Al-Amin Sience Techno Park Company Profile Website Design

Alfha Rahmadhi Nst, Amelia Putri Ramadhanti, Ajeng Maharani, Abdiilah Ramadhan Pratama, T.Muhammad Chairil Isnan

Abstract

The development of information technology requires institutions to have credible digital information media to increase the reach of publications and branding. Al-Amin Science Techno Park as an innovation center requires a digital representation tool that can effectively convey its vision, mission, and superior services. This study aims to design and build a company profile website that is informative, responsive, and able to strengthen the institution's digital identity. The research method used in developing this system is the Waterfall method, which includes the stages of needs analysis, system design, coding, and testing using White-box Testing. The result of this study is a web-based platform that integrates profile information, innovation catalogs, and service contacts that can be easily accessed by stakeholders through various devices. The conclusion of the study shows that this website successfully functions as an efficient official communication medium in introducing the Al-Amin Science Techno Park technology ecosystem to the wider community. The implications of this design are expected to increase the professionalism of the institution and open up opportunities for strategic collaboration in the future.

Keywords: *Company Profile, Website, Waterfall, Al-Amin Science Techno Park, Branding Digital.*

Alfha Rahmadhi Nst[1]
[1]Information Technology, Universitas Pembangunan Panca Budi, Indonesia
e-mail: alfharhmdhi@gmail.com[1]

Amelia Putri Ramadhanti[2], Ajeng Maharani[3], Abdillah Ramadhan Pratama[4], T. Muhammad Chairil Isnan[5]
[2,3,4,5]Information Technology, Universitas Pembangunan Panca Budi, Indonesia
e-mail: aramadhanti83@gmail.com[2], ajengmaharani592@gmail.com[3], abdillahramadhan738@gmail.com[4], tengkuisanan8@gmail.com[5]
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Introduction

The rapid development of information technology in today's digital era has transformed the way agencies interact with the public. Company profile websites are no longer merely supplementary media, but rather a crucial requirement for an institution to build credibility and expand its information reach globally [1]. Al-Amin Science Techno Park, as a center for innovation and technology development, requires a digital platform capable of presenting its vision, facilities, and research findings in an integrated manner to stakeholders.

Although web technology has been widely implemented, the main challenge lies in presenting a responsive and informative interface to effectively increase brand awareness [2]. A frequent problem is the lack of readily accessible information available to potential collaboration partners, thus hampering potential synergies between techno park management and industry and the wider community.

This research aims to design a company profile website for Al-Amin Science Techno Park using a systematic approach to ensure all service content is clearly conveyed. The novelty of this design lies in the integration of an interactive innovation catalog feature with userfriendly navigation. With this website, it is hoped that Al-Amin Science Techno Park will have a professional digital identity and facilitate the communication process and the widespread promotion of its superior innovative products.

Literature Review

2.1 Theoretical Basis

2.1.1 Website and Company Profile

According to Pressman (2020), a website is a collection of interconnected web pages that can be accessed via the internet using a web browser. In the digital era, websites serve as the primary communication medium for an organization. One implementation is a company profile website. According to Solikhin (2021), a digital company profile aims to present official information regarding an institution's vision, mission, services, history, and contact information so that it can be accessed by the public widely, quickly, and accurately, while simultaneously enhancing the institution's professional image.

2.1.2 Science Techno Park (STP)

A Science and Technology Park (STP) is a professionally managed area specifically designed to initiate and channel research and technology results from universities or R&D institutions directly to industry. The characteristics of a STP include innovation management, business incubation, and the provision of laboratory and technology facilities for the scientific community and businesses. Therefore, conveying information about the facilities and services within a STP requires a well-organized and integrated information structure.

2.1.3 Waterfall Method

The Waterfall method is a classic software development model that is sequential and linear. This method consists of several main phases, including: Requirements Analysis, System Design, Code Writing (Implementation), System Testing (Verification), and Maintenance. The main characteristic of this method is that each phase must be fully completed before moving on to the next phase, resulting in highly structured and well-planned project documentation.

2.2 Previous Research

To support the design of this system, a review of several previous studies related to the research methods and objectives was conducted:

1. The first study was conducted by Solikhin (2021) entitled "Designing a Web-Based Company Profile Information System Using the Waterfall Method." This study focused on creating interactive information media to broadly introduce agency profiles. Similar to the author's study, both employed the systematic, web-based Waterfall method. However, the difference lies in the research object, where this study focused specifically on science and technology institutions (Science Techno Parks).
2. The second study by Setiawan et al. (2023) on "Company Profile Website Design and Construction" emphasized the importance of a responsive user interface (UI) using the latest framework technology to ensure convenient access to information across various devices, including smartphones and PCs. This study served as a reference for the authors in designing an Al-Amin Science Techno Park website interface that is not only informative but also adaptable to user devices.
3. The third study was conducted by Hidayat and Nugroho (2024), who designed a profile website for a research and technology institution. The results showed that a science institution profile website requires a more complex menu structure, such as a research and facilities directory. This is similar to what will be implemented on the Al-Amin Science Techno Park website, but the authors added updates to the integration of information on business incubation services within Al-Amin STP.

2.3 Research Comparison and Gap

Based on a literature review of several previous studies, designing a company profile website has proven effective in enhancing an institution's image and disseminating information. However, there is limited research specifically designing websites for science and technology parks (Science Techno Parks), which have complex information needs such as research publications, business incubation, and laboratory facility profiles in a single, integrated platform.

This research entitled "Designing a Company Profile Website for Al-Amin Science Techno Park" was conducted to build a system that not only functions as a standard information media, but is also specifically designed to meet the needs of technology publications, innovations, and partnerships at Al-Amin STP using a structured Waterfall method.

Research Methodology

3.1 Research Flow

The research methodology used to develop the Al-Amin Science Techno Park Company Profile Website adopted a linear sequential model (Waterfall Method). The research implementation process was carried out in stages and systematically through the following five main steps:

1. System Requirements Analysis

Data collection was conducted directly at Al-Amin Science Techno Park through observation and interviews to map out the required content on the website (such as profiles, incubation services, research facilities, and contact details).

2. System and Interface Design

Creating a website blueprint based on the collected data. This stage includes creating flowcharts (UML), database design (Database Schema), and creating visual web page designs (Wireframe/UI/UX Mockups).

3. Implementation and Coding

Translating the design results into a computer programming language. At this stage, the author creates the program code for the user interface (frontend) and the admin data management (backend).

4. System Testing (Testing/Verification)

Conducting a trial run of the completed website before its public launch. Testing focuses on button functionality, access speed, security, and display responsiveness when opened on computers and smartphones. **5. Implementation and Maintenance**

1. The official website is launched on a hosting domain so that it can be accessed by the general public. This stage also includes regular system monitoring to fix any bugs that may emerge during use.
2. Data Collection Methods
3. To support the needs analysis stage, data and information regarding Al-Amin Science Techno Park are collected using the following techniques:
4. Interview: Conducting a direct question-and-answer discussion with the management of Al-Amin Science Techno Park to understand the organizational structure, vision and mission, and the services they wish to highlight on the website.
5. Observation: Directly observing the activities, laboratory facilities, and environment of Al-Amin Science Techno Park to collect visual assets (photos/documentation) to be displayed on the website's gallery page.
6. Literature Review: Collecting references from books, scientific journals, and official institutional documents related to company profile creation and Science Techno Park management standards.3.3 Alat dan Bahan Penelitian (Environment Setup)

The technological components used to design and build this website consist of hardware and software as follows:

Component Types	**Specifications / Tools Used**	**Function in Research**
Hardware	Laptop (RAM 8GB)	The primary tool for writing code and designing systems.
Software	Sistem Operasi (Windows / macOS)	A basic environment for project development.
Languages and Frameworks	JavaScript, PHP.	A basic language for building website structure and logic.
Code Editor	Visual Studio Code / Sublime Text	An application for typing software program code.
Database	MySQL(melalui XAMPP)	A place to store web content data dynamically.
Component Types	Specifications / Tools Used	Function in Research

Interface Design	Figma	Tool for creating visual appearance designs (Mockups) for websites.
Browser Testing	Google Chrome	Media for running and testing website coding results.

Results

- Based on the analysis conducted, the Al-Amin Science Techno Park Company Profile Website requires several main menus to effectively present information to the public. The resulting menu structure includes:
- Home Page: Displays a profile summary, main banner, and the latest news.
- Profile Page: Contains the history, vision, mission, and organizational structure of AlAmin STP.
- Services Page: Displays information on business programs and technology services for partners.
- Facilities Page: Displays a list of available laboratories, research rooms, and advanced equipment.
- Contact Page: Provides a message form, location map (Google Maps), telephone number, and official email.

4.1 System Design Results (Design)

4.1.1 Menu Architecture (Sitemap)

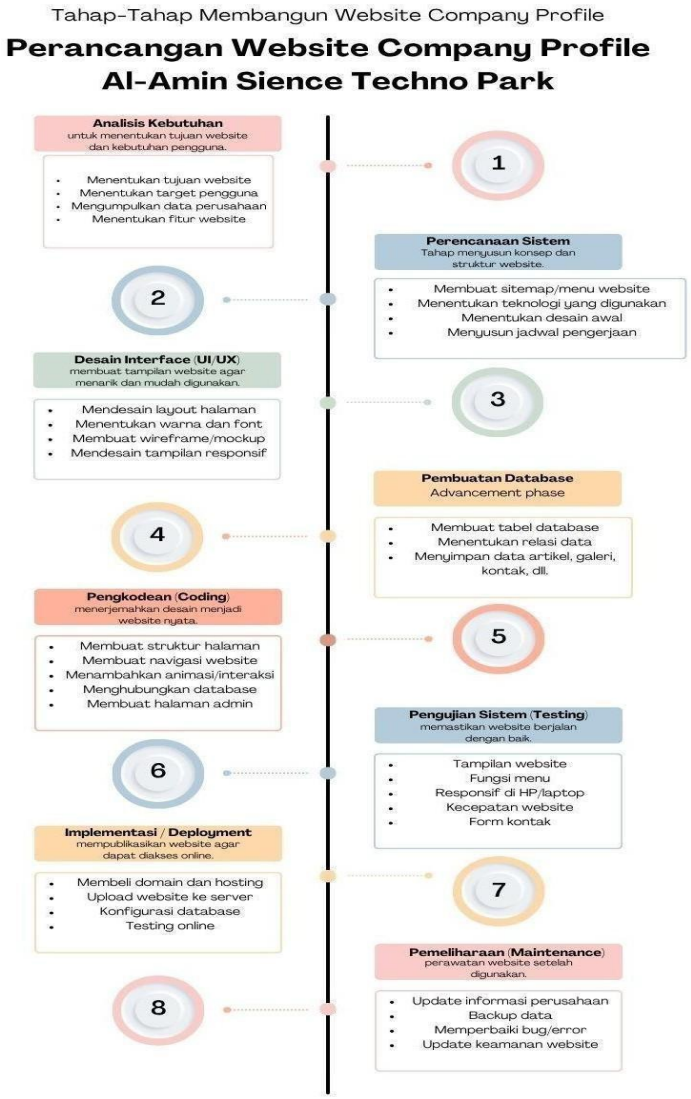


Figure 1. Diagram Pembuatan Dari Awal Sampai Akhir

4.1.2 Rancangan Antarmuka (Mockup / Wireframe)

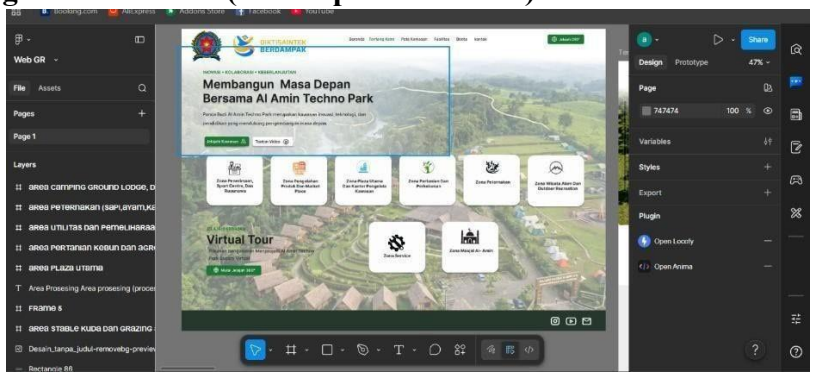


Figure 2. Main Page Design Using Figma (Mockup)

4.2 System Implementation Results

This is the most crucial part. Here, you display the finished, full-color photos/images of your website.

The implementation phase results in the Al-Amin Science Techno Park Company Profile Website, ready for use. Here's a concrete representation of the system being built:

4.2.1 Homepage View

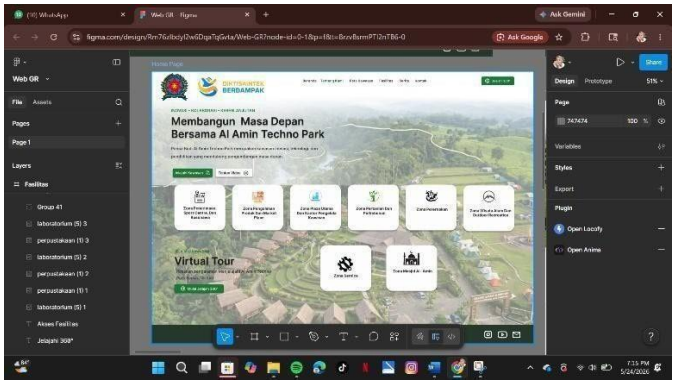


Figure 3. Implementation of the Website Main Page

4.2.2 STP Facilities and Services Page View



Figure 4. Implementation of the Facility Information Page

4.2.3 Admin Dashboard Page View (Backend)



Figure 5. Implementation of the Admin Data Management Dashboard Page

4.3 System Test Results (Verification/Testing)

The examiner wants to know whether your website is crashing or running smoothly. You must display the test results in the form of a Test Table (Black Box Testing).

System testing is carried out using the Black Box Testing method to ensure that all button functions, links, and navigation systems on the website run as expected:

No	Tested Components	Testing Scenario	Expected results	Status
1	ıvigation Menu	Clicking on the Profile, Services, Facilities, and Contact menus will smoothly navigate to the desired page.	Clicking on the Profile, Services, Facilities, and Contact menus will smoothly navigate to the desired page.	Valid
No	**Tested Components**	**Testing Scenario**	**Expected results**	**Status**
2	Contact Form	Enter your name, email address, and message, then click the "Send" button. The message is successfully sent and saved to the admin database.	Enter your name, email address, and message, then click the "Send" button. The message is successfully sent and saved to the admin database.	Valid
3	Admin Dashboard	Enter the correct admin username and password. The admin is successfully logged into the main data management page.	Enter the correct admin username and password. The admin is successfully logged into the main data management page.	Valid
4	Screen Responsiveness	Open the website on a smartphone. The website display automatically adjusts to the phone's screen size neatly.	Open the website on a smartphone. The website display automatically adjusts to the phone's screen size neatly.	Valid

Conclusion

Based on the design, implementation, and testing results of this study, the following conclusions can be drawn:

Suggestions

1. Although this website has been completed and is functioning well, there is still room for further research. Some suggestions are:
2. Feature Development: For future research, it is recommended to add an online registration information system feature directly to the website for entrepreneurs interested in participating in the business incubation program at Al-Amin STP.
3. Security Aspects: More in-depth system security testing (Penetration Testing) is needed on the admin dashboard page to prevent security vulnerabilities from external parties.

4. SEO Optimization: Search Engine Optimization (SEO) needs to be carried out regularly so that the Al-Amin Science Techno Park website can be more easily found on the first page of search engines such as Google.

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