

Analysis of the Role of Websites, Design, and Performance Metrics in Improving Company Performance in Medan City

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Abstract: This study aims to analyze the role of websites, design, and performance metrics in supporting the business continuity of companies in Medan City. In the era of Industry 4.0, the utilization of technology has become a strategic necessity for companies to survive and remain competitive. Websites and design are positioned as promotional tools, information service media, and communication channels between companies and consumers. Visual design also serves as an attraction that can influence consumer perceptions. This research employs a quantitative approach by measuring user satisfaction levels and website performance based on predetermined metrics. The results show that the majority of users, amounting to 72.2%, are satisfied with the effectiveness and productivity of company websites in Medan City. Meanwhile, the overall website performance is at 50%, indicating there is still room for improvement in digital services within companies.

Keywords: Website, Design, Performance Metrics, Company, Industry 4.0, Medan City

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I. INTRODUCTION

According to Bambang Warsita (2008:135), information technology is a set of facilities and infrastructures consisting of hardware, software, and useware, along with systems and methods used to acquire, transmit, process, interpret, store, organize, and meaningfully utilize data. Technology itself reflects the development of human civilization, which continues to evolve in line with changes in how people convey information. In prehistoric times, early humans communicated through paintings on cave walls, whereas today, information can be delivered within seconds through various digital media. The advancement of information technology has also had a significant impact on the world of work, where activities that previously required a long time can now be completed more quickly and efficiently. Many modern companies take advantage of technology to accelerate work processes and increase productivity.

According to Rohi Abdulloh (2015:1), a website is a collection of interconnected digital pages containing various types of information in different formats, such as text, images, audio, video, and animations, which can be accessed via the internet. A website functions as one of the products of

information technology that is widely utilized by companies today to introduce their business profiles, enhance popularity, and provide information services for users who wish to learn more about the company or engage in direct communication.

This study aims to identify and analyze the roles of websites, design, and performance measurement in improving company performance in the city of Medan. The research questions addressed in this study include, first, how websites can support the continuity and success of business operations for companies in Medan in today's digital era. Second, how website design influences user perceptions and satisfaction toward the company, as well as the extent to which the design can attract attention and build a positive image in the eyes of consumers. Third, what performance metrics are used by companies in Medan to evaluate the effectiveness of their websites in supporting business performance improvement. Finally, this study will examine how the integration of websites, design, and performance measurement can contribute to enhancing the overall performance of companies in Medan.

The main objective of this study is to analyze how websites play a role in supporting the continuity of business operations for companies in the city of Medan, particularly in the era of Industry 4.0, which increasingly relies on digital technology. This study also aims to examine the influence of website design on user perception and satisfaction in Medan, which can affect a company's image and reputation in the eyes of consumers. In addition, the research will identify the performance metrics used by companies to evaluate the effectiveness of their websites, as well as how well these metrics help improve business performance. Lastly, this study seeks to describe how the integration of websites, design, and performance measurement can contribute to enhancing the overall business performance of companies in the city of Medan.

II. RESEARCH METHODS

This study employs a descriptive qualitative approach to analyze the role of websites, design, and performance metrics in improving the performance of companies in the city of Medan. A qualitative approach is chosen because this research focuses on gaining an in-depth understanding of how companies in Medan utilize websites, visual design, and digital performance measurement to support their business continuity in the era of Industry 4.0.

A. Types and Sources of Data

The data for this study consists of:

- **Primary data**, obtained through in-depth interviews with informants, including IT managers, marketing managers, business owners, and corporate website users in the city of Medan.
- **Secondary data**, in the form of literature, previous research findings, books, scientific journals, and company documents related to the use of websites and digital design.

B. Data Collection Techniques

The data collection techniques used in this study include:

- **In-depth interviews** with 5–8 key informants from companies that utilize websites as promotional and information service media.
- **Direct observation** of the appearance, features, and performance of the corporate websites that are the objects of this research.
- **Documentary study** to complement secondary data, such as company annual reports, digital media reports, and internal company surveys related to user satisfaction with the websites.

C. Data Analysis Technique

The data obtained in this study were analyzed using thematic analysis. The analysis process was carried out through the following stages:

- **Data reduction** — simplifying and selecting relevant data according to the focus of the research.
- **Data presentation** — organizing the results of interviews and observations into thematic categories.
- **Drawing conclusions** — formulating patterns of findings related to the role of websites, visual design, and

performance measurement in supporting business performance of companies in Medan City.

D. Data Validity

To ensure the validity of the data, this study employed the following techniques:

- **Source triangulation**, by comparing interview results from multiple informants.
- **Method triangulation**, by comparing the results of interviews with data obtained from observations and documentation.
- **Member checking**, by asking informants to review the interview results to ensure the accuracy of the data.

III. DISCUSSION

In the era of Industry 4.0, information technology plays a crucial role in supporting the sustainability and growth of business enterprises. One of the key components in digital business strategy is the website. A website is not only a marketing tool but also a platform to introduce the company to the public, provide product and service information, and serve as a means of direct communication between the company and consumers (Abdulloh, 2015). The presence of an effective website can expand market reach and provide ease for consumers in accessing information related to the products or services offered by the company.

The design of a website also plays a very important role in attracting consumer attention. An attractive and easy-to-navigate design can leave a positive impression on site visitors and enhance the user experience. On the other hand, poor design can reduce consumer trust in the company and potentially decrease the conversion rate of visitors into customers. According to Warsita (2008), design and information technology are tools that connect a company with its consumers, allowing the company to convey messages more effectively and efficiently.

In addition, measuring website performance becomes crucial for evaluating how effective the website is in achieving the company's goals. Performance metrics such as page loading speed, number of visitors, conversion rate, and user interactions can provide a clear picture of the website's performance. This study found that although the majority of users are satisfied with the effectiveness and productivity of the website, the overall performance still shows a relatively low figure, with only 50%. This indicates that companies in Medan still have room to develop and improve their digital services to be more competitive in the global market.

Website performance can be measured using various metrics, such as user satisfaction, the average time visitors spend on the site, and the conversion rate from visitors to customers. For example, a study by Google (2018) shows that website loading speed significantly impacts visitors' decision to continue interacting with the site. Therefore, companies in Medan need to conduct continuous evaluation and improvement of their websites to ensure that their websites remain relevant and effective in meeting consumer needs.

In this context, a website with good design and optimal performance can enhance consumer trust and satisfaction. This also contributes to the business development of companies in Medan, both operationally and in terms of marketing. Therefore, companies need to wisely utilize technology and design to create a website that is not only informative but also appealing and functional.

➤ *Performance Metrics*

Website performance metrics are tools used to evaluate the effectiveness of a site in achieving a company's business objectives, whether in marketing, communication, or customer service. In the context of companies in Medan, measuring website performance is crucial because it provides insights into how the website interacts with users and how well it meets their needs and expectations. These metrics not only cover technical aspects such as site speed and functionality but also the overall quality of the user experience.

Some common performance metrics used to evaluate websites include:

- **Page Speed** Page speed is one of the most important factors in measuring website performance. Visitors are likely to leave a site that takes too long to load. According to Google (2018), more than half of visitors will leave a site if it takes more than 3 seconds to load the page. Therefore, companies need to ensure that their site has fast loading times to maintain conversion rates and an optimal user experience.
- **Conversion Rate** This metric measures how effectively the website turns visitors into customers or takes the desired actions, such as filling out a form, making a purchase, or subscribing to a newsletter. A high conversion rate indicates that the website has an effective and functional design and is capable of facilitating the consumer journey well (Kotler & Keller, 2016).
- **Traffic** The number of visitors to a website is a basic metric that measures how many people are accessing the

site. While the number of visitors is important, companies should also pay attention to the quality of visitors, whether they are a relevant audience for the products or services offered by the company. Traffic source analysis can provide further insights into which marketing channels are most effective in attracting visitors (Järvinen & Taiminen, 2016).

- **Engagement Rate** This metric measures the extent to which visitors engage with the content provided on the website. It can include the number of clicks, the duration visitors spend on the site, and interactions with specific elements such as forms or videos. A high engagement rate indicates that the website has content that is relevant and engaging for the audience (Chaffey, 2019).
- **Bounce Rate** Bounce rate is the percentage of visitors who leave the website after viewing only one page. A high bounce rate typically indicates that the website is not engaging or informative enough for visitors, causing them to leave without exploring other pages. This metric is crucial for assessing the quality of the user experience and the effectiveness of the website's design in retaining visitors (Kotler & Keller, 2016).
- **Satisfaction Rate** One of the more subjective performance metrics is the user satisfaction rate, which can be measured through surveys, reviews, or feedback from visitors. User satisfaction can provide an indication of how well the website meets their expectations in terms of design, usability, and the completeness of information provided. This evaluation can be used to make improvements focused on design and user experience (user experience).

By using these performance metrics, companies in Medan can more easily identify areas that need improvement on their websites. Regular evaluation of these metrics will help companies continuously adapt and enhance the quality of their digital services, which in turn can improve the overall performance of the company.

Table 1. Website Performance Metrics

Performance Metric	Description	Importance for Website Performance
Page Speed	Measures the time it takes for a webpage to load.	A high page speed is important for retaining visitors and preventing them from leaving the site. Faster loading = better user experience.
Conversion Rate	The percentage of visitors who take a desired action, such as making a purchase or filling out a form.	A high conversion rate indicates that the website is successfully directing visitors to take important actions that can increase sales or customer loyalty.
Traffic	Measures the number of visitors who access the website during a specific period.	High traffic indicates interest in the website, though it is also important to consider the relevance of visitors coming through the right channels.
Engagement Rate	Measures visitors' interaction with website elements such as clicks, comments, or shares.	This metric evaluates how effectively the website captures attention and retains visitors' interest, as well as the quality of the content provided.
Bounce Rate	The percentage of visitors who leave the site after viewing only one page.	A high bounce rate indicates that the site fails to capture visitors' attention or does not provide the information they are seeking. This metric reflects the quality of the user experience.
Satisfaction Rate	Measures user satisfaction, typically obtained through surveys or feedback.	User satisfaction is a key indicator of the success of the site's design and functionality. If users are satisfied, they are more likely to return

Performance Metric	Description	Importance for Website Performance
		and engage further.

This table provides a clear overview of the performance metrics that companies need to focus on to evaluate their websites in an effort to improve overall business performance.

IV. CONCLUSION

Based on the analysis conducted in this study, it can be concluded that websites, design, and performance measurement play a crucial role in supporting the sustainability and improvement of company performance in Medan, especially in the Industry 4.0 era, which requires companies to leverage technology in their operations. Websites not only function as a means of promotion and communication with consumers but also as a tool to enhance the company's visibility in the digital world. An attractive design and the functionality of the website play a significant role in influencing consumer perceptions of the company.

The measurement of website performance through various metrics, such as page speed, conversion rate, and user satisfaction, provides valuable insights into the effectiveness and productivity of the company's website. Although most users are satisfied with the performance of websites in Medan, there is still room for improvement, particularly in optimizing site performance and increasing visitor interaction with the site. Therefore, companies in Medan need to continue innovating and enhancing the quality of their digital services in order to remain competitive and meet the expectations of the increasingly evolving market.

Thus, the use of appropriate information technology, attractive design, and effective performance measurement will be key for companies in enhancing their effectiveness and performance in this competitive digital market.

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