Evaluating the Village Website for Improving Its Quality

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Abstract— Website is important in public sector because it increases its transparency to citizens. Through a website, government is easier to delivers information or announcement to public, and reduces asymmetric information. This paper evaluates the performance of village website to improve website quality and increase users' experience. The indicators for this evaluation consist of first confluent color, exposure time, speed rating, total block time, maximum satisfaction color, and complete redesign. The finding this evaluation is village websites in this sample should improve and enhance to increase its quality. This finding recommends the stakeholder to minimizes render-blocking resources, offers images in next-generation formats, allows text compression, improves image encoding efficiency, decreases unneeded JavaScript, CSS, and initial server wait time is intended to enhance first contentful paint, time to interactive, speed index, total blocking time, largest contentful paint, cumulative layout shift. The limitation of this paper is inherent in qualitative research especially descriptive analysis which is does not be generalized to other website. The implications of the research are village government should consider the quality of website and consistent to improve it

Keywords— Website, Transparency, Performance

I. INTRODUCTION

Recently, Technologies have an impact in energy, health, mobility, shopping, learning and entertainment. In public sector, digital technologies are less adopted or have been lagging behind the business sector. On other hand, such digital technologies are claimed to enhance engagement stakeholders and to improve public services. Also, Petrakaki (2018) stated that in the e-government era accountability, it entails digitalization of public entity [1]. In addition, e-government has progressed significantly especially in Thailand and also implemented 4.0 version of digital transformation strategies, it aims to enhance business competitiveness, citizen welfare, and performance of public sector [2]. Novachenko et al. (2020) also confirmed that information technologies in public sector can increase the economic efficiency level and public trust especially in Ukraine [3].

In this era, public entity such as village government should adopt this digital technology such as government website to accommodate and serve a public needs. Hopefully, this digitalization enhances community welfare and increases level of economic efficiency. Based on law of the republic of Indonesia number 6 of 2014 concerning village, the village government should conduct the village consultative meeting to deliberate some strategic nature in the administration of the village government. This meeting should be followed by village consultative body, village government, and elements of the village community.

This meeting of village government is important for village community because it discusses about village structuring and planning, plan of village cooperation, plan of investment, BUMDES (village-owned enterprise), additions and disposals on village asset, and extraordinary events. These topics have pivotal impacts to village community. For that, the running of this meeting should be known by public and be monitored by community. The principle of accountability means that each activity of village government and its results are being transparent and accordance with the provisions of the legislations. Previous research shows that disclosure of specific information to public has an impact on the perspective of stakeholders [4].

Village website provides information about village government. This platform is used by village government to share information with a community. Through public website, village government can ask community participation in the Q&A column. Public feedbacks should be professionally handled. Nurhidayati (2019) finding indicated that in digital accountability era, it is not only about modern facilities, but also appropriate complaints handling from the public.

Village website enhances accountability and transparency because it lets village government to share information and to show their meeting activities in real time and retrieve comments and reactions from the public directly. Village websites have been implemented by most of villages in Indonesia because it increase public engagement, stay transparent, accessible and accountable. Unfortunately, there is no research which analyzes the performance of village websites.

For this gap, this paper descriptive analyze the performance of websites through some indicators which consist of first confluent color, exposure time, speed rating, total block time, maximum satisfaction color, and complete redesign. Hopefully, the result of analysis can be some consideration or recommendation for village government to enhance the website performance.

II. LITERATURE REVIEW

Web Based Accountability

Based on previous researches, government public services are topics which have been intensively researched, but not much literature addresses accountability in digital era [5]. For that, this paper analyzes the accountability performance through a website. Idea in village accountability trough digital technology, especially using a website is most implemented. Also, in Indonesia, some of public entity uses television as a limited broadcaster. As a one way communication, website and television has some limitation because it doesn't accommodate the comments or advices from viewers.

Recently, there is some platform which provides live streaming features. Through a live streaming, it provides accountability enhancement, as supported by digital technologies, this platform substantially bringing the public accounting and accountability to stakeholder of entity. Live streaming program provides a solution to increase the village government engagement to its community, stay transparent and more accountable.

Recent accountability web based technology also provides some features such as multi-platform; it means that meeting will be share through a Facebook, YouTube, and Instagram. Hence, village community can watch and monitor the meeting. Also, the technology provides cloud-based streaming, it defines that users don't need to download specific software for this purposes. They can run live streams directly in their browser because it is a cloud-based platform. The website also informs the meeting schedule, it indicates that the platform (website) post a regular meeting of village government. Also, this website inform to community or website reader about agendas of meeting prior to a scheduled meeting. It means that public can prepare their advices or recommendation for the meeting. Furthermore, some website has minutes of meeting feature. After the meeting ended, the community can access the minutes of meeting. The official record of the meeting (minutes) will help village community in understanding the considerations and decisions taken at the village government meeting. For tracking document, some website has a multiple recording formats. For public need orientation, there is no restriction format type about recording of meeting and minutes of meeting. This type shall be easier accessed by village community. Recording of meeting provides a lot of advantages to community such as letting government people know that they've been monitored by public and really listened, provides a primary sources that that can be used as decisions verification, or as a reminder for future meeting, helps meeting members or village government run a meeting on track because everything is written down or recorded. Hard copies facilities is also the product of council meeting is a minutes of meeting. Reader of websites can request a formal meeting document and its processing charges for the document will vary depending on package size, shipment, weight, location, and more.

Website Quality

Internet adoption is increasing in the twenty-first century. Village community needs high-quality websites that provide accurate information about the plan of the village. For fulfilling this need, the village governments should attempt to offer high-quality information through, user-friendly websites. Also, the important issue that government should identify the website features, internet website types, and internet site performance evaluation [6].
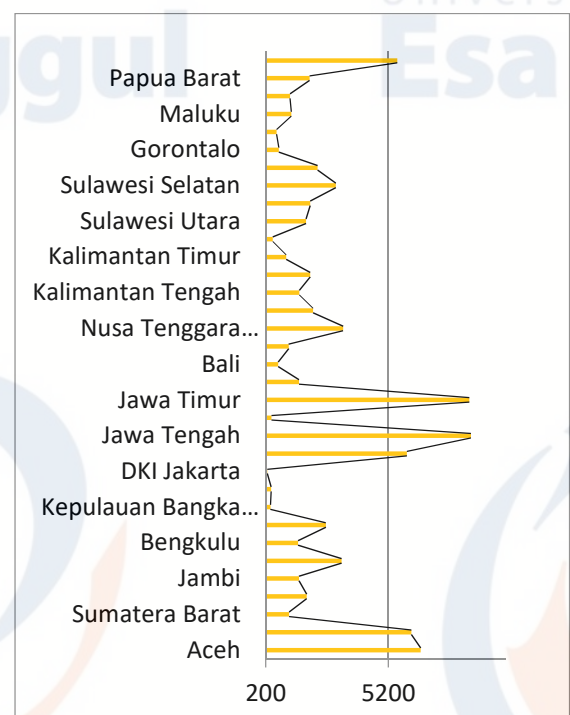
The website quality indicated the metric that measures whether a website of village government performs in terms of its most essential metrics, which are often website speed, features, display, etc. website performance analysis is a subset of public accountability that focuses on an organization transparency, which is generally assessed in terms of public information.

In this paper, the idea of website performance has broadened. It is increasingly thought to include first confluent color, period to engage, speed rating, total blockage time, greatest contently paint, and total design change. Furthermore, this paper using these indicators for performance metrics.

III. RESEARCH METHOD

3.1. Research Data

The research data for this paper obtained from google searching result using keyword site:desa.id 'website resmi". Thus, this keyword result around 204.000 website. Compare to Statistics Indonesia (Badan Pusat Statistik), the number of village in Indonesia is 83.820 villages in 2019. The number of village is presented in graph 3.1. This research uses convenience sample which is a type of non-probability sampling where the sample of research is taken from easy unit to to reach. There is no clear guidance on sample size computations because the majority of sample size determinations are based on an empirical framework. Thus, this paper uses 5 websites for descriptive review. These websites are taken from first 5 results on Google search.

3.2. Data Analysis

Data analysis in this research is defined as method for processing data to discover useful information which is website performance. The website performance indicators consist of first contently paint, it indicates how speed of content onto website page. A standard first contently paint is 0.9s or less. Second indicator is period to engage; it indicates how speed the website page starts loading to its sub resources. Next, speed index, it means how quickly the website contents are comprehensively visible. A standard experience is 1.3s or less. Total blockage time, it is about period time between First Contently Paint and Time to Engage. A good time period for this indicator is around 1.3s or less. Largest contently paint indicator provides information about how long the website takes for the largest content to website page. A normal score for this indicator is 1.2s or less. Last, it is cumulative layout shift; it means total layout shifting through a website. A normal time for this indicator is 1.2s or less.

IV. RESULTS AND DISCUSSIONS

The village website which analyzed in this paper is 5 website which consist of, (1) https://semlaran-bjn.desa.id/, (2) https://tanjunglaya.desa.id/, (3) https://margamekar.desa.id/, (4) https://bubulan-bjn.desa.id/, (5) https://kalipelus-banjarnegara.desa.id/.

Using desa.id domain consistent with with the Regulation of the Minister of Communication and Information (Permenkominfo) Number 5 of 2015 concerning Domain Name Registrars of State Organizing Agencies Chapter III Classification of Domain Names Article 4 paragraph (2) states that vertical agencies from central agencies located in the regions, or representatives abroad, or regional apparatus in the Regional Government, including the Village Government, may use the Domain Name as the official electronic address of the Agency. Thus, village government should use format which consists of the character name [Desa, or its abbreviation].desa.id. According to whois record, this domain is created on 09 September 2013, and then it is updated on 10 September 2019.

Based on evaluation through https://web.dev/measure on website sample, descriptive data for every indicators will look as in table 1.

Table 1. The quality of village website

	Seml aran	Tanjun glaya	Marga mekar	Bub ulan	Kalipel us- Banjar negara
First conflue nt color	15,7 s	16,0 s	16,1 s	15,7 s	3,1 s
Speed rating	19,4 s	22,9 s	24,0 s	24,1 s	8,6 s
Maximum satisfaction color	18,8 s	22,1 s	16,1 s	35,9 s	7,0 s
Exposure time	24,4 s	29,0 s	22,6 s	35,4 s	7,0 s
Total block time	280 ms	590 ms	1,230 ms	450 ms	710 ms
Complete redesign	0.071	0,533	0,03	0,466	0
Performance	**39**	**17**	**21**	**22**	**41**

Sourcce: https://web.dev/measure

The Performance of https://semlaran-bjn.desa.id/

This website indicated its performance is around 39. This score shows that the website needs some improvement for its performance. There are some opportunities and suggestions which help the website can load faster than earlier. These suggestion such as minimize render-blocking resources, offer images in next-generation formats, allow text compression, improve image encoding efficiency, decrease unneeded JavaScript, CSS, and initial server wait time.

The Performance of https://tanjunglaya.desa.id/

This village website's effectiveness is estimated to be around 17. This number indicates that the site's performance might be improved. There are various chances and ideas that will assist the website in loading faster than before. These recommendations include reducing render-blocking files, providing pictures in next-generation formats, allowing text reduction, improving image encoding efficiency, and reducing unnecessary JavaScript, CSS, and initial web service wait time.

The Performance of https://margamekar.desa.id/

Based on performance measurement, this website score is 21. It needs some improvement to be effective website. These improvement consist of avoid large network payloads because its total file size was 19,264 KiB, the website should use an effective caching strategy, ensure that the text remains visible while the webfont is loading, reduce the ramifications of third-party, dont use passive listeners to increase scrolling performance, be concise width and height image.

The Performance of https://bubulan-bjn.desa.id/

This website has a score of 22 based on performance measurement.It has to be improved in order to be a useful website. These enhancements include avoiding large network payloads, using an effective caching strategy, ensuring that the text remains visible while the webfont is loading, reducing the impacts of third-party, not using passive

listeners to increase scrolling performance, and being concise in size and height image.

The Performance of https://kalipelus-banjarnegara.desa.id/.

This webpage performance is estimated to be around 39. This number indicates that the website's performance might be improved. There are various chances and ideas that can make the website load faster than it did previously. These recommendations include reducing render-blocking resources, providing pictures in next-generation formats, allowing text compression, improving image encode efficiency, and reducing unnecessary JavaScript, CSS, and initial server idle time.

The descriptive analysis displays the need of some improvement for the website. The speed performance and user friendly appearance can enhance public accountability. Also, the enhanced website will enhance the the economic efficiency level and public trust (Novachenko et al., 2020). Thus, public entity website should improve their government website to be easy to be accessed and full information for public. Hopefully, this reformation enhances public awarness and indirectly affects the community welfare and economic efficiency.

V. CONCLUSIONS

Based on data analysis, there is an answer to the gap, which is village websites have been massively implemented in Indonesia to increase public engagement and be accountable but no research which analyzes the performance of village websites. Based on the analysis, the paper found an answer that there are some suggestions and recommendations for enhancing the performance of village site.

The recommendation such as minimize render-blocking resources, offer images in next-generation formats, allow text compression, improve image encoding efficiency, decrease unneeded JavaScript, CSS, and initial server wait time is intended to enhance first contentful paint, time to interactive, speed index, total blocking time, largest contentful paint, cumulative layout shift. The limitation of this research is inherent in qualitative research especially descriptive analysis which is does not be generalized to other website. For that, next research should employ the quantitative research or mixed method.

REFERENCES

[1] D. Petrakaki, "Re-locating accountability through technology: From bureaucratic to electronic ways of governing public sector work," *Int. J. Public Sect. Manag.*, vol. 31, no. 1, pp. 31–45, 2018, doi: 10.1108/IJPSM-02-2017-0043.

[2] D. Sagarik, P. Chansukree, W. Cho, and E. Berman, "E-government 4.0 in Thailand: The role of central agencies," *Information Polity*, vol. 23, no. 3. 2018, doi: 10.3233/IP-180006.

[3] T. V. Novachenko, T. V. Bielska, E. A. Afonin, M. H. Lashkina, O. M. Kozhemiakina, and N. P. Diachenko, "Use of information technology to increase economic efficiency and credibility in public administration in the context of digitization," *Int. J. Econ. Bus. Adm.*, vol. 8, no. 1, 2020, doi: 10.35808/ijeba/431.

[4] Y. Ramírez and Á. Tejada, "Digital transparency and public accountability in Spanish universities in online media," *J. Intellect. Cap.*, vol. 20, no. 5, pp. 701–732, 2019, doi: 10.1108/JIC-02-2019-0039.

[5] D. Nurhidayati, "Does Digital Public Service Complaint Promote Accountability? A Comparative Analysis of Upik Yogyakarta and Qlue Jakarta," *Policy Gov. Rev.*, vol. 3, no. 2, p. 127, 2019, doi: 10.30589/pgr.v3i2.139.

[6] I. Margarita, "Internet Website Analysis," *Int. J. Trend Sci. Res. Dev.*, vol. 5, no. 1, pp. 9–12, 2020.

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