

Web-Based Financial Information System in The Christian Evangelical Church in Minahasa

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Abstract.

As a community service organization, the church has a variety of activities and transactions to meet the needs of the congregation. Because the church has quite complex business processes and systems, information, including data storage, is required to facilitate an integrated and centralized church in data storage, management, and presentation. The analysis, design, and construction of a church financial information system as a solution to the problems that exist in the GMIM church, where processing will be maximized in a web-based financial information system, are discussed in this study.

Keywords: Financial information system, GMIM, Website, Prototype

Abstrak.

Sebagai organisasi pelayanan masyarakat, gereja memiliki berbagai kegiatan dan transaksi untuk memenuhi kebutuhan jemaat. Karena gereja memiliki proses dan sistem bisnis yang cukup kompleks, informasi, termasuk penyimpanan data, diperlukan untuk memfasilitasi gereja yang terintegrasi dan terpusat dalam penyimpanan, pengelolaan, dan penyajian data. Analisis, perancangan, dan pembangunan sistem informasi keuangan gereja sebagai solusi dari permasalahan yang ada pada gereja GMIM, dimana pengolahannya akan dimaksimalkan dalam sistem informasi keuangan berbasis web dibahas dalam penelitian ini.

Kata kunci: Sistem informasi keuangan, GMIM, Website, Prototype

INTRODUCTION

The church, as a community service organization, has a wide range of activities and transactions to meet the needs of the congregation, both in terms of ecclesiastical activities and church financial transactions (Yohannes Kurniawan and Cassandra, 2014). In addition, the church will have a large amount of complex data. In these circumstances, churches should have a centralized and integrated data repository to facilitate data storage, management, and presentation (Cathryna Rumondang Bulan Simangunsonga and Elisabeth Yansye Metekohy, 2019).

Bajdor and Grabara describe information systems that are formed solely by information (P. Bajdor and I. Grabara, 2014). This means that the diversity of information's emergence contributes to their need to categorize, which leads to certain, distinct groups of information that are formed into information systems. And information system development can be seen as part of the implementation of information technology through analysis, design, implementation, and support.

A system is defined as a collection of interconnected components that work together to achieve a specific goal. Computer technology (hardware and software) and telecommunications technology (network data, images, and sound) are combined to form information technology (Grace Persulesy et al., 2018). According to Whitten, Bentley, and D. Lonnie (2017), an information system is a collection of people, data, processes, and information technology that interact to collect, process, store, and provide information needed to support the organization.

According to J. O'Brien and G. M. Marakas (2012), information systems are a structured collection of people, hardware, software, network communications, data sources, rules, and procedures that store, obtain, transform, and distribute information within an organization.

However, the current issue is that financial data is still recorded and stored manually at the GMIM Imanuel Walian Church in Tomohon 4 Region, using resources from various applications such as paper or programs such as Word and Excel. Because of this flaw, financial data was stored separately and not centralized, making it difficult for the administrative section of church employees to obtain and manage information that took a long time to present certain reports.

This flaw also raises the possibility of data loss, whether intentional or unintentional. It is hoped that by implementing data storage in the DBMS (Database Management System), the church will be able to eliminate data redundancy, produce data consistency, and create a centralized data repository with integrated security and data access.

Furthermore, the development information system at the GMIM Imanuel Walian church in Tomohon Region 4 is a web-based application that acts as a media renderer and specifically helps the congregation access financial information in the church.

The goal of this research is to analyze and comprehend the business processes that occur at the GMIM Imanuel Walian church in Tomohon Region 4, to identify weaknesses that will become the definition of church needs, and to design a financial information system that supports church activities.

MATERIALS AND METHODS

Technology has evolved continuously in many aspects of human life, including religious institutions. The use of information and technology for communication in the church has grown in recent years. People all over the world are turning to the internet and social media to find personal, social, and religious information. Ecclesiastical institutions are increasingly devoting time and resources to increasing their web presence (C. A. Bolu, 2012).

Several studies have been conducted to examine how information and technology affect the church today. L. Gunton (2011) presented the value of information in his research by developing an understanding of how churches use information in learning, and the findings show that exploration can help church organizations, church leaders, and lay people consider how information can be used to grow faith, develop relationships, manage churches, and respond to religious knowledge.

C. A. Bolu (2012) provides additional research on the use of information and communication technology in church communication for growth in Nigeria. He investigates church leaders' perceptions of the internet's use for church growth, communication, and the deployment of church ICT infrastructure for church

administration and human resource management. According to the findings, while most churches have email addresses and websites, there is little communication between church members and leaders. Furthermore, not many churches make Bible studies, music, and other materials available for download on their websites. Finally, while most churches lack ICT personnel and infrastructure, they all agree on the importance of having one (Salaki R. Joshua, et al., 2021).

C. F. Harvey (2016) examines selected technological advances and their impact on the life and work of the church across four dimensions in his research: authority (control) is the method and means of establishing and maintaining adherence to a set of beliefs among the human population; evangelism is spreading the gospel of Jesus Christ among the unconverted and bringing them to faith in Jesus Christ as Savior and Lord; and community is gathering believers to function.

Seller, on the other hand, stated that information technology is critical to the church. Sellers stated in a journal article titled *Technology and Ministry* that "technology is the main problem for every church because it is the main problem in society" (R. Sellers, 2011). Sellers also explains that the website technology is intended to serve as a form of community for congregations; it allows people to interact online, connect with the church and with others in the congregation, and stay connected while they are away, as well as notify users about what is going on in the church.

R. E. Grinter (2011) presented their research findings in four sections, each focusing on a different aspect of the services provided by ICTs: corporate work, Sunday worship service, coordinated church community, and reaching people outside the congregation. Grinter also stated that technology is important in church management because it supports financial data, payroll for each employee, community services, and so on. C. Zech, W. Wagner, and R. West conducted additional research (2020). They attempted to discover effective church site design during their research. Most people's lives revolve around technology, primarily for religious reasons. Churches can use websites to provide information and keep members engaged with the church community.

Randi V. Palit, Yaulie D.Y. Rindengan, and Arie S.M. Lumenta (2015) developed a computer-based church financial information system in their research, focusing on the processing of church financial data. The designed system can assist in making the

registration and administration processes more effective and efficient. This system was created with PHP and MySQL applications integrated with PHPMyAdmin and XAMPP as a web server.

This application can process data and generate financial data reports. A research roadmap (Figure 1) is used to describe the development of the GMIM church financial information system application, which consists of three processes or phases. Beginning with the Listen to Customer stage, progressing to the Build/Revise Mock-up stage, and finally to the Customer Test Drive Mock-up stage.

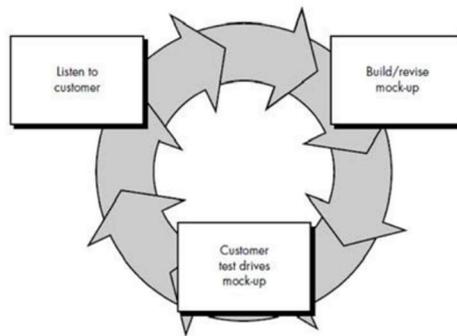


Figure 1. Prototype Method (Salaki R. Joshua, 2017)

RESULTS AND DISCUSSION

This section describes the outputs generated in the methodology section. Elaborate and compare your results with those of previous research performed in the past.

1. Listen to the customer

The prototype model starts with gathering customer requirements against software to be created. At this stage, the researcher and the team analyze the features and webpages needed for the financial information system that will be created.

Table 1. User Needs Analysis

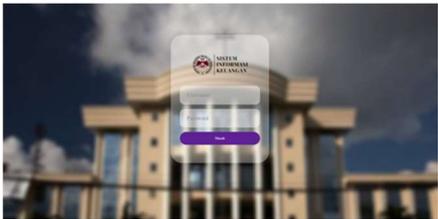
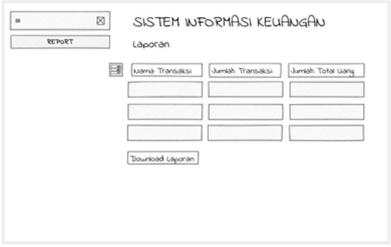
No	Web Page	Description
1	Login	The financial information system website login page is a page created to give users access to access features/services

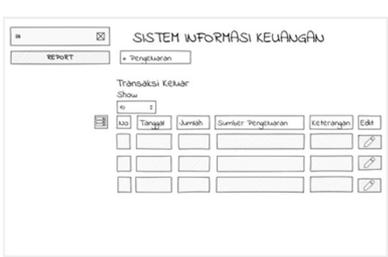
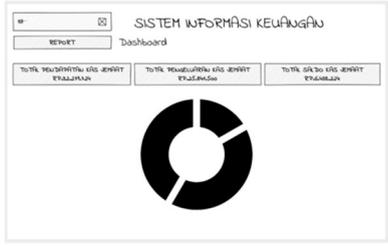
		on the website where on this page users are asked to input their username and password.
2	List of Admin	The financial information system website admin list page is a website page that contains a list of users. In this case, it is the admin/ financial manager of the church who is in charge of managing finances in the church.
3	Report	The report list page of the financial information system website is a website page that contains the name of the transaction, the number of transactions, and the total amount of money in the church. This page will also include a report download feature to facilitate reporting in the form of a report document (.Pdf).
4	Income	The financial information system website income page is a website page that contains incoming transactions consisting of date, amount, source of income and information. This page will also include an edit feature in order to update the existing data.
5	Cash disbursement	The Cash disbursement page of the financial information system website is a website page that contains outgoing transactions which include the date, amount, source of expenditure, and information. This page also includes an edit feature to update the existing data.
6	Dashboard	The dashboard page of the financial information system website is a website page that contains the total cash income of the church, the total cash disbursements of the church, and the total cash balance of the church. On the dashboard, you can see a review of your income, expenses and balances in the form of a chart.

2. Build and Revise Mock-up

After listening to customer needs, a prototype program is made so that customers are more aware of what they really want. A prototype program is usually an unfinished program that provides a view of a software flow simulation so that it looks like ready-made software. The build and revise mock-up stage is carried out to design the financial information system web page. Specifically, from the mock-up design stage to the implementation into the financial information system web page.

Table 2. Build and Revise Mock-up

No	Web Page	Build Mock-up	Revise Mock-up
1	Login		
2	List of Admin		
3	Report		

4	Income		
5	Cash disbursement		
6	Dashboard		

3. Customer Test Drives Mock-up

This prototype program is evaluated by the customer or user until it meets specifications in accordance with the wishes of the company. The test is carried out to see the level of acceptance of the use of financial information system applications by church financial users and managers.

CONCLUSION

A web-based church financial data processing system will make life easier and can improve the efficiency with which financial data is entered. This system can speed up data processing and report generation, and the resulting information is more accurate and complete, reducing errors. Improving and optimizing the church's financial process. This

is an early stage of research that will be continued and developed in response to and following the needs of the church organization.

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