



Digital Cooperative System at the Palembang Cooperative and MSME Office

Mardiana¹, Marti Utari², Diah Novita Sari³

¹⁻³ Informatics Management, Politeknik Negeri Sriwijaya
mardiana_mi@polsri.ac.id

Abstract. Digitalization is greatly influenced by technological developments, such as advances in computerization, data storage, communication networks, and software. Currently, digitalization is also used by cooperatives to be much more modern and practical. The purpose of this study was to carry out digital transformation on cooperatives through a website so that it can be accessed by all cooperatives under the auspices of Palembang Cooperative and MSME Office. This study used the DevOps (Development and Operations) method to build a web-based application on cooperative transactions so that it can be accessed by administrators, managers, and members of the cooperative digitally. Through this application, all cooperative activities can save time and energy and create transaction transparency that can be trusted by all parties and can increase the interest of the younger generation to get to know cooperatives in a more modern way. This system is expected to help develop cooperatives in Palembang to be more modern, transparent, and improve cooperative performance.

Keywords: Cooperative, Digitalization, DevOps.

1 Introduction

Currently, digitalization is carried out by cooperatives to make transactions much more modern and practical. Digitalization of cooperatives currently consists of several aspects: transactions between members, internal communication between cooperative administrators and members, cooperative management, and transparent financial management systems. To survive and remain relevant in an era dominated by Generation Z and millennials, cooperatives must pay attention to technological changes and dare to adopt technology. Currently, the Ministry of Cooperatives and MSMEs of the Republic of Indonesia is promoting digital transformation for all cooperatives throughout Indonesia through the IDX COOP platform. This platform connects cooperatives with companies that provide relevant technology. At the beginning of the program, all tech providers provided free facilities for cooperatives. However, many cooperatives have not responded to this opportunity well due to the unpreparedness of infrastructure and human resources. Digital transformation in cooperatives often takes place more slowly than

other business entities. In addition, cooperatives with non-transparent and unaccountable governance can experience obstacles in prioritizing digital transformation. Without a clear understanding of the needs and benefits of digitalization, the decision to invest in this new technology is difficult to make.

A previous study discussed the importance of cooperative digitalization such as “Cooperatives Digitalization: How Urgent and Ready is Information Technology?” from *Jurnal Akuntansi Bisnis dan Manajemen (ABM)* by Made Susilawati in 2021 in East Nusa Tenggara on how urgent and ready is the digitalization of cooperatives during the Covid-19 pandemic [1]. Then, a study entitled “Transformasi Komunikasi Digital: Upaya Untuk Meningkatkan Kinerja Koperasi: Studi Kasus Pada Koperasi Ghani Mandiri Indonesia Cimahi Jawa Barat” from *Koalisi Cooperative Journal* by Yudhistira Febryansyah in 2021 in West Java. Ghani Mandiri Indonesia Cooperative is one of the Sharia-based cooperatives in providing aqiqah, qurban, and umrah savings services. Ghani Mandiri Indonesia Cooperative is a new and developing cooperative, but, this cooperative is already preparing a digital service in the form of an application that will be presented for Android and iOS users for its members [2]. Then, another study entitled “Penerapan Sistem Kuelap Dalam Transformasi Koperasi Berbasis Digital” from *Jurnal Cakrawala Ilmiah* by Khaqim Nurjawahir, Safuan, Musa Alkadhim Alhabshy in 2022 in West Java showed that cooperative is one of the supporting sectors of the economy in Indonesia with investment capital assistance. PT. Kuelap Solusi Indonesia is a technology company that provides a digital financial service platform based on cloud computing focused on cooperative investment capital services [3].

Digital transformation has great potential as a lever for cooperatives. Various research, literature, and practices have shown that digitalization can improve operational efficiency, expand market reach, improve services to members, and create added value for cooperatives. The purpose of this study was to implement a web-based digital cooperative system using the DevOps method to make sure it can be accessed by all cooperatives under the auspices of Palembang Cooperative and MSME Office.

2 Literature Review

2.1 Digitalization

Digitalization is the transition from printed media, audio, or video to digital form. Digitization aims to create digital document archives with equipment such as computers, scanners, source media operators, and supporting software [4].

2.2 System

A system is a collection of parts or several subsystems combined to achieve a specific goal [5]. A system can be said to be good if it has special characteristics, such as [6]:

1. A complete system must consist of several parts or components to relate to each other and work together.
2. Boundary or scope of the system, is the limitation of how the system interacts with its environment.
3. The environment is everything outside the scope of the system.
4. An interface or connector is a means to connect external elements to a system and can be described as a connection between external and internal parts.
5. The process is a component of changing input into output.
6. The output shows the results of a process that can be used as input for other sub-systems in the form of required information.
7. A system is said to be successful if its goals are achieved according to plan.

2.3 Cooperative

According to Law No. 25/1992, A cooperative is a business entity whose members are individuals or cooperative legal entities relying its activities on cooperative principles, namely driving the people's economy through togetherness. [7].

3 Methodology

This study used the DevOps (Development and Operations) method where the concept, development, and delivery of software through a collaborative and integrative approach between developers (Dev) and software operations (Ops) [8]. DevOps can make software releases earlier with high frequency [9]. Figure 1 shows the DevOps phases as follows

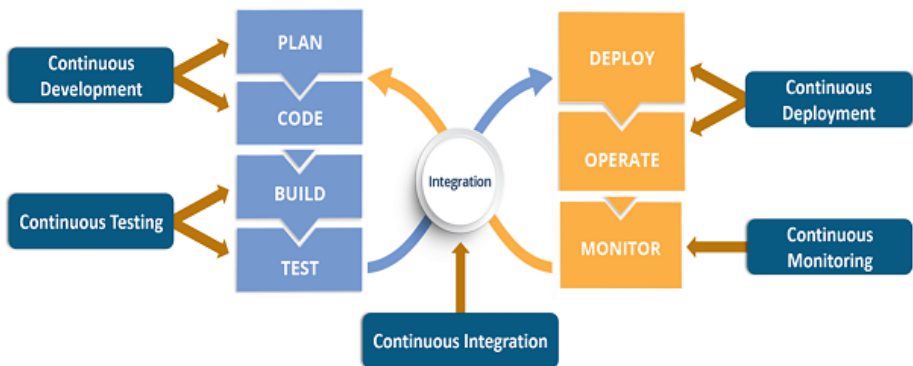


Fig. 1. DevOps Phases [10]

A. Continuous Development

This phase begins with planning and then developing the software. Once the project vision is agreed upon and defined, the developer begins to develop the application.

B. Continuous Testing

In this phase, the software being developed will be tested continuously every time there is a change or commit from the developer.

C. Continuous Integration

This phase is the core of the entire DevOps life cycle where the integration of software development and operational processes takes place.

D. Continuous Deployment

In this phase, the code is deployed to the production servers. This is important to ensure that the code works on all servers.

E. Continuous Monitoring

This phase is very important in the DevOps life cycle where application performance needs to be continuously monitored.

4 Discussion

This web-based digital transaction application for cooperatives can provide convenience for the Palembang Cooperative and MSMEs Office to provide training for all cooperative managers and administrators in understanding digital transformation. This application provides transaction information that can be accessed by administrators, administrators, and cooperative members digitally.

4.1 Interface

This web-based digital transaction application for cooperatives can provide convenience for the Palembang Cooperative and MSMEs Office to provide training for all cooperative managers and administrators in understanding digital transformation. This application provides transaction information that can be accessed by administrators, administrators, and cooperative members digitally.

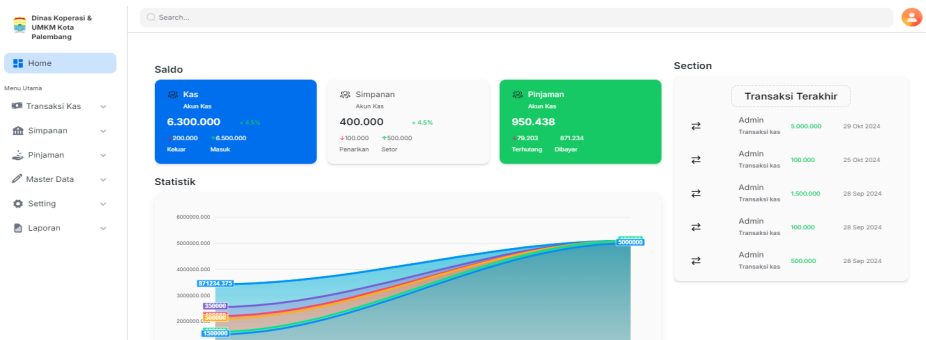


Fig. 2. Home Page

On the homepage, users can access features as needed. Users are required to fill in a username and password to be able to enter the homepage.

Search...

Master data > Jenis akun kas

Data Akun Kas

Nama Akun Kas *

Model Awal *

Tipe Akun *

Jenis Akun *

Kas *

Kategori Akun *

Apakah akun kas berupa:

☐ Pemasukan

☐ Pengeluaran

Tambah

Fig. 3. Master Data Page

Figure 3 shows the Master Date page with the following menus: type of savings, type of cash account, cash data, installment period, goods data, member data, and user data. This page can be accessed by users and administrators of cooperatives.

Search...

Transaksi kas > Pemasukan

Pemasukan

Tanggal Transaksi *

09/02/2024

Jumlah Uang Masuk

Keterangan

Dari Akun *

Untuk Kas *

Simpan

ID	TANGGAL TRANSAKSI	URAIAN	JUMLAH	AKUN KAS	USER
TKD2400001	8/31/2024	Model awal akun kas 'Kas Pokok'	Rp 100.000,00	Kas Pokok	admin
TKD2400002	8/31/2024	Sumbangan masyarakat	Rp 200.000,00	Kas Pokok	operator
TKD2400003	9/3/2024	Sumbangan	Rp 100.000,00	Kas Pokok	admin

Fig. 4. Transaction Page

Figure 4 shows the cooperative financial cash transaction features that can be accessed by users. These financial cash transactions include income, expenses and transfers.

5 Conclusion

Digitalization has a positive impact on cooperatives under the auspices of Palembang Cooperative and MSME Office. Applications built can be a solution for cooperatives that have not implemented technology. With this technology, administrators, managers,

and cooperative members can work faster and more efficiently. The DevOps method is present as a solution for developing an application.

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