



## An Agile Development Method of Employee Co-op Shop Web-Based Sales Information System

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### Abstract

Constructing a sales information system is a critical step to improve the sales process of productivity and efficiency. Kopkar 24 MMF as an employee co-op shop which is involved in the procurement and distribution of fast-moving consumer goods. Nowadays, it still conducts manual transactions through order cards and these lead to numerous impediments on commercial development to gain more revenues. The goal of this study is to construct a web-based sales information system utilizing the Laravel framework through an agile development method. This research specifically to streamline and expedite the transaction process including the storages of goods. An agile development method is used to ensure the system development occurs in iterative stages and can swiftly adapt business evolvement. This web-based sales information system contains five primary functionalities which are product management, employee management, transaction management, billing reports, and other elements that facilitate the sales process at Kopkar 24.

**Keywords:** Sales Systems, Co-Op Shop, Laravel, Agile.

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### 1. Introduction

Cooperatives are a type of micro, small and medium enterprises (MSMEs) that seek to improve the welfare of their members by carrying out collective economic efforts [1]. Those MSMEs carry out economic activities by selling fast-moving consumer goods as basic necessities which mostly made by their members include the Kopkar 24 MMF as an employee co-op shop. The commercial operation of MSMEs is comprehensive supported by the government as stated in the Government Regulation No. 7 of 2021 [2]. These days, Kopkar 24 MMF experiences some constraints with its service procedures. Kopkar 24 MMF is capable of carrying out approximately fifty to seventy transactions within 45 minutes. Current payment method still relies on manual order cards which increases the processing time. Cashiers often feel overwhelmed during this short period of time which can result human error and ultimately lead to incorrect sales figures. Inaccuracies in this data will have impacts on the process of preparing financial reports and the responsibilities of management at member meetings. Therefore, it is very important to develop a sales information system that can streamline and speed up the transaction process, handle data processing efficiently, and ensure organized sales data storage [3][4].

Kopkar 24 MMF utilizes Laravel as the framework foundation for developing a web-based sales information system due to its extensive range of features and capabilities. This framework facilitates accelerated development and simplifies code management for the developers [2], [5]. Also, agile development method is used in developing the sales information system as a strategy which enables Kopkar 24 MMF to have extensive interaction during the system design process [6] because the agile development method serves as a substitute for the unchangeable and sequential waterfall process where the common issues lies in the rapid and ever-changing market demands. Hence, software development must possess the capability to adapt to evolving patterns [7]. The agile development method is well-suited for sales information systems due to its ability to facilitate iterative and incremental system development. This enables quick adaptations to evolve client or market requirements. Additionally, the agile development process fosters extensive engagement between the development team and stakeholders, ensuring the developed system aligns with the user needs and expectations [8].

The issues regarding agile development method in sales information systems have been widely researched, including by [9] which is proposed to design a point-of-sale system at the Eka Putra Store using the agile development method with the aim of helping the store to check sales reports in real time, making transactions

easier, and creating a good communication flow between buyers and sellers; 2) Research conducted by [10] developing a point-of-sale system at Cora Petshop using Scrum method as part of agile development to simplify data management and transaction processes where the result gets an average score of 87 using the system usability scale. This shows that the system is quite good and suitable for use; 3) further research by [11] concluded that the design and implementation of a web-based Cosmetic Sales Application in the Bless Me Cosmetic Case Study was very helpful in carrying out the transaction process more accurately and easily, and the use of the agile development method could speed up the development process. Refer to those that the agile development method can quickly and precisely develop a reliable sales information system according to user needs and requirements.

## 2. Research Methods

The research stage contains of the data retrieval and collection stage, the analysis stage, the system design stage, the system development stage, and the system testing stage. The following flow of the research stages:

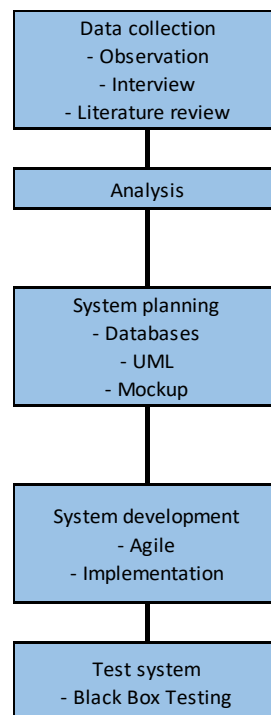


Figure 1. Research stages

### 2.1. The Process Of Retrieving And Collecting Data

The data collection procedure is a crucial stage in research, as the acquired data serves as the foundation for the system development [12]. Conducting the data gathering method meticulously and comprehensively is crucial to ensure the research findings are valuable and align with the desired system at Kopkar 24. The data collection and retrieval process in this research was conducted using three methods which are literatures review, observation, and interviews.

#### a. Observation Data

Employees still write order cards by hand to carry out transactions. The management is responsible for updating product data on the wall list every time there is a price change and there are new products. Employees must look for codes for each product purchased. Employees need a lot of time to complete transactions. Employees are less enthusiastic about the existence of cooperatives because they consider the transaction process to be complicated and time consuming.

#### b. Interview Data

The interview sessions were conducted as part of research of the information system development for Kopkar 24. The main aim of these sessions were to find out the perspectives and direct experiences of the parties involved in Kopkar 24 as well as ways to resolve these problems. Those sessions were conducted in two stages where the first stage was carried out with the representative of Kopkar 24 as the manager, who will hereinafter be called respondent 1, and the second one was carried out with the accounting party as the party who received the final report, who will hereinafter be called respondent 2.

According to respondent 1, currently Kopkar 24 does not have a system to help transactions process and data record which causing many employees are not interested to shop at Kopkar 24. Apart from that, Kopkar 24 suffers many losses every month because there are many slow products selling and some of them already expired. At the end of each month, the co-op shop crews must manually report all the invoices and manually recap all transactions to the accounting department. Hence, Kopkar 24 urgently requires a simple but reliable information system which helps employees carry out transactions independently without depending to the co-op shop crews, therefore, employees will feel satisfied due to no more experiences any shopping difficulties. The co-op shop crew will be greatly assisted in managing many invoices as all reports can be generated by the information system.

Next, The respondent 2 explained about the often delays in providing invoice reduction proof, causing the accounting department to have difficulty in deducting employee salaries in the same month. Respondent 2 added that often receives complaints from employees because the salary deduction is not the same as the goods they have purchased where the mistakes were made by Kopkar 24. A big hope from respondent 2 about an information system that can create accurate invoice reports to reduce complaints from the employees due to the salary deduction is not the same as the goods they have purchased.

### c. Literature Review

Collectong data through literature review and sales information system references in books, scientific journals, articles, libraries, or online databases. This is done to identify the basic concepts needed to build a sales information system, such as sales data models, sales business processes, and the technology used. The theory discovered was then used to create a framework or structure for the Kopkar 24 information system. By conducting in-depth literature research, the author gained the understanding and knowledge needed to create an effective and innovative sales information system.

## 2.2. Analysis Stage

### a. Analyzing the Running System

Shopping transactions at Kopkar 24 are still carried out by recording them on the order card, and the shop admin will input the orders one by one into the order list to make a report which may has many risks.

### b. Analysis of the Proposed System

The results of the current system business process analysis show that errors made manually can still be reduced or avoided with information technology. Kopkar 24 requires a new system that leverages advanced information technology to expedite data processing, streamline transaction processes, and simplify the creation of transaction reports for accounting and information tracking. This analysis aims to give the cooperative management a comprehensive overview of the system that Kopkar 24 will create and implement.

## 2.3 System planning

The aim of this system design is easiness of system development and serve as documentation material [13], [14]

### a. Database Design

The database design and system tables designed can be seen in the following image:

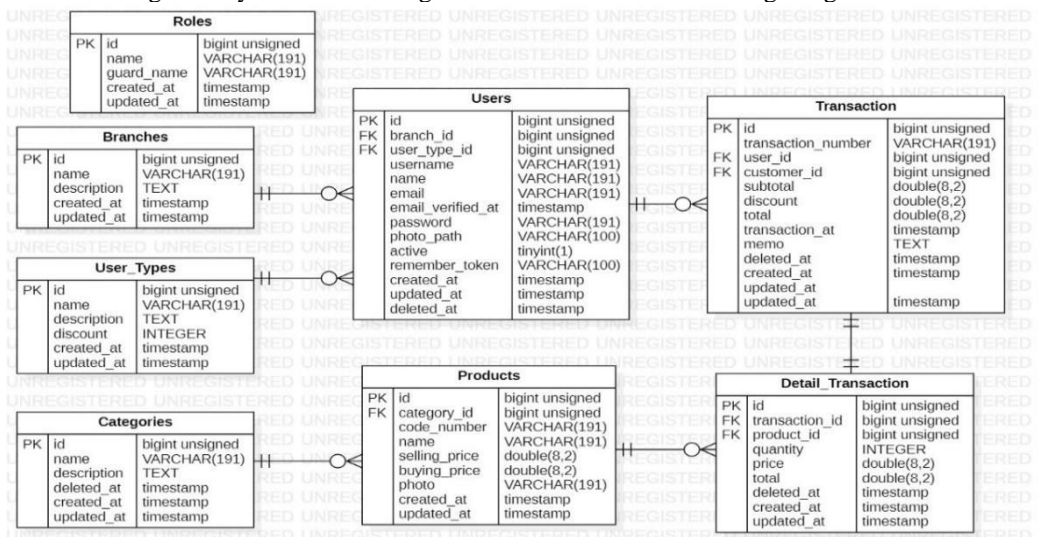


Figure 2. Sales system database design for Kopkar 24

### b. UML

The system development process, known as UML (Unified Modeling Language), documents and implements system specifications using a graphical language. Another name for UML is object-oriented system design (OOP) tools. UML is a writing standard or template that addresses business classes and processes in a specific language. Currently, UML is a standard language that is often used to design a system so that it is easy for ordinary people to understand. UML functions to make it easier for system designers to prepare the system to be created [3], [15], [16] .

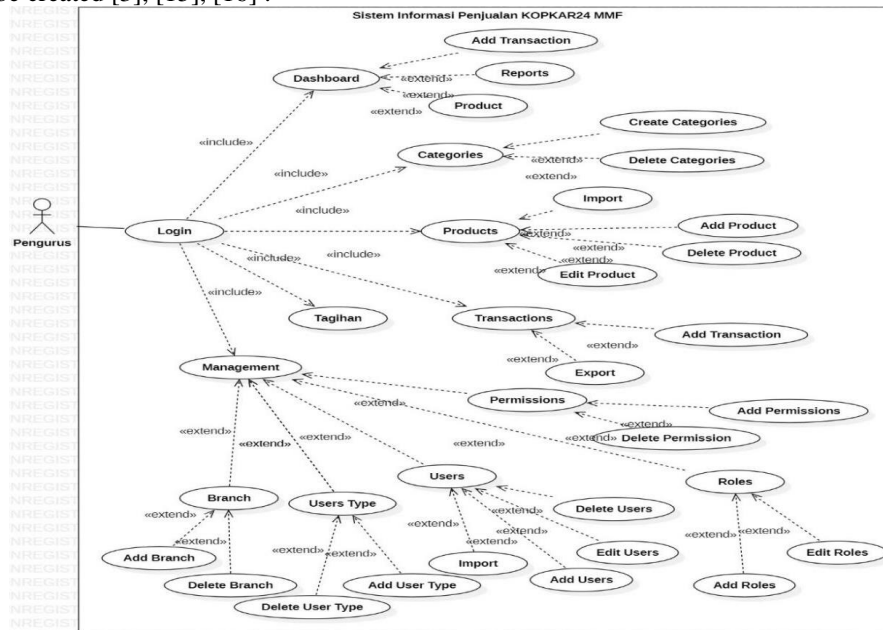


Figure 3. Use case sales information system diagram for Kopkar 24

The picture above shows the relationship between the cooperative management actor and the use case, which explains that the system has access rights to input, edit, delete user (employee) data and product data, add transaction processes, process transaction data, check user bills, management system permissions, roles, management user type, and branch.

#### 1. Login

During the login process, only administrators can access it. In this process, the administrator must enter a username and password to be able to access the system. After the administrator has successfully logged in, there are six features that can be accessed by the administrator, namely the dashboard, categories, products, transactions, billing, and management.

#### 2. Dashboard

In this menu, there are 3 sub-menus: add transaction, which functions as a shortcut to the add transaction feature; products, which is a shortcut to the product list menu that already exists in the system database; and reports, which is a shortcut to the billing menu.

#### 3. Categories

This menu contains a list of categories of products that will be sold. This menu aims to make it easier for managers to categorize products according to type, supplier, and others.

#### 4. Products

On the products page, there are import and add product buttons. The import button functions to add product data that previously existed in Kopkar 24 as an Excel file. This was created so that administrators no longer need to add products one by one. The add product function is to add a new product. In the add product form, the user must add product categories, a product code, a product name, a selling price, and a product purchase price.

#### 5. Transaction

In this menu, employees can use it to process shopping transactions. The features are made as simple as possible so that employees who are not used to using computers do not experience difficulties when carrying out independent transactions.

#### 6. Management

This menu functions as a system access controller. Administrators can set up new users or delete them; administrators can also manage user access rights to the system. In this menu, a sub-menu branch is added, which functions if Kopkar 24 wants to open a branch outside PT. MMC Metal Fabrication no longer needs

to create a new system. Just add a branch, and the system can be controlled and monitored by the administrator.

## 7. Bill

This billing page contains all transaction records that have been carried out using the system. Billing records can be filtered by date and also by the name of the employee who made the transaction. This billing page can be accessed by administrators and users who have been granted access rights.

## c. Mockup

A mockup is an illustration of how a design concept will look when applied to a real object. The mockup is part of a preview of a "flat" design concept that is given visual effects so that the results look similar [17] .

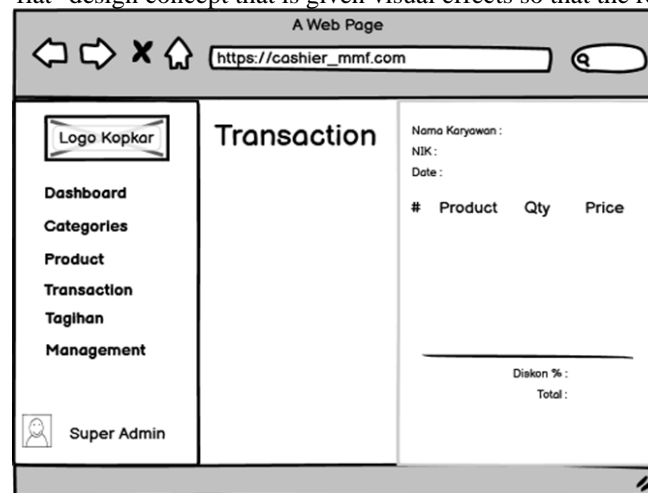


Figure 4. Transaction mockups

In this transaction form, the user is required to enter employee data by scanning the Mandiri card and scanning the product barcode. In this transaction process the data will be stored in the transaction menu. Apart from carrying out transactions, users can also download the bill in .csv form.

## 2.4. System Development

Agile development is a software development method based on the principles of rapid adaptation to existing changes and intensive interaction with clients during the system design process [18], [19].

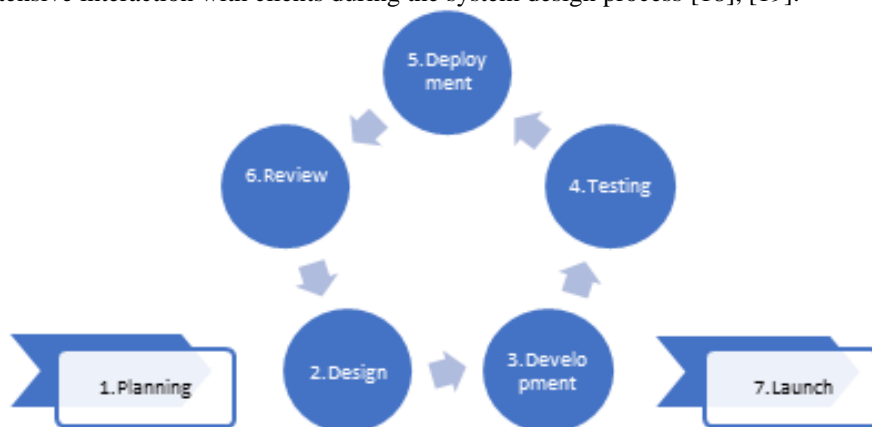


Figure 5. Stages of the agile development method

The stages of the Agile Development method include planning, design, development, testing, deployment, review, and launch. The following is an explanation of the stages of agile development [20], [21], [22]:

### 1. Planning

An important stage in the Agile methodology is planning, which allows developers to understand the goals of the project, determine requirements, and plan the actions to be taken to achieve the desired results. During

the planning stage, developers work closely with stakeholders to determine which features are most important to develop and identify what is most important.

## 2. Design

In the Agile methodology, the design stage is when creating a detailed product design. Although this stage can be carried out simultaneously with development, this design stage includes visual aspects, the user interface, and the overall structure of the product.

## 3. Development

When developers start translating planning plans into working code, this is the development stage in the Agile methodology. Coded and integrated into the product are features that have been prioritized in the planning stages. Developers can regularly create product replicas that can be checked by stakeholders because development is done in short iterations called sprints.

## 4. Testing

To ensure that the features that have been developed operate correctly and are free from bugs, the testing phase is an important step in the Agile methodology. During and after development, testing is carried out regularly. Functional, integration, and performance testing are some of the types of tests included in testing.

## 5. Deployment

The product that has been developed is implemented or delivered to the production environment or user at the delivery stage. Delivery is done repeatedly in the Agile methodology. From the start, this method allows developers to collect user feedback and make changes if necessary.

## 6. Review

This process is very important in the Agile methodology because it ensures that the product develops according to the wishes and expectations of the users.

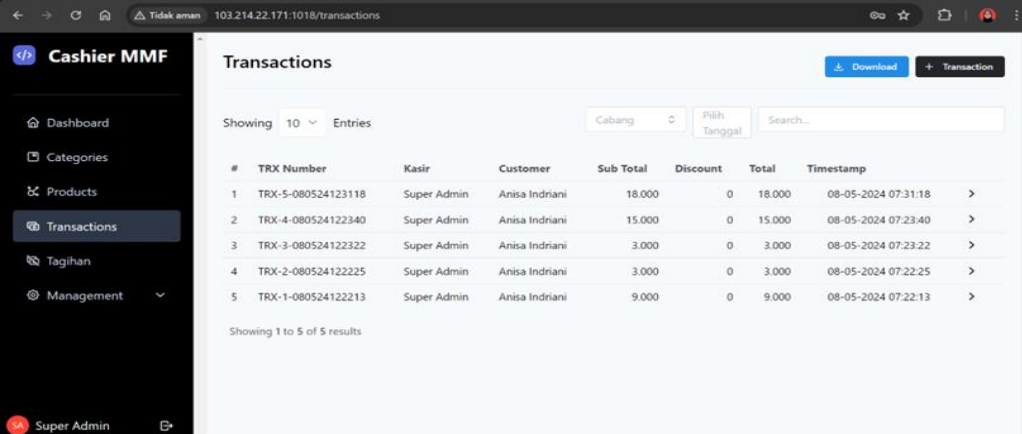
## 7. Launch

When the product is finally ready to be released to end users after going through various stages of development, testing, and improvement, the launch stage is considered to have reached sufficient quality for use by consumers.

## 3. Results and Discussion

### 3.1. Results

Based on the test results using Black Box with 40 test scenarios, it was found that the proposed system was in accordance with the design. The system can overcome problems at Kopkar 24. Figure 6 and Figure 7 are the transaction pages, and Table 1 is a test scenario to verify the function of the transaction page.



#	TRX Number	Kasir	Customer	Sub Total	Discount	Total	Timestamp
1	TRX-5-080524123118	Super Admin	Anisa Indriani	18.000	0	18.000	08-05-2024 07:31:18
2	TRX-4-080524122340	Super Admin	Anisa Indriani	15.000	0	15.000	08-05-2024 07:23:40
3	TRX-3-080524122322	Super Admin	Anisa Indriani	3.000	0	3.000	08-05-2024 07:23:22
4	TRX-2-080524122225	Super Admin	Anisa Indriani	3.000	0	3.000	08-05-2024 07:22:25
5	TRX-1-080524122213	Super Admin	Anisa Indriani	9.000	0	9.000	08-05-2024 07:22:13

Figure 6. Transaction page

On the transaction page, users can download transaction data according to their needs based on branch, specific date, or employee name. Apart from that, on the transaction page, users can see invoices for transactions that have been carried out. Because the transaction process can be carried out independently by buyers (employees), this system is designed to be very easy. Employees can scan products or independent shopping cards first.

Figure 7. Transaction form

The transaction process cannot be added if the product and independent shopping card are not scanned. This is to avoid transactions where the employee name and total transaction are empty. On the transaction page, users can download transaction records to be used as billing report material for accounting. The downloaded report will be saved as a.csv file. The testing scenario for the transaction page, along with the test results, will be depicted in the table below :

Table 1. Transaction page testing

No	Test Scenario	Expectations	Results	Conclusion
1	Click add transaction	The system immediately displays the create transaction form	The system successfully displays the form create transaction	Valid
2	Search products	The product you are looking for may appear	The system successfully displays products that match the keywords that the user enters in the search bar	Valid
3	Search products by categories	The products that appear are only products that match the category the user needs	The system successfully displays categories according to user requests	Valid
4	Click enter to automatically add transactions	The system saves transactions by simply clicking enter after the product and card are scanned	The system has successfully saved transaction data	Valid
5	Add transactions before scanning member shopping cards	The transaction process is rejected and the system will display a warning "You have not scanned your Mandiri card"	The system refuses to add the transaction and successfully displays "You have not scanned your Mandiri card"	Valid
6	Add transactions before scanning products	The transaction process is rejected and the system will display a warning "You have not scanned the product"	The system refuses to add transactions and successfully displays "You have not scanned the product"	Valid
7	Add transactions after scanning member shopping cards and products	The transaction process is successful and the system will display "Transaction successfully added"	The system successfully added the transaction and successfully displayed "Transaction successfully added"	Valid
8	Download transaction results into a .csv file	Transaction data files are downloaded and saved in .csv format	The transaction data file has been successfully downloaded and saved in .csv format	Valid
9	Displays transaction invoices	The system displays transaction invoices according to the transactions carried out	The system successfully displays the requested transaction invoice	Valid
10	Administrator delete transaction	Deleted transactions do not appear on the transaction page	The system successfully does not display deleted transactions	Valid

### 3.2. Discussion

Kopkar 24 as an employee co-op shop which had previously relied on manual transactions with order cards, was deemed less effective in meeting its business needs. The research shows that the development and implementation of sales information resulting an operational efficiency, carrying out transaction processes easiness, data produced accuracy, customer satisfaction, and sales increament. The following are the results of the analysis of the sales information system at Kopkar 24:

#### a. Analysis of Results with Problem Background

There is significant progress by implementing information systems in business processes. The digitalization carried out at Kopkar 24 received a positive response from the employees which increasing the transactions volume and the revenue is growing as well that can improve the welfare of its members.



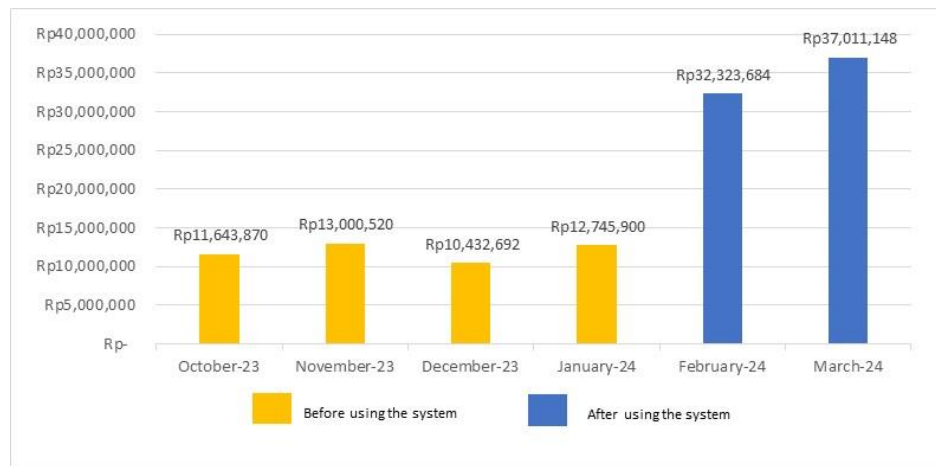


Figure 8. Total transactions from Oct 23 to Mar 24

Very small number of total transactions before implementing the information system (Oct 23 to Jan 24) compares to the total transactions after implementing the information system (Feb 23 to Mar 24). Kopkar 24 estimates a 50% increase in remaining business revenue at the end of 2024 due to transaction volume increment which in line with the cooperative's aim to improve the welfare of its members.

#### b. Results Analysis Implementing Agile Development Method

An analysis of the agile development methodology in the Kopkar 24 information system can provide insight into how this approach can influence information system planning and implementation.

##### 1. Customer engagement

During the system development process, the developer received several suggestions that were very helpful in the system improvement process. Through rapid iteration and repeated testing, developers can actively obtain feedback from customers and accommodate their changing needs more flexibly.

##### 2. Adaptability to change

Developers have received requests for changes several times in the system development process, such as removing the employee name option on the transaction form. This was a request from Kopkar 24 to avoid unwanted transaction processes by adding a user types menu option to categorize employees and removing the rule for creating a password of at least 8 characters. Using the agile development method allows developers to be more responsive to changes in the market or customer needs.

##### 3. Strong team collaboration

Using the agile development method really allows for collaboration between developers and related parties at Kopkar 24. This can ensure that the business vision and goals are achieved through the design and implementation of an effective sales system.

#### c. Results Analysis utilizing the Laravel Framework

An analysis of using Laravel framework for Kopkar 24's transportation system reveals its impact on development, efficiency, and system scalability. Laravel offers quick development due to its fast-paced development process, including migration, eloquent ORM, and blade templating engine, and its active development community, enabling quick and efficient solutions to technical issues.

#### d. Analysis of Results with Data Collection Process

The comparison made by the author before and after the sales system was made based on the data that the author managed to obtain:

Table 2. Comparison results table before and after using the system

No	Before using the sales system	After using the sales system
1	Writing orders is still manual using the "Order Card"	No need to write in the "Order Card", employees can directly carry out transactions by scanning product barcodes and by Mandiri card
2	The administrator must input the "Order Card" data to create a report	Administrators does not need to input "Order Card" data, because all transaction processes have been recorded in the system
3	Often receive claims from accounting	Currently, Kopkar 24 has never received a claim from accounting either due to late reports or data errors.
4	Sales are low because employees have less purchasing	Increased sales because employees can easily carry out



	power	transactions
5	The transaction process is long because it can take 1 minute for just 2 customers	The transaction process is faster and easier

#### 4. Conclusion

Developing a web-based sales information system using the Laravel framework and agile development methods for Kopkar 24 can provide convenience to related parties regarding the transaction process, ease in managing Kopkar 24 data, make it easier to store and search for information, and help improve business processes at Kopkar 24. With the existence of an information system at Kopkar 24, service to employees has also increased, and cooperative profits have also increased. The agile development system development method really helps the author in the system development process if Kopkar 24 has a sudden request for feature changes in the system being created. Using the Laravel framework also makes it easier for writers because the Laravel framework provides many plugins that can help writers develop systems without having to rebuild the system, which will take longer.

Obviously, this research has some limitations due to some constraints such as time period of research, number of respondents, data samples and technology stacks. Furthermore, another researchs can continues this one by having more respondents especially persons who incharge in MSMEs retail stores who have better understanding of FMCG supply chain system [4]. Further research can develop the mobile applications version of this Kopkar 24 employee co-op shop which transforms it as mobile commerce [23] that allows shop crews to maintain the stock and provides report from anywhere and the employee as customer will more flexibility to purchase anytime.

#### References

- [1] M. H. Wibowo, F. Ulum, "Sistem Informasi Koperasi Simpan Pinjam Berbasis Website pada PRIMKOPPABRI Bandar Lampung," vol. 4, no. 1, pp. 22–27, 2023, doi: 10.33365/jtsi.v4i1.2434.
- [2] M. A. Chalim, P. R. Listiyowati, L. Hanim, and MS. Noorman, "Peran Pemerintah Dalam Pengembangan Koperasi Modern Dan UMKM Berdasarkan PP NO. 7 Tahun 2021," *Audi Et AP : Jurnal Penelitian Hukum*, vol. 1, no. 01, pp. 21–29, Jan. 2022, doi: 10.24967/jaeap.v1i01.1490.
- [3] M. A. Firmansyah, N. Ramsari, and A. D. Rachmanto, "Rancang Bangun Sistem Informasi Penjualan Pada Toko Buku Kita Tasikmalaya Berbasis Web Menggunakan Framework Laravel 8," 2022. [Online]. Available: <http://jurnal.unnur.ac.id/index.php/jurnalfiki>
- [4] D.K. Pramudito, K.Kamar, A.A.Bakri, Husaini., N.K. Pratiwi, "Analysis of Internal Inventory Control Systems and Accounting Information Systems For Product Stock Inventory in ANationalCorporate Wear Manufacturing Company," *Jurnal Informasi dan Teknologi*, Vol.5 , No.4, pp.305-311, 2023, <https://doi.org/10.60083/jidt.v5i4.457>
- [5] A. R. Naufal, D. A. Nawangnugraeni, and A. T. Suseno, "Rancang Bangun Sistem Informasi Point Of Sale Multi Outlet Dengan Menggunakan Framework Laravel Di Koperasi Itsnu Pekalongan," *Jurnal Teknik Informasi dan Komputer (Tekinkom)*, vol. 5, no. 2, p. 280, Dec. 2022, doi: 10.37600/tekinkom.v5i2.591.
- [6] A. Sunardi and Suharjo, "MVC architecture: A comparative study between laravel framework and slim framework in freelancer project monitoring system web based," in *Procedia Computer Science*, Elsevier B.V., 2019, pp. 134–141. doi: 10.1016/j.procs.2019.08.150.
- [7] Y. Wahyuningsih and F. Mahendrasusila, "Rancang Bangun Sistem Proses Transaksi Perusahaan Berbasis Website Dengan Metode Agile Development," *Jurnal PROSISKO*, vol. 11, no. 1, pp. 10–19, Mar. 2024.
- [8] S. A. Putri, W. Hayuhardika, N. Putra, and B. T. Hanggara, "Pengembangan Sistem Informasi Penjualan dan Pemesanan Plywood berbasis Web menggunakan Teknologi Framework Laravel dengan memanfaatkan Payment Gateway Midtrans (Studi Kasus: CV Mirai Alam Sejahtera)," 2022. [Online]. Available: <http://j-ptiik.ub.ac.id>
- [9] S. W. Jelantik, P. T. H. Permana, and N. M. Estiyanti, "Analisis Dan Perancangan Sistem Point Of Sales Menggunakan Metode Agile Development Pada Toko Eka Putra Sukawati," *Jurnal Ilmiah Teknik Informatika dan Sistem Informasi*, vol. 10, no. 1, pp. 185–198, 2021.
- [10] D. Auditira, A. Triayudi, and D. Hidayatullah, "Implementasi Point of Sale Pada Cora Petshop Menggunakan Metode Agile dan Scrum Framework," *Journal of Information System Research (JOSH)*, vol. 4, no. 2, pp. 532–542, Jan. 2023, doi: 10.47065/josh.v4i2.2966.
- [11] Y. Vio Euaggelion and R. Somya, "Analisis Dan Implementasi Aplikasi Penjualan Kosmetik Di BMC Berbasis Website Menggunakan Framework Laravel," *JURNAL INOVTEK POLBENG - SERI INFORMATIKA*, vol. 7, no. 1, pp. 37–49, 2022.
- [12] A. Surahmat, "Rancang Bangun Aplikasi Sistem Penjualan Pada Percetakan Cubic ART," *JATI (Jurnal Mahasiswa Teknik Informatika)*, vol. 7, no. 1, pp. 82–86, Feb. 2023.
- [13] S. Mulyani, *Analisis dan Perancangan Sistem Informasi Manajemen Keuangan Daerah: Notasi Pemodelan Unified Modeling Language (UML)*. Abdi Sistematis, 2017.
- [14] V. B. Anwari, F. Ferdiansyah, "Implementasi Sistem Informasi Kasir Pada Rakab Mercon Berbasis Web," 2022.
- [15] E. Saputro, M. Y. Putra, and A. Safei, "Sistem Informasi Penjualan Benang Berbasis Website Menggunakan Framework Laravel Pada Pt. Sulindamills Cikarang Barat," vol. 6, no. 1, pp. 41–50, 2021.
- [16] S. Suharnawi, R. R. Sani, and W. P. Loka, "Sistem Informasi Penjualan Online Berbasis Web pada Toko Sari Tani Tegal," *JOINS (Journal of Information System)*, vol. 5, no. 2, pp. 256–264, Nov. 2020, doi: 10.33633/joins.v5i2.3853.

- [17] R. Hanafi, C. Wibowo, and A. B. Putra, “Sistem Informasi Bimbingan Konseling Berbasis Web (Studi Kasus : Smk Negeri 1 Mojoagung),” 2020.
- [18] D. Y. K. N. E. W. N. Yanuardi, “Pencatatan Transaksi Keuangan Umkm Berbasis Website Menggunakan Metode Agile Development,” *Academic Journal of Computer Science Research*, vol. 5, no. 2, pp. 104–109, 2023.
- [19] U. Dani and M. L. Hamzah, “Design And Construction Of Activity Reporting Information System Of Pt. Siak Alam Lestari With Agile Development Methods,” *Journal of Information Technology and Computer Science (INTECOMS)*, vol. 6, no. 1, pp. 371–376, 2023.
- [20] S. R. Yulianto, “Sistem Informasi Pemesanan Lapangan Futsal Berbasis Web Menggunakan Metode Agile Development Pada Bineka Futsal Cileungsi,” *Jurnal Teknologi Pelita Bangsa*, vol. 12, no. 1, pp. 1–9, 2020.
- [21] A. L. Irawan, A. Triayudi, and A. Iskandar, “KLIK: Kajian Ilmiah Informatika dan Komputer Implementasi Sistem Point of Sales Menggunakan Metode Agile Development,” *Media Online*, vol. 3, no. 6, pp. 1326–1333, 2023, doi: 10.30865/klik.v3i6.940.
- [22] W. W. Kalengkongan, E. Alfonsius, M. Inra Takaendengan, P. Studi, and S. Informasi, “Goods Sales Information System Using Website-Based Agile Development Methods (Case Study At XYZ Store),” 2023.
- [23] D.K. Pramudito, a. Nuryana, S. Assery, H. Purnomo, & A.A. Bakri. “Application of Unified Theory of Acceptance, Use of Technology Model and Delone & Mclean Success Model to Analyze Use Behavior in Mobile Commerce Applications,” *Jurnal Informasi Dan Teknologi*, vol. 5, no. 3, pp.1-6. <https://doi.org/10.60083/jidt.v5i3.382>