

Personnel management information system in order to create up-to-date and integrated personel data and information in the personnel and human resources agency in malaka regency

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Abstract

Purpose: This study discusses the personnel management information system to create up-to-date and integrated personnel data and information in the Personnel and Human Resources Development Agency in Malaka Regency.

Research Methodology: This study used a qualitative approach. Data collection methods for this research will be conducted through interviews, observations, and document searches. The data analysis technique used in this study is based on the theory of Miles and Huberman.

Results: The findings reveal that the implementation of SIMPEG in Malaka Regency remains ineffective. Personnel data management still relies heavily on manual (paper-based) and Excel systems, leading to delays, inaccuracies, and unintegrated databases. Problems include mismatches between BKPSDM records and the State Civil Service Agency (BKN) system, resulting in canceled promotions, delayed pension processing, and the inappropriate placement of civil servants. Major inhibiting factors include limited budget allocations, the absence of a permanent building and adequate IT infrastructure, and insufficient human resources with IT expertise.

Conclusions: The study concludes that SIMPEG has yet to be effectively realized in Malaka Regency, causing inefficiency, inaccuracies, and poor service delivery in personnel management.

Limitations: Researchers find it difficult to make more detailed observations; therefore, they cannot display more related data and information.

Contribution: This research can serve as a scientific basis for evaluating the application of the personnel information system at the Personnel and Human Resources Development Agency of Malaka Regency. In addition, this research can provide scientific information for students of Public Administration Science.

Keywords: *Management, Personnel, Systems, Technology*

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1. Introduction

Information technology plays an important role in improving the quality of an organization. The use of technology and information can produce a level of efficiency in various aspects of information management that is aimed at the timeliness of processing, accuracy, and correctness of the information (validity) produced. Kumorotomo and Margono (1994) state that in facing the growth and development

of an organization that is already so complex, it is necessary to have a management information system capable of helping to provide data and information as materials for determining development policies and strategies as well as for the availability of operational data and information (Firmansyah, Satriawan, & Indrawan, 2023). One of the impacts of the application of information technology is the creation of a personnel management information system (SIMPEG) in organizations for managing human resources. The Personnel Management Information System (SIMPEG) will provide great benefits in efforts to regulate human resource management and improve the quality of human resources and personnel management (Selvaraj & Venkatakrishnan, 2023). The use of personnel management information systems is useful for reducing costs, improving communication, and reducing time to complete personnel-related activities (Liao, Liu, & Chen, 2020).

The implementation of the Personnel Management Information System in government agencies is regulated in the Decree of the Minister of Home Affairs Number 17 of 2000 concerning the Personnel Management Information System of the Ministry of Home Affairs and Regional Government article 3 (paragraph 3) that the Regency/City SIMPEG is domiciled in a Regency/City, which manages it functionally implemented by the Regency/City Civil Service. Furthermore, in the Decree of the Minister of Home Affairs Number 17 of 2000, it is explained that the Personnel Management Information System (SIMPEG) is an integrated totality consisting of processing tools, including collectors, procedures, processing staff, and software; storage devices, including data centers and data banks; and communication devices that are interrelated, dependent, and mutually determining in the framework of providing information in the field of personnel. SIMPEG contains data such as basic civil servant data, biodata, salary data, positions, ranks, family relationships, and work units.

The Personnel and Human Resources Development Agency (BKPSDM) of Malaka Regency is one of the Regional Apparatus Organizations (OPD) that functions as a supporting element of government affairs in the scope of civil service management of the State Civil Apparatus (ASN), which is under and responsible to the Regent of Malaka. Based on the Malaka Regent Regulation Number 54 of 2017 concerning Position, Organizational Structure, Duties and Functions, and Work Procedures of the Personnel and Human Resources Development Agency of Malaka Regency, the Malaka Personnel and Human Resources Development Agency has the duty and obligation to assist the Malaka Regent as an Officer for Human Resources Development Regions in implementing the management of Regional Civil Servants of Malaka Regency. The Personnel and Human Resources Development Agency of Malaka Regency is an agency that has the main task of carrying out regional government affairs in the formulation and implementation of regional policies in the field of personnel and human resources development.

As stated earlier, one of the important facilities that the Malaka Regency Personnel and Human Resources Development Agency must have to support its main duties in the field of employment in accordance with the Minister of Home Affairs Decree Number 17 of 2000 is the Personnel Management Information System (SIMPEG). This is because this system can improve the quality of human resources by providing accurate and efficient data and information, thus supporting objective decision-making. The Personnel Management Information System can cultivate knowledge, maintain, enrich, and provide knowledge in the field of personnel to those who need it as a basis for making accurate decisions at the right time.

SIMPEG is a personnel management information system needed by government agencies to increase information transparency, facilitate the work of Civil Servants, and is used as an analysis and formulation of policies and their implementation in the field of Civil Servant human resources through a computerized personnel database system. SIMPEG, which is generally understood as a personnel management information system, includes hardware, software, computer network devices, and operating procedures, which are closely related to government regulations or policies. SIMPEG is a system, which is a collection or set of elements, components, or variables that are organized, interact with each other, and are integrated (Kumorotomo & Margono, 1994). McLeod Jr and Schell (2008) state that the Human Resources Information System (HRIS) in Indonesia is known as the Personnel Management Information System (SIMPEG), which deals with designing personnel data formats and

arranging systems for collection, processing, storage, and reporting of personnel information consisting of employee data, position data, education data, reward data, education and training data, family data, attendance data, and others. This allows information to be managed regarding planning employee needs, performance appraisal, coaching and career development, welfare, and dismissal or retirement.

However, since 2013, the Personnel and Human Resources Development Agency of Malaka Regency has not had a Personnel Management Information System, so it still uses a manual (paper-based) process to manage personnel data and information. Manual processing (paper-based) is a form of processing that uses the basis of a stack of records stored on file racks. If a file is needed, it is searched for on the shelves (Kadir, 1999). As a result, the personnel data and information presented by the BKPSDM of Malaka Regency are not up to date, are not integrated, and are slow in obtaining employee data and information that are needed at any time in coaching related to efforts to improve employee quality, promotion, transfer, promotion, retirement, job data, and other data. In addition, because the resulting data are invalid, decision-making in the personnel sector is often inappropriate. For example, in the field of procurement related to formation proposals that are still being recapitulated manually, there is no accurate pension database in the field of employee placement mutations that are not in accordance with educational needs, backgrounds, and others. If the implementation of digitalization in this government system can be carried out effectively, it will increase government competence, improve the quality of government services, and promote healthy government development (Alvarenga, Matos, Godina, & CO Matias, 2020).

In addition, the Malaka District Personnel and Human Resources Development Agency has complex activity problems, such as employee data input, which still uses Microsoft Excel with data sources from employee archives that are manually collected from each regional apparatus. This is inefficient because it requires both time and power. Entering employee data in Microsoft Excel takes a long time (data for 3,357 civil servants of the Malaka District Government) because only one person inputs it. The volume and workload are very high because the admin or officer in charge of inputting data does not only complete one job, but there are several other jobs that must be done due to the limited number of employees.

The difference in data between SAPK BKN and Manual Data at BKPSDM is due to data processing at BKPSDM, which still uses manual methods so that the existing data are not updated regularly and are not integrated into SAPK BKN. This data difference has an impact on invalid civil servant promotion data, as the manual data have been able to propose promotion, but in SAPK BKN, it is rejected because of the inappropriate rank data. BKPSDM also does not have a database for civil servants who will be promoted every year, so it only accepts files submitted by civil servants for the promotion process, so the State Civil Service Agency often cancels proposals for promotion. In 2018, there were 71 proposals for promotion that were canceled by the BKN, in 2019 there were 18 files, while in the period of April 2020 there were 10 files. In the process of proposing pensions, there are also a number of problems, such as delays in proposing pensions for civil servants because their positions are not accurately recorded. In 2020, 11 civil servants experienced delays in proposing pensions. In the SAPK BKN data, the PNS concerned should have retired in 2018, while the BKPSDM data were not read correctly, so that the person concerned was not informed to propose a pension file in 2018. As a result, the concerned pension proposal file was only processed in 2020, so the concerned PNS had to pay back the state loss. Another problem related to pensions concerns the working period of the retirement class, which is often different from the SAPK and BKPSDM manual data, so that the pension SK that has been received must be corrected. In 2020, three people were found to have this condition. In addition, the inaccuracy of data also affects policy making related to transfers and promotions, in which the placement of civil servants in certain positions is inappropriate. BKPSDM also does not have accurate data on the mapping of civil servants who have attended leadership training.

Therefore, BKPSDM Malaka Regency requires a personnel management information system (SIMPEG) capable of handling these complex problems. This is absolutely necessary because the public sector is affected by ever-increasing needs such as competition, performance standards, monitoring, measurement, flexibility, emphasis on results, customer focus, and control. Knowledge management

for the government is no longer an option but a necessity if the country's economy is to survive in the era of privatization, liberalization, and globalization. In the era of technological development, almost every human life is inseparable from technology, especially in terms of the use of computers and information technology. Computers were originally only used for certain things, such as scientific calculations and as a means of completing a job (Microsoft Word, Excel, and PowerPoint). The objectives to be achieved in this SIMPEG program application, as described in the Minister of Home Affairs Decree No. 17 of 2000 on Personnel Management Information Systems and Regional Government, are as follows: (a) to support a rational PNS Management System and human resource development in government apparatus; (b) to create up-to-date and integrated personnel data; (c) to provide accurate civil servant information for planning, development, welfare, and control of civil servants; and (d) to help the smooth running of work in the field of employment, especially reporting. Based on the descriptions of the problems above, the authors would like to examine the Personnel Management Information System to Realize Up-to-date and Integrated Personnel Data and Information in the Personnel and Human Resources Development Agency of Malaka Regency.

2. Literature review

2.1 Changing the Old Paradigm to the E-Government Paradigm in Government Administration

The personnel management information system is an implementation of E-Government in service in the personnel sector in a transparent and objective manner (Hochstetter, Vásquez, Diéguez, Bustamante, & Arango-López, 2023). In addition to providing information related to staffing, this system is specifically designed to improve services in the field of staffing transfers. The personnel management information system aims to solve existing problems (Selvaraj & Venkatakrishnan, 2023). Existing problems include civil servants whose employment status is not clear, which illustrates the poor administration of existing personnel, civil servants who have retired, died, or stopped staffing data are not updated. PNS data are not up to date, so the number of civil servants is not known with certainty, and existing data differ from one another. Updating data does not run properly in both agencies and local governments. Based on the consideration of the president of the Republic of Indonesia, the rapid advancement of communication and information technology and its potential for widespread use opens up opportunities for access, management, and utilization of large volumes of information quickly and accurately; and that the use of communication and information technology in government processes (e-government) will increase the efficiency, effectiveness, transparency, and accountability of government administration.

It is hoped that the application or implementation of e-government can encourage the realization of a clean government because the involvement of the community, both as actors and acting as development supervisors, will be carried out. In addition, the control function between agencies or sectors will also be realized because efforts to reinforce the division of duties, powers, and responsibilities of all institutional components of state administrators can be implemented. According to Baron and Cruz (2023), e-government is an information system that uses the Internet and other digital technologies to carry out transactions, public services, communication, coordination, and management of government organizations, including government-to-government services, government-to-business, and government-to-society. Concard, quoted by Dokku, Rajesh, and Lakshmi (2022), defined electronic government as a government that adopts Internet-based technology to complement and improve its programs and services. Meanwhile, according to Priyanto in (Wanggai, 2021), in principle, discussing e-government is discussing computer-based government information systems. Discussion of management information systems means the application of information systems anywhere, the heart is communication technology and information technology, while Wyld in Azimi (2021) states that e-government is an electronic processing used by the government to communicate, disseminate, or collect information as a transaction and licensing facility for a goal.

The development of e-government is an effort to develop governance based on (using) electronics to improve the quality of public services effectively and efficiently. Through e-government development, management systems and work processes are structured within the government by optimizing information technology use. The use of information technology includes 2 (two) related activities:

a. Data processing, information management, management systems, and work processes electronically.

- b. Utilization of advances in information technology so that public services can be accessed easily and cheaply by people in all regions of the country is also important.

2.2 Management Information System

Management can be defined as the process of utilizing various available sources to achieve a goal (Sutanta, 2003). Management can also be considered a system of power in an organization so that people carry out work. MIS refers to an integrated system of people and machines that aims to deliver the data necessary to support a firm's operations, management, and decision-making (Nworie & Oguejiofor, 2023). Generally, the resources available for management include human, material, and capital resources. The concept of management resources will become more prevalent when the discussion focuses on management information systems. Therefore, it is necessary to have a good management information system not only for processing data into information but also for channeling information to reach the decision-making process of an organization. According to Hartono (2013), a management information system is an organized series of parts/components that jointly function or move to produce information for use in company management. According to Nugroho (2010), a Management Information System (MIS) is an information system that functions to manage information for organizational management. The role of information in this organization can be likened to that of blood in the human body. The concept of SIM has existed before the computer appeared, where all kinds of information in the organization must be processed quickly, thoroughly, and reliably. Therefore, it can be concluded that the management information system is an arrangement of connected components working together to manage information in the management of the organization.

Some opinions about Management Information Systems (MIS), according to Demartini, Difallah, Gadiraju, and Catasta (2017), state that a management information system is an integrated human/machine system to present information to support management operations and an organization decision-making functions. Furthermore, the notion of SIM was also put forward by McLeod Jr and Schell (2008), who stated that MIS is a computer-based system and other networks that can provide information for several users to support management functions and decision-making functions. Meanwhile, Komaruddin (2003) states that a Management Information System is a method that allows organizational leaders to obtain information. Information systems perform organizational tasks. The system includes the following:

- a) In the form of information available
- b) Information that is easy to understand
- c) Useful information
- d) Timely information

According to McLeod (2010), information can be said to be of quality if it has the following criteria:

- a) Relevant information provided must match what is needed. This means that information needs are in accordance with those requested by the organization.
- b) It must accurately reflect the actual situation. The accuracy of the information can be tested by one or more people. If it produces the same result, it is considered to be accurate.
- c) Complete: The information obtained presents a complete picture of a problem or solution.
- d) In a timely manner, information must be available when needed to solve problems before the crisis situation gets out of hand or opportunities disappear. Information that comes to the recipient must not be too late because outdated information cannot be processed anymore.

The criteria for an effective Management Information System is that the information entered into the system is fast and on time, meaning that planning and data analysis through the system will run optimally and promote better organizational growth. Furthermore, management information systems have characteristics of the results obtained or received by the information users. According to Sutabri (2012), the characteristics of the SIM are to get an earlier signal about the existence and condition of the MIS in the organization.

- a) MIS helps managers in a structured manner at the operational and control levels.
- b) MIS is designed to provide daily operational reports to ensure proper control of these operations.

- c) MIS is very dependent on the existence of organizational data as a whole and also depends on the flow of information owned by the organization as a whole.
- d) An ordinary SIM cannot analyze problems.
- e) MIS data are not generated by forecasting.
- f) MIS is oriented toward data within the organization compared to data from outside the organization.
- g) MIS usually does not usually operate on data that has occurred or data that is happening,
- h) It is flexible because many reports are prepared in advance.
- i) MIS requires careful and long-term planning, considering the future development of the organization.

2.3 Personnel Management Information System

The Personnel Management Information System was developed by the government to support a rational civil service management system and human resource development in the government apparatus, realizing up-to-date and integrated personnel data, and providing accurate civil servant information for planning, development, welfare, and employee control, especially in making reports. According to Simamora (2004), a Personnel Management Information System is a systematic procedure for collecting, storing, maintaining, retrieving, and validating data needed by an organization regarding human resources, personnel activities, and characteristics of organizational units.

Based on the Decree of the Minister of Home Affairs Number 17 of 2000 concerning the Personnel Management Information System of the Ministry of Home Affairs and Regional Governments, the Personnel Management Information System is an integrated totality consisting of processing tools, including collection, procedures, processing personnel and software, storage devices, including data centers and data banks, and communication devices that are interrelated, depend on, and mutually determine the framework of providing information in the field of employment. The Personnel Management Information System is an integrated information system that includes employee data collection, data processing, procedures, work procedures, human resources, and information technology to produce fast, complete, and accurate information to support personnel administration. The Personnel Management Information System has an application menu that contains the following:

- a) Employee Data The employee data facility is the main facility of the Personnel Management Information System application. To access this facility, the Employee Data menu must be selected.
- b) Employee Report Employee report is a menu for viewing several reports related to employee data.
- c) Salary: The menu contains a list of salaries and a recap of salaries.

Based on the Decree of the Minister of Home Affairs Number 17 of 2000 concerning the Personnel Management Information System of the Ministry of Home Affairs and Regional Governments, it is stated that The Personnel Management Information System is an integrated totality consisting of processing tools, including collection, procedures, processing personnel, and software; storage devices include data centers and data banks as well as communication devices that are interrelated, depend on, and mutually determine in the framework of providing information in the field of employment. The purpose of the Personnel Management Information System is to support the efficiency and integrity of personnel data management in an integrated manner. With a local area network (LAN) and Internet-based design, the Personnel Management Information System can be accessed anywhere and anytime by the user in accordance with predetermined access rights. From the explanation above, it can be concluded that the SIMPEG application (Personnel Management Information System) developed by the government for the central and local governments is in order to speed up accurate data collection and is very helpful in searching for employee data to the data processing stage. The existing Personnel Management Information System in every regional and central government continues to experience developments that are followed by technological developments, namely, by means of which every employee can access The Personnel Management Information System anywhere and anytime for the affairs of personnel problems for each civil servant.

Furthermore, Simamora (2004) argues that a personnel management information system is a systematic procedure for collecting, storing, maintaining, retrieving, and validating data needed by an organization regarding human resources, personnel activities, and characteristics of organizational units. According

to McLeod Jr and Schell (2008), the Human Resources Information System (HRIS) in Indonesia is known as the Personnel Management Information System (SIMPEG), which deals with designing personnel data formats and arranging systems for collection, processing, storage, and reporting of personnel information consisting of employee data, position data, education data, reward data, education and training data, family data, attendance data, and others. This allows information on planning employee needs to be managed, performance appraisal, coaching and career development, welfare, and dismissal or retirement to be managed. According to Lastriany, Sulistiobudi, and Sulastiana (2022), the Personnel Management Information System is an arrangement for the process of collecting, processing, analyzing, and presenting data and information needed to support administration and management related to employees. According to Peranita, the Employee Management Information System is defined as an integrated information system, which includes employee data collection, data processing, procedures, work procedures, human resources, and information technology to produce fast, complete, and accurate information to support personnel administration. In this study, to analyze the personnel management information system in order to realize up-to-date and integrated personnel data and information at the Malaka Personnel and Human Resources Development Agency, the author uses an analytical knife related to problems at the research site, which states that Information Systems have three main activities, namely input, process, and output.

3. Research methodology

This study adopted a qualitative approach. This type of research used in this research is a case study or case study. The researcher selected the research location at BKPSDM Malaka Regency because it is a regional apparatus organization that handles personnel affairs within the Malaka Regency government. One of the main tasks is managing the personnel management information system. The informants in this study were the Regional Secretary, Head of BKPSDM, Secretary of BKPSDM, Head of the Division/Subdivision, and Head of the Treasury Division. Data collection methods for this research will be conducted through interviews, observations, and document searches. The data analysis technique used in this study is based on the theory of Miles and Huberman (SilalahiSilalahi (2009)). The analysis activity consists of three flows of activities that occur simultaneously: data reduction, data presentation, and drawing conclusions/verification.

4. Results and discussions

4.1 Personnel Management Information System in Order to Realize Up-to-date and Integrated Personnel Data and Information in the Personel and Human Resources Development Agency of Malaka Regency

In this study, to analyze the personnel management information system in order to realize up-to-date and integrated personnel data and information at the Malaka Personnel and Human Resources Development Agency, the author uses an analytical knife related to problems at the research site which says that Information Systems have three main activities, namely input, process and output with the results of research and discussion as follows:

4.1.1 Input

The input function provides the ability to enter personnel information at the Manpower and Human Resources Development Agency of Malaka Regency into the SIMPEG. This section includes the various procedures required to collect data. Therefore, the position of the database in the input function is the most important step in the system development process through database creation. As a starting point, the database should include essential data elements needed both internally by the Manpower and Human Resources Development Agency of Malaka Regency and to facilitate the needs of external parties. The input function plays a vital role in the data creation process. An input method should be defined for each data element, data editing and processing steps should be defined, and various frameworks and standard reports should be specified so that the required data elements can be clearly detailed.

According to Kim et al. (2022), input is information or data that has been or will be transferred from an external storage medium to a computer's internal storage. The input can also be interpreted as a

routine decomposition of the equipment or the collection of the equipment needed. In some system approaches, it is explained that input is an input function that occurs because a system is influenced by the environment surrounding a system, both human and non-human factors; thus, the system terminology, any influence on the functioning of a system, is called input. From the above rationale, it is evident that the system works owing to various influences. It can also be said that the input consists of demands and support. The demand in question is a necessity; if it is not fulfilled, the system will not work. To ensure the availability of high-quality information, the data collected should have guarantees: (a) high quality of data collected, (b) relevant to the interests of the user, and (c) extracted from reliable sources, both internal and external. Data can be obtained instantaneously or periodically (Siagian, 2008). To be in harmony and interrelated with input, it requires adequate information technology, completeness of data taken as basic data, and human elements as the executors. However, in relation to this research, as an important design of what is to be researched, material is needed as input to measure the operational work of the information system as support in carrying out tasks.

However, since 2013, the Malaka District Personnel and Human Resources Development Agency has not had a Personnel Management Information System, so the management of personnel data and information still uses a manual (paper-based) process. Manual processing (paper-based) is a form of processing that uses the basis of a stack of records stored on file racks. If a file is required, it is searched for on prepared shelves, while the input consists of demands and supports. The demand in question is a necessity, which if not fulfilled, the system does not work, but in its implementation, the application of SIMPEG by BKPSDM Malaka Regency has not been effective because it is constrained in the procurement of the SIMPEG application. This is due to limited regional budget allocations, and since 2013, the government program has not been implemented. Consequently, the quality of personnel data collected, such as basic civil servant data, civil servant biodata data, salary data, positions, ranks, family relationships, work unit appointments, personal data employees, employee history data, periodic salary increases, promotions, reward disciplinary penalties, training, and pensions, remains unchanged because they are only recorded manually. However, for relevance to the interests of users based on the author's observations, it is different from the results of interviews conducted because the employee database recording system is on a regular basis. This manual is prone to damage and loss, whereas personnel data are extracted from reliable sources.

The results of the author's research found that BKPSDM Malaka Regency has not been effective because it is constrained by the procurement of the SIMPEG application, whereas Wandhe (2020) stated that currently, business organizations, government, and non-profit organizations around the world rely on human resource information systems (HRIS). Indonesia is called SIMPEG to accelerate progress in information sharing and facilitate downsizing and re-engineering efforts. The Human Resources Information System (HRIS) is a combination of HRM and Information Systems (IS). A Human Resources Information System (HRIS) helps HR managers carry out HR functions in a more efficient, systematic, and orderly manner using technology. The main reason for the slowdown in HRIS implementation in organizations is the phobic anxiety created by "technology" and "IT" in the concern of older management. They may not be very tech-savvy and may fear being ignored. However, the trend is changing towards a higher one as more and more organizations realize the importance of IT and technology. This needs to be done by the Malaka District Personnel and Human Resources Development Agency to match the rapidly emerging trends of the use of Artificial Intelligence (AI) technology in the modern economy (Hmoud & Várallyai, 2020).

The success of digital governance appears to be related to the quality of organizational knowledge management, which complements significant improvements in the public sector (Mu & Wang, 2022). However, this has not been implemented in the Manpower and Human Resources Development Agency of Malaka Regency, while the system (SIMPEG) is believed to be able to make a significant contribution to the productivity of Human Resources employees; thus, producing appropriate and timely feedback to the administration (Elwin S. ArOrganizationalob, Virnisignificantly affect organizational factorHRIS/SIMPEGificant effect on the effectiveness of HRIS / SIMPEG in terms of t (Sari et al., 2020)imeliness, completeness, and accuracy of information. These organizational factors include but

are not limited to IT infrastructure, the level of support for HR in terms of training, and system maintenance (Matimbwa, Masue, & Shilingi, 2020).

Priyanto in Abdulkareem and Ramli (2021) states that in principle, talking about e-government is talking about computer-based government information systems. Discussion of management information systems, meaning the application of information systems anywhere, the heart is communication and information technology. However, since the implementation, the Manpower and Human Resources Development Agency of Malaka Regency has not been able to use this system, which has impacted the quality of the personnel data collected, such as the main data for civil servants. Civil servant biodata, salary data, position, rank, family relations, work unit appointments, employee personal data, employee history data, periodic salary increases, promotion, disciplinary punishment, training, and retirement are still as is because they are only recorded manually, starting with data entry by operators in the Sub Division of Data Processing and Employee Information. The process of entering the initial data is by filling out a form. Filling in the form manually through paper is done after a file is sent to the Sub Division of Data Processing and Employee Information to be filled in the form. As a result of storing and administering the database manually by BKPSDM Malaka Regency, there are data inaccuracies, such as differences between manual data and data in the BKN Personnel Service Application System (SAPK). Manually recording the employee database is very prone to damage and loss, while according to Davis and Newstrom (1985), in the bureaucracy, there are basic elements of organizational behavior that interact with each other between individuals/people, structure, technology, and the environment. This explains why bureaucratic organizations, including the government, emphasize the importance of technology (Amegayibor, 2021). The IT component in today's era is essential to support government and development tasks. The utilization of IT is increasingly promising because it can accelerate the delivery of information, global reach, and transparency. In government agencies, IT has been widely applied in various fields to provide public services. The public is increasingly aware and understands that online media is a means of socialization that is very effective and efficient in government administration.

4.1.2 Proses

The process is more focused on changing something into another form so that it is more meaningful. In relation to information systems, Lott in The Liang Gie (1983) argues that "Processing refers to any steps taken, by whoever means possible, to make data usable for aspected purpose" (the process refers to whatever steps are taken). done by any means possible to make the data usable for a specific purpose). This opinion is more likely to assess the process as processing, especially aimed at processing data based on the stages that must be carried out to achieve the goal. In line with the above, in SIMPEG, a process is an activity, action, or treatment, either by humans, machines, or both. Data processing is an activity of the mind with the help of hands or equipment that follows a series of formulation steps or a certain pattern to change data, so that the data, either in form, structure, nature, or content, become more useful. Data processing is always a critical task for an organization's information system; therefore, a data processing system that can provide information that has meaning or benefits to the organization itself is required. Methods or work procedures in data processing that act as "game rules" in organizational life according to Siagian (2008) include: (a) identification of data sources, (b) data storage, and (c) data maintenance. From some of the explanations above, it can be concluded that Process (Process) is further processing focused on efforts, activities, steps, methods, actions, or treatment to change something into another form so that it is more meaningful and has meaning for the Personnel and Human Resources Development Agency of Malaka Regency.

At the process stage, the implementation of SIMPEG in the Manpower and Human Resources Development Agency of Malaka Regency is still a goal and has not yet reached the implementation stage, which requires leadership support through budget realization because SIMPEG procurement is very costly. However, Matimbwa et al. (2020) state that when top management supports the department, it must provide the necessary financial and psychological resources to produce reliable information for informed decision-making through HRIS/SIMPEG. Even though the funds needed for the procurement of the personnel information system (SIMPEG) are quite large, if this system is budgeted, the author's belief that it will have an impact on the performance of employees within the Malaka Regency

Government is in line with the research results of Zulfina, Matondang, and Sembiring (2020) that the employee management information system has a positive and significant effect on employee motivation, the employee management information system has a positive and significant effect on performance. Pervin and Begum (2022) also stated that the main use of technological advances in companies has led to changes in facilities, needs, and work styles.

When work effectiveness and results advance in line with the time management agenda and devotion to the timeliness guideline, there are more benefits for employees. A good Personnel Management Information System (SIMPEG) is a Personnel Management Information System (SIMPEG) that can balance the costs and benefits that will be obtained, meaning that SIMPEG will save costs, increase income, and is immeasurable, arising from very useful information. The organization of the Personnel and Human Resources Development Agency of Malaka Regency must realize that if they are realistic enough in their wishes and careful in designing and implementing SIMPEGs, so that they are desirable and reasonable in determining the cost limit of the point of benefits to be obtained, the resulting SIMPEG will provide benefits.

In general, the government aims to implement e-government through SIMPEG to create Good Governance (Good Governance). The implementation of e-government can be applied through management information technology policies, namely, through planning and designing the analysis system to be used. If the design of the analysis system can be clearly stated in a working paper, the application can be immediately implemented by applying the determined design. The results will be evaluated to determine their impact on the organization, in this case, the government. (Riska C. D & Suparno, 2022) simplify hierarchies and improve the quality of information so that the relationship between subordinates is open and direct, the quality and speed of information is better, decoptimal,,,,,is optimal and the government's response is better and more precise. E-government improves the quality of policies and increases the legitimacy of the government so that government policies become information-based and effective. E-government makes transparency in government and services inevitable and speeds up the realization of good governance. But another problem is the identification of data sources, the Malaka District Personnel and Human

Resources Development Agency has complex activity problems such as employee data input still using Microsoft Excel with data sources from employee archives that are manually collected from each regional apparatus that is not efficient because it takes time and effort. Entering employee data in Microsoft Excel takes a long time (data for 3,357 PNS Scope of Malaka Regency Government) because only one person inputs it at the data storage stage. The volume and workload is very high because the admin or the officer in charge of inputting data does not only complete one job, but there are several other jobs that must be done due to the limited number of employees, which also results in not maximizing the maintenance of personnel data at the Manpower and Human Resources Development Agency of Malaka Regency. . Meanwhile, if human resources are sufficient, especially in the field of IT, the implementation of the HRIS system (SIMPEG) is believed to make a significant contribution to the productivity of human resources, thereby producing appropriate and timely feedback to the administration (Lastriany et al., 2022). The Human Resources Information System (HRIS/SIMPEG) is believed to be a very convenient way to obtain, store, manipulate, analyze, retrieve, and distribute institutional information relative to human resource management (Lastriany et al., 2022).

Theoretically, computers are not an absolute prerequisite for a Personnel Management Information System (SIMPEG), but in practice, a good Personnel Management Information System (SIMPEG) will not exist without the help of computer processing capabilities. The main principle of designing SIMPEG must be carefully woven in order to be able to carry out the main task. It can also be said that the measurement of the value of information will be more appropriate if it uses cost-effectiveness or cost-benefit analysis. The quality of information is strongly influenced or determined by three main factors: relevance, accuracy, and timeliness.

Information provided to superiors is used to control operations, strategy, long- and short-term planning, management control, and solving specific problems in decision making. However, the phenomenon that

occurs in the Malaka District Personnel and Human Resources Development Agency is the accumulation of employee data for entry at Microsoft Excel. Therefore, if the officer wants to process employee data, it will take a long time, and is worsened by the existing data that are not integrated and not up to date, which has an impact on the service and performance of the Malaka District Personnel and Human Resources Development Agency. As a manual system is still used to process employee data, information about employees cannot be obtained quickly and accurately. There are often errors in typing and inaccurate information provided to relevant stakeholders, such as PT. Taspen, BPJS, Central Bureau of Statistics, etc. The data input process, which takes a relatively long time, plus the computer or laptop used to input employee data is damaged or an error often causes employee data loss. Problems that often occur at BKPSDM Malaka Regency are related to inaccurate data, such as differences between manual data and data in the BKN Personnel Service Application System (SAPK). Based on data obtained from the BKPSDM Malaka Regency as of September 30, 2020, the number of Malaka District civil servants recorded on SAPK BKN was 3,891.

The inaccuracy of the employee database at the Manpower and Human Resources Development Agency of Malaka Regency between Manual Data and data in the BKN Personnel Service Application System (SAPK) will impact decision-making related to employees in the Malaka Regency government. According to McLeod Jr and Schell (2008), the Human Resources Information System (HRIS) / SIMPEG is used to design personnel data formats and manage systems for collecting, processing, storing, and reporting personnel information consisting of employee data, job data, educational data, award data, data education and training, family data, attendance data, and others. This information is used to plan employee needs, performance appraisals, career development and guidance, welfare, and dismissal or retirement processes. If an error occurs or the administration is done manually, it will affect the effectiveness of staffing services by the Manpower and Human Resources Development Agency of Malaka Regency. Simamora (2004) also argues that the personnel management information system (SIMPEG) is a systematic procedure for collecting, storing, maintaining, retrieving, and validating data needed by an organization regarding human resources, personnel activities, and units' characteristics.

The difference in data between SAPK BKN and Manual Data at the Manpower and Human Resources Development Agency of Malaka Regency is due to data processing at the Manpower and Human Resources Development Agency of Malaka Regency, which still uses the manual method so that the existing data are not updated regularly and are not integrated into SAPK BKN. This data difference has an impact on invalid civil servant promotion data, as the manual data have been able to propose promotion, but in SAPK BKN, it is rejected because of the inappropriate rank data. The Civil Service and Human Resources Development Agency of Malaka Regency also does not have a database for civil servants who will be promoted every year, so they only receive files submitted by PNS for the promotion process, so proposals for promotion are often canceled by the State Civil Service Agency.

In 2018, there were 71 proposals for promotion that were canceled by the BKN, in 2019 there were 18 files, while in the period of April 2020 there were 10 files. In the process of proposing pensions, there are also a number of problems, such as delays in proposing pensions for civil servants because their positions are not accurately recorded. In 2020, 11 civil servants experienced delays in proposing pensions. In the SAPK BKN data, the PNS concerned should have retired in 2018, while the data from the Manpower and Human Resources Development Agency of Malaka Regency were not read correctly, so the person concerned was not informed to propose a pension file in 2018. As a result, the pension proposal file concerned was only processed in 2020, so the civil servants concerned must pay back the state's losses. Another problem related to pensions concerns the working period of the pension class, which is often different from the SAPK and the manual data of the Manpower and Human Resources Development Agency of Malaka Regency, so that the pension SK that has been received must be repaired. In 2020, three people were found to have this condition.

In addition, the inaccuracy of data also affects policy making related to transfers and promotions, in which the placement of civil servants in certain positions is inappropriate. The Manpower and Human Resources Development Agency of Malaka Regency also does not have accurate data on the mapping of civil servants who have attended leadership training, while the main purpose of the Personnel

Management Information System (SIMPEG) is to support the efficiency and integrity of managing employee data in an integrated manner. With a local area network (LAN) and internet-based design, the Personnel Management Information System, if implemented effectively by the Malaka District Personnel and Human Resources Development Agency, can be accessed anywhere and anytime by the user in accordance with predetermined access rights.

The SIMPEG application (Personnel Management Information System) developed by the government for the central and regional governments, especially for the District of Malaka, is useful for accelerating accurate data collection and is very helpful in finding employee data for the data processing stage. The existing SIMPEGs in every regional and central government continue to experience developments that are followed by technological developments, namely, every employee can access SIMPEG anywhere and anytime for personnel issues for every civil servant. However, this has not been implemented in Malaka Regency, especially in the OPD Personnel Agency Human Resources Development of Malaka Regency, which should operationalize this system.

4.1.3 Output

In many cases, an input, process, and output program can be considered good if it can provide accurate information as desired. Torab-Miandoab, Samad-Soltani, Jodati, and Rezaei-Hachesu (2023) states that output is an activity carried out by information systems in response to demands, pressures and other inputs. Output is information generated by manipulation of computer handling and which will be submitted to those who have the right and need it (Hajli, Saeed, Tajvidi, & Shirazi, 2022). The foundation for sound staffing decisions is good staffing data. Personnel information should be made available to leaders in a manner that facilitates decision-making (Wang, Hou, & Li, 2022). Thus, it can be concluded that the output (output) in this study is the ability to produce output according to organizational needs, and the output provided by the system is an important link between SIMPEG and its users. This can include reports and staffing information needed in the context of employee development.

The value of information is related to decision-making. This means that when there is no choice or decision, information is not required. Decisions can range from simple iterative decisions to long-term strategic decisions (Pot, Scherpenisse, & 't Hart, 2023). Determined from two main things, namely benefits (benefits) and costs (cost). Information is said to be valuable if the benefit is more effective than the cost to obtain it, and most information cannot be accurately estimated in terms of monetary value; however, the value of its effectiveness can be estimated. A good Personnel Management Information System (SIMPEG) is a Personnel Management Information System (SIMPEG) that can balance the costs and benefits that will be obtained, meaning that SIMPEG will save costs, increase income, and is immeasurable, arising from very useful information.

Organizations must realize that if they are realistic enough in their desires, careful in designing and implementing SIMPEGs so that they are desirable and reasonable in determining the cost limit from the point of benefits to be obtained, the resulting SIMPEG will provide benefits. The Personnel Management Information System (SIMPEG) was developed by the government to support a rational civil service management system and human resource development in government apparatus, realize up-to-date and integrated personnel data, and provide accurate civil servant information for the purposes of planning, development, welfare, and employee control, especially in making reports. According to Simamora (2004), SIMPEG is a systematic procedure for collecting, storing, maintaining, retrieving, and validating data needed by an organization regarding human resources, personnel activities, and characteristics of organizational units.

The authors' findings show that because SIMPEG has not been implemented in the civil service administration within the Malaka Regency government, the benefits cannot be calculated, and the costs for manual operation are also quite high. Every budget year is only spent on maintaining personnel administration files on shelves in this office, so in terms of costs (costs) are also large, while the benefits obtained for implementing SIMPEG do not exist at all because they have not been implemented until today. According to McLeod Jr and Schell (2008), information can be said to be of quality if it meets

the following criteria: (a) Relevant: the information provided must be in accordance with what is needed. This means that the information needs in accordance with that requested by an organization, (b) It must accurately reflect the actual situation. Testing by one or more people can ensure the accuracy of the information. If it produces the same results, it is considered accurate; (c) complete, that the information obtained presents a complete picture of a problem or solution; (d) timely, information must be available at the time needed to solve the problem before the crisis situation becomes out of control or opportunity disappears. The information that comes to the recipient must not be late because outdated information cannot be processed. However, the Malaka District Personnel and Human Resources Development Agency has not met the criteria for the quality of information since 2013, which ultimately results in an imbalance between the costs and benefits of the administration activity of employees because the data and information on staffing that are up to date and integrated cannot be fulfilled.

A good Personnel Management Information System (SIMPEG) at the Malaka District Personnel and Human Resources Development Agency is a Personnel Management Information System (SIMPEG) that can balance the costs and benefits that will be obtained, meaning that SIMPEG will save costs, increase income, and are immeasurable that arises from information that is very useful but its application has been ineffective since the input stage so that the process stage until the output produced does not meet the criteria for effective SIMPEG application.

4.2 Inhibiting Factors for the Application of Personnel Management Information Systems in the Framework of Realizing Up-to-date and Integrated Personnel Data and Information in the Personnel and Human Resources Development Agency of Malaka Regency

4.2.1 Unavailability of Budget

The existence of limited government funds is why budgeting is the most important mechanism for allocating resources. The allocation of several budgets for the Malaka District Personnel and Human Resources Development Agency aims to procure the SIMPEG application to create up-to-date and integrated personnel data and information. However, in its implementation, it is known that SIMPEG recruitment is still constrained at the budgeting stage, even though this policy has existed since 2000 through the Minister of Home Affairs Decree Number 17 of 2000 concerning the Personnel Management Information System of the Ministry of Home Affairs and Regional Government. Therefore, according to Matimbwa et al. (2020), top management must provide the necessary financial and psychological resources to produce reliable information for informed decision-making. For most public organizations in Indonesia, the theme of the failure to implement e-government (electronic government through the implementation of SIMPEG) is considered less relevant. How can we talk about the failure of e-government if we see that not all local governments have a website, while Internet users in Indonesia by 2010 are estimated to have only reached around 57.8 million people? However, considering that the trend of using digital technology in public organizations is something that cannot be avoided anymore, from the start, it must be realized that e-government applications must be carefully prepared so that there will be no failure and a decline in service performance, especially in personnel services in the Personnel and Human Resources Development Agency of Malaka Regency.

4.2.2 No Permanent Building

Based on the results of interviews, observations, and document tracing conducted by the author, it is known that one of the factors inhibiting the application of the personnel management information system (SIMPEG) in order to create up-to-date and integrated personnel data and information in the Personnel and Human Resources Development Agency of Malaka Regency is still not possible because it is constrained by the absence of a permanent building. Therefore, it is costly to use this system when moving buildings.

4.2.3 No Support Device

Based on the results of interviews with the Head and Secretary of the Manpower and Human Resources Development Agency of Malaka Regency and the results of the author's observation, it was found that the absence of a permanent building had an impact on the Manpower and Human Resources Development Agency of Malaka Regency, which did not have a supporting device for the personnel information system. (SIMPEG). The availability of networks such as LANs and WANs already exists

but is limited to the office and not to access or operate SIMPEGs. Due to the absence of a SIMPEG information system, the Malaka Personnel and Human Resources Development Agency only uses an offline system, namely, through the transfer of data media (floppy disks, CDs, flash drives). The communication network in the form of one Wi-Fi indihome, seven units of office equipment and supplies in the form of laptops, six units of PC computers, five units of printers, one unit of CAT server, one unit of AC, one unit of Focus, and 45 units of furniture (consisting of desks, work chairs, and filing cabinets).

4.2.4 Lack of Human Resources (Brainware)

The results of the author's findings show that the number of Civil Servants at the Manpower and Human Resources Development Agency of Malaka Regency is only 31, consisting of 17 civil servants and 14 regional contract workers who are then divided into respective fields and sub-sectors. According to Wandhe (2020), the Human Resource Information System (HRIS/SIMPEG) or HR system is a joint structure and procedure of alignment between human resource management (HRM) and information technology (IT). Organizational factors, especially the development of information technology infrastructure and the employment of IT experts, greatly affect the effectiveness of human resource information systems (Matimbwa et al., 2020).

Based on Malaka Regent Regulation Number 66 of 2018 concerning the Results of Position Analysis and Workload Analysis at the Manpower and Human Resources Development Agency of Malaka Regency and Malaka Regent Regulation Number 56 of 2020 concerning the Map of Regional Apparatus Position in the Malaka Regency Government, the number of civil servants required in the Civil Service Agency and Human Resources Development in Malaka Regency is 89, with details of 16 people holding structural positions, 57 people holding general functional positions (JFU), and 16 people holding certain functional positions (JFT). However, the fact is that until now, the number of civil servants at BKPSDM Malaka Regency is 17, with details of 10 people holding structural positions and 7 people holding general functional positions, while certain functional positions do not exist, while quality and high-standard human resources are needed in the implementation. good governance. The quality of human resources affects performance through employee motivation to the digital system (Zulfina et al., 2020).

5. Conclusion

The personnel management information system in order to create up-to-date and integrated personnel data and information at the Malaka District Personnel and Human Resources Development Agency is analyzed with an analytical knife related to problems at the research location with conclusions that can be drawn from the input, namely: (a) the quality of data collected is not good because the manual processing system (paper-based) (b) is not relevant to the interests of the user because the existing data is not updated regularly and is not integrated in SAPK BKN (c) data extracted from reliable sources, both internally and externally but are constrained by the manual processing stage of personnel data, at the process stage (process) it is known that (a) the identification of data sources at the employee data input stage still uses Microsoft Excel with data sources from employee archives that are collected manually. manual of each regional device that is inefficient because it requires time and effort, (b) data storage only uses a cabinet and is divided into files manually (c) data maintenance is also done manually on file shelves, causing often missing employee data and at the output stage because SIMPEG has not been implemented in k For personnel administration activities in the scope of the Malaka Regency government, the benefits cannot be calculated and the costs for manual operation also cost a lot of money, while the inhibiting factors are the Unavailability of the SIMPEG implementation budget, the absence of a permanent building for the Personnel Agency and Development of Human Resources in Malaka District, Absence of Support Tools for the SIMPEG system, and the Lack of Competent Human Resources (Brainware) in the IT field for the smooth running of personnel administration services at the Manpower and Human Resources Development Agency of Malaka Regency so that the Vision of the Personnel and Resource Development Agency The people of Malaka Regency, namely "Serving Friendly, Easy, Fast and Qualified for the Establishment of Orderly Administration and Professionalism of the State Civil Apparatus" have not been realized.

Limitation and study forward

The weakness of this study is that the researchers cannot show more detailed data related to the research problems. Future researchers are expected to develop this research using different methods, such as quantitative methods, which can measure problems in more detail and concisely.

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