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Sectoral Statistical Data Processing Strategy at the Communication, Informatics and Statistics Service of Gorontalo Province

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Abstract

The purpose of this study is to determine and describe the quality of sectoral statistical data processed by the Communication, Informatics and Statistics Office of Gorontalo Province based on the completeness of data attributes and the accuracy of data presentation time. This study uses a qualitative approach. This study uses several data collection techniques, including observation, interviews, documentation and triangulation. The results of the study indicate that the implementation of the strategy is clearly described in the results of the work in the management of sectoral data that is carried out. Indeed, basically the strategy that has been made will be achieved but again with the problems found such as human resources that need to be educated and their enthusiasm maintained, of course the implementation of the strategy is one of the obstacles.

Keywords: Statistical Data, Human Resources, Students.

Introduction

According to Harold (2023), data existence is one of the matters that the government continues to strive to make available in supporting the policy-making process in the Gorontalo Provincial Government. The data collection system used by regional apparatuses usually still refers to the old data collection system such as before regional autonomy. Information materials in the form of data produced for regional planning policies also still use the old data collection system, namely from administrative records (Ekaputra, 2021). Research that has been conducted by previous researchers has convinced that data has a position in supporting the policy-making that is to be taken. The clear origin of the data can be used as a reference in regional development planning and can produce Evidence-Based Policy making or fact-based policies in the implementation of long-term development planning (Iswanto, 2023).

Gorontalo Province in implementing development planning certainly adopts an information system that is applied with the development of sector data management, both the planning sector, the financial sector, the development sector and other sectors that are absolute government affairs, concurrent government affairs, and universal government affairs. Sectoral data of Gorontalo Province collected by the Communication, Informatics, and Statistics Service (KOMINFOTIK) is data sourced from 34 Regional Apparatus Organizations (OPD) within the Gorontalo Provincial Government which have their respective affairs based on established

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regulations. According Putra (2024), this data covers various development sectors that aim to support planning, evaluation and decision-making based on facts or evidence. Each regional apparatus is responsible for providing information in the form of data that matches the scope of its duties and functions. For example, the Education Service is responsible for data related to education, the Health Service manages health data, and the Agriculture Service collects data on the agricultural sector (Hermin, 2023).

The data is collected through various mechanisms, such as a collection of administrative processes, internal surveys by each OPD, periodic reporting in certain periods, and cooperation with the Central Statistics Agency (BPS) in maintaining accuracy and consistency. Furthermore, KOMINFOTIK carries out a data verification process to ensure validity, consistency, and completeness before the data is used. However, the data collection process is not free from various challenges, including inconsistent data collection methods between OPDs, late reporting, and limited data technology infrastructure. Problems related to data have become a case that occurred in the Gorontalo Government where the Indonesian Minister of Social Affairs, Mrs. Tri Rismaharini, who led a coordination meeting for matching data on recipients of the Family Hope Program (PKH), Cash Social Assistance (BST), and Non-Cash Food Assistance (BPNT) in Gorontalo Province, was angry because it was triggered by allegations of deletion of beneficiary family data (KPM) by the Ministry of Social Affairs.

Continued with the data of PKH recipients who were deleted as KPM from the Integrated Social Welfare Data (DTKS) because their account balances were zero rupiah. This made the Indonesian Minister of Social Affairs immediately scold the Gorontalo PKH officers who also attended the meeting. With this problem, Opinion Mining emerged regarding the presentation of data. Evaluation of the presentation of open data in Gorontalo Province is needed to provide a reference for strengthening the implementation of public policies such as open data in the long term. By using a phenomenological methodology, this study concludes that although the implementation of open data in Gorontalo Province has been implemented, the inconsistency of data and the existence of data quality and low average access time need to be addressed immediately so that data user satisfaction can be optimized.

Improving the quality of the substance of open data must be done while still prioritizing the validity of the published data and the active participation of all stakeholders in producing data that can be used by the general public both digitally and manually (Simonofski et al., 2021). The development of an integrated system that is able to integrate all public information portals in Gorontalo Province needs to be maximized so that the ideals of Presidential Regulation Number 39 of 2019 concerning One Data Indonesia can be realized as directed by the President of the Republic of Indonesia in creating uniformity, sustainability, and compliance with government data and metadata standards, as well as supporting effectiveness, efficiency, and transparency in government data management.

Align with research from Ardiansyah & Ilyas (2023), this Presidential Regulation also regulates the formation and duties of the Central Statistics Agency (BPS) as the coordinator of the implementation of One Data Indonesia. BPS plays an important role in coordinating the collection, processing, storage, and dissemination of government data (Mardiana et al., 2024). Sectoral statistical data is very important for the government, researchers, and policy makers to

plan economic policies, identify economic trends, understand market demand, and design economic development strategies (Firmansyah et al., 2024). This data is also used by companies and investors to conduct market analysis and make better business decisions. In its implementation, the Communication, Informatics and Statistics Service is an agency within the Gorontalo Provincial Government that has the task of implementing regional authority in the field of Information Technology, Communication, and Statistics management which is divided into fields according to needs.

One of the fields formed is the Statistics Field with the responsibility to manage data and information related to sectoral statistics for the availability of data and information services to support the implementation and development of the provincial area (Ali et al., 2023). Data and information services that have been previously collected then need to be processed and distributed to various agencies within the Gorontalo Provincial government, so that the processing and distribution process can take place more effectively and efficiently. In facilitating the roles and targets of the Gorontalo Provincial Communication, Informatics, and Statistics Service above, a media was created that can support the processing and distribution of sectoral statistical data, which is designed into a data processing application called the E-Data Sector Application.

According to Zulpaldi (2022), this E-Data Sector Information System is expected to be able to accommodate, in accordance with its function as a container for creating sectoral statistical data, sectoral data is very much needed in development, because development begins with data and can produce data. Data can be used as a tool to analyze various development problems in the context of formulating a policy, even in the process, data is very much needed in every development cycle, both from the planning, implementation and monitoring evaluation stages. All of these stages require and will produce data. The development process and stages require monitoring or control to stay on track, and vice versa to measure the success of a development product, an evaluation is needed. Data is needed to see the condition of a problem and to make an assessment or analysis of the problems that occur in a particular area (Huber & Helm, 2020).

So that the current development planning model requires better analytical skills and data usage to visualize a situation in a region (Ivanov & Gnevanov, 2018). The implementation of development requires mature decision-making, and mature decisions are decisions that consider all aspects including databases (Iurev, 2020). In the era of data-based information and communication technology development, the decision-making process is shifting towards more systemic solutions through data processing information systems rather than relying solely on intuition and personal or group opinions. Digital transformation presents opportunities and challenges for the government, especially in data-based decision/policy making (Komarudin et al., 2024). The implementation of government data governance to increase the value of data as a basis for policy making is one of the most important things in ensuring the success of the government in realizing development targets in the present and future.

Moreover, currently, when viewed from various indicators of good governance, the government still has fundamental and complete problems related to public service accountability because the achievement of development indicators is still not optimal. This can be seen from several macro indicators of regional development that have not experienced significant improvements, such as

poverty rates, inequality and so on (Rahmawati et al., 2021). Amid the importance of data utilization in the scope of government administration, thus encouraging every government agency to produce quality data.

However, in reality, the increasing number of agencies that manage and produce data, both at the ministry and institution level, as well as at the regional government level Regional Apparatus Organization, has in fact caused many problems, ranging from overlapping data, not synchronized, differences in data produced, unclear data identity, not updated, closed data but general in nature and not communicating with each other even though the data is built using the same indicators. For example, related to the achievement or calculation of the open unemployment rate in Gorontalo Province (Lala, 2023). This data is considered very important in studying the focus of problems in the economic sector which can be used as a reference for producing targeted programs, but agencies that are known as data producers such as BPS have not released information related to the data in question so that information related to open unemployment in Gorontalo Province is not known to the general public.

Methods

The approach used in this study uses a qualitative approach to gain an in-depth understanding of the Sectoral Statistical Data Processing Strategy at the Communication, Informatics and Statistics Office of Gorontalo Province. The type of research in this study is Qualitative Descriptive Research. Qualitative descriptive research is a type of research that observes and captures the real world factually and actually and examines the behavior of individuals, groups and their daily experiences, as well as studying, explaining, or interpreting a case in its context naturally without any intervention from outside parties. The data sources used in this study use data from the Communication, Informatics and Statistics Office of Gorontalo Province or informants, namely Officials or staff at the Communication, Informatics and Statistics Office of Gorontalo Province and Officials from the Central Statistics Agency of Gorontalo Province. This study uses several data collection techniques, including Observation, Interviews, Documentation and Triangulation. The data analysis technique used in this study is qualitative data analysis consisting of three activities, namely Data Reduction, Data Display, Conclusion Drawing or Verification.

Results and Discussion

Implementation of Sectoral Statistical Data Processing Strategy at the Communication, Informatics and Statistics Service of Gorontalo Province

The next stage after formulating a strategy to improve the quality of madrasahs is the strategy implementation stage. The implementation of the strategy is a concrete manifestation of the strategy that has been formulated. There are five development strategies formulated in the processing of sectoral statistical data at the Communication, Informatics and Statistics Office of Gorontalo Province.

Implementation of Program Capacity Development Strategy

The program capacity development strategy carried out by the Communication and Information Technology Office through a sectoral statistical data processing capacity strengthening program. Related to the implementation of the sectoral statistical data processing capacity strengthening

"For the sectoral statistical data processing capacity strengthening program, it used to only prioritize how the sector data existed. But now the sectoral statistical data processing capacity strengthening program has become one of the routine activities that have been included in the Statistics IKU. This sectoral statistical data processing capacity strengthening program is implemented with a time allocation of four times a year where each quarter will definitely implement the program. The methods applied in each session are also designed differently so that they can produce definite targets. The system used in this program is a system that involves all those involved, both internal and external. This program makes representatives from each field gathered in one group or one location of the same activity. To hone skills and of course about sectoral statistical data as regulated or implemented by ministries and other institutions "

With what has been described in the explanation above, the Sectoral Statistical Data Processing Capacity Strengthening Program is a mandatory program and must be carried out continuously so that sectoral statistical data processing becomes a common thing and eventually becomes a habit.

Figure 1. Strengthening Process of Sectoral Statistical Data Processing Capacity

Implementation of Human Resource Development (HRD) Strategy

The second development strategy is the human resource (HR) development strategy. This development strategy includes several activity programs, namely: (a) training programs; (b) training and (c) technical guidance related to data from the planning, collection, processing and dissemination processes. Related to the formulation of HR development strategies as an effort in processing sectoral statistical data at the Communication, Informatics and Statistics Office of Gorontalo Province, the Head of Statistics Division conveyed the following.

"For the development or empowerment of human resources, we have activities involving data processors such as training, coaching and technical guidance. Activities such as Strengthening data processing human resources in the Gorontalo Provincial Government

environment for sustainable development for data processor friends. The implementation is carried out four times a year in each quarter. The implementation of this activity is to encourage data processors to create an active, relaxed information sharing situation but still have performance-based goals in data processing. Other activities are often carried out in the form of technical guidance or training, although the goals are the same, the form of the activity can change the mindset and mood so that when carrying out data processing activities it can increase work enthusiasm. "

With the human resource development strategy (HRD) carried out using the method as above, it can be seen that the Communication and Information Service is trying to improve the quality of sectoral statistical data processing so that it always becomes a routine program.

Figure 2. Implementation of human resource development programs

Implementation of Infrastructure Development Strategy

Regarding the formulation of infrastructure development strategies, the Head of the Service stated the following.

"For the infrastructure development strategy, we must adjust to current developments by using a networking system with the aim of helping and facilitating data processing in the Communication and Information Service in particular. So we first analyze what kind of needs we should need. Like this new one, the creation of an open data application that is used for the input process to data analysis."

Furthermore, the Head of Statistics also conveyed the following regarding the formulation of infrastructure development strategies.

"For the infrastructure development strategy, we really need support including in completing infrastructure, such as the procurement of data center buildings, computers. Then we have a literacy program, namely creating social media as an alternative means"

The formulation of infrastructure development strategies is also carried out by establishing

cooperation with several related parties. This is because there are several obstacles in the implementation of several activity programs. As a result, cooperation must be carried out that can support the implementation of these activity programs. This statement is as conveyed by the head of the service as follows.

> *"From this work program, yes, the programs that have been determined, finally problems arise for their implementation. When this problem arises, we in certain parts collaborate with other fields or other agencies. To fulfill our infrastructure, we also collaborate with other agencies that can certainly support data processing work."*

From the statement above, it can be said that the formulation of the infrastructure development strategy carried out at the Communication and Information Technology Office is to cooperate with other fields to provide their participation in supporting and assisting the development of facilities and infrastructure at the Communication and Information Technology Office. In addition, it is also carried out through cooperation/networking with several parties as needed.

Implementation of Work Environment Development Strategy

The environment greatly influences the comfort that leads to success in working in the work environment. The head of the department and the statistical apparatus must be able to take action as an effort to create a conducive environment for work. Related to the formulation of a work environment development strategy as an effort to improve the quality of sectoral statistical data processing, the Head of the Department conveyed the following.

> *"The data processing process will be able to run smoothly, of course also supported by a clean and healthy environment. Our agency is a type B agency, for that this environmental development program is more focused on Forming a Forum as a forum for integration by establishing cooperation between data producers in this case OPD related to the existence of data as a means of communication, Establishing cooperation with data managers. And in my opinion, this is a success if communication in the work environment can be established."*

The Head of the Service's statement was also strengthened by what the Head of Statistics Division said as follows.

> *"To create a comfortable working atmosphere in data processing certainly requires cooperation and integration both internally and externally. This can create a sense of kinship that will eventually minimize things that are ego-sectoral."*

The environment of the communication and information service is indeed located in an area far from the city or city center, so that the communication and information service must create a comfortable working atmosphere. From the statement above, it can be concluded that the formulation of a work environment development strategy formulated as an effort to improve the quality of sectoral data in the communication and information service is through a program to form a Forum as a forum for integration, FGD with data producers in this case OPD related to the existence of data as a means of communication.

Implementation of Management Development Strategy

Regarding the management development strategy as an effort to improve the quality of sectoral statistical data, the head of the Communication and Information and Communication Service stated the following.

> *"To be able to provide the best service, of course it starts from good management. Our efforts here are to be able to provide good, fast, and easy administrative services. We provide a data portal that is open and easy to access, then there is the Sectoral Statistical Data Service so that all our services are centralized there."*

The provision of this data portal is intended to facilitate anyone who needs administrative services, especially those who need sectoral statistical data. The Gorontalo One Data Portal, which was created in 2023 and developed in 2024, is able to become a container for providing data. It is hoped that not only the Communication and Information Office will optimize the portal, but later all OPDs of Gorontalo Province and also the City and Regency can make the data portal a system that is provided. The services mentioned above are centered on the Communication and Information Office, both in terms of services and updates. The Communication and Information Office has duties in terms of ICT affairs so that with these matters, the portal is easy to operate or repair when an error occurs or needs development.

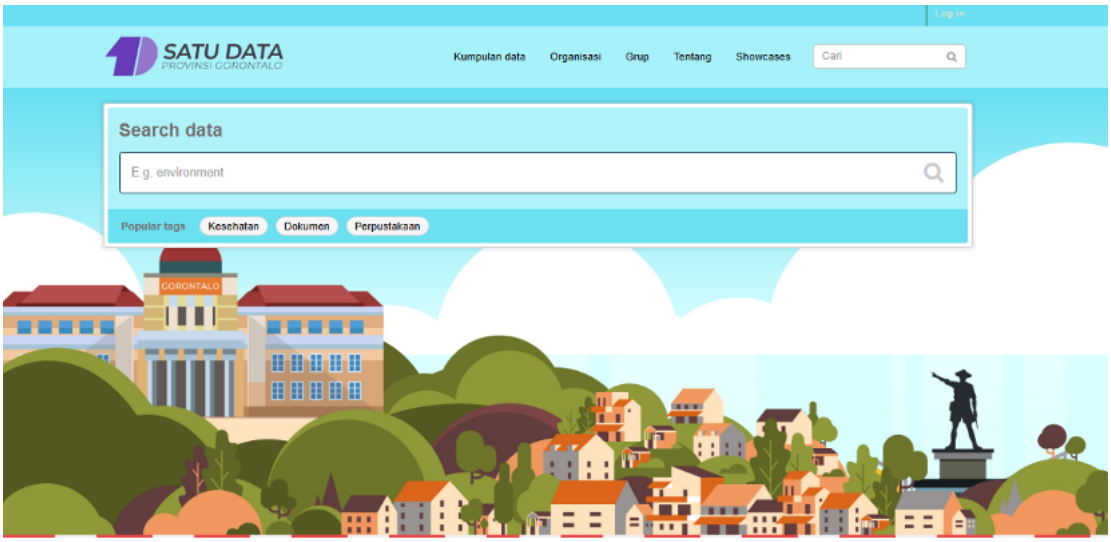

Figure 3. One Data Indonesia Portal Gorontalo

Of course, in the process of data that has been released in the portal, it certainly requires a processing application where the application in question is able to become a container in processing sectoral statistical data processing. As mandated by Presidential Regulation 39 of 2019 that one Indonesian data must follow the rules in producing quality sectoral statistical data which is called the principle of one Indonesian data which consists of data standards, metadata, reference codes and interoperability. With the existence of the SDI principle, it is easier for Diskominfotik to create a data processing application that is able to accommodate all stages and principles that must be applied in supporting the implementation of sectoral statistical data processing in the regions.

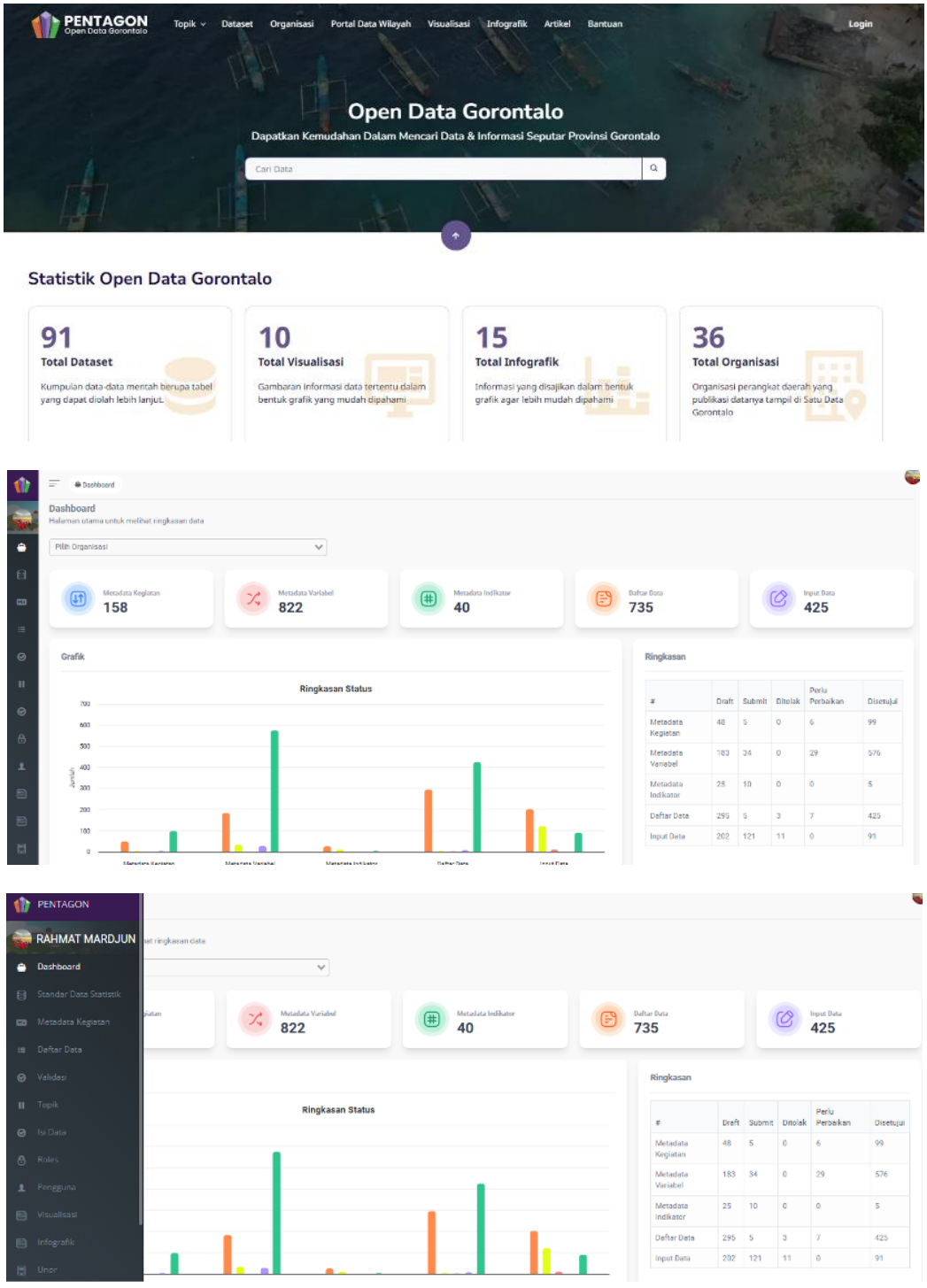

Figure 4. Gorontalo Open Data Application (PENTAGON)

This Gorontalo open data application (pentagon) was created to load all sectoral data elements processed by the regional apparatus of Gorontalo Province which of course is in accordance with all stages and directions of data management in order to produce quality sectoral statistical data. This application has also been added with features of all services provided by the Gorontalo

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provincial government so as not to multiply applications but to maximize one application with many uses. Based on the statement above, the formulation of a management development strategy in improving the quality of sectoral statistical data, namely by utilizing the system facilities that have been created to facilitate, especially in serving data requests, is one of the ideal strategies in processing sectoral statistical data in Gorontalo Province, especially in the Communication, Informatics and Statistics Service.

The implementation of the sectoral statistical data processing strategy at the Communication, Informatics and Statistics Service of Gorontalo Province is carried out through structured steps that refer to the principle of modern technology-based data integration. The implementation process begins with collecting data from various sectors using a standardized system to ensure data quality and consistency. Furthermore, data integration is carried out through a platform based on the Electronic-Based Government System (SPBE) which allows synchronization between agencies.

The application of technologies such as big data and analytics helps accelerate the data processing process while producing relevant insights for policy making. In addition, periodic monitoring and evaluation are implemented to ensure that data processing runs in accordance with key performance indicators. The Office also pays special attention to human resource training to improve the ability to use analytical tools and data management systems. Collaboration with related parties, including academics and the community, is an important pillar in supporting smooth implementation, so that the sectoral data produced can be used optimally in supporting the development of Gorontalo Province based on data and technology.

Conclusion

Strategy Implementation is clearly described in the results of work in sectoral data management that is implemented. Indeed, basically the strategy that has been made will be achieved but again with the problems found such as human resources that need to be educated and their enthusiasm maintained, of course the implementation of the strategy is one of the obstacles. Then the budget that seems impartial in organizing sectoral statistics and facilities and infrastructure that need to use the latest and sophisticated devices to support the strategy that has been formulated.

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