

PDAM Challenge to Provide Water Services Industry in the Era 4.0: Case Study of Regency Jeneponto, South Sulawesi

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Abstract- Water is an important element in human survival. The ability of service providers to clean water affects the availability of clean water for the community. Entering the industrial era 4.0 a challenge for the Regional Water Company (PDAM) in providing water services. This study aimed to describe the challenges faced by PDAM Jeneponto in providing water services. Descriptive qualitative research method was conducted to obtain data through observation and interviews, which strengthened from the data related institutions. Results showed that the challenges faced by PDAM Jeneponto in providing water services, The lack of awareness and skills possessed by employees to innovate in service delivery. In addition, the existing rules have not been able to make employees leave “the culture late”. Limited facilities and infrastructure, as well as no time limit on completion of work also become obstacles in providing clean water services.

Keyword: PDAM, Services, clean water

I. INTRODUCTION

Of the researchers report, Indonesia is among countries that are experiencing water shortages. Nearly two-thirds of Indonesia's population does not have access to clean water sources. This is influenced by climate change are uncertain, and the spread of springs that are uneven, ([1], [2]).

Increasing population growth, and development activities such as agriculture and industry, and rising standards of living, one of the challenges for Indonesia to realize the target of Sustainable Development Goals (SDGs) in the provision of clean water and sanitation to communities. Another challenge faced by the limited ability from provider clean water services, in this case the Regional Water Company (PDAM).

PDAM is a business entity belonging to the area that serves to manage and serve the water needs of the community. As an organization that has an important role in the provision of clean water, PDAM should be able to maintain the public welfare by ensuring the availability of water resources, and the provision of a quality service.

Given the increasing severity of the challenge PDAM in providing water service at this time, a few PDAM in Indonesia has made many innovations, such as PDAM in Bantul Districts, Yogyakarta Province which launched the innovation public service based information technology through android, called PDAM Bantul SIAP PRIMA, [3], PDAM Malang, launches service *Total Water Utility Integrated Network Command Center* or TCC. This service is the command center for the restraint, control and monitoring the transmission and distribution of water, (Alpha, 2018) and PDAM Batang, launches android-based application "Banyu", this application aims to simplify and improve services [4]

Innovations made by several PDAM is a step to maintain their existence in industry 4.0 today. In this era, any government organization is required to use technology to improve efficiency, effectiveness and accountability [5], [6]. In addition, the use of technology in the industrial era 4.0 has a goal that focuses on customer needs [6]. In accordance with the role of PDAM.

New breakthrough made by PDAM in Indonesia, only touching aspects of public service delivery, such as, receiving complaints and bill payment processing. PDAM have not been able to innovate the existing use technology to find and maintain the availability of raw water sources, as well as maintaining water quality, which is a major problem in providing water services to the public.

Inability PDAM to make innovation in the provision of raw water sources and water quality protection, basically influenced by budgetary constraints, as experienced by PDAM Jeneponto located in the province of South Sulawesi.

PDAM Jeneponto experiencing budget crises since 2014. The budget crisis caused by the misuse of funds by the leadership of PDAM. So this affects to management system PDAM. In addition, the natural disaster that struck Jeneponto district in February 2019, led to the existing infrastructure at the district office Jeneponto PDAM suffered severe damage.

Providing services such as clean water by PDAM Jeneponto, according [7] can succeed if it is supported by six contributing factors are: 1), Awareness factor; 2) Rules

Factors; 3) organizational factors; 4) Factor income, 5) officer skills Factors, 6) Means Factor.

Based on this phenomenon, the provision of water services by PDAM especially Jeneponto still have problem, so that it underlies researchers to conduct research to analyze the challenges PDAM Jeneponto in providing clean water services.

II. METHOD

PDAM Jeneponto role in providing clean water services to the public in the era of industry 4.0 rated still less than the maximum, which create grievances in society. So that it encourages researchers to use descriptive qualitative approach to analyze the challenges faced by PDAM Jeneponto in providing water services.

Data from this study consisted of primary data and secondary data, the researchers obtained from the results of observation, interviews and review of documentation. Informants in this study was determined by using the snowball technique, which according to (Nemuan, 2013) informant is determined based on the information that has been obtained, which then become a reference for determining the next informant. Informants in this study consists of the Director of PDAM Jeneponto, Head of Finance PDAM Jeneponto Vice Regent Jeneponto Jeneponto PDAM employees, and society Jeneponto. For data analysis, using data analysis techniques presented by Miles, Huberman, and Saldana, which is called interactive model, which consists of the data reduction, data display, and conclusion, drawing / verification. [8]

III. RESULTS AND DISCUSSION

As mentioned earlier, this study discusses the challenges Jeneponto PDAM particularly in providing water services in the industrial era, with regard to the dimensions awareness factor, regulation factor, organizational factors, income factor, personnel skill factor, and means factor. For more details will be outlined as follows:

1. Awareness Factors

Awareness of employees at all levels of the tasks that are the responsibility they bring a positive impact to the organization. Thus providing excellent service awareness needs to be built in the ranks of employees of PDAM Jeneponto.

Jeneponto Regency PDAM employees in providing clean water services have been shown not to underestimate their obligation to provide services to communities that register PDAM water installations, pay bills manually, and who make complaints.

But in terms of innovation, employees PDAM Jeneponto not show awareness to make a new breakthrough in order to improve services. In addition, the employees do not make efforts to overcome the problems which has been encountered. Clerks tend to expect leaders to solve the problems.

2. Rules Factors

Rules are important tools for employee actions and deeds. Rules on Jeneponto PDAM into the groundwork for the employees in providing services. rule in interpreted

by PDAM employees Jeneponto as obedience and authority for encashment use rights, obligations and responsible.

Rules can also be defined as implementation of employee discipline that comes with obedience, orderliness and discipline (Discipline of time and discipline), conviction and act fairly. Rules that belong PDAM Jeneponto not been able to serve as one of the supporters in the delivery of services. Many employees PDAM Jeneponto undisciplined time. They always come in late after hours of complete rest. In the absence of sanctions for employees who are too late to give the notion that they do not delay an important problem they were in the office and provide services after they break.

Rules should be supporting in providing services in the Office of the District Samsat Bone, but in fact an obstacle to not discipline employees. It later became one of the drawbacks for employees PDAM Jeneponto in overcoming this industrial era, late culture is still maintained.

3. Organizational Factors

Organization a tool and a system that allows the passage of the mechanism of service activities in an effort to reach our objectives. Every organization has a Standard Operating Procedure (SOP), which became the foundation for providing services so that the desired objectives can be achieved.

The Standard Operating Procedure (SOP) of the Jeneponto Regency PDAM does not determine the completion period. As in the SOP to install clean water in community homes. In the SOP there is no limit on how long it takes to complete the pipe installation from the start of the community submitting the installation. The same thing was also found in the SOP for piping connection removal.

Basically, rules regarding the time of completion of an activity are important to improve the efficiency and effectiveness of providing a service. The unclear rules regarding the deadline for completion of activities in PDAM Jeneponto Regency, causing some work often completed in a long time.

4. Income Factor

Revenue affect employee performance. Employee income serves as a support service delivery. Sufficient income will motivate employees to carry out a good job.

Budget crisis that hit the PDAM Jeneponto in 2014, have an impact on employee salaries and benefits. In 2017, during the two months of salary for employees not paid. This then affects the performance of employees. Servants to strike and held demonstrations demanding the payment of benefits.

Entering 2019, the revenue PDAM Jeneponto only able to pay the salaries and benefits of employees. This revenue is not able to finance the provision of facilities and infrastructure after flooding that hit Jeneponto. And to fix some pipelines and water pumps were damaged, PDAM get funds from the loan proceeds.

In addition, PDAM Jeneponto also still have a loan of 225 million rupiah to one of the supervisory board PDAM. The loan was granted in 2017, to help PDAM

overcome the financial crisis, in order to clean water services to the public continues to run.

5. Skills Officer Factor

The success of an activity inseparable from the skills possessed by employees, which in this case is an employee of PDAM Jeneponto. The skills of employees must not be separated from the educational background they have.

PDAM employee Jeneponto have diverse educational backgrounds. Educational backgrounds ranging from elementary, middle, high school / vocational, and S1. Number of employees PDAM Jeneponto of 66 people, consisting of 57 men and 9 women. Of the 67 persons only 14 people who have the educational background strata 1. For more information about the educational background of employees PDAM Jeneponto can be seen in the following table:

Table 1. Background of Education Employees

No.	Education	total
1	SD	2
2	SMP	4
3	SMA / SMK	46
4	S1	14
total		66

PDAM employee Jeneponto dominated by graduate SMA / SMK. The employee generally has an important position in the organizational structure. But not all of these employees fully understand the task at hand. This is caused by the non-conformance educational background. As an employee who has a background of Religious Education S1 placed on the maintenance techniques. Furthermore, in order to improve the skills of employees, PDAM Jeneponto often send employees to attend training organized by other PDAM.

6. Means Factors

Availability of facilities concerning any equipment, equipment and facilities to the main and auxiliary execution of work. The function means that services, accelerate the process of implementation of the work, which saves time, creates a feeling of comfort to people who are interested, give rise to feelings of satisfaction in people with an interest so as to reduce their emotional nature.

At PDAM Jeneponto, completeness facilities to support all forms of service in the office at this time is very less. There is only one office laptop use. This is because all computers and laptops as well as other ancillary equipment has been damaged by the floods in February 2019.

For affordability of water services to the public, has built several water management installations (IPA) in some areas, like in the District Bangkala, District and Sub-district Binamu Turatea. The IPA development have

not been able to provide clean water access to all communities in Jeneponto. Access to clean water is only obtained by people who live near the IPA. This is due to the lack of pipeline owned by PDAM. In addition, PDAM Jeneponto had only two tank cars. The state of the car is also very alarming because it has been more than 20 years. If based on the eligibility standards of vehicles, the tank car is already no longer allowed to be used.

IV. CONCLUSION

Provision of clean water by PDAM Jeneponto in the industrial era are faced with various challenges. Employees do not have the awareness to innovate in the delivery of services, in addition work skills in providing water services is still lacking. Rules in the PDAM Jeneponto not been able to make employees leave late culture. Facilities and infrastructure, as well as the absence of a time limit completion of work, to make the services of PDAM Jeneponto less than the maximum, leading to complaints from the public.

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