p–ISSN: 2723 – 6609 e-ISSN: 2745-5254
Vol. 5, No. 12, December 2024 http://jist.publikasiindonesia.id/

Potential Analysis and Evaluation of Drinking Water Supply Based on Independent Smart Drinking Water Platforms in Depok City

Sudirman[1], Heri Suprapto[2]*, Nurina Yasin
Universitas Gunadarma, Indonesia
Email: sudirman@studentsite.gunadarma.ac.id[1*], hsuprapto.staffgunadarma.ac.id[2]

*Correspondence

Keywords: water; drinking water needs; independent smart drinking water platform.

ABSTRACT

Tirta Asasta Depok has made the Independent Smart Drinking Water Platform which is prepared as a special program that is placed in public places. Currently, there are 3 (Three) Independent Smart Drinking Water Platforms installed throughout the Depok City area. The Mandiri Smart Drinking Water Platform aims to be a facility that can be enjoyed by customers in particular and the general public so that they can enjoy the processed water of the Mandiri Smart Drinking Water Platform. The installation of this machine is a form of effort by PT. Tirta Asasta Depok (Perseroda) in order to encourage the people of Depok City to be able to reduce bottled water consumption so that they can reduce the contribution of waste in the Depok City environment. People can use tumblers to buy drinking water, so that plastic bottle packaging waste can be minimized. Therefore, it is necessary to evaluate the effectiveness of the use of the Mandiri Smart Drinking Water Platform that has been installed and the potential for the installation of the Mandiri Smart Drinking Water Platform program in the future so that it becomes a consideration for the installation of the Mandiri Smart Drinking Water Platform which will be planned next. The results of the evaluation of the use of this machine still need control and regulation as well as official levies. The installation of this machine has a lot of water consumption opportunities in schools. Based on the weighting assessment that has been calculated, there are 9 (nine) agencies and schools that can be recommended (with a total value of > 15.00 points).

Introduction

The Depok City Government continues to strive to overcome waste problems, starting from making regulations regarding arbitrary waste disposal that is subject to sanctions/criminals, banning the use of plastic bags in minimarkets, appealing to the community to sort waste, to plans to build waste processing facilities with

environmentally friendly technology (Ilfan, Laura, & Kurniadi, 2023). However, efforts to overcome this waste problem can not only be carried out by the Depok City Government, but it also requires the involvement of all elements of the community, both community and other stakeholders in Depok City (Ilfan et al., 2023).

Depok City is a metropolitan city with an area of 199,906 km2 and a population density of 2.21 million people (DDA Depok City, Year 2023), inseparable from the issue of waste problems that are increasingly large and piling up. Head of the Depok City Sanitation Environment Agency (DLHK) Abdul Rahman said that every day around 900 to 1,000 tons of waste are sent to the Cipayung Landfill (www.kompas.com July 19, 2023), and around 50 tons are plastic waste that is difficult to decompose (Hanifa, Adityosulindro, & Wahyuningsih, 2021).

The Depok City Government continues to strive to overcome waste problems, starting from making regulations regarding arbitrary waste disposal that is subject to sanctions/criminals, banning the use of plastic bags in minimarkets, appealing to the community to sort waste, to plans to build waste processing facilities with environmentally friendly technology (Nofiyanti, Salman, Nurjanah, Mellyanawaty, & Nurfadhillah, 2020). However, efforts to overcome this waste problem can not only be carried out by the Depok City Government, but it also requires the involvement of all elements of the community, both community and other stakeholders in Depok City (Kusharsanto, Maninggar, Maulidya, & Muzaki, 2021).

PT. Tirta Asasta Depok (Perseroda) is a company owned by the Depok City Government engaged in water treatment which has a vision to become a company that provides excellent service and environmental insight, as well as a mission to increase the company's active role in environmental conservation, making various efforts to be able to take part in maintaining and preserving the environment in Depok City in particular (nisa Nisa, 2021). PT. Tirta Asasta Depok (Perseroda) has built a Water Storage Service with the Asasta+ brand in the form of a refillable drinking water outlet that can be reached by customers and the people of Depok City to be able to access quality refillable water (nisa Nisa, 2021).

PT. Tirta Asasta Depok in 2022, has created an Independent Smart Drinking Water Platform which is prepared as a special program that is placed in public places. Currently, there are 3 (Three) Independent Smart Drinking Water Platforms installed throughout the Depok City area. The Mandiri Smart Drinking Water Platform aims to be a facility that can be enjoyed by customers in particular and the general public so that they can enjoy the processed water of the Mandiri Smart Drinking Water Platform. The installation of this machine is a form of effort by PT. Tirta Asasta Depok (Perseroda) in order to encourage the people of Depok City to be able to reduce bottled water consumption so that they can reduce the contribution of waste in the Depok City environment. People can use tumblers to buy drinking water, so that plastic bottle packaging waste can be minimized.

The Independent Smart Drinking Water Platform currently has 3 (Three) new procurements placed at 3 points of government agencies, namely the Bojongsari District

Office, the Sawangan District Office, and the Sukmajaya District Office. The placement of the Mandiri Smart Drinking Water Platform is expected to be accessible to the people of Depok City so that they can consume drinking water through the Mandiri Smart Drinking Water Platform when visiting the sub-district offices. However, after one month of installation of the Mandiri Smart Drinking Water Platform, based on water usage reports, the Mandiri Smart Drinking Water Platform has not been used effectively by the three sub-districts because the water consumption value is still zero. Therefore, it is necessary to evaluate the effectiveness of the use of the Mandiri Smart Drinking Water Platform that has been installed and the potential for the installation of the Mandiri Smart Drinking Water Platform program in the future so that it becomes a consideration for the installation of the Mandiri Smart Drinking Water Platform which will be planned next.

Method

The methodology used in this study is a qualitative method. Qualitative research methods are research methods used to research on natural object conditions, where the researcher is the key instrument, data collection techniques are carried out in triangulation, data analysis is inductive, and qualitative research results emphasize more on meaning than generalization (Sugiyono, 2016). The data collection techniques carried out in this study are as follows:

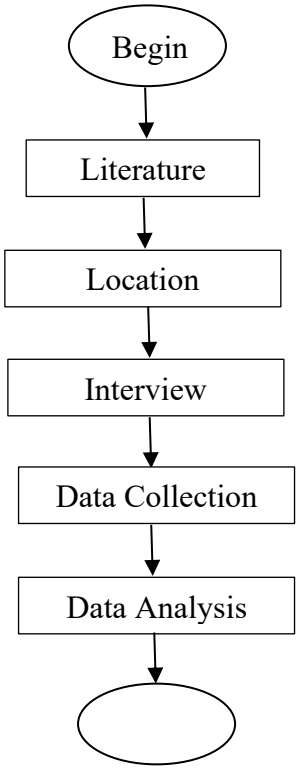

Figure 1
Research Writing Flow Chart

Results and Discussion

Data from the Interview Results of the School Potential Survey in Depok City

The results of the evaluation carried out by interviewing the sub-districts that have been installed with the Mandiri Air Smart Drinking Water Platform, the author tried to conduct interviews to several schools that the author considered to be potential to be given the Mandiri Air Smart Drinking Water Platform (Robbie, Roziqin, Deniar, Praharjo, & Roz, 2023). The reason for the author's suspicion that the school has the potential to be installed with the Mandiri Air Smart Drinking Water Platform is because the school is a public place with many students but the access is closed so that only the internal school can access water from the Mandiri Air Smart Drinking Platform. Long class hours make students stay at school longer so that the fulfillment of drinking water needs while at school will also be many. In addition, several schools in Depok City have implemented a policy to encourage students to bring tumblr from home as an effort to reduce plastic waste generated from the school environment (Dirgatama, Permansah, & Rusmana, 2024).

In order to strengthen the suspicion of this potential, the author conducted interviews about water needs, water use culture, and the willingness of schools to accept the Mandiri Air Smart Drinking Platform program. The following is a table of interview data obtained by the author from interviewing a sample of 16 (Sixteen) Schools in Depok City in Table 2.

Table 2
School Interview Results Data

No	Nama Instansi	Kebutuhan Air Galon Per Bulan	Kebutuhan Air Kemasan Per Bulan	Daya Listrik (Watt)	Jumlah Pegawai (Orang)	Jumlah Siswa (Orang)
1	SD Negeri Beji 5	40	2	27000	25	375
2	SD Negeri Mekar Jaya 10	25	3	2650	25	345
3	Sekolah Islam Fitrah Al Fikri	250	50	50000	140	700
4	SD Nasional Plus Tunas Iblam	120	2	55000	60	245
No	Nama Instansi	Kebutuhan Air Galon Per Bulan	Kebutuhan Air Kemasan Per Bulan	Daya Listrik (Watt)	Jumlah Pegawai (Orang)	Jumlah Siswa (Orang)
5	SD Negeri Depok 1	52	2	10000	46	715
6	SMP NEGERI 3 Depok	60	2	32000	68	1313
7	SMP NEGERI 32 Depok	40	2	5500	38	588
8	SMPIT Ummul Quro	400	4	40000	180	345
9	SMP Negeri 2 Depok	40	2	32000	66	1325
10	SMP Citra Negara	96	2	32000	40	488
11	SMAS Yaspen Tugu Ibu	64	5	10000	55	900
12	SMA Negeri 1 Depok	80	20	84000	80	1500
13	SMA Negeri 3 Depok	16	2	84000	90	1300
14	SMA Negeri 2 Depok	70	9	85000	80	1500
15	SMA Negeri 15 Depok	30	1	5000	32	467
16	SMAIT Nurul Fikri	38	2	60000	25	375

Number of Gallon and Bottled Water Needs Per Month

From the data from the school interview results in table 3.2, it can be concluded that the maximum number of gallons of water needed per month is at SMPIT Ummu'l Quro as much as 400 gallons. Followed by the Fitrah Al Fikri Islamic School with a need for 250 gallons of water per month. The school with the smallest consumption of gallons of water per month is SMA Negeri 3 Depok, but this amount is only the number of gallons to meet teachers and employees, while each class has a gallon filling dispenser coordinated by each homeroom teacher so it is uncertain how much is consumed each month. Some schools have policies to facilitate drinking water dispensers for each school, but generally the purchase of gallons of water is not accommodated by the school, coordinated by each student in the class. The following is a data chart of the number of gallon water needs per month for all schools:

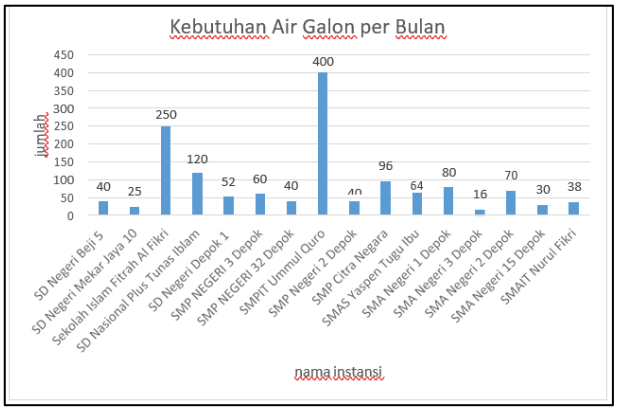

Figure 1
Number of School Gallon Water Needs Per Month

The largest number of bottled water needs per month is Fitra Al Fikri Islamic School with a total of 50 Packs. This number is a calculation of the needs of two levels of schools (elementary and junior high school) and also the foundation. The next highest number of bottled water needs is at SMA Negeri 1 Depok, where the number of 20 Packs per month is the average number of all needs, both for guests, meetings, parent meetings, and school events/activities. The following is a data diagram of the number of bottled water needs per month for all schools which can be seen in Figure 2.

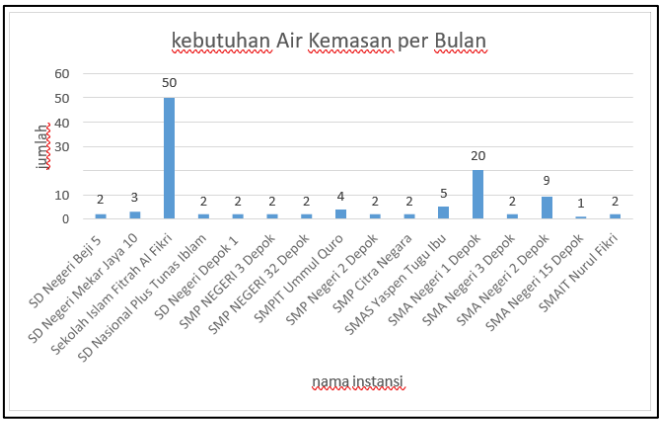

Figure 2
Number of School Bottled Water Needs Per Month

Installed Electrical Power Capacity

In addition to identifying the amount of water needed, both gallons and packaging, the author also asked about the electricity capacity installed in the schools visited. This is intended to see the ability of the installed electricity capacity if there is an increase in the amount of electricity consumption required for the installation of the Mandiri Air Smart Drinking Water Platform from the Company (Lady Aqnes Kurniawati, Muhammad Ilham Aldika Akbar, Budi Utomo, & Aditiawarman, 2021) .

From the data from school interviews in table 4.3, it can be seen that the electrical power capacity installed in 16 school locations has an average capacity of tens of thousands. The highest installed electrical power capacity is at SMA Negeri 2 Depok, SMA Negeri 1 Depok, and SMA Negeri 3 Depok with a capacity of more than 80,000 Watts. As for SD Negeri Mekarjaya 10, SMP Negeri 32 Depok, and SMA Negeri 15 Depok do not have a capacity of more than 10,000 so it is necessary to reconfirm whether it can accommodate the installation of the Mandiri Air Smart Drinking Water Platform or not. However, according to information from the party we interviewed, the school building of SMP Negeri 32 Jakarta will be renovated and there is a possibility of increasing its electrical power capacity. As for SMA Negeri 15 Jakarta which is a newly established school, the building currently used is a rented building so it does not have the authority to increase electrical power.

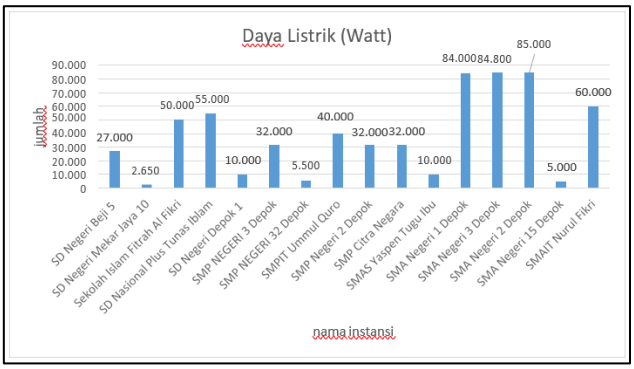

Figure 3
Installed Electrical Power Capacity in Schools

Number of Students and Employees

In addition to the use of water needs, the author also analyzed the number of students in each school. This is intended to see how much the estimated daily drinking water needs in the school are based on the number of students and the number of employees (teachers, TU employees, security guards and OB) in the school which is the potential amount of water use at the Air ATM. If each student and employee is assumed to need at least 1 liter of water per day while at school, then the number of daily needs at school is multiplied by the number of students and employees.

Based on table 4.3 data, the highest number of students is in SMA Negeri 1 Depok and SMA Negeri 2 Depok, which is around 1,500 students, followed by SMP Negeri 2 Depok and SMP Negeri 3 Depok, and SMA Negeri 3 Depok which reaches 1,300 students. While the least number of students is SD Nasional Plus Tunas Iblam with a number of less than 300 students. The following is a comparison chart of the number of students from each school which can be seen in Figure 4 and Figure 5.

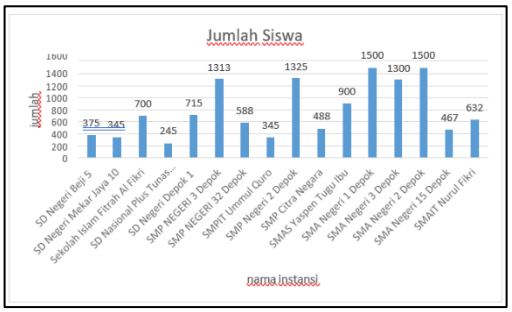

Figure 4
Number of School Students

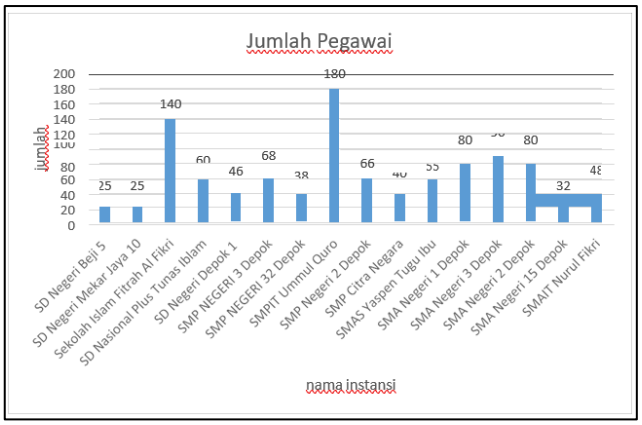

Figure 5
Total School Staff

If we simulate by taking one of the schools with the largest number of students and employees combined with the largest number of students and employees is SMA Negeri 1 Depok and SMA Negeri 2 Depok with the number of students and employees around

1,580 people, then in a day the two schools consume drinking water as much as 1,580 liters or equivalent to 1.58 m^3/day to meet the needs of body fluids.

Data from Interview Results of Survey of Potential Health Centers in Depok City

In addition to interviewing schools as a place that is considered one of the potential locations for the Mandiri Air Smart Drinking Water Platform program, the author tries to see the potential in the Puskesmas. The reason for the suspicion that the Puskesmas is a potential location is because the Puskesmas has visitors both who will seek treatment and accompany them, sometimes have a good and necessary time that has limited access only for patients and companions who will check their health. As for those who visit for health checkups, sometimes wait some time so they need to meet the needs of body fluids while in the Puskesmas environment. To strengthen the suspicion of this potential, the author conducted an interview about water needs, water use culture, and the willingness of the health center to accept the provision of this Mandiri Air Smart Drinking Water Platform program.

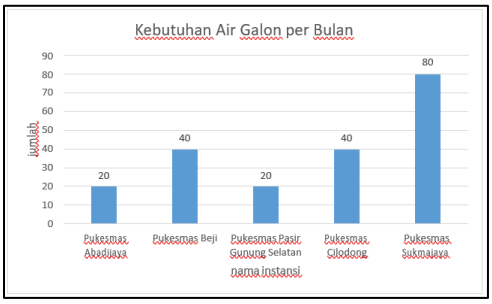

Figure 6
Number of Puskesmas Gallon Water Needs Per Month

The largest number of bottled water needs per month is the Sukmajaya Health Center with a total of 10 Packs. This number is the average number of all needs, both for the needs of guests and other agendas/meetings. The following is a data chart of the number of bottled water needs per month for all health centers which can be seen in Figure 7.

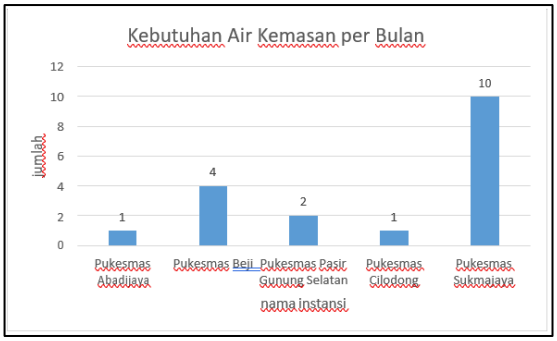

Figure 7
Number of Puskesmas Bottled Water Needs Per Month

Installed Electrical Power Capacity

Similar to at school, the author also asked about the electricity capacity installed in the health center visited. This is intended to see the ability of the installed electricity capacity if there is an increase in the amount of electricity consumption required for the installation of the Independent Smart Drinking Water Platform from the Company.

From the data from the interview results of the health center in table 4.4, it can be seen that the electrical power capacity installed in 5 health center locations has an average capacity of tens of thousands. The highest installed electrical power capacity is at the Sukmajaya Health Center with an installed capacity of 75,000 Watts and the lowest electrical power capacity is the Pasir Gunung Selatan Health Center with 23,000 Watts.

Economic Aspects

In terms of economic aspects, a comparison of the number of gallon and bottled water needs in each school and health center that is a sample of the study can be seen. In addition, the amount of electrical power installed in each school is also one of the considerations whether the electrical power in schools and health centers is able to accommodate the installation of Independent Smart Drinking Water Platforms or not.

Gallon and Bottled Water Needs in Schools

From the data of each school presented in Table 4.3, it can be concluded that the number of percentage of gallon needs per month in schools can be seen in Table 3 and Figure 4.

Table 3
Percentage of Total Gallon Water Needs per Month in Schools

No.	Number of Gallon Water Needs	Sum	Percentage
1	1 - 30 Gallons	2	13%
2	31 - 60 Gallons	7	44%
3	61 - 90 Gallons	4	25%
4	91 - 120 Gallons	1	6%
5	> 120 Gallons	2	13%

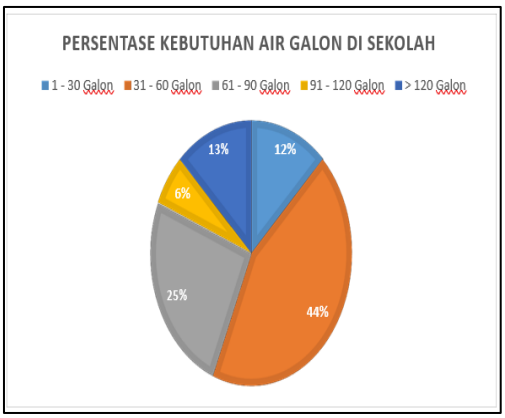

Figure 8
Percentage of Gallon Water Needs in Schools Per Month

From the data of each school presented in Table 4.3, it can be concluded that the

percentage of bottled water needs per month in schools can be seen in Table 4 and Figure 5.

Table 5
Percentage of Number of Needs
Bottled Water per Month in Schools

No.	Number of Bottled Water Needs	Sum	Percentage
1	1 - 5 Packs	13	81%
2	6 - 10 Packs	1	6%
3	11 - 15 Packs	0	0%
4	16 - 20 Packs	1	6%
5	> 20 Packs	1	6%

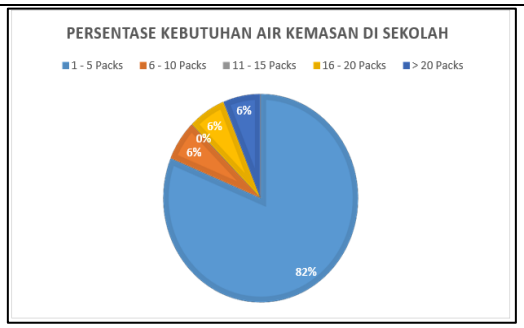

Figure 9
Percentage of Total Water Needs

Packaging in Schools Per Month

From the table and diagram above, it can be seen that on average the highest number of gallon needs in schools is in the range of 31 – 60 Gallons as much as 44% or 7 (seven) schools and the average number of the most packaging needs is in the range of 1 – 5 Packs as much as 82% or 13 (thirteen) schools.

If on average the highest number of gallon water needs is in the range of 31 – 60 gallons, the amount of costs incurred to meet the average gallon water needs ranges from Rp. 600,000,- to Rp. 1,200,000,- assuming the price of a refillable gallon unit of Rp. 20,000,-. Meanwhile, the average amount of bottled water needs is in the range of 1-5 Packs, assuming that the amount of costs incurred to meet the average bottled water needs ranges from Rp. 30,000 to Rp. 150,000 when assuming the unit price of bottled water is Rp. 30,000,-.

Gallon and Bottled Water Needs at Health Centers

From the data of each school presented in Table 4.4, it can be concluded that the percentage of the number of gallons needed per month at the Puskesmas can be seen in Table 6 and Figure 7.

Table 6
Percentage of Gallon Water Needs per Month at Puskesmas

No.	Number of Gallon Water Needs	Sum	Percentage

1	1 - 30 Gallons	2	40%
2	31 - 60 Gallons	2	40%
3	61 - 90 Gallons	1	20%
4	91 - 120 Gallons	0	0%
5	> 120 Gallons	0	0%

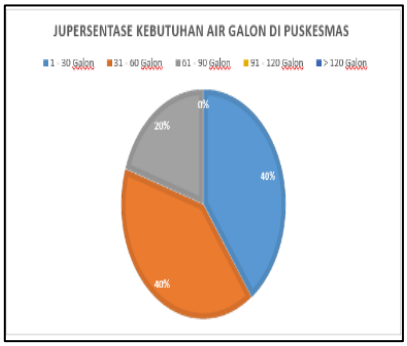

Figure 10
Percentage of Gallon Water Needs in Schools Per Month

From the data of each school presented in Table 4.3, it can be concluded that the number of percentage of bottled water needs per month in schools can be seen in Table 7 and Figure 11.

Table 7
Percentage of Number of Needs
Bottled Water per Month in Schools

No.	Number of Bottled Water Needs	Sum	Percentage
1	1 - 5 Packs	13	81%
2	6 - 10 Packs	1	6%
3	11 - 15 Packs	0	0%
4	16 - 20 Packs	1	6%
5	> 20 Packs	1	6%

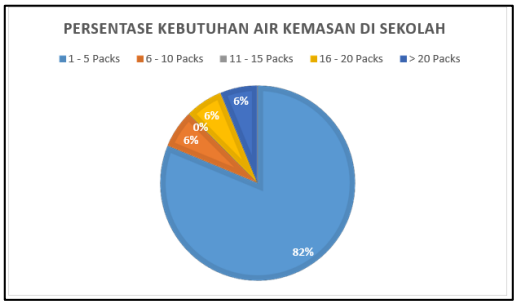

Figure 11 Percentage of Total Water Needs
Packaging in Schools Per Month

From the table and diagram above, it can be seen that on average the highest number

of gallon needs in schools is in the range of 31 – 60 Gallons as much as 44% or 7 (seven) schools and the average number of the most packaging needs is in the range of 1 – 5 Packs as much as 82% or 13 (thirteen) schools.

If on average the highest number of gallon water needs is in the range of 31 – 60 gallons, the amount of costs incurred to meet the average gallon water needs ranges from Rp. 600,000,- to Rp. 1,200,000,- assuming the price of a refillable gallon unit of Rp. 20,000,-. Meanwhile, the average amount of bottled water needs is in the range of 1 – 5 Packs, assuming that the amount of costs incurred to meet the average bottled water needs ranges from Rp. 30,000 to Rp. 150,000 when assuming the price of a unit of bottled water is Rp. 30,000,-.

Service and Social Environmental Aspects

In terms of service and social environment, it can be seen from the number of employee needs and the number of students/visitors in each school and health center that is a study sample. In addition, the interest to receive services for the Independent Smart Drinking Water Platform program. This should also be considered assuming that the agency that is interested in pairing is willing to maintain, maintain, and maximize the use of this Independent Smart Drinking Water Platform.

Percentage of Puskesmas Visitors

From the data of each health center presented in table 8, it can be concluded that the number of employees in the school can be seen in Table 8 and Figure 12.

Table 8
Percentage of Visitors

No.	Number of Visitors	Sum	Percentage
1	1 - 300 people	5	100%
2	301 - 600 people	0	0%
3	601 - 900 People	0	0%
4	901 - 1200 people	0	0%
5	>1200 people	0	0%

Figure 12
Percentage of Visitors

From the table and diagram mentioned above, it can be seen that on average the

highest number of students in schools is in the range of 301 – 600 people as many as 38% or 6 (six) schools, while the average number of visitors to the puskesmas is in the range of 1 – 300 people as much as 100% or 5 (five) puskesmas.

In addition to the number of employees and the number of students/visitors in school institutions and health centers, there are several things that are considered from the service and social aspects of the environment, such as socialization and the willingness of the PT. Tirta Asasta Depok (Perseroda) at the location of the related school/health center. Some schools, especially private schools, state that it is necessary to socialize to parents or school committees first, because this is related to the quality of water that will be drunk by children to prevent the risk of mistakes by the school if unwanted things happen due to water consumption by students. In addition, several schools asked for a guarantee of drinking water quality from the Independent Smart Drinking Water Platform.

One of the main points that needs to be considered in the service aspect is the availability of networks at the location of schools and health centers that are targeted for the installation of the Independent Smart Drinking Water Platform. This is to facilitate the installation of the Independent Smart Drinking Water Platform if the agency already has a pipeline network. For agencies that have subscribed, of course they will know how the water quality of PT. Tirta Asasta Depok (Perseroda) so that they can further determine whether to maximize the use of the company's water filtration machine or not.

Cultural and Legal Aspects

There are several other considerations related to the potential installation of the Independent Smart Drinking Water Platform, including policies and the implementation of environmental culture in related agencies. The Depok City Government encourages agencies in Depok City to implement the Mayor's Circular Srat on waste reduction by providing facilities in the form of Independent Smart Drinking Water Platforms. Most of the schools and health centers visited have followed the direction to implement the reduction of plastic waste from bottled drinking water by providing dispensers in office spaces for internal employees, but all related agencies still provide bottled water for guests who attend.

Formulation of Agency and School Potential Assessment

After analyzing the data obtained from the interview results, the author also formulated the weighting of the assessment to get the priority of the schools with the most potential as agencies and schools that will be paired with the Independent Smart Drinking Water Platform using four assessment aspects (Economic Aspects, Service and Social Aspects, Cultural, Environmental, and Legal Aspects, and Risk Aspects).

Table 9
Assessment Weighting

No.	Aspek Penilaian	Keterangan	Scoring	Bobot
	Aspek Ekonomi			
		1 - 30 Galon	1	
		31 - 60 Galon	2	
		61 - 90 Galon	3	
		91 - 120 Galon	4	
		> 120 Galon	5	
		1 - 5 Packs	1	
		6 - 10 Packs	2	
		11 - 15 Packs	3	
		16 - 20 Packs	4	
		> 20 Packs	5	
		< 10.000 Watt	1,25	
		10.000 - 30.000 Watt	2,5	
		30.001 - 60.000 Watt	3,75	
	Daya Listrik	> 60.000 Watt	5	20%
	Aspek Pelayanan dan Sosial			
	Jumlah Siswa/Pengunjung	1 - 300 orang	1	
		301 - 600 orang	2	
		601 - 900 Orang	3	20%
		901 - 1200 orang	4	
		>1200 Orang	5	
2		1 - 30 Orang	1	
		31 - 60 Orang	2	
	Jumlah Pegawai	61 - 90 orang	3	40%
		91 - 120 orang	4	
		> 120 orang	5	
	Terdapat Jaringan PT. TAD	Ya	5	
No.	**Aspek Penilaian**	**Keterangan**	**Scoring**	**Bobot**
		Tidak	2,5	25%
		Ya	5	15%
	Berlangganan PT. TAD	Tidak	2,5	
3	**Aspek Budaya, Lingkungan, dan Hukum**			
	Kebijakan/Aturan Membawa	Ya	5	
		Tidak	2,5	
	Wadah Isi ulang			50%
	Fasilitas Pendukung Kebijakan	Ya	5	
		Tidak	2,5	
				50%
	Analisis Risiko			
		Ya	5	
	Keberminatan	Tidak	0	100%

Based on the weighting assessment that has been calculated, there are 9 (nine) agencies and schools that can be recommended (with a total value of > 15.00 points). The following is a list of weighting assessments of the potential for water installation in school institutions and health centers based on data from each aspect and information on the existence of piping networks and subscription status contained in Table 10.

Table 10
List of Weighting Assessment of Potential Water Installation in School Institutions and Health Centers

It	Name of Agency	Economic Aspects	Service and Social Aspects	Cultural and Legal Aspects	Risk Analysis	Total Score	Information	
							Pipeline	Subscription
1	SD Negeri Beji 5	1,70	2,18	5,00	5,00	13,88		
2	SD Negeri Mekar Jaya 10	1,00	2,80	2,50	5,00	11,30		
3	Fitrah Al Fikri Islamic School	4,75	3,60	3,75	5,00	17,10	x	x
4	SD Nasional Plus Tunas Iblam	3,15	2,63	3,75	5,00	14,53		
5	SD Negeri Depok 1	1,70	3,03	3,75	5,00	13,48		
6	SMP NEGERI 3 Depok	1,95	4,20	5,00	5,00	16,15	√	√
7	SMP NEGERI 32 Depok	1,40	3,20	5,00	5,00	14,60		
8	SMPIT Ummul Quro	3,15	3,40	5,00	5,00	16,55	x	x
9	SMP Negeri 2 Depok	1,95	4,03	5,00	5,00	15,98	√	x
10	Citra Negara Junior High School	2,75	2,83	5,00	5,00	15,58	√	x
11	SMAS Yaspen Tugu Ibu	2,10	3,23	2,50	0,00	7,83		
12	SMA Negeri 1 Depok	3,80	4,20	5,00	5,00	18,00	√	√
13	SMA Negeri 3 Depok	1,80	4,60	5,00	5,00	16,40	√	√
14	SMA Negeri 2 Depok	3,00	3,83	3,75	5,00	15,58	√	x
15	SMA Negeri 15 Depok	1,05	2,83	3,75	5,00	12,63		
16	SMAIT Nurul Fikri	1,95	2,80	5,00	5,00	14,75		

17	Abadijaya Health Center	1,55	2,63	2,50	2,50	9,18		
18	Beji Health Center	2,60	3,40	3,75	2,50	12,25		
19	Pasir Gunung Selatan Health Center	1,30	2,23	2,50	5,00	11,03		
20	Cilodong Health Center	1,95	3,60	3,75	5,00	14,30		
21	Sukmajaya Health Center	3,00	3,60	3,75	5,00	15,35	√	√

Conclusion

The results of the evaluation of the use of the Independent Smart Drinking Water Platform in 3 (Three) sub-districts, namely the Bojongsari District Office, the Sawangan District Office, and the Sukmajaya District Office, namely:

a. It is necessary to have periodic control and maintenance by the provider/company regarding the condition of the Mandiri Smart Drinking Water Platform machine and periodic water quality inspection/testing in the laboratory as well as reporting water quality results to the agency so that it becomes evidence of water quality assurance
b. The sub-district stated that there needs to be a regulation related to the scope of use of the Independent Smart Drinking Water Platform as well as the official levy that will be imposed by the three sub-districts and the socialization of the three sub-districts for the service of the Independent Smart Drinking Water Platform so that it becomes the basis for budgeting.
c. The installation of Independent Smart Drinking Water Platforms in school institutions has more opportunities for water consumption because of the greater number of employees and students and the long teaching and learning time in schools will provide opportunities for water consumption in more frequency and volume.
d. Based on the weighting assessment that has been calculated, there are 9 (nine) agencies and schools that can be recommended (with a total value of > 15.00 points).

Bibliography

Dirgatama, Chairul Huda Atma, Permansah, Sigit, & Rusmana, Dede. (2024). Understanding smart village concepts: digital literacy and mobile technology. *Journal of Education and Learning (EduLearn)*, *18*(3), 1015–1028.

Hanifa, R., Adityosulindro, S., & Wahyuningsih, N. P. S. (2021). Optimization of water treatment process performance of Duren Seribu Water Treatment Plant in Depok City: water quality and design parameters. *IOP Conference Series: Earth and Environmental Science*, *896*(1), 12039. IOP Publishing.

Ilfan, Freddy, Laura, Winny, & Kurniadi, Eki. (2023). Planning Of Clean Water Distribution Pipeline Network At Universitas Jambi Kampus Pinang Masak Mendalo. *Jurnal PenSil*, *12*(1), 120–132.

Kusharsanto, Z. S., Maninggar, N., Maulidya, D., & Muzaki, A. R. (2021). How infrastructure contributes to fostering regional innovation system: The case of Pelalawan Regency–Indonesia. *IOP Conference Series: Earth and Environmental Science*, *778*(1), 12001. IOP Publishing.

Lady Aqnes Kurniawati, Lady, Muhammad Ilham Aldika Akbar, Muhammad, Budi Utomo, Budi, & Aditiawarman, Aditiawarman. (2021). Risk Factor of Preeclampsia in a Secondary Indonesian Hospital: A Case-Control Study. *Indian Journal of Forensic Medicine & Toxicology*, *15*(3), 3474–3482.

nisa Nisa, Khoirun. (2021). Analisis Efektivitas Program Stasiun Air Siap Minum dalam Pengembangan Inovasi Layanan Publik. *Jurnal Ilmu Sosial Dan Ilmu Politik*, *1*(1), 26–35.

Nofiyanti, Estin, Salman, Nurcholis, Nurjanah, Novi, Mellyanawaty, Melly, & Nurfadhillah, Tazkia. (2020). Pelatihan Daur Ulang Sampah Plastik Menjadi Souvenir Ramah Lingkungan Di Kabupaten Tasikmalaya. *JAMAIKA: Jurnal Abdi Masyarakat*, *1*(2), 105–116.

Robbie, R. Iqbal, Roziqin, Ali, Deniar, Shannaz Mutiara, Praharjo, Ardik, & Roz, Kenny. (2023). *Environmental Issues and Social Inclusion in a Sustainable Era: Proceedings of the 2nd International Conference on Humanities and Social Sciences (ICHSOS 2022), Malang, Indonesia, 1-2 July 2022*. Taylor & Francis.