

Public Service Agency: Business-Based Innovation in Public Institutions (Study of Design of Government Institutions in the Field of Communications and Informatics)

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Abstract

Legal certainty as a result of the development of laws and regulations encourages the establishment of the Regional Public Service Agency. By taking into account the principles of fairness, propriety, and benefits that are in line with Healthy Business Practices, BLUD seeks to provide public services more effectively, efficiently, economically, transparently, and responsibly. This will help achieve the goals of the regional government, whose management is carried out in accordance with the authority granted by the regional head. The purpose of this study is to serve as a document that can be used as a reference and considered in making policies related to the establishment of the Regional Public Service Agency in related institutions. The study was carried out by means of Value Proposition Analysis, focus group discussions, and an analysis of the hierarchy process. The results of the study recommend 12 Public Service Recommendations in the Field of Communication and Informatics, namely Application Development Services, Key Location Servers, Internet Services, Information Technology Architecture Development Services. Smart City Replication Services, Digital Content Creation Services, Advertising Services, Data Analysis Services, Consulting and Development Services HR, Dissemination Services, Research Services, and Report Preparation Services These service recommendations can be used as BLUD services that can be offered as a community.

Keywords: BLUD, Public Service Agency

INTRODUCTION

The research titled Public Service Agency: Business-Based Innovation In Public Institutions (Study Of Design Of Government Institutions In The Field Of Communications And Informatics In Indonesia focuses on the innovation in public institutions, specifically in the field of communications and informatics in Indonesia. The study aims to explore the design of government institutions and the role of innovation in improving their performance and effectiveness.

The public sector plays a crucial role in delivering services to the citizens and driving economic growth. However, public institutions often face challenges in adapting to changing societal needs and technological advancements. There is a need to understand why and how public institutions should innovate to address these challenges and improve their performance. The research aims to address this problem by studying the design of



government institutions in the field of communications and informatics in Indonesia and exploring the role of business-based innovation in enhancing their effectiveness.

The research is important for several reasons. Firstly, innovation in the public sector is crucial for improving service delivery, enhancing efficiency, and driving economic growth (Kastelle, 2015). Understanding why and how public institutions should innovate is essential for their success and effectiveness (Kastelle, 2015). Secondly, the study focuses on the design of government institutions in the field of communications and informatics, which are critical sectors for economic development and societal progress. By studying these specific institutions, the research can provide insights into the challenges and opportunities for innovation procurement and the influence of institutions on innovation processes (Rolfstam et al., 2011; Safarov, 2018). The study offers important insights into the variables that affect the success and longevity of innovation projects in the public sector by examining the institutional elements of open government data implementation (Safarov, 2018). Lastly, the study is timely and pertinent to Indonesia's current situation, where focus is expanding on digital transformation and the application of technology to public service delivery.

The literature pertinent to the study's topic emphasises the value of innovation in the public sector and the part played by institutions in determining how innovation occurs. Kastelle (2015) highlights the importance of innovation in the public sector and offers doable suggestions for encouraging it in public organisations. According to Rolfstam et al. (2011), endogenous institutions that serve as barriers to innovation are investigated in relation to the dissemination of innovations acquired by public agencies. Safarov (2018) talks on the institutional aspects of implementing open government data and how institutions affect how well innovations perform. The difficulties public institutions have implementing new ideas and the requirement for institutional capacity building are highlighted by Dzvinchuk et al. in their study from 2021.

The project will use a case study methodology, semi-structured interviews, and document analysis to examine the organisation of Indonesian government entities involved in communications and informatics. The study will look at the institutional factors that influence how business-based innovation is used at these institutions. In order to shed light on successful methods for innovation in the public sector, the study will also compare best practises from the Netherlands, Sweden, and the United Kingdom (Safarov, 2018).

By offering insights into the design of Indonesian government institutions in the fields of communications and informatics and the role of business-based innovation in improving their performance, the research adds to the body of current knowledge. The study advances knowledge of the institutional factors that influence how innovation is used in the public sector. The research's conclusions can provide policymakers and public administrators in Indonesia and other nations with useful advice on how to encourage innovation in public institutions.

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The relevance of innovation in the public sector and the part played by institutions in influencing innovation processes are emphasised by the most recent studies in the field. It emphasises the requirement for public institutions to remove their barriers and interact with creative individuals and novel concepts (Kastelle, 2015). The impact of institutional coordination on the dissemination of innovations acquired by public bodies is also highlighted in the literature (Rolfstam et al., 2011). Additionally, the institutional aspects of implementing open government data have been researched, emphasising the importance of policy and strategy, legal underpinnings, organisational structures, pertinent skills, and public support and awareness (Safarov, 2018).

The transformation of public service agencies in Indonesia has been a topic of interest in recent research. Digital innovation has been identified as a key strategy for public sector transformation (Magna & Maulana, 2022). However, there is limited research on the practical implications of digital innovation in the context of public sector transformation in Indonesia (Magna & Maulana, 2022).

The implementation of digital innovation in the public sector, particularly at the local government level, has been an area of focus (Magna & Maulana, 2022). Previous research has examined the use of technology to improve operational activities and deliver webbased services in the government (Magna & Maulana, 2022). However, there is criticism that the proposed transformation is not aligned with the main goal of transformation (Magna & Maulana, 2022). It is important to not only increase the effectiveness, efficiency, and transparency of public services but also involve various stakeholders in the transformation framework (Magna & Maulana, 2022).

Bureaucratic reform has also been a significant factor in the transformation of public services in Indonesia. After decentralization in Indonesia, there have been changes in the paradigm of public services (Hutahaean & Pasaribu, 2022). Some regions have carried out bureaucratic reforms to provide optimal services, but many regencies/cities have not done so (Hutahaean & Pasaribu, 2022). Bureaucratic reform in public services has faced challenges such as overlapping tasks and functions, differences in interests, and insufficient budget resources (Wigati et al., 2021).

The development of policies regarding state-owned enterprises (SOEs) and public service agencies (PSAs) has also influenced the transformation of public services in Indonesia (Shidarta & Huis, 2020). The introduction of PSAs in 2004 aimed to increase the efficiency and effectiveness of public service delivery (Shidarta & Huis, 2020). The autonomy given to PSAs aligns with the New Public Management ideal of creating market-oriented government institutions (Shidarta & Huis, 2020).

In the case of BLU operations in Indonesia, the focus is on providing public services rather than making a profit. However, the BLU can charge fees to the public as compensation for the goods and services they provide. This compensation is calculated based on the cost per unit of service or investment, taking into account various factors such as continuity and development of services, people's purchasing power, fairness, and fair competition (Sulila, 2021). This approach ensures that fees charged are fair and

reasonable, taking into account the needs and capabilities of the community.

Blud, or Badan Layanan Umum Daerah, is a type of business organization that operates differently from traditional organizations. Blud adopts a unique approach to organizational governance, finance, and accountability, which sets it apart from other institutions (Hariyanto, 2021). The management of Blud is characterized by the creation of a specialized organizational structure that focuses on financial administration, known as the Blud Financial Administration Manager (Hariyanto, 2021). This structure ensures that the financial management of Blud is carried out effectively and efficiently.

Financial management is a crucial aspect of Blud operations. Blud organizations are required to meet specific financial reporting and performance obligations (Fajri et al., 2020). To fulfill these requirements, Blud organizations rely on information technology and enterprise architecture modeling. Enterprise architecture modeling serves as a bridge between organizational goals and information technology, enabling Blud organizations to design and implement financial software that meets their specific needs (Fajri et al., 2020).

In terms of accountability, Blud organizations follow a systematic approach. They assess performance and financial absorption by establishing indicators, evaluating performance and finance, and finding solutions to improve existing processes (Hariyanto, 2021). This ensures that Blud organizations are accountable for their actions and are continuously striving for improvement.

Blud organizations also have a unique focus on industry-based learning. They are oriented towards the development of teaching factories, which provide students with practical, hands-on learning experiences (Hariyanto, 2021). This approach sets Blud organizations apart from traditional educational institutions and makes them valuable models for other institutions seeking to incorporate industry-based learning into their curriculum (Hariyanto, 2021).

In the case of BLU operations in Indonesia, the focus is on providing public services rather than generating profits. However, BLU can charge fees to the community as compensation for the goods and services they provide. This compensation is calculated based on the cost per unit of service or investment, taking into account various factors such as continuity and service development, people's purchasing power, fairness, and healthy competition (Sulila, 2021). This approach ensures that the fees charged are fair and reasonable, considering the needs and capabilities of the community.

METHOD

This study involved 3 (three) main stages, are Value Proposition Analysis, Focus Group Discussion (FGD) and Analysis Hierarchy Process (AHP)

The steps above need to be carried out for several important purposes, including:

- 1. Identify the value that the South Tangerang City Communication and Information Service (Diskominfo) has to offer to customers.
- 2. Identify customer needs and expectations for products or services provided by the

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South Tangerang City Communication and Information Service (Diskominfo).

- 3. Validating the results of the value proposition analysis from the South Tangerang City Communication and Information Service (Diskominfo) through discussions with stakeholders.
- 4. Perform weighting of the criteria for the results of the FGD with stakeholders.
- 5. Provide product or service recommendations that can be offered by the South Tangerang City Communication and Information Service (Diskominfo) through company values and customer needs.

A. Value Proposition Analysis

Value Proposition Design (VPD) is a crucial aspect of business model innovation, particularly in the context of sustainability and the creation of value for multiple stakeholders. The integration of design thinking into the VPD process has been shown to enhance the development of sustainable value propositions and improve overall business modeling (Geissdoerfer et al., 2016). The value mapping process, developed through literature synthesis, expert interviews, and multiple workshops, provides a framework for identifying and visualizing the value creation for each stakeholder involved in the business model (Geissdoerfer et al., 2016). In the context of smart Product-Service Systems (PSS), the value proposition plays a central role in guiding the design of the business model. The design of value propositions influences the creation and improvement of offerings and the reconfiguration of systems (Fernandes et al., 2020).

B. Focus Group Discussion (FGD)

Focus group discussions (FGDs) are a valuable qualitative research method used to gather in-depth insights and perspectives from participants on a specific topic. FGDs involve a group of individuals who engage in a guided discussion facilitated by a trained moderator. This method allows for the exploration of participants' experiences, beliefs, attitudes, and perceptions (Samuel, 2023; York et al., 2015; Carbone et al., 2019; Mpunga et al., 2021; Idehen et al., 2020). Overall, FGDs provide a valuable method for gathering qualitative data and gaining insights into participants' experiences, beliefs, and attitudes. They have been used in various research studies to explore a wide range of topics and populations, allowing for a deeper understanding of complex issues.

C. Analysis Hierarchy Process (AHP)

The Analytic Hierarchy Process (AHP) is a decision-making method that involves measuring and comparing both tangible and intangible factors in order to determine the best choice (Saaty, 2008). It relies on pairwise comparisons made by experts to derive priority scales (Saaty, 2008). These scales are then synthesized by multiplying them by the priority of their parent nodes and adding them for all nodes (Saaty, 2008). AHP is used to clarify the advantages and criteria of complex problems and facilitate decision-making at all levels (Saaty, 1994). AHP is based on the idea that people make judgments



to express importance, preference, or likelihood and use them to choose the best alternative (Saaty, 1994). It allows decision-makers to develop standards of excellence and poorness and use them to rate alternatives (Saaty, 1994).

AHP has been widely used in various fields, including engineering, mathematics, computer science, and biology. It has been applied in ranking decision alternatives, evaluating risks, determining media for online learning, making recommendations, and assessing software project proposals (Sahrom & Dom, 2015; Sitio & Sitio, 2021; "Implementation of Analytical Hierarchy Process for Recommendations of Islamic Venues", 2022; Guo et al., 2009; Akinnuwesi & Uzoka, 2017). The simplicity and rationality of AHP have contributed to its popularity as a decision-making tool (Liu et al., 2014).

The AHP method is able to maintain validity and consider logical consistency in assessments, taking into account the durability of output ("Implementation of Analytical Hierarchy Process for Recommendations of Islamic Venues", 2022). It allows decision-makers to construct judgment matrices and modify them to cope with complicated problems and make high-quality objective descriptions (Naidong & Minxue, 1993). AHP also provides a framework for assessing software project proposals and selecting the best option based on relative priorities (Akinnuwesi & Uzoka, 2017).

RESULTS AND DISCUSSION

Value Proposition Analysis

In conducting an analysis related to determining the type of service as a product or service that has the potential to be managed by a BLUD, one of the approaches used to determine this is through a value proposition canvas analysis. In the business sector, this analysis aims to identify market characteristics based on behavior and needs. After the market has been identified, it can be initiated by creating products/services that can be offered to the market segments that have been analyzed by taking into account the characteristics of their needs and consumption patterns. Nonetheless, in the context of product or service initiation to be offered by BLUDs, the concept of applying the Value Proposition Canvas requires several considerations, bearing in mind that this relates to regulations related to local government revenues,

However, in the context of initiating a product or service to be offered by a BLUD, the concept of applying the Value Proposition Canvas requires several considerations, bearing in mind that this is related to regulations related to local government revenues, an analysis of the resources owned by the managing institution of the BLUD, as well as results of identification of practices that have been successfully implemented by other local governments.

1. Identification of elements of potential non-tax regional income



- 2. Analysis of the resources owned by the communication and informatics service as potential to be developed into a product and service. This can be adjusted accordingly.
- 3. Analysis of various types of products and or services that have been carried out by similar agencies in other regions.

The third consideration that must be had when initiating products/services to be carried out by the BLUD in the field of communication and informatics is to refer to best practices from other local governments that have already carried out business processes through BLUD management. This needs to be done to reduce the risk of public rejection of the product/service that will be offered. In relation to the field of communication and informatics, there are several products/services that have been successfully implemented along with the pricing for the services applied and the legal umbrella that covers them. Products / services in question consist of: Complaint Service; Media Social Consultation; Application Public information; Online Mail Service; Social Media Monitoring; Official e-mail service; Call center service; Media promotion; Surveying; Media Center; Mobile Community Access Point (M-CAP); Domain and sub domain requests; Spread information service; Group Information Society (KIM); Handling server interruption ; Website Service; Innovation Magazine Service; WI-FI Internet service; Bandwidth addition service; Hosting Service; Video conferencing services

Focus Group Discussion

New public management efforts in entrepreneurship state institutions or government institutions in the public administration sector to provide the best service for the community. In this effort, the government provides flexibility in the organization of business entity units other than legal entities that prioritize aspects of effectiveness and efficiency. The holding of this study was carried out to design the establishment of the South Tangerang City BLUD Diskominfo to improve community services for the sake of general welfare with fair business competition. Based on a focus on community service, financial management flexibility and sound business practices.

These service options are offered through a value proposition analysis process to identify what needs are required by the market which is divided into three market groups, namely individual markets, government markets and business markets, FGDs to obtain feedback regarding the recommendations provided, and an analytical hierarchy process to determine several choices of decision making based on certain criteria.

Several recommendations for products/services that have been identified in an effort to service the needs of the BLUD Diskominfo Kota Tangerang Selatan. Focus group discussion begins by presenting the results of work recommendations that have been obtained from the value proposition analysis. There are 10 jobs that have been recommended, namely: Research Services; Smart City Replication Service;Report Preparation Service; Advertising Services; Data Analysis Services; Application Development Services; Digital Content Creation Services; Information Technology



Architecture Development Services; HR Consultation and Development Services; Colocation Servers; Internet service. These service recommendations are offered based on legal aspects, business aspects, market aspects, competition aspects, and human resource availability aspects, to find out which one is the most likely to be chosen.

Input related to the services offered, were submitted by FGD participants related to the description of the price offered for each service. Determining the price of each service offered seems to require prior agreement on what types of services are possible, so if on this occasion ladies and gentlemen have not been able to provide feedback, later the softfile will be sent as material for internal consideration of which service institution to choose. After that the pricing will refer to the results of the selected considerations.

In addition, input was also given regarding the addition of services, namely internet services. Previously there was no such service. Services that have been recorded, for example, only include research services in the form of online/offline surveys. In addition, there are several items that are presented, such as security architecture designs for making information technology architectures, and network architecture designs. There are also application creation and analysis services data or digital content services. So later for each type of service there are several possible alternatives to choose from along with an analysis of the market potential.

Internet services can be an alternative service that can be offered by the South Tangerang City Diskominfo. This service includes providing internet access in both public and private spaces. Facilities that can be offered can be related to internet services, wifi, cable, etc. For example, providing free Wi-Fi points in public spaces such as city parks, stations, terminals, etc., which can be accessed by residents free of charge, or providing an internet network in companies. Consumers for this service can come from individuals, public/government organizations, and private organizations or businesses.

Service suggestions that can be added can also be in the form of colocation server services. Colocation server is a type of service that allows consumers to place a server in a data center. So in this type, the hardware or physical server belongs to the consumer himself, then places it in a data center provided by the South Tangerang City Communication and Informatics Service as a server service provider.

This type of colocation server service can offer two different types of servers, namely 1. Unmanaged colocation where the consumer is responsible for monitoring the process, repairing server problems, and taking preventive measures such as data backup. 2. Managed colocation where the process or operation of monitoring, maintenance, up to updating of the server is handled by the server service provider, namely Diskominfo Kota Tangerang Selatan

Colocation servers can be developed into another service, namely a dedicated server. The difference is the ownership status of the server itself. in the dedicated server type, the consumer will rent a physical server owned by a hosting service provider. Whereas in colocation, what the consumer rents is the space owned by the data center and its servers. So what distinguishes the two lies in server ownership, dedicated servers are limited to



renting servers while colocation servers are privately owned.

Analytical Hierarchy Process (AHP)

Based on the results of the Focus Group Discussion (FGD) 2 (two) additional recommendations for public services for the South Tangerang City Communication and Information Service (Diskominfo) have been obtained. Thus the total recommendations for public services are 12 services, which include: Research Services; Smart City Replication Service; Report Preparation Service; Advertising Services; Data Analysis Services; Application Development Services; Digital Content Creation Services; Information Technology Architecture Development Services; HR Consultation and Development Services; Colocation Servers; Internet service.

All alternative services proposed will be re-mapped based on predetermined criteria. These criteria are: Legal Aspect; Business Aspect, Market Aspect; Competition Aspect; HR Availability Aspect. Guidelines for analysis of these criteria include: The business aspect is more important than the legal aspect; The business aspect is absolutely important than the competition; and aspects of availability of human resources and market are more important than aspects of competition. Thus, to get the top 5 (five) recommendations for Diskominfo public services for South Tangerang City, an Analytical Hierarchy Process (AHP) was carried out from 12 recommendations considered based on 5 (five) predetermined criteria.

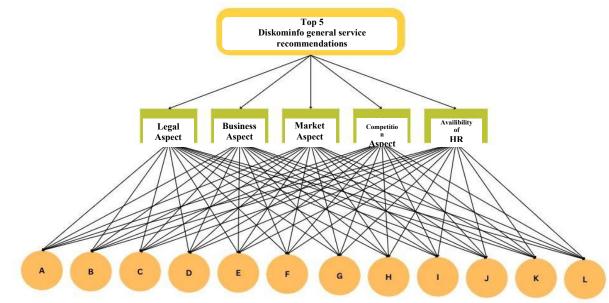


Figure 1 Hierarchy Structure

Paired Matrix

The criteria matrix involves five things, namely legal aspects, business aspects, market aspects, competition aspects, and human resource availability aspects. So the pairwise comparisons form 5x5 criteria. Whereas the general service recommendation

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Table 1 Matrix Criteria								
CRITERIA	Legal	Availability of						
	Aspect	Aspect	Aspect	Aspect	HR			
Legal Aspect	1							
Business Aspect		1						
Market Aspect			1					
Competition				1	2			
Aspect								
Availability of HR					1			

alternative consists of 12 jobs so that it will form a 12x12 matrix. The criteria guidelines are applied to the number matrix, so that the matrix table is presented below.

Based on the pairwise comparison equations for the recommendation criteria for the South Tangerang City Diskominfo public services presented in the table above, the comparison values for each criterion are obtained in accordance with the predetermined criteria indicators.

Table 2 Criteria Priority Weights					
CRITERIA	Aspect	Priority Weight			
Α	Legal Aspect	0.31			
В	Business Aspect	0.43			
С	0.11				
D	0.07				
E	Availability of HR	0.08			
C 1 D	$\langle \mathbf{C} \mathbf{D} \rangle = 0.07 \langle \mathbf{I} \rangle = 1.00$	1 1 1 01			

 $\overline{Critical Ratio (CR)} = 0.07 (A \text{ good } CR \text{ value is less than } 0.1)$

The calculation of the AHP on the selection criteria for the recommendation of the South Tangerang City Diskominfo public service produces a priority weight for each criterion with a Critical Ratio (CR) value of 0.07, which means that the understanding of AHP is consistent. Of all the criteria considered in determining the top service recommendation position for Diskominfo Kota Tangerang Selatan, it shows the priority weight that legal aspects (0.31) and business aspects (0.43) are the main criteria considered. Followed by market aspect criteria (0.11), HR availability aspect (0.08). As for the criteria with the last consideration is the aspect of competition (0.07). The weight of these criteria used as a calculation of the top 5 recommendations for public services for the South Tangerang City Communication and Information Service.

Alternative Priority Weights

After the priority weights of the criteria have been determined, the next step is to determine the priority weights for the 5 alternative public service recommendations that have been discussed in the FGD. The weighting uses 5 (five) scales, namely 1,2,3,4 and 5 with the following description: 10

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Weight	Information
1	Very Not Good
2	Not good
3	Enough
4	Good

Table 3. Alternative Priority Weighting

5 Very good Source: Processed by Researchers, 2023.

Table 4. Alternative Priority Weights

No	General	Code	Ket.	Legal			Competiti	HR	
	Service			Aspect	Aspect	-	on Aspect		Score
	Recommenda			31%	43%	11%	7%	8%	
	tions								
1	Research	В	Weight	4	3	3	2	3	65%
	Services		Score	1.2	1.29	0.3	0.	0.24	
				4		3	14		
2	Smart City	С	Weight	5	3	4	4	5	79%
	Replication		Score	1.5	1.29	0.4	0.	0.4	
	Service			5		4	28		
3	Report	D	Weight	4	3	3	2	2	63%
	Preparati		Score	1.2	1.29	0.3	0.	0.16	
	on			4		3	14		
	Service								
4	Advertising	Е	Weight	4	4	4	2	2	74%
	Services		Score	1.2	1.72	0.4	0.	0.16	
				4		4	14		
5	Data Analysis	F	Weight	4	4	4	2	2	74%
	Services		Score	1.2	1.72	0.4	0.	0.16	
				4		4	14		
6	Manufacturin	G	Weight	5	5	4	3	3	92%
	g Services								
	Application		Score	1.55	2,15	0.44	0.21	0.24	
7	Digital	Η	Weight	4	4	3	3	3	75%
	Content		Score	1.24	1.72	0.33	0.21	0.24	
	Creation								
	Services								
8	Information	Ι	Weight	4	4	4	4	4	80%

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OPEN Society Conference				aculty of L	ety Conferenc aw, Social an Universitas T	d Political S		23	
	Technology Architecture Development		Score	1.24	1.72	0.44	0.28	0.32	
9	Services HR Consultatio	J	Weight Score	4 1.24	3 1.29	3 0.33	3 0.21	5 0.4	69%
	n and Developme nt Services								
10	Colocation	Κ	Weight	4	5	5	3	5	91%
	Servers		Score	1.24	2,15	0.55	0.21	0.4	
12	Internet	L	Weight	4	5	5	3	4	89%
	service		Score	1.24	2,15	0.55	0.21	0.32	

Source: Processed by Researchers, 2023.

The results of the calculation between the priority weighting of criteria and alternatives are presented in the table above. The weighting of the alternatives takes into account each criterion that is compared between service recommendations. The results of the multiplication between the alternative weights and the criteria weights are added up and the average value is sought. Until the final value is obtained which is used as a comparison for each type of work. The final score shows that there are 5 general service recommendations at the lowest position, namely report preparation services, research services, and HR consulting and development services. In accordance with the objectives of this study, the top 5 recommendations for public services from Diskominfo for South Tangerang City will be selected based on the highest score from the final calculation of AHP. This series of assessments has gone through 3 stages, namely literature study with qualitative and quantitative approaches, FGD, and AHP to obtain 5 recommendations.

RANK	GENERAL SERVIC	CODE	FINAL		
	RECOMMENDATIO		SCORE		
1	Application Development Service	Application Development Services			
2	Colocation Servers	Colocation Servers			
3	Internet service	Μ	89%		
4	Information Technology	Ι	80%		
	Development Services				
5	Smart City Replication Service	С	79%		
6	Digital Content Creation Services	Н	75%		
7	Advertising Services	Е	74%		

 Table 5 Ranking of Diskominfo Public Service Recommendations for the City of

 South Tangerang

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8	Data Analysis Services	F	74%
9	HR Consultation and Development Services	J	69%
10	Dissemination Services	F	66%
11	Research Services	В	65%
12	Report Preparation Service	D	63%

CONCLUSION

The above is a ranking of all recommendations for the general services of the South Tangerang City Diskominfo, especially the 5 (five) service recommendations that have considered other aspects. So that types of work emerge which in demand and competence need to be adjusted in order to be able to meet the needs of the workforce and competencies need to be arranged so that they are able to fulfill recommendations based on applicable aspects.

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