

Evaluation of E-Government Implementation in Managing Public Service Complaints Using E-GovQual and Importance Performance Analysis (Case Study: CRM - Cepat Respon Masyarakat – of the Jakarta Provincial Government)

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Abstract

The improvement of public service quality is an effort to enhance the quality and innovation of public services within each government agency periodically, according to the needs and expectations of the society. One of the efforts to enhance the quality of service by public service providers, in order to improve the well-being of the community, is to use public complaints as a basis for making improvements in public services. According to data from the Central Bureau of Statistics in 2022, the population of DKI Jakarta is 10,679,000. The Provincial Government of DKI Jakarta has an integrated complaint system called "Cepat Respon Masyarakat" (CRM), which serves as a platform for the public to report issues within the DKI Jakarta area. The assessment of the "Cepat Respon Masyarakat" system is necessary to ensure that the services provided through the system can be utilized by the public and to obtain feedback regarding aspects that need improvement by the DKI Jakarta Provincial Government, which serves as the service provider. The purpose of this research is to determine the quality of the "Cepat Respon Masyarakat" complaint system using the e-GovQual method and identify attributes that require priority for service quality improvement using Importance Performance Analysis.

In this study, 6 dimensions and 21 e-GovQual attributes are used to assess service quality with a sample of 118 respondents. The analysis results indicate a level of conformity of 98.39% (<100%) for the 6 dimensions, meaning that the public service provided through the "Cepat Respon Masyarakat" system still falls short of user expectations. The average gap (GAP) between expectations and performance is -0.03 or < 0, suggesting that, based on public perceptions, the quality of complaint service performance through the CRM system is still not up to par with expectations. The attributes that require improvement are those located in Quadrant A (1 attribute) and Quadrant C (7 attributes). Recommendations are provided based on literature/theory for attributes that need improvement to enhance the quality of complaint services in DKI Jakarta.

Keywords — *Cepat Respon Masyarakat (CRM), e-Govqual, Importance Performance Analysis*

1. INTRODUCTION

Electronic Government (E-Government) is an effort to develop electronic-based government affairs. One of the goals of implementing e-government is to enable government institutions to provide better public services. In this context, a strong commitment from the government is needed to pioneer and initiate new practices within the bureaucracy. The utilization of e-government within the bureaucracy is expected to serve as an alternative for bureaucratic reform towards improved services^[1]. The Indonesian government has been implementing E-Government since the issuance of Presidential Decree (Instruksi Presiden) Number 3 of 2003 concerning the Policy and National Strategy for E-Government Development. In this decree, it is stated that all government agencies are directed to make changes by utilizing information systems or information technology in the process of serving the public. The websites of central and regional governments must gradually be improved towards integrated G2G (Government to Government), G2B (Government to Business), and G2C (Government to Citizen) interactions^[2].

Based on the Regulation of the Minister of State Apparatus Empowerment Number 14 of 2017 concerning Guidelines for the Preparation of Public Satisfaction Surveys of Public Service Organizing Units^[3]. The consideration of this Ministerial Regulation is that for sustainable improvement of public service quality, it is necessary to evaluate public service delivery. The survey results can serve as an evaluation material for the CRM (Customer Relationship Management) system to enhance its quality.

Improving the quality of public services is an effort to enhance the quality and innovation of public services in each government agency periodically according to the needs and expectations of the public. In addition, improving the quality of service providers in public service delivery aims to enhance the welfare of the society by using public complaints as a means to improve public services.

Repetitive complaint issues in DKI Jakarta still persist due to dissatisfaction with the follow-up actions taken by Regional Working Units (SKPD). According to data from the Central Statistics Agency in 2022, the population of DKI Jakarta is 10,679,000. The DKI Jakarta Provincial Government has integrated complaint handling through the Customer Response Management 2 (CRM) system as a platform for citizens to report issues in DKI Jakarta. Measuring the Customer Response Management system is necessary to ensure that the services provided through the system are felt by the public and to identify areas for improvement by the DKI Jakarta Provincial Government as the service organizer.

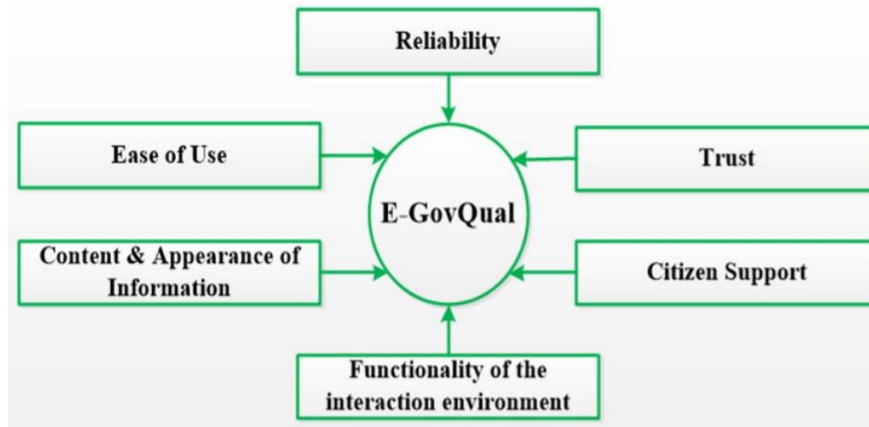
E-Government Quality (E-GovQual) is a framework developed to measure public perception of service quality from government website or eGovernment portals. E-Government portals are platforms where people can obtain necessary information or services. E-GovQual consists of six Dimensions: ease of use, trust, functionality of the interaction environment, reliability, content and appearance of information, and citizen support^[4]. Importance Performance Analysis is a technique used to identify the important performance factors that an organization must address to satisfy its users^[5].

Given the preceding explanations, an assessment of the quality of the service system is necessary. The objective of evaluating the quality of the E-Government service using EGovQual and Importance Performance Analysis in this study is to measure whether the CRM (Customer Response Management) system is of quality or not based on user satisfaction levels. The researcher will conduct a study titled "Evaluation of E-Government Implementation in Managing Public Service Complaints Using E-GovQual and Importance Performance Analysis (Case Study: CRM - Customer Response Management - of the DKI Jakarta Provincial Government)".

2. RESEARCH METHOD

The E-GovQual instrument is developed to measure the quality of services provided by E-Government services based on the perspective of end-users or the public. The EGovQual method consists of six Dimensionons: ease of use, trust, functionality of the interaction environment, reliability, content and appearance of information, and citizen support.

The concept of the E-GovQual method is mapped in the following diagram:



(Source: Papadomichelaki & Menntzas, 2012)

Figure 1. The initial concept of the 6 dimensions of E-GovQual

Table 1. The Initial Concept of e-Govqual (36 Attributes & 6 Dimensions)

| | |
|--------------------|---|
| <i>Ease of Use</i> | <ol style="list-style-type: none"> 1. Website structure 2. Customized search function 3. Site linking with search engine 4. Easily memorable URLs 5. Detailed information on the website 6. Customization capability |
| <i>Trust</i> | <ol style="list-style-type: none"> 1. Maintaining the confidentiality of personal data 2. Not sharing personal information with others 3. Secure procedures for obtaining usernames and passwords 4. Secure transactions, Message encryption 5. Access control |

| | |
|---|--|
| <i>Functionality of the interaction environment</i> | <ol style="list-style-type: none"> 1. Availability of online assistance in forms 2. Reuse of public information 3. Automatic form calculations 4. Adequate response format |
| <i>Reliability</i> | <ol style="list-style-type: none"> 1. Users can access the website anywhere 2. Users succeed on their first website access attempt 3. Real-time website services 4. Browser system compatibility 5. Speed in loading the website |
| <i>Content and appearance of information</i> | <ol style="list-style-type: none"> 1. Information provided on the website is accurate 2. Accuracy and conciseness of data and information 3. Data relevance 4. Regularly updated information and issues 5. All links must work 6. Concise and easy-to-complete online forms 7. Attractive website design 8. Webpage size |
| <i>Citizen support</i> | <ol style="list-style-type: none"> 1. User-friendly guidelines 2. Frequently asked questions (FAQ) page 3. Transaction tracking facility 4. Contact information availability 5. Troubleshooting 6. Quick response to questions 7. Employee knowledge and courtesy 8. Employees conveying service trust and confidence |

Table 2. Attributes of Research Instruments

| Dimension | Variable | Attribute |
|--------------------|-----------------|---|
| <i>Ease of Use</i> | EU1 | Easily understandable website |
| | EU2 | Easily memorable website |
| | EU3 | Detailed information on the website |
| | EU4 | Effective search function |
| <i>Trust</i> | T1 | Access to information is secured |
| | T2 | Personal data is safely used |
| <i>Reliability</i> | R1 | Website accessible anywhere and anytime |
| | R2 | Website provides real-time services |
| | R3 | Website is fast to access |
| | R4 | Success in the first website access |
| | R5 | Website operates smoothly upon access |

| Dimension | Variable | Attribute |
|---|----------|---|
| <i>Content and Appearance of Information</i> | CA1 | Information provided on the website is accurate |
| | CA2 | Information is easily understandable |
| | CA3 | Information and issues are regularly updated |
| | CA4 | Attractive website design |
| <i>Functionality of the Interaction Environment</i> | FIE1 | Adequate response format for reports |
| <i>Citizen Support</i> | CS1 | Officials resolve issues |
| | CS2 | Officials provide quick responses |
| | CS3 | User-friendly guidelines |
| | CS4 | Officials instill trust in the provided results and information |

Importance Performance Analysis (IPA) is a method used to measure user satisfaction with a product or service offered. Furthermore, the IPA method is useful for identifying attributes that need improvement to enhance the average customer satisfaction^[5]. The IPA Cartesian diagram consists of the x-axis representing performance level and the y-axis representing importance level. In Figure 3, there is an intersection of the x-axis and the y-axis, resulting in four quadrants: Quadrant A (concentrate here), Quadrant B (keep up the good work), Quadrant C (low priority), and Quadrant D (possible overkill).



Figure 2. IPA Cartesian Diagram

1. Quadrant A (Concentrate Here):** High importance level and low performance level. This indicates the need for attention to improve and enhance attributes that are considered lacking.
2. Quadrant B (Keep up the Good Work):** High importance level and high performance level. This means there's an opportunity to maintain attributes that have strengths.
3. Quadrant C (Low Priority):** Both importance level and performance level are low. This signifies that there are attributes that are lacking, but they don't require significant attention.

4. Quadrant D (Possible Overkill):** Low importance level and high performance level. This suggests that there are attributes with excessive resource allocation in terms of performance, and these resources might be better directed towards attributes that are considered lacking.

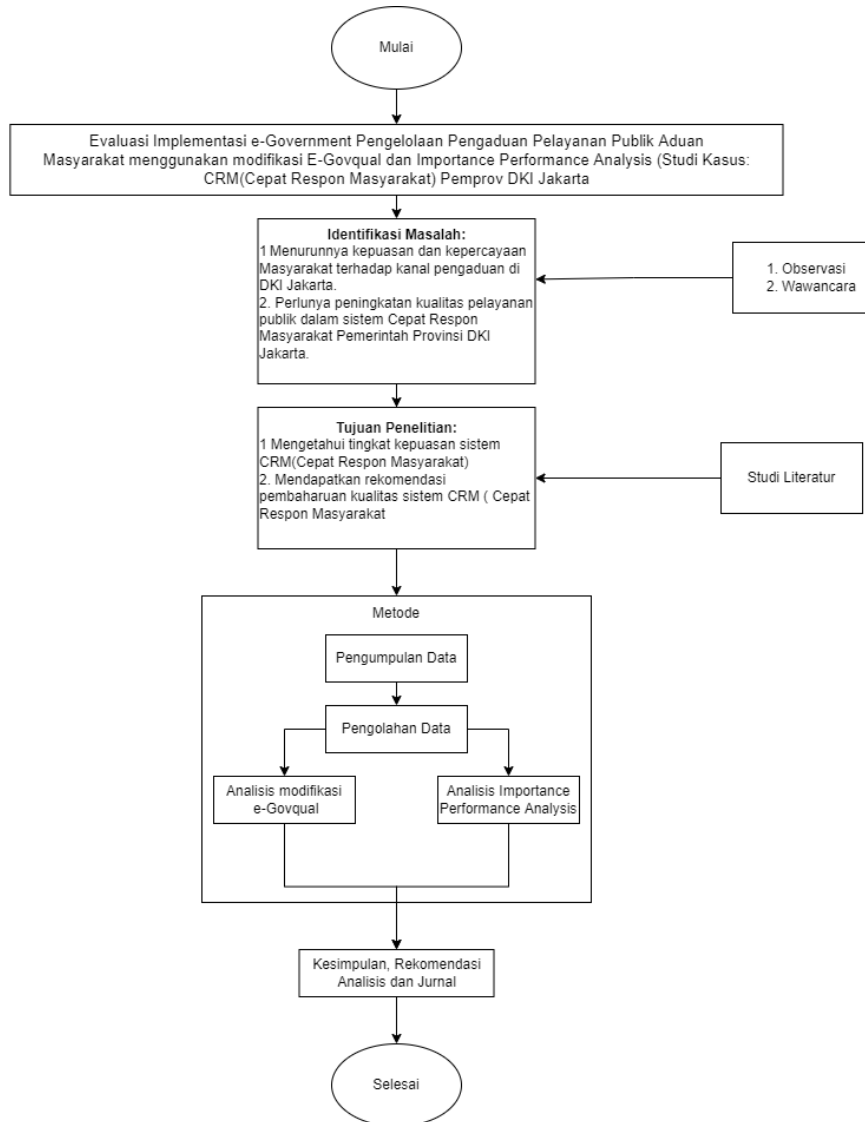


Figure 3. Research Steps

3. RESEARCH RESULTS AND DISCUSSION

A. Research Sample

The data collection conducted in this study is obtained from the distribution of questionnaires. The distribution of questionnaires was targeted at users of the Customer Response Management (CRM) system who have made complaints through complaint channels in DKI Jakarta using Google Forms, and the questionnaire distribution was carried out twice. In the first round of distribution, 30 respondents participated, and in the final round, 118 respondents participated.

B. E-Govqual Analysis Results

Before the data from the 20 statements in the questionnaire were processed and analyzed, validity and reliability testing of the questionnaire as a research instrument was conducted. An instrument is considered valid and reliable when it accurately measures the data and its measurements are consistent upon repetition.

1. CRM Performance Validity Test (Performance/X)

If the calculated r is greater than the tabulated r , then the questionnaire item is considered valid.

Table 3. CRM Performance Validity Test

| Dimension | Attribute Code | R Tabel | R Hitung | Result |
|---|----------------|---------|----------|--------|
| <i>Ease of Use</i> | EU1 | 0,361 | 0,751 | Valid |
| | EU2 | 0,361 | 0,636 | Valid |
| | EU3 | 0,361 | 0,639 | Valid |
| | EU4 | 0,361 | 0,688 | Valid |
| <i>Trust</i> | T1 | 0,361 | 0,630 | Valid |
| | T2 | 0,361 | 0,577 | Valid |
| <i>Reliability</i> | R1 | 0,361 | 0,508 | Valid |
| | R2 | 0,361 | 0,707 | Valid |
| | R3 | 0,361 | 0,647 | Valid |
| | R4 | 0,361 | 0,656 | Valid |
| | R5 | 0,361 | 0,671 | Valid |
| <i>Content and Appearance of Information</i> | CA1 | 0,361 | 0,629 | Valid |
| | CA2 | 0,361 | 0,757 | Valid |
| | CA3 | 0,361 | 0,717 | Valid |
| | CA4 | 0,361 | 0,589 | Valid |
| <i>Functionality of the Interaction Environment</i> | FIE1 | 0,361 | 0,674 | Valid |
| <i>Citizen Support</i> | CS1 | 0,361 | 0,609 | Valid |
| | CS2 | 0,361 | 0,607 | Valid |
| | CS3 | 0,361 | 0,747 | Valid |
| | CS4 | 0,361 | 0,732 | Valid |

2. User Expectation Validity Test (Importance/Y)

If the calculated r is greater than the tabulated r , then the questionnaire item is considered valid.

Table 4. User Expectation Validity Test

| Dimension | Attribute Code | R Tabel | R Hitung | Result |
|---|-----------------------|----------------|-----------------|---------------|
| <i>Ease of Use</i> | EU1 | 0,361 | 0,649 | Valid |
| | EU2 | 0,361 | 0,592 | Valid |
| | EU3 | 0,361 | 0,662 | Valid |
| | EU4 | 0,361 | 0,667 | Valid |
| <i>Trust</i> | T1 | 0,361 | 0,648 | Valid |
| | T2 | 0,361 | 0,552 | Valid |
| <i>Reliability</i> | R1 | 0,361 | 0,570 | Valid |
| | R2 | 0,361 | 0,722 | Valid |
| | R3 | 0,361 | 0,620 | Valid |
| | R4 | 0,361 | 0,683 | Valid |
| | R5 | 0,361 | 0,665 | Valid |
| <i>Content and Appearance of Information</i> | CA1 | 0,361 | 0,673 | Valid |
| | CA2 | 0,361 | 0,728 | Valid |
| | CA3 | 0,361 | 0,739 | Valid |
| | CA4 | 0,361 | 0,593 | Valid |
| <i>Functionality of the Interaction Environment</i> | FIE1 | 0,361 | 0,664 | Valid |
| <i>Citizen Support</i> | CS1 | 0,361 | 0,613 | Valid |
| | CS2 | 0,361 | 0,592 | Valid |
| | CS3 | 0,361 | 0,713 | Valid |
| | CS4 | 0,361 | 0,741 | Valid |

3. Reability Test

Reliability is tested using Cronbach's Alpha. If the Cronbach's Alpha value is greater than 0.6, then the data is considered reliable.

a. Results of the Instrument Reliability Test for Website Performance

| Cronbach's Alpha | N of Items |
|-------------------------|-------------------|
| 0,928 | 20 |

b. U User Expectation Instrument Reliability Test (Importance/Y)

| Cronbach's Alpha | N of Items |
|-------------------------|-------------------|
| 0,935 | 20 |

Conclusion: The data for Website Performance Reliability and User Expectation Reliability are reliable.

C. Importance Performance Analysis (IPA) Results

1. Results of Suitability Analysis

This analysis is conducted with the aim of determining the level of congruence between perceived service performance and service importance, based on the average values of performance and importance for the 20 attributes defined. If the congruence level is <100%, it indicates that the service performance has not met user expectations. Conversely, if the congruence level is >100%, it signifies that the service performance has met or exceeded user expectations.

Table 5. Results of Suitability Analysis

| Attribute Code | Mean Importance | | Mean Performance | | Tingkat Kesesuaian | |
|--|-----------------|---------------|------------------|---------------|--------------------|---------------|
| | Per Attribute | Per Dimension | Per Attribute | Per Dimension | Per Attribute | Per Dimension |
| EU1 | 4,12 | 4,03 | 4,14 | 4,09 | 0,995169 | 98,35% |
| EU2 | 4,08 | | 4,2 | | 0,971429 | |
| EU3 | 3,9 | | 3,97 | | 0,982368 | |
| EU4 | 4 | | 4,06 | | 0,985222 | |
| T1 | 3,66 | 3,67 | 3,77 | 3,79 | 0,970822 | 96,83% |
| T2 | 3,68 | | 3,81 | | 0,965879 | |
| R1 | 4,15 | 4,10 | 4,16 | 4,11 | 0,997596 | 99,81% |
| R2 | 4,11 | | 4,13 | | 0,995157 | |
| R3 | 4,05 | | 4,07 | | 0,995086 | |
| R4 | 4,1 | | 4,08 | | 1,004902 | |
| R5 | 4,08 | | 4,09 | | 0,997555 | |
| CA1 | 3,98 | 3,98 | 3,94 | 3,96 | 1,010152 | 100,58% |
| CA2 | 4,04 | | 4,03 | | 1,002481 | |
| CA3 | 4,01 | | 4,01 | | 1,000000 | |
| CA4 | 3,89 | | 3,85 | | 1,010390 | |
| FIE1 | 4,03 | 4,03 | 4,11 | 4,11 | 0,980535 | 98,05% |
| CS1 | 3,89 | 3,75 | 4 | 3,88 | 0,947500 | 96,74% |
| CS2 | 3,76 | | 3,81 | | 0,986877 | |
| CS3 | 3,73 | | 3,88 | | 0,961340 | |
| CS4 | 3,72 | | 3,82 | | 0,973822 | |
| The average congruence level across the six Dimensionons. | | | | | | 98,39% |

Conclusion: The table above presents the analysis results of the congruence level from the six Dimensionons, which is 98.39% (< 100%). This indicates that the public service provided through the Customer Response Management system is still not in line with user expectations.

2. GAP Analysis Results

This analysis is conducted to determine the gap value between perceived service performance and service importance, based on the average values of performance and importance for the 20 attributes defined. If the gap value is positive (+) or > 0 , it indicates that the service performance has met or exceeded user expectations. Conversely, if the gap value is negative (-) or < 0 , it signifies that the service performance has not met user expectations.

Table 6. GAP Analysis Results

| Attribute Code | Mean Importance | | Mean Performance | | Tingkat Kesesuaian | |
|---|-----------------|---------------|------------------|---------------|--------------------|---------------|
| | Per Attribute | Per Dimension | Per Attribute | Per Dimension | Per Attribute | Per Dimension |
| EU1 | 4,12 | 4,03 | 4,14 | 4,09 | -0,02 | -0,07 |
| EU2 | 4,08 | | 4,2 | | -0,12 | |
| EU3 | 3,9 | | 3,97 | | -0,07 | |
| EU4 | 4 | | 4,06 | | -0,06 | |
| T1 | 3,66 | 3,67 | 3,77 | 3,79 | -0,11 | -0,12 |
| T2 | 3,68 | | 3,81 | | -0,13 | |
| R1 | 4,15 | 4,10 | 4,16 | 4,11 | -0,01 | -0,01 |
| R2 | 4,11 | | 4,13 | | -0,02 | |
| R3 | 4,05 | | 4,07 | | -0,02 | |
| R4 | 4,1 | | 4,08 | | 0,02 | |
| R5 | 4,08 | | 4,09 | | -0,01 | |
| CA1 | 3,98 | 3,98 | 3,94 | 3,96 | 0,04 | 0,02 |
| CA2 | 4,04 | | 4,03 | | 0,01 | |
| CA3 | 4,01 | | 4,01 | | 0 | |
| CA4 | 3,89 | | 3,85 | | 0,04 | |
| FIE1 | 4,03 | 4,03 | 4,11 | 4,11 | -0,08 | -0,08 |
| CS1 | 3,79 | 3,75 | 4 | 3,88 | -0,11 | -0,13 |
| CS2 | 3,76 | | 3,81 | | -0,05 | |
| CS3 | 3,73 | | 3,88 | | -0,05 | |
| CS4 | 3,72 | | 3,82 | | -0,1 | |
| The average gap level across the six Dimensionons. | | | | | | -0,04 |

Conclusion: Based on the table above, the average gap values between expectations and performance for the Dimensionons of Ease of Use, Trust, Functionality of the Interaction Environment, Reliability, Content and Appearance of Information, and Citizen Support are -0.04 or < 0 . With these gap values, it can be concluded that the perceived quality of complaint service performance by the public has not met expectations. Only two measurement variables/Dimensionons have met public expectations. The presence of these gaps also indicates the distance between reality and needs, where the larger the gap, the further the reality is from the desired expectations.

D. Results of IPA Quadrant Analysis

To analyze the e-Government service factors that need improvement based on their priority scale, they need to be mapped into the performance and importance perspective using IPA, as shown in the figure below:

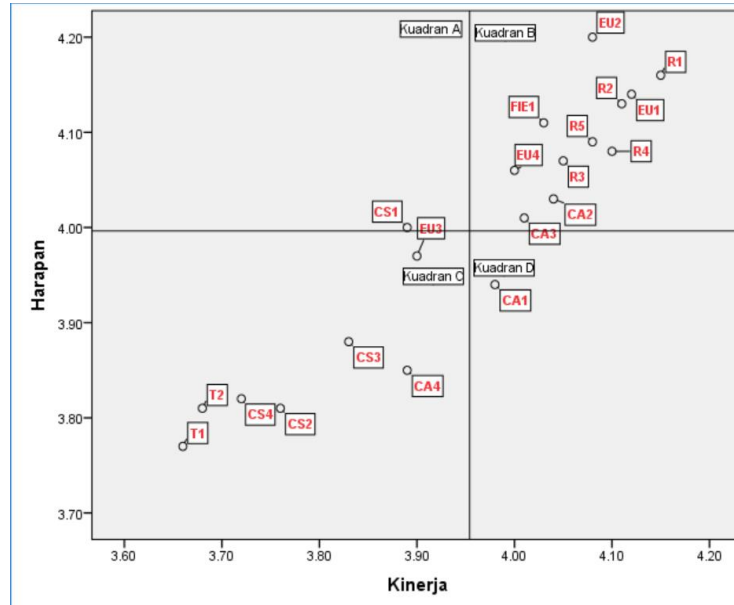


Figure 4. Quadrant IPA

Table 7. Recommendation

| Attributes | Recommendation |
|---|---|
| Petugas menyelesaikan permasalahan (CS1) | Regional Working Units must address issues thoroughly, not merely perform formalities like taking pictures for evidential purposes. They should be more responsive to the issues raised. Currently, not all Regional Working Units have a 24-hour shift to handle reported issues. Scheduling for officers, especially in the complaint section of each sub-district or other departments, is necessary. Training should be provided to the officers responsible for complaints to avoid double standards when addressing issues. |
| Petugas memberi respon cepat (CS2) | |
| Result tindaklanjut menjawab permasalahan(CS3) | |
| Petugas memberi kepercayaan atas Result dan informasi yang ada(CS4) | |
| Keamanan akses informasi terjamin(T1) | Users still lack trust in the confidentiality of the reporter when explaining issues within the system. There is a need for the Jakarta Provincial Government to enhance the security and confidentiality of this data. Considering that reporting issues can lead to disputes between the reporter and the reported party, it's crucial to improve the security and privacy of the data. |
| Data pribadi aman digunakan(T2) | |

| Attributes | Recommendation |
|--|---|
| Informasi pada situs cukup detail(EU3) | There is still a lack of information presented on the CRM website, such as adding contact information that can be reached in case of emergencies at the sub-district level. Additionally, providing instructions for specific issues and the authorized officers responsible for addressing those issues would be beneficial. |
| Design Situs Menarik(CA4) | The design of the CRM website can be improved with a simple and easily understandable layout design. Creating a straightforward and easily navigable interface is essential. Using a simple font and ensuring responsiveness across all devices are also important aspects to consider. |

4. CONCLUSION

Based on the research titled "Evaluation of E-Government Implementation in Managing Public Service Complaints Using E-GovQual and Importance Performance Analysis (Case Study: CRM - Customer Response Management - of the DKI Jakarta Provincial Government)," the following conclusions can be drawn:

1. The performance of the complaint service in the Jakarta Provincial Government, assessed using the e-GovQual method consisting of six variables: ease of use, trust, functionality of the interaction environment, reliability, content appearance of information, and citizen support, with a total of 20 attributes, is evaluated as lacking or not meeting user expectations. This is evident from the congruence level value $< 100\%$, specifically 98.39% .
2. Results of the gap analysis:
 - a. The average gap value between expectations and performance across the Dimensionons of Ease of Use, Trust, Functionality of the Interaction Environment, Reliability, Content and Appearance of Information, and Citizen Support is -0.04 or < 0 . This indicates that the perceived quality of public complaint service performance has not met user expectations.
 - b. There is one Dimensionon, Content and Appearance of Information, which has met user expectations with a GAP value of 0.02 . The highest gap is observed in the Citizen Support Dimensionon with a value of -0.13 , suggesting that follow-up actions are not aligned with the expectations of the complainants in terms of the speed of resolution by the Regional Working Units.
3. Results of the IPA Cartesian Diagram:
 - a. Quadrant A contains 1 attribute, Quadrant B contains 11 attributes, Quadrant C contains 7 attributes, and Quadrant D contains 1 attribute.
 - b. Attributes that require improvement and recommendations are those in Quadrant A as the highest priority and Quadrant C as the lower priority. These attributes include (CS1), (CS2), (CS3), (CS4), (T1), (T2), (EU3), and (CA4).

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