

Planning Consultant Performance Analysis at the Division Human Settlements Sector of Public Works and Spatial Planning and Development of the City of Banjarbaru

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ABSTRACT :Planning consultants play a very important role in the success of a project. Assessment (evaluation) of the performance of planning consultants is inevitable because most project strategy and financing decisions depend on their performances as implemented in the project planning document. The assessment system for the performance of planning consultants using the Customer Satisfaction Index (CSI) and the Importance Performance Analysis (IPA) methods are expected to be reference materials in carrying out the assessment in a more detailed and measurable manner.

This study was conducted by collecting primary data obtained through a questionnaire sample of respondents at the Public Works and Spatial Planning and Development of the City of Banjarbaru. Data were analyzed using the SPSS computer program version 25.00 (Statistical Product and Service Solution). To determine the level of participant satisfaction, the Customer Satisfaction Index (CSI) method was used, while to determine the service factors that needed to be improved, the Importance Performance Analysis (IPA) method was used. The results of the respondents' answers to the questionnaire would then be analyzed using Importance Performance Analysis (IPA). Variables that are in quadrant A or top priority would be the focus of determining the improvement strategy for the performance of planning consultants.

Based on an analysis of the 4 indicators, the following satisfaction levels were obtained, namely, Planning Document Indicator, with satisfaction levels of 75.57% (Satisfied), Implementation Time Indicator, with satisfaction levels of 74.33% (Satisfied), Planning Cost Indicator, with satisfaction levels of 75.17% (Satisfied) and Terms of Reference Indicator, with satisfaction levels of 74.34% (Satisfied). Based on the results of the analysis, the dominant factors in improving performance included in quadrant A are factors of consistency between drawing documents, RKS, and Engineer's Estimate; availability of technical data related to the material used; accuracy of completion of the document at each planning stage; conformity of the type of direct personnel costs with the project needs; and conformity of the data collection carried out by consultants with ToR.

KEYWORDS: planning consultants, customer satisfaction index, importance performance analysis.

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I. INTRODUCTION

Planning consultants play a very important role in the success of a project. Most project strategy and financing decisions depend on project planning. In the planning process, there are several problems that arise, one of which is repeated design revisions, where service users generally have needs and desires that must be accommodated (Indriani, 2019). Problems with the quality of a planning document can also influence the success of project activities, where the higher the level of accuracy of planning consultants, the higher the success rate of project activities.

Law of the Republic of Indonesia Number 8 of 2022 concerning the Province of South Kalimantan states that the Capital City of the Province of South Kalimantan is domiciled in Banjarbaru. The Public Works

and Spatial Planning and Development of the City of Banjarbaru is one of the Regional Agencies handling infrastructure in Banjarbaru. In 2022, the Human Settlements (CiptaKarya) Sector of the Public Works and Spatial Planning and Development of the City of Banjarbaru carried out 15 tender packages. Of the 15 packages implemented, all of them have undergone changes or Contract Change Orders (CCO). The source of the occurrence of CCO around 67% is caused by a discrepancy between the drawings and field conditions.

Related to the discrepancy between the drawings and field conditions, it is the responsibility of planning consultants as planners. The performance of planning consultants in design, according to a previous study (Diputra, 2019), can be measured based on several assessment aspects such as the quality of the planning document, conformity of planning with TOR, aspects of implementation time, and aspects of planning costs..

II. RESEARCH METHODS

Preliminary Stage

The preliminary stage was carried out by studying the terms of the work contract between the project owner and planning consultants, conducting discussions, and seeking information regarding the implementation of the contract between the project owner and planning consultants. The focus of the results of this activity was to find out aspects of the performance of planning consultants which are thought to influence project owner satisfaction. The preliminary stage was also carried out by taking sources from journals, books, and relevant applicable regulations to support this study.

Determination of Performance Variables

In this study, the variables consist of satisfaction and expectation variable. Variables were compiled based on a literature review of previous studies and observations from documents and work contracts of planning consultants as well as information obtained from direct interviews with related parties concerning the implementation of the contract of planning consultants. The indicators that served as an assessment of these variables are the planning document, implementation (planning) time, planning costs, and terms of reference, as shown in the following Table 2.1.

Table 2.1 Variables and Performance Assessment Indicators of Planning Consultants

Variable	Number	Indicator
Planning Document Indicator	1.a	Consistency between drawing documents, RKS, and Engineer's Estimate
	1.b	Consistency in the use of symbols, notations, and units
	1.c	Accuracy of the use of scale on the drawings
	1.d	Conformity of planning with government regulations
	1.e	Availability of technical data related to the material used
	1.f	Availability of supporting data related to planning design, especially for constructability
Implementation time indicator	2.a	Scheduling systematics
	2.b	Determination of rational time allocation
	2.c	Accuracy of completion of the document at each planning stage
	2.d	Timely submission of the planning document
Planning cost indicator	3.a	Conformity of the type of direct personnel costs with the project needs
	3.b	Conformity of direct personnel cost calculation methods with regulations
	3.c	Conformity of the type of direct non-personnel costs with the project needs
	3.d	Conformity of direct non-personnel cost calculation methods with regulations
Terms of reference indicator	4.a	Conformity of the data collection carried out by consultants with ToR
	4.b	Conformity of the work method implemented by consultants with ToR
	4.c	Completion of the implementation of the work carried out by consultants with ToR
	4.d	Conformity of presentation of the planning report carried out by consultants with ToR

Data collection

Primary data

- Questionnaire

In this study, the data analysis used was based on data processing obtained through questionnaire data. Respondents used in this study consisted of a Budget User (PA), a Commitment Making Official (PPK), Activity Technical Implementation Officials (PPTK), Field Supervisors for the Human Settlements Sector, Work Recipient Committee (PPHP) Teams in the Human Settlements Sector, Implementing Contractors for the

Human Settlements for the 2022 Fiscal Year, and Supervisory Consultants for the Human Settlements for the 2022 Fiscal Year.

- **Validity test**

A validity test is used to measure the validity or invalidity of a questionnaire. A validity test uses a correlation coefficient significance test at a significance level of 0.05, meaning that an item is considered valid if it has a significant correlation with the total score. In this study, the significance test was carried out by comparing the value of r count with r table for the degree of freedom $(df)=n-2$, in this case, n is the number of samples. In this study, Spearman's Rank correlation method was used.

- **Reliability Test**

The reliability test in this study used one shot or only one measurement. Measurement was carried out once and then the results were compared with the questions. The reliability test used a statistical test with Cronbach's alpha equation.

- **Observations and Interviews**

Observations and interviews were used to clarify the results of the questionnaire as well as used as input when developing strategies. Observations were made for each indicator influencing the performance assessment of planning consultants in the Human Settlements Sector of the Public Works and Spatial Planning and Development of the City of Banjarbaru.

Secondary Data

Secondary data in this study were supporting data obtained from work contracts of planning consultants, terms of reference, planning reports, literature studies, and book references related to the lecture material of the object of this study. These secondary data would be used as support for analyzing the factors on the performance of planning consultants.

Analysis Results

The results of the respondents' answers to the questionnaire, after the validity and reliability tests were carried out, would then be analyzed again using the Customer Satisfaction Index (CSI) and Importance Performance Analysis (IPA) methods, where the x-axis represents satisfaction levels while the y-axis represents expectation levels. Variables in quadrant A were the main priority and would be the focus of determining the improvement strategy for the performance of planning consultants.

- **Analysis of Performance Assessment of Planning Consultants**

Regarding the results of the respondents' answers to the questionnaire, a performance assessment of planning consultants was carried out using the Customer Satisfaction Index (CSI) method, with the following steps:

1. Determining *Mean Importance Score (MSS)*
2. Determining *Weight Factor (WF)*
3. Carrying out *Weighting Score (WS)*
4. Determining *Customer Satisfaction Index (CSI)* values

The CSI values in this study were divided into categories as shown in the following Table 2.2.

Table 2.2 Satisfaction Index Values

No	CSI Value	Satisfaction Levels
1.	81% - 100%	Very satisfied
2.	66% - 80.99%	Satisfied
3.	51% - 65.99%	Moderately satisfied
4.	35% - 50.99%	Dissatisfied
5.	0% - 34.99%	Very Dissatisfied

- **Priority Factor Analysis**

To analyze the priority factors for improving the performance of planning consultants on the results of respondents' answers to the questionnaire, the Importance Performance Analysis (IPA) method would be used. This method measures expectation levels of customers in relation to what a company should do to produce high-quality products or services.

Preparation of Improvement Strategy Direction

From the results of the variable matrix using the Importance Performance Analysis (IPA), indicators in quadrant A were found, which would be the top priority in determining the improvement strategy for the

performance of planning consultants. After the results of the Importance Performance Analysis (IPA) were known, they were re-examined based on the results of field observations, whether the results of the Importance Performance Analysis (IPA) directly proportional to the results of observations or just the opposite.

III. ANALYSIS AND DISCUSSION

Results of the Questionnaire

In this study, 30 respondents were used as samples, consisting of: 1 Budget User (PA), 1 Commitment Making Official (PPK) in the Human Settlements, 2 Activity Technical Implementation Officials (PPTK) in the Housing Settlements, 7 Field Supervisors, 5 Work Recipient Committee (PPHP) Teams, 7 Implementing Contractors for the Human Settlements for the 2022 Fiscal Year, and 7 Supervisory Consultants for the Human Settlements for the 2022 Fiscal Year.

From a total of 30 respondents, 24 respondents (80.00%) are males and 6 respondents (20.00%) are females. Meanwhile, the highest level of education of respondents is Bachelor's degree/S1, with 21 respondents (70.00%). Based on work experience, the most respondents are respondents with work experience of > 10 years, with 18 respondents (60.00%).

Research Instrument Tests

• Results of Validity Test

The validity test was carried out by comparing the correlation coefficient, r count with r table for the degree of freedom $(df)=n-2$, where n is the number of samples. It is known that $(df)=n-2$, $df=30-2 = 28$ with a significant level $(\alpha) = 0.05$, then $df 28$ obtains r table = 0.361. The table of the results of validity test are presented in the following Table 3.1

Table 3.1 Results of Correlation Coefficient Validity Test

Variable	Items	Validity rcount		Rtable	Information
		satisfaction	expectation		
Planning Document Indicator	1.a	0.705	0.667	0.361	valid
	1.b	0.655	0.671	0.361	valid
	1.c	0.659	0.756	0.361	valid
	1.d	0.678	0.611	0.361	valid
	1.e	0.621	0.461	0.361	valid
	1.f	0.654	0.642	0.361	valid
Implementation time Indicator	2.a	0.688	0.675	0.361	valid
	2.b	0.849	0.695	0.361	valid
	2.c	0.686	0.676	0.361	valid
	2.d	0.632	0.705	0.361	valid
Planning cost indicator	3.a	0.622	0.803	0.361	valid
	3.b	0.584	0.634	0.361	valid
	3.c	0.719	0.636	0.361	valid
	3.d	0.660	0.684	0.361	valid
Terms of reference indicator	4.a	0.676	0.689	0.361	valid
	4.b	0.742	0.675	0.361	valid
	4.c	0.681	0.735	0.361	valid
	4.d	0.674	0.755	0.361	valid

Based on Table 3.1, all question items are valid as evidenced by the results of calculations from r count which is greater than r table.

• Results of Reliability Test

Reliability test was carried out on valid question items. This reliability test was carried out with Cronbach's Alpha equation. Calculations were made using the SPSS 25.00 program. The results of reliability test are presented in the following Table 3.2.

Table 3.2 Results of Reliability Test using Cronbach's Alpha

Number of Respondents	Reliability			Information
	Satisfaction	Expectation	α value	
30	0.931	0.949	0.6	reliable

Based on the results of reliability test for all research instruments as shown in Table 3.2, it can be concluded that all variables are declared reliable. Because the Cronbach's alpha value for each variable analyzed is greater than 0.6, further analysis in this study can be carried out.

Analysis of Customer Satisfaction Index (CSI)

The analysis of Customer Satisfaction Index (CSI) was carried out on the results of respondents' answers to the questionnaire. There are 4 variables that are the focus of this study, namely 1) Planning Document Indicator, 2) Implementation Time Indicator, 3) Planning Cost Indicator, and 4) Terms of Reference Indicator. The following is a calculation of the performance of planning consultants in the Human Settlements Sector of the Public Works and Spatial Planning and Development of the City of Banjarbaru using the Customer Satisfaction Index (CSI) analysis.

• Planning Document Indicator

Calculation of the performance of planning consultants in the Human Settlements Sector of the Public Works and Spatial Planning and Development of the City of Banjarbaru using the Customer Satisfaction Index (CSI) analysis is presented in the following Table 3.3.

Table 3.3 CSI Analysis on Planning Document Indicator

No	Indicator	MIS (Mean Y)	Weight Factor $\left(\frac{MIS}{\sum MIS} * 100\%\right)$	MSS (Mean X)	Weight Score (WF*MSS)
1.a	Consistency between drawing documents, RKS, and Engineer's Estimate	4.60	16.93	3.70	62.65
1.b	Consistency in the use of symbols, notations, and units	4.53	16.69	3.83	64.97
1.c	Accuracy of the use of scale on the drawings	4.53	16.69	3.87	64.52
1.d	Conformity of planning with government regulations	4.57	16.81	3.90	65.56
1.e	Availability of technical data related to the material used	4.57	16.81	3.73	62.76
1.f	Availability of supporting data related to planning design, especially for constructability	4.37	16.07	3.63	58.40
Total		27.17	100.00	22.67	
Total weight					377.86
Customer Satisfaction Index (CSI) value = WT/Maximum Value of Likert Scale					75.57

Based on Table 3.3, the Customer Satisfaction Index (CSI) value for the performance of planning consultants in the Human Settlements Sector of the Public Works and Spatial Planning and Development of the City of Banjarbaru, for the planning document indicator is 75.57%. The CSI value is in the range of 66% - 80.99% which according to categories in Table 2.2, it is included in the "Satisfied" category.

• Implementation Time Indicator

Calculation of the performance of planning consultants in the Human Settlements Sector of the Public Works and Spatial Planning and Development of the City of Banjarbaru using the Customer Satisfaction Index (CSI) analysis is presented in the following Table 3.4.

Table 3.4 CSI Analysis on Implementation Time Indicator

No	Indicator	MIS (Mean Y)	Weight Factor $(\frac{MIS}{\sum MIS} * 100\%)$	MSS (Mean X)	Weight Score (WF*MSS)
2.a	Scheduling systematics	4.23	24.42	3.77	91.99
2.b	Determination of rational time allocation	4.20	24.23	3.67	88.85
2.c	Accuracy of completion of the document at each planning stage	4.50	25.96	3.70	96.06
2.d	Timely submission of the planning document	4.40	25.38	3.73	94.77
Total		17.33	100.00	14.87	
Total weight					371.67
Customer Satisfaction Index (CSI) value = WT/Maximum Value of Likert Scale					74.33

Based on Table 3.4, the Customer Satisfaction Index (CSI) value for the performance of planning consultants in the Human Settlements Sector of the Public Works and Spatial Planning and Development of the City of Banjarbaru, for the implementation time indicator is 74.33%. The CSI value is in the range of 66% - 80.99% which according to categories in Table 2.2, it is included in the "Satisfied" category.

- **Planning Cost Indicator**

Calculation of the performance of planning consultants in the Human Settlements Sector of the Public Works and Spatial Planning and Development of the City of Banjarbaru using the Customer Satisfaction Index (CSI) analysis is presented in the following Table 3.5.

Table 3.5 CSI Analysis on Planning Cost Indicator

No	Indicator	MIS (Mean Y)	Weight Factor $(\frac{MIS}{\sum MIS} * 100\%)$	MSS (Mean X)	Weight Score (WF*MSS)
3.a	Conformity of the type of direct personnel costs with the project needs	4.40	25.10	3.73	93.69
3.b	Conformity of direct personnel cost calculation methods with regulations	4.40	25.10	3.77	94.52
3.c	Conformity of the type of direct non-personnel costs with the project needs	4.43	25.29	3.77	95.24
3.d	Conformity of direct non-personnel cost calculation methods with regulations	4.30	24.52	3.77	92.38
Total		17.53	100.00	15.03	
Total weight					375.83
Customer Satisfaction Index (CSI) value = WT/Maximum Value of Likert Scale					75.17

Based on Table 3.5, the Customer Satisfaction Index (CSI) value for the performance of planning consultants in the Human Settlements Sector of the Public Works and Spatial Planning and Development of the City of Banjarbaru, for the planning cost indicator is 75.17%. The CSI value is in the range of 66% - 80.99% which according to categories in Table 2.2, it is included in the "Satisfied" category.

- **Terms of Reference Indicator**

Calculation of the performance of planning consultants in the Human Settlements Sector of the Public Works and Spatial Planning and Development of the City of Banjarbaru using the Customer Satisfaction Index (CSI) analysis is presented in the following Table 3.6.

Table 3.6 CSI Analysis on Terms of Reference Indicator

No	Indicator	MIS (Mean Y)	Weight Factor $(\frac{MIS}{\sum MIS} * 100\%)$	MSS (Mean X)	Weight Score (WF*MSS)
4.a	Conformity of the data collection carried out by consultants with ToR	4.47	25.24	3.70	93.37
4.b	Conformity of the work method implemented by consultants with ToR	4.20	23.73	3.70	87.80
4.c	Completion of the implementation of the work carried out by consultants with ToR	4.53	26.61	3.73	95.62
4.d	Conformity of presentation of the	4.50	25.42	3.73	94.92

planning report carried out by consultants with ToR			
Total	17.70	100.00	14.87
Total weight			371.70
Customer Satisfaction Index (CSI) value = WT/Maximum Value of Likert Scale			74.34

Based on Table 3.6, the Customer Satisfaction Index (CSI) value for the performance of planning consultants in the Human Settlements Sector of the Public Works and Spatial Planning and Development of te City of Banjarbaru, for the Terms of Reference indicator is 74.34%. The CSI value is in the range of 66% - 80.99% which according to categories in Table 2.2, it is included in the "Satisfied" category.

Importance Performance Analysis (IPA)

This study also used Importance-Performance Analysis (IPA) to measure the level of interest and performance of planning consultants in the Human Settlements Sector of the Public Works and Spatial Planning and Development of the City of Banjarbaru using questionnaire data. The questionnaire that was distributed to the respondents was given a choice of answers using a 5 level scale (likert). The assessment was based on the mean score on all aspects studied as presented in the following Table 3.8.

Table 3.8 Total Score of Respondents Assessment

Variable Item	Score/ Satisfaction levels (X)	Score/ Expectation levels (Y)
	Mean	Mean
1.a	3.70	4.60
1.b	3.83	4.53
1.c	3.87	4.53
1.d	3.90	4.57
1.e	3.73	4.57
1.f	3.63	4.37
C-Line	3.78	4.53
2.a	3.77	4.23
2.b	3.67	4.20
2.c	3.70	4.50
2.d	3.73	4.40
C-Line	3.72	4.33
3.a	3.73	4.40
3.b	3.77	4.40
3.c	3.77	4.43
3.d	3.77	4.30
C-Line	3.76	4.38
4.a	3.70	4.47
4.b	3.70	4.20
4.c	3.73	4.53
4.d	3.73	4.50
C-Line	3.72	4.43

Based on the above mean score, a Cartesian quadrant diagram was made to divide each indicator into variables using the X-axis points and Y-axis points (C-lines). This diagram is used to describe variables and a number of indicators that are considered to influence the performance of planning consultants in the Human Settlements Sector of the Public Works and Spatial Planning and Development of the City of Banjarbaru. The following is a Cartesian diagram for the division of the Importance Performance Analysis (IPA) Quadrant using the mean score, as shown in Figure 3.1, Figure 3.2, Figure 3.3, and Figure 3.4.

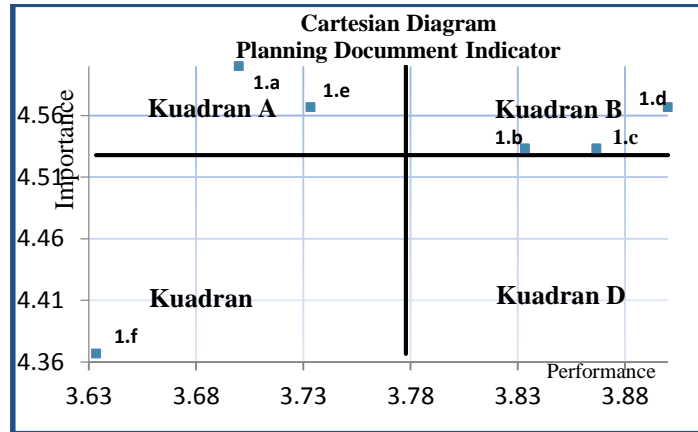


Figure 3.1 Distribution of the IPA Quadrant using the Mean Score on the Planning Document Indicator

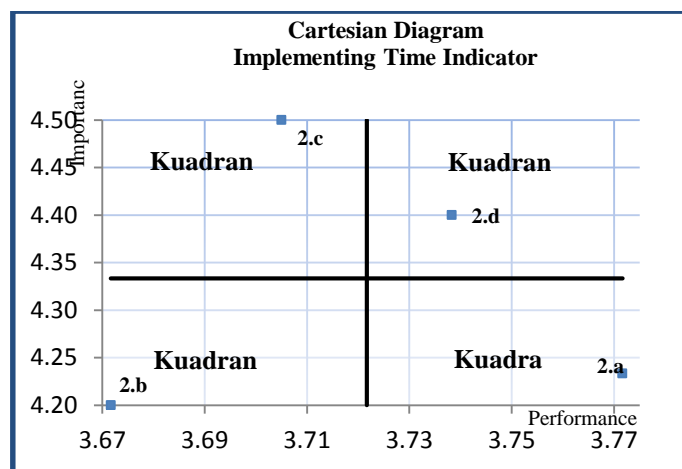


Figure 3.2 Distribution of the IPA Quadrant using the Mean Score on the Implementation Time Indicator

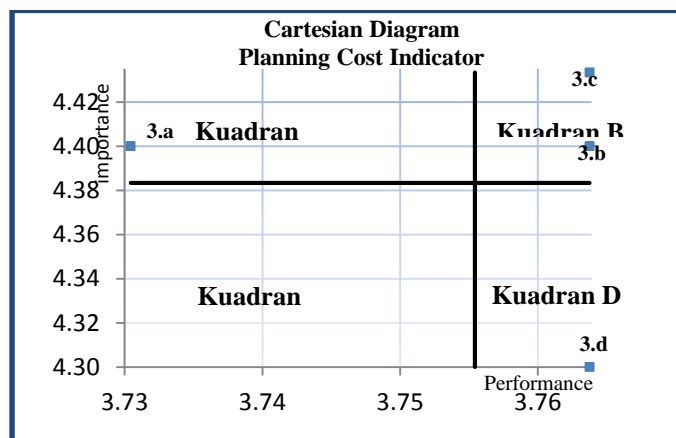


Figure 3.3 Distribution of the IPA Quadrant using the Mean Score on the Planning Cost Indicator

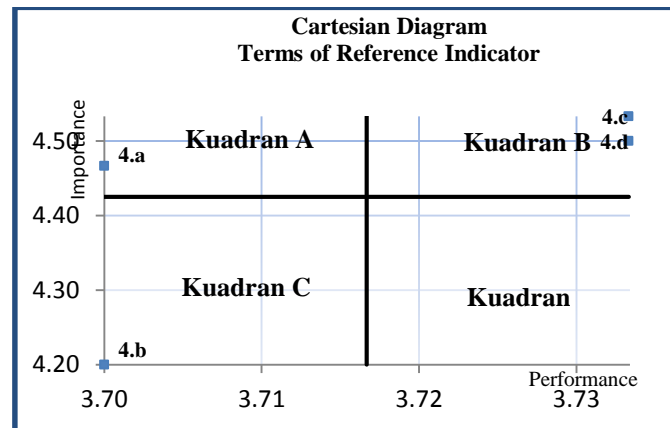


Figure 3.4. Distribution of the IPA Quadrant using the Mean Score on the Terms of Reference Indicator

Based on the division of the Importance Performance Analysis (IPA) Quadrant using the mean score as described in Figure 3.1, Figure 3.2, Figure 3.3, and Figure 3.4, it can be concluded that there are 5 items that are in Quadrant A (focus here), which must receive serious handling and become a top priority indicator for improving the performance of planning consultants in in the Human Settlements Sector of the Public Works and Spatial Planning and Development of the City of Banjarbaru. The five indicators are 1) consistency between drawing documents, RKS, and Engineer's Estimate, 2) availability of technical data related to the material used; 3) accuracy of completion of the document at each planning stage; 4) conformity of the type of direct personnel costs with the project needs; and 5) conformity of the data collection carried out by consultants with ToR.

Results of Observations and Interviews

To find out the performance of planning consultants, observations were also carried out by conducting field reviews and studying documents, as well as conducting interviews with the Commitment Making Official (PPK) in the Human Settlements Sector, Mrs. Nina Aprodita ST., MT. This aimed to analyze how the consultant does the planning work. The results of several document studies and direct interviews show that, in general, there is satisfaction with the Planning Document, Implementation Time, Planning Cost and Terms of Reference indicators, but there are still several indicator items where there is dissatisfaction with the performance of planning consultants.

Performance Improvement Strategy

In the final stage of the study, interviews were conducted with Mrs. Eka Yuliesda, ST, MT as the Head of the Public Works and Spatial Planning and Development of the City of Banjarbaru, and obtained several inputs for strategies to improve the performance of planning consultants, among others, in carrying out their duties, planning consultants must be guided by ToR, increase personnel expertise by participating in technical guidance activities, be guided by applicable regulations, be open to developments in science and technology, comply with administration, and implement cost, quality, and time management.

There are 4 main recommendations for strategies to improve the performance of planning consultants. These strategies include self-development by increasing personnel skills, increasing personnel knowledge about building materials, improving coordination, and placing/adding personnel according to the expertise required in ToR. Of the four main strategies, it boils down to the same thing, namely competency improvement carried out by providers and input from personnel with experience in the construction of similar work.

IV. CONCLUSION

As a result of the analysis carried out using the Customer Satisfaction Index (CSI) method on 4 indicators with 18 instruments, it can be concluded that the performance of planning consultants who received the 2021 work packages in the Human Settlements Sector of the Public Works and Spatial Planning and Development of the City of Banjarbaru can be categorized as satisfied (satisfactory). The results of the Importance-Performance Analysis (IPA) show that 5 instruments are included in quadrant A (top priority), namely 1) consistency between drawing documents, RKS, and Engineer's Estimate, 2) availability of technical

data related to the material used; 3) accuracy of completion of the document at each planning stage; 4) conformity of the type of direct personnel costs with the project needs; and 5) conformity of the data collection carried out by consultants with ToR.

Based on the results of this study analysis, a strategy for improving the performance of planning consultants in the Human Settlements Sector of the Public Works and Spatial Planning and Development of the City of Banjarbaru is competency improvement carried out by providers and involvement or acceptance of input from personnel with experience in the construction of similar work.

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