

User satisfaction analysis for service-now application

Sfenrianto¹, Mutiara Pitauli², Wang Gunawan³

Information Systems Management Department, BINUS Graduate Program – Master of Information Systems Management, Bina Nusantara University, Jakarta, Indonesia 11480

E-mail: ¹sfenrianto@binus.edu; ²mutiaraharianja@gmail.com; ³gwang@binus.edu

Abstract. A good application system can be seen from the user's satisfaction. Service-Now is an application used by the service desk division at PT Aero System Indonesia for the needs of customer reports. Many employees face obstacles in operational service-now, so the resulting report is not optimal. In this study will measure the level of user satisfaction on the service-now application. The study was conducted by taking a survey involving 32 staff in the service desk division as respondents. An approach the Importance Performance Analysis (IPA) is used to analyse the data. The results of analysis show ease of use, completeness of a function or feature, and timely enough to satisfy the user. Meanwhile, quality of information needs to be increased in service-now applications to improve user satisfaction.

1. Introduction

A good application system service should able to support the activities of the company. Its concern with the satisfaction of users in the use of the application. Therefore, the analysis required to measure the level of employees satisfaction as a user against that application.

The analysis of user satisfaction can be derived from the existence of differences between expectations and perceived performance [1]. In addition, the satisfaction analysis approach of an application system can use the Importance Performance Analysis (IPA) [2].

PT Aero System Indonesia has used various applications to support the company's business activities. One such application is service-now in the service desk division for recording business reports. However, since usage since service-now year 2014 to 2016 seen user dissatisfaction. Table 1 shows the company's preliminary research data on Service-Now user satisfaction levels.

Table 1. User satisfaction of Service-Now (2014-2016)

Years	Satisfied		Dissatisfied	
	Number		Number	
2014	3	17.65	14	82.35
2015	4	16.00	21	84.00
2016	8	33.33	24	66.67

Based on table 1, survived three years in row (2014-2016) users tend to be dissatisfied using service-now. This condition has resulted in employee performance in operation, and reporting on Service Now is not optimal. The study will analyze the level of user satisfaction on application Service-Now using the Importance-Performance Analysis.



2. Basic Theoretical

The service-now is one application in PT Aero System Indonesia, and accessible to employees at <https://asyst.service-now.com>. The service desk is a division that uses service-now to print corporate business reporting activities. Figure 1 shows the service-now user interface.

The screenshot displays the ServiceNow 'Request - REQ0017877' form. The form fields are as follows:

- Number:** REQ0017877
- Requested for:** CS Miles/GFF Support
- * Location:** Cengkareng
- Due date:** 2014-12-14 16:54:45
- Price:** 0
- Opened:** 2014-12-12 16:54:45
- Opened by:** User 1 Helpdesk
- Approval:** Approved
- Request state:** Approved

Below the form is a 'Related Links' section with a 'Show Workflow' link. At the bottom is a table titled 'Requested Items (1)' with the following data:

Number	Quantity	Catalog	Item	Due date	Stage
RITM0017885	1		Add New General Request	2014-12-14 16:54:45	Approved

Figure 1. The service-now user interface

Better management of information can be seen from the application system used. The success of an application is the satisfaction of the users [3]. The level of user satisfaction is as either a benchmark whether or not the information is generated. The evaluation of the satisfaction level of an application within a certain period of time needs to be done. User satisfaction with an application is how users perceive system quality in real, but not technically [4] and user will continue to use this system [5]. Therefore user satisfaction relates to the recipient's response to an application's usage.

Factors affecting user satisfaction are the ease of use of the application [6]. Ease of use may indicate the application works well or success [7]. user satisfaction of the app can also be measured using the completeness of a function or feature that aims to help for its users [8]. Then, user satisfaction should produce timely information. Information should be available to decision makers when required by management [9]. In addition, user satisfaction is determined by the quality of information generated by the application [10]. Users need quality

information because it will increase the value of decisions to be taken by the company [11]. The quality criteria of information is accurate and relevant [9]. Accurate information that means information in accordance with the actual reality [12]. The information quality is closely linked to content is relevant on a service [13].

User satisfaction using applications can be analyzed using Importance Performance Analysis (IPA) [2]. Analysis of this technique relates between the level of importance and reality (performance) and perceived by the user. (According to journal of theoretical and applied electronic commerce research 2011). Figure 2 shows the Importance Performance Analysis diagram, which consists of four quadrants (I-IV).

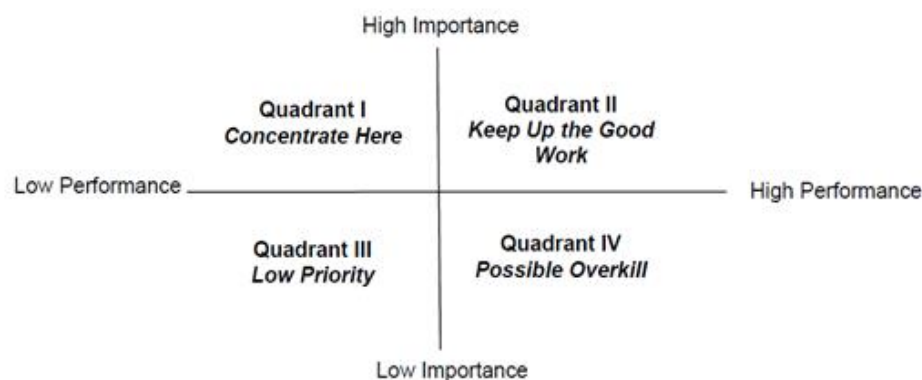


Figure 2. Importance Performance Analysis

3. Research Methodology

This study has 32 respondents from all staff in the division of service desk, consist of 21 male respondents and 11 female respondents. Most respondents are working > 2 year (14 peoples or 43.75%). The second largest number is working under 5 year (11 peoples or 34.37%) and the others are working more than 5 years (7 peoples or 21.875%).

That four indicators are used to analyze the level of user satisfaction in using service-now, namely: ease of use (US_1), completeness of a function or feature (US_2), timely information (US_3), and quality of information (US_4). Validity and realibiliy test is done with the help of SPSS 16.0 software. The validity is tested by using Product Moment Correlation Pearson's. Table 2 shows the results of validity test for user satisfaction based on the factors that influence it. Tests performed on indicators US_1, US_2, US_3 and US_4 are generating valid data, because all results from Correlation Pearson's> sig.

Table 2. Validity test result

Indicators	r Table	r Calculation	Validity
US_1	0.289	0.785	Valid
US_2	0.289	0.884	Valid
US_3	0.289	0.866	Valid
US_4	0.289	0.848	Valid

Then, there is no indicator that has Cronbach's Alpha values below 0,70. That reliable data are from the user satisfaction. Table 3 shows the reliability test for each indicator.

Table 3. Reliability test for each factor

Indicators	Cronbach's Alpha	Realibiliy
US_1	0.798	Reliable
US_2	0.782	Reliable
US_3	0.786	Reliable
US_4	0.786	Reliable

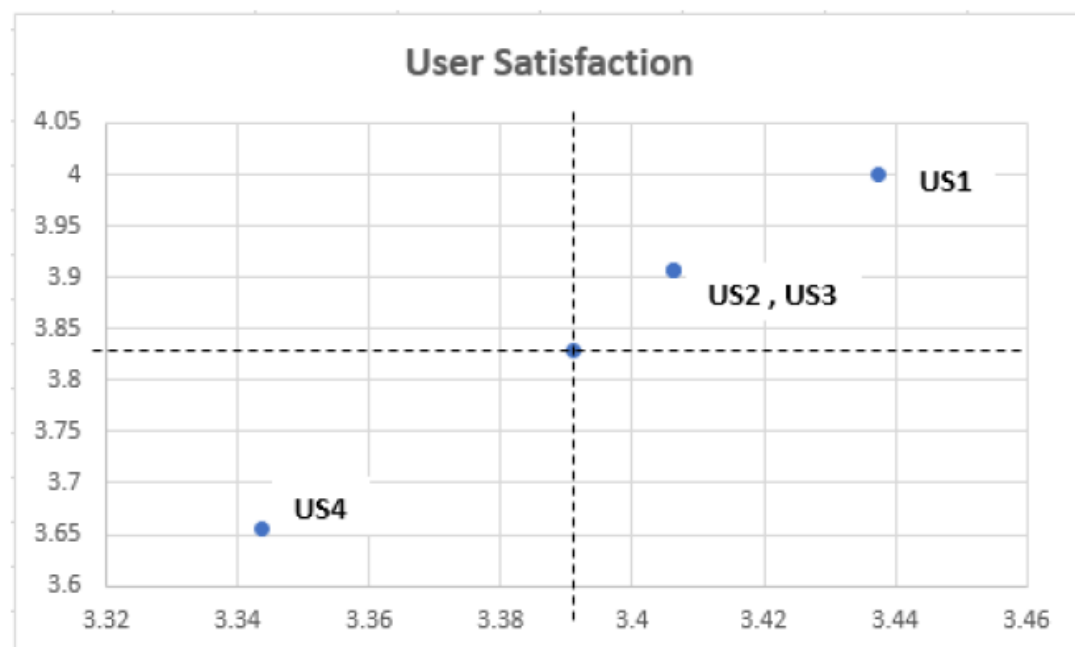
4. Result

Table 4, shows the results of analyzing the expectations and performance of the service-now application for each indicator. Overall value of satisfaction level has negative value. Thus, each indicator has not met the expectations of users. Based on these results, further analysis is needed to determine the improvement of each indicator, which is to determine the priority of improvement using the method of Importance Performance Analysis (IPA).

Table 4. Level of satisfaction based on performances and expectations

Indicator	Performances	Expectations	Level of Satisfaction
US_1	3.438	4.000	-0.563
US_2	3.406	3.906	-0.500
US_3	3.406	3.906	-0.500
US_4	3.344	3.656	-0.313

Mapping of performance results and expectations will be established on a matrix consisting of four quadrants. Each quadrant represents a priority scale in taking policy to improve or sustain performance of user satisfaction. Figure 3 shows the Importance Performance Analysis for a matrix of user satisfaction.

**Figure 3.** Importance performance analysis for a matrix of user satisfaction

Based on the figure 3, the variables US1, US2, and US3 are in quadrant II. This condition has a high level of importance and its performance is also considered good by the respondents. This means ease of use (US_1), completeness of a function or feature (US_2), and timely information (US_3) are considered important and satisfy users in the use of the service-now app. While, the US4 indicator included into Quadrant III. This condition has a low importance and poor performance according to respondents. Therefore, quality of information (US_4) needs to be increased in service-now applications to improve user satisfaction.

5. Conclusion

Based on the study result, this study can have several conclusions. First, the indicators that have a high level of importance and its performance to user satisfaction in the service-know application are ease of use, completeness of a function or feature, and timely. Second, the indicator of the quality of information needs to be increased in service-now applications to improve user satisfaction. Recommendation for future study is recommended to examine the evaluation of the applications Service Now to increased performance of employees. To better support service application Service Now against the satisfaction of users, then we recommend the variable that needs to be fixed can be realized soon.

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