

Improvement on Document Control Review System in Document Control Section, at PT. ASIKA, Cikarang

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ABSTRAK

PT. ASIKA Cikarang adalah salah satu perusahaan manufaktur mainan. Ada beberapa kendala yang dapat terjadi di PT. ASIKA Cikarang. Salah satu kendala tersebut dapat berkaitan dengan kualitas produk, sistem teknologi atau sistem dokumentasi dari perusahaan tersebut. Karena sistem dokumentasi adalah hal penting bagi PT. ASIKA Cikarang, ada kendala spesifik yang perlu diselesaikan di sana. Dokumen SOP atau Standar Operasional Prosedur yang dimiliki PT. ASIKA Cikarang terhitung rangkap dalam satu data induk. Ada juga SOP atau Standar Operasional Prosedur dan beberapa dokumen terkait yang berlaku namun belum terdaftar dalam sistem dokumentasi tersebut. Hal ini dapat berdampak pada sistem manajemen mutu perusahaan terutama pada saat perusahaan melakukan peninjauan dan pemeriksaan semua dokumen legal yang terdapat pada PT. ASIKA Cikarang. Dalam penelitian ini, dokumen PT. ASIKA Cikarang seperti prosedur dan formulir akan ditinjau di setiap departemen. Hal ini dilakukan untuk mengetahui berapa jumlah prosedur dan formulir yang masih berlaku dan sudah didaftarkan dalam sistem dokumentasi dan menghindari prosedur dan formulir tersebut terhitung rangkap di dalam sistem dokumentasi. Metodologi yang dilakukan untuk menganalisa dan menyelesaikan kendala Standar Operasional Prosedur (SOP) dan formulir adalah dengan menggunakan diagram pareto, diagram pie dan tabel pivot. Dengan adanya penggunaan metodologi tersebut, jumlah prosedur dan dokumen terkait tidak terhitung rangkap dan akan mempermudah pengguna untuk pencarian prosedur dan dokumen terkait di dalam sistem dokumentasi.

Keyword: *Sistem Pengendalian Mutu, Standar Operasional Prosedur, Formulir, Diagram Pareto, Diagram Pie, Tabel Pivot*

ABSTRACT

PT. ASIKA Indonesia is a big manufacturing toy company in Indonesia. Many problems occur in PT. ASIKA Indonesia. The obstacle that may occur such as about the product quality, the technological system of the company or the documentation system of the company. In this section, the obstacle that occurs in PT. ASIKA Indonesia is the double counted of Standard Operating Procedure (SOP) and some of the documents have not been registered yet even those documents are legal documents. It has the impact on the quality management system of the company. It will give impact when the company needs to review and audit all the legal documents of PT. ASIKA Indonesia. Thus, it is needed to conduct the research on document control. The procedures and the applicable documents such as form will be reviewed. The analysis is performed on a list of Standard Operational Procedures (SOP)s and forms. Pareto diagram is also constructed with pie chart and pivot table as a tool. After conduct the analysis, it will make the user ease to find the procedure and the related document in the documentation system without double counted.

Keyword: *Forms, Quality Management, Standard Operating Procedure, Pareto Diagram, Pie Chart, Pivot Table*

1. Introduction

An standard operating procedure contains set of instructions for performing specific operation that describes the activities necessary to complete tasks. SOPs are policies, procedures and standards which are need in the operations, marketing and administration disciplines within the business to ensure success. Applying the SOP could help the company to remove variation in task performance caused by employee completing the same work processes in different ways (Stup, 2002).

Standard Operating Procedure (SOP) can help employee do his/her jobs and improve his/her outcomes in repetitive manufacturing. In addition, SOP could give high consistency of output that affect high quality product manufactured. By those procedures, the employee can improve the job performance and the product quality based on standard (Treville, 2005).

PT ASIKA, a toy manufacturer located in Cikarang, has been implemented SOP for all its jobs in all functions. These procedures are not the only documents needed for measuring the standardization in this company, but also are related with some applicable documents such as forms, guidelines and work instructions. The amount of SOP is very high and also other related documents. It is caused this company faces an obstacle to improve the document control review system. Even the procedure and related documents format have been standardized, some SOPs may related to forms that do not have the format number, named as or unregistered forms. In addition, there are some procedures contain same forms that cause the double documents while searching the forms by using form number and take time for the user to find the certain procedure and its applicable form.

Thus, it is needed to conduct a research for developing and improving document control review system that impacts on reducing number of double documents and searching time. This research will be focus on procedures and form. By using pivot table, pie chart and Pareto diagram, the documentation system will be improved in decreasing the double counted documents. There will be some differences after applied the system by using pivot table. It also makes easier for a user to find the forms and related procedure in simpler process and save searching time.

2. Methods

2.1 Analyze Current Standard Operation Procedure (SOP)

It is used to analyze the procedure of each job. By checking all SOPs, the amount of the total procedures used in PT. ASIKA could be recorded. SOP analysis is also for identifying whether the procedure is related to other documents or not. The format of SOP in PT. ASIKA Indonesia has been standardized. Each SOP has its own effective date depends on the department authority. If the SOP is not in used anymore, then it will be obsolete. The format of procedure number is XXX/PP/001 which means XXX is for the department code, PP is procedure code and 001 is for the sequence of the procedure released.

The diagram shows a standardized SOP form with the following structure:

- Header:** PT.X PROCEDURE
- Metadata:**
 - Procedure Title :
 - Procedure No. : XXX/PP/001
 - Effective Date :
 - Revision : 00
 - Page No : 1 of
- Approval Table:**

ORIGINATOR	DIRECT SUPERIOR	DEPARTMENT HEAD
- Content Sections:**
 - Purpose
 - Scope & Background
 - Applicable Documents
 - Definition
 - Procedure Detail
 - Attachment
 - Record Retention
 - 7.1 What
 - 7.2 Where
 - 7.3 How
 - 7.4 How long
 - 7.5 Who

Callouts in the diagram point to:

- Logo:** PT.X
- Format Number:** XXX/PP/001
- Signature:** The area for the originator's signature in the approval table.

Figure 1. SOP Standardized Format

2.2 Analyze the Current Form

Form is a document (printed or electronic) with spaces in which to write or enter data. It helps to enter the data become easier to input. A legal document in all department has a task to fill and input data from a form to the computerized system. In this research, the analyzing is performed to identify the form status, whether the form has form number and related to any procedures or not. Each form has its own effective date depends on the department authority. If the form is identified as an unused form, then it will be obsolete. The format number of form is XXX/FR/001 which means XXX is for the department code, FR is form code and 001 is for the sequence of the form released.

2.3 Improvement

After analyzing the amount of the procedures and the amount of the applicable document (form) by reviewing the documentation system, all procedures that have form will be listed in the table. Then all forms will be listed in the separated table. The forms have two categories which are registered form and unregistered form. For the unregistered form should be changed into registered form by adding form number and submit to the Document Control. For documents with double counted, they will be eliminated using pivot table. Pivot Table is an interactive table in a short time capable of displaying a summary of large amounts of data. Pivot Table not only rotate the axis of the table, but capable calculates each item required to use appropriate calculation methods and options. Therefore, it can be placed on the Pivot Table range or other sheets, it can be changes to the Pivot Table without having to change the original data. In doing calculations, not only do the Pivot Table sum only, but counting with other functions such as finding the average, seeking a percentage, standard deviation, and other (Walkenbach, 2015).

The differences between the documents before and after reviewed will be figured out by using pareto diagram and pie chart. There will be a comparison before and after the documents reviewed. All of the differences will be analyzed and concluded in the conclusion. Pareto diagram is a graph contains of one or several bars which focus on principal causes of a problem. The most common form of a Pareto diagram is a combined bar graph and cumulative frequency of each cause is compiled. The bar graph contains a bar for each cause, where the frequency determines the bar height. In this research, Pareto diagram will be used as a tool to analyze the amount of total procedure and total form. Meanwhile, pie chart is a tool used in statistics. The independent variables are plotted even clockwise or counterclockwise direction. Pie chart also known as a chart that uses slices like a pie and it shows the certain size of data. The data series may show in percentage or its value (Abell, et al, 2003).

3. Result and Discussion

As the initial observation, there should be the data of the whole of procedures and related forms. Those documents can be found in the intranet system. Job observation and interview to the document control section will be needed to ensure the present documents which are used in PT. X Indonesia already match with the master data in intranet system.

Make a list of each department documents. In this research, PT. ASIKA Indonesia has 8 departments and each department has its code for the document numbers. There are department A, B, C, D, E, F, G, and H. Each department will conduct the specific document number based on the standardized of PT. ASIKA Indonesia. In appendix 1, there is a master data of the documents in PT. ASIKA Indonesia for Department F. Based on the data, it is known that there are 10 procedures. However, the actual procedures only 8. The double counted occurs on FFF/PP/024 and FFF/PP/029. Thus, by using pivot table the real quantity of the procedures without double counted will be known.

It also occurs for the form as the related documents. There are several forms in Department F. Those forms have specific code and several forms do not have the code yet. By using the pivot table, the quantity of those forms which already registered and unregistered will be known and by clicking the forms, there will be more information about what is the related procedures with the forms.

3.1 Procedure and Related Form Review

By using pareto diagram, analyzing of the quantity of each department's procedures is done. The result is two category form. The first category is a procedure related with form (s) and the other is a procedure not related with form(s). Next step is to analyze the quantity of forms in each department and identify all forms into 2 categories, an unregistered form or a registered form. The registered forms is a form with form number whether the unregistered forms is a form without form number yet.

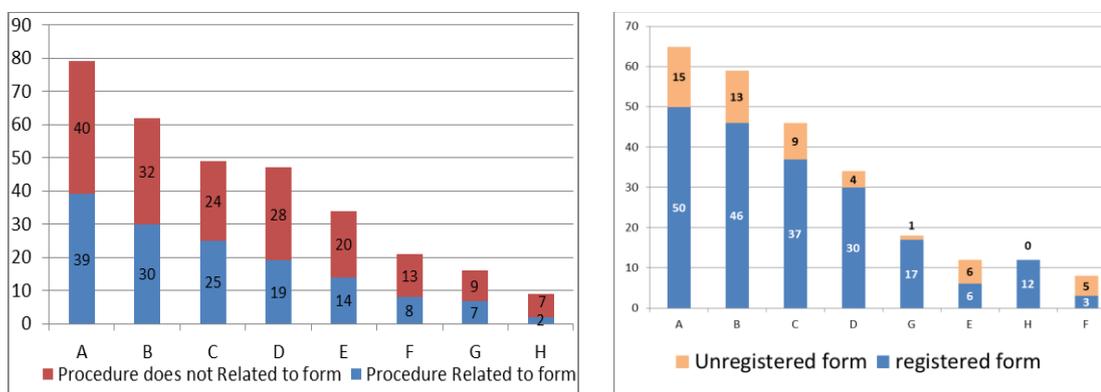


Figure 1. (a) Procedure Quantity Based on Categories, (b) Form Quantity Based on Categories

The result can be seen in Figure 1 above. The total of procedures which related with form(s) are 144 procedures and procedures which not related to any forms are 173 procedure. There are 201 (or 79.1%) registered forms and 53 (or 20.9%) unregistered forms.

3.2 Unregistered Form Checking

The unregistered is a form without form number. It is hard for user for tracing and searching this form. Thus, the unregistered form will be analyzed using Pareto diagram and pie chart to determine the amount of unregistered form in each department.

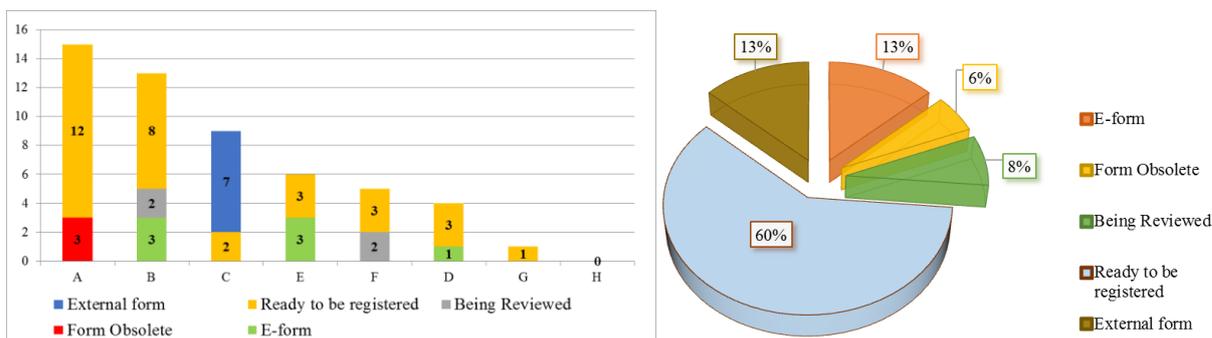


Figure 2. (a) Unregistered Form Quantity Based on Categories, (b) Percentage of Unregistered form

There are several categories of unregistered forms, such as external form, form obsolete, e-form, being reviewed and ready to be registered. From Figure 2 above, there is 60% of the unregistered forms will be ready to be registered. It means the quantity of unregistered form will decrease later on. The e-form and external form, around 13%, do not need to be registered. The amount of 8% are still being reviewed by the representative. The rest 6% are obsolete and do not be used anymore. It will affect the related procedures to be revised.

For the form which needs to be registered will get the sequence form number given by document control section of PT. ASIKA Indonesia. As an example, Department A have 15 unregistered forms and after those unregistered forms have been analyzed, 3 of 15 unregistered forms are obsolete and the rest will be registered and have new form number shown in Appendix.

3.3 Improvement Result

The number of each categories of the unregistered form changes after improving and registering some forms. Table 1 shows the number of forms for each category after improvement. The number of “ready to be registered” become zero and other categories decrease or become zero.

Table 1. Number of Forms after Improvement

Department	Registered form	Obsolete form	E-form	Being reviewed	external form
A	62	3	-	-	-
B	54	-	3	2	-
C	39	-	-	-	7
D	33	-	1	-	-
E	9	-	3	-	-
F	6	-	-	2	-
G	18	-	-	-	-
H	12	-	-	-	-

Unfortunately, even some forms have been registered and it means the quantity of the registered form increases, the improvement has not finished yet. The improvement should be continued because a procedure may relate with more than one form and a form may relate with several procedures. It gives impact the double counted documents. Thus, there will be pivot table to make the user easier to find a certain form or procedure by only search the document number and pivot table will prevent the double counted document.

Pivot table is created by using Microsoft Excel. After making the pivot table, it will help the user for finding the procedure or form. The resources of the pivot table is from the master data of the documents in each department (for example Department F, shown in Appendix).

By using pivot table, the user can find the form number. For example, forms in Department F, there are 6 registered forms which related to the procedures of Department F. For those criteria, give checklist in the box **Procedure Code** and **No. form** to ensure that the user will find the relation between form number and also the procedure code like shown in the figure Pivot Table Field List. Hold **Ctrl+F** to find the document number. As an example, if the user would like to find FFF/FR/005 then it can be found that it is related to 1 procedure of Department F. If the user double click on column Number of Related Procedure (per-form), row FFF/FR/005 then it will show what is the procedure that FFF/FR/005 related to. After double click, then it will show a new table which explains more detail about what procedure that related to FFF/FR/005 in a new sheet of Microsoft Excel.

Form Department F

No.	Row Label	Number of Related Procedure (per-form)
1	being reviewed	4
2	FFF/FR/005	1
3	FFF/FR/014	1
4	FFF/FR/015	1
5	FFF/FR/016	1
6	FFF/FR/022/0	1
7	FFF/FR/055/0	1
Grand Total		10

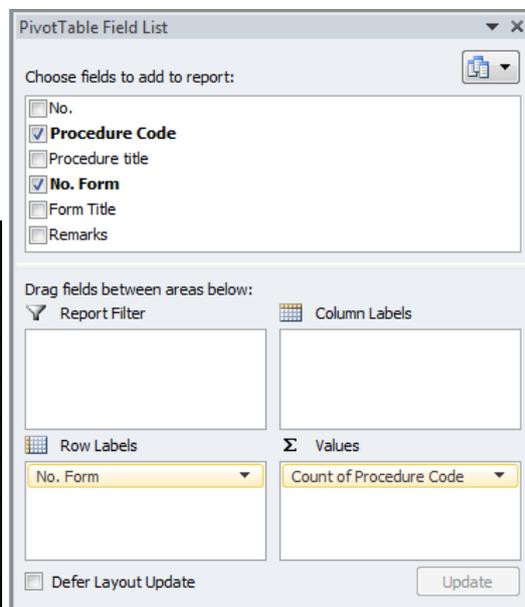


Figure 3. (a) Pivot Table of Department F, (b) Pivot Table Field List

Table 2. Procedure related to FFF/FR/005

No.	Procedure Code	Procedure title	No. Form	Form Title
3	HS/PP/020	Key Control Procedure	FFF/FR/005	Key Log Book

3.4 Percentage Difference

After conduct the pivot table, it will give impact on the difference between the related form before and after registering several unregistered forms, using pivot table and using pareto diagram. From the unregistered form, most of unregistered form are registered (97%), and the other form categories are decreasing. It will make easier for user to find the related document in a short time using the document number.

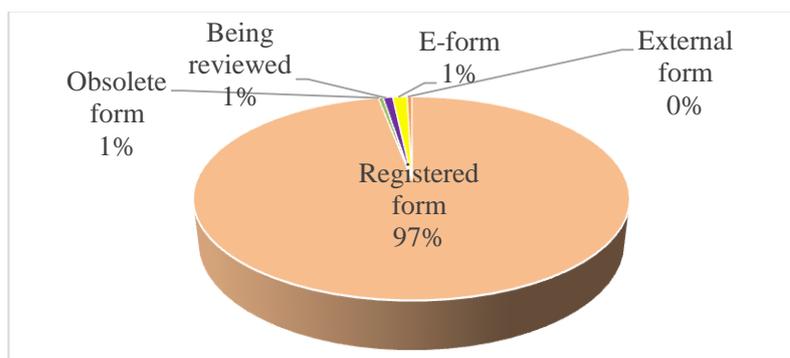


Figure 4. Final Percentage of Form Categories after Improvement

Table 3. Master Data of Department F Procedure and Related Document

No	Procedure Code	Procedure title	No. Form	Form Title
1	FFF/PP/008	Employee Outgoing Inspection	FFF/FR/014	Interview report Form
2	FFF/PP/015	Non employee entering and leaving plant		Guests Visit Proof form
3	FFF/PP/020	Key Control Procedure	FFF/FR/005	Key Log Book
4	FFF/PP/021	Unauthorized Person Procedure		Guests Visit Proof form
5	FFF/PP/024	Vehicle Parking Procedure		Guests Visit Proof form
6	FFF/PP/024	Vehicle Parking Procedure	FFF/FR/015	Parking car overnight
7	FFF/PP/028	Entry & Exit of Vehicle Procedure	FFF/FR/022	Delivery Order
8	FFF/PP/029	Incoming and Outgoing Employee	FFF/FR/055	Exit Permit form
9	FFF/PP/029	Incoming and Outgoing Employee	FFF/FR/016	Coming late form
10	FFF/PP/033	Property Pass		Property pass form

Table 4. Form categories after registering the unregistered form

No.	Form Title	Form Status
1	RKL form	AAA/FR/413/00
2	Air Ambient	FORM OBSOLETE
3	Waste Water	FORM OBSOLETE
4	Gutter Checklist	AAA/FR/404/00
5	Work order	AAA/FR/406/00
6	Indoor temperature	AAA/FR/190
7	Incidents form	FORM OBSOLETE
8	Forklift daily	AAA/FR/412/00
9	Machine Safety Audit	AAA/FR/411/00
10	Shower Inspection	AAA/FR/410/00
11	Smoke detectors	AAA/FR/409/00
12	Fire Detection	AAA/FR/408/00
13	Fire extinguisher weekly and monthly	AAA/FR/408/00
14	Automatic sprinkler protection monthly	AAA/FR/407/00
15	Weekly testing fire pump check list	AAA/FR/405/00

4. Conclusion

It is found that there is a significant difference after determining the unregistered form categories and registering some unregistered forms. From the analysis of unregistered, 60% of forms are ready to be registered, 13% of forms are e-form, 13% of forms are external forms, 8% of forms are being reviewed, and 6% of forms are obsolete forms. After improvement by registering several forms, 97 percent of all unregistered form is being registered. The recommendation for the future research is more development in documentation system using specific software for the database and there must be continuous review for the procedures and related documents.

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