

CHAPTER 4 - RESULTS AND DISCUSSIONS

By analyzing and understanding the needs of XYZ customers as well as to answer research questions consisting of

1. How to understand pain and gain customer XYZ?
2. How to accommodate pain and gain customer XYZ?

From the results of the Analysis process, Focus Group Discuss, and mapping through the Value Proposition Canvas, an appropriate program is produced as a product service to answer pain and gain as well as the program can accommodate the pain and gain of customers. The program is called Package Service Regular (PSR).

4.1 Implementation of Paket Service Regular (PSR)

The PSR implementation process is carried out in XYZ customer plantation area supported by the UT team near the plantation area. Prior to the implementation of the PSR program, a socialization process was carried out to the UT branch team who would execute the PSR program related to the scope of work of the PSR and the process to make a report on the implementation of the PSR.

Paket Service Reguler (PSR)

This is a heavy equipment maintenance package where customers get benefits in the form of carrying out Periodical Service and Periodical Inspection according to OEM standards at a fixed cost per month.

Scope of Job

Periodic Service

- ✓ Filter Replacement
- ✓ Element air Cleaner Replacement
- ✓ Oil and Coolant Change
- ✓ Checking All Parameter

Reporting

- ✓ PS Report
- ✓ Oil Analysis/ PAP Report
- ✓ Backlog Report
- ✓ PM Clinic every 2000 hours

Periodic Inspection

- ✓ Oil level checking
- ✓ Leakage Checking
- ✓ Error or abnormal noise Checking
- ✓ Backlog

Unit Coverage

☐ ALL Komatsu Small unit

- ☐ PC Small
- ☐ Dozer Small
- ☐ Grader Small
- ☐ Wheel Loader Small



☐ BOMAG



Figure 4. 1 Service Program for Customer XYZ

There are 3 main activities of this PSR program to carry out preventive maintenance on XYZ customers' heavy equipment. The first is to carry out Periodical Service (PS) according to the schedule, the UT team will prepare spare parts to do PS so that customers do not need to prepare spare part stock and reduce inventory and space in the warehouse. By doing PS by UT, the quality of work will be guaranteed. In addition, UT's mechanic team will also conduct periodical inspections in addition to PS work, where the coverage of check list items from this periodical inspection covers all parts of the machine. The results of PS work will be reported in the PS Report and hail jobs from inspection will be written in the Backlog Report

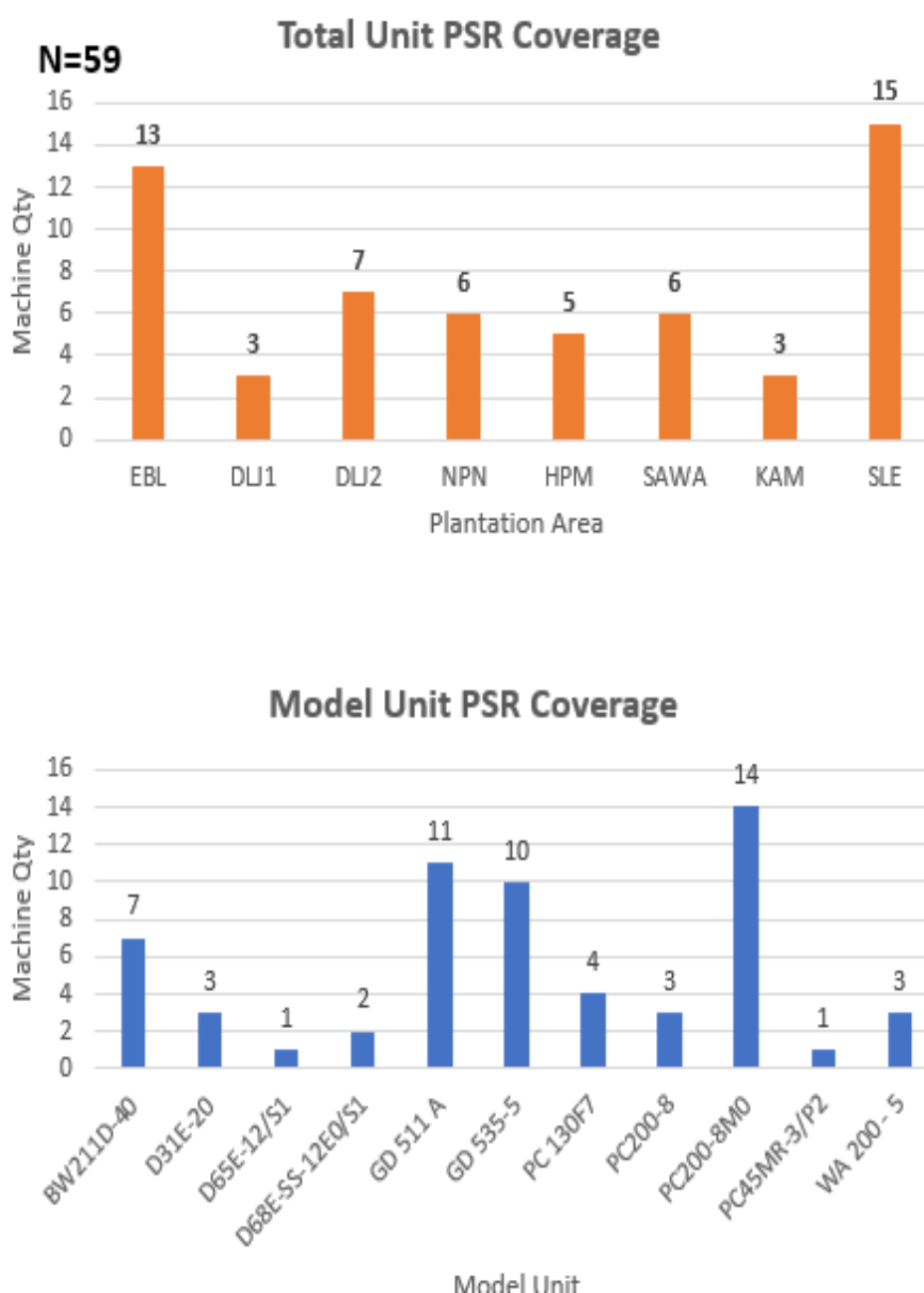


Table 4. 1 PSR Unit Model and Area Coverage

To describe the working process of PSR, a flow process is made that is useful to more easily understand the PSR process from the beginning of the PSR draft to the reporting process of PSR implementation. The following is an overview of the process flow of the PSR program. This PSR process flow is made together with the customer team to ensure that this PSR program can run in accordance with the demands and conditions of the existing organization, infrastructure, and administrative processes from the beginning before work starts until the PSR work is then carried out the reporting process and finally the billing process for the transaction.

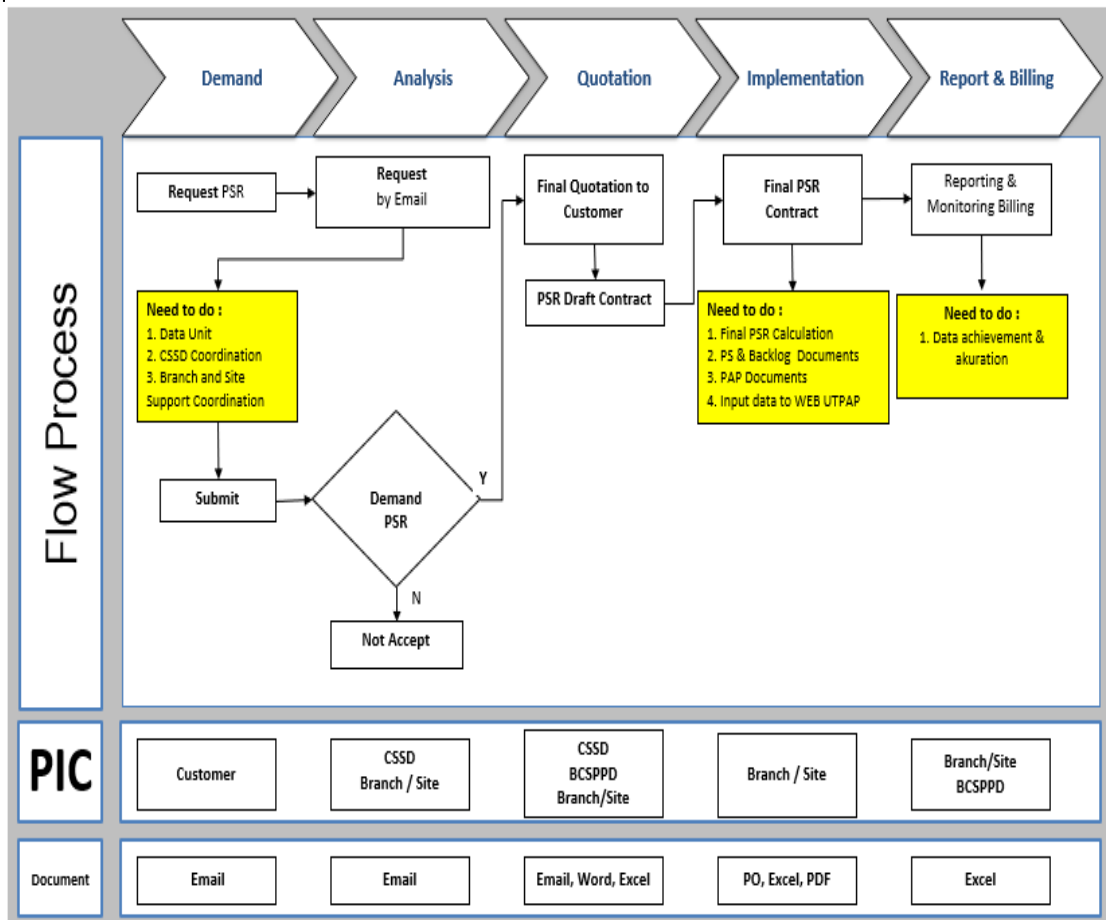


Figure 4. 2 PSR Flow Process

In the backlog report, recommendations for spare parts that have experienced symptoms of wear, leaks or cracks will be given in the form of part numbers that must be replaced in the near future to avoid greater damage. An additional program to optimize the preventive maintenance process is to take oil samples for the main components in the unit which then the oil samples will be sent and analysed to the laboratory to determine excessive metal content in case of abnormal wear in these components, or to determine if there is contamination in the oil or components. If there is an abnormality in the results of the oil analysis, the UT team will provide recommendations to the customer team to immediately take the necessary actions in accordance with the findings of the laboratory results, by checking the oil again or even changing the oil, it is hoped that more severe component damage can be avoided, so that unit repair costs will be smaller.

4.2 PSR Reporting Process

To answer customer needs in terms of the reporting process, which is still carried out manually, so that the maintenance history of the process has not been recorded properly. UT provides support in the form of web development that can record all periodical service activities, oil analysis reports and inspection reports. And customers will be given access to see all of these data as routine activities in viewing reports from the heavy equipment maintenance process.

4.2.1 Web PSR Development

The web development process has been carried out under the name Maintenance Management 4.0, where the XYZ customer team with a person in charge (PIC) is appointed to monitor online the progress of PSR implementation every month. Each PIC will be given an ID to access the web.

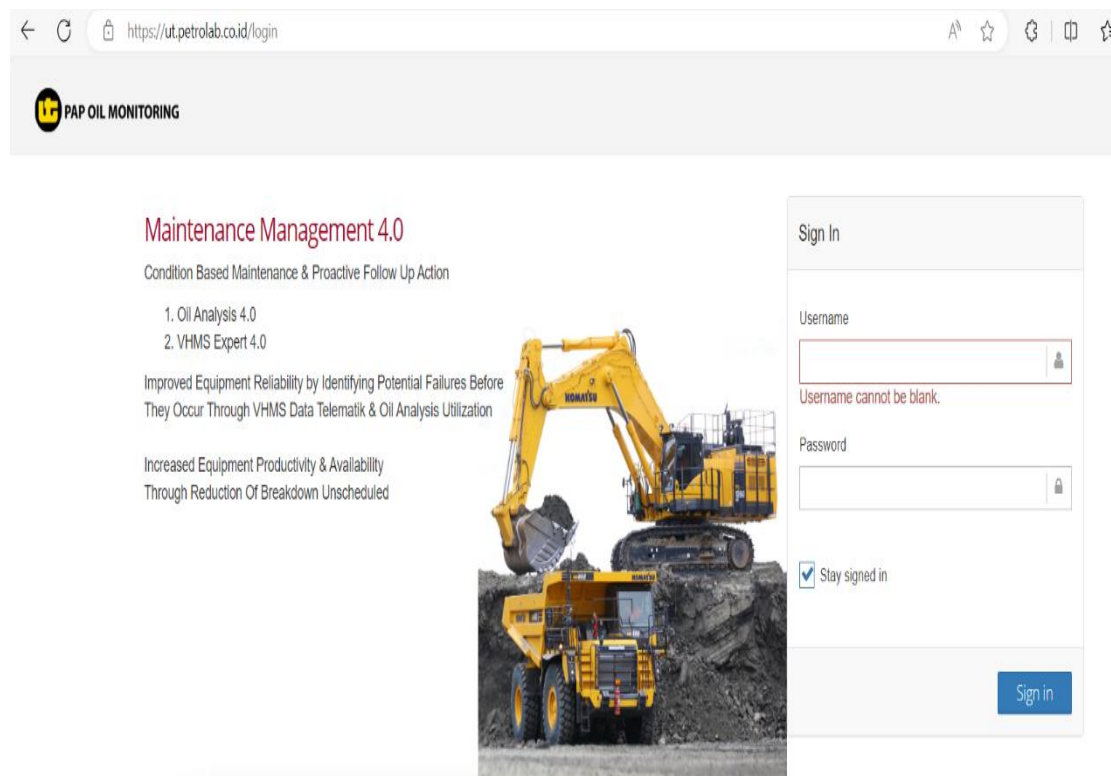


Figure 4. 3 PSR Online Web Reporting

All data submitted in the system will be guaranteed confidentiality and will not be leaked to any party. The data entered into the PSR web system is data from periodical

service, machine inspection / backlog, oil sample analysis carried out by the mechanic periodically during the mechanic's visit according to the agreed schedule. The visit schedule is carried out by first the unit operator will inform the status of the unit hours meter actually, if it has entered the hours meter for service implementation, the operator will inform the planner team. Furthermore, the planner team will inform the distributor team at the nearest branch or branch that has been appointed to make a visit to immediately prepare a mechanical visit plan, and spare parts for service by issuing a purchase order in accordance with the work plan to be carried out. Then the mechanic will make a visit according to the agreed schedule. After the mechanic has finished doing work within the scope of the PSR program consisting of Periodical Service, Machine Inspection, Oil Analysis, Recommended part, the mechanic will send proof of completion of work to the customer, henceforth all work reports will be submitted on the PSR web and the work will be closed by invoice to the service team.

4.2.2 Periodical Service (PS) and Backlog Reporting

The results of the work from Periodical Service (PS) and Inspection that have been carried out by mechanics will be included in the web system with an overview of the reported results that have been uploaded as follows. The XYZ customer team will coordinate with the UT team to follow up on the findings of the inspection or backlog results and process the parts needed for replacement in the next service or immediately if the backlog findings recommend urgent replacement of parts.

Paket Servis Reguler Tables

Actual Service

Begin

End

Submit

✕ Cancel

Show 10 entries

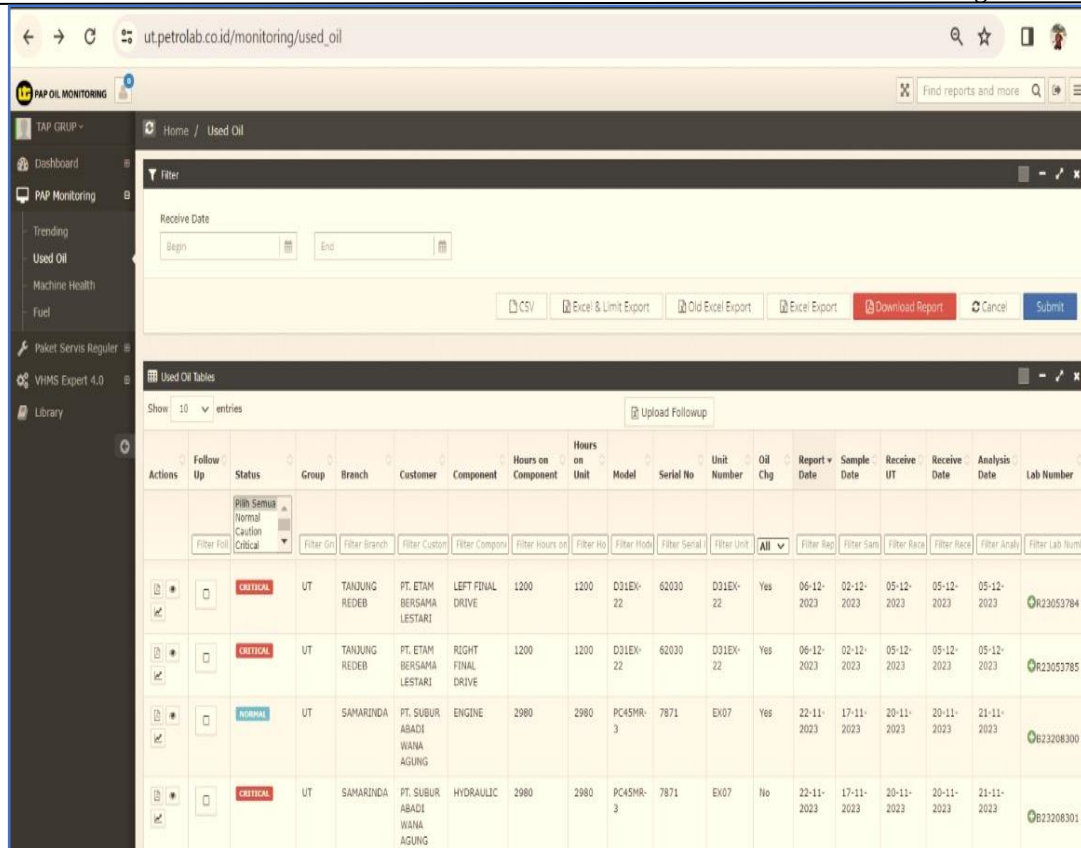
Attachment	Unit No	Model	Sn	Brand	Branch	Customer	Pap	Interval	Plan Service	Plan Hm	Actual Service	Actual Hm	Until Day	Accuration Status
	Filter Unit	Filter Model	Filter Sn	Filter Brand	Filter Branch	PT. SUBUR ABADI WANA AGUNG		Filter Interv	Filter Plan S	Filter Plan	Filter Actual	Filter Acta		All
	EX003	PC200-8	C67440	KOMATSU	SAMARINDA	PT. SUBUR ABADI WANA AGUNG		500	2023-12-05	96000			0	
KSR SPB	EX10	PC210-10M0	DBCH0343	KOMATSU	SAMARINDA	PT. SUBUR ABADI WANA AGUNG	Critical	500	2023-11-17	3000	2023-11-17	2999		Accurate
KSR SPB	VC06	BW211-40	961582391227	BOMAG	SAMARINDA	PT. SUBUR ABADI WANA AGUNG	Critical	500	2023-11-17	1500	2023-11-17	1470		Accurate
KSR SPB	GD04	GD535-5	J10270	KOMATSU	SAMARINDA	PT. SUBUR ABADI WANA AGUNG	Critical	500	2023-10-31	3000	2023-10-31	3030		Accurate
KSR SPB	EX006	PC200-8M0	C20870	KOMATSU	SAMARINDA	PT. SUBUR ABADI WANA AGUNG	History unit not found	500	2023-10-13	10500	2023-09-29	10471		Accurate

Figure 4. 4 Periodical Service and Backlog Reporting

The results of the PS work will be reviewed based on the target plan that must be carried out and the accuracy of the implementation of the SF. The targeted PS accuracy is within the range of +/- 50 hours from the hour meter unit that is included in the PS plan.

4.2.3 Oil Analysis (PAP) Reporting

Oil samples taken from major components of the engine oil and hydraulic oil will be sent to the oil laboratory for analysis and immediately the results of the oil analysis will be reported in the web system so that it can be directly accessed by the UT team and customer team.



Actions	Follow Up	Status	Group	Branch	Customer	Component	Hours on Component	Hours on Unit	Model	Serial No	Unit Number	Oil Chg	Report Date	Sample Date	Receive UT	Receive Date	Analysis Date	Lab Number
		CRITICAL	UT	TANJUNG REDEB	PT. ETAM BERSAMA LESTARI	LEFT FINAL DRIVE	1200	1200	D31EX-22	62030	D31EX-22	Yes	06-12-2023	02-12-2023	05-12-2023	05-12-2023	05-12-2023	0223053784
		CRITICAL	UT	TANJUNG REDEB	PT. ETAM BERSAMA LESTARI	RIGHT FINAL DRIVE	1200	1200	D31EX-22	62030	D31EX-22	Yes	06-12-2023	02-12-2023	05-12-2023	05-12-2023	05-12-2023	0223053785
		NORMAL	UT	SAMARINDA	PT. SUBUR ABADI WANA AGUNG	ENGINE	2980	2980	PC45HR-3	7871	EX07	Yes	22-11-2023	17-11-2023	20-11-2023	20-11-2023	21-11-2023	0223206309
		CRITICAL	UT	SAMARINDA	PT. SUBUR ABADI WANA AGUNG	HYDRAULIC	2980	2980	PC45HR-3	7871	EX07	No	22-11-2023	17-11-2023	20-11-2023	20-11-2023	21-11-2023	0223206301

Figure 4. 5 Oil Analysis Web Reporting

The customer team will immediately follow up on the recommendations of the results of the oil sample issued by the laboratory on the unit taken by the oil sample.

4.3 PSR Results

With the implementation of this PSR program, it will provide benefits for customers including the process of preventive maintenance work will be more controlled both in terms of achievement, guaranteed quality of work because it is carried out by certified mechanics and the accuracy of preventive maintenance work according to schedule. and of course, customers do not need to prepare many mechanics because the maintenance process has been given to UT as a distributor and provider of after sales support. From the UT side, as a distributor, there will also be benefits including increased number of service work and more regular unit inspection visits, where before the existence of this PSR program on average the number of service jobs every month there were only 2 work orders to an average of 15 work orders every month, preparing the needs of parts and consumables for the PSR program and parts needed for backlog

work. With the increase in the number of work orders, it has an impact on increasing the number of revenue services and additional revenue in spare parts. The following is an overview of the number of Periodical Service and Inspection work every month after the implementation of the PSR program.

Subject	Month 1	Month 2	Month 3	Month 4	Month 5	Month 6	Month 7	Month 8	Month 9	Month 10	Year To Date
Periodical Service Execution	5	16	11	11	16	16	14	26	5	15	135
Periodical Inspection (Backlog)	5	16	11	11	16	16	14	26	5	15	135

Table 4. 2 Periodical Service Achievement

The increase in service revenue generated from the PSR program has increased by 240% from the target, which initially only reached the target between 68% and 73%. It was conveyed that this PSR program also generated additional spare part revenue of 3.5 billion Rupiah.