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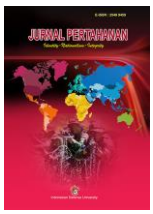

BUSINESS PROCESS RE-ENGINEERING THROUGH 3 HARD Ss McKINSEY FRAMEWORK AS WORKING CAPITAL MANAGEMENT IMPROVEMENT PROPOSAL (CASE STUDY: PT. XYZ – 2020/2021)

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Abstract

Due to the negative operating cash flow, working capital's unsatisfactory performance indicates that internal business processes exist. Meanwhile, the COVID-19 pandemic urges the management to be wiser in making decisions, primarily to support better working capital management. They cannot rely forever on its aggressive capital structure. Accordingly, the management committed to carrying out operation improvement related to working capital management. This decision is the background of this research to identify and analyze the root cause problems and improvement plan issues. Further investigations regarding the business issue are conducted, and business process re-engineering through the 3 hard Ss framework is selected as the research design. These frameworks are approached due to their capability to map the thorough process and link them to one another. These combination improvement ideas over the ineffective and inefficient activities could be blended while organized to be aligned with the organizational directions. This research is conducted through a semi-structured interview to explore the company conditions and uses secondary data to gather the information and strengthen the evidence. At least 14 ineffective and inefficient activities were then carried out a root-cause analysis to determine the source of the problem that had to be eliminated. Based on these findings, four management improvements are suggested: Production management, Receivable Management, Payable management, and Cash flow control and monitoring translated into action plan strategies, procedures, and tools which are equipped structurally and systems.

INTRODUCTION

The negative operating cash flow is an issue that is rarely a topic to be reviewed. Currently, the company only focused on earning to meet market expectations, not the operating cash flow, which affects working capital to give a signal of future liquidity and solvency (Allen & Cote, 2005). Some researcher examines the effect of negative cash flow on performance in construction companies by concluding that cash shortages can lead to project failure and business bankruptcy but can be managed by setting a schedule of activities based on cash flow availability (Al-Joburi, Al-Aomar, & Bahri, 2012). On the contrary, financing is preferred to fill the working capital shortfall to keep up and be more aggressive toward their capital structure (Ismail, 2017). Ironically, although a negative net operating cash position in a particular year can be offset by financing or investing decisions, a continuing cash loss from ongoing operations cannot be indefinitely continued (Sagner, 2014).

Nowadays, a cash-oriented mindset is difficult to be implemented to prioritize cash over revenue. For aerospace and defense companies are facing difficulties to handle unique supply chain challenges, such as long waiting times (months or even years) and a relatively high percentage of single-source suppliers. It is critical to managing their working capital capabilities due to the cash conversion constraints cycle, with the most extended cycle is around 164 days (Park, Chung, Khan, & Park, 2017). They have to think about the way out so as not to get troubled.

PT. XYZ a state-owned enterprise (SOE) manufacturer with a core business in defense security and industrial equipment surrounding manufacture, design, development, engineering, and maintenance, is currently experiencing those two facts. They have struggled with the negative operating cash flow since 2016, as depicted in Table 1. This situation is also getting worse by the COVID-19 pandemic. The management is cornered regarding selecting policies that must be taken as a solution to the problem. It needs to be a rebound strategy effort to use this moment as a turning point that they can do. With most customers coming from the armed force and government, it could affect national defense and project necessity sustainability. Even though it is not directly correlated to the defense aspect, but the PT. XYZ's position as the armed force supporter is essential. They cannot adequately support them if they are still struggling with their internal process problems, even more, to support the five-yearly Minimum Essential Force (MEF) needs.

The management needs toward the improvement proposal cannot be fulfilled by the finance team alone. The current management is more comprehensive; therefore, the linkage process among functions must be considered (Comelli, Fenies, & Tchernev, 2007). Business Process Re-engineering is proposed due to providing solutions but can also identify the existing business process. The 3 Hard Ss framework was used to fulfill the management mandate and maintain the continuity of improvement proposals. Further explanation about the 3 Hard Ss framework will be explained in the methods section.

We address in this paper the operational issues that could affect the operating cash flow. We review the related activities with working capital. We consider and propose an alternative solution based on the findings with business process re-engineering through the 3 Hard Ss framework to improve working capital performances.

METHODS

This study is a research study conducted in PT. XYZ which is one of a state-owned enterprise manufacturer that has core business in defense and security equipment product, and industrial product. It was initiated with the business issue findings of the need to analyze the design to define the problems caused by the symptom in unsatisfied working capital performance,

Table 1. Consolidated Operating Cash Flow of PT. XYZ (In Billion Rupiahs)

Description	2015	2016	2017	2018	2019
Operating Cash In	1.916	1.932	2.092	2.862	3.273
Operating Cash Out	(1.550)	(1.932)	(2.420)	(3.324)	(4.140)
Net Operating Cash Flow	366	0	(328)	(462)	(867)

Source: Internal Data of PT. XYZ, 2020

which is marked by a negative operating cash flow. Therefore, the research objectives focused on analyzing the root causes of the problems that affect the unsatisfactory existing performance of operating cash flow and propose appropriate operation management improvement in the business process related to optimizing the operation strategy formulation's operating cash flow. The root cause analysis used is the current reality tree. This logical structure seeks the cause-and-effect connection between visible indications of a system's condition and the origin causes (Dettmer, 2007).

The data sources used in this research are derived from primary and secondary data. Primary Data is collected from observation, collecting, and summarizing the person's opinion and point of view directly involved in the operation activity related to operating cash flow by conducting an interview. The semi-structured interview is conducted to create clever or inventive information gathering, but it has descriptive and straightforward characteristics (Adams, 2015). The reason for conducting the interview is to explore the related activity's main problem and assess its condition. Furthermore, the interview is conducted to review and ask the related person in charge's justification for the design conformity. At the same time, secondary data obtained from other sources such as company documentation, library studies, and other sources such as the Internet. This research had been done from August 2020 until January 2021. The data is gathered from the past five-year performance of PT. XYZ.

The framework approached to improve the research's current operation management utilizes the 3 Hard Ss framework and Business Process Re-engineering. 3 Hard Ss is a simple form of 7s McKinsey that mainly focused on operational aspects (strategy, structure, & system), assessing and identifying the internal process (Waterman & Peters, 1980). While the 7s McKinsey adds more Soft Ss such as shared value, style, staff, and skill. According to Slack (2013), some improvement approaches take the process perspective further and prescribe exactly how processes should be organized that adds value for customers. The method used is Business Process Re-engineering, a blend of several ideas to capture the current and future operations management about interrelated activities (Park et al., 2017). To support this continuity, they insisted that improvement must be organized, information must be gathered, the improvement effort must be maintained, and resources must be allocated (Slack, Brandon-Jones, & Johnston, 2013). It must also be linked to the organization's overall strategy to take place a real improvement. One of the frameworks is the 7s McKinsey framework, which can assess a company's competitive and strategic position and values (Rahman & Anuar, 2018). The prior research has also been stated the possibility of collaboration to assess its effectiveness and ability to adapt with 7s McKinsey and Business Process Re-engineering, even though there has been no follow-up regarding the execution (Malan, 2012).

However, this research limits the framework into the 3 Hard Ss to focus on quick improvement related to the operation, which is easier to define or identify, and management can directly influence them (Alam, 2017). It also adjusts PT. XYZ management's intention to improve operations and 3 Hard S was chosen

because it was considered the most appropriate method based on current condition. Therefore, based on the initial interview, using a combination of business process re-engineering and 3 Hard Ss McKinsey theoretically could be done and can be conducted, which is selected as best methods in this research to improve the internal business process. It also rationally creates a solution adjusting the current condition based on the needs, and realistically implemented by combining it with other tools to reconstruct the design, making it easier for researchers to be creative and design what they need. The research's scope mainly investigates the operations and support activities related to the operating cash flow performance and the improved cash conversion cycle.

RESULT AND DISCUSSION

Business Process Identification

Based on the past five-year performance of PT. XYZ and several interviews gathered for August 2020 until January 2021, several activities related to operating cash flow are identified and carried out further investigation, as depicted in Figure 1. The 14 key findings that caused ineffective and inefficient activities are obtained and highlighted with the example of a significant moment; there are:

1. No sales contract review
   Currently, no sales contract review pays attention to the quality of the contract. Of course, there is a need for a legal aspect such as the term of payment agreement. However, the profitability aspect must also be considered whether the project is feasible as a project sustainability decision or an improvement in planning. It is essential to evaluate the project done and consolidated in the business area that differs from its feasibility study.

   In 2019 that followed by 2020, there are five problematic issues regarding the quality of the contract. It has happened because there are missing control and a lack of awareness. Those complex contracts cause a potential loss of Rp 200 Billion due to lost orders even though the goods are finished.
2. Issues regarding subcontracting payments
   In running its business, PT. XYZ uses subcontracting to support some of its manufacturing lines. Therefore, it is necessary to maintain support and closeness to subcontracting. However, there were problems with subcontracting payments. The subcontractor has collected invoices for the work they have completed, but the customer has not completed their payment. The primary customer of PT. XYZ is an armed force and government that used a nation-state budget that disburses at the end of the year. The other private customer can also not be relied on since their inability to pay in on time.

   At the time of the COVID-19 pandemic increasing, many subcontract partners were experiencing financial difficulties to survive and put pressure on companies, even though the companies were also experiencing the same thing. The potential to lose confidence in the subcontracting partner for future cooperation. Companies will find it challenging to find a new partner to do a particular type of work.
3. Payment terms are a burden to e company
   Payment is crucial for a company's cash condition. This condition is complicated when the company has to make a procurement to prepare for production, but if it cannot make a payment at the due date, it will incur interest costs.

   The payable days are shorter, while the receivable days are longer. The payable days are in the first quarter (Q1) 2020 are shortened from 226 days to 59 days Year on Year (YoY). The companies will increasingly have difficulty managing their finances. Especially with the wide gap with accounts receivable, the risk of default and interest will burden the company.

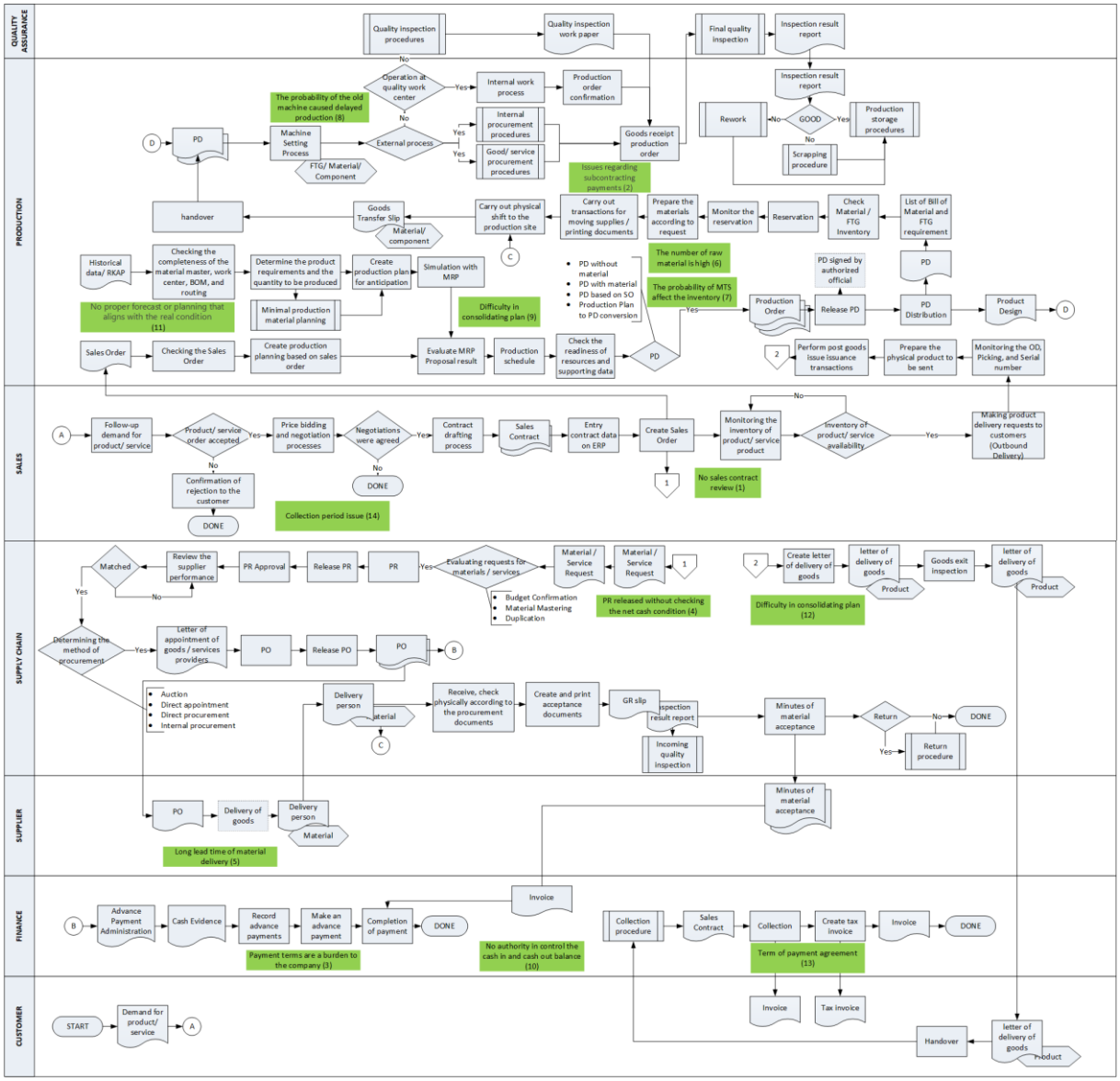

Figure 1. Business Process Identification
Source: Processed by Authors, 2020

4. Purchase requisition released without checking the net cash condition
   There is no function in control the procurement. The authority rests with the division, the supply chain only as a purchaser. The finance team finds it difficult to review, and the production team wants their material to arrive on time. The information received by the finance team is when there is a collection from the supplier.

   The negative operating cash flow from the beginning until the third quarter (Q3) 2020. Financial conditions will be increasingly out of control because there is no scheduling control. Overspent is likely to occur, exacerbated by current conditions and risks that arise from material purchases, such as payment obligations and interest.
5. Long lead time delivery
   There is a missed on-time delivery risk, especially for strategic material that used foreign suppliers. The long lead time pushes to immediate procurement, though there is no good forecast or planning to predict the order.

   The lead time of PR released until the primary raw material is received 290 days on average. The long lead time

becomes one of the reasons make to stock procurement policy is made. However, the deviation makes the inventory piled up. Specific product specifications with specific materials from abroad are a concern that production will not be fulfilled. The missed calculation could generate losses in procurement decisions that affect cash out and the excess or deficiency of materials.

6. The number of raw materials is high
   A large amount of inventory is due to the raw materials being prepared for production on multi-year orders. It will affect the high inventory turnover condition, which indicates the potential loss to generate cash.

   The raw material in 2019 is Rp 948 Billion, and in Q3 2020 is Rp 1.045 Billion with approximately 414 days of inventory turnover from the beginning of the year. There will be unused inventory with the current condition in managing the inventory, which causes a long turnover. Therefore, the period for cash generation becomes longer.
7. The probability of Make to Stock affects the inventory
   The risk of Make to Stock (MTS) procurement could increase the raw material inventory level. MTS is conducted to anticipate the long lead time material delivery toward the order uncertainty. However, the product's specific specification makes experiencing challenging to forecast the order from the customer.

   In division product B, the number of deviations in material procurement between MTS and the actual order is 19.156.743 items. The number of deviations could be a potential loss due to the number of inventories. It needs to be considered about the use of materials to the availability of supplies to intensify production.
8. The probability of the old machine caused delayed production
   The majority of machines used in the production line are old, and some are more than 30 years old. Along with the machines' age, there is the possibility of a breakdown that will result in production not running correctly.

   For example, one of the divisions has a series of lines with high production rates, on average, experiences a breakdown of 9.63 hours a month. The breakdown can disrupt production continuity, especially for processes carried out in line units to disturb the balance. Besides, it will take additional time to set up the machine, also the cost of breakdown maintenance.
9. Difficulty in consolidating plan
   Currently, there is no review in consolidated production planning, moreover the variance of the products. There is no standard form for managing each different information from each division into a consolidation. With specifications, characteristics, and various treatments for each division makes it difficult for management to carry out evaluation and corrective action. The current information system or ERP (Enterprise Resource Planning) cannot fully accommodate its information needs. The quality of data and the accuracy of the information's timing will also affect the decisions to be taken by management.
10. No authority in control of the cash in and cash out the balance
    There is missing in the function of authority in control the cash in and cash-out balance. The financial team is not involved in the procurement process, so there is no control over the overspending issue. Simultaneously, there is no control from the supply chain team because the material will be purchased as long as the production team fulfills the requirement.

Monitoring is carried out after the incident has occurred. So that there is no function of anticipation or control so that inequality does not continue. The company will continue as it is currently experiencing financial problems with operating cash flow.

11. No proper forecast or planning that aligns with the actual condition

There is a lack in forecast or planning with the actual conditions since there will be a deviation in data. Planning was conducted based on the historical data and the peek on the Nation-State Budget. The ERP (Enterprise Resource Planning) usage could not help make the planning better.

During the Q3 of 2020, the total number of overdue orders toward the scheduled production is 81 items with approximately Rp 92 Billion. This condition could affect cash generation. It can also result in the risk of having to pay penalties due to late delivery orders. It can also result in the risk of having to pay penalties due to late delivery orders. The worst case if the customer is in doubt about the accuracy of the company's order fulfillment.

12. No proper information for management to review the progress

There is no correct information presented to management routinely to determine direct decisions. Management is late in making decisions, nor can they maximize their authority. Like the armed force's possible problem, direct management will be easier to handle to approach. With this condition, the strategy execution will be late and may be done after the incident occurred.

13. Term of payment agreement

Term of payment agreement is determined in the sales contract making. As mentioned above about the quality of the contract could affect the term of the payment agreement. The receivables date could be more extended when it could not be collected immediately after the due date.

The account receivable in Q3 of 2020 is Rp 482 Billion which Rp 120 Billion is having aged more than six months. The existence of a high age of accounts receivable indicates that many orders cannot be collected even though they have passed the due date. It will affect the cash in condition of the company.

14. Collecting period issue

There is difficulty in collecting accounts receivable due to strict procedures. There is a possibility of late payment in collecting activity with had no fines on it. For defense & equipment product payment, it is hard to change due to strict bureaucracy and the source of funds from the Nation-State Budget that is inviolable.

Collection Period no more than 60 days for defense equipment and 40 days for industrial. Disturbing financial condition due to slow cash inflow.

Root Causes Analysis

Root cause analysis conducted by Root Cause Analysis – Current Reality Tree (RCA-CRT); based on the actual conditions related to the working capital's unsatisfied performance caused by the operational cash flow. Figure 2 shows eight main causes, four of them categorized into strategy, structure, and system that several solution proposals will improve. Four main cause that becomes out of scope due to the possibility to be implemented soon. Between the activities in business process identification and the root cause analysis seems related because several activities reappeared.

Most of the customers use the Nation-State Budget as a source of funds because the company cannot control it, and 79% of the total order is coming from the armed force, police, and the government. It resulted in payments using the Nation-State Budget, which had to wait for the disbursement of funds, bureaucracy, and orders involving the ministry of defense had

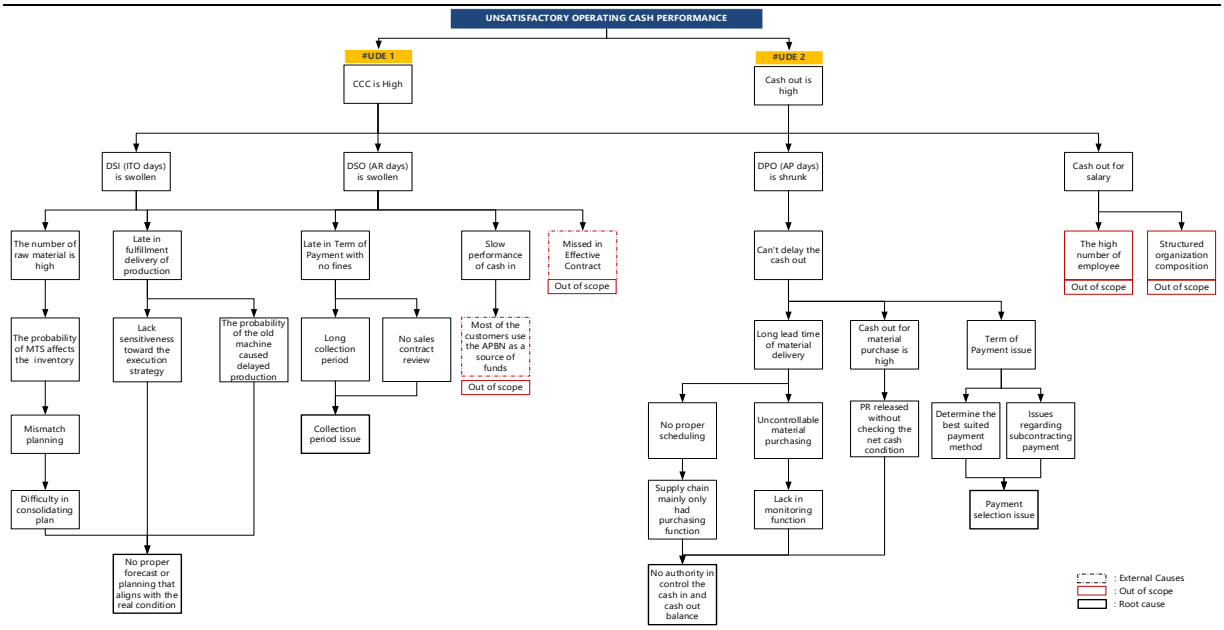

Figure 2. Current Reality Tree Root Cause
Source: Processed by Authors, 2020

to go through the finance ministry's approval. Furthermore, this cause will affect slow cash-in.

The missed in the effective contract also out of scope due to the inability to control it. This condition is related to the use of the Nation-State Budget. The company cannot predict the exact number of orders by the customer who used the Nation-State Budget as its source. Nation-State Budget is no certainty in what product needs are needed. Meanwhile, the expected needs are products with variants of specific specifications that cannot be predicted with certainty. The company used to look for the Nation-State Budget draft forecast, which always has a deviation from the Nation-State Budget. It is possible for the value of the order to change, and amendments had to be made to the sales contract agreed.

The high number of employees & structured organization also out of scope due to the research objective. Salary is a part of fixed cost that does not influence the production rate, in the Q3 of 2020, the total employee of PT. XYZ is 2.613 persons.

It consists of 1.766 persons in the production unit and 847 persons in non-unit production. The composition is divided into 27 persons in strata 1, 107 persons in strata 2, 457 persons into strata 3, 1.144 persons in strata 4, and 878 persons in strata 5. Strata is the ranking system of a job position, from five (the lowest) to one (the highest). The improvement proposal toward this root cause was not carried out because of the ethics associated with implementing a cost-cutting strategy with a layoff. Laying off employees without well-planned consideration would have a temporary advantage to boost profit. However, it negatively impacts employee morale and satisfaction, which ultimately burden the company for the continuity of human resources availability (Mujtaba, 2020). Because even though this is done, there will be more expenses due to severance pay. Radical changes were also not carried out to prevent resistance that emerged within the organization. Although it is possible to rule out the results of this research can be used as a basis for further research on this strategy, on the commitment of management.

Alternative of Solutions

Based on the business process identification and current reality root cause result, several alternative solutions are proposed according to the controllable root cause. As

depicted in Table 2 (see Appendix page), the proposed alternative solutions are production management, receivable management, payable management, cash flow control, and monitoring, which are the main highlight of the main root cause analysis. Using the business process re-engineering framework to design future state process; rethink, retool, and redesign concept is proposed. According to the ineffective & inefficient activities that need to be eliminated, the improvement proposal is aligned with the main root cause requirement. After the possible improvement is provided, the alternative solution categorized in the interrelated 3 Hard Ss McKinsey framework consists of strategy, structure, and system. The process of alternative solution creation is not solely by the author's judgment but also involves the person in charge (PIC) to adjust the existing condition and the expected needs. Therefore, the company's proposed solution could be implemented because of some terms and conditions. Its closeness toward the PIC experience and already expected by PIC but constrained by the policy. It can be ever done implemented but yet integrated. It also can be a breakthrough solution due to the closeness toward the issues and conditions.

Production Management Solution

1. Accelerated Production

This strategy is carried out to fulfill orders received by a predetermined plan by maximizing existing resources without high costs. The objective is to eliminate the gap between plan and actual production overdue by intensifying planning with sales & operation planning. Sales & operation planning is deemed appropriate to the company's conditions. With the various business form of PT. XYZ, sales & operation planning. Flexibility in aggregate and disaggregate planning can be a good solution for PT. XYZ. Besides that, the intensification of meetings through Sales & Operation Planning (S&OP) meetings is also expected to increase the level of coordination of PT. XYZ. The S&OP grid is linked to the disaggregate planning to detail each division's activities. The coverage of activities are per group demand, sales, production, and stock that monthly monitored included the salary, overtime, downtime, hiring, firing, storage material, ongoing expense, total cost, income, and profit (Mauergauz, 2016).

2. Excess Inventory Prevention

The difficulty in accurately predicting customer needs is one of the bases for poor inventory management at PT. XYZ. So far, efforts have been made to form anticipated sales orders as a container for Make to stock needs, where in fact, the production business process is a make-to-order. It is exacerbated because one of the sources of material used is imported products, so it needs sufficient procurement Leadtime to not interfere with production time achievement. Therefore, based on the existing cases at PT. XYZ, the correct type of management is (R, Q) inventory management because demand and lead-time are uncertain and in the form of multiple orders. This strategy is carried out to reduce or limit the high of inventory due to unused inventory. The aspect that had to be considered in excess inventory prevention are demand distribution, lead time, fast-moving/ slow-moving, frequency level, historical data, stock status, preferably of specific material, and service level.

3. Scheduled Maintenance

This strategy is carried out to manage productivity by preventing damage to machines in a production line. The evaluation of production performance is carried out based on the OEE (Overall Equipment Effectiveness) approach with the global machine standard is 85% (Hegde, Mahesh, & Doss, 2009). After the OEE distribution is collected, it could be measured when the machine should be scheduled for repair. With the

goodness of fit alongside the distribution data, specific machine's scheduled maintenance could be found. That assessment is based on the meantime of failure and the meantime of repair that has been measured before

Receivable Management Solution

1. Speed Up the Collection
   Supply chain financing is used for the receivable collection to speed up the collection as an additional option for current payment facilities to improve and complement existing methods, especially to prepare future uncertainties. There are several benefits of supply chain financing, such as providing accelerated payment options, providing alternate sources of liquidity, providing potentially better financing costs, providing visibility, facilitating reconciliation of payments with invoices, and offering more predictable cash flows for PT. XYZ as producers and do not burden the other party (Hofmann & Kotzab, 2010).
2. Improve the Quality of Contract
   Another strategy that can be proposed is to improve the contract's quality by reviewing the contract procedure. This objective is to eliminate the 'failed to pay issue. Even though this is not relatively closed to receivable management, it could be enforcement actions that should be mandatory. In the implementation, it must be attached regarding the legality review from the legal team. Before the contract is executed, it must be attached regarding the legality of the legal team. Therefore, besides the legal team's efforts to review, supply chain finance will reduce risks that may occur to the company.

Payable Management Solution

1. Postponement of Payment to Subcontractors
   This strategy is called a back-to-back payment agreement that reduces cash out while the company has not received cash from the customer. Although this could offend the ethics, there are aspects of the agreement governing it, of course, with specific considerations. According to Godwin et al., (2011) there are a few things to be considered, such as conditional payment clauses, liquidated damages, deadlines, and dispute resolution. Therefore, several points that can be included in the back-to-back policy proposal are:
   • Term of payment.
   • Dispute.
   • Deadline of the project.
   • Cooperation agreement.
   • Termination.
2. Long-term Agreement Procurement
   This strategy is carried out to minimize future uncertainty risks, besides maintaining a cooperative relationship with the suppliers. PT. XYZ has a multi-year contract with the armed forces. Therefore, it is necessary to have a long-term procurement agreement to minimize risk and to have more controlled procurement. However, the implementation must be authorized by the parliament due to the government's military product regulation. According to Clay (2018), several summary points that can be included in the long-term agreement policy proposal are:
   • Scope the right and obligations. The supplier had to qualify the agreement not to violate and pay compensation in the amount of the stipulated provisions.
   • The minimum quantity that is set in advance.
   • The price must be capable of adjusting through re-negotiation periodically regarding the standard price.
   • The termination.
3. Improve the Quality of Procurement
   The quality of procurement is carried out to enhance the procurement with appropriate payment terms and good material quality according to the primary needs. Vendor or supplier quality could determine their service, which indicates the company's demand service level's

compliance. Therefore, vendor selection management is proposed to assess the criteria and sub-criteria that can be helped with the Analytical Hierarchical Process referring to the QCDFR (Quality, Cost, Delivery, Flexibility, and Responsiveness) model (Susetyo, Parwati, & Asmi, 2019). This solution is carried out to enhance the procurement with appropriate payment terms and good material quality according to the primary needs.

Cash flow Control & Monitoring Solution

Cash Flow Monitoring & Control Concept is proposed by monitoring every entry and expense of every order held. This strategy is carried out to delay unnecessary purchases that will affect cash conditions and adjust the cash out to the plan's cash. The purpose is to integrate a platform for management as purchase restrictions, cash monitor & evaluation intensification. It can be used to review the contribution and feasibility of orders to total orders held. Besides that, it is also helpful for knowing cash in, cash out, and balances in a certain period which consists of various kinds of orders. To integrate the function among the company, it needs a function in charge of the intermediary. However, that function cannot be placed among the division because of the level of equality. It requires higher power as a leader among other functions as well as to facilitate delegating orders. It could also mediate the management and the lower level. This solution aims to bring the neutral Directorate's authority to delegate the control & monitoring toward the cash that division below them and combined with the framework of sales & operation planning to gather the information. Therefore, the execution goals are to keep the operating cash flow balance through several actions.

The production person could assign the estimation cash in and cash out. The estimation cash-out must be linked with the procurement that has been compared to the MTS anticipation analysis. The cash-out also needs to be adjusted to the cash balance with positive value or generated cash. If the actual cash-out does not meet those requirements, the owner will receive a disclaimer that the estimation is missed. This condition is aggregate in the division level, so there is the possibility that some orders will subsidize another order. That also shows the deviation of cash out with the closest actual cash-in to know the option of paying the interest of late repayment. This concept could spur the production division to accelerate the production to match with estimated cash to balance the cash condition.

Strategy Alignment

A performance indicator was conducted to establish a performance output control to achieve the optimum desired target, as depicted in Table 3 (see Appendix page). This indicator's performance is formed based on alignment with the higher-level strategic plan to control its implementation. The indicators are combined from the existing available indicators, the primary consideration's research objective and the proposed that derived from a strategic action plan of each alternative of solutions. After the data is processed, the ten deemed eligible indicators are gathered to be adopted into the Key Performance Indicator (KPI) to control the division's performance. Several are still using pre-existing KPI such as reject rate and operating cash flow. And then, as the main objective, the indicator that related to working capital is added, such as inventory turnover (DSI), receivable collection periods (DSO), payable periods (DSO), and cash conversion cash (CCC). Several relevant indicators were added to create a completeness strategy alignment.

Additional indicators that can be added to support the strategy are order fulfillment rate, overall equipment effectiveness, collection effectiveness index, and time in whole which has been the subject of previous research. According to Meier et al.

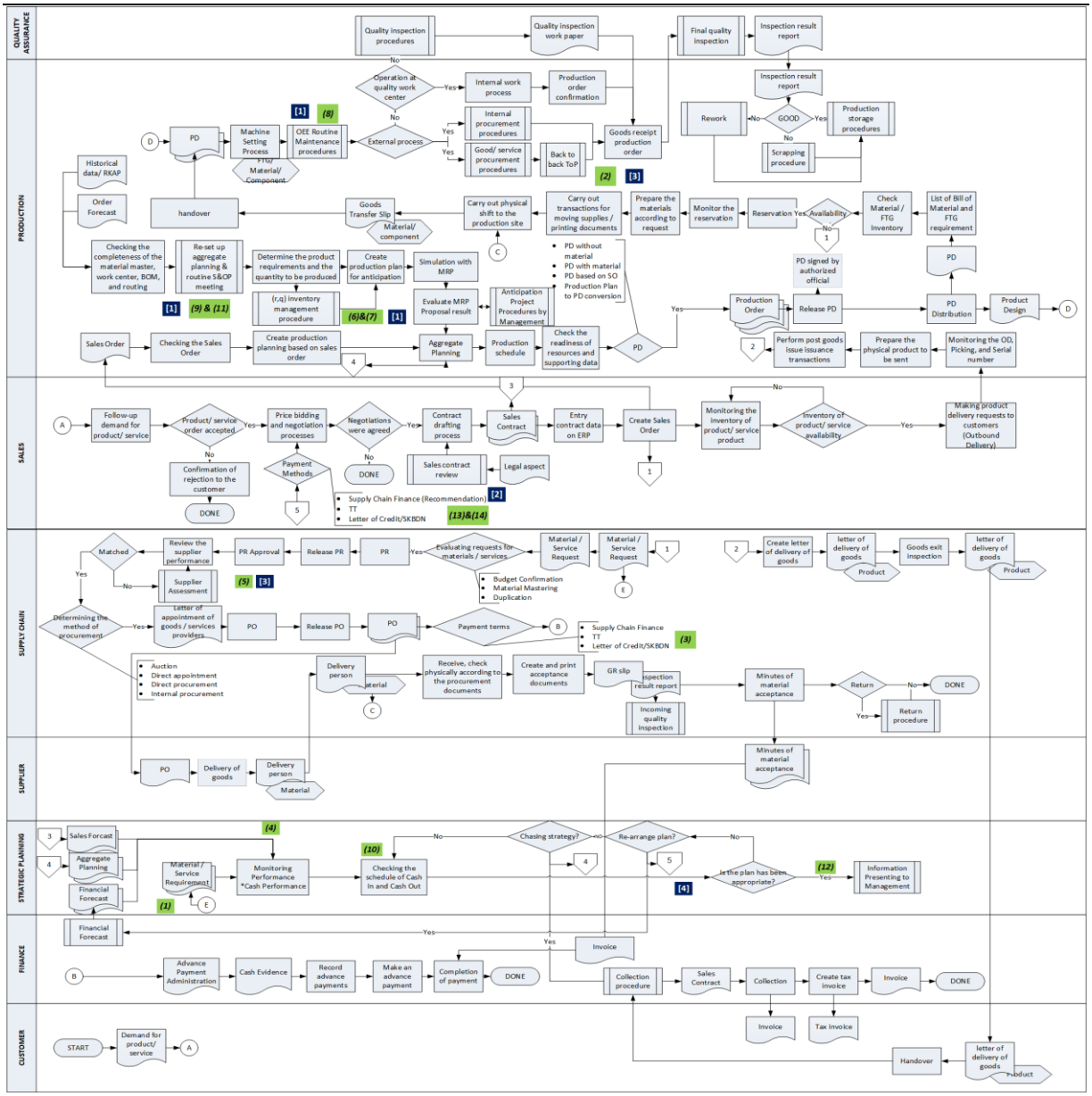

Figure 3. Business Process Re-engineering
Source: Processed by Authors, 2020

(2013), they have measured the delivery process's completeness within the periods. OEE can be the process or manufacturing assessment to identify the output based on capacity, considering process availability, efficiency, and quality (Graham et al., 2015). The collection effectiveness index could be the receivable performance indicator by assessing the percentage of accounts receivables collected in a given period (Singh, 2017). The last is on time in full, aiming to improve the payable from its supplier service level since not all deliveries arrive on time, due to the possibility of unconformity on it (Broeze, 2018). The target is derived from the previous result or adjusting the standard provisions achieved in the previous research

Proposed Business Process

The accumulated restructure improvement gathered into a complete view of business process re-engineering is depicted in Figure 3. A collection of improved element structures remapped into a complete picture in the form of business process re-engineering. In this research, the radical changes are limited to minimize the

resistance due to the organizational structure's complexity. The number in green is the indicator of improvement that is related to ineffective and inefficient activities. Simultaneously, the blue one is the indicator of progress related to the root causes.

By this research, we could know the current condition of PT. XYZ is still struggling to optimize its internal process, which substantially impacts its sustainability. As a part of state-owned enterprises, they had to perform well also fulfill the armed force and government needs. Long-term planning, such as to fulfill the five-yearly Minimum Essential Force (MEF), will be a challenging task if they still had faced several issues regarding their internal process. This research is expected could portray the current condition of defense state-owned enterprises constraints that can provide insight for management, awareness for the government, and information for the reader. As a national asset, the PT. XYZ's problem needs to be considered, especially if the government has a long-term plan of having an independent national defense industry.

CONCLUSIONS, RECOMMENDATION, AND LIMITATION

The research investigated the unsatisfactory performance of working capital caused by negative operating cash flow. The result that had been explained presents insight into the possibility of similar incidents regarding similar business issues for both actors and management. With the small amount of literature discussing this matter, at least this research can describe the effects, the relationship of the problem, and some proposed improvements. It needs to be considered because the operational aspect is the core business; if the performance's achievement is not satisfactory, then something is wrong with the existing conditions.

Several solutions are proposed toward the controllable main causes, no good forecast or planning that aligns with the actual condition, collection period issue, no authority in control of the cash-in and cash-out balance payment selection issue. The solutions proposal that can be proposed is operation management that consists of production management, receivable management, payable management, and cash flow control and monitoring.

It can be concluded that a business issue is an event that has happened for a long time and continues to be repeated without any improvement. It is hoped that the management could evaluate the research and start to follow up immediately. The solution options are proposed with the review and insight by the related person in charge. Therefore, it can be said that it is best fitted to answer unsatisfactory current condition performance.

This research has some limitations. The research scope mainly focuses on improving the operating cash flow, and 3 Hard Ss McKinsey used as an improvement proposal framework to focus on leveraging the operational aspect. This research background is initially conducted to support the rebound strategy to be executed immediately; however, its recommendation is to enhance the research with 7S McKinsey to improve its quality by assessing every employee involved. Based on the main root cause findings, several problems are still unclearly answered in this research due to the limitations. Future research could be conducted, such as applying a correct number of employees & best fitted structured organization composition. Therefore, related policy creation to support employee prosperity is expected could be conducted.

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APPENDIX

Table 2. Alternative Solution Linkage Formulation

No	Root Causes	Ineffective & Inefficient Activities	Rethink	Retool	Redesign	Alternative of Solution			Reference
						Strategy	Structure	System	
1	No proper forecast or planning that aligns with the real condition	6. The number of raw materials is high	Review the procurement process	Initiation of excess inventory & system/ tools	-	Excess inventory prevention strategy	Excess inventory prevention procedure	(R, Q) inventory management	Esmaeili et al., (2018) Mauergauz (2016)
		7. The probability of MTS affects the inventory	Review the established MTS policy						
		8. The Probability of the old machine caused delayed production	Review the old machine maintenance & assessment procedure	Improvement of the scheduled maintenance & machine assessment procedure system/ tools	-	Scheduled maintenance strategy	Scheduled maintenance procedure	Overall equipment effectiveness assessment	Bamber et al., (2003)
		9. Difficulty in consolidating plan	Review the consolidation data & information flow	Improvement of aggregate planning & routine S&OP procedure system/ tools	-	Production acceleration strategy	Re-set up aggregate planning & routine S&OP procedure	Sales & operation planning	Ling & Goddard (1988) Mauergauz (2016) Noorozi & Wikner (2016)
		11. No proper forecast or planning that aligns with the real condition	Review the forecast of the production planning procedure						
2	Collecting period issue	1. No sales contract review	Review the sales contract condition	Strengthening of sales contract review	-	Quality of contract improvement strategy	Improvement the quality of contract procedure	Sales contract review	1320 of KUHPerdata 1381 of KUHPerdata
		14. Collecting period issue	Review the collection procedure	Improvement of the collection procedure	-	Collection speed-up strategy	Supply chain financing preparation procedure	Supply chain financing	PwC (2018) Hoffman & Herbert (2010)
		13. Term of payment agreement	Review the term of payment for customers						
3	Payment selection issue	2. Issues regarding subcontracting payments	Review the subcontracting payments	Strengthening of the subcontracting payments procedure	-	Postponement of payment to subcontractor strategy	Back-to-back ToP of subcontractor procedure	Back-to-back payment agreement	Bannaga (2015) Breen (1993)
		3. Payment Terms is a burden to the company	Review the quality of supplier	Improvement of the supplier assessment procedure	-	Improve the quality of procurement	Supplier assessment procedure	Vendor selection management	Görener (2012) Saaty (1987)
			Review the term of payment for the supplier			Long-term agreement procurement strategy		*Long-term purchasing agreement	Clay (2018)
4	No authority in control of the cash in and cash out balance	4. PR released without checking the net cash condition	Review the procurement process	Improvement of operating cash flow control & monitoring procedure to be aligned with the other functions	Redesign by new function creation that has the authority to control and monitor, and reporting to BoD	Operating cash flow control strategy	Operating cash flow control procedure	Operating cash flow control & monitoring	Sagner (2014) Richards & Laughlin (1980)
		5. Long lead time delivery							
		10. No authority in control of the cash in and cash out balance	Review the operating cash flow control process						
		12. No proper information for management to review the progress	Review the consolidation data & information flow						

Table 3. KPI Strategy Alignment

No	Alignment	Action	Indicators	Formula	Unit	Target	KPI Owner	References
	Operating cash flow (Annual Target & Corp. KPI) | Working capital turnover	*Production Management*						
1		• Accelerate production	• Order fulfillment rate	% On-time delivery (OTD)	Percentage	≥ 97,25	Production div.	(Meier et. al., 2013)
2		• Excess inventory prevention	• Inventory turnover	(Total inventory/total sales) * 365 days	Days	< 214	Production div.	Research objective
3		• Scheduled maintenance	• Overall equipment effectiveness (OEE)	$\frac{Good\ part}{Total\ part\ produced} x \frac{Total\ count/total\ runtime}{Ideal\ production\ time} x \frac{Planned\ production\ time - stop}{total\ available\ time - planned\ breaks}$	Percentage	≥ 85	Production div.	(Graham et al., 2015)
4			• Reject rate	% reject rate	Percentage	< 1,25	Production div.	Company's KPI
		Account Receivable Management						
5		• Speed up the collection by selecting the best payment method to speed up the collection	• Receivable collection period (DSO)	(Total AR/ Total sales) * 365 days	Days	< 47	Production & sales div.	Research objective
6		• Improve the quality of contract by review contract procedure	• Collection effectiveness index	$\frac{Beg.receivable + credit\ sales - end.receivable}{Beg.receivable + credit\ sales - end.current\ receivable}$	Percentage	> 80	Sales div.	(Singh, 2018)
		Payable Management						
7		• Long term agreement procurement	• Payable periods (DPO)	(Total AP / Total sales) * 365 days	Days	≥ 105	Supply chain div.	Research objective
8		• Postponement of payment to subcontractors • Improvement the quality of procurement	• On-time in full (OTIF)	100% - (% of orders late + % of orders canceled + % of orders with incorrect items that were delivered in time)	Percentage	100%	Supply chain div.	(Broeze, 2018)
		Cash flow control & monitoring						
9		• Schedule allocation cash	• Cash conversion cycle (CCC)	DSO+DIO-DPO	Days	< 156	All division	Research objective
10			• Operating cash flow	Net operating cash flow	Rupiah	> 0	All division	Company's KPI