Knowledge Management Maturity Assessment at Balai Besar POM in Serang

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ARTICLE INFORMATION

ABSTRACT

Provincial Office of Indonesian Food and Drug Authority in Serang (BBPOM di Serang), its surveillance area in Banten Province, has cultivated knowledge sharing, including disseminating training results to implement Knowledge Management (KM). However, by evaluation in 2021, the number of knowledges shared in the KM portal is still low. These conditions need further investigation to identify their strengths and opportunities for improvement in implementing KM. This study aims to measure the Maturity of KM implementation at BBPOM di Serang. The methods used are quantitative measurement through surveys, qualitative through interviews, and desk studies. The survey was conducted using APO KM assessment tools to see the maturity gap of KM implementation. The surveys showed a score of 162.34 which means the application of KM is continuously evaluated and improved; the score is categorised as high because there are applicable business processes, namely the Implementation of Personnel Management, Management System, and Bureaucratic Reform. However, from the survey, interviews, and business processes examination, there are opportunities to improve the implementation of KM. Based on these opportunities, solutions are recommended to increase the Maturity of KM implementation.

Keywords: APO KM Assessment Tool, BBPOM di Serang, Indonesian Food and Drug Authority, Knowledge Management

JEL Classification: D83, M12, M54, O3

INTRODUCTION

Provincial Office of Indonesian Food and Drug Authority in Serang (BBPOM di Serang) is one of the organisational units of Indonesian Food and Drug Authority (Badan POM), which is a non-Ministerial Government Institution committed to implementing Bureaucratic Reform according to Regulation of the Minister of Administrative and Bureaucratic Reform number 25 of 2020. All employees proclaimed this commitment since 2018, which still referred to the Menpan RB regulations number 11 of 2015.

BBPOM di Serang, who is determined to carry out Bureaucratic Reform, needs to implement Knowledge Management as part of the Bureaucratic Reform plan according to the Minister of Administrative and Bureaucratic Reform guidelines number 14 of 2011 concerning Knowledge Management. The need for implementing knowledge management is due to the dynamic changes in the composition of employees since BBPOM di Serang began operating in 2007. Changes in the composition of employees are rotation between sections, transfer to the organisational unit outside BBPOM di Serang, moving agencies outside BPOM, promotion, resigning, or retiring. In addition, changes in the composition of employees are certainly influenced by the presence of new employees and transfer employees from outside the organisation.

BBPOM di Serang realises that the knowledge and experience of employees after serving in a position for many years is invaluable. Therefore, knowledge and expertise sharing culture among employees as part of knowledge management are essential so that the knowledge and experience of the employees are not carried away with the employees. For example, suppose an employee has moved to another unit. In that case, we can still contact them to share their knowledge and experience so that the replacement employee can carry out tasks with the same quality of work. That possibly can be done, but not necessarily because when the employee has occupied a new job, it will burden new performance targets that must be achieved with limited time. So, it is necessary to regulate it through a knowledge mechanism known as Knowledge Management to avoid this. Implementing Knowledge Management at BBPOM di Serang is critical because the organisation's mutation, rotation, and promotion of employees are necessary.

As an organisation that consistently implements continuous improvement, BBPOM di Serang has also enforced ISO 9001:2015 and ISO/IEC 17025. From implementing these standards, BBPOM di Serang already has a culture for disseminating training, and then the implementation of the training results is evaluated by their respective superiors. Meanwhile, Knowledge Management is a series of more than that, namely finding, developing, sharing, and using organisational knowledge that involves sustainable people, processes, and technology.

The parent agency of BBPOM di Serang, namely Badan POM, since 2020, has been committed to implementing Knowledge Management through the Decree of the Head of Badan POM Number HK.02.01.1.2.05.20.171 of 2020 concerning the Application of Knowledge Management in the Badan POM environment. Data and information concerning Badan POM Knowledge Management are managed through the SIMPONI application. During January 2021, the data and news in the SIMPONI application have increased by 472, of which 464 can be accessed openly by all Badan POM employees. So far, 92 (out of 101) Work Units at the Badan POM have shared knowledge through the SIMPONI application.

From the monitoring and evaluation conducted by Badan POM, it is known that from the beginning of the year until September 2021, only ten materials were shared by BBPOM

di Serang to the SIMPONI application. Meanwhile, BBPOM di Serang itself has built an application to make Knowledge Management electronically called K-MAS, which stands for Knowledge Management Serang. This application was launched in early 2021 and then officially used in March 2021. This application is expected to be accessible also by non-civil servants of BBPOM di Serang.

With the implementation of SIMPONI in 2020, then KEMAS in 2021, KM at BBPOM di Serang has entered the era of learning & research-based. Therefore, knowledge-sharing activities are internalised in the internal and external learning ecosystem under the supervision of the PPSDM.

Table 1. The dynamics of changing the composition of BBPOM di Serang civil servants in 2007-2020

Year	Total Emplo-yee	Employee Addition		Employee Reduction				Internal Rotation
		Mutations from outside BBPOM Serang	Civil Servant Recruit-ment	Mutation outside BBPOM Serang	Promotion outside BBPOM Serang	Re-sign	Retire-ment	
2007	5		3					
2008	20		15					
2009	40	6	14					1
2010	45	1	5	1				1
2011	50	5						
2012	51	3		2				6
2013	53	1	2	1				2
2014	57	1	4	1				5
2015	72	1	15		1			2
2016	71			1				4
2017	71	3		8	1	1		2
2018	64	2	1	1	1		1	1
2019	81	1	19	2	1			3
2020	85	1	6	1		2		15

Table 2. The Dynamics of Changing the Composition of Non-Civil Servant Government Employees at BBPOM di Serang 2012-2020

Year	Total non-Civil Servant	Recruitment	Resign	Internal Rotation
2012	3			
2013	3	3	3	
2014	3	2	2	
2015	6	12	9	2
2016	7	6	5	
2017	11	8	4	
2018	13	3	1	
2019	14	6	5	1
2020	15	3	2	1

BBPOM in Serang has only a few employees, even though it has the scope of supervision over health care facilities, production and distribution of drugs, food, cosmetics, traditional medicines, and hazardous materials. In addition, it also carries out the functions of certification, laboratory tests, investigation, communication, information and education related to medicine and food. So BBPOM in Serang is an organisation that is poor in structure but rich in functions. It is feared that a slight change in the composition of employees will disrupt the performance of BBPOM in Serang.

Each employee has particular expertise and knowledge in their respective fields. Employees in charge of replacing an employee's position must adapt quickly and carry out tasks with the same quality as the previous employee. When an employee is definitively no longer in a particular unit, difficulties are accessing the intellectual and information held by the employee, which is not easy to avoid. Some unit leaders are worried about this, so they are hesitant to approve the application to move to another unit.

From the phenomena above, it is feared that the next generation unable to access the knowledge possessed by a past employee. Loss of intellectual and information resources as essential assets will be happened by the organisation.

Since Balai Besar POM in Serang operated in 2007, it has undergone many changes in the composition of its employees, and this is due to several organisational dynamics, namely: Local rotation between sections in one office, job rotation to other units under the Badan POM, promotions to different departments under Badan POM, moving agencies outside the Badan POM, resigning and retiring, as well as the addition of employees both from Civil Servant recruitment and transfers from outside the region. Implementing Knowledge Management properly can help employees gain knowledge and learn from past experiences and unit leaders in the decision-making process in the future.

Then concerning the previous discussion, the researcher explains the problem as follows:
1. In dealing with the problem of rotation, promotion, moving to another agency outside the Badan POM, resigning, retiring, Balai BesarPOM in Serang must ensure that the knowledge possessed by employees can be easily accessed by substitute officers or the next generation of employees.

2. The number of materials shared by BBPOM di Serang is still low, and this shows that the existing culture for sharing knowledge is still common.
3. No research has been conducted to measure and develop the level of implementation of Knowledge Management at BBPOM di Serang.

This study is purposed to measure the maturity level of knowledge management implementation. However, since Balai Besar POM in Serang was committed to implementing Bureaucratic Reform in 2018, no research on the Maturity Level of Knowledge Management has been done. Therefore, it is expected to recommend an appropriate formula to improve the Implementation of Knowledge Management by knowing the Strengths and Opportunities for Improvement.

LITERATURE REVIEW

Conceptual Framework
The ideal way to start a project is not to start with what anybody has already possessed but to pay close attention to real needs.

Figure 1. Conceptual Framework
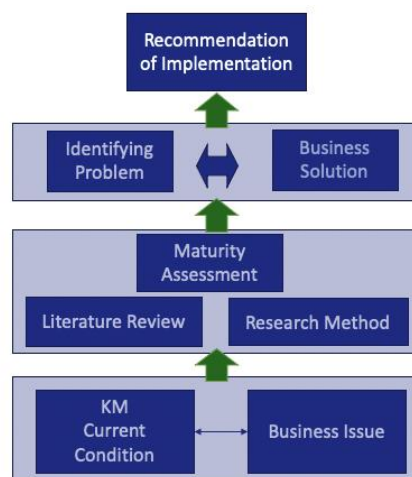
There is a need to identify problems going around. Those problems are the basis for seeking knowledge about solving the problem. In this term, we call it a business issue. Laying a solid foundation for learning requires a clear understanding of the overall goal of the learners based on Janus, S., are —"*What problem are they trying to address? What would be success look like*? "(2016:76). Then to find out what we need to succeed and primarily address the problem, it is necessary to do a literature review and an assessment with appropriate research methods.

Knowledge Management
Many theories approach the necessary of Knowledge Management, but in this opportunity, the researcher put forward an idea of why Knowledge Management is important for BBPOM di Serang:

According to Harjic, E:
> -*It helps firms learn from past mistakes and successes.*
> -*It better exploits existing knowledge assets by re-deploying them in areas where the firm stands to gain something, e.g., using knowledge from one department to improve or create a product in another department, modifying knowledge from a past process to create a new solution, and so o.*

> *-It promotes a long-term focus on developing the right competencies and skills and removing obsolete knowledge.*
> *-It enhances the firm's ability to innovate.*
> *-It enhances the firm's ability to protect its crucial knowledge and competencies from being lost or copied.* (2018:26)

According to Mulyono, Harisno, Kristianto:

> *Generally, knowledge as the primary capital of many organisations is still stored in its members and not contained in the various forms shared with other members. Therefore, such knowledge will be lost when a person stops working.* (2013:188)

Likewise, with many employee rotations, mutations, and promotions, without a knowledge-sharing culture, this will cause problems because replacement employees take longer to reach the level of competence that is in line with organisational expectations; therefore, Knowledge Management is needed. According to Regulation of the state minister for State Apparatus Empowerment and Bureaucratic Reform Number 14 of 2011:

*"*The obstacle that is often faced is that knowledge and experience in the organisation are often scattered, undocumented, and may even still exist in the heads of individuals in the organisation. Knowledge management is an effort to improve the organisation's ability to manage its intellectual assets: existing knowledge and experience. The goal, of course, is to utilise these assets to achieve better organisational performance to accelerate the achievement of the objectives of implementing bureaucratic Reform". (2011:1)

"To increase knowledge, it is necessary to provide counseling and training by the government…" (Sugiharto, 2021).

Management tool to realise for an organisation to be faster and better in achieving its KM goals, according to Tjakraatmaja, J then by integrating between:
"(1) KNOWLEDGE WORKER (by intervening in its Initiatives and Behaviors), (2) BUSINESS PROCESSES, and (3) DIGITAL INFORMATION TECHNOLOGY – to facilitate the process of Discovery, Storage, Distribution and Sharing of Information / Knowledge to increase Work Productivity and Innovation." *(*2021:6*)*

KM Objectives
The implementation of Knowledge Management has an official objective as stated in the Head of Badan POM Decree number HK.02.01.1.2.05.20.171 of 2020 concerning The Implementation of Knowledge Management in Badan POM Environment, namely:
1. Increasing the role and participation of Work Units and employees within BPOM in managing intellectual assets owned by BPOM.
2. Cultivate knowledge sharing, data sharing, and learning culture to foster creativity and innovation power of BPOM employees, carried out by employee access rights to data within BPOM by the provisions of the legislation.
3. Facilitate and improve the quality of decision-making, competency development, and create dynamic learning supported by accountable and easy-to-obtain data and knowledge.
4. As a basis for developing the Knowledge Management System by utilising information technology to manage intellectual assets at BPOM.
5. Supporting BPOM's public information disclosure by increasing speed in providing information for public information applicants; and

6. As a basis for planning, implementing, monitoring, and evaluating the implementation of knowledge management at BPOM. (2020:5)

Quality Management System – Knowledge Management Relationship
According to Saputri, Knowledge Management with ISO 9001:2015 relationship is as follow:

*"*Knowledge Management is one of the new requirements in ISO 9001 version 2015. This requirement requires organisations to know what knowledge is needed, maintain it, and make it available at the required level. The definition of Knowledge from ISO is "the available collection of information being a justified belief and having a high certainty to be true.

Some small companies may just need a way to document as much of the knowledge as possible in internal personnel who are considered experts, and then choose a storage method that makes this important information accessible to the personnel who need it. Mentoring or training programs can be done as a way of sharing knowledge*"* (2016). In addition, Knowledge sharing behavior has a positive and significant effect on innovative work behavior.(Natalia & Sandroto, 2020).

RESEARCH METHOD

This study will utilise a qualitative, quantitative, and desk study method to analyse organisations' strengths and opportunities to improve their current knowledge management practices. The following is a breakdown of methods approaches:

Survey
Purposive sampling is used in this study to acquire quantitative data by applying a survey or questionnaire to assess KM maturity. "The purposive sampling technique, also called judgment sampling, is the deliberate choice of an informant due to the qualities the informant possesses." (Tongco, 2007: 147). Employees from five work units under BBPOM di Serang who actively engage in KM, with positions ranging from functional position (staff) to chief executive, are the sample target for this study.

This research uses KM maturity tool assessment, a survey questionnaire designed to help BBPOM di Serang conduct a rapid initial assessment of their readiness for KM. The evaluation is carried out at the beginning of the KM program. Before starting on the KM improvement, BBPOM di Serang needs to know its strengths and opportunities for improvement. BBPOM di Serang can then focus on its KM programs to address the gaps identified through the assessment.

The APO KM Assessment Tool has seven audit categories based on the critical elements of the framework, namely 1. KM Leadership; 2. Process; 3. People; 4. Technology; 5. Knowledge Processes; 6. Learning and Innovation; 7. KM Outcomes. Forty-two questions cover the seven audit categories, with a maximum score of 210 points. Each category has a maximum score of 30 points. Each question can be rated from 1 (doing poorly or nothing at all) to 5 (doing very well).

The assessment results explain the level of KM readiness in an organisation. This result may range from the "reaction" level at its lowest to the "maturity" level at its highest.

Figure 2. KM maturity level of the organisation,
Source: (Young, R, 2020:22)
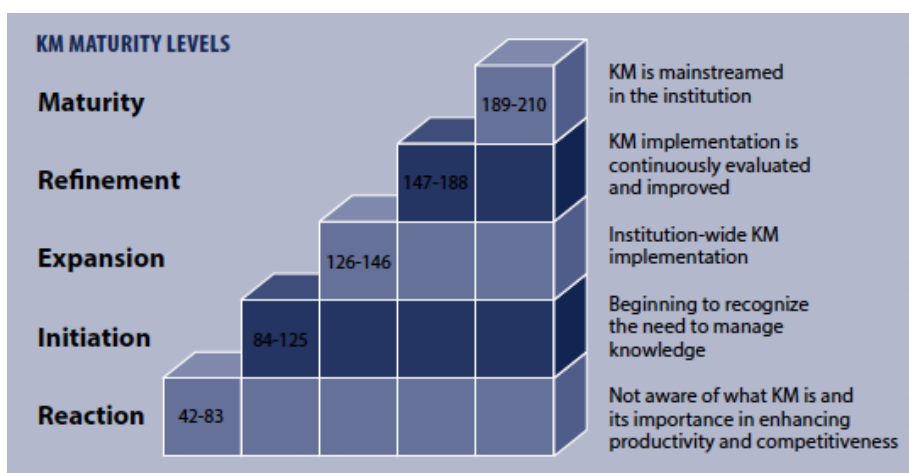
The assessment questionnaire should be answered by 70–80% of employees at all levels and work units. Respondents should have been working by the organisation for at least six months. This requirement is to ensure that respondents are familiar enough with the organisation to answer most of the questions in the questionnaire. (Young, R, 2020:22). The average score for each category will be tabulated and presented in a radar chart.

Interview
Virginia Tech, in a discussion entitled *"Goals of Interview Research,"* define *"*Interviews are designed to collect a richer source of information from a small number of people about, Attributes, Behavior, Preferences, Feelings, Attitudes, Opinions, Knowledge. Interviews are also the effective way to get an explanation, better understand, and explore research subjects' opinions, behaviour, experiences, phenomenon.*"* (2018). In this example, in the organisational support work unit, employee perceptions and awareness of knowledge management in a specific organisational environment were explored using qualitative study. This method uses open-ended questions to elicit more detailed responses.

During the pandemic, selected employees in the organisational support work unit were interviewed by answering questions in written form through a Google form. Although the number of people in this Interview is small, it includes all management and users in the organisational support work unit. This condition would make the responses more concrete.

Table 3. Interview Question

Key Topics	Question Guidance	Subjected to
KM Enabler / Leadership	A. Regarding the leadership condition / KM enabler in BBPOM di Serang, what are the strengths and opportunities for improvement? B. Is there an adequate KM work unit?	A. Interviewee 1 – 10 B. Interviewee 1 - 3

Key Topics	Question Guidance	Subjected to
Processes	A. Concerning the KM Processes condition in BBPOM di Serang, what are the strengths and opportunities for improvement? B. Is there room for discussion between staff and managers?	A. Interviewee 1 – 10 B. Interviewee 4 - 10
People	A. About the People condition in BBPOM di Serang, what are the strengths and opportunities to improve KM Maturity? B. Has there been any exchange of information on any community of practices?	Interviewee 1 - 10
Technology	A. Regarding the Technology condition in BBPOM di Serang, what are the strengths and opportunities to improve KM Maturity?	Interviewee 1- 10
Knowledge Processes	A. If you are reassigned or transferred, will your successor be able to easily trace all knowledge about your job? If your answer is Yes, where is your knowledge stored? (Explained about tacit and explicit knowledge and the percentage) B. About the Knowledge Process condition in BBPOM di Serang, what are the strengths and opportunities to improve KM Maturity?	Interviewee 4 - 10
Learning and Innovation	A. How many times have you opened the Badan POM KM application portal this year? Since the K-MAS application is an innovation from BBPOM di Serang, how many times have you accessed this portal? What are your barriers to sharing material, knowledge, or experience in the K-MAS / SIMPONI Application? B. Regarding the Learning and Innovation condition in BBPOM di Serang, what are the strengths and opportunities to improve KM Maturity?	Interviewee 4 – 10
Knowledge Outcomes	A. Concerning the Knowledge Outcomes condition in BBPOM di Serang, what are the strengths and opportunities to improve KM Maturity? B. Is there still a need for training that is held specifically to improve competence? or enough with applications that provide sources of information that can be accessed anytime and anywhere? Which one do you think will be more effective and efficient? What do you suggest?	Interviewee 4 – 10

Desk Studies
Cross-checks on the survey and interviews with desk studies on the current business processes were carried out. This process was performed to get a complete picture of the implementation of KM at BBPOM di Serang.

Examination of business process documents also aims to understand the real situation because the survey results have the possibility of a response bias, namely: Social desirability or Random responding. This response set usually occurs because respondents do not focus on the content of the statement in the survey (Yulianto, A, 2015).

Fishbone Diagram
A cause-and-effect diagram, often called a "fishbone" diagram, can help in brainstorming to identify possible causes of a problem and sort ideas into useful categories. A fishbone diagram is a visual way to look at cause and effect.

VRIO
This framework is implied in the resource-based model, which identifies resources as key to superior performance. For a resource to be the basis of competitive advantage, it must be: Valuable, Rare, and costly to Imitate. Furthermore, finally, the firm itself must be Organised to capture the value of the resource. (Rothaermel, F,2020:128)

RESULTS

Quantitative Data
Invitations to fill out the survey were distributed on October 23, 2021, to all BBPOM in Serang's employees, both civil servants and non-civil servants, with a total of 118 employees. The survey closed on October 29, 2021, with 89 respondents.

The respondents' answers with the 'Maturity' level were ten people, or 11.2% of the total respondents. In comparison, the answers with the level of 'Refinement' were 59 people or 66.3% of the total respondents. The respondents' answers with an 'Expansion' level of 16 people (18.0%) and an 'Initiation' level of 4 people (4.5%). There were no respondents whose answer results at the level of 'Reaction.'

Figure 3. Responses Percentage of Maturity level.
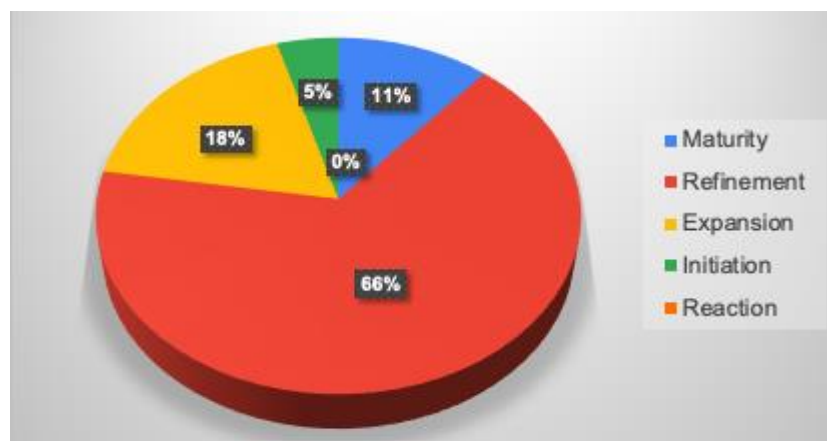
To see a complete picture of the maturity level of KM Implementation of Balai BesarPOM in Serang the average score for each category tabulated and presented in the form of a radar chart as follow:

Figure 4. Radar Chart of KM Maturity Level of Balai BesarPOM in Serang
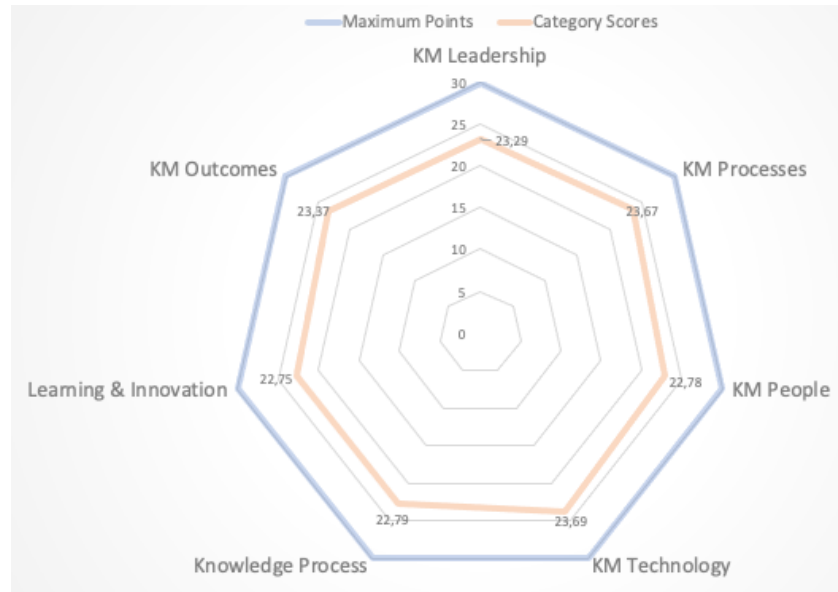
The maturity level on each category
The data obtained needs to be analysed by category, namely in Leadership, Processes, People, Technology, Knowledge Process, Learning and Innovation, and KM Outcomes. This analysis is useful to see the strengths and opportunities of Balai BesarPOM in Serang KM Implementation.

Table 4. KM Strengths and Opportunities for Improvement based on Survey Results.

CATEGORY	STRENGTHS	OPPORTUNITIES FOR IMPROVEMENT
CAT 1.0 KM Leadership	1. BBPOM di Serang has a shared Knowledge Vision and Strategy strongly linked to its vision, mission, and goals. S:4.37	4. Balai BesarPOM in Serang has a policy for safeguarding knowledge (i.e., copyrights, patents, KM, and knowledge security policy) S:3.66 5. Manager's role-model the values of knowledge sharing and collaborative working. They spend more time disseminating information to their staff and facilitating the horizontal flow of information between them and any staff from other departments/divisions/units. S:3.70
CAT 2.0 Process	12. BBPOM di Serang continually evaluates and improves its work processes to achieve better performance, reduce variations, improve products and services, and keep updated on the latest business trends, developments, and directions. S:4.08	10. BBPOM di Serang has an organised system for managing crises or unforeseen events that ensures uninterrupted operations, prevention, and recovery. S:3.65 9. New technology, knowledge sharing in the organisation, flexibility, efficiency, and effectiveness are factored into the design of processes. S:3.83

CATEGORY	STRENGTHS	OPPORTUNITIES FOR IMPROVEMENT
CAT 3.0 People	13. BBPOM di Serang's education, training, and career development programs build employee knowledge, skills, and capabilities, support achievement of overall objectives, and contribute to high performance. S:4.06	18. Employees are organised into small teams/ groups (i.e., quality circles, work improvement teams, cross-functional teams, Communities of Practice) to respond to workplace problems or concerns. S:3.61 14. BBPOM di Serang has a systematic induction process for new staff familiar with KM and its benefits, the KM system, and tools. S:3.66
CAT 4.0 Technology	22. Everyone has access to the Internet/intranet and has an email address. S:4.25	20. The IT infrastructure is aligned with the organisation's KM strategy. S:3.72 19. Management has established an IT infrastructure (i.e., Internet, intranet, and website) and has developed capabilities to facilitate effective KM. S:3.83
CAT 5.0 Knowledge Process	27. Knowledge accrued from completed tasks or projects is documented and shared. S:3.92 30. Benchmarking activities are conducted inside & outside the organisation, the results of which are used to improve organisational performance & create new knowledge. S:3.92	28. Critical knowledge from employees leaving the organisation is retained.S:3.56 29. Balai BesarPOM in Serang shares best practices and lessons learned across the organisation so that there is no constant reinventing of the wheel and work duplication. S:3.70
CAT 6.0 Learning & Innovation	31. BBPOM di Serang articulates and continually reinforces the values of learning and innovation. S:4.09	36. Individuals are given incentives to work together and share information. S:3.53 33. Cross-functional teams are organised to tackle problems/concerns that cut across the different units in the organisation. S:3.61
CAT 7.0 KM Outcomes	41. BBPOM di Serang has improved the quality of its services due to applying knowledge to improve business processes or customer relationships. S:4.08	38. Measures are in place for assessing the impact of knowledge contributions and initiatives. S:3.73 37 Balai BesarPOM in Serang has a history of (and maintains measures for) successfully implementing KM and other change initiatives.S:3.79

Note. S=Score

Qualitative Data
Interviews were conducted to confirm the answers obtained through a survey to sharpen the strengths and opportunities of KM implementation at Balai Besar POM in Serang. Interviews need to be conducted because much information cannot be captured through a survey using the APO KM Assessment Tool. Interviews were conducted in 2 groups. The first group was structural officials, while the second group was randomly selected to

represent the young group. The first group consisted of 3 respondents, while the second group consisted of 7 respondents.

Table 5. KM Maturity Strength of BBPOM di Serang based on Interview

No	Categories	Respondent Code	Strength
1	KM Leadership	3	There are already policies in the form of an obligation to disseminate the training results.
		4, 5, 6, 7, 9, 10	- Policies regarding maintaining knowledge can be seen from applications for storing all information about training, test results, audit results, and other knowledge-related things. The application is not easily accessed by outsiders but can easily be accessed by BBPOM di Serang employees by registering an employee email. - BBPOM in Serang has the policy to maintain knowledge in terms of public services. It also applies to complaints from the public where the identity of the complainant must be kept confidential. - Balai Besar POM in Serang has a QMS ISO 9001:2015 (SI-DoQ) information and documentation system; maintaining knowledge is carried out via employee email registered by Gmail. All knowledge related to micro-SOPs, macro-SOPs and Work Instruction is not easily accessible by outsiders. - Policies related to internal analysis methods, which are user rights from internal BBPOM di Serang - In reporting test results, BBPOM di Serang should maintain the confidentiality of test results.
		4, 5, 6, 8, 10	- At the beginning of the year, a general meeting is usually held. All employees gathered for discussion in terms of giving criticism and suggestions that build performance targets in the current year can be achieved better than the previous year. - BBPOM di Serang provides time and space for discussions between subordinates and the highest-level superiors in all aspects of work and other things outside of work. This discussion space can also be held on the occasion of friendship events.
2	KM Processes	4	BBPOM di Serang has often conducted monitoring and evaluation to increase performance. In the Monitoring and Evaluation meeting, all employees may share and discuss the obstacles they face to find solutions together.
		6, 8, 10	There are identification and risk mitigation.

No	Categories	Respondent Code	Strength
		9	BBPOM di Serang has many tools for monitoring performance; one of them is an innovation for creating a budget and performance monitoring application (MONARKI) that can monitor the percentage and number of achievements that have been implemented quarterly.
3	KM People	5, 6, 8, 9	- In terms of coaching, mentoring, and tutoring on aspects of public services at BBPOM di Serang is sufficient and has been formalised. - The laboratory testing already has a supervisory system for new lab person, and there are forms for evaluation. - There is already coaching in the context of Employee Performance Target Assistance. - Coaching, mentoring and tutoring activities have been carried out by Badan POM through the IDEAS application.
		5	There is quality circle, work improvement team, cross-functional team, the community of practice in all aspects of BBPOM di Serang.
		10	There is a target of 20 hours of competency development for each employee
4	KM Technology	4	Facilitate by claiming credit for internet bill in the context of WFH
5	Knowledge Process	4, 6, 8, 9, 10	Can learn from past mistakes by sharing knowledge and experiences with office friends. This knowledge is obtained from training and discussion. Also, can be obtained from coaching, mentoring and tutorials.
		6, 8, 9, 10	Laboratory Testing Division has a shared folder in the form of Google Drive that is easy to access and known by all members.
6	Learning & Innovation	-	-
7	KM Outcomes	4, 6, 8	- Employees can conduct online training through IDEAS. It can be accessed during office hours and outside office hours. - Employees can take advantage of the JDIH application. - The latest regulations can be accessed through the official website of the Badan POM.

Table 6. KM Maturity Opportunity for Improvement of BBPOM di Serang based on Interview

No	Categories	Respondent Code	Opportunity
1	KM Leadership	2	This KM should have a leader who does aware of KM; one of his/her duties is to monitor uploads to SIMPONI, K-MAS, IDEAS (knowledge portal of Badan POM).

No	Categories	Respondent Code	Opportunity
		9	Discussions with leaders are still limited formally and have not been carried out in a relaxed manner that can flow unique ideas.
2	KM Processes	-	-
3	KM People	1	The current employee's age, the average is in the period of young marriage. Employees have children who are still toddlers, so they need to divide their time with their families strictly. Most employees are very focused on their families when returning home, so they do not have extra time outside of working hours.
		4	mentoring program for new employees is not sufficient
4	KM Technology	3, 4, 6, 7, 8, 9, 10	The office should facilitate computer equipment. So far, many employees use personal laptops for daily operations in conducting inspections to production and distribution facilities. Computers are also required for WFH needs. Technology facilities in the form of laptops are only owned by a few people, while PC facilities in testing are sufficient. In addition, the software is not up to date. Computers often turn or restart off by themselves, sometimes appearing "blue screen of death". Sometimes they use their connection.
		2	The 4G signal in the Laboratory building is weak. Mobile phones today are a crucial source of information. Even though Wi-Fi has been provided, employees feel it is unethical to use office Wi-Fi for personal cellphones because it contains many personal interests.
5	Knowledge Process	4	Most of the Data is stored on the staff's computer, and in the end, discussion and sharing of data are carried out through Whatsapp groups.
6	Learning & Innovation	4, 5, 6, 7, 8, 9 10	They have not had enough time to access KEMAS and SIMPONI applications. Sharing knowledge in the application has not been widely disseminated between functions, and in offline learning activities as well as in WhatsApp groups, so it is necessary to increase the frequency to introduce this application and explain the technicalities of uploading material in this application
7	KM Outcomes	2, 4, 5, 6, 7, 8, 9 10	Several special activity trainings are still needed by the organisation because there is a certain knowledge that could not be obtained from the material that has been shared in KM tools.

Desk Study to Busines Process Document related to Knowledge Management
The following business processes have a significant role in influencing the condition of BBPOM's Knowledge Management Maturity in Serang:

1. Implementation of Employee Management using SIASN application through http://siasn.pom.go.id. SIASN is a mandatory application for all employees of Badan POM. In the SIASN application, there are features for recording employee data since being registered as a Candidate for Civil Servants, namely Competency Development, Competency Database, Employee Performance Targets, Workload Analysis, Employee Allowance, Leave Rights and also rights and obligations of each employee.

2. Implementation of QMS ISO 9001: 2015 and SNI: ISO/IEC 17025:2017
   By implementing these standards, the BBPOM di Serang's KM Maturity is formed itself in terms of:
   - Policy for safeguarding knowledge
   - Establish a culture of knowledge sharing
   - Work systems to get best practices
   - Create value for customers
   - Improve customer satisfaction
   - Achieve performance improvements
   - Managing crisis
   - Learning from mistakes.
   - Management ICT
   - Benchmarking management
   - Evaluation of the impact of the knowledge contribution obtained and the initiatives carried out.
   - Sustained growth

   Balai Besar POM in Serang has implemented ISO 9001:2015 on Quality Management Systems and ISO/IEC 17025:2017 on General requirements for the competence of testing and calibration laboratories. ISO 9001:2015 Certificate number 824 100 19074 released by PT TUV Rheinland Indonesia and ISO/IEC 177025:207 certificate number LP-699-IDN released by National Accreditation Committee.

3. Implementation of Bureaucratic Reform.
   Bureaucratic Reform intended to make reforms and fundamental changes to the government administration system, especially regarding the implementation of excellent service. So, it can be understood that bureaucratic Reform is a government effort in changing the system of governance for the better. Since committing to implementing RB, 34 innovations have been created. Innovations that support KM BBPOM in Serang include:
   - K-MAS, a program that makes learning easy for all BBPOM employees in Serang to obtain information and add insight related to implementing competency improvement learning materials. This application is one of the IT infrastructures aligned with its KM strategy.
   - SERSAN CANGKIR, which is Interactive Discussion and Chat activities in a virtual relaxed manner, facilitating the horizontal flow of information between their staff and with any staff from other units
   - TOPING, Innovation Competition, and quote poster design motivate employees to create and develop innovations. This innovation help management in promoting, recognising and rewarding performance improvements and innovations.

- SADAR RESIKO is a risk management application in a google form to identify and monitor risks in the BBPOM di Serang environment. SADAR RESIKO is part of an organised system for managing crises or unforeseen events that ensures uninterrupted operations, prevention, and recovery
- PASTELAN, a Reward program or giving appreciation to exemplary employees, both civil servants and non-civil servants, in the BBPOM in Serang quarterly. By applying this innovation, People feel empowered and feel that the organisation generally values their ideas and contributions.
- SI-DOQ contains soft copies of documents, submissions, and disseminating documents such as Organizational Manuals, Macro SOPs, Micro SOPs, Other Reference Documents and Work Instruction Documents. This innovation shares best practices and lessons learned across the organisation so that there is no constant reinventing of the wheel and work duplication.

Fishbone Analysis

After analysing the current business processes that applied at BBPOM di Serang, it was found that some claims about the KM Maturity Gap are not relevant to current conditions because there is already a system in place. Therefore, the fishbone diagram after analysing the business process becomes as follows:

Figure 5. Opportunity for Improvement KM Implementation in Balai Besar POM in Serang based on Survey, Interviews and Business Processes Document Study
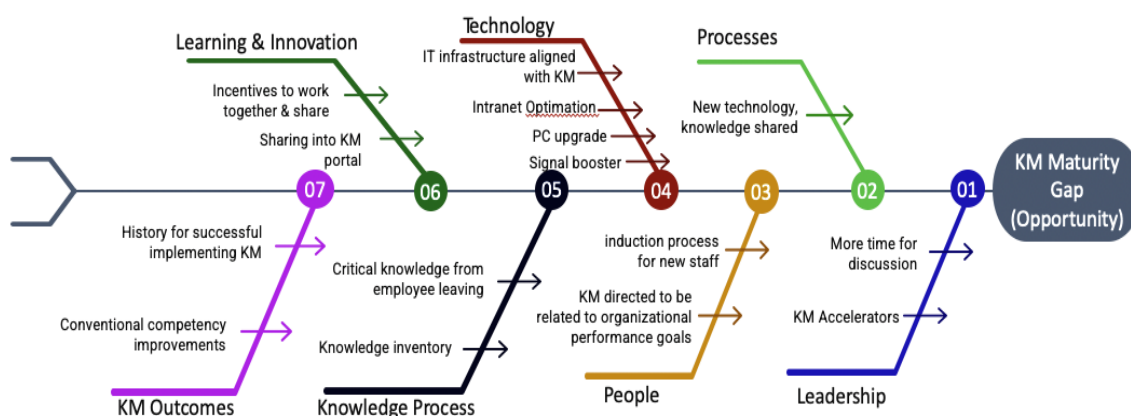
VRIO

VRIO analysis was conducted as material for the leadership to be considered in accepting the Business Solution proposal to increase KM Maturity from BBPOM di Serang. Here we make a VRIO scheme, accompanied by questions and arguments.

Value: If BBPOM di Serang improves its KM Maturity, will it increase value to consumers? The answer is Yes, BBPOM in Serang will take advantage of the previous chapter, which explains why BBPOM di Serang needs to implement KM. the knowledge management have positive and significant toward progress of organization. The applied of knowledge management to actualize and get significant contribution toward the progress of organization. (Mendo, 2019)

Will BBPOM in Serang take advantage of the competition with the current internal capabilities? The answer is 'Yes'. There have been many KM implementations that BBPOM di Serang has achieved. Implementing KM or reaching the Maturity level in KM fully will need a little extra KM Governance. BBPOM di Serang can be categorised as more advanced in implementing KM in its competition with fellow government agencies outside Badan POM.

Rare: If BBPOM in Serang increases KM Maturity, will it have rare resources or abilities? The answer is 'Yes'. Currently, only a few BPOM Technical Units have started measuring their KM Maturity; even then, the unit does not necessarily want to improve its KM Maturity. In addition, from the results of the evaluation of knowledge sharing at SIMPONI, it is known that very few units actively share knowledge at SIMPONI.

Will BBPOM in Serang have something rare to get from the industry/market? For "Knowledge" as a product of KM implementation, this product is not rare. However, Mature KM implementation is still rare because it involves the culture adopted by the people in the organisation. Many smart people are, but smart organisations and keep learning are still rare. Regulation of the Minister of PAN and Bureaucratic Reform on Knowledge Management is still voluntary, not yet required to be implemented by all government agencies.

Inimitable: Is it expensive to duplicate your organisation's resources or capabilities? The answer is 'Yes', to match the ability of BBPOM di Serang, an agency must have 1) personnel management that equals to or better; 2) Implementation of Quality management system, Internal Control Unit, Laboratory Management System which is equal to or better; 3) Productive Agent of Change team / RB team.

Organisation: Has BBPOM di Serang developed systems, processes, structures and management culture on organisational resources and capabilities? The answer is 'Yes'. BBPOM di Serang needs to harmonise these elements with the KM principles and objectives in this context. If the above conditions are met, BBPOM di Serang's efforts to increase KM Maturity will help BBPOM di Serang achieve Sustainable Competitive Advantage.

DISCUSSION

In the "leadership" category, the opportunity related to question number 4 on "policy to safeguard knowledge" was removed from the list of opportunities because there is already an SOP that regulates this issue. There are:
- For information not released to the public, set out in Regulation of the Head of Badan POM No. 6 of 2017 concerning the List of Excluded Public Information and Management system's SOP.
- In Infocom division: Confidentiality of the complainant's identity, as part of the Consumer Complaints Service Unit as regulated in Micro SOP number POM-08.02/CFM.01/SOP.01/IK.16A.01 about Complaint Management.
- In Laboratory Testing Division: It is regulated in Work Instruction number IK.4.2-01 about confidentiality;
- In Investigation Division: The suspect's identity in a criminal case is kept secret, using the suspect's initials until the case obtains a final legal certainty.
- There is SOP Number POM-15.01/CFM.02/SOP.01/IK.16A.01 about Documents Controlling
- For official documents and archives are regulated in SOP Macro number POM-14.02/CFM.02/SOP.01

The "process" category on question number 10, regarding "the organised system for managing crises or unforeseen events that ensures uninterrupted operations, prevention, and recovery," got the lowest score, namely 3.65. But actually, Balai Besar POM in Serang already has a Risk Awareness Team (SPIP: Government Internal Control System) based on the Decree of the Head of Balai Besar POM in Serang on Innovation for the Implementation of SPIP / Risk Awareness number HK.02.02.101.03.21.124

The results of surveys and interviews that have been conducted are compared with a desk study of business process documents. A complete picture of improvement opportunities has been outlined in the form of the fishbone diagram above. Based on those points, proposals were obtained to improve the KM Maturity of BBPOM di Serang as follows:

Business Solution Recommendations to improve the KM implementation of BBPOM di Serang are as follows:
- To establish an organisational structure for KM Accelerators / KM Managers / KM Enablers, who know and understand KM.
- To spend more time disseminating information to their staff and facilitating the horizontal flow of information between their staff and with any staff of other units, it is necessary to form initiatives such as Knowledge Café.
- To explore new technology and knowledge sharing in the organisation by exploring employee knowledge about new technologies that may be implemented.
- To integrate KM on Performance Goals.
- To improve K-MAS innovation.
- To optimise Intranet utilisation.
- To perform a series of activities to upgrade PCs.
- To carry out feasibility analysis and procurement for a signal booster.
- To strengthen a system that retains any critical knowledge from employees leaving the organisation.
- Knowledge must be easy to find to strengthen systems that prevent most data from being stored on staff computers or spread across various media.
- To give incentives to employees to work together and share information.
- To increase socialisation to existing Knowledge Portal and its benefit.
- To make a history of (and maintains measures for) successfully implementing KM, by Formulation of KM Vision, Strategy, Objectives, determination of KM Organization followed by KM Campaign.
- Reducing conventional education and training as much as possible will save costs.

CONCLUSION

The survey results using the APO KM Maturity Assessment Tool, a total score of 162.34, which can be concluded that the KM Maturity level of BBPOM di Serang is 'Refinement' in other words "KM Implementation of BBPOM di Serang is continuously evaluated and improved." After the survey and interview, then the desk study on business processes documents was conducted to confirm the answers to the survey and get a better picture of KM Maturity and gather opportunities for improvement.

The level of KM Maturity of BBPOM di Serang is categorised quite high, and it almost reached the maximum point. This score is influenced by the business processes that applied at BBPOM di Serang, namely:
- Implementation of Employee Management through SIASN, this application can be accessed on http://siasn.pom.go.id.
- Implementation of Quality Management System ISO 9001: 2015 and SNI: ISO / IEC 17025.
- Implementation of Bureaucratic Reform that the Agent of Change team performs.

Nevertheless, it is necessary to propose efforts to continue to improve KM Implementation of BBPOM di Serang. From the results of surveys, interviews and desk study, 15 activities are proposed to improve KM implementation of BBPOM di Serang. If described in the PPT Framework (People, Process, Technology), then the 15 activities proposed can be compiled as following scheme:

Figure 6. Business Solution's PPT Framework.
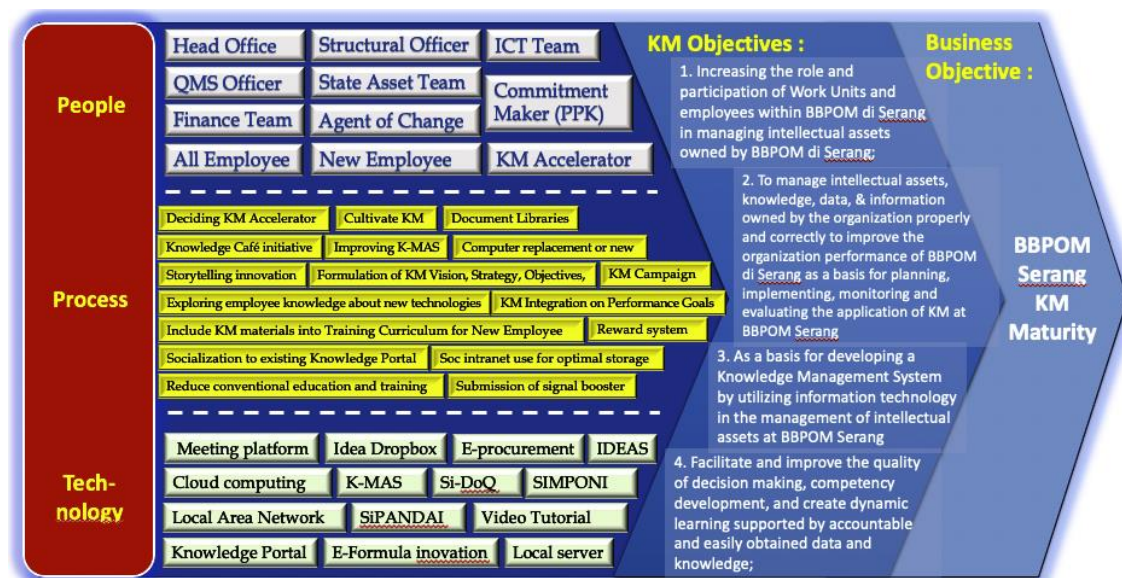
LIMITATION (OPTIONAL)
This research conducted in the Provincial Office of the Indonesian FDA in Serang (BBPOM di Serang) focuses on knowledge management implementation.

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DECLARATION OF CONFLICTING INTERESTS
The authors assert that there are no conflicts of interest.

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