ORGANIZATIONAL DEVELOPMENT TOWARDS AN INNOVATIVE ORGANIZATION

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ABSTRACT

The objective of this thematic paper is to assess the level of innovativeness of Company A to determine the areas for improvement for the company to become an innovative organization. Semi-structured interviews were conducted with the company's executives, middle management, and operational level to assess the level of innovativeness of the company based on the 3S2C framework for innovative organization which consists of 5 key dimensions being the company's Strategy, Structure, Support, Climate and Culture. The key dimensions consist of further sub-dimensions, which altogether make up 32 sub-dimensions. Based on this framework, the concept of maturity model is used as the tool to determine the level of innovativeness of each sub-dimension of the framework.

The result shows the specific areas that Company A needs to improve, thus providing valuable insights for the company to effectively organize and plan for development activities to increase the level of innovativeness. In the recommendation, development activities are recommended and laid out in a roadmap to guide Company A towards being an innovative organization.

KEY WORDS: Organizational Development/ Innovative Organization/ Maurity
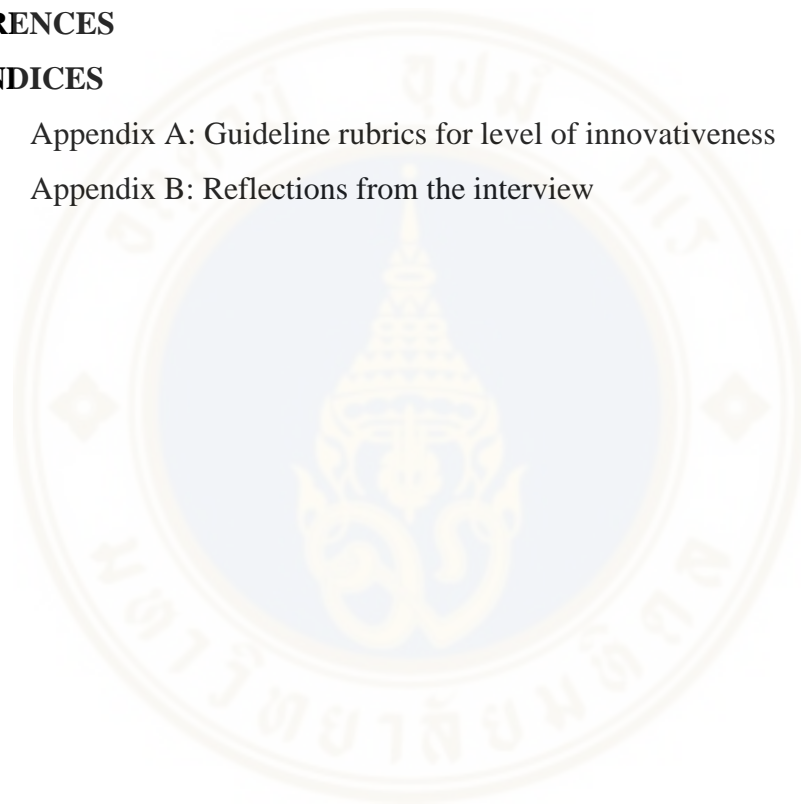   Model/ Strategic Roadmap

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CHAPTER I
INTRODUCTION

Innovation has emerged as a crucial driver, not only for organizations' success in today's highly competitive and rapidly changing business environment, but also for organizations' survival in the uncertain economic conditions. As the Global Innovation Index of 2021 showed, despite the recent huge impacts from the global pandemic, companies that adopted digitalization, technology, and innovation have proven to be remarkably resilient (WIPO, 2021). Aside from increasing organizations' adaptability and resilience, innovation can also enable organizations to gain competitive advantage in the long term. This can be explained from the perspective of the resource-based theory, innovation can lead to the development of valuable and scarce resources in the company and the organization's capacity to innovate is difficult to imitate, thus leading to sustainable competitive advantage (Jiménez-Jiménez & Sanz-Valle, 2008). However, only a few organizations manage to sustain innovation over a long period of time and a significant number of innovation initiatives do not produce the desired outcome (Bjork et al., 2023).

Innovation is thus the subject of high interest for many organizations and scholars in the management field. Scholars have been studying and researching on the factors influencing the success and failure of innovations for many decades and there is a plethora of published findings on the key successes and barriers for organizations to develop into innovative organizations. To develop into an innovative organization, it is imperative for the organization to adopt a systemic approach to organizational development by having a process for effective implementation of innovation management and a process for measuring and analyzing the activities supporting innovation to identify the areas for improvements needed to reach the targeted performance (Melendez 2019).

By understanding the important role that innovation plays in the organization, I am interested in undertaking a study and research on Company A, where I am currently working at. Company A is a family-owned SME, and the main business

activity is trading and auction of used heavy equipment. The innovations that I have seen at the company have been incremental innovations such as the adoption of new technology for efficient work processes, in-house software programming, the implementation of new sales and marketing methods or new business models. However, not all innovations were successfully adopted or implemented. The research objectives of this study are therefore:

       1. To assess the level of innovativeness of Company A to identify the areas for improvement.

       2. To make recommendations for Company A to improve in becoming an innovative organization.

       To achieve the objectives, the qualitative method is used in this study by conducting focus group interviews with the executives (top management), managers, (middle management) and operational staffs (operational level), in order to gain a comprehensive understanding of the company's overall activities across the different levels. The 3S2C model for innovative organization is used as the framework for this qualitative paper and is described in the literature review.

       Lastly, the findings and recommendations from this study can provide the basis for the management team of Company A to set a strategic direction and organize the company's resources appropriately and effectively to develop into an innovative organization, rather than just relying on the management team's intuition to set the direction, which could result in an ineffective organizational development.

CHAPTER II
LITERATURE REVIEW

2.1 Organizational Development and Innovation

Organizational development is defined as a planned effort in making systematic changes to increase effectiveness of the organization (Brown & Harvey, 2006). It first emerged in the 1930s out of human relations studies when psychologists perceived that the behavior and motivation of employees could be influenced by organizational structures and processes (Organizational Development Theory, n.d.). Since then, it has expanded widely into the field of management with many studies confirming the close relationship with innovation. Many scholars have found through research and empirical studies that innovation is a key driver for an organization to gain competitive advantage and sustain growth. More specifically, innovation enables the organization to come up with new ideas for creating and implementing new products, services or processes that would increase the business value for the organization (Damanpour, 1991, as cited in Mendoza-Silva, 2021). Hence, innovation efforts can be said to spur organizational development following the new changes implemented. On the other hand, organizational development supports innovation through team building, knowledge management and human resource management (Chutivongse & Gerdsri, 2019), thus providing the solid foundation for innovation to thrive.

2.2 Innovation

Innovation has been conceptualized and defined from many perspectives depending on the disciplines that it has been studied. It can generally be defined as "the adoption of an idea or behavior, whether a system, policy, program, device, process, product or service that is new to the adopting organization" (Damanpour et al, 1989). Such adoption of novel ideas brings about changes in the organizations which is necessary for preparing and adapting to a change in circumstances, either due to external

change or by necessity of taking precautionary measures against uncertainty (Dani & Gandhi. 2021). Depending on the extent of these changes, Damanpour (1991) categorized innovation as radical innovation and incremental innovation; radical innovation is when fundamental changes have been made that result in the obsolescence of traditional practices, whereas incremental innovation aims at making changes to improve on the current practices. Thus, radical innovation is inherently more challenging and involves higher risks compared to incremental innovation. Kahn (2018) argues that both types of innovation should occur alongside in organizations as minor incremental change will lead to major radical innovations.

Innovation has also been described by their forms of output by many scholars. The most common forms are product innovation and process innovation. Product innovation is the outcome when the organization comes up with new products or services offerings to the market that meets the customers' needs, whereas process innovation concerns with the improvement to the process or methodology for more efficiency that result in lower cost, faster processing, or higher output (Than et al, 2023). Jiménez-Jiménez & Sanz-Valle (2008) argues that this is not to say that product and process innovation are mutually exclusive as product innovation may have resulted from process innovation and vice versa. Purchase and Volery (2020) investigate the development of marketing innovation which is defined as the implementation of new marketing practices involving significant changes in the design and the 4'Ps of marketing mix. Giesen et al (2007) identify three main types of business model innovation: innovations in industry models, revenue models and enterprise models. Other forms of innovation in the literature include, but are not limited to, supply chain innovation, service innovation, technology innovation and organizational innovation.

2.3 Innovation measurement models

Innovation measurement models are frameworks or methodologies designed to assess the level and impact of innovation within the organization. This enables the organizations to keep their innovation goals and objectives up-to-date and set the appropriate incentives to promote and manage the innovation process (Alfaro-Garcia et al, 2017). Traditionally, innovation was commonly measured quantitatively

for its inputs and outputs such as R&D spending, number of patents, speed to market and the number of new products (Adams et al., 2006; Bjork et al., 2023).

More recently, researchers and organizations are increasingly using qualitative measures focusing on the process and system of innovation activities. This enables evaluation of the innovation activities to identify areas for improvements and not merely measuring the inputs and outputs of innovation. From the study by Melendez (2019), many measurement models and frameworks have been proposed by researchers, although, the publications are very specific to the need and context in which they were developed in terms of the sizes of the companies, industrial sectors, and countries. For example, Adam et al. (2006) develops a synthesized framework consisting of seven areas of innovation management which are inputs management, knowledge management, innovation strategy, organizational culture and structure, portfolio management, project management and commercialization. The framework can be used by managers to evaluate their organization's innovation activity and identify areas for improvement. Another example is by Edison et al (2013), who, through an empirical study, constructed a conceptual model of the key measurable elements of innovation to provide a better understanding and measuring innovation to practitioners and researchers in the software industry, which can lead to improved innovation performance and competitiveness.

2.3.1 The 3S2C framework for innovative organization

In this thematic paper, the 3S2C framework for innovative organization is used as the assessment model. It is based on the research paper by Chutivong & Gerdsri (2019) which proposes an analytical approach and assessment model for measuring the level of innovativeness of the organization to develop a strategic roadmap to guide the organization to become an innovative organization. The 3S2C framework consists of 5 dimensions which are Strategy, Structure, Support, Culture, Climate (3S2C). Figure 1 shows the five dimensions along with their sub-dimensions which altogether there are 32 sub-dimensions.
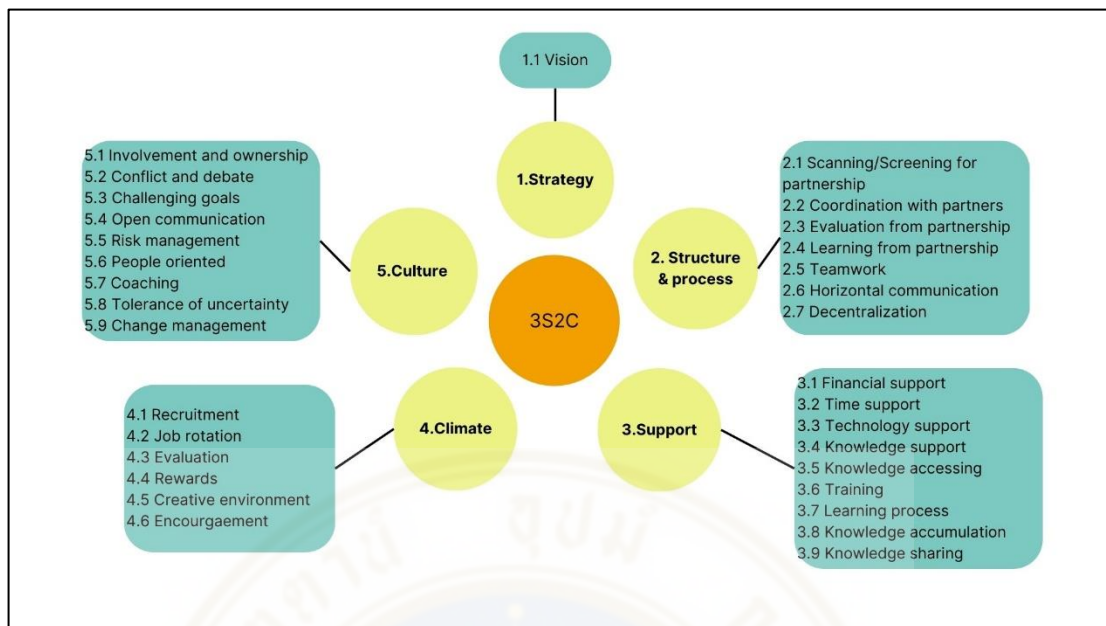
Figure 1: 3S2C Framework with its 5 dimensions made up of 32 sub-dimensions for assessing innovative organization.

2.3.1.1 Strategy dimension looks at the clarity of the organization'svision and strategy and how effectively they are communicated in the organization. The better the employees understand the vision and strategy, the better the alignment of innovation efforts in the organizations. Study has also found that the only factor that has the power to predict the potential success of the innovation process was by having a clearly stated vision and mission (Pinto and Prescott, 1988 as cited in Adams et al., 2006).

2.3.1.2 Structure and process dimension looks at the processes related with external partners and the structure that shaped the processes that enhance innovation in the organization. Strategic partnerships with external suppliers can help organizations to create value by sharing resources which could be tangible, such as a new equipment, or non-tangible, such as knowledge and know-how (Fernandes, et al, 2022). Thus, the processes for scanning, coordinating, evaluating, and learning from external partners are emphasized in the structure and process dimension. In terms of internal processes, organizational structure that support teamwork, less formalized flow of communication across business units and decentralized decision-making have been

shown to facilitate generation of new ideas and promote innovation across the organizations (Damanpour, 1991).

2.3.1.3 Support dimension looks at the resources that the organization provides that support innovative activities. The resources are in terms of financial, time, technology, knowledge, and training. Innovative organizations must allocate an appropriate financial budget and adopt the right technology to support innovative activities, as well as allocate the time for employees to pursue innovative activities. Eneh and Awara (2016) emphasize on employees training as one of the aspects that creates value for the organizations as training is not only necessary for basic skills, but it also increases employees' productivity as training impacts their behavior and attitudes. Knowledge as a resource is fundamental to innovation. According to Plessis (2007), knowledge management, which includes the process of creating, sharing and accumulation of knowledge, enhances organizations' ability and effectiveness in improving their products and services by helping in managing new knowledge created through innovation process, as well as, managing existing knowledge by using it as input to the innovation process. The ease of access to the knowledge is also taken into consideration in this dimension.

2.3.1.4 Climate dimension looks at internal factors that would motivate and enhance innovation creation among the employees. Recruitment, job rotation, evaluation and rewards sub-dimensions are related to human resource management, while creative environment and encouragement sub-dimensions are related to the leaders' favorable attitude toward change which can enhance innovative internal environment and encourage employees to create and share new ideas.

2.3.1.5 Culture dimension looks at the leadership style and the subordinates' behavior that are conducive to innovative culture. Conflict and debate, open communication, people-orientation, coaching and tolerance to uncertainty are the sub-dimensions that examine the relationship between the leader and the subordinate. According to Damanpour (1991), leaders' acceptance attitude toward change and support for innovation are especially vital in the implementation stage, when collaboration and conflict resolution among the employees are essential. With the right leadership style, it stimulates the employees to be initiative and more involve in innovation development (Involvement & ownership). The culture dimension also

examines the level of challenging goals of the company, the clarity of risk management process and change management process.

2.4 Innovativeness assessment tool

To assess the level of innovativeness of the company and identify the areas for improvement, the concept of Capability Maturity Model (CMM) is applied. The concept emerged from the field of software engineering for continuous process improvement (Lookman, 2022), but the application fields have widened to include project management, new product development, open innovation, and many other disciplines (Podmetina et al, 2019). Wendler (2012) described CMM as a set of five sequential stages, with each stage defining the criteria or activities for the development of the examined subject in a simplified way, thus providing an effective tool and systematic framework for benchmarking and measuring the level of development. This process also enables the company to continuously improve as the company works to transition from one stage to the next higher maturity stage (Lookman, 2022).

For this paper, the five stages of CMM signify the level of innovativeness and are ranked in ascending order which are Initial, Defined, Aligned, Integrated and Mature. To assess and analyze the 3S2C sub-dimensions, the level of innovativeness is presented as a number score from 1 being "initial", 2 is "defined", 3 is "aligned", 4 is "integrated" and 5 is "mature". The guideline rubrics for the sub-dimensions along the five-level of innovativeness have been taken from the web-based assessment tool for innovative organization (www.inno.insighttrm.com/, 2017) and shown in Appendix A.
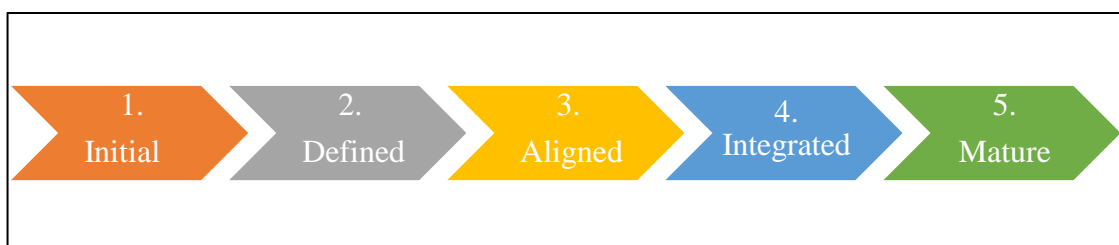
Figure 2: The 5 stages of innovativeness level based on the Capability Maturity Model.

CHAPTER III

METHODOLOGY

3.1 Data collection method

For this research paper, the qualitative method was used for primary data collection. The data was collected by conducting semi-structured interviews with the top management, middle management, and operational level employees. The interview questions were based on the dimensions of the 3S2C framework and were asked across the 3 groups of interviewees to gain an overall understanding of the company direction and activities at the different levels in the company. The qualitative method through semi-structured interview was chosen to allow the interviewees to respond freely in more details and it also enabled the interviewer to probe for more specific examples, thus giving a more accurate and validated data for the assessment and analysis part.

The data collected from the interviews were then transcribed, analyzed, and assessed using the web-based assessment tool on www.inno.insighttrm.com and assigned scores according to the guideline rubric for the level of innovativeness (Appendix A). The sub-dimension scores were then visualized into a radar chart to identify the areas for improvement and finally to make recommendations for Company A to improve in becoming an innovative organization.
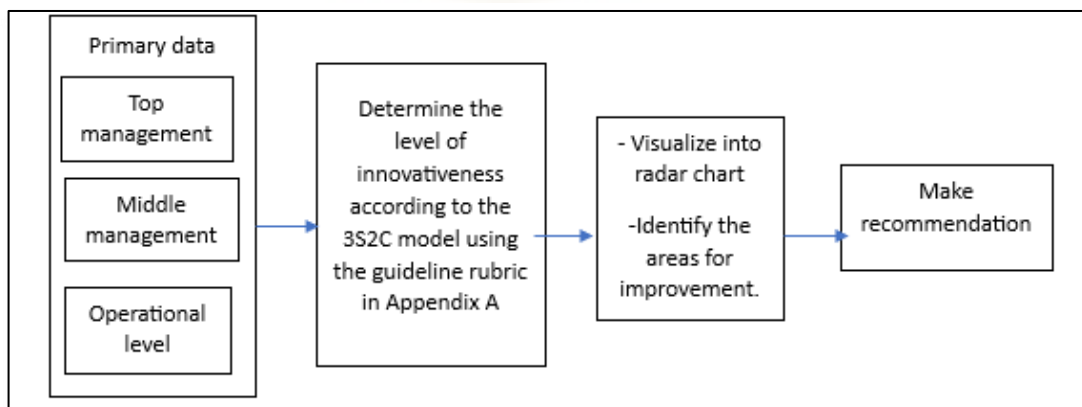
Figure 3: The research process

3.2 Sample selection

The subject of this research is Company A, a small family business with approximately 200 employees. The company has been operating for over 20 years in the trading industry of used equipment. In order to gain a complete overview and understanding of the company's organizational activities at different levels, the following groups of employees were selected for the interviews with each group consisting of 3 interviewees.

• Top management level (Group A), which consists of the Chief Operating Officer, Chief Finance Officer and the Human Resource Director, are family members who have been working at the company since its establishment.

• Middle management level (Group B) is made up of the I.T. manager, Auction Management manager, and Sale manager. All of whom have been working at the company for more than 10 years.

• Operational level (Group C) are staffs from HR department, Auction Management department and Sale department, all of whom have been working at the company for more than 5 years

3.3 Semi-structured interview

The semi-structured interview questions were designed to investigate Company A following the key dimensions of the 3S2C framework for innovative organization as shown in Table 1 below.

Table 1: Semi-structured interview questions based on framework dimensions.

1. Strategy dimension	1.1 What role do you believe innovation plays in driving the success and growth of the company?

	1.2 Can you share some examples of innovative initiatives or projects that have been implemented within your company? 1.3 How are the company's vision and goals communicated to employees in the company? Is there a process in monitoring employee's understanding of the vision and goal?
2. Structure dimension	2.1 Please provide an example of collaboration with external partners on innovation initiatives. How is the company's screening, collaboration, learning process for partnership? How are the partners evaluated? 2.2 Can you share how is the collaboration between business units in the company?
3. Support dimension	3.1 How are the resources, such as time, budget, and technology allocated to support innovation initiatives? 3.2 Please describe how knowledge is captured, stored, and accessed in the company?
4. Climate dimension	4.1 How is your company's recruitment process? 4.2 Are there any training or development opportunities provided for the employees? Is there a system in place for training employees by job rotation? 4.3 Please describe the process for evaluation and reward program for innovation efforts. 4.4 How is innovation encouraged and supported in the company?
5. Culture dimension	5.1 How challenging is the goal of the company? 5.2 How would you describe the dynamics between the leader and the subordinates in the company? 5.3 In your opinion, please describe the leadership style in the company.

	5.4 Please describe the process of risk management in innovation-related issues. To what extent are risks and errors accepted as part of the learning process?

Interview appointments were made in advance with each group and conducted face-to-face at the company venue. During the interviews, the interview questions were asked in an open-ended manner to allow the interviewees to answer freely, sharing their experience at any points which can relate to the key ideas. The interviews were recorded with the interviewees' permission and each group's interview took approximately 60 to 90 minutes to complete.

CHAPTER IV
DATA ANALYSIS

After completion of the qualitative research method by conducting the interviews, the recorded interviews were then transcribed and shown in Appendix B as reflections from top management (code A), middle management (code B) and operational level (code C). The data was then analyzed for each dimension of the 3C2S framework and given a score for the level of innovativeness to each sub-dimension according to the guideline rubric in Appendix A.

4.1 Strategy dimension

4.1.1 Vision (VS1)

The following quotations are the reflections from top management and middle management regarding the organizational vision and strategy supporting innovation development.

"We have continuously improved and developed our operation and work processes ...with the focus on the internet of things to innovate our work processes and sale models as we aim to be the leader in this industry" (A)

"We have a process for getting feedbacks from employees about satisfaction but not regarding the vision or goals of the company." (A)

"The vision and goal of the company are set and communicated to us by the top management in the management review meeting, and we share the message to the team members in our own department in team meeting. "(B)

Based on the interview results, Company A's goals and vision are set by top management and cascaded down to middle management during the management review meeting. The middle management then communicated to operational level in their own department. However, at operational level, the selected interviewees seem to know that there are some innovations in the company, but they were unable to clearly state the

vision and strategy of the company. This shows that the employees at the operational level lack understanding of the company's vision and strategy.

Therefore, based on the guideline rubric in Appendix A, the score for the level of innovativeness for organizational vision and strategy is 3 (Aligned)

4.2 Structure dimension

4.2.1 Scanning/Screening for partner (ST1)

In the interview, a logistic partnership was provided as an example of the company's experience in working with partners. All potential partnerships had to go through the selection process by top management level. In their own words, *"In selecting a partner, we held meetings with potential partners and discussed our objectives with them and selected the one that can support us in meeting our objectives."* Therefore, based on the guideline rubric in Appendix A, the score for the level of innovativeness for scanning or screening for partner is 3 (Aligned)

4.2.2 Coordination with partners (ST2)

Following the example of the logistic partnership, top management continued to explain the process after the partner had been selected. The objectives and guidelines of the partnership were drawn up and agreed upon, however, both parties manage their own activities and resources.

"...an MOU was signed as mutual agreement on objective and guideline on both sides. So far, with current partners, there is no sharing of resources." (A)

Therefore, based on the guideline rubric in Appendix A, the score for the level of innovativeness for coordination with partners is 3 (Aligned).

4.2.3 Evaluation from partnership (ST3)

The company evaluates the outcomes of collaboration with partnerships by focusing solely on whether the objectives set up in the beginning were met.

"We evaluate our partners based on the outputs of the collaborations, if the result meets the objectives" (A)

Therefore, based on the guideline rubric in Appendix A, the score for the level of innovativeness for evaluation from partnership is 3 (Aligned).

4.2.4 Learning from partnership (ST4)

It is found that, for projects involving the collaborations from external partners, the experience from the collaboration is only gained by the people involved in the project. Lessons learned from the experience, if any, are passed on verbally if there is a new employee joining the project. As reflected by Group B, *"If the project involved an outside partner and there is a conflict or mistake that happened, the issues are usually resolved by the people involved in the project."*

Therefore, based on the guideline rubric in Appendix A, the score for the level of innovativeness for learning from partnership is 3 (Aligned).

4.2.5 Teamwork (ST5)

Based on the reflection from the operational level employees regarding the level of collaboration among the employees in the company, it can be concluded that there is regular collaboration among the team members in the same business unit. However, collaborations between different business units only occur when a request for assistance is made.

"We collaborate within our department on a daily basis. Sometimes we ask for collaboration from other departments, or they will request our help with some tasks. But the requests are made and approved by the supervisors" (C)

Therefore, based on the guideline rubric in Appendix A, the score for the level of innovativeness for teamwork is 4 (Integrated).

4.2.6 Horizontal communication (ST6)

Based on Group C's reflection regarding the communication among the employees in the same level across different departments, the interviewee said that *"We collaborate within our department on daily basis…. Sometimes we ask for collaboration from other departments, or they will request our help with some tasks. But the requests are made and approved by the supervisors"*. This suggests that the employees usually communicate freely within their unit, however, communication between units is still

according to the chain of command. Therefore, based on the guideline rubric in Appendix A, the score for the level of innovativeness for horizontal communication is 3 (Aligned).

4.2.7 Decentralization (ST7)

The company has a top-down management style and most decision-making that involves significant changes or requiring a substantial budget is made by the top management. Even so, in some approved projects, middle managers are expected to take charge and make some decisions. However, the final decision still depends on whether the top management agrees with the decision or not. Quoting Group B, *"In terms of managing a new project, we can make some decisions relating to the project, but the top management has to see eye to eye with the decision."*

Therefore, based on the guideline rubric in Appendix A, the score for the level of innovativeness for decentralization is 2 (Defined).

4.3 Support dimension

4.3.1 Financial support (SP1)

The following quotations are the reflections from top management and middle management regarding the financial support for projects or activities supporting creativity and innovation in the company.

"Budget is allocated to new projects every year. Each business unit can propose the projects and we will select and approve the projects" (A)

"After the project gets approved, we still need to get approval on the use of budget at each step of the projects" (B)

In the company annual budget planning, there is a portion set aside for innovative and creative projects that would be proposed by the different business units. However, the business unit with the selected projects still have to go through the approval process for budget use, so that the top management always knows exactly what the budget is used for, the amount used and when. Therefore, based on the guideline rubric in Appendix A, the score for the level of innovativeness for financial support is 4 (Integrated).

4.3.2 Time support (SP2)

Although the company does not have a specific schedule for employees to spend their time between the routine work and the projects or activities supporting innovations, top management fully support the employees to manage their own schedule and are not expected to stick to only their routine tasks. The following quotations are from top management and middle management that support this finding.

"We do not expect our employees to stick to only routine tasks" (A)

"We see that any projects or any new process that we do is part of our regular work because most of the time it is about improving on the existing process." (B)

Therefore, based on the guideline rubric in Appendix A, the score for the level of innovativeness for time support is 5 (Mature).

4.3.3 Technology support (SP3)

The importance of technology was emphasized as a tool to innovate work processes or other innovation development in the company. Therefore, there is a procedure in place for analyzing and evaluating a suitable technology before it is being implemented. Group B commented that *"We can request for new technology, whether it is a hardware or software, that can improve our work but the new technology proposed must go through an evaluation process and approved by the top management."*

Therefore, based on the guideline rubric in Appendix A, the score for the level of innovativeness for time support is 4 (Integrated).

4.3.4 Knowledge creation (SP4)

"The company has the intranet that stored all the policy and procedures and some knowledge from other business units. I can easily access and find the knowledge or information that I need." The quotation from Group C's reflection shows that the company systematically provides knowledge that employees can utilize effectively. Therefore, based on the guideline rubric in Appendix A, the score for the level of innovativeness for knowledge creation is 4 (Integrated).

4.3.5 Knowledge accessing (SP5)

The company intranet is accessible to all employees. From Group C reflection, *"The company has the intranet that stored all the policy and procedures and some knowledge from other business units. I can easily access and find the knowledge or information that I need."* Therefore, based on the guideline rubric in Appendix A, the score for the level of innovativeness for knowledge accessing is 5 (Mature).

4.3.6 Training (SP6)

Based on the interview with Group A and B, it is learned that the company sets a budget for employees' training needs every year. The employees can select the training of their interest that they believe to be useful in applying in their work. Group A also reflected that "Some trainings we assigned the employees to participate in because we see the knowledge or skill is required". An example was given where some middle managers were assigned to participate in ChatGPT training as the company sees the benefits of incorporating AI to improve their work. Therefore, based on the guideline rubric in Appendix A, the score for the level of innovativeness for training is 4 (Integrated).

4.3.7 Learning process (SP7)

An example of an on-going project was given in the interview that provided some insights into the learning process. Group B reflected on the development of a new in-house software for online auction, where along the process, any mistakes were recorded and discussed within the team for continuous improvement. So, although there is a process for learning, it is usually within the team involved in the process only. Therefore, based on the guideline rubric in Appendix A, the score for the level of innovativeness for learning process is 4 (Integrated).

4.3.8 Knowledge accumulation (SP8)

The company's intranet serves as the platform for storing and sharing knowledge where employees from all levels and business units can access. All materials are reviewed by top management before being uploaded onto the intranet. Therefore,

based on the guideline rubric in Appendix A, the score for the level of innovativeness for knowledge accumulation is 4 (Integrated).

4.3.9 Knowledge sharing (SP9)

In terms of knowledge from different business units, some knowledge is shared on the company's intranet. However, from the examples shared in the interview about knowledge learned from working with partners or within the company, most of the time the knowledge is only shared within the business unit or team that is involved in the project. Therefore, based on the guideline rubric in Appendix A, the score for the level of innovativeness for knowledge sharing is 3 (Aligned).

4.4 Climate dimension

4.4.1 Recruitment (CM1)

From the interview with top management, it is found that Company A's hiring process consists of two steps. Firstly, the candidate is selected based on their qualifications and job description. In the second step, the candidate is tested on their attitude and problem-solving thinking by being given a real example of a situation and the candidate would be asked how they would act and solve the problem. However, no further questions were asked to gain a deeper insight into the candidate's values or purpose and the extent of his or her problem-solving skills that contribute to the benefits of the company. Therefore, based on the guideline rubric in Appendix A, the score for the level of innovativeness for recruitment is 3 (Aligned).

4.4.2 Job rotation (CM2)

From the interview with operational level, it is found that Company A does not have systematic process for job rotation among the employees. There is some preparation for the employees to learn the different jobs and tasks, but it is only within the same business unit. As Group C reflected, *"Some tasks are rotated among our team members so that anyone can take over the tasks if the person-in-charge is not available due to sick leave or other issues"*. Therefore, based on the guideline rubric in Appendix A, the score for the level of innovativeness for job rotation is 2 (Defined).

4.4.3 Evaluation (CM3)

According to Group B, *"The activities supporting the goals of the company are included in the employees' KPI to be evaluated mainly based on the outcome"*. Therefore, based on the guideline rubric in Appendix A, the score for the level of innovativeness for evaluation is 3 (Aligned).

4.4.4 Rewards (CM4)

Based on the interview result, it is found that Company A does not have a system in place for granting rewards in innovation activities. From Group B's reflection, rewards are given based on the consideration of top management on a case-by-case basis. Therefore, based on the guideline rubric in Appendix A, the score for the level of innovativeness for rewards is 2 (Defined).

4.4.5 Creative environment (CM5)

Company A's internal environment is suitable for innovation development to a certain extent. Operational employees are encouraged to think of ideas to solve problems or improve new processes with the guidance from their supervisors. As one Group C interviewee reflected, *"when I have a problem I cannot solve, my manager usually discusses with me the different approaches to solve the problem and then we choose the one we think will work best"*. The other two Group C interviewees also agree with this statement about their supervisors.

Therefore, based on the guideline rubric in Appendix A, the score for the level of innovativeness for creative environment is 3 (Aligned).

4.4.6 Encouragement (CM6)

Every business unit is encouraged to propose new ideas and projects every year. From Group B's reflection, an example was given about a new in-house program development that involves collaborations from many business units, it was reflected that everyone involves in the project in a willing manner and *"everyone tries to seek for a mutual solution by focusing on the end goal of the project"*. Therefore, based on the

guideline rubric in Appendix A, the score for the level of innovativeness for encouragement is 4 (Integrated).

4.5 Culture dimension

4.5.1 Involvement and ownership (OC1)

From Group B's reflection, an example was given about a new in-house program development that involves collaborations from many business units, it was reflected that everyone involves in the project in a willing manner and *"everyone tries to seek for a mutual solution by focusing on the end goal of the project."* Therefore, based on the guideline rubric in Appendix A, the score for the level of innovativeness for involvement and ownership is 4 (Integrated).

4.5.2 Conflict and debate (OC2)

From Group A's reflection, they are open to different ideas from employees from different levels and encourage them to exchange ideas among themselves. While Group B gave an example of cross-collaboration on the new program system that involves users from different department, they shared that in the meeting to develop this new program *"Viewpoints are openly exchanged on how the new system can have impact on the different department and everyone tries to seek for a mutual solution by focusing on the end goal"*. Therefore, based on the guideline rubric in Appendix A, the score for the level of innovativeness for conflict and debate is 4 (Integrated).

4.5.3 Challenging goals (OC3)

Based on the interviews, employees voiced similar opinions that there is constant change in the company in order to achieve the company goals. Group A reflected that *"...to achieve our goal, change in the company is inevitable, such as improving work processes to be more efficient, to increase productivity of our manpower."* Group B also stated that they see incremental changes in the company every year. Therefore, based on the guideline rubric in Appendix A, the score for the level of innovativeness for challenging goals is 4 (Integrated).

4.5.4 Open communication (OC4)

The interviewees of this research have been working together at the company for a long time, so based on their opinions, the communication format between the superiors and the subordinate in the company is non-contractual and quite an informal one. As one of Group B's interviewees reflected, *"In my department, my team members and I can discuss freely both work and personal topics. It is the same with my supervisor. I think because we have been working together for a long time and have close relationships."* The opinions from Group C also reflected similar sentiment, *"I feel I can talk freely with my supervisor or manager on work-issues and personal issues. If I have a different opinion on a matter, I feel comfortable to openly discuss with him.*

Therefore, based on the guideline rubric in Appendix A, the score for the level of innovativeness for open communication is 4 (Integrated).

4.5.5 Risk management (OC5)

Company A has a risk management team under the internal audit unit. Every business unit is required to have a risk management plan which is evaluated every quarter. Any non-conformities or failures found would be followed up for a corrective action report by the risk management team. Therefore, based on the guideline rubric in Appendix A, the score for the level of innovativeness for risk management is 5 (Mature).

4.5.6 People oriented (OC6)

Based on the reflections below from the employees, it showed that Company A has a people-oriented leadership style rather than task-oriented. Employees are encouraged to learn and continuously improve and there is no penalty or punishment for project failures or mistakes made the first time.

"One example of a new project is using a new software in the online auction platform. …. any errors or shortcomings are noted for discussion in the project team for improvement and try again in the next auction "(B)

"If I made any mistakes, the problem will be discussed to find ways not to let the same mistake happen." (C)

Therefore, based on the guideline rubric in Appendix A, the score for the level of innovativeness for people oriented is 5 (Mature).

4.5.7 Coaching (OC7)

Based on the reflection from Group C about the leadership style, one interviewer shared that *"when I have a problem I cannot solve, my manager usually discusses with me the different approaches to solve the problem and then we choose the one we think will work best".* The other two Group C interviewers agreed with the statement. Therefore, based on the guideline rubric in Appendix A, the score for the level of innovativeness for coaching is 3 (Aligned).

4.5.8 Tolerance of uncertainty (OC8)

When asked about the extent to which risks and errors from innovation process can be accepted, Group A responded, *"We accept the mistakes that happened as part of learning process, but we expect that the same mistake should not happen repeatedly".* As for Group B, they shared that risks could be accepted only to certain extent, usually when they have new ideas or projects, they have to have a mitigation plan accompanying the project plan when proposing to top management. Therefore, based on the guideline rubric in Appendix A, the score for the level of innovativeness for tolerance of uncertainty is 3 (Aligned).

4.5.9 Change management (OC9)

The top management is well aware of creating change for the company to grow sustainably as they reflected, *"we have continuously improved and developed our operation and work processes with the emergence of rapidly advancing technology and continue to do so in the present…".* Hence, to manage change sustainably, the company appoints the internal audit unit to also act as a change management team that regularly follows up on any work process and procedure changes. Therefore, based on the guideline rubric in Appendix A, the score for the level of innovativeness for change management is 4 (Integrated).

4.6 Discussion

After assessing the level of innovativeness, the scores of sub-dimensions are added up and averaged for each key dimensions which are presented as bar chart in Figure 4 to show the overview level of innovativeness of Company A. The result shows that Culture and Support dimensions have the highest score at 4 and 4.11 respectively. Strategy and Structure dimensions have the same score at 3 and Climate dimension has the lowest score at 2.83.

To identify the specific characteristics for improvement along the key dimensions, the sub-dimensions scores are presented in radar chart in Figure 5. The orange line represents the target scores recommended for Company A which is at the Integrated level (score 4), and the blue line represents the actual scores. The finding shows that Job rotation (CM2), Rewards (CM4) and Decentralization (ST7) are the lowest scored sub-dimensions at the score of 2 and represent the largest gaps between the target and actual score. The medium gaps are the sub-dimensions at the aligned level (score 3) which are Vision (VS1), partnerships-related sub-dimensions (ST1-ST4), Horizontal communication (ST6), Knowledge sharing (SP9), Recruitment (CM1), Evaluation (CM3), Creative environment (CM5), Coaching (OC7) and Tolerance for uncertainty (OC8). To increase the company's level of innovativeness, Company A would need to plan for activities or actions to be taken to bridge the gaps between the actual scores and target scores of these sub-dimensions.
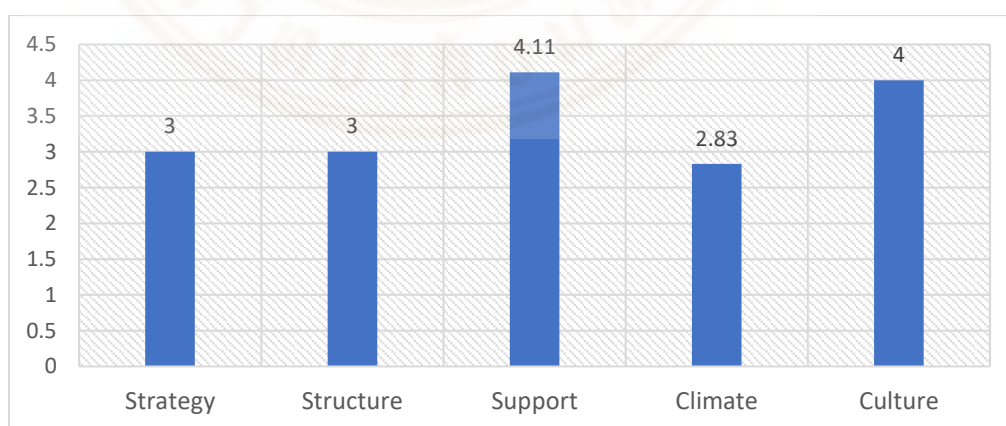
Figure 4: The score for the level of innovativeness of the 5 dimensions of innovative organization.
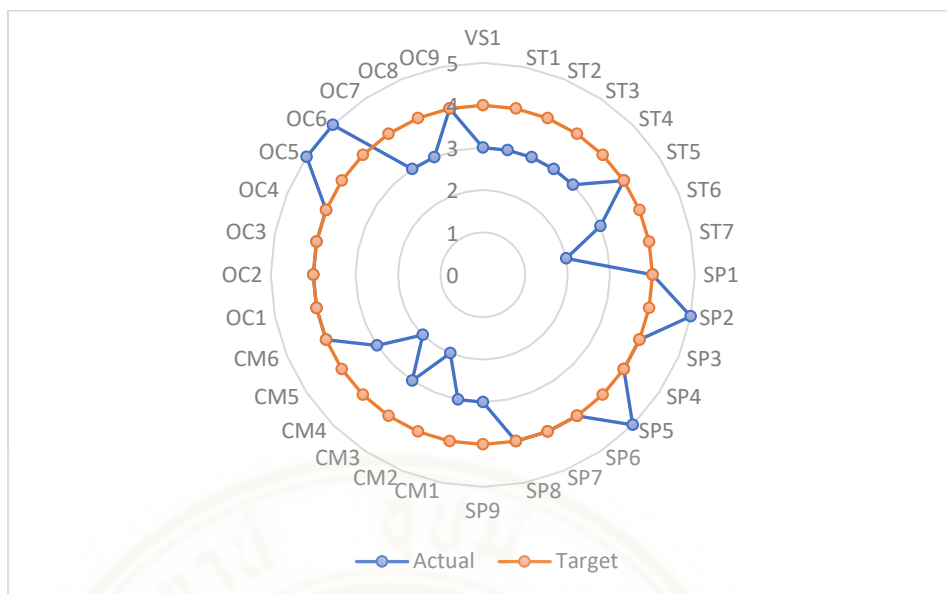
Figure 5: Radar chart showing the target and actual scores for the level of innovativeness in each sub-dimension.

CHAPTER V
CONCLUSION AND RECOMMENDATION

5.1 Conclusion

In conclusion, this thematic paper has explored the key dimensions in enhancing the level of innovativeness of Company A. The research identified the weak points to be improved, allowing the company to prioritize and determine a strategic direction and planning of resources for increasing the company's level of innovativeness. Through the research analysis, the result shows that Company A has the strengths in the Support and Culture dimensions as Company A emphasizes innovation as their growth driver and fully support their employees in terms of resources in creating and implementing innovations (Support). Furthermore, by being a small family business and having many long-time employees, it fosters a non-contractual and close working relationships among the employees, thus enhancing the innovation culture in the company (Culture).

On the other hand, Climate, Strategy and Structure dimensions are the areas that need to be improved to increase the overall level of innovativeness of Company A. Although the company emphasized innovation as their growth driver, the research found that the employees, especially at the operational level, still do not fully understand the innovation plan in the company's vision and strategy (Strategy). The result could lead to a lack of focus or misalignment of efforts as the employees might not know how their efforts contribute to the bigger picture. From the data analysis, Job rotation and Reward under Climate dimension and Decentralization under Structure dimension have been identified as the priority areas for improvement as they are the sub-dimensions with the lowest score and represent the weakest points that could hinder innovation and creativity in the company.

After the above weak points have been improved, further improvements can then be made to achieve the recommended target level of innovativeness (Integrated) for all sub-dimensions at the aligned level which includes the partnerships-related sub-

dimensions (ST1-ST4), Horizontal communication (ST6), Knowledge sharing (SP9), Recruitment (CM1), Evaluation (CM3), Creative environment (CM5), Coaching (OC7) and Tolerance for uncertainty (OC8).

5.2 Recommendation

Based on the research conclusions, the recommendations for Company A to increase the level of innovativeness are suggested in Figure 6, using a roadmap to guide the management to prioritize and plan development activities for the company towards being an innovative organization. The first phase focuses on improving the weak points under the Climate dimension, which are Job Rotation and Reward, within 6 to 12 months. The second phase focuses on improving the weak point under the Structure dimension, which is Decentralization, within 1 to 2 years. The third phase is bridging the medium gaps of the sub-dimensions with the score of 3 (aligned) to reach the target score of 4 (integrated) within 2 to 3 years.

1st Phase (Within 6 - 12 months)	2nd Phase (Within 1 – 2 years)	3rd Phase (Within 2-3 years)

Management	Set the procedure for decision-making at different levels in each innovative project. Middle management level / Operational level
	Set the systematic processes for working with partners. Scanning / Coordination / Evaluation / Learning
	Organize cross-functional team project to promote horizontal communication.
	Set up regular knowledge sharing workshops for employees across
	Develop a process for assessing risks and benefits of an innovation project.
	Organize small scale-projects and delegate decision-making.
Human Resource Development	Set the procedure for rewarding innovation activities, contributions, efforts based on Activities / Outputs / Outcomes and impacts
	Set the systematic processes for job rotation across different Mentoring / Shadowing
	Set up yearly online survey to include the company's vision and goals.
	Revise KPIs to include evaluation of employees' performance based on their contributions to innovation activities.
	Enroll managers and supervisors in coaching lessons.
	Revise recruitment process to look for fit between the candidate's and the company's purpose.

Figure 6: Roadmap for activities to increase Company's A innovativeness.

5.2.1 Recommended activities to bridge the gaps.

5.2.1.1 Job rotation (CM2)

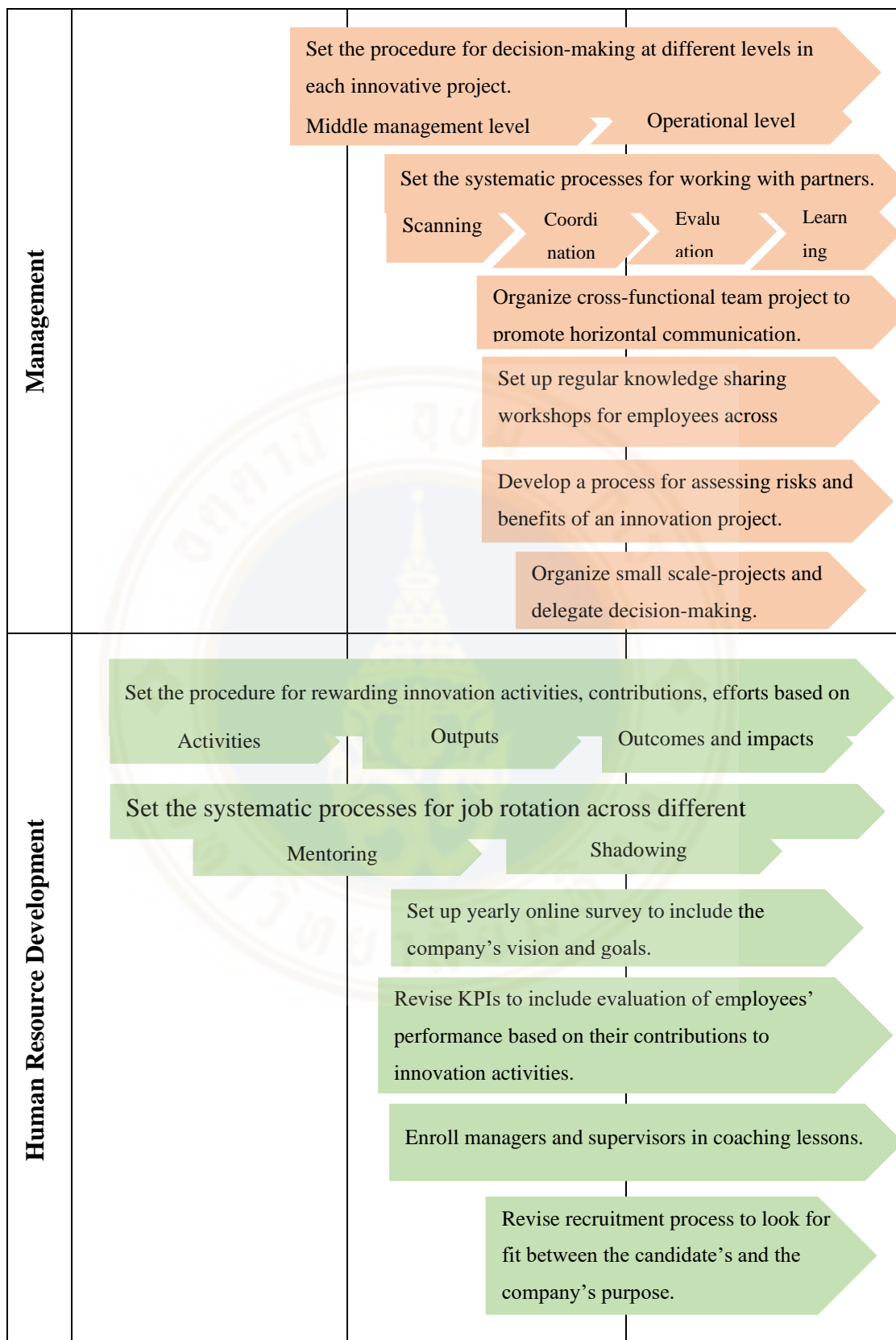Job rotation can provide employees with exposure to different roles and responsibilities, thus fostering a broader skill set and knowledge of the company. Without job rotation, employees' skills are limited only to their own routine tasks, thus limiting their ability to contribute to innovation in other areas. Therefore, it is recommended that for Company A to move from the defined level in this dimension to integrated level, the company should set up a procedure for job rotation at regular intervals and pair the employees with mentors from different department or with different expertise which can guide the employees in learning new skills and gaining insights into the different function of the company.

5.2.1.2 Rewards (CM4)

At the defined level, Company A rewards their employees for innovative initiatives and activities on a case-by-case basis by the top management. This could result in the demotivation of employees as there is no clear process on how and when the rewards are given. The suggestion for Company A to move from the defined stage to integrated stage, firstly in the short term, is to set up a procedure for rewarding the efforts and contributions put into innovation activities. Then within a year, the company can set up a reward program based on the development process and the outcome of the projects. The rewards ceremony should be held regularly at least once a year. The rewards could be in monetary form or non-monetary such as a public recognition award or career advancement opportunities. The rewards can also be for team contribution to foster teamworking and innovation culture in the company.

5.2.1.3 Decentralization (ST7)

At the aligned level, decision-making is limited to the top management and partially to middle management. This could result in a missed opportunity to tap into the diverse perspectives and creativity that can come from the operational level across the different business units. To move to the integrated level where decision making starts to be decentralized to the operational level with the approval of their supervisors, it is suggested that Company A set up a procedure and develop a clear guideline for decision-making at different levels in each innovative

project to allow for some flexibility. Starting with setting up and implementing the guidelines for decision-making by the middle management within 1 year, then extending the guidelines for decision-making to the operational level within the following year.

5.2.1.4 Vision (VS1)

To increase the level of innovativeness for vision and strategy, the recommended activity for Company A is to set up a process for monitoring employees' understanding of the company's vision and goals. In doing so, the employees would have a clear understanding of how their efforts contribute to the bigger goals of the company. Since Company A already has a process for monitoring employees' satisfaction with their jobs and workplace through online survey, it is suggested that the company's vison and goals be included in the survey as a tool to monitor the employees' understanding of the company's vision and goals at least once a year.

5.2.1.5 Partnerships (ST1-ST4)

To increase the level of innovativeness for strategic partnerships from the aligned stage to integrated stage, it is suggested that in the partner screening process, apart from looking at the potential partner's ability to meet the company's objectives, Company A should also consider the compatibility in the culture and values between the company and the potential partners. This would ensure sustainable partnerships in the long term. It is also suggested that there is a channel for knowledge to be exchanged to enhance the collaboration with partners. The knowledge consequently becomes the intangible asset that the company can gain from the partnerships and thus should also be considered in the partner evaluation process, rather than focusing on the outcome alone. Lastly, it is suggested that the company set up a procedure for learning from partnerships by documenting the knowledge gained to be shared across the organization and keeping records of past experiences and use it to set up guidelines and best practices for future collaboration with potential partners.

5.2.1.6 Horizontal communication (ST6)

At the aligned stage, the communication between different departments is still in accordance with the chain of command. To improve communication between employees in the same hierarchical level from different departments, the company can organize cross-functional team projects where members

from different business units will be encouraged to communicate and collaborate with each other, thus promoting independence of communication among the employees in the company.

5.2.1.7 Knowledge sharing (SP9)

Although Company A has an intranet as the platform for sharing knowledge, the knowledge sharing is only at the aligned stage where knowledge is shared only within team or business unit. To move to integrated stage where knowledge is shared across the different business units, it is suggested that Company A conducts knowledge sharing workshops once a month where employees from different departments can participate to verbally share their knowledge or experiences from any innovative activities or projects that they are involved in. This encourages the employees to acquire knowledge and allows for a more interactive knowledge sharing among employees from different business units.

5.2.1.8 Recruitment (CM1)

To increase the level of innovativeness for the recruitment process from aligned level to integrated level, it is recommended that Company A looks beyond the candidate's skills and behaviors. Laloux (2014) suggests that organizations should also look for the fit between the individual and organizational purpose by asking some interview questions, such as, "What is your sense of your life trajectory?", What aspect of the company purpose resonates with you?" and "What unique talents and gifts could you contribute to the company's journey?". When the organization's purpose and the candidate's personal calling start to reinforce each other, it will lead to higher efforts and contributions in the organization.

5.2.1.9 Evaluation (CM3)

At the aligned level, Company A evaluates their employees' performance on innovation development based only on the outcome. To increase the level of innovativeness to integrated level and to align with the reward system recommendations, the employees' KPIs could be set to account for the efforts and contributions put into the innovation activities., rather than just measuring from the outcome of the innovation development alone.

5.2.1.10 Creative environment (CM5)

At the aligned level, top and middle management are open to new ideas by the employees, but decisions still require their approval. To move to the integrated level where the top and mid-level are interested in experimenting with new ideas and leaves the employees responsible, the leaders of Company A can consider delegating decision-making to the employees in some small-scale projects where they are encouraged to seek solutions independently.

5.2.1.11 Coaching (OC7)

Increasing the level of innovativeness from aligned to integrated level in coaching involves encouraging employees to explore new ways to solve the problems, rather than merely providing alternative solutions to the employees. Therefore, it is recommended that the company provide coaching lessons to all the managers and supervisors so that they can learn to ask open-ended questions to stimulate critical-thinking and let the employees analyze the situations and problems and come up with the alternatives on their own prior to providing them the solutions.

5.2.1.12 Tolerance for uncertainty (OC8)

To increase the level of innovativeness from aligned level to integrated level in this sub-dimension, it involves developing a greater willingness to take calculated risks and a greater acceptance of mistakes as part of the learning process. Therefore, it is suggested that Company A should develop a process for assessing the potential risks against the benefits of the projects, in addition to the risk mitigation plan. The company is also recommended to set up regular sessions where employees can come together and share both successes and failures that they came across in innovative projects, this can help to emphasize the importance of learning from mistakes.

5.3 Limitation

This thematic paper assessed the level of innovativeness of Company A, providing valuable insights for the management to plan an effective organizational development plan towards becoming an innovative organization. However, there are certain limitations that should be acknowledged.

Firstly, there could be bias in the data collected towards presenting the company in a positive light. As I am an employee working in the company who

interviewed my own colleagues, any challenges or difficulties may have been downplayed in the interview, resulting in an inaccurate assessment of the innovative scores. Secondly, the data collected for the assessment in this paper may not be valid in the future as innovativeness is not static. It is subject to change due to changes in the internal environment, such as a change in leadership or changes in the external environment such as economic factors or future technological disruptions.

To mitigate these potential problems, Company A can consider conducting the assessment of the company's level of innovativeness at regular interval to keep check on the innovativeness of the company and by using an independent audit or expert interviewers to add more accuracy and credibility to the assessment result.
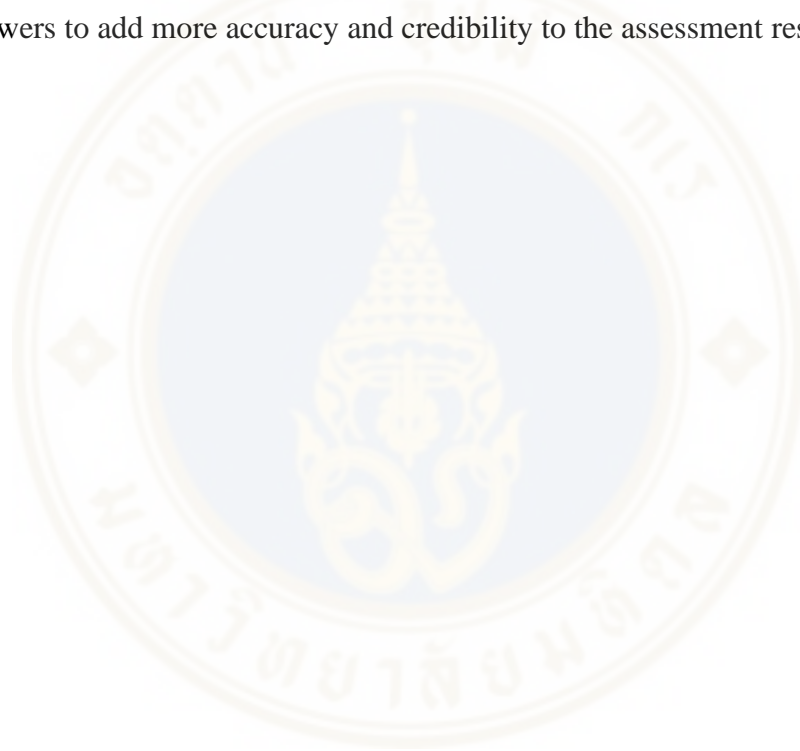
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APPENDICES

APPENDIX A: Guideline rubrics for sub-dimension's level of innovativeness

Vision (VS1)

1	The company has no innovation strategy and organizational goals are not conveyed to employees concretely.
2	An innovation strategy is defined in the organization's vision, but no clear development goals and guidelines are set. Moreover, the Company has not communicated effectively to employees.
3	There is clarity of innovation strategy in the vision of the organization. Clear goals and guidelines are set. the company. Communicate effectively to employees, but there is no verification of employees' understanding of the organization's vision.
4	There is clarity of innovation strategy in the vision of the organization, as well as clear goals and development guidelines. The Company communicates effectively to employees and checks employees' understanding of the corporate vision.
5	There is clarity of innovation strategy in the vision of the organization, as well as clear goals and development guidelines. The company communicates effectively to its employees. Employees' understanding of the corporate vision is monitored and employee feedback is used to continuously improve goals and guidelines.

Scanning/Screening for partnership (ST1)

1	Organizations are aware of working with partners but have not yet achieved concrete collaboration.
2	Organizations are aware of working with partners, but it is unclear and unclear how they can help innovate.
3	The organization has a systematic process of analyzing and finding partners. It focuses on partners who have the capability to meet the organization's current goals.
4	The organization has a systematic screening process for the readiness of potential partners, where each business unit can look for partners on their own to further the organization's goals.
5	The organization has a systematic and effective screening process for the readiness of potential partners. It focuses on partners who have the capability to meet the organization's current and future goals.

Coordination with partners (ST2)

1	The organization has set goals with partners but it is not clear.
2	The organization has a clear goal with its partners. However, there is no clear guidelines for joint project development and there is still a clear separation of resources and support the activities of each organization.
3	The organization has set goals with partners and has clear guidelines for joint project development. But collaborations remain unsystematic.
4	The organization has set goals with partners and has clear guidelines for joint project development. Organizations systematically share tangible assets with each other, but intangible assets such as knowledge are shared occasionally but remain unsystematic.
5	The organization has set goals with partners and has clear guidelines for joint project development. The organization is shared. Systematically share resources with tangible and intangible assets. In addition, there is a collaborative effort to solve the problems that arise. systematically

Evaluation from partnership (ST3)

1	The organization does not have a concrete evaluation process for working with partners.
2	The organization has a process for evaluating the results of project development with partners, but it is not yet a clear system.
3	The organization has a systematic process of evaluating the results of project development with partners. It focuses mainly on project outcomes (outputs) without regard to achievements.
4	The organization has a systematic process of evaluating the results of project development with partners. The assessment system is well managed without considering not only the success of the project but also other benefits that the organization will receive.
5	The organization has a systematic and effective process for evaluating the results of project development with partners. It focuses on collaborative activities and project outcomes on a regular basis.

Learning from partnership (ST4)

1	The organization does not apply past information or experience to new partners in the future in a concrete way. The mistakes that have been made continue to repeat with new partners.
2	The organization has a system to learn from past experiences that are not clear. Data is stored and collected in the past, but also in a limited group of individuals or only those involved.
3	The organization has a clear learning process based on past experience but is limited to those who are involved in the project and do not have Formulation is a systematic practice.
4	The organization has a clear learning process based on past experience. New processes have been improved to be implemented with partners. New Cases in the Future It is defined as a systematic practice but is not disseminated to people in the organization.

5	The organization has a clear learning process, past mistakes are adapted to create new processes systematically and have Dissemination to people in the organization to learn

Teamwork (ST5)

1	Employees focus on personal work.
2	Cooperation is only possible when assistance is requested.
3	Collaboration occurs regularly within the team, but only occurs between teams when help is requested.
4	Cooperation occurs regularly within the agency, but only interagency occurs when assistance is requested.
5	All departments in the company are integrated for problem solving and innovation on a regular basis.

Horizontal communication (ST6)

1	Communication follows the chain of command.
2	Communication between the bosses is still along the chain of command, but employees can communicate independently with colleagues. Within the same team
3	Communication within the team is free, both between the boss and colleagues, but between departments it remains along the lines of affairs. command
4	Employees can communicate with other teams within the organization.
5	Employees can communicate freely and directly with all teams within the organization.

Decentralization (ST7)

1	All decisions come from senior management.
2	All decisions come from senior management, but power has begun to be distributed to middle management. Approve of the boss first.
3	Decision-making power is distributed to middle management.
4	Decision-making power has been distributed to middle management, but the power has begun to be distributed among employees but still needs to be given. Approval from the boss first.
5	Employees or teams can independently make decisions on work-related matters. The responsible authorities have full rights to set all goals, plans, and operations that must be in line with the Company's goals.

Financial support (SP1)

1	The company does not provide a budget for concrete innovation.
2	The company does not provide a formal budget for innovation, but the company has approved some projects (project by project).
3	The company has prepared a budget for formal innovation but must pass requirements and selection.

4	The company has formally prepared a budget for innovation and gives employees the freedom to apply the budget, but each use of the money must be approved by management.
5	The company has prepared a formal budget for innovation and gives employees the freedom to allocate the budget within the specified framework.

Time support (SP2)

1	The company does not have a clear deadline for creating new ideas. We also continue to focus on spending time on routine tasks.
2	Innovation is realized as an extension of the work. The company allows innovation during normal working hours, but employees must first complete their assigned tasks.
3	Innovation is realized as part of the job. Employees can develop innovations during their time but must first obtain approval from their supervisor. (case by case)
4	Innovation is realized as part of the job. Time is allocated to employees to develop clear innovations, but employees do not have the freedom to allocate their own time. It is necessary to act in a given period of time.
5	Innovation is realized as part of the job. Time is allocated to employees to develop clear innovations. To engage employees in interest-based innovation projects. In addition, employees have the freedom to adjust their time to complete projects in line with their routine tasks as much as possible.

Technology support (SP3)

1	Inefficient internal systems and technologies that do not support innovation development plans.
2	The organization has a system to evaluate technology before adopting it systematically, and the technology within the organization is the basic technology, which still does not support innovation development.
3	The organization has a systematic system for evaluating technology before adopting it. The company supports modern technology but does not meet User Requirements or Support Only in Certain Business Unit Aligned
4	The organization has a system to systematically analyze and evaluate appropriate technologies before adopting them. The employee can request it. New technologies that are suitable for their jobs, but the allocation of technology remains up to the organization.
5	The organization has a systematic system to analyze and evaluate appropriate technologies before adopting them. Technology to be used in line with future innovation development (Technology roadmap), including employees can request new technology that suits their job.

Knowledge creation (SP4)

1	The organization provides knowledge or information to employees for use in developing new projects systematically and organizationally. Knowledge does not meet the needs of employees.
2	The organization provides knowledge or information to employees for systematic development of new projects, but the body of knowledge is not sufficient to meet the needs of employees for innovation development.
3	The organization has a process to provide knowledge systematically enough to meet the needs of employees. The process of data analysis causes the data to be used inefficiently.
4	The organization has a process to procure knowledge systematically enough to meet the needs of employees, including a process for analyzing data and developing systematically so that employees can apply that knowledge effectively.
5	The organization has a process for providing knowledge. There is a systematic process for data analysis and development, which is sufficient. To meet the needs of employees, including the process of providing knowledge. New and new regularly. There is a channel for employees to request. Information or knowledge outside the organization for innovation development.

Knowledge access (SP5)

1	The database has been developed systematically or has not been used, and the organization has not yet supported the use of knowledge concretely.
2	Systematic database development Employees have access to basic organizational resources, but the organization does not yet encourage the use of knowledge.
3	Systematic database development Employees have access to basic organizational resources and organizations encourage employees to apply their knowledge but within a limited (niche) range.
4	Systematic database development that meets the needs of employees Employees can quickly access organizational resources and use them as needed but limited. Just along the line of work.
5	Systematic database development that meets the needs of employees Employees can quickly access the organization's unified resources and implement them as needed.

Employee Training (SP6)

1	Training programs to develop skills related to creativity and innovation management for employees are quite limited.
2	Training programs to develop skills related to creativity and innovation management are provided as an option. Employees but few employees involved.
3	Training programs are organized to develop skills related to creativity and innovation management for employees, focusing on the areas of responsibility that most employees are responsible for.
4	Training programs are organized to develop skills related to creativity and innovation management as cross-functional options. Employees can request to

	participate in programs that interest them, and employees are occasionally sent for training outside the organization.
5	Training programs to develop skills related to creativity and innovation management are provided as an option. Employees can cross the line of work. Employees can request to participate in programs that interest them. Apply training outside the organization with a clear approval process. The budget framework is set in advance.

Learning process (SP7)

1	The system of learning from past experiences lacks clarity or concreteness. There are still mistakes that have been repeatedly made in New projects are always there.
2	Learning from past experiences but not yet systematic (no writing down as best practice) by learning process Caused by personal relationships, what is learned is not used to develop future innovations.
3	There is a clear system for learning from past experiences, but the learning process is still limited to those involved in the work.
4	There is a clear learning process. Past errors have been systematically adjusted to create new processes and clearly defined guidelines for future innovation development, but remain focused primarily within the organization.
5	There is a clear learning process. Past errors are systematically adjusted to create new processes and clearly defined regulations for future innovation development of the entire organization.

Knowledge accumulation (SP8)

1	Organizations do not have processes in place to screen and store knowledge with organizations whose systems result in information or knowledge being unavailable (databases are developed unsystematically or are not used).
2	The organization has a systematic process for screening the body of knowledge necessary to develop innovation, but there is no system to store knowledge with the organization.
3	The organization has a systematic process of screening and storing knowledge with the organization, such as having a central database but not storing it as a good category. As a result, the use of knowledge is limited.
4	The organization has a systematic process of screening and storing knowledge with the organization. There is a central database provided, as well as there is a good category store. This enables the knowledge to be used effectively.
5	The organization has a process for screening and storing knowledge with the organization systematically and continuously developing.

Knowledge sharing (SP9)

1	The organization does not have a clear process for distributing knowledge to employees. Knowledge sharing is quite limited. All information is kept as personal and must be requested to be sent to it.

2	The organization has a systematic process for distributing knowledge, but there is no stimulation for employees to distribute knowledge.
3	The organization has a systematic process of distributing knowledge. Employees are encouraged to spread knowledge, but they are confined to the group.
4	The organization has a systematic process of distributing knowledge. Employees are encouraged to spread knowledge, but they are also confined to departments or departments as well as motivate employees to raise awareness.
5	The organization has a systematic process of distributing knowledge. Employees are encouraged to spread knowledge throughout the organization as well as stimulate employees to be aware.

Recruitment (CM1)

1	Your organization selects employees only from job description .
2	Your organization selects employees based on job responsibility and uses KSA technique (knowledge-skill-ability).
3	Your organization selects employees based on job responsibility and uses KSA technique (knowledge-skill-ability) and CBR technique (situation and behavioral interview) to see their creativity in solving immediate problems.
4	Your organization selects employees from job responsibility in combination with KSA technique (knowledge-skill-ability) and CBR technique (situation and behavioral interview) to see their creativity in solving immediate problems and leading them to the workplace. What benefits come to the organization?
5	Your organization selects employees from job responsibility and uses KSA technique (knowledge-skill-ability) and CBR technique (situation and behavioral interview) to see their creativity in solving immediate problems as well as ways to solve problems to bring benefits to the organization.

Job rotation (CM2)

1	The organization has a staff rotation process within the organization as necessary, such as rotating to replace employees who have left. No, there is no coaching, mentoring and shadowing process.
2	The organization has a staff rotation process within the organization as necessary. Organizations have coaching, mentoring and shadowing processes, but they are not systematic.
3	Job rotation occurs within the organization to add knowledge related to routine work. The organization has a systematic coaching, mentoring and shadowing process.
4	Job rotation occurs within the organization to increase knowledge for employees to develop innovations by rotating to add knowledge to various projects that employees are responsible for or to make changes in current projects. The organization has a systematic coaching, mentoring and shadowing process.
5	Job rotation is systematically managed. It occurs regularly within the organization to increase knowledge for employees to develop innovations, as well as to monitor the results of staff turnover from the perspective of creating ideas or innovations. The organization has a systematic and effective coaching, mentoring and shadowing process.

Evaluation (CM3)

1	Activities related to innovation are not used in the evaluation of employee performance. Employee assessment results look primarily at job success.
2	Innovation-related activities are used to evaluate employee performance but are not the main factor in evaluation.
3	Innovation-related activities have been used to evaluate employee performance, focusing primarily on innovation outcomes. (outcomes)
4	Innovation-related activities are used in employee performance evaluation, focusing on activities in the process and innovation (activities), where the assessment system is well managed.
5	Process activities and innovation are one of the key requirements used in employee performance evaluation. The organization values the whole process towards innovation and results.

Rewards (CM4)

1	The organization does not provide tangible rewards related to innovation activities.
2	The organization has a process for rewarding innovation activities on a case-by-case basis, depending on the decisions of the management.
3	The organization regularly awards innovation activities with a clear reward process based on outcomes.
4	The organization regularly rewards activities that facilitate innovation development, with a clear reward process. The budget is clearly defined. Rewards are based on the innovation development process and the outcome of the innovation.
5	The organization regularly rewards innovation-related activities, with a clear reward process in place, with a clear reward scheme such as promotions or money, making employees in the organization see it as part of their work and job progress.

Creative environment (CM5)

1	There has been a realization of environmental development that supports innovation development, but the work process is still in the same form, there is no change (traditional way), the decision making is mainly up to the management.
2	The chief is interested in experimenting with new concepts in some processes, but still maintaining the same processes. Decisions are made mainly by the management.
3	The boss is open to new ideas or processes in some work processes and is ready for employees to experiment with that concept, but decisions must be made through the approval of the boss.
4	The boss is interested in experimenting with new ideas in the work process and dares to experiment with new ideas while leaving the staff responsible for them.

5	The boss pays attention and allows new ideas to be tried in every process, collaborates with other business units, and leaves the staff responsible for that idea.

Encouragement (CM6)

1	The company encourages and motivates employees to create innovative ideas, but it is not yet concrete.
2	The Company encourages and motivates employees to innovate, such as having innovative projects but not yet providing concrete support.
3	The Company encourages and encourages employees to innovate by holding contests for new ideas and projects, but without concrete support.
4	Employees participate in the development of innovation in a willing, ready to focus on the outcome of the project and the organization.
5	Employees participate in innovation development in a willing manner by being willing to participate in all parts of the project and proposing ideas for further development in order to achieve better innovation. It has a positive impact on the organization as a whole.

Involvement and Ownership (OC1)

1	Employees participate in the development of innovation according to their assigned duties.
2	Employees take part in the development of innovations as assigned, ready to take on specific responsibilities on their part. It also does not take into account the overall picture of an agency or organization.
3	Employees participate in innovation development in a willing, ready to focus on the results of the business unit.
4	Employees participate in the development of innovation in a willing, ready to focus on the outcome of the project and the organization.
5	Employees participate in innovation development in a willing manner by being willing to participate in all parts of the project and proposing ideas for further development in order to achieve better innovation. It has a positive impact on the organization as a whole.

Conflict and Debate Management (OC2)

1	There is a limited level of exchange of ideas or conflicting opinions at meetings.
2	Allow the exchange of ideas or opinions at meetings. Each side adheres to their own point of view, ignoring the collective goal.
3	Allow the exchange of ideas between employees, each adhering to their own point of view, but being ready to listen to the other's reasons by combining each other's ideas (combine).
4	Allow the exchange of ideas between employees, each side does not adhere to their own point of view and is ready to listen to the other's reasons to find a solution together. By combining the ideas of each side. (integrate)

5	Allow the exchange of ideas between employees. Different perspectives are accepted. Participants were unaware of the uneasiness when they found conflicting ideas or different points of view. New solutions are sought together with a focus on the goal.

Challenging goals (OC3)

1	No emphasis on creating challenging goals. There is no systematic goal-setting process.
2	The company targets are set but still comparable to other companies (Benchmark) at a similar level.
3	More challenging company targets are set to be higher compared to other companies (Benchmark).
4	More challenging company targets are being set. To achieve the goal, one must innovate or adapt. Incremental change
5	More challenging company targets are being set. To achieve the goal, there must be a clear radical change.

Open communication (OC4)

1	Communication is based on the hierarchy of the organizational structure, which is in a contractual style.
2	Communication continues to follow the hierarchy of the organizational structure, which is in a contractual style . The boss does not listen to ideas that contradict his own ideas.
3	Employees can freely discuss work-related matters. Began to talk on matters related to personal topics (social exchanges are occur but still limited), communication is not in contractual style. Ideas that contradict one's own thinking by looking primarily at the work text.
4	Employees can freely discuss matters related to work, including some personal topics in the field of work. Communication is not in a contractual style. The boss accepts to listen to all ideas that contradict his or her own ideas.
5	Employees can discuss work-related and personal topics freely across functional lines. Communication is not in a contractual style, the boss accepts listening to all ideas that contradict his or her own thoughts.

Organization's ability to manage risk (OC5)

1	The Company does not have a concrete risk management process.
2	The risk management process is unclear. Management seeks to create a concept of low-risk innovation.
3	The Company has managed risks, although they may not be specified in the exact stage. Management supports employees in creating risky innovations but must have a plan in place at all times if something goes wrong.
4	The Company has systematic risk management, although it may not be specified in a precise manner. Management supports employees in creating innovations

	when they evaluate the results as cost-effective. They can accept mistakes made by innovation as part of the learning process.
5	Risk is integrated into the organization's roadmap. The Company has systematic and efficient risk management. Management fully supports employees in innovation. The impact on the risk is assessed and all errors made by innovation can be accepted. This is part of the learning process.

People oriented (OC6)

1	The head looks primarily at the success of the project, the head does not admit the mistakes made in the process of developing innovations. There are clear penalties against employees in case the project does not meet its goals.
2	The head mainly looks at the success of the project. The head is able to admit mistakes made in some innovation development process. There are still penalties against employees in some cases when the project does not meet its goals.
3	The head admits the mistakes that can be made in some innovation development processes. It is considered a learning process, but it does not encourage employees to learn and analyze the causes of errors.
4	The boss admits the mistakes that can be made in any process of innovation development. It is considered a learning process. Employees are encouraged to learn and analyze the causes of such errors.
5	The boss admits the mistakes that can be made in any process of innovation development. It is considered a learning process. There are no penalties for employees, but employees are encouraged to learn. Analyze and find solutions to mistakes in the project as well as provide opportunities to improve the project successfully.

Coaching (OC7)

1	The chief has a command style by issuing orders at every stage as well as defining and specifying guidelines for every step of the operation.
2	The chief has a reciprocal style, advising and explaining problems as well as providing clear guidelines for problem management and consultation.
3	The chief advises and explains the problem and provides clear advice by providing several solutions to the problem. Alternative approaches for employees to analyze and find the most appropriate approach.
4	The head has a guided discovery style by encouraging employees to come up with new ways to solve problems that arise.
5	The boss encourages employees to come up with new approaches to problems or encounters. It may be in the form of guiding questions for employees to learn by themselves (Self-learning) by the boss is ready to give advice at every step.

Tolerance of uncertainty (OC8)

1	The chief has a conservative administration, accepting low-risk projects. Without admitting any mistakes.
2	The boss tried to create a novel concept with low risk. Without acknowledging the mistakes made by innovation.

3	The chief supports employees in creating innovations that are risky but must have a plan in place every step of the way if mistakes are made.
4	The chief supports employees in creating innovations when they have assessed that the results are worth the risk in normal circumstances and can accept the mistakes made by innovation as part of the learning process.
5	The chief fully supports employees in both normal and crisis situations, resulting in continuity where the company can accept the mistakes made by innovation, which executives consider to be part of the learning process.

Change management (OC9)

1	Executives are aware of creating change but have no clear plan and approach to change.
2	Executives are aware of creating change and have clear guidelines for change, but lack a clear process for change.
3	Executives are aware of creating change and have clear guidelines for change. There is a clear change process in place, but the company has unsystematic change management.
4	Executives are aware of creating change and have clear guidelines for change. A clear process of change is defined. The Company has systematic change management and can be tracked on a regular basis when there is a unit responsible for the change. Changes happen all the time sustainably.
5	Employees participate in innovation development in a willing manner by being willing to participate in all parts of the project and proposing ideas for further development in order to achieve better innovation. It has a positive impact on the organization as a whole.

APPENDIX B: Reflections from the top management (code A), middle management (code B) and operational level (code C)

- […] Innovation is something every organization should have because, without it, organizations risk getting disrupted by the changing business environment. This needs to innovate also applies to our company, starting from when we introduced unreserved auction to Thai market as the new sale model for used heavy equipment industry. Since then, we have continuously improved and developed our operation and work processes with the emergence of rapidly advancing technology and continue to do so in the present with the focus on the internet of things to innovate our work processes and sale models as we aim to be the leader in this industry […] (Code A)
- […] Vision and goal are set by us and cascade down to operation level, but we do not have the process for monitoring employee's understanding of company's vision. We have a process for getting feedback from employees about satisfaction but not regarding the vision or goals of the company. To achieve our goal, changes in the company is inevitable, such as improving work processes to be more efficient or to increase productivity of our manpower […] (Code A)

- […] Our company has a top-down management style, but we try to encourage our employees from different levels to share any new ideas with us or with other departments. We do not expect our employees to stick to only routine tasks. Every business unit can share their knowledge. We have an Intranet for storing and sharing knowledge where all business units can access. All materials are reviewed before being uploaded onto the intranet. […] (Code A)
- […] We accept the mistakes that happened as part of learning process, but we expect that the same mistake should not happen repeatedly. We have a risk management team under the internal\ audit unit. Everyday quarter, the team follows up on risk management plan and evaluation from every business unit. […] (Code A)
- […] Budget is allocated to new projects every year. Each business unit can propose the projects and we will select and approve the projects. However, after selecting the project, the use of the budget in each step still must be approved by the executive in charge. […] (Code A)
- […] In the hiring process, we first screen the candidates based on their job description by doing initial interview and aptitude tests. For example, a position of internal audit officer must have experience in document control and test the knowledge about ISO. After passing the interview and test by HR, the candidate will go on to the second interview which will be joined by the head of the department that made the hiring request. The second interview is to learn their attitude and their thinking in problem-solving. For example, a real problem that had happened in the past is used as an example to ask the candidate to respond how they would rectify the problem. […] (Code A)
- […] We set budget for employees' training needs and allow them to select any training of their interest, but they must be able to tell us how they can apply what they learn in their work. Some trainings we assigned the employees to participate because we see the knowledge or skill is required. For example, the managers from several business units were assigned to participate in training of how to use Chatgpt because we see the benefits of incorporating AI in our work process." (Code A)
- […] Example of strategic alliance, we collaborate with other logistic companies to support us as additional service to the auction business. In selecting a partner, we held meetings with potential partners and discussed our objectives with them and selected the ones that can support us in meeting our objectives. After the selection, an MOU was signed as mutual agreement on objective and guideline on both sides. So far, with current partners, there is no sharing of resources. We evaluated our partners based on the outputs of the collaborations, if the result met the objectives." […] (Code A)
- […] The vision and goal of the company are set and communicated to us by the top management in the management review meeting, and we share the message to the team members in our own department in team meeting. We see some changes made in the company every year in order to reach our goal. Like this year, the sale team has come up with a new sale channel in an effort to achieve this year's target, or a new technology is implemented to increase efficiency in the work process. The activities supporting the goals of the company are included in the employees' KPI to be evaluated mainly based on the outcome. We still do not have a system

for granting rewards in innovation activities. Any rewards given are on case-by-case basis from the top management […] (Code B)

- […] The company allocates budget for new ideas or projects every year. If we have new ideas or projects, we have to write up a project plan, including details describing purpose, goal, budget, process, timeframe, mitigation plan and propose the project in the manager meeting. After the project gets approved, we still need to get approval on the use of budget at each step of the projects. In terms of technology, we can request for new technology, whether it is a hardware or software, that can improve our work but the new technology proposed must go through an evaluation process and approved by the top management. We see that any projects or any new process that we do is part of our regular work because most of the time it is about improving on the existing process. […] (Code B)

- […] In terms of managing a new project, we can make some decisions relating to the project, but the top management has to see eye to eye with the decision. One example of a new project is the development of in-house software for online auction platform. Before implementing, we need to have a mitigation plan in place in case of software failure during the auction. After the auction is finished, any errors or shortcomings are noted for discussion in the project team for improvement and try again in the next auction. Any new knowledge is then recorded and shared within the team. If the project involved outside partner and there is a conflict or mistake that happened, the issues are usually resolved by the people involved in the project. Our company has an internal audit unit. Apart from ISO auditing, the team also regularly follows up on changes in process and procedure and risk management plans from every business unit which is regularly evaluated and updated. […] (Code B)

- […] At the moment, I am collaborating with our programmer from I.T. department to make a new program system to improve a work process that involves collaboration from various departments. Viewpoints are openly exchanged on how the new system can have impact on the different department and everyone tries to seek for a mutual solution by focusing on the end goal of the project […] (Code B)

- […] There is a review of training need once a year. We can request any training of our interest but must be related to our job. After training we have to write a report about the benefits of the training and how we can apply to our work in the company.[…] (Code B)

- […] In my department, my team members and I can discuss freely on both work and personal topics. It is the same with my supervisor. I think because we have been working together for a long time and have close relationships. […] (Code B)

- […] we collaborate within our department on the daily basis. Some tasks are rotated among our team members so that anyone can take over the tasks if the person-in-charge is not available due to sick leave or other issues. Sometimes we ask for collaboration from other departments, or they will request our help with some tasks. But the requests are made and approved by the supervisors. […] (code C)

- […] The company has the intranet that stored all the policy and procedures and some knowledge from other business units. I can easily access and find the knowledge or information that I need. […] (code C)

- […] I feel I can talk freely with my supervisor or manager on work-issues and personal issues. If I have a different opinion on a matter, I feel comfortable to openly discuss with him. And when I have a problem I cannot solve, my manager usually discusses with me the different approaches to solve the problem and then we choose the one we think will work best. If I made any mistakes, the problem will be discussed to find ways not to let the same mistake happen. […] (code C)