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## Multi-methods Approach for Information Management Framework in Government Control in Human Resources

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**Abstract:** Knowledge management strategy roadmap consists of several stages to implement knowledge management in three government organizations that manage the process of managing the government's human capital. They are the Minister of State for State Organization Modernization (KEMENPAN & RB), National Civil Service Departments (BKN), and National Public Administration Institute (LAN). Generally speaking, this KM plan framework addresses three critical facets of human resource management by government that involve individuals, procedures, and technologies. This work explains the implementation of the KM strategy using multi-methods OCAI (Organizational Culture Assessment Instrument), evaluation of difference analysis and evaluation of risk analysis. Questionnaire and interviews are conducted to discover data relating to the government's human capital management KM strategy roadmap. The outcome of the roadmap for the KM plan was confirmed using expert judgement. Research finding the KM strategy roadmap for managing government human capital was described in three criteria and three phases. There are individuals (three phase), mechanism (three phase), technologies (two phase), and each phase has its own strategic plan of action.

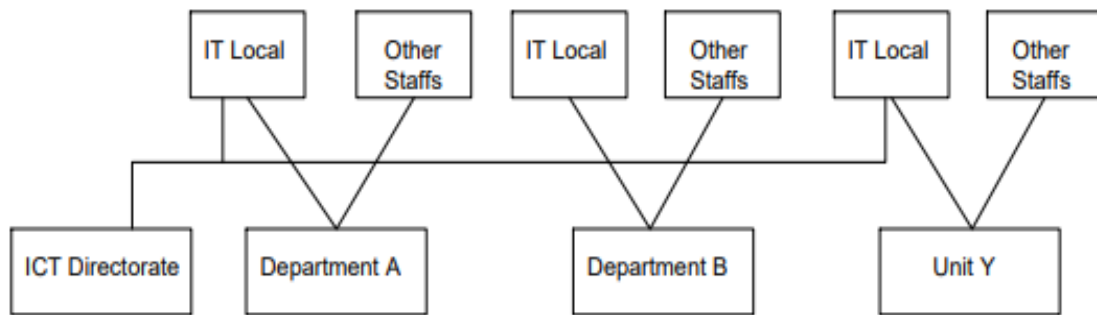
**Keywords:** Gap Analysis, Government Human Capital Management, Knowledge Management, Knowledge Management Strategy, OCAI and Risk Analysis

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### INTRODUCTION

Technology development has been growing rapidly in the last decades. In the late 80s, many distinguished scholars remarked their view that information technology would have a significant impact on enterprise competitive advantages. Their perception seems more than true. The advanced technology advances for example, computer, internet, and communications technology have radically changed people's way of life and the way companies do business. Since IT has been put at the center of any organization, it is almost difficult for any company to neglect the use of information technology (IT) in today's age. IT is an important tool for an organization to speed up communication and coordination across organizations, streamline the business processes of organizations, simplify communication between customers and businesses, accelerate information sharing across the organization, etc. Ultimately, these advantages will result in a company raising more profits, lowering more prices, and thus reaping more economic benefits. IT is usually provided within an entity in terms of facilities [1]–[4].

As with any other organization, the Teknologi Sepuluh Nopember Institute (ITS) has a wide array of organizational structure. As an academic institution currently serving more than 20,000 students, ITS is made up of 89 units including faculties, departments, directorates, and offices. In ITS the ICT Directorate provides and maintains the IT services. This directorate is responsible for providing, maintaining and regulating the network, database technology, apps and programs, e-mails, networking, domains and all IT services offered by the organization. However, units may also use their discretion when setting up certain of their IT services. IT locals are responsible for making the most of the discretion. We have authority to establish their own IT projects because they are in accordance with the ICT Directorate's guidance. The connection between the IT locals and the ICT Directorate is shown in Figure 1. Although IT locals are structurally below departments / units, coordination with ICT Directorate is still required. In practice, for example, IT locals can be tolerated for developing their own local networks [5]–[8]. However, since the ICT Directorate maintains the backbone, the IT locals need to discuss with the ICT Directorate about the arrangement.



**Fig.1: The Relationship between ICT Directorate and IT Locals.**

IT locals are not only responsible for providing unique IT facilities for units, but also for an IT-related accident that occurs in a unit. Ideally, when a particular IT incident occurred in a unit, the local IT should respond to it by checking the condition of the unit. If the problem remains, the IT local will contact the ICT Directorate to find the solution. Nevertheless, in most cases, IT locals go through their own checking process and directly escalate the issue to the Directorate, while in fact some incidents originated from units or simply due to mistakes of the users. As a consequence, the ICT directorate load is rising. The most important consequence, however, is that IT locals do not perform their work and, besides, their ability has not yet improved.

ICT Directorate realizes the need for more empowerment of IT locals. To do so, the Directorate initially involves investigating the kind of events that the locals normally experience in carrying out their everyday tasks. Once the most frequent incidents have been identified, the Directorate is proposing a solution designed to help IT locals handle the incidents. Work Instruction as a technical guideline is an instrument that considered fit for incident handling by IT locals. This paper presents the ICT Directorate's work to identify major incidents that have occurred frequently in units and from which it proposes Work Instructions (WI) as guidelines for IT locals to handle the incidents.

Throughout the grand plan of institutional restructuring, government human resources (GHC) is one of eight fields of priority. Therefore, knowledge management is a part of the roadmap of bureaucratic reform that all government ministries in Indonesia should implement. Knowledge management (KM) assumed the corporate learning culture and the sharing of knowledge among the corporate participant and stakeholder could be improved. The consequence is the discipline of the human resources of government and the efficient use of KM in the public sector. On Presidential Decree No. 81 Year 2010, PERMENPAN law, UU No. 5 Year 2014 and other government policies, government regulations relating to the regulatory restructuring, information management and human resource management (GHCM) were announced. So, all government ministries will adopt the KM to boost their civil service professionalism [9]–[12].

There are State Ministry for State Apparatus Reform (KEMENPAN&RB), National Institute of Public Administration Republic of Indonesia (LAN), National Civil Service Agency (BKN), conducting the human capital management process in three government ministries. In the GHCM process these three ministries will collaborate and cooperate. Therefore, KM mechanism should be introduced to share their expertise to successfully execute their duties.

KM can enhance information by finding, recording, communicating and integrating it in their company according to several studies. Additionally, KM will increase the operational importance of the human resources by 1,2. However, because of their culture, regulation, policy, organizational structure and also their human capital itself, it is a big challenge to implement KM in government institutions. Therefore, we need to identify the right approach and action plan in GHCM to execute the KM. This work aims to establish the roadmap of the government's human resource management plan for KM in Indonesia. This goal is to enhance the efficiency of organizations in undertaking the process of managing government human resources [13]–[15].

## **1. Knowledge Management Strategy**

### **• Knowledge Management:**

Knowledge management (KM) is important for achieving organizational goals, it aims at managing individual organizational knowledge that consists of certain activities such as discovering, capturing, sharing and applying their knowledge. Whereas, it claimed that KM could increase the organization's intellectual capital to improve the competitive value and objectives of the organization. This method will be achieved by defining, choosing, organizing, storing and sharing the information for future problem solving, decision taking and strategic planning. Through utilizing many practices such as obtaining, reflecting, sharing, preserving and combining implicit and explicit information, KM in organization strives to establish operational awareness. KM has

incorporated the information in the management of human resources and the corporate cycle by producing, processing, sharing and analyzing it.

- **Knowledge Management Strategy:**

Strategies consist of many steps to accomplish the corporate goals of the future in the long term. Thus, through the action plan, the organizational strategy aims at developing the organizational initiatives. According to this, the knowledge management strategy is a set of organizational process and infrastructure used to manage the knowledge of the organization. In fact, this approach will increase the corporate efficiency, programs, financial income, market process development and capability of each human capital.

## 2. Government Human Capital Management

- **Government Human Capital**

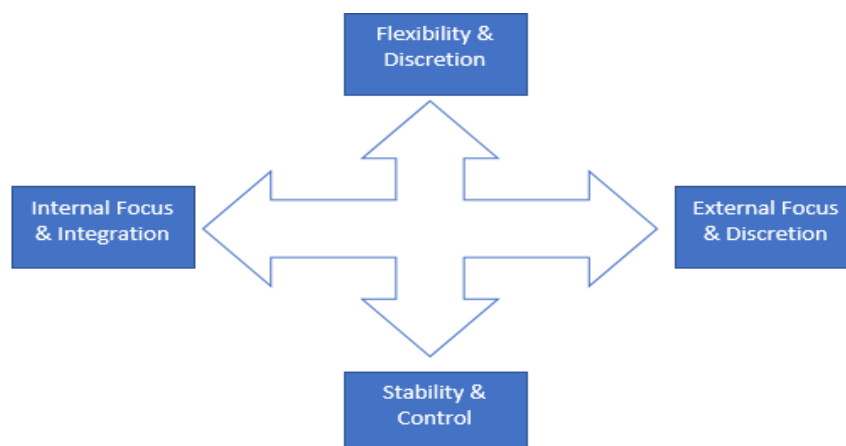
Human capital (HC) is regarded as the precious commodity for management of organization. Intellectual organizational capital embodied in human knowledge, talents, interactions, abilities and self-motivation. Hence, their intellectual capital may also measure corporate worth. It also considers that human capital represents the ideas, knowledge, and innovation of every organizational member and how they make the decisions in the work activities. In comparison, HC can be made up of professional skills, interactions, and information management that are rooted in their corporate culture and can improve organizational initiatives. Government human capital is generally an association of individual knowledge, skills, abilities, ideas, and experiences as an intangible organizational value, and was managed to enhance the organizational initiatives through the human capital management process.

- **Government Human Capital Management:**

Management of human capital (HCM) is a set of activities to manage human capital in an organization. These processes were carried out to improve the competitive value of the organization through the ability of the employees to achieve higher levels of individual performance. Management processes for human capital include planning, recruitment and selection, placement, development and training, employee satisfaction retention, engagement, reward and collaborative activities to manage individual and organizational competencies. Therefore, presume that HCM activities consist of the growth, encouragement and management of employees embedded in the organizational activities. In addition, HCM reflects organizational talent acquisition, learning and growth that involves organizational and individual ability, motivation, transformation, leadership, participation, and performance.

## 3. Organizational Culture Assessment Instrument (OCAI)

Organizational Culture Assessment Instrument (OCAI) also known as Competing Value Framework, which used to interpret organizational design, development of the life cycle, quality, effectiveness, leadership, and human resource management skills. OCAI is a tool used to measure organizational culture in six dimensional criteria, with dominant features, organizational leadership, management and employees, organizational glue, strategic emphases and success criteria. Figure 2 describes four forms of CVF-based organizational culture, the domains are used to evaluate each strategic strategy to promote the organizational culture of the future. Future corporate structure should be altered in accordance with the business strategy and the management process.



**Fig.2: CVF of Leadership, Effectiveness and Organizational Theory**

## 4. Gap Analysis

Gap analysis is one of the strategic methods for determining the existing organizational condition and the future condition required to achieve the organizational goals. Stages in the method of gap analysis are identifying the goals of gap analysis, analyzing the current challenges that prevent the goals, building the strategic plan to

resolve the gap and reach the goals, reviewing the plan for gap analysis, and finally auditing the process. Gap identification will bridge the void that used to build the organizational effort. These approaches will also match the application of information management with the human resource management approach of the organizations and governments.

### **5. Risk Analysis**

Methods of risk analysis believe that can define the important activities which should be carried out. This method can integrate sensitivity, risk reduction and organizationally determine the attack. Depending on the study outcome of the risk analysis, it can be excluded according to all corporate risk factors. Some earlier studies describe that risk analysis has some benefits such as cost-effectiveness and can be performed in iterative methods, can cover the danger indicator and can categorize the danger, identify the risk response and cover the implementation of KM.

### **6. Expert Judgment**

Methods of expert analysis used to solve the issue generally rely on expert consensus. Many technological, science, and social studies primarily used these approaches to cover the problem and forecast the solution. This method can also define the likelihood of future activities and some policy that needs to be implemented. Although, believe that this approach will evaluate the decision-making action strategy, clarify the process and the solution of organizational problems.

### **7. Previous Study**

Past research, using OCAI to describe the present state of the corporate culture and the potential status of the organizational goals. Depending on the study outcome in the future, OCAI will calculate the form of organizational culture and the mechanism for improving the organizational culture. Determining the next plan within an enterprise is one of the ways to shift the community. The program requires initiatives and behavior to bring about the significant behavioral improvements that will send the large means to the corporate objectives. In almost 10,000 organizational sectors (private sector, public sector, education, healthcare, NGOs) the OCAI instrument was used. According to OCAI, very adequate methods are used to assess the organizational culture in Korea's sport organization that has proven its highest reliability and validity worth.

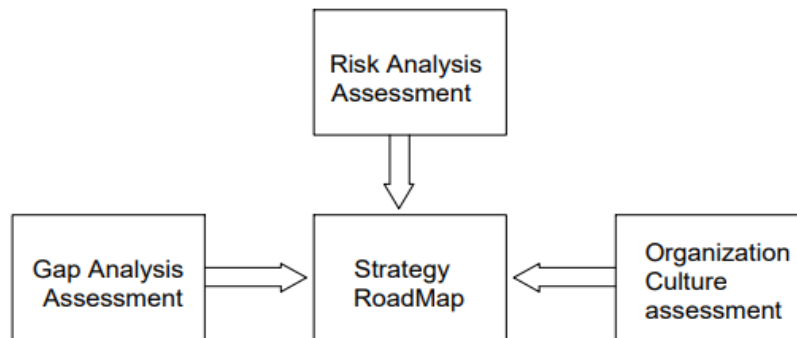
Based work was combined with risk analysis in Canadian to assess the action strategy, this study was undertaken to identify approaches to tackle climate change. The climate risk action strategy was defined based on the international risk management framework (ISO 31000) and the Canadian national risk management framework. This plan is used to ensure that the organization can cover the damage, predict the cost of climate change in every aspect of life, and determine after-damage recovery activities. Some work was carried out in Kenya, using risk analysis. The analytical structural architecture of government service efficiency was established by defining increasing vulnerability in each structural operational strategy (organization structure, top management engagement, important process participation, and fund availability).

Therefore, the distance measurement is used in the attitude plan of the information system in formulating the strategic target. Consider in the organization thereof. The distance analysis will describe the action plan depending on the implementation process, analytical awareness of oral and written communication skills and attitude to the information system. This method has also been used in the construction industry to define strategic security issue. The analysis was carried out using the five security problems that

## **METHODOLOGY**

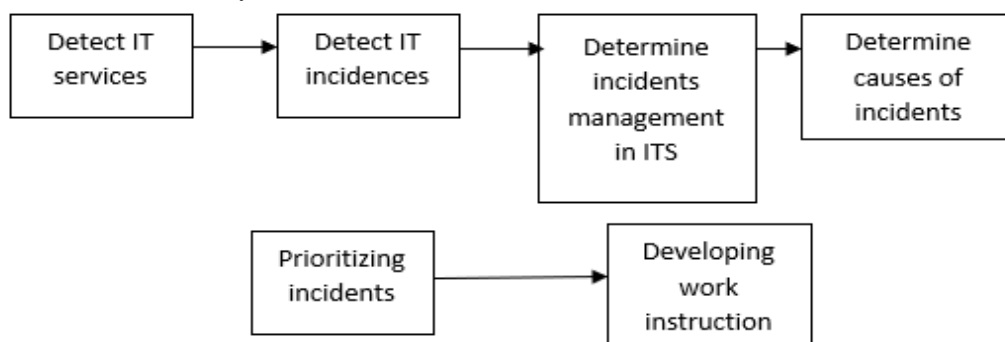
The research approach consists of multiple phases of literature reading, data collection, evaluation of the strategy matrix using OCAI and Gap Analysis, then creation of the KM strategy route map using risk analysis, the last one being confirmation using the expert judgment.

Literature research undertaken using some form of analysis to uncover the philosophical principle relevant to the KM strategic roadmap for the management of government human resources. Three government ministries administered interviews and surveys to gather data. The number of respondent surveys using OCAI consists of 200 respondents, although, there are 5 experts in the expert interview to determine difference identification based on question define. The method of risk analyzation is based on 4 interviews with experts. Figure 3 outlines the study of the KM plan roadmap implementation using several approaches including the Corporate Culture Evaluation, Distance Review Evaluation and the Assessment of Risks. The strategy matrix is calculated by combining the strategy matrix based on the outcome of OCAI and the problem recognition difference analyzes performance. The method analyzes the actual issue happening within the company and the planning plans in order to meet the anticipated potential situation. In the strategic matrix, each Strategic Operation represents.



**Fig.3: KM Strategy Roadmap of GHCM Analysis Method**

Risk analysis was then carried out to develop the roadmap for the KM strategy to carry out the priority activities and strategic activities into several phases that should be done in the organization. At this point the risk factor was established for every strategic operation. Last step is evaluation of the outcome of a conceptual plan to assess the outcomes of the study.



**Fig.4: The Flowchart of the Methodology**

This research was carried out through the following stages as shown in Figure 4. Next, the definition in case analysis of IT programs,

E.g. IT facilities were performed wherein interviews for each IT local in 20 divisions of ITS and the person in charge of the service desk in the ICT Directorate carried out the recognition. Incidents were also listed in each branch, to obey. Accident response activities in ITS have also been discussed to see how IT locals and ICT Directorate engage in incident handling. Using a fishbone diagram, the root causes of accidents were then identified. This stage is critical because the triggers are the basis for creating instruction in the workplace. Although not all accidents are of equal significance, events must be classified by the vital states. This categorization was achieved using Modes of Loss, Consequences and Critical Analysis. At the end the WI was designed for crucial accidents.

There are fifteen problems that can be addressed within the company as a result of the question recognition. There are human resources, regulation / politics, leadership, organizational culture, human resource management, monitoring and evaluation, development of human resources, knowledge, budget, goodwill, IT, engagement, socialization, sharing of knowledge, infrastructure. Thereafter, distance review was performed to assess the method for bridging the gap in current issue into future targets. Such approaches, such as employee turnover and transfer, build a regulation / policy, improve leadership, construct information sharing culture, match workforce growth with awareness of criteria, increase employee participation and loyalty, design and deployment of KMS, increase infrastructure.

Thus, OCAI results in three government ministries that manage the human capital of government as the current type of organizational culture is hierarchy (39 %) and the expected future culture is clan culture (42.36 %). Existing culture is hierarchy that often enforces the communication and transmission of individual information among workers. The clan tradition also allows individuals to communicate freely with others.

The current culture in the institution is hegemony and the future society chooses clan. Recognizing the clan community will enhance the corporate process of information management, and is also considers promoting strategic execution. Clan culture also facilitated cooperation between member organizations. Based on the OCAI result, the recommendation to transform the organizational culture from hierarchy to clan is focused on the individual relationship, observing employee loyalty, enhancing collaboration, engagement and group cohesion, becoming a mentor and advisor, promoting sharing of culture, teamwork, employee participation and friendship.

Both results from the study of holes and OCAI have been integrated into matrix strategy. There are individuals, method and technologies the matrix approach split into three parameters. The "jobs" criterion consists of six tasks: job relocation and transformation, information improvement, skills exchange and workplace transition improvement, HR collaboration enhancement, enhancement of service dedication, honesty and loyalty, leadership compliance as a trainer and knowledge hub. The "phase" consists of seven tasks, HR process alignment with information necessity, teaching need research creation, HR progress enhancement, knowledge exchange and cultural transition control, diffusion of knowledge through technology, KM process participation and leader oversight, regulation and application of guidelines. The risk of "process" is workforce growth that is not matched with corporate needs, inadequate GHCM policy, GHC expertise, business ego, leadership, conflicting knowledge, lack of goodwill, diversity of understanding, and the risk of "technology" is accessible budget, and lack of technology direction, etc. Each activity in the roadmap was divided according to the priority of the urgent activities and the risk factor impact.

Three phases describe the stage in each of the criteria that the organization should accomplish to implement the KM in managing government human capital. The last line in all criteria means the activity takes place throughout the whole phase. That ministry will define that task that has already been completed in its place and then conduct the next activities depending on the timetable of the roadmap until it has been fully enforced.

The findings of the KM approach plan also confirm in the focus group conversation by the expert assessment. The product of the expert assessment for the Government's human resource management KM plan framework is coherent and accurate. The PRL reliability check value is 0,69, indicating that it has intermediate reliability, can be evidence.

## CONCLUSION

Analysis finding that the government's human resource management plan framework for KM consists of three parameters that include individuals, method and technology. The timeline of the roadmap is divided into three phases that have several activities on it. The KM plan roadmap should be used with the ministries that delegate KEMENPAN & RB, LAN and BKN to handle the government's human resources. To execute KM, all operations in the KM approach framework will be achieved by configuring it into their strategic organizational structure. Those ministries will start applying KM by specifying the activities from phase one to phase three in each parameter and performing the activities that should be obtained in all process. Upon carrying out all of the tasks in the previous process, each ministry will continue the next process. Such analysis questions are used to evaluate current operations that have already been completed in the enterprise in relation to the timeline of the KM strategy. This instrument is a testing device to determine how high the ability of the government's human resource management to implement KM is. The difference between current KM implementation situation and roadmap could be a suggestion for the government to create a problem-solving of through distance. They can also make a knowledge management regulation or policy, and the process of managing government human capital that aligns with the bureaucratic reform programmed. The multi-methods used to develop the roadmap for the KM strategy can give reliable results by merging the results of the analysis from three methods.

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