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GOVERNMENT ORGANIZATION ADAPTATION TO IMPLEMENT AGILE PRACTICES IN PROVINCIAL SMART CITY AGENCY

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ABSTRACT

The purpose of this study is to describe how the Provincial Smart-City Agency in Indonesia adapted agile practices. Implementing agile in conventional government is challenging because formal regulations dictate that a government entity operates by default. While agile approach demands a quick and effective response to shifting circumstances, its deployment frequently contrasts with the established bureaucracy. Considering practicing agile in government organizations, this paper asks how the Provincial Smart-City Agency adapts an agile approach to comply with the conventional government. This case study uses a qualitative method and NVivo software to organize and analyze data. Data were collected through internship observation from April to August 2022 and semi-structured interviews between June and September 2022. Data triangulation was used to validate the informants' information. By describing the adaptation of agile practices in a provincial smart city agency, this paper expands knowledge on the adaptation of government organizations to implement agile concepts within a conventional bureaucracy that previous studies did not discuss. The result of this study contributes to agile adaptation practice to help government organizations start implementing agile practice by learning from the Provincial Smart-City Agency's success through six elements adapted to enable agility: the innovative structure of the organization, flexible working hours for non-permanent employees, workflow interaction, operational flexibility in the workplace, categorization of work into dynamic flexible tasks and routine repetitive tasks, and work location. These elements are affected by several factors, some of which arise from inherent characteristics of the agile components that influence the other components.

KEYWORDS *Flexible, Responsive Government, Traditional Bureaucracy*

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INTRODUCTION

Organizational agility is recognized as a critical dynamic characteristic for organizations to succeed in dynamic situations, as it enables them to swiftly deploy and modify their resources and better deal with the inherent unpredictability of a quick-changing world of competition (Castro-Lopez et al., 2023, p. 4). The implementation of agility within government organizations has the potential to enhance their capacity to address evolving demands and objectives promptly and proficiently. Agility enables government organizations to enhance their sensitivity and responsiveness to changes in their work environment (Safitri et al., 2020, p. 5). It is believed that IT agencies hold a significant responsibility in encouraging an atmosphere and mindset that motivates individuals both within and outside of IT departments to adopt agile perspectives (Wang et al., 2014, p. 182). The present study is based on knowledge obtained from Jakarta Smart City, a provincial government organization responsible for monitoring the management of Jakarta, a metropolitan region. The operating region is a metropolitan area from an operational aspect. The area is a province divided into five cities and one regency for administrative purposes. As a result, this work unit is referred to as the Provincial Smart City Agency and operates administratively inside a provincial region. The agency is believed as an IT department that develops and operates smart systems in the cities and practices agile routines.

The notion of smart cities pertains to the establishment of automated and sustainable urban areas, wherein agile methodologies can serve as a crucial factor, given their widespread integration in the systems development lifecycle (Rocha et al., 2019). In practice, government organization with an agile concept is more than merely a matter of theory due to the inherent sluggishness of government bureaucracy in adapting to rapidly changing conditions (Dowdy et al., 2017, p. 1), characterized by a top-down approach to leadership and a zero-failure tolerance practice (Mergel et al., 2021, p. 4). A holistic framework for aligning agile government with the actual performance of public organizations has yet to be established (Kumorotomo, 2020, p. 159). To address these challenges, an adaptation of agile government organization to the existing conventional bureaucratic system is required. Agile practices are thought to be conducive to fostering innovation within conventional government. Mergel (2016, p. 516) argue that utilizing agile methodologies can enhance innovation in digital services within the government sector.

Despite conventional bureaucracy, several work units in the Indonesian government have practiced the agile concept. However, this concept has been mostly used for software development, either a project done by the contractor or developed within government agencies (Fransisca et al., 2023; Karouw & Wowor, 2013, 2016; Rindengan & Tulenan, 2015). Since the agile concept can be applied to various fields, namely business agility, enterprise agility, agile organization (Maximini, 2015), agile workforce, IT agility, agile manufacturing, agile supply

chains, agile software development (Kettunen, 2009), agile doctoral research (Franco et al., 2023) and agile public administration (Luna et al., 2020). Kettunen (2009) explains agile cannot be defined equally or uniformly in all areas. This is in line with Mergel et al. (2021, p. 2) statement that agile government is modeled after agile software development, but in broader administrative terminology it refers to adapting quickly to the constantly shifting demands of the public. This statement confirms that applying agile concepts in software development is undoubtedly different from applying agile in government bureaucracy.

Similar situations have been noticed in prior studies on organizational agility in Indonesia, which have predominantly focused on private enterprises (Manurung & Kurniawan, 2022; Susanty et al., 2022; Theodore et al., 2022). Differences in organizational settings, objectives, frameworks, and management principles make it difficult to transfer management techniques from the private to the public sector (Boyne, 2002, p. 118). Therefore, it is necessary to focus on studying organizational agility in the government sector.

Despite the fact that studies on agile practice in government organizations have already been conducted in other nations, it cannot be merely applied to the bureaucratic system in Indonesia. Different government systems in different countries might have different agile government practices. Every country has unique culture and traditions regarding administration, economy, law, and social life (Thai, 2009, p. 5). Moreover, implementing agile practices in government operations and delivering services is a relatively new concept, prompting most governments to explore its application for innovation and performance enhancement (Mergel et al., 2021, pp. 1–2). Considering other governments have encountered similar circumstances, more research is necessary to properly understand each case (Mergel, 2016, p. 517). According to Mergel et al. (2018, p. 295) further study is required to comprehend the processes through which bureaucracies may adapt or how agile practices can be harmonized with the requirements of bureaucracies and their regulatory frameworks.

This paper presents a case study of adapting an agile organization to existing bureaucracy in an Indonesian Provincial-Smart-City agency by responding to the following research query: *How does a Provincial Smart City Agency adapt to the conventional government in practicing agile in its organization?* The study was conducted in Jakarta Smart City by studying the work process in the government organization. When the study was conducted, the Provincial Smart City Agency had around 218 employees, consisting of 18 ASNs and approximately 200 non-permanent employees, that worked in a digital environment to fully implement Smart System in 5 cities and 1 district in the province, which had approximately 11 million inhabitants. There are two employment statuses at the Smart City Agency. The first is civil servants (ASNs), permanent employees, and individual consultants, non-permanent employees with working contracts for a fiscal year that can be extended to following years. Considering, a study of agile practices in government must be explicitly conducted by considering theory foundations from other sectors. The finding results from earlier studies were used to conduct this research as theoretical provision (Janssen & van der Voort, 2016; Kirkpatrick et al., 2020; Mergel et al., 2020, 2021; Reunamäki & Fey, 2022; Ylinen, 2021).

The adaptability of agile practices to conventional bureaucratic structures, particularly in Indonesia, is a notable study that needs further exploration in the academic literature. The lessons from this unique experience must be captured and be the subject of sharing. This study aims to describe the adaptation of a government organization to practice agile methods in Provincial Smart City Agency in Indonesia, which then enriches agile government organization theory.

Literature Review

Agile refers to the capacity to implement changes rapidly and effectively (Kaur et al., 2023). Agile government is defined as the capacity to respond effectively to the changing requirements of the public that affects how the agency determines and then incorporates the evolving public's demands (Mergel et al., 2021, p. 2). The concepts of Agile have been extensively adopted by teams working on software since the establishment of the Agile Manifesto (Rathor et al., 2023). Since the private sector has enhanced its service development processes and many software companies now use some form of agile development methods to implement services that meet user needs and expectations quickly, government organizations are now starting to experiment with incorporating agile development methods into their own digital public service development toolkits (Kupi & McBride, 2021). Implementing agile methodologies in government environments typically begins with IT management, rendering the IT department a valuable resource for acquiring knowledge on agile in government (Fransisca et al., 2023; Ylinen, 2021).

Managing the IT department to achieve a smart city within conventional bureaucratic structures is a challenging endeavor. Conventional bureaucracies are commonly perceived as incompatible with innovative practices (Scott, 2021, p. 1). Ylinen (2021) researched an IT department of a large Finnish municipality and found that implementing agile IT management in the government IT departments can improve operational flexibility, collaboration, and customer service despite obstacles such as conventional functional structures and change resistance. It was also noted by Ylinen (2021) that bottom-up agile implementation is able to change large-scale agile transformations, particularly when the organizational level supports the transformations.

Conventional bureaucratic are permanent public organizations formed by hierarchically organized and centralized agencies and institutions that follow processes set by written rules and are filled by merit-based workers who are classified into bureaucratic ranks and grades (Scott, 2021, p. 1). Bureaucratic ranks and grades create rigidity in horizontal coordination between leaders and subordinates instead of agile concepts. The elements of conventional bureaucracy might still be seen in the Indonesian government. That is shown by the civil servants' ranks *(golongan)* and grades *(echelon)* system, which applies to three levels of government structure: central government, provincial government, and city/district government. Individual civil servants' ranks are determined by their educational credentials and years of service, while the echelon reflects leadership levels divided into five levels: echelon I, echelon II, echelon III, echelon IV, and echelon V, which echelon I being the highest civil servant leader and echelon V as

the lowest (Tjiptoherijanto, 2018). This type of government system indirectly causes silos. In government, a silo is defined as a hierarchical organization that seeks to maximize vertical coordination at the expense of horizontal coordination (Scott & Gong, 2021). The existence of silos is a barrier to implementing agile work practices in an organization (Ebert & Hochstein, 2023; Hemon et al., 2020).

According to Luna et al. (2020, p. 13), agile public administration is the application of agile capabilities to governance capabilities in public administration. Agility in governance will make public management strategic, adaptive, and responsive (Awamleh et al., 2022, p. 7). DeSeve (2020) states that the characteristics of agile government are mission-driven, community-focused, able to communicate and collaborate, and continuously deliver value to the public. According to Kirkpatrick et al. (2020), the characteristics of an agile government organization have three routines: sensing, interpreting, and responding. It was also noted by Kirkpatrick et al. (2020) that these three routines are integrated into the organization and supported by seven levers, namely (1) organizational structure, (2) decision-making processes, (3) leader actions, (4) knowledge sharing, (5) business processes, (6) roles, (7) norms and expectations.

According to Aghina et al. (2017), transforming from a traditional mechanistic organizational structure to a more dynamic and proactive organismic structure is crucial to achieving organizational agility. Meanwhile, the inflexible formal structure of conventional government organizations has difficulty supporting dynamic and proactive organizations due to the bureaucratic flow that must be followed. Wu et al. (2021) stated the informal structure of an organization can facilitate the expression of individual opinions by providing assistance in comprehending complex procedures, interpreting concerns, and presenting them in a manner that is likely to elicit a suitable response from the organization. In contrast, the flexible work arrangement is significantly related to organizational commitment, in which their relationship is in a positive direction (Mee Choo et al., 2016). Therefore, recognizing rules and regulations as barriers to public sector transformation underscores the need for future research related to managing human resources (Ylinen, 2021).

RESEARCH METHOD

The present study employed a qualitative case study approach, deemed applicable in elucidating a present-day situation. Case study research is particularly pertinent when attempting to comprehend the functioning of a social phenomenon in terms of its "how" or "why" (Yin, 2018, p. 33). It was also noted by Yin (2018, p. 33) that case studies become more and more pertinent when inquiries necessitate a comprehensive and detailed examination of a particular social phenomenon. The current study applied abduction as it considers the theoretical framework of agile government, which serves as the study's foundation but was not empirically tested during the data collection phase (Patton, 2015, p. 820). According to Babbie (2021, p. 55), abduction involves utilizing existing theories from prior research *(deduction)* as a theoretical framework and gathering a substantial amount of data to construct a theory based on the collected information *(induction)*. However, this study does not conduct an empirical evaluation of a theoretical framework.

Case study research examines cases in their natural settings, extensively and in depth, using a variety of data sources. The Jakarta Smart City case naturally has a unique research phenomena context, which determines the characteristics of agile practices. Researchers solely perform as observers with no control over the phenomena of agile practices in the organization subject of research. Considering these circumstances, this study employs a case study methodology with an abductive approach.

We developed a research proposition as foundation in guiding the research process, shaping the observation agenda, and formulating initial interview questions. The proposition was developed by analyzing the relationship among the concepts that contribute to agile culture. The inclusion of each specific interview question is supported by an in-depth analysis of the various factors that contribute to the formation and sustainability of an agile culture in organizational contexts. Each highlighted concept, from organizational structure to government agility considerations, contributes uniquely to the dynamics of agile processes. For example, the assessment of organizational structure delves into its hierarchical or flat framework to determine its impact on inter-team communication, which is critical in agile work environments (Aghina et al., 2015, 2017; Kirkpatrick et al., 2020). When investigating the dynamics of organizational culture and its alignment with agile principles, an initial interview question develops: "How does the organizational structure within the company contribute to an agile culture, especially in the context of hierarchical or flat frameworks?" This question is purposefully designed to elicit insights about the impact of organizational form on inter-team cooperation, a critical feature of agile work environments. The motivation for this investigation stems from the awareness that an effective organizational structure has a significant impact on whether or not team interaction occurs. Understanding the subtle impact of the organizational framework allows us to examine how it promotes or impedes the development of a flexible and responsive work culture. This topic thus serves as an important starting point for understanding the complex interaction between organizational structure and the development of an agile workplace ethos. As a result, each initial interview question is purposefully placed to elucidate specific aspects of agile culture, thereby contributing to a thorough understanding of the factors that influence agile practices in organizational contexts.

In the fourth week of March 2022, the first author conducted a grand tour visit to the Smart City Agency, and we conducted scholarly literature to ensure that the Provincial Smart City Agency practices agile based on the characteristics of an agile organization from previous studies (Kirkpatrick et al., 2020; Ylinen, 2021). From April to August 2022, the first author undertook an apprenticeship to observe the Smart City Agency's daily activities, employee interactions, and real-life situations. The study was further enriched by the first author's (Spigelman, 2001) firsthand experience interning at the Smart City Agency.

In order to gather empirical data from the Smart City Agency, a series of semi-structured interviews were conducted between June and September 2022. These interviews were conducted face-to-face and online and involved informants from

various divisions within the agency. Notably, the key informant for the interviews was the first author's internship mentor. The study employed a snowball sampling technique (Kirchherr & Charles, 2018) to conduct a series of interviews with six participants from five distinct divisions. Data collection ceased upon reaching a point of data saturation. The interviews implemented a relaxed conversational approach during the discussions to facilitate a comfortable environment for the participants to freely share their professional experiences at the organization. The interviews were conducted one to three times per informant, with an average duration of one hour. The interviewer used a positive approach and flexible inquiries to obtain significant data from the informants that might be considered confidential information (Maryudi & Fisher, 2020).

The study employed the data triangulation method to validate the consistency of information provided by informants. This was achieved by utilizing supplementary data obtained from various sources such as observation, public documents, official websites, official social media platforms, online news outlets, electronic media, presentation materials, laws, presidential and ministerial regulations/guidelines, provincial government regulations, official documents (such as employee recruitment evidence), and scholarly literature. Interviews were manually transcribed to streamline data processing prior to importing into qualitative data analysis (QDA) software. Observation results were also manually transcribed, which involves converting the observed interactions, behaviors, and events. These diverse data were organized and analyzed using NVivo. The data were then classified and coded based on the research proposition to identify potential themes that emerged frequently in the collected data. We eliminated data by removing pretenders, which are concepts that may initially seem essential but are not supported across interviews, to focus on contenders, which are salient and frequent concepts that emerge across interviews (Marks, 2015). We then finalize the core themes and systematically code the sentences a second time. Systemic coding verifies the existence of codes that have been previously identified and discovers all participant excerpts corresponding to a specific code (Allsop et al., 2022). Once the data has been clustered using NVivo, six main themes cover the Smart City Agency's agile concepts, five of which are from the proposition. Another concept, working location, was found during data collection that the interviewees frequently mentioned.

RESULT AND DISCUSSION

The six concepts are frequently found during observation and interviews, supported by secondary data. They are innovative organizational structure, flexible working time for the non-permanent employees, workflow interaction, operational flexibility at work, work classification into dynamic flexible work and routine repetitive work, and working location.

Innovated Organization Structure:

To overcome problems quickly, the Provincial Smart City Agency innovates its organizational structure so that the organizational structure in the field can help overcome problems. The Service Unit *(Satpel)*, which a civil servant leads, is the

Smart City Agency's smallest formal work group. Each service unit is led by the Head of the Service Unit *(Kasatpel)*, an ASN, and the Kasatpel is assisted by ASN staff. Daily, Kasatpel is also assisted by non-permanent employees who help Kasatpel do technical matters. To facilitate the organization's work, non-permanent employees are grouped based on their expertise. This grouping is referred "division", an informal organizational structure not regulated by Jakarta Governor Regulation Number 57 of 2022 concerning Organization and Work Procedures of Regional Apparatus. Each division in the Provincial Smart City Agency is led by a Division Manager who is a non-permanent employee. The "division" organizational structure was formed to make it easier for the organization to respond to work based on the grouping of employee expertise. Each Kasatpel handles one to two divisions (table 1). In certain divisions, assistant managers assist the division manager in day-to-day operations.

Table 1: Division in the Service Unit

No.	Service Unit	Division
1.	Study & Analysis Unit	Product Development & Analysis Division
		Data Analysis Division
2.	Communication & Marketing Unit	Communication Division
		Marketing Division
3.	Information Technology Infrastructure Unit	Network & Data Security Division
4.	System Development Unit	Application & Service Development Division
		Product & Service Operations Division

Source: Observation and Interview, 2022

The organizational structure facts on the ground reach not only the assistant manager but also the level Team Leader *(project leader)*. The team leader leads a small team of non-permanent employees to do a small scope of work. For complex work, the Team Leader can be assisted by the Assistant Team Leader in coordinating the non-permanent employees in the team. The organizational form is more flexible and communicative in a small group than in a conventional bureaucratic organizational structure. The streamlined small team organization consists of non-permanent employees who actively contribute towards completing work (Figure 1).

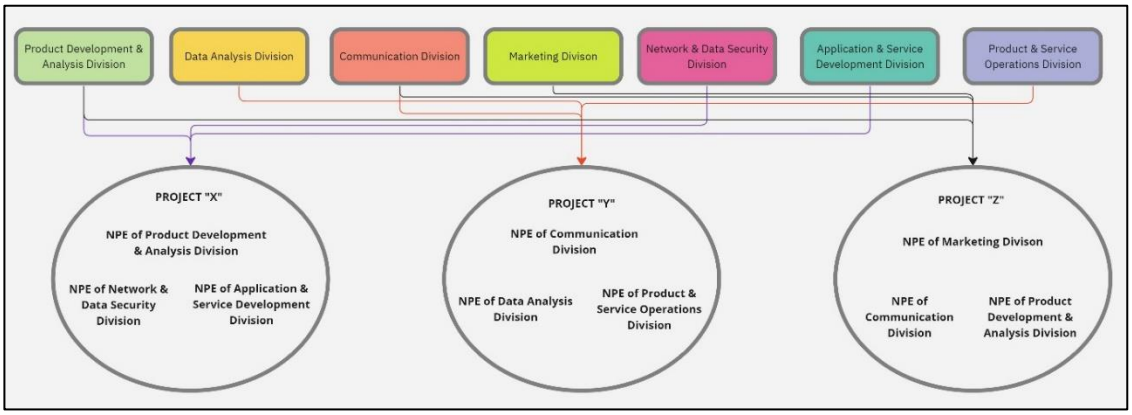

Figure 1: Small Team Organizational Structure of Multiple Divisions

Source: Observation and Interview, 2022

**Non-permanent employees (NPE) on a small team come from one or more divisions whose assignments depend on the project's needs.*

Workflow Interaction:

Workflow interaction is generally a top-down hierarchy in which the supervisor instructs the work direction. Upon completion of the work, the staff provides a report to their supervisor. Conventional workflow impacts the interactions between non-permanent employees at the staff level, the assistant manager, and the division manager. To speed up the exchange, they use e-mail as a formal interaction among non-permanent employees. This differs from interactions involving civil servants who formally correspond internally through official notes, memoranda, dispositions, and internal invitation letters (Article 20 of National Archives Regulation No. 5 of 2021). However, interaction between civil servants is not only done formally, it can also be done by communicating directly. This is because the workspaces at the Provincial Smart City Agency are not separated. This allows civil servants to interact informally with fellow and non-permanent employees. The workflow interaction in project management diverges from that in conventional administration. Efficiency is essential in project management. Therefore, the organization applied a framework similar to Scrum to ensure excellent output.

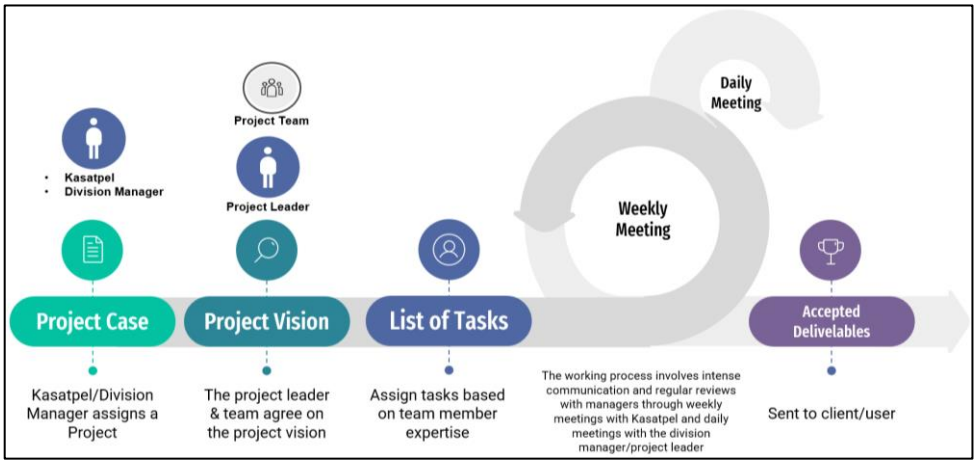

Figure 2: Adapted SCRUM Project Management Workflow
Source: Observation and Interview, 2022

Workflow interactions with parties outside the Provincial Smart City Agency are formally carried out through official letters as in conventional government in Indonesia. But for informal interactions with outside parties using e-mail and short message applications. Conversational interaction is done to speed up the communication process because when using official letters, there is a bureaucratic flow that must be passed. Interaction between civil servant staff and non-permanent employees occurs when non-permanent employees need administrative support. Civil servants have a vital role in the successful completion of a job. Without administrative support, non-permanent employees with various skills will be hampered by administrative-bureaucratic rules. Administrative affairs are one of the characteristics of conventional bureaucracy, so daily operational activities still require administrative matters.

Flexible Working Time for Non-Permanent Employee:

The informal rules of non-permanent employees' working time give them room to be creative in responding to and coping with changing work situations. In principle, the work targets of non-permanent employees at the Provincial Smart City Agency must be completed on time and meet the desired results. With this informal rule, non-permanent employees can manage their work time well. They have to work beyond regular working hours at certain times so that their working time is different from general office employees. However, this informal rule encourages implementing an agile work culture oriented towards good results and fast time.

On holidays, non-permanent employees continue to work when necessary, especially when activities require non-permanent employees' attendance. Considering the working days of non-permanent employees who are not limited by the working day, they are given the flexibility to set their working hours. The flexibility given makes them responsible for their work. Indirectly, informal rules for non-permanent employees benefit the effectiveness of performance at the Smart City Agency.

During the Covid-19 pandemic, non-permanent employees had the flexibility to not come to the office. Likewise, after the decline in Covid-19 sufferers, non-permanent employees are only obliged to enter the office thrice a week. They adjusted to the province area's Enforcement of Restrictions on Community Activities (PPKM) rules.

The same applies to the working hours of non-permanent employees who are not bound by a specific time like the State Civil Apparatus, who must enter at a time determined by the Presidential Regulation Number 21 of 2023 concerning working days and working hours of Government Agencies and State Civil Apparatus. Non-permanent employees work at least 8 hours daily when averaged weekly. The time of entry and return to work for non-permanent employees can be freely adjusted to their activities as regulated by Jakarta Governor Regulation No. 212/2016 on Guidelines for the Management of Individual Service Providers. For example, if a non-permanent employee enters during the day, then the non-permanent employee goes home at night after completing his work. So that the work targets of these non-permanent employees are achieved and their working time is more effective. Particularly for the Product and Service Operations Division (OPL), non-permanent employees are organized into three shifts for 24 hours. Therefore, managers and assistant managers in the OPL division must take turns on duty for 24 hours, accompanied by non-permanent employees on duty.

Operational Flexibility at Work:

In terms of work, non-permanent employees have flexibility in working. This is where non-permanent employees can work on tasks outside their primary duties. In order to facilitate task completion, non-permanent employees engage in mutual assistance. This flexibility optimizes the workforce resources available at the Smart City Agency. Flexibility in the workplace results from a culture of collaboration and the desire to share knowledge between non-permanent employees. This creates a sense of togetherness to innovate and quickly complete a job.

To support work flexibility, the division manager decides on adding work to non-permanent employees by considering the workload. Suppose a non-permanent employee feels they cannot complete an additional job outside their main duties since it will interfere with the main work. In that case, the non-permanent employee may refuse the extra work given by the division manager. However, non-permanent employees are willing to assist their colleagues if they can undertake additional tasks.

Flexibility is not only in the division of work tasks but also in the way employees work at Smart City Agency, where employees at Smart City Agency are free to sit and discuss at any table. This makes it easier for employees to work together to accomplish their tasks.

Work Classification:

Two work classifications simplify daily tasks while achieving targets and assuring quality. The classification was divided into Dynamic & Flexible Work and Routine & Repetitive Work.

1. Dynamic and Flexible Work:

Non-permanent employees exhibit a dynamic and flexible work manner. Their job responsibilities are subject to change based on the challenges encountered and are not restricted to a fixed set of tasks. Non-permanent employees and division managers can work to respond to issues quickly according to their expertise. Therefore, the Smart City Agency can effectively address various issues and adapt to changing conditions in the field. There was a case where an assistant manager associated with the application and service development division was possibly a team member whose project manager was the manager of a different division. In this case, every non-permanent employee and manager can work on a project whose project team comes from several divisions. So non-permanent employees can be led by people from other divisions.

The successful implementation of dynamic work comes from its ability to facilitate adaptable collaboration across various divisions, enabling timely responses to evolving challenges. Collaborative efforts across various divisions are necessary to address the challenges at hand, as the work demands diverse skill sets. Sometimes, non-permanent employees with the required project skills are spread across several divisions. Therefore, to complete the project, non-permanent employees from various divisions collaborate. In a project like this, the project leader will be chosen based on the competence of his expertise, which is dominantly needed in a project. Unlike traditional bureaucracy, which requires a formal letter to collaborate employees from different work units to work together, such as a decree from the head of the work unit. In the Smart City Agency, the collaboration between non-permanent employees from various divisions does not require a written statement from the leader in their work unit. That way, a job can be completed quickly because there is no time wasted waiting for the head-unit-decision letter.

2. Routine and Repetitive Work:

As part of a conventional government work unit, Smart City Agency has routine tasks like other agencies in the provincial government. Routine tasks at the Smart City Agency are repetitive, meaning that these recurring tasks have been scheduled and become daily activities, such as meetings with other agencies, correspondence management, procurement of goods and services, financial administration, socialization, policy determination, and other routine tasks. Civil servant employees and non-permanent employees carry out routine tasks. Where civil servants formally represent the Smart City Agency, and non-permanent employees help with routine tasks. For example, civil servants are present during meetings with other agencies to represent the Smart City Agency formally. Likewise, non-permanent employees attend the meeting with civil servants to contribute their expertise to the forum. Another example is when there is a Technical Guidance event *(Bimbingan Teknis)* with participants who are civil servants from other agencies. The Smart City Agency civil servants play a role in opening the *Bimbingan Teknis* event then the *Bimbingan Teknis* program is filled by non-permanent employees. But there are also routine activities that do not require the presence of civil servants, such as socialization events, which non-permanent employees sufficiently carry out.

Civil servants are generally tasked with managing work units' administration, policy, and management. This includes financial management, work schedules, and human resource management. Civil servants also carry out strategic routine and repetitive work, such as procuring goods and services, which competent civil servants must carry out. They play a pivotal role in shaping the direction of smart city policies, including determining which digital applications to be developed by non-permanent employees, in addition to the managerial aspect related to the organization and governance of the Smart City Agency. Meanwhile, technical work is handled by non-permanent employees. Non-permanent employees at the Smart City Agency do routine work according to their expertise. There are also non-permanent employees tasked with assisting general administration and coordinating with other government agencies. An example of routine work for a non-permanent Data Scientist is coordinating with other government agencies as data providers, such as the Health Province Office, which provided data on the number of patients infected with covid-19 and who had been vaccinated. Due to the large amount of data, the non-permanent employee digitizes the data to facilitate the data collection and presentation. Non-permanent employees who serve as division managers and assistant division managers have routine tasks to coordinate with other non-permanent employees in other agencies in the provincial government.

Another administrative responsibility of the Smart City Agency is to promote the active utilization of digital applications by other agencies within the provincial government. The dynamic nature of the smart city ecosystem requires prompt adaptations to align with current technology and real-life circumstances. The Smart City Agency facilitates the effective integration of digital technology throughout diverse provincial government bodies.

Working Location:

In order to remain up-to-date, the Smart City Agency should provide provisions for its employees to work remotely utilizing digital technologies and resources, particularly for non-permanent employees. If the employee's work location is outside the office, it must be with the approval of their direct supervisor. The permission of the Head of the Sub-Department of Administration, or the Head of Smart City Agency, must be obtained for civil servant staff. Meanwhile, non-permanent staff must have the division manager's or assistant manager's approval. Unlike civil servants who are required to take regular attendance at the office, non-permanent employees at the staff level, assistant division managers, and division managers are not required to be present in the office. They can work from anywhere with the approval of their supervisors. However, work is still being coordinated through regular meetings and communication through digital applications.

The liberating workplace culture emerged after the Covid-19 pandemic. With mobility restrictions, employees are advised not to work in the office, so the majority of employees at the Smart City Agency work from home. At first, non-permanent employees were not used to the flexible-workplace culture. But the non-permanent employees began to adjust their way of working to the culture of working from anywhere, such as working at home (WFH).

During the Covid-19 pandemic, only non-permanent employees from the Operations and Service Products Division continue to work from the office because this division operates digital assets at the Smart City Agency, such as monitoring citizen reports. Therefore, the Operations and Service Products Division must also make adjustments to coordinate with other non-permanent employees who work from home during the Covid-19 pandemic. As the COVID-19 pandemic has subsided, non-permanent employees have changed the culture of work location, which was initially full work from the office. In the period after the COVID-19 pandemic declined, such remote work culture continued.

The work location also depends on the type of work to be done. When non-permanent employees must fully work outside the office, such as meeting with digital service users in other agencies or conducting research interviews. Non-permanent employees are allowed to work remotely with the knowledge of the division manager.

Discussion

The Smart City Agency included agile elements into the conventional bureaucracy to facilitate the adaptation of agile government. Several factors influence this adaptation. Some of those factors result from the inherent characteristics of agile components, which impact other elements.

The innovative organizational structure is influenced by a significant workload that requires many staff and conventional provincial government bureaucracy. Another factor influencing an innovative organization is forming an informal small team of non-permanent employees for a project, enabling Scrum implementation and transforming conventional working unit arrangements. Formal regulations that do not restrict the workflow of non-permanent employees also influence the advancement of conventional operations. Due to the absence of official legislation governing flexible working hours, the Smart City Agency has established unwritten rules regarding flexible working hours for non-permanent employees. The inherence of agile characteristics, project team formation and flexible working time, have created another element which is operational flexibility. Adaptable job descriptions and inter-divisional cooperation influence dynamic and flexible work arrangements. However, routine and repetitive work is influenced by other factors, namely mutual understanding and effective sharing of responsibilities. The last agile element in the Smart City Agency is the working location, which is influenced by digital technology support, enabling work remotely.

The Smart City Agency innovates its organization because the workload requires many workers, which a lean organizational structure cannot manage. This condition contradicts Aghina et al. (2015, 2017) and Kirkpatrick et al., (2020) statements, which said that an implementation agile government has a lean structure with the lowest possible position level in government work units. Either the Smart City organization cannot be equated to a private company organization structure (Boyne, 2002, p. 118). Another factor is that the provincial government applies conventional bureaucracy structured according to hierarchical ranks and grades (Scott & Gong, 2021, p. 1; Tjiptoherijanto, 2018) , encouraging the Smart City

Agency to adapt by forming small teams to work on a project. The provincial government does not regulate small team projects and can be classified as an informal organization within the framework of conventional government. The team project enables individuals to articulate their points of view by helping them understand complex processes and communicate them in a way expected to accomplish the work. This finding supports previous research (Wu et al., 2021) .

In the informal small team, the conditions are similar to Aghina et al. (2015, 2017) and Kirkpatrick et al., (2020) statements', where the leadership position in the small team is only the team leader, who can make technical decisions based on his expertise, reducing the silo (Ebert & Hochstein, 2023; Hemon et al., 2020) in the agency. For digital projects that require many people, an Assistant Team Leader will be assigned to the project if necessary. The adaptation made by the Smart City Agency is in line with the statement of Mergel et al. (2020) and Ylinen (2021), which stated that the implementation of agile digital transformation in successful government work units initially starts on a small scale. Moreover, the fact of the organizational structure at the Smart City Agency confirms the statement of the agile roadmap DeSeve (2020), according to which the most minor level of agile government implementation is applied to project teams.

The informal small team enables Scrum framework implementation for project management to ensure project deliverables comply with project goals. This framework is initially introduced by the Application & Service Development Division team responsible for software development. This condition supports Wang et al. (2014) statement that the IT division encourages an agile culture in the whole organization. The Kasatpel and the Division Manager perform the function of Product Owner, and the Project Leader serves as the Scrum Master to lead the project team (Maximini, 2015). Although the protocol is not entirely equivalent to Scrum in software project management, it is essential to ensure the quality of services offered, including regular weekly and daily meetings to monitor performance. The small team formation has transformed conventional work unit systems (Janssen & van der Voort, 2016; Ylinen, 2021). The finding confirms the result of previous studies. In which the workflow in the Smart City Agency adapts the workflow of conventional bureaucracy applied in province government, specifically in the workflow interactions involving non-permanent employees from the staff level up to division managers. Agility helps government agencies adapt to workplace changes (Safitri et al., 2020, p. 5).

The transformation has happened due to formal government rules do not bind the workflow of non-permanent employees. Which then enables flexible interactions of non-permanent employees since they do not have to follow a specific format. However, non-permanent employees are administratively supported by civil servants to comply with the rules of conventional bureaucracy in the provincial government. In this approach, conventional government regulations can be followed while using agile, which fulfills Kumorotomo's (2020, p. 159) proposal that agile practice should be linked to the organization's actual performance. Civil servants ensure that non-permanent employees' work meets bureaucratic guidelines. This study shows how agile government units conform to conventional

bureaucratic practices, with administrative support from civil servants crucial for non-permanent employees to follow government rules.

Flexible working time for non-permanent employees, including division managers, assistant managers, and staff, is influenced by informal rules, allowing for agility and better work outcomes. Although bypassing regulations can lead to unfavorable results Ylinen (2021), studies show flexible arrangements boost organizational commitment (Mee Choo et al., 2016) and productivity (Kim et al., 2017). In the Smart City Agency, non-permanent staff adhere to informal rules, enhancing work target achievement in a dynamic environment.

Project team formation and flexible working time led to operational flexibility. Agile government implementation augments operational flexibility by facilitating a dynamic work environment (Ylinen, 2021). The Smart City Agency proactively deploys non-permanent employees across divisions, enhancing adaptiveness and problem-solving (Mergel, 2016, p. 516). Flexible desk assignments further foster operational adaptability, establishing a culture of collaboration. Operational flexibility is pivotal to organizational agility, enabling swift resource allocation amidst rapid workplace changes (Castro-Lopez et al., 2023, p. 4). These practices have proven to foster innovation (Kim et al., 2017), substantiating operational flexibility as a crucial determinant of organizational adaptiveness.

This study confirms the importance of adaptable job descriptions in facilitating dynamic, flexible work, as noted by Kiani et al. (2021) and Miller & Kirkpatrick (2021). Such adaptability is particularly crucial for non-permanent employees, whose diverse duties require flexibility. Similar flexibility is also expected from division and assistant managers, who often collaborate on cross-divisional projects. The main challenge is the creation of adaptable job descriptions suited to the needs of non-permanent employees. To overcome this, fostering inter-divisional collaboration is paramount to allow the formation of dynamic, possibly changing, teams across divisions. Therefore, adaptable job descriptions and inter-divisional cooperation are key factors that drive dynamic and flexible work arrangements.

Agile systems enable automated, sustainable smart cities (Rocha et al., 2019) and promote well-defined routine tasks for efficient work (Kirkpatrick et al., 2020, p. 73). The Smart City Agency exemplifies this with daily routine tasks, such as meetings, procurement, correspondence, financial management, data analysis, and policy determination. ASNs primarily perform routine and repetitive work in the Smart City Agency, but non-permanent employees also contribute technically. As suggested by (Kupi & McBride, 2021) and (Ylinen, 2021), collaboration and the differentiation of responsibilities are essential between ASN and non-permanent employees. Civil servants focus on strategic tasks, such as policy formulation and procurement, needing specific competencies and certifications. On the other hand, non-permanent employees assist ASNs in strategic work and handle non-strategic routine tasks like correspondence administration and data analysis. The study identifies strategies promoting collaboration and defining roles between ASN and non-permanent employees, highlighting the importance of mutual understanding and shared responsibilities in effectively addressing routine and repetitive work.

Working remotely is possible for most non-permanent employees, contingent on supervisor approval. These employees enjoy significant location flexibility, exempt from the Provincial Government's strict rules. Some roles, mainly in IT, require on-site presence. Similarly, ASNs must follow attendance regulations barring specific off-site assignments and authorized remote tasks. The wide use of digital devices aids remote work, enabling work from any area. Thus, the choice of workplace results from the job type. Specific departments need the office environment, while others can operate virtually.

As per Ylinen's (2021) findings, virtual collaborations between ASNs and non-permanent employees are effective in IT-oriented government organizations. With digital technology support, employees can work remotely and report to their supervisors. Physical distance does not hinder efficient teamwork, despite Reunamäki & Fey (2022) observation that agile work methods suit co-located teams better. The Smart City Agency adapted this by considering job specifics. Product & Service Operations Division employees must co-locate for successful service operations while other units use digital platforms for simultaneous communication.

CONCLUSION

The paper enhances the existing knowledge regarding the adaptation of government organizations to implement agile concepts within conventional bureaucracy by presenting the agile practices adaptation of a provincial smart city agency. While previous studies focused on agile government practice without considering existing conventional bureaucracy, the Smart City Agency proves that conventional bureaucracy can adapt an agile culture. The paper's theoretical contributions demonstrate that agile methods can be adapted to the conventional government while complying with current bureaucracy by encouraging a culture of innovation and continuous improvement that is crucial for agile government, which includes creating informal small teams for specific projects, establishing unwritten rules for flexible working hours, adapting Scrum project management workflow, emphasizing operational flexibility, dynamic work arrangements to enhance agility within government agencies, as well as enabling flexible work location. Government organizations can modify aspects not explicitly regulated by formal government regulations, allowing them to accommodate public needs swiftly and successfully, which may not be possible with conventional bureaucratic practices. The Smart City Agency adapts most of the conventional bureaucracy to non-permanent employees since civil-service-employee-regulations do not apply to them.

Adapting formal regulations to non-permanent employees allows them to focus on results rather than administrative procedures. Because conventional government requires orderly administration, formal administrative support from ASNs is critical in allowing agile work practices. This study found that the Smart City Agency has successfully adapted its organizational structure, working hours, workflow interaction, operational flexibility, work categorization, and work location. These adapted agile elements are influenced by several factors, some of which are inherent elements.

This study can serve as an illustration for government organization stakeholders and scholars considering the adoption of agile practices, particularly for provincial governments in Indonesia. The study is limited to a smart city agency in a provincial government. Further research is required to research agile organizational adaptation in government agencies other than smart cities, as well as in local and central government agencies.

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