Application of Design Thinking to the Organization's Policy and Plan Department

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Abstract:- *Design thinking is a user-centered process aimed to solve problems correctly and involves stakeholders. This thinking concept tries to produce concrete outcomes that will fix problems while improving performance and creating innovation. In today's world, government and private sectors adopt the concept. Its process is composed of five stages, namely empathize, define, ideate, prototype, and test. This article presents the concept application into the organization's policy and plan department. Contents in this paper come from a literature review and reliable sources locally and internationally, then analyzed for application to the policy and planning department. The study found that Its policy and plan analysis follows two major stages when applying the concept. In the first stage, problems and work procedures are identified. First of all, the analyst empathizes with the target group who can voice out opinions. This is the stage where the analyst can understand and communicate with them from the beginning. Following this, the analyst defines major problems in order to design solutions, policies, and work procedures appropriately. The second stage is policy and work procedure drafting and comes after problems and solutions are identified concretely. This stage adopts ideating possibilities, prototyping policies or work procedures, and testing the prototype for feedback from stakeholders and further improvement. According to these mentioned stages, if the policy and plan analyst holds a discussion with colleagues and stakeholders from the start, positive results will be obtainable and affect the policy implementation and efficiency of the organization.*

Keywords: Policy and Plan Department; Design Thinking

Introduction

Back in 1950-1960, design thinking was first introduced to design industrial and architectural products (Rowe, 1991). This approach was well recognized in the past ten years as an innovative development for organizations (Dolata & Schwabe, 2016). Until the present day, the approach has become an efficient tool when addressing complex social issues, organization management, and strategic innovation (Laferriere et al., 2019). Toyota, Starbucks Thomke & Feinberg (2010), Apple (Beckman & Barry, 2007), and other global corporations are examples of design thinking applications in search of new products to better serve consumers' needs and the business in the years to come.

Among examples in Thailand, design thinking serves a useful purpose for teaching students to become innovators by employing digital or online techniques in teaching in the new normal era. They create educational materials that transfer knowledge to learners perfectly (Phitthayasenee & Yuangsoi, 2021). According to Phetcharat (2022), Thaksin University Library applied design thinking to its library services and found that the method resulted in more channels of services for the different needs of users and upgraded the service quality that benefited teaching and learning satisfactorily.

Rapid changes in the present health, environmental, economic, social, and technological aspects influence the utilization of design thinking in both public and private sectors and cause structural and procedure adaptation. It is common to find an integration of new and existing knowledge into organizational policies and strategies as well as human resources plans. The overall objective is that the organization's personnel should be equipped with the capacity and preparedness to catch up with uncertain situations.

Modern organizational management that is strategy-oriented and responsive to current updates matters to the organization's survival in the long run.

In view of a policy and plan analyst, human resource development on planning is highly essential for this position. Development contributes towards enhanced skills, expertise, and abilities so that the analyst will perform at their best. This position deals with planning, strategic layout, and budgeting. Normally, in operation, budgeting is a prime mover, but also requires control and timely reporting. For analysts, collection and analysis of a wide range of data are unavoidable in order that the organization can draw up plans and strategies successfully. Other mechanisms like communication and cooperation with colleagues facilitate policy and plan analysis. Overall, the analyst must show an insight into assignments, systematic thinking, creativity, managerial experience, and self-management amidst changeable environments effectively. Therefore, the design thinking application is considered a strategic thinking approach for the organization's achievement.

There are several important aspects of design thinking. First, design thinking is a synthetic, holistic, and heuristic mode of thinking, that complements the analytical thinking that managers rely on when solving problems and making decisions (Jenkins and Fife, 2014). Second, design thinking is a useful tool to help understand and face complex challenges (Design Management Institute, 2022). Third, design thinking is now also beginning to influence how corporate managers bring customer or service user data into their day-to-day strategic planning as well as long-term planning (Knight, Daymond, & Paroutis, 2020). Finally, design thinking offers innovation the upgrade it needs to inspire meaningful and impactful solutions (Han, 2022).

In analyzing and planning for optimum management, the research team believes that the application of design thinking to policy and plan analysis is integral to efficient performance. This paper is intended to present the design thinking application to policy and plan analysis, and to understand the approach and how analysts and concerned staff can apply it. Contents in this paper come from a literature review and reliable sources locally and internationally, then analyzed for application to the policy and planning department. The findings in this study describe in-depth details of design thinking and shape the application of design thinking by the policy and planning department.

This article presents 5 issues: 1) Background and definition, 2) Design Thinking: An important tool for the organization's achievement, 3) Characteristic of the policy and plan department, 4) Applying design thinking to the policy and plan department, and 5) Benefit of design thinking applied to the policy and plan department.

Background and definition

Design Thinking is a thinking process to find the best or most correct answers or new ideas to problems. This approach is user-centered as it looks for tangible outcomes and innovations to solve problems efficiently (Hrnote.asia, 2019).

In the "The Sciences of Artificial" written by Herbert A. Simon, design thinking was first introduced. According to his summary, basically, material artifacts from intellectual operations were not different from the discovery of health treatments or welfare policies for the state's citizens (Simon, 1969). Design thinking is a constructive problem-solving process with humans at the core. The primary focuses are on taking action and learning from experiments, creativity, and testing in users so that design thinking can be learned and reduce errors while developing new solutions and answers.

In fact, the human-centered design is not a new concept, but a work procedure that responds to the target's needs or problems. For consecutive years of development, the human-based approach had been employed by world-class design schools and companies until 1990 when David Kelley Tim Brown and Roger Martin brought out the word "Design Thinking" officially (Israsena Na Ayudhya & Treerattanaphan, 2018).

Design Thinking: An important tool for the organization's achievement

Design thinking in organization management paves the way to analyze problems thoroughly which root causes may emerge. By analyzing this way and grounding on different angles, the policy and plan analyst can figure out more precisely alternatives and prioritize them along with backup plans. Coinciding with the design thinking process, the analyst can arrive at innovative ideas beyond the scope of familiar actions and these innovations are good for the organization's management.

According to Fung (2006), when identifying problems, design thinking looks into deeper layers of these problems by including viewpoints of people and highlighting the more appropriate solutions. Hence, design thinking promotes reviewing and brainstorming repetitively. The most critical skill of design thinkers is imagining the world from the varied perspectives of colleagues and service users in the present and the past (Brown, 2008). It implies that design thinking should begin with the involvement of stakeholders instead of the assumption of possible answers.

Among diversified design thinking models, the 5-step version created by Stanford D School (The d.school, 2010) is the most well-known.

1) Empathize means being considerate. Mostly, design thinkers solve the problems of others and need a profound understanding of the target group, what they want, and what their important issues are. This is why design thinkers observe, attempting to have a direct experience and having talks with the target group. As part of thinking, thinkers should be open to new ideas or have a beginner's mindset. They will not jump to conclusions, but keep questioning and being an attentive audience. Therefore, their observation becomes profound. Normally, they ask a few basic questions, what, how, and why. Problems will show up and thinkers will learn exactly what the target people need.

2) Define is the core of design thinking and can help the thinker to decide on serious problems to be solved for the target group. Problem defining starts when the thinker can synthesize problems at the beginning and ignites the desire to explore the target group's genuine needs. At this point, the thinker defines questions and acts respectively. Good problem-defining should lead to the key messages. The defining scope should not be too much open but allow colleagues to raise their opinions and brainstorm. People's involvement can determine implementation in a timely manner.

3) Ideate is a constructive method for a variety of problems that need answers different from previous ones. "Quantity" and "diversity" of problem-solving methods are the goals of ideating. The very first question is "How can we…...?" Therefore, questions should be open-ended for new answers and, at the same time, moderately close-ended to assemble specific and different ideas. Next, ideas from this brainstorming stage will evolve into prototypes.

4) Prototype means forming ideas into tangible formats, maybe putting them on paper, drawing, acting, and doing a storyboard. At first, a prototype should be a rapid and rough creation for quick learning and determining possibilities. A successful prototype can be achievable if thinkers and other concerned parties interact with the prototype. This is the way to obtain an in-depth understanding and successful solutions to problems. Overall, prototype creation directly relates to learning. The prototype may "fail fast or fail cheap or fail forward," meaning that it does not consume much time and budget at the beginning.

5) Test takes place when a low-resolution prototype is built for the test in the target group. This is to examine the similar understandings among thinkers and the target group. Testing is a means of development and improvement of new ideas. Testing is an iteration process. Hence, a prototype can be re-built and re-tested and will finally deliver unprecedented perceptions. After testing, desirable and undesirable comments are considered gifts for the production of the next improved prototypes.

To many organizations, design thinking is integral to production, services, and other operations that demand new products as the organizations can learn about genuine needs and problems the target group

and workers are having. People from units and departments are accepted to the joint development for problem solutions. They have opportunities to build and test prototypes. From this point, feedback from the test will be reviewed for further improvement. It can be said that design thinking is not "thinking too much" but "doing much" that generates innovations for organizations in both the public and private sectors.
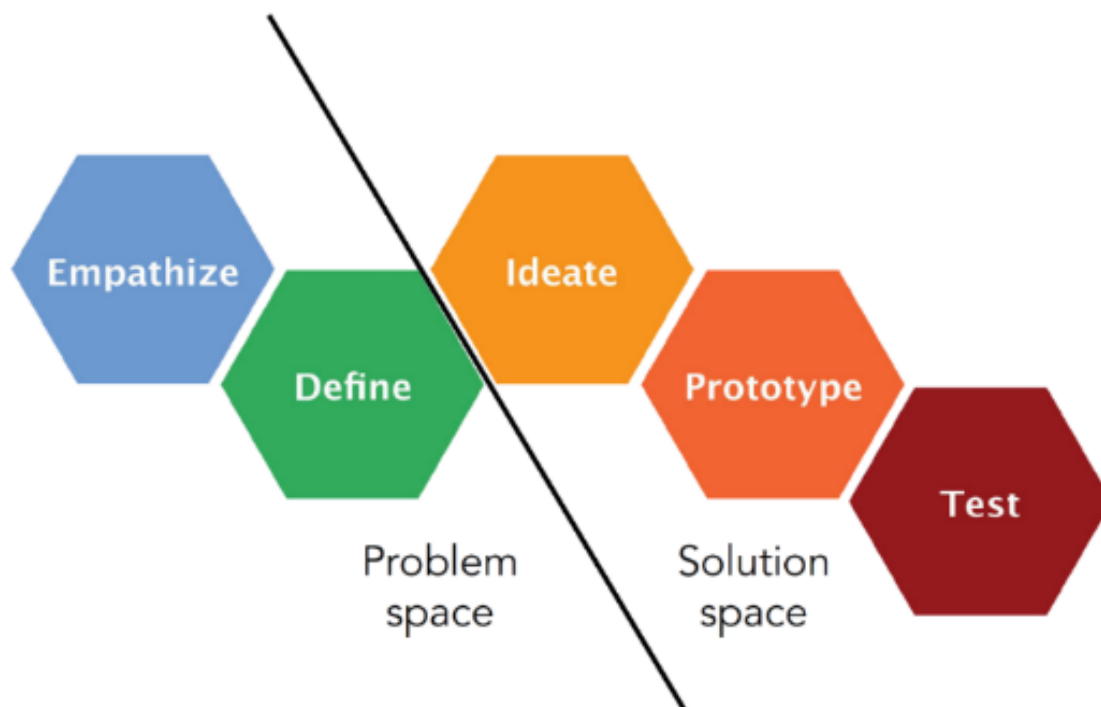

Figure 1: Design Thinking Roadmap
Source: Charoen, 2022

Characteristics of policy and plan department

Generally, this department is responsible for policy and plan analysis covering examining, coordinating, synthesizing, and proposing policies and plans in accordance with government policies and programs. As part of the country's strategy development, the department formulates and provides data on economic, political, social, administrative, and security issues, nationally and internationally, and performs other relevant assignments (Office of the Civil Service Commission, 2009). In educational institutions, policy and plan analysts monitor and evaluate the institutions' plans and programs, and carry out relevant jobs (Mahidol University, 2022).

Not far from government agencies, the policy and plan section in private companies has similar responsibilities, namely planning and strategic thinking based on the organization's policies, strategies, expectations, and goals. The section monitors and evaluates strategies and helps move towards changes effectively and efficiently (Thailand Institute of Justice, 2019).

Applying design thinking to the policy and plan department

It may be unusual for government organizations to provide an environment favorable to design thinking. To start this skill, training in different fields is a requirement, maybe in anthropology, psychology, sociology, communication, design, and architecture (Shergold, 2015). As for the policy and plan department, it heavily utilizes diversified data and intensive knowledge. Its staff should hold multiple skills, especially analytical, creative, and design thinking that will ease the process to establish new work procedures under dynamic circumstances. In this aspect, one cannot have all the required skills, however, if having teamwork, the group can learn various opinions and experiences. This reasons why design thinking can play a vital role in the successful policy and planning department. The next section presents two major stages of design thinking application.

1. Identifying problems and work procedures is the stage for stakeholders to know what causes obstacles and problems. In the policy and plan department, it is normal for executives and department staff to take some actions and they must decide the process and how to fix problems. In terms of design thinking, this is the empathizing stage. When a policy and plan analyst applies it, they should listen to and communicate with stakeholders in the beginning phase.

They may conduct an interview or raise three primary questions to executives and other staff, starting like a beginner asking what, how, and why. At this stage, he may incorporate tools preferred by anthropologists such as participant observation, discussion, and in-depth interviews. By involving oneself in the situation, he can perceive problems as his own, having a clear picture of what is going on. As a policy and plan analyst, he may try being the person experiencing a problem. For example, he may act as a service user who contacts and works with the policy and plan department and see what problems or obstacles are. After trying this role, he can create an experience map which is a stepping-stone to the proper problem-defining process.

Defining means identifying important problems. The analyst can define them after taking action with colleagues and stakeholders. The defined problems are fundamental for the analyst to design methods for problem-solving.

2. Drafting policies and work procedures are a combination of identification of problems and solutions in an organization. In this stage, the design thinker can ideate, prototype, and test.

Ideating is the component of solutions to problems and the development of policies and work procedures. This component welcomes new possibilities from people with different expertise or radical collaboration. Theoretically, the component replaces the traditional policy and plan analysis by a few executives. In this stage, stakeholders from managerial to operation levels from various sections come to ideating ideas relating to policy and plan analysis.

Collaboration from people contributes to advanced thoughts and questions. Ideating requires some initial questions, such as How might we…?" To give an example, how can we design budgeting? How can we produce academic papers? What processes and steps do we need for indicator formulation?
However, ideating may seem like letting thoughts drift. Perhaps, it is a mixture of "idea" and "create," and so thinking and evaluating should be separated. Therefore, at the very beginning, there should be many choices for selection and each choice will be evaluated and selected. It happens sometimes that some extreme and impossible ideas are developed to be the fittest answers. When ideating, the design thinker can also use techniques such as mind mapping, the Six Thinking Hats, and brain writing. These brainstorming methods bar dominant ideas from people. The principle of ideating counts on the equal importance of ideas without any judgment. Hence, after many ideas arise, staff may group them, and review and summarize choices for prototype development.

Prototyping is a critical component as it is meant for testing that will pass stakeholders' feedback, negatively and positively, on to the design thinker. If compared with general policy and plan development from experts and executives, design thinking places emphasis on doing.

More importantly for prototyping, minimal cost and time consumption is an advantages. Prototyping is also the fastest way to obtain opinions from service users and staff. The sooner a prototype is finished, the sooner prototype policy and work procedures will be released. During the prototyping process, staff can learn and adjust anytime. Practically, prototyping is applicable to the organization's policy and plan development. A prototype can be a drafted policy or plan that staff can test for months or years according to certain contexts.

If design thinking is applied in the first period of policy and plan development, staff can feel that their ideas are being implemented. This would make it easy for them to follow policies and initiatives willingly and efficiently. Dorst & Cross (2001) and Liedtka et al (2013) found discussion with stakeholders at the beginning would benefit the design thinking process. Similar to the case of policy and plan analysts, discussion with colleagues and other concerned staff promotes bringing policies and plans to practice with effectiveness and efficiency.

Table 1: Summary of design thinking application to policy and plan department by author

Application process	Stakeholder	Technique and major component
1. Identifying problems and work procedures	1. Executive 2. Policy and plan analyst 3. Concerned people	1. Empathizing - Observation - Discussion, interview 2. Defining problems, ideating or radical collaboration of concerned people, and summarizing policies and work procedures
2. Drafting policies and work procedures	1. Executive 2. Policy and plan analyst 3. Concerned people	1. Drafting policies and work procedures 2. Testing policies and work procedures

The benefit of design thinking applied to the policy and plan department

The researcher summarizes the following benefits.

First, design thinking trains people to fix problems at work step by step. Compared with the past, problem-solving may be unsystematic and not thorough or may ignore some causes. If employing design thinking, thinkers investigate problems very carefully, come to a true insight into these problems, and tackled them correctly.

Second, design thinking is accompanied by choices of answers and information for concerned persons to consider and make decisions variously. By having these, thinkers perceive different points of view and search for the best answers before taking action.

Third, the organization has backup plans and problem-solving options that help decide what is the best. They are prioritized and can be chosen at the right time.

Fourth, design thinking trains people to produce more ideas and express opinions. Brainstorming gathers data from various viewpoints of people. The policy and plan analyst can think and learn from multiple aspects and present new work procedures. Basically, sharing ideas among people is a way to train people to think constructively, both for problem-solving and management.

Fifth, there are new work procedures and subsequent innovations. Design thinking gives chances to staff to think out of the box, implying that they can explore brand-new work processes and management. They get the picture of the changing society and technologies and so they must adapt themselves and keep pace with changes.

Sixth, the organization adopts systematic work processes, especially for policy and plan analysts. Their systematic thinking process will result in satisfactory performance and increasing capacity that benefits themselves and the organization.

Conclusion

Design Thinking is a thinking process to obtain a detailed understanding of problems. It is a human-centered approach that requires new ideas from stakeholders and these proposed ideas are further developed into innovations, strategies, policies, and procedures that will benefit the organizational management.

It is not only innovation derived from this thinking approach, but the improved performance of staff who apply this systematic thinking and obtain new methods of working. Design thinking is made of five major components; (1) Empathize, (2) Define, (3) Ideate, (4) Prototype, and (5) Test

This paper examines design thinking in detail and concludes that the policy and plan department has focused on planning and laying out strategies and goals in relation to the organization's mission to be accomplished effectively and efficiently. Organizational accomplishment includes management, monitoring, and evaluation based on strategies and expected outcomes. The paper presents two stages of design thinking application.

Application of design thinking to the organization's policy and plan department

Stage 1 Identifying problems and work procedures by applying two components of design thinking

1. Empathizing through observation, discussion, and interview. The design thinker involves managerial staff, colleagues, and concerned persons to learn about problems at all levels.

2. Defining problems is the method to find out important or top-prioritized problems that need resolutions. When defining, the policy and plan analyst opens for opinions from stakeholders, namely executives, colleagues, and concerned persons. Following this, the analyst can define problems. Both executives and analysts can design policies and work directions that suit the organization's vision and mission.

Stage 2 Drafting policies and work procedures by using three components

1. Ideating is a method for potential answers to problems and policies. This component requires brainstorming before evaluating. By separating the two actions, the design thinker can have many numbers of answers and, then, evaluate what the most suitable answers are. To prevent the domination of some people, the thinker should employ certain elements like the mind map, the Six Thinking Hats, and brain writing. These suggested tools ease grouping ideas and turn them into refined prototypes or policies and work procedures.

2. Prototyping is the construction of a model or draft policy or work procedure to be tested.

3. Testing allows the design thinker to test the prototype or draft policy. The thinker will know both positive and negative feedback from colleagues and other concerned staff. Testing is a principle of design thinking because this approach focuses on action and feasibility.

To sum up, the application of design thinking to the policy and planning department is a method of modern organizational management. Design thinking involves staff from all levels brainstorming to reach the desired missions and visions. This concept is not limited to the policy and plan department, but other sections that can adjust the concept in different contexts.
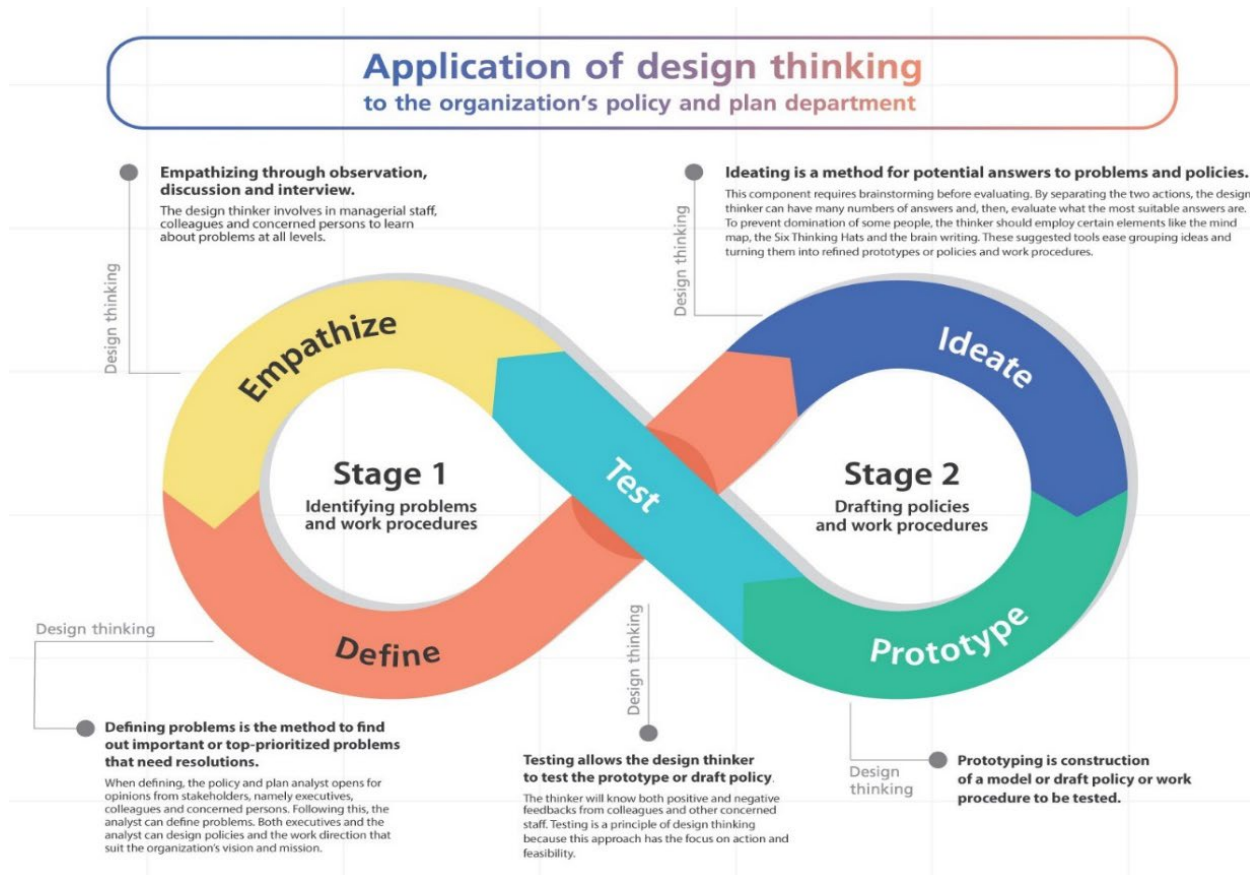
Figure 2: Conclusion of Application of design thinking to the organization's policy and plan department

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