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## DEVELOPING A MONITORING AND EVALUATION (M&E) PLAN FOR ORGANIZATION'S STRATEGIC OBJECTIVES USING THE DESIGN THINKING APPROACH

Анотація. Мета цього дослідження полягала в тому, щоб розробити теоретичну базу моніторингу та оцінки, адаптовану для менеджерів малого та середнього бізнесу, а також керівників проектів. Дизайн-мислення — це орієнтований на людину підхід, який передбачає залучення зацікавлених сторін на різних рівнях його застосування у розвитку інновацій. Спочатку як інженерний метод, дизайн-мислення застосовувалося в різних сферах, включаючи підприємництво. У цій роботі представлена розширена версія моделі подвійного діаманта, яка використовується в дизайн-мисленні. Модель подвійного діаманта була розроблена у 2005 році як графічний підхід для досягнення процесу проектування. Глибокий аналіз моделі, проведений автором, свідчить про те, що її можна застосовувати для формулювання стратегічних цілей бізнесу, чого раніше не розглядалося в літературі. Таким чином, ця праця має на меті зробити внесок у науковий доробок, розширюючи модель подвійного діаманта для формулювання стратегічних цілей. Для розробки цієї основи була використана нормативна концептуальна методологія. Розробка плану моніторингу та оцінки для бізнесів або проектів на основі традиційної методології огляду літератури ілюструє, як дизайн-мислення може запропонувати нову перспективу цих процесів, допомагаючи вирішувати ключові виклики. У статті продемонстровано, як кожен із п'яти етапів процесу дизайн-мислення може бути використаний під час розробки плану моніторингу та оцінки. Хоча цей процес розробки може бути виснажливим і складним, застосування підходу дизайнерського мислення може спростити та оптимізувати його, забезпечуючи активну участь усіх зацікавлених сторін через представлену розширену структуру. Рекомендації для майбутніх досліджень включають застосування запропонованої розширеної моделі в емпіричних дослідженнях, що стосуються великих організацій. Для практичного використання менеджерам малого та середнього бізнесу рекомендується застосовувати що модель при розробці стратегій або інтегрувати її в управління проектами для покращення розвитку плану моніторингу та оцінки проекту.

**Ключові слова**: Дизайн-мислення, моніторинг та оцінка, стратегічний план, людиноцентричний підхід, план моніторингу та оцінки

JEL Classification: L1, L21, L26



Absztrakt. E tanulmány célja az volt, hogy a kkv-menedzserek és projektmenedzserek számára adaptált elméleti keretet dolgozzon ki a nyomon követésre és értékelésre. A design-gondolkodás egy emberközpontú megközelítés, amely az innováció fejlesztésében való alkalmazásának különböző szintjein bevonja az érdekelt feleket. Eredetileg mérnöki módszer, a design gondolkodást számos területen, többek között a vállalkozói szférában is alkalmazzák. Ez a tanulmány a design gondolkodásban használt kettős gyémántmodell kibővített változatát mutatja be. A kettős gyémántmodellt 2005-ben fejlesztették ki a tervezési folyamat grafikus megközelítéseként. A szerző a modell mélyreható elemzése azt mutatja, hogy a modell használható a stratégiai üzleti célok megfogalmazására, amire korábban nem volt példa a szakirodalomban. Így e dolgozat célja, hogy hozzájáruljon a tudományos ismeretanyaghoz a kettős gyémántmodell stratégiai célok megfogalmazására való kiterjesztésével. A keretrendszer kidolgozásához normatív fogalmi módszertant alkalmaztunk. Egy vállalkozás vagy projekt monitoring- és értékelési tervének kidolgozása a hagyományos szakirodalmi áttekintés módszertanán alapulva szemlélteti, hogy a tervezői gondolkodás hogyan kínálhat új perspektívát ezeknek a folyamatoknak, segítve a legfontosabb kihívások kezelését. A cikk bemutatja, hogy a tervezői gondolkodás folvamatának mind az öt szakasza hogyan használható a monitoring- és értékelési terv kidolgozásához. Bár ez a fejlesztési folyamat fárasztó és összetett lehet, a tervezési gondolkodás megközelítésének alkalmazása egyszerűsítheti és ésszerűsítheti azt, a bemutatott kibővített keretrendszer révén biztosítva valamennyi érdekelt fél aktív részvételét. A jövőbeli kutatásokra vonatkozó ajánlások között szerepel a javasolt kiterjesztett modell alkalmazása nagy szervezeteket érintő empirikus vizsgálatokban. Gyakorlati felhasználás szempontjából ajánlott, hogy a kkv-k vezetői alkalmazzák a modellt a stratégiafejlesztés során, vagy integrálják a projektmenedzsmentbe a projektfelügyeleti és értékelési terv kidolgozásának javítása érdekében.

*Kulcsszavak:* Design-gondolkodás, monitoring és értékelés, stratégiai terv, emberközpontú megközelítés, monitoring és értékelési terv

Abstract. The objective of this study was to develop a theoretical framework tailored for managers of small and medium-sized businesses, as well as project managers. Design thinking is human centered approach that involves stakeholders at different levels of its application in the development of innovations. Originally as an engineering method, it has been applied in diverse fields, including entrepreneurship. This paper presents an extended version of the double diamond framework used in design thinking. The double diamond framework was developed in 2005 as a graphical approach for achieving project design process. The author's in-depth analysis of the model indicates that it can be applied to formulating business strategic objectives, a use case not previously discussed in the literature. Therefore, this paper aims contribute to the scientific body of knowledge by extending the double diamond model for strategic objective formulation. A normative conceptual methodology was used to develop this framework. The development of a monitoring and evaluation plan for businesses or projects, based on a traditional literature review methodology, illustrates how design thinking can offer a new perspective on these processes, helping to address key challenges. This paper demonstrates how each of the five stages in the design thinking process can be employed during the development of a monitoring and evaluation plan. Although this development process can be tedious and complicated, applying the design thinking approach can simplify and streamline it, ensuring active involvement from all stakeholders through the introduced extended framework. Recommendations for future research include applying the proposed extended framework in empirical studies involving large organizations. For practical implications, managers of small and medium businesses are encouraged to apply this model when developing strategies or incorporate it into project management to enhance the development of a project's monitoring and evaluation plan.

*Keywords*: Design Thinking, Monitoring and Evaluation, Strategic Plan, human-centered approach, Monitoring and Evaluation Plan



Introduction and Problem Description. Successful organizations are guided by strategic plans that provide them with an overall goal they aim to achieve. Strategic plans are looking into the future and carefully and thoughtfully aligning the strength of an organization to the opportunities that are available to the organization in its chosen business environment [1]. Achieving the organization's overarching goal is made possible with a monitoring and evaluation plan that breaks down the mission and vision of the strategic plan into strategic objectives, specific activities, achievable targets, and indicators. The development of a monitoring and evaluation plan for a strategic plan is equally as tedious as the development of the strategic plan itself.

Monitoring and evaluation processes have been criticized as being too narrow and do not capture system-wide attributes and effects [2]. This is even more pronounced when the monitoring and evaluation process covers an entire organization or system rather than a specific well-defined service or project. Therefore, monitoring and evaluation processes covering complex systems, organizations, and interventions require a paradigm shift [3] where all attributes of the system can be captured, monitored, and evaluated. Owing to the increasing use of monitoring and evaluation processes in organizations, the WHO advocates for the use of system-wide approaches such as system thinking (design thinking) to guide the design of monitoring and evaluation processes [4]. The development of the monitoring and evaluation plan and its implementation needs to be considered from the system's thinking perspective while embracing the human element which recognizes that effectiveness is rooted in the journeys of people. The system's thinking and human element are embodied in the design thinking process.

The design thinking methodology prioritizes deep empathy for the end users' desires, needs, and challenges to get a better understanding of the problem such that the solution developed can be more comprehensive and effective [5,6]. Design thinking is a human-centered process that emphasizes observation, collaboration, fast learning, visualization of ideas, rapid concept prototyping, and concurrent business analysis [7, 8]. The elements as outlined in the design thinking process are similar to the process that monitoring and evaluation follow. Thus, both design thinking and monitoring and evaluation processes do not follow the linear and analytic approach but rather integrative and iterative approaches to enhance and improve organizational outcomes.

Design thinking is seen to be evolving rapidly [7] and so is monitoring and evaluation contributing significantly to processes in organizations and the global economic landscape. The two fields can be seen as anchored in practice and characterized by methods and tools. Therefore, illustrating how design thinking can provide monitoring and evaluation processes with a new perspective for addressing challenges is key. This paper presents the use of the design thinking process in developing a monitoring and evaluation plan for an organization's strategic plan.

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Literature review. Design thinking is increasingly being used as an approach to overcome uncertainty because it helps with strategic focus. The design thinking process also ensures the efficient use of resources, including time and money, in the development of strategy, focusing on results [9, 10]. These results would however need to be measured against desired outcomes that were set during the strategy development.

Not only is there an increase in the use of design thinking for strategy development but there is also a significant growth in publications on design thinking and a change in meaning of design thinking. One of these new meanings is how designers think (design cognition) and work (design processes) as well as the use of design or design-oriented approaches in business and management. A few see it as a "way of working" [11]. Change theory has been argued to help identify where design thinking has to be supplemented by other practices to become effective in "strategic design" [11]. One such practice is project management which recently and in some other projects was identified to lack delivery quality/output. Design thinking was thus identified as a valuable addition to the project management process. Although the ideation stage of design thinking was identified as the most important to integrate into project management's planning phase, the author, emphasized that combining both methods and processes will achieve targeted results at the expected quality with the allocated resources [12]. It is however important to find a way to measure the expected quality. Emphasis is placed on the fact that project areas need to be assessed comprehensively to ensure that the benefits of integrating design thinking are actually realized [12]. The integrating design thinking into project management is achievable with the benefit of having a clearer project objective [12]. There is however limited research about the implementation or the impact on the use of design thinking in project management.

Jaskyte & Liedtka [13] in their research demonstrate that Design Thinking practices have a variety of positive outcomes, not only for the users for whom the solution is being designed for but for the individuals and the organization as a whole. They state that one of the positives outcomes of using design thinking practices is improved implementation and adaptation as well as enhanced resource utilization. Their research suggests that the benefits of using design thinking are vast and go far beyond improvements in the quality of the solutions that are produced out of using the methods and practices.

Verma et al., [10] used R&D-intensive firms to study the adaptation of the design thinking because the concept is associated with innovation and creativity. They, however, recommended that similar studies could be done considering different functions of firms.

The literature review indicates a significant increase in the use of design thinking methods and practices in strategy development, helping overcome uncertainty and ensuring the efficient use of allocated resources. Integrating design thinking into project management, particularly, can improve project outcomes and quality. However, outcomes and the quality of these outcomes need to be effectively measured. Verma et al., [10] made a research call to consider researching different functions of



the firm to test the effectiveness of the use of design thinking. Other scholars have also proposed to supplement design thinking with other practices.

Researchers and practitioners recognize design thinking as an enabler of innovation and change not only for products but also for new user experiences, strategic decision-making, and organizational change [14]. Design thinking is a creative problem-solving process not only for innovation [14,15] but also a sense-making approach to create new strategies [14,16].

The adoption of design thinking has increased being used in diverse landscapes thereby broadening its use such as innovation in the making of strategic choices or changing organizational culture [14]. Currently, there is the integration of design thinking into strategic management where strategic planning now requires the incorporation of customer data into daily strategic planning. This is what is termed as "design-led strategy"[16].

In complex projects, Design thinking has been employed as a tool that effectively developed the project strategies, frameworks, and tools for implementation. For instance, the design thinking method was used to develop and validate a peer evaluation scale for team-based learning. The design thinking method helped in reflecting learners' opinions in developing a peer evaluation instrument [17].

In Australia, the design-thinking framework was used in developing a functional and easy-to-understand city dashboard, the Smart Social Spaces [18]. Steinmetz-Weiss et al., [18] used this project as a case study to show how design thinking can be employed in large public projects with a successful outcome. It showed a unique collaboration between different stakeholders. Another public project that used the design thinking process is a rail project that introduced the UK high-speed rail to the UK involving the construction of a large viaduct across a massive lake within an environmental area that had many recreational activities. The initial project design was developed without input from external stakeholders like the local community and thus faced resistance because it was affecting many recreational activities. A redesign thinking framework [19].

Knight et al., [16] advocate for design thinking to be incorporated into organizational practice and other researchers agree because they say that design thinking has much more to offer to projects and project practitioners from planning and delivering of projects, especially complex ones. Liedtka & Locatelli [19] posit that Design Thinking provides concrete, teachable, and scalable tools, and processes perfect for planning and delivering complex projects such as ethnographic research Job-to-be-done analysis, journey mapping among others, and advocate for researchers to find out how design thinking can impact the management of projects. "How might Design Thinking change the nature of projects we plan and deliver?" What remains is how do we monitor that we are delivering what the stakeholders have requested. This paper seeks to answer by suggesting how the design thinking framework can be used in developing a monitoring and evaluation plan for projects.



"Design thinking is a human-centered approach to innovation that draws from the designer's toolkit to integrate the needs of people, the possibilities of technology, and the requirements for business success." Tim Brown, CEO of IDEO [20].

Tim Brown also underscores the fact that Design Thinking techniques and strategies of design fit at every level of an organization and it is not only for designers but also for creative employees and leaders who seek to inculcate design thinking into every level of an organization. Design thinking combines human desirability, technological feasibility, and economic viability. It provides a means of digging a bit deeper to discover ways of improving user experiences. Design Thinking is a tool that can be used to tackle a variety of problems and can be used by everyone through the adoption of a design thinking mindset into work procedures [20].

The most important phase of design thinking is empathy building. Through understanding people affected by an issue, more impactful solutions can be implemented where the user remains the focus of the final implementation [20]

The design thinking process has five stages [20]:

- 1. Empathize: The first stage of empathizing is a very important stage in the process as it sets the tone because it helps us to understand the stakeholders' needs in relation to a particular problem.
- 2. Define: The define stage is where all the information that has been collected and observed is synthesized to frame the problem clearly.
- 3. Ideation: During the ideation stage, the search for possible solutions begins, and design thinking at this stage encourages as many ideas as possible.
- 4. Prototyping: Prototyping is where the solutions that have been proposed during the ideation stage are produced at the lowest cost possible with all its features. Some methods used for prototyping include sketching and storyboarding.
- 5. Testing: During the testing stage, the prototype is tested with customers to see if the solution is satisfactory and meets their needs or solves the problem. Design thinking helps with a deep understanding of the problem and those affected by the problem.

**Research goal.** This paper proposes an extended framework of the double diamond to address a gap found in the literature. The core goal is to present a modification of the double diamond technique for developing a monitoring and evaluation (M&E) plan for an organization's strategic objectives. This advancement of the existing diamond framework accommodates contemporary business developments, such as project management. Ultimately, the paper aims to extend beyond business applications by introducing a new research framework for future empirical studies. In essence, it proposes a framework to enhance strategic objective planning.

**Methodology and Data.** This paper applies a conceptual and normative approach as it proposes a new framework for designing business strategic objectives. It utilizes existing literature data, secondary or documentary. Following the literature review, the paper employs the double diamond conceptual framework, a key framework used in design thinking. Based on identified gaps in the literature and modern business dynamics, the paper modifies the double diamond and contributes a new model to the existing literature for practical applications in business.



**Results and Discussions.** Monitoring and Evaluation (M & E) is a systematic process of collecting data, analyzing data, and synthesizing data on a project or program to provide information to decision-makers in the project, program, or organization [21,22]. The data from Monitoring and evaluation can also inform policy at the national level. For the M&E process to effectively and efficiently gather data to inform decisions, it is guided by an M&E Plan. An M&E plan is a document that outlines how projects, programs, or strategic plans will be monitored and evaluated [21-23]. An M&E plan clearly states objectives, activities, inputs, outputs, outcomes, impact, indicators targets, how data will be collected and analyzed, and how project data will be disseminated [23-24]. The plan tracks progress in all these areas to assess results and effectiveness. The development of an M&E plan is tedious; however, it can follow the design thinking process of empathizing, defining, ideation, prototyping, and testing to make it less cumbersome.

1. Empathize: In the Monitoring and Evaluation plan process, empathize will exist in engaging stakeholders and gathering of information regarding the strategic plan to help appreciate the intent of the strategic plan. Design thinking involves taking into consideration various stakeholders both within and outside your organization. You need to ask questions such as "Who are the people affected by it?", "Who are the people causing it?". In developing an M&E plan stakeholder engagement and initial data gathering is done in various ways. This can be through in-depth interviews with stakeholders, workshops with stakeholders, and document reviews.

2. **Define:** At this stage, in the M&E plan development process, data gathered from stakeholders is analyzed and synthesized to understand the issues within the organization's strategic plan. It is at this stage that data analysis and synthesizing approaches such as SWOT and PESTLE are utilized.

3. **Ideation:** This stage involves developing and deciding on the strategic objectives for the M&E plan. It includes determining the activities required to achieve these objectives, identifying necessary inputs, and anticipating the results of these activities (outputs), intermediate results (outcomes), and long-term results (impact). Additionally, it entails defining the indicators to be measured and outlining the plan and approach for monitoring outputs and evaluating outcomes and impact. This stage is iterative and requires engaging various stakeholders both within and outside the organization.

4. **Prototyping:** The results of the earlier stages (empathy, define, and ideation) are put into the different M&E frameworks to simplify the thought processes to make meaning and for easy understanding. All the information is put into the Monitoring and Evaluation Plan as a draft document for validation at the testing stage.

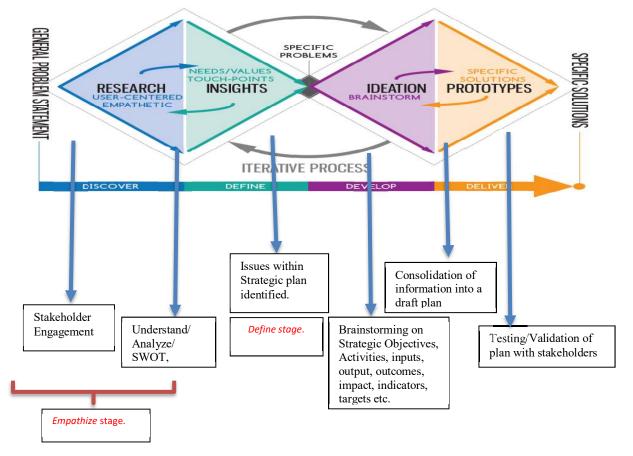
5. **Testing:** The testing stage in design thinking can be equated to the M&E plan validation stage, where stakeholders are engaged at different levels to validate the information contained in the draft M&E plan or otherwise. At this stage, stakeholders can suggest changes, inclusion, or revision of objectives, activities, inputs, outputs, outcomes, impacts, indicators, targets, and/or any other part of the M&E plan. These suggestions are incorporated into the document and can be tested/validated again for accuracy before it is accepted and implemented. However, during the implementation

of the plan, Monitoring and evaluation principles allow changes to be done based on data and evidence to ensure that the intent of strategic plan is achieved. The validation process can take different approach; however, stakeholder validation workshop is the commonly used.

The authors' modification of the double diamond technique to achieve this paper's objective of developing a monitoring and evaluation (M&E) plan for organization's strategic plan objectives is presented in Fig.1.

Here we proceed to provide a more detailed explanation of figure 1 above:

**Discover:** In design thinking, the stage of discovering is where the problem of interest is identified and understood from the perspective of the stakeholder (who could be the user of the potential solution). At this stage the problem is discovered from the stakeholders' perspective and what could be a potential solution to problem also emanate from the stakeholder. Similarly, in the M&E plan development process, the discover stage involves talking to stakeholders of the organization through different means to get an understanding of the organization's strategic intent from the stakeholders' perspective.



**Double Diamond DESIGN PROCESS** 

Figure 1: The double diamond and the logic model framework We modified this figure linking design thinking stages to the M&E plan development process.

Source: own editing based on [25]



**Define**: the defining stage in the design thinking is the point where all information gathered about the problem form stakeholders is synthesized to clearly define the problem that reflect the understanding and perspective of the stakeholder. Similarly, the define stage in the M&E plan development process is where the information gathered from stakeholders about the organization's strategic intent is analyzed and synthesized. The organization is understood and analyzed to discover its strength, weaknesses, opportunities, and threats from the stakeholders' perspective. In addition, other aspect of the organization (such as PESTLE) could be discovered at this stage from the stakeholder perspective. The organizations strategic objectives and goals for the M&E plan may potentially be defined here.

**Develop:** At this stage in design thinking, different potential solutions are refined and scaled down to a solution(s) that would be most suitable to stakeholders. Prototyping of the suitable solution can begin here with a sketch of solution in a 2D or 3D pictorial form for prototyping in the next stage. In the M&E pan development process, this is the stage where the strategic objectives and goals of the organization for M&E plan is fully developed to pave way for the identification and listing of activities, inputs, outputs, outcomes, impacts and indicators for the full development of M&E plan document.

**Deliver:** The deliver stage in design thinking involves creating of a prototype of the suitable solution. The protype after it has been created will be tested with stakeholders for feedback and to assess if the solution is able to meet their needs. The stakeholder feedback is incorporated, and a proof of concept can be developed for the solution. In the M&E plan development process, the deliver stage will be point where draft of the M&E plan document is created. The content of the draft M&E plan will be tested and validated with stakeholders. Stakeholder feedback is incorporated into the document to reflect the organizational stakeholders' intent.

The four D process (discover, define, develop, and deliver) is iterative and interconnected. At any stage of the process, there may be a need to go back to the previous stage(s).

**Conclusion and prospects for further Research**. The objective of this study was to develop a framework for monitoring and evaluation for small and medium business and project managers. Developing a Monitoring and Evaluation (M&E) plan for a strategic plan can be a challenging task even for the most experienced organizations, leadership of institutions or project managers. It will require the expertise of a monitoring and evaluation specialist. However, with an understanding of the design thinking process, the process of developing a Monitoring and Evaluation plan can be seamless and less stressful. Undertaking empathy by engaging stakeholders and going through the other iterative process of design thinking, the components required for an M&E plan will come out and be agreed upon by stakeholders. This sets the tone for the organization to focus and achieve set objectives in the strategic plan.

This paper introduces a new framework that provides a new extended model for future researchers to apply in future research empirical research. In doing such future



research, the researchers are encouraged to apply this model in small and medium businesses to see how it can assist them in developing strategies and improving performance or incorporate it into project management to see how it assists in developing the monitoring and evaluation plan of the project.

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