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Utilising Design Thinking To Alleviate The Effects Of Covid-19 On Civil Servant Operations

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Abstract The phenomenon of design thinking has a significant potential to form a synergistic interaction of individual abilities of leaders, managers and civil servants in the context of global challenges caused by the consequences of the COVID-19 pandemic. Against the backdrop of these issues, ensuring the effectiveness of key state institutions and organisations is of particular relevance, which, in turn, requires a detailed analysis of potential measures to counteract negative impacts. The aim of the study is to analyse the potential of design thinking in the context of developing and implementing a comprehensive mechanism for overcoming the effects of COVID-19 on the activities of civil servants. The article focuses on the functionality of design thinking in terms of civil servants' basic professional and personal skills. The possibility of their allocation as separate indicators of the concept is considered. The structural elements of design thinking are outlined, and each of them is described in detail. The imperative for establishing a unified mechanism to address the pandemic's existing and potential adverse consequences is clearly demonstrated. The peculiarities of integrating design thinking based on the Stanford concept into the work of civil servants in Ukrainian public institutions are described. It is assumed that implementing this goal will increase the efficiency of civil servants, forming an effective mechanism for mitigating the risks caused by the pandemic. The author identifies sustainable principles that can facilitate the operational and strategic management of team performance in the civil service. The priorities for further improvement of design thinking skills to improve the efficiency of public institutions are revealed. The specifics of the Stanford model as an effective tool for team development and management decision-making are investigated. The main principles of the mechanism for overcoming the destructive effects of COVID-19 through the introduction of design thinking technology, which helps improve public institutions' efficiency and quality of work and create favourable conditions for team effectiveness, are analysed. The study's results have practical value in the development, improvement and modernisation of the design thinking concept to minimise the impact of the adverse effects of the COVID-19 pandemic.

Index Terms corporate culture, civil servants, design thinking, hard skills, soft skills, consequences of COVID-19, professional competences of staff

I. Introduction

The actualisation of the phenomenon of design thinking today makes it possible to actively introduce it into institutions whose functioning requires integrating new creative approaches to levelling the challenges and threats of our time. In this context, public institutions need to improve the efficiency of the management paradigm.

Most management processes in public institutions are implemented by specialists who must have the necessary skills

and abilities to formulate solutions as complementary as possible to the tasks and goals set. Implementing design thinking approaches in the context of an innovative approach to the professional training of civil servants has the potential to develop and actively improve hard and soft skills.

In the context of Ukrainian realities, developing and further implementing the methodology and programmes of existing practical successful models of developed countries is necessary. These models are positioned by a system of specific prin-

ciples and consistent processes of optimising the corporate culture of civil servants. The latter helps to improve performance and encourages the search for non-standard, balanced alternative solutions.

Design thinking focuses on empathy, communication competence and emotional intelligence. These factors synergistically contribute to the active development of the internal environment of a government organisation. The problems caused by the COVID-19 pandemic in 2019 and 2020 are ongoing, provoking significant negative dynamics within the state apparatus and global destruction of management processes. In order to avoid related risks and mitigate potential threats, it is advisable to use all available opportunities to improve human capital performance.

Civil servants are responsible for formulating and approving effective management decisions. The current situation requires the creation of a mechanism to ensure the high quality of civil servants' performance.

II. Literature review

Scientists have studied the possibilities of the design thinking concept, its structure and bare functionality and analysed its potential in the vector of development and implementation of a comprehensive mechanism for mitigating the consequential impact of COVID-19 [1]. The latter variation has been identified by researchers [2] as a particularly effective approach in the context of the professional activities of civil servants. This is based on an analysis of the practice of its implementation and improvement in developed countries.

According to scientists [3], design thinking is a concept that synergises creative and non-standard approaches, primarily to develop practical solutions to new challenges. The authors position design thinking as an essential tool for modern management.

Implementing the design thinking system on an international scale is a common practice among government and commercial organisations. This experience is considered significant in the context of maximum implementation in Ukrainian realities, from an educational institution to a government agency. Design thinking activates creative abilities, develops emotional intelligence, and creates conditions for developing practical skills for further effective management. This is the opinion of [4]. Given its status as a driver of both individual and collective advancement, design thinking necessitates a distinctive shift in the methods employed by civil servants. Design thinking in modern government structures is a conceptual element of additional educational programmes, as it allows mastering practical skills and knowledge that can significantly improve civil servants' performance. According to [5], using design thinking stimulates the effectiveness of collective interaction, contributes to forming a favourable business climate and corporate culture, and focuses efforts on specific tasks. In particular, it can be employed to conduct a structural analysis of potential solutions to prevent or mitigate new challenges and threats. Design thinking allows for inno-

vative approaches, mechanisms and solutions for commercial organisations and governmental entities.

Prior training is an essential factor in integrating design thinking into government structures. Podolchak et al. [6] argue that improving infrastructure, detailing the competence development programme for employees, and stimulating the development of continuous self-education skills can serve as effective means of rapid training and practical application of acquired skills and abilities. The issue of COVID-19 remains relevant today due to the significant scale of the negative consequential impact on all aspects of public life, including the level of readiness of civil servants to mitigate existing and potential threats [7] In this context, using the concept of design thinking to adjust work processes within the activities of a public institution contributes to the formation of an effective environment for making high-quality and optimal management decisions.

Modern scholars [8] argue that forming a mechanism for preventing the consequences of a pandemic in the civil service system based on design thinking requires proper infrastructure preparation, appropriate programme and design work, and readiness for possible related challenges and obstacles. Despite modern scientists' significant achievements in the aspects of the problem under study, ensuring civil servants' effectiveness in post-COVID crisis conditions remains relevant and requires extended research.

The study aims to analyse the potential of design thinking in developing and implementing a comprehensive mechanism for overcoming the effects of COVID-19 on civil servants' activities.

III. Materials and methods

Several research methods were used to analyse the possibilities of applying design thinking to develop a comprehensive mechanism for counteracting the impact of COVID-19 on civil servants' activities. In particular, analysis and synthesis allowed us to study several scientific materials and modern theoretical and practical publications on the possibilities of implementing design thinking and its potential in unfavourable conditions for government organisations and structures. A systematic analytical approach was employed to examine the results, and recommendations were formulated for the further development and impact of design thinking implementation. The article employs a search method to delineate the distinctive characteristics of design thinking as a conceptual framework that enhances the efficacy of civil servants' activities, mitigates the adverse effects of external influences, and equips them to anticipate and address existing and potential challenges and risks.

The comparative method was employed to analyse the Stanford and 4W models. This revealed that the former is best placed to implement the concept of design thinking in the context of Ukrainian society's development.

The survey methodology was utilised to analyse the level of development of hard and soft skills of civil servants from different organisations and to determine their skill levels.

By employing the abstraction technique, the critical issues about the performance of civil servants and their detrimental impact on the quality of work were successfully identified. These aspects reveal potential ways of improvement through the integration of design thinking technologies based on the Stanford model as a tool to counteract the consequential impact of COVID-19 on performance, focusing on the creation of infrastructure, development of specialised skills, abilities and knowledge, and increasing the emotional intelligence of employees.

The applied research methods enabled us to identify the potential for improving skills to ensure the mechanism's functioning and counteract the pandemic's effects on civil service.

IV. Results

The phenomenon of design thinking has a significant potential to increase the efficiency of management decisions, integrate innovative approaches to achieving goals, and solve problems caused by the consequential destructive impact of the COVID-19 pandemic. The concept of design thinking involves the implementation of integrated approaches, methods, and tools that focus on transforming managers' thinking towards the concepts of flexibility, adaptability, and structuredness.

Against modern society's development trends, design thinking is positioned as particularly significant and functional for civil servants who must effectively use their managerial skills to achieve their goals. Design thinking is the dynamics of one's thinking based on creativity, non-standard approaches, critical thinking, high motivation, and continuous self-development.

Based on the concept of design thinking, it is possible to intensify the quality of management of state structures and institutions, which ultimately affects the country's macroeconomic climate [9]. In this context, developing the design thinking concept and its practical implementation are prioritised for government agencies, structures, and organisations.

Today, the most popular design thinking models are the Stanford Design Thinking Model and the 4W model. The former is based on several essential components that define the conceptual programme of its functionality. These include focus (concentrating on a specific issue, achieving a comprehensive understanding), empathy (developing emotional intelligence and working directly with people or issues related to people), prototyping (an essential step in generating ideas, involving the creation of an intellectual or physical product to obtain feedback and understand the quality of the product and its potential use), testing (assessing the quality of work, monitoring processes and finding ways to improve), idea generation (using creative ideas to find solutions, and non-standard approaches that deliver quality results) [8].

An alternative model of design thinking is 4W. It is based on the concepts "What is?", "What if?", "What is WOW?" and "What works?" Each stage involves identifying the problem and possible solutions, creating a prototype, developing an effective mechanism for solving the problem, and selecting the most optimal solution.

Implementation of the concept of design thinking in the professional environment of civil servants motivates managers to improve and develop soft skills. Also, it has a qualitative impact on the effectiveness of using hard skills. Soft skills of civil service include a specific categorisation, particularly communication skills, including effective communication, listening and persuasion skills, and the ability to express thoughts and ideas clearly and competently. The second category includes mastering skills in building positive relationships, including the willingness to cooperate and teamwork, conflict resolution, and building trusting friendships. The third category of soft skills contains aspects of personal development, such as self-control and continuous self-development, the ability to work in a stressful situation and overcome its consequences, and an appropriate level of innovative thinking and creativity [2].

Soft skills are identified as universal personal characteristics that can be effectively implemented in any field of activity. The most important are emotional intelligence, adaptability, communication skills, problem-solving, leadership, teamwork, creativity, and others. In order to analyse the quality of the COVID-19 response, it is necessary to use deep feedback mechanisms, develop emotional intelligence and apply creativity. This is well aligned with the characteristics of the Stanford Design Thinking Model, making it the most appropriate choice for the study. The main principles and advantages of this model are shown in Table 1.

By conducting surveys among a representative sample of government representatives, senior managers and officials, the level of development of hard and soft skills was determined, and the potential effects of the introduction of design thinking based on the Stanford model were predicted. For the analytical study, the following hard skills assessment parameters were proposed, which comprehensively and in detail reflect the quality of civil servants' practical skills: assessment, execution, control, level of education, operational planning, regulation, design thinking, strategic planning, knowledge of the Ukrainian language, knowledge of foreign languages [1]. The selected categories best describe the mastery of hard skills, and it is proposed that a scale for assessment be used: high, medium, and low. The results obtained on the quality of hard skills are presented in Table 2.

The obtained indicators indicate a high level of professionalism, the quality of mastering practical skills, and the ability of managers to use their professional skills effectively. In addition, all three state organisations demonstrate a high value of the "effectiveness" parameter and an average level of "design thinking", which is typical for operational work and direct workload. Applying the proposed model can help improve the quality of communication, leadership, motivation, and positive thinking and find ways to strengthen this process.

The analysis suggests that government organisations have a reliable work system in the context of the spread of COVID-19 and can create a competitive model for other government agencies. However, despite the high level, it is not the maximum, even considering the positive results. Therefore, there is

Principles	Features	Model advantages
Teamwork	Ensuring a favourable environment for teamwork	The model involves teamwork, with a high-quality system of delegation and distribution of responsibilities
Focus on people	An activity's product should be helpful to people	The model reminds us of the final goal of the activity and helps to improve people's lives
Optimism	Introducing a positive mindset and focus on results	The model encourages positive thinking and effective functioning of the organisation
Ability to ask questions	Searching for an effective solution and the ability to define an issue, as well as the ability to assess it rationally	The model encourages a holistic view of the problem and the search for the most optimal solutions
Creative approach	A non-standard approach to solving administrative and operational service issues	The model emphasises the use of non-standard and effective solutions

Table 1: Principles of the stanford design thinking model Source: compiled by the author

Skill	Assessment of the level of skills mastery					
	State institution 1		State institution 2		State institution 3	
	Government representatives	Officials	Government representatives	Officials	Government representatives	Officials
Education level	3	3	3	3	3	3
Strategic planning	3	1	2	2	3	2
Operational planning	2	2	2	2	2	2
Assessment	2	1	2	2	2	1
Execution	3	2	3	1	2	3
Control	2	1	2	3	3	2
Regulation	2	1	3	2	1	2
Design thinking	2	3	2	2	2	2
Ukrainian language proficiency	3	2	3	3	3	2
Foreign language proficiency	3	2	3	2	2	2
Overall level	25	18	25	22	23	21
The total score	43		47		44	

Table 2: Description of hard skills of civil servants of A and B categories in three institutions Source: compiled by the author *3 – high level, 2 – medium, 1 – low

a need to develop and find practical solutions to improve the quality of productivity and hard skills among civil servants.

Implementing successful communication activities in the professional duties of civil servants is the basis for establishing effective teamwork and collective work for results. The ability to express opinions in a concrete and acceptable manner, represent ideas, listen to opposed positions and resolve conflict situations promptly are essential components of successful communication. The skills of innovation and creativity, which are part of the soft skills category, are often the priority components of a manager's successful development algorithm. A creative attitude allows looking for new approaches to solving current problems and developing innovative competitive products. To assess the quality of soft skills, the following parameters are proposed: emotional intelligence, non-confrontational behaviour, leadership, time management, communication, adaptability, creativity, critical thinking, self-motivation and stress resistance (see Table 3).

Emotional intelligence, leadership and communication are essential soft skills that are fundamental to the development of hard skills. They have the most significant impact on the potential for developing these skills and play a crucial role in effective and optimal management. Motivation, stress tolerance and adaptability reflect a person's psychological state and ability to make decisions, take advantage of opportunities to continue working, and are the basis for assessing their potential. In the context of career growth for managers, the possession

of professional knowledge, skills and practical abilities (hard skills) is no longer the sole determining factor. The readiness for continuous self-development and self-criticism, the ability to establish teamwork, and the capacity to identify and implement creative solutions to overcome professional difficulties while maintaining a focus on personal development are also highly valued. These attributes, which may be described as soft skills, are now an essential component of the managerial toolkit.

Time management and critical thinking are essential for making good decisions and finding the best ways to overcome difficulties in the face of increasing stress. In addition, a high level of soft skills development impacts hard skills development.

The result shows that soft skills are less important than hard skills due to the unstable working conditions caused by the war and the gradual transformation of most work processes. Therefore, in the event of a recurrence of the COVID-19 pandemic, it is necessary to use practical tools to mitigate the consequences, mainly to implement the practice of design thinking. This can affect the quality of development of most soft skills and, accordingly, stimulate the improvement of hard skills. Creating a unified system for sharing experiences and implementing the Stanford Design Thinking Model is extremely important, as it can yield positive results in the work of civil servants in the long run.

Implementing the Stanford Design Thinking Model to mitigate the destructive effects of the pandemic on civil servants'

Skill	Assessment of the level of skills mastery					
	State institution 1		State institution 2		State institution 3	
	Government representatives	Officials	Government representatives	Officials	Government representatives	Officials
Emotional intelligence	3	2	3	2	2	2
Non-conflictuality	2	2	2	2	2	2
Leadership qualities	2	2	3	2	2	1
Time management	2	2	2	2	2	1
Communication	2	2	2	2	2	1
Adaptability	2	2	2	2	1	1
Creativity	1	3	2	2	2	1
Critical thinking	2	2	2	2	1	1
Self-motivation	3	3	2	2	1	1
Stress resistance	3	1	3	2	2	2
Overall level	22	21	23	20	17	13
The total score	43		43		30	

Table 3: Description of soft skills of civil servants of A and B categories in three institutions Source: compiled by the author *3 – high level, 2 – medium, 1 – low

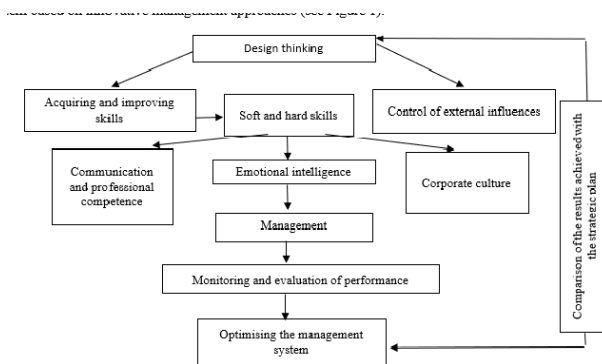


Figure 1: Using the Stanford Design Thinking Model to optimise the performance of civil servants in the Post-Covid period Source: compiled by the author

activities requires introducing creative methods and forming a practical, well-established system based on innovative management approaches (see Figure 1).

Implementation of the Stanford model will stimulate the development of soft communication skills, increase civil servants’ effectiveness, develop their emotional intelligence, and promote the growth of hard skills. The study shows that integrating the Stanford Design Thinking Model can maximise the degree of hard and soft skills among civil servants, which will help offset the impact of the pandemic’s destructive effects.

V. Discussion

Research by modern scholars [10] shows that developing a comprehensive mechanism to counter the consequential impact of COVID-19 on the performance of civil servants requires updating the concept. According to several authors [11], the integration of design thinking is currently seen as a vital tool for practical management tools within government agencies. These include, first of all, the development of emotional intelligence, motivation and communication. Another area of research [12] is the development of a system for implementing design thinking in the activities of state organisations and structures in the context of responding to existing and future threats. In this context, preparing seminars, specialised

consulting events, and conferences are influential. According to scientists, the primary purpose of this preparatory stage is to convey to civil servants and senior management the importance of such practices and the potential for using the most effective solutions in an unstable environment.

Some scholars [13] see the gradual integration of the experience gained practically as an essential factor in improving civil servants’ performance. Research in this context can significantly improve the quality of work in public institutions and enhance each civil servant’s skills.

In addition, digital competence is crucial to civil servants’ professional relevance and career prospects [14], [15]. Digitalisation skills contribute to successful communication interaction and are necessary for success in modern management. The formation and improvement of flexible skills and digital competence are positioned as an indicator of success in the modern labour market, which is rapidly adapting to digitalisation processes and a vector for ensuring the competitiveness of a specialist. Analysing the quality of digital systems, methods, and communication channels will be crucial for implementing design thinking practices in a dynamic digital environment.

Considering the specifics of society’s dynamics, some authors [16] highlight an innovative position on soft skills and digital competence as determinants of a modern approach to managerial professional ethics. The main emphasis in the definition of “soft skills” is the variability of behavioural responses that contribute to successful socialisation and teamwork.

Future research in this area should focus on developing digital literacy among civil servants and digitalising management tools.

VI. Conclusion

The concept of design thinking is positioned as a modern and effective tool for developing a system for levelling post-COVID threats and challenges to civil servants’ activities. The primary means of fostering design thinking are using non-standard approaches, effective business communication, searching for optimal solutions, and developing emotional intelligence that affects human performance.

The Stanford Design Thinking Model is the best and most cost-effective solution in this context. This model synergises the elements of empathy, focus, ideas, prototyping and testing. The advantages of this model lie in a wide range of parameters related to the skills of civil servants, their adaptability to new challenges, and their ability to make rational decisions in the face of global challenges and threats. The Stanford model can help improve civil servants' performance and encourage them to find creative, non-standard, practical solutions. An essential advantage of this model is the possibility of feedback through increased emotional intelligence, as the main result of work is aimed at people.

The introduction of design thinking technology will help overcome the destructive effects of COVID-19, improve the efficiency and quality of government agencies, and create favourable conditions for team effectiveness.

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