

# THEORETICAL APPROACH TO INTRA-ORGANIZATIONAL FACTORS CONDITIONING THE EFFECTIVENESS OF DESIGN THINKING IN ENTERPRISES

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## **Abstract**

The purpose of the following study was to systematize knowledge about design thinking and identify the key intra-organizational factors that determine the successful application of design thinking in enterprises. The formulated objectives were implemented on the basis of a review of the most important domestic and foreign literature on this topic. The article compiles fundamental definitions of design thinking, characterizes the key rules of this notion and describes the design thinking process in accordance with a conceptualization based on an iterative sequence of five stages of action. The literature review conducted to create this article has led to the identification of crucial intra-organizational factors promoting the effective application of design thinking in companies. They include an organizational culture based on the assumptions of collaboration and experimentation, a favorable attitude of senior management towards the practical use of design thinking, a correct understanding of the essence of design thinking by executives, managers and employees, as well as the need to legitimize the method within the organization and ensure that project teams find balance between their level of independence and the need to adapt to certain constraints arising from the nature of their function within the organization. Conclusions arising from the current study also indicate that the successful application of design thinking is determined by resources available to companies. Human and information resources play a key role in this regard.

**Keywords:** design thinking, determinants of design thinking.

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## 1. Introduction

Design thinking is one of the methods used to resolve complex problems in a creative manner. This method has already become the subject of numerous studies, which often highlight its universal applicability in the business, social, cultural and public spheres (Brown, 2013; Dunne, 2018). In contemporary business management, design thinking indicates an innovative way of thinking and acting in the process of solving problems or undertaking challenges. This method is used by well-known international companies, such as *Apple, Bayer, eBay, Ikea, Lufthansa, Ford and Toyota* (Helman and Rosienkiewicz, 2016). However, the application of design thinking in business practice is not limited solely to product design. Principles of design thinking have already been successfully applied in business strategies, marketing, user experience, service delivery, as well as in projects aimed to introduce change or ensure growth, among others (Rudkin Ingle, 2015).

The purpose of this study is to systematize knowledge about design thinking and identify the key intra-organizational factors that determine the successful application of design thinking in enterprises. The paper gives rise to the following research question: what conditions must be met within organizations in order to successfully apply design thinking in enterprises? The set objectives were achieved based on the study of key national and international literature on the subject.

The structure of this work includes an introduction, four sections devoted to the achievement of objectives and a conclusion. After the introduction, the first, main part of the article presents the essence of design thinking and follows by juxtaposing different definitions of this notion. The second part of the text characterizes the method under study on the basis of its key rules. The third part of the article describes three dimensions and five stages of design thinking. The fourth section of the article is devoted to identifying the intra-organizational factors conditioning the effectiveness of design thinking in enterprises.

## 2. The essence of design thinking

The term „design thinking” was first introduced into the literature by H. Simon, and then by P. Rowe, in the second half of the 20th century. At the time, the term was associated exclusively with design in the fields of architecture, urban planning, crafts or industrial production. A change in the perception of design thinking was initiated by R. Buchanan, who generalized the theory and indicated the possibility of its multidirectional application. From that moment, the concept of design thinking has been identified with a socially-inclusive intellectual approach used to formulate and solve problems (Cankurtaran and Beverland, 2020; Kimbell, 2009). Over time, this idea was implemented into the business environment by *IDEO*. In the said company, design thinking has been directed towards, among other things, creating innovative products and services, solving complex problems, building organizational culture,

formulating business strategies, as well as designing educational and social systems (Brown, 2013; Liedtka, 2013).

Throughout the years, many theorists have attempted to develop a design thinking method, both on a theoretical and practical level, but so far, no clear and universally accepted definition has been established (Dunne, 2018; Liedtka, 2013; Skowrońska, 2019; Staniec and Pilawa, 2020). Its development has proven to be extremely difficult, primarily because of the genesis, multidimensionality and nature of this method. Due to the ambiguity of the term, at least several dozen different definitions of design thinking can be found in domestic and foreign scientific literature. Some of them have been summarized in Table 1.

**Table 1.** A comparison of *design thinking* definitions

Author	Design thinking is:
Brown (2008)	“(…) a discipline that uses the designer’s sensibility and methods to match people’s needs with what is technologically feasible and what a viable business strategy can convert into customer value and market opportunity.”
Lockwood (2009)	“(…) a human-centered innovation process that emphasizes observation, collaboration, fast learning, visualization of ideas, rapid concept prototyping, and concurrent business analysis.”
Meinel and Leifer (2011)	“(…) a human-centric methodology [that] integrates expertise from design, social sciences, engineering, and business.” It blends an end-user focus with multidisciplinary collaboration and iterative improvement to produce innovative products, systems, and services.”
Razzouk and Shute (2012)	“(…) an analytic and creative process that engages a person in opportunities to experiment, create and prototype models, gather feedback, and redesign.”
Rudkin Ingle (2013)	“(…) an exploratory approach to problem solving that includes and balances both analytical and creative thought processes.”
Michalska-Dominiak and Grocholiński (2019)	“an approach, a way of thinking, a philosophy that supports problem solving, supported by a thorough knowledge and understanding of the users’ needs.”

Source: Own study based on: Brown T. (2008). Design thinking. *Harvard Business Review*, 86(6), p. 86; Lockwood T. (2009). *Design Thinking: Integrating Innovation, Customer Experience, and Brand Value*. Allworth Press, New York, p. 11; Meinel C., Leifer, L. (2011). *Design Thinking Research* in: Plattner H. et al. (ed.), *Design Thinking. Understand – Improve –*

*Apply*. Springer - Verlag Berlin Heidelberg, Heidelberg, p. 14; Michalska-Dominiak B. and Grocholiński P. (2019). *Poradnik design thinking, czyli jak wykorzystać myślenie projektowe w biznesie*, Wydawnictwo Helion, Gliwice, p. 15; Razzouk, R. and Shute V. (2012). What Is Design Thinking and Why Is It Important. *Review of Educational Research*, 82(3), p. 330; Rudkin Ingle B. (2015). *Design thinking dla przedsiębiorców i małych firm. Potęga myślenia projektowego w codziennej pracy*, Wydawnictwo Helion, Gliwice, p. 16.

The analysis of definitions cited in Table 1 shows that, first and foremost, design thinking is a creative and open problem-solving process focused on people and their needs. This method provides for the possibility of experimentation, collaboration in multidisciplinary teams and the use of any heuristic methods at all stages of the implemented task, depending on the current needs. Design thinking is also characterized by a holistic approach to innovation, which means acting to provide systemic and comprehensive solutions (Baran and Bąk, 2017; Brown, 2013; Sobota and Szewczykowski, 2014).

The design thinking method is fluid, non-linear and flexible. Its process is based on specific rules and stages of activities that aim to induce unconventional and creative thinking by adopting different points of view and recognizing new opportunities in the environment, which are supposed to result in original solutions (Rudkin Ingle, 2015). The exploratory nature of design thinking is a consequence of the iterative nature of the process, which involves continuous prototyping and testing of newly developed ideas (Arabasz and Sińczuch, 2016; Brown, 2013; Pyszka and Bartoszewicz, 2014).

The concept of design thinking is also characterized by a synergistic and balanced approach that juxtaposes rational and creative thinking, as well as divergent and convergent thinking. The use of creative skills allows generating a wide variety of ideas, which, thanks to analytical skills based on logic, are subjected to selection in order to find the single most appropriate solution to the problem (Brown, 2013; Michalska-Dominiak and Grocholiński, 2019; Sobota and Szewczykowski, 2014).

### 3. Key rules of design thinking

The notion of design thinking can be described using four key rules, which include (Meinel and Leifer, 2011):

- the human (social) rule – indicates that human-centered design and its needs constitute an inherent and necessary element of any successful innovation;
- the ambiguity rule – assumes openness to experimentation and acceptance of different perceptions and interpretations of reality, as well as the necessity to abandon all limitations and barriers that take away the possibility of making an innovative discovery;

- the re-design rule – according to which, it is advisable to analyze methods of solving a given problem from the past and draw appropriate conclusions on their basis;
- the tangibility rule – stating that the creation of prototypes of ideas is a necessary element of design thinking.

The social rule is the most significant among those included in the list. Every project is created taking into account its target user and the best possible way of satisfying their needs. However, it is important to emphasize that they are not obvious and well-known needs. According to Brown (2013), design thinking aims to discover and make potential users aware of hidden and so far unidentified needs, because only such needs lead to breakthroughs. To this end, this concept involves following three integral principles: understanding, observation and empathy (Brodnicki, 2015; Brown, 2013). An accurate and in-depth understanding of a potential user is not limited to the analysis of elaborated research results or the involvement of consultants and specialists from a given field of science in the project. Understanding requires empathy, that is, the ability to be personally and emotionally involved in getting to know the user in detail in order to accurately determine their motives for action and perception of reality. It is executed through active listening, direct interaction and careful observation of natural reactions and behaviors of the user in their natural environment (Brown, 2013; Michalska-Dominiak and Grocholiński, 2019; Sońta-Drączkowska, 2020)

Furthermore, the approach represented by design thinking features a distinctive characteristic – the fulfilment of the principle of visualization and prototyping. These assumptions allow all members of the interdisciplinary team to clearly understand the context and assess the potential of the proposed idea. Visualization and prototyping are also elements integral to the principle of experimentation. It consists in testing and modifying the resulting ideas, as well as receiving feedback on products and solutions, both from team members and potential users (Dobrakowski and Misiak, 2016; Michalska-Dominiak and Grocholiński, 2019; Sońta-Drączkowska, 2020).

#### **4. Stages of the design thinking process**

According to Brown (2008), design thinking is a system consisting of three overlapping dimensions of innovation, that is, inspiration, ideation and implementation. Inspiration indicates the ability to identify problems and opportunities in the environment. The phenomena observed in the subsequent dimension – ideation – are transformed into actual proposals of ideas. The most relevant ideas are selected at the implementation stage. Then, they are subjected to detailed analysis and study, and finally implemented on the market.

The flexible nature of design thinking limits the ability to explicitly establish the course of the process. However, it is possible to control it indirectly through an iterative sequence of five stages of design thinking, also referred to as the Stanford model (Brodnicki, 2015; Meinel and Leifer, 2011). The five stages adopted by the model include empathizing (understanding), defining the problem, generating ideas (ideation), building prototypes, and testing (Arabasz and Sińczuch, 2016; Chomałowska et al., 2019; Rudkin Ingle, 2015).

The first stage of design thinking is empathy (understanding), also known as discovery, which relates directly to the principle of understanding and observation. It consists in identifying with the potential user as much as possible, as well as getting to know and understanding their problems, needs, habits, experiences and motives. An ethnographic interview and a cognitive survey may prove to be useful at this stage. After verifying the accepted hypotheses, it is also suggested to draw up an empathy map and establish a persona, i.e. a synthetic description of the potential user's profile based on their characteristics, skills, goals and motives (Brodnicki, 2015; Chomałowska et al., 2019; Michalska-Dominiak and Grocholiński, 2019; Helman and Rosienkiewicz, 2016).

The meticulous acquisition of quantitative and qualitative information determines whether an attempt to define the problem can be made. This is the most difficult and simultaneously the most important stage of the whole process. It requires a high level of commitment from the participants and a skilful transition from generally accepted „framework” thinking patterns limiting their possibilities. Furthermore, poor problem formulation can result in the failure of the entire project. An attempt to define a given problem or challenge starts with a thorough analysis of the acquired data, followed by its synthesis in relation to three areas: the needs, problems and benefits of the user (Michalska-Dominiak and Grocholiński, 2019). This stage involves the identification of factors comprising the potential problem, creating a description of the situation and formulating a reason for addressing the identified problem (Brodnicki, 2015; Dobrakowski and Misiak, 2016; Rudkin Ingle, 2015).

Once the problem or challenge has been defined, the third stage – ideation, or idea generation – follows. As the name suggests, it consists in creating the highest possible number of solutions to a defined problem. At this stage, the role of the interdisciplinary team is particularly emphasised, as it is required to apply creative thinking, be ingenious, open and flexible, have the ability to cooperate in a group and come up with original and unconventional proposals of solutions. For this purpose, it is necessary to use tools that support the generation of creative ideas. They include „brainstorming” and its available variations, the „Six Thinking Hats” method and the creativity pyramid technique (Brodnicki, 2015; Helman and Rosienkiewicz, 2016; Michalska-Dominiak and Grocholiński, 2019). All the resulting ideas are then subjected to sorting and evaluation. The selection of the best ideas is made democratically, yet taking into account three relevant factors. The idea must be character-

ised by technological feasibility, economic viability and, above all, attractiveness, which means the real possibility of satisfying the needs of potential users (Sobota and Szewczykowski, 2014).

The best concepts selected at the ideation stage undergo prototyping, i.e. the presentation of the solution proposal in a real and tangible manner in order to better understand key features and basic functions of the idea. This action is not limited to material products. All ideas, including services, processes, business strategies or experience, are prototyped. They are most often presented in the form of a mock-up, storyboard or scene. Prototyping should always meet three key criteria, that is, be short, affordable and simple. Prototyping does not consist in creating elaborate and detailed models that take into account all physical and visual aspects of a given idea. This stage aims to quickly identify the potential of this idea, recognise its strengths and weaknesses, as well as introduce necessary changes and modifications (Brown, 2013; Rudkin Ingle, 2015; Michalska-Dominiak and Grocholiński, 2019).

The fifth stage of the design thinking process is testing, where the developed prototype is evaluated by its future users. Its purpose is to obtain feedback on the positive and negative aspects of the prototype relating to its usability, functionality and design (Helman and Rosienkiewicz, 2016; Michalska-Dominiak and Grocholiński, 2019). According to Michalska-Dominiak and Grocholiński (2019), the development of a prototype solution that meets the expectations of future customers does not end the design thinking process. Taking into account the set objective, the last and most important action is to draw up an implementation plan for the tested solution.

## **5. Determinants of the effectiveness of design thinking in enterprises**

The business practice identifies factors that significantly affect the implementation and subsequent use of design thinking in enterprises. These factors occur both in the company environment and within the organization itself, and are undoubtedly often complex in nature. The basic aspects determining the correct and effective application of design thinking in practice include intangible and material resources owned by the company, as they allow undertaking actions that may bring the expected result and positively influence the creation of the company's competitive advantage (Śliwiński, 2012). According to many practitioners, the implementation of design thinking into an organization requires a lot of money, but this assumption is not correct (Elsbach and Stigliani, 2018). In reality, financial resources play a secondary role. This is supported by Elsbach and Stigliani's (2018) research that shows that there are organizations, such as start-ups for example, which, despite having very modest financial resources, successfully apply design thinking principles in their operations. For the key to the successful application of design thinking in practice is human and information resources.

Regardless of the enterprises' resources, the key factors determining the successful application of design thinking may include the company's organizational culture, in which the values and standards are based on the assumptions of collaboration and experimentation (Elsbach and Stigliani, 2018). Elsbach and Stigliani's (2018) research review on the organizational culture conducive to the use of design thinking in enterprises indicates that a collaborative culture is most often manifested in the flexibility and freedom of communication between employees in the different functional departments of an organization. Quick and easy networking enables an open exchange of differing insights and inspiring one another, resulting in diverse proposals for innovative ideas. However, culture based on collaboration is not limited only to employees. The above-mentioned values and standards relate equally importantly to the relations which employees build with the end users through the idea of co-creation of the designed solutions. Customers have long been a valuable source of creative ideas for companies. The role of the customer, however, is not only to create a proposal for a solution as in the case of the so-called crowdsourcing. In this case, collaboration with the customer takes place at all stages of the solution development process, from the identification of problems and resulting needs to the construction of prototypes and their testing (Baran, 2016; Chen and Venkatesh, 2013; Tidd and Bessant, 2013).

Another important assumption of organizational culture that creates an environment conducive to the effective application of the design thinking method and tools is recognizing experimentation as an integral part of the innovation process. This is supported by Elsbach and Stigliani (2018), who, in their research review, invoke the idea of start-ups that rely on constant experimentation to create innovative solutions. Such enterprises, due to their limited resources, solve complex problems through continuous experimentation and quick prototyping, using tools characteristic of design thinking. A culture based on the assumption of collaboration and experimentation can also be observed in the Toyota Motor Corporation. There, based on conversations and experiments with customers, a product with a minimum range of features undergoes gradual modifications that ultimately result in a fully developed product (Rozmus, 2014). This action enables quick testing of the company's assumed theories and early correction of identified defects and irregularities, with limited financial and time commitment, leading to shorter product development times (Brodnicki, 2015; Helman and Rosienkiewicz, 2016; Sońta-Drączkowska, 2020).

The successful application of design thinking in business practice also depends on the favorable attitude of senior management towards the method being implemented. As Dunne's (2018) research suggests, the implementation of design thinking into management practice is almost always carried out at the initiative of senior management. The key to success is therefore the attitude and commitment of the leader throughout the process of implementation, promotion and later providing support for employees in using the method. It is recommended for such a leader to



reflect the transformational style in his/her behavior, and thus to be able to influence the employees in a charismatic way and motivate them to take up creative activities. This is because teams managed in this way achieve a very high degree of innovation, leading to above-average performance of individual organizational units and working groups (Szwiec, 2008).

Another element that determines a proper design thinking process is a correct understanding of the essence of design thinking by managers, executives and employees (Elsbach and Stigliani, 2018). The design thinking method by its very nature seems chaotic and incomprehensible. It operates based on a wealth of theoretical assumptions from philosophy, sociology, psychology and engineering. Furthermore, the flexibility, iterative nature and openness of the process can make the first contact with design thinking and the attempt to understand its theory lead to general discouragement and frustration among employees. Adopting design thinking is therefore only possible by properly getting to know and understanding the method. Misinterpretation and circumvention of some of the principles of the method can often result in coming up with ill-conceived solutions. An example of this is an incomplete understanding of the iterative nature of the process and a desire to solve the problem as quickly as possible, which makes the team unwilling to revisit previous stages of the process in their work and feel no need to redefine the problem or prototype the resulting solutions (Dunne, 2018).

There is another very important factor determining the effective use of design thinking in enterprises. It is the need to legitimize the method within the organization and to ensure that design teams balance between its independence and adaptation to the constraints that arise from the functioning of the team within the organization (Dunne, 2018). Work based on the principles of design thinking, especially in large organizations, is usually entrusted to a specific team and its leader. However, it is important to properly outline the role and mission of the design thinking team in the company. Operations departments should recognize that the team working on innovative solutions operates in a slightly different way, due to the need for freedom of thought. Hence, company employees who are not part of the design team should maintain an open and cooperative attitude towards the design team members when the need arises.

The review of the research on the key principles, the process and nature of design thinking, allow us then to conclude that the basic intra-organizational factors that promote the effective application of the design thinking method in enterprises are the following: an organizational culture based on the assumptions of collaboration and experimentation, a favorable attitude of senior management towards the practical use of design thinking, a correct understanding of the essence of design thinking by executives, managers and employees, as well as the need to legitimize the method within the organization and ensure that project teams find balance between the degree of independence of the team and the need to adapt to certain con-

straints arising from the nature of their functioning within the organization. Those factors are schematically presented in Figure 1.



**Figure 1:** Basic intra-organizational factors determining the successful application of design thinking in an enterprise

*Source:* Authors' own study.

The presented intra-organizational determinants of the effective application of design thinking in enterprises in reality coexist with factors present in the micro and macro environment of the enterprise. External conditions, as research indicates, play an important role in the process of creating innovation (Goszczyński, 2018). Changing conditions in the business environment can therefore both stimulate and act as a barrier to the use of design thinking in practice. In addition, the occurrence of negative factors in the enterprise's environment may also make the organization's current resources insufficient and the existing intra-organizational factors may need to be modified.

## 6. Conclusions

Design thinking is an interdisciplinary method of solving complex problems, which is more and more commonly used to stimulate innovativeness of enterprises and build their competitive position through flexible adaptation to changes occurring in the environment. The use of design thinking in business practice has already had a positive impact on a number of projects carried out by well-known, international organizations.

The successful implementation of the design thinking method in an enterprise is determined by a number of factors that occur both in the environment and within the organization itself. A review of research on the issue of introducing design thinking into organizational practice has led to the identification of key intra-organizational factors determining the effectiveness of applying design thinking in enterprises. They are related to such aspects of an enterprise's functioning as: organizational culture and structure, leadership, management style, managers' attitudes and employees' knowledge, relations and competences. However, these determinants may take on a different character and significance within individual enterprises, which differ, for example, in the industry they are a part of and the resources they possess. Hence, for some companies, the successful application of design thinking may be determined by the need to re-evaluate organizational culture or change management style, while for others, the correct implementation of this method will depend on adopting a different way of thinking and acting within the organization. In each case, organizations willing to implement design thinking should be prepared in the scope of theory and practice, not only in terms of understanding the essence of design thinking, but also the proper functioning of the company, in line with the determinants that promote the application of design thinking in practice.

The research review indicates that the issue of the influence of intra-organizational factors on the effectiveness of applying design thinking in enterprises is an under-researched area of the application of design thinking in the functioning of organizations. Empirical research is therefore needed to confirm the assumptions presented in the literature cited above. Moreover, future research could not only further explore the impact of the factors identified in this study, but could also, for example, examine the relationship between the use of design thinking in an enterprise and the level of motivation and creativity potential of employees. The advantages and disadvantages of using design thinking in practice in enterprises could also be explored. It is also worth analyzing these factors through the prism of the size, industry or sector in which the organization operates.

## References

1. Arabasz M. and Sińczuch M. (2016). *Design thinking*. Studio Graficzne Piotr Kurasiak, Olsztyn.

2. Baran G. (2016). Marketing współtworzenia wartości z klientem jako instrument tworzenia innowacji. *Prace Naukowe Uniwersytetu Ekonomicznego we Wrocławiu*, 458, 9–22. DOI:10.15611/pn.2016.458.01.
3. Baran G. and Bąk J. (2017). Design thinking jako przestrzeń dla przełomowych innowacji. *Przedsiębiorczość i Zarządzanie*, 18(12), 233–246.
4. Brodnicki K. (2015). Zastosowanie koncepcji *design thinking* w funkcjonowaniu przedsiębiorstw. *Przedsiębiorstwo we Współczesnej Gospodarce – teoria i praktyka*, no. 4, 35–45.
5. Brown T. (2008). Design thinking. *Harvard Business Review*, 86(6), 84–92.
6. Brown T. (2013). *Zmiana przez design: jak design thinking zmienia organizacje i pobudza innowacyjność*, LIBRON Publishing House, Wrocław.
7. Cankurtaran P. and Beverland M.B. (2020). Using design thinking to respond to crises: B2B lessons from the 2020 COVID-19 pandemic. *Industrial Marketing Management*, 88(7), 255–260. DOI: 10.1016/j.indmarman.2020.05.030.
8. Chen S. and Venkatesh A. (2013). An investigation of how design-oriented organizations implement design thinking. *Journal of Marketing Management*, Vol. 29, 1680–1700. DOI: [10.1080/0267257X.2013.800898](https://doi.org/10.1080/0267257X.2013.800898).
9. Chomątowska B., Żarczyńska-Dobiesz A., Janiak A. M. (2019). Wykorzystanie wybranych narzędzi Design Thinking w budowaniu doświadczeń zróżnicowanych pokoleniowo pracowników. *Przedsiębiorczość i Zarządzanie*, 20(1), 171–187.
10. Dobrakowski K. and Misiak Ł. (2016). *Design thinking – jak powstają innowacje* in: A. Mempel-Śnieżyk i in. (eds.), *Innowacje w polskiej nauce w obszarze nauk ekonomicznych*, Nauka i Biznes Publishing House, 125–132.
11. Dunne D. (2018). Implementing design thinking in organizations: an exploratory study. *Journal of Organization Design*, 7(1), 7–16. DOI:10.1186/s41469-018-0040-7.
12. Elsbach K. and Stigliani I. (2018). Design Thinking and Organizational Culture: A Review and Framework for Future Research. *Journal of Management*, 44 (6) 1–33. DOI: 10.1177/0149206317744252.
13. Goszczyński T. (2018). Wpływ czynników mikro- i makrootoczenia na procesy innowacyjne zachodzące w przedsiębiorstwach. *Zeszyty Naukowe. Quality. Production. Improvement*, 1(8), 42–51.
14. Helman J. and Rosienkiewicz M. (2016). *Design thinking jako koncepcja pobudzania innowacji* in: R. Knosala (ed.), *Innowacje w Zarządzaniu i Inżynierii Produkcji*, The Publishing House of the Polish Association for Production Management, 62–72.
15. Kimbell L. (2009). *Beyond design thinking: Design-as-practice and designs-in-practice*. CRESC Conference, Manchester.
16. Liedtka J. (2013). *Design Thinking: What it is and why it works*. Darden School of Business.
17. Lockwood T. (2009). *Design Thinking: Integrating Innovation, Customer Experience, and Brand Value*. Allworth Press, New York.
18. Michalska-Dominiak B. and Grocholiński P. (2019). *Poradnik design thinking – czyli jak wykorzystać myślenie projektowe w biznesie*, Helion Publishing House, Gliwice.
19. Meinel C., Leifer, L. (2011). *Design Thinking Research* in: Plattner H. et al. (ed.), *Design Thinking. Understand – Improve – Apply*. Springer – Verlag Berlin Heidelberg, Heidelberg, xiii–xxi.

20. Pyszka A. and Bartoszewicz M. (2014). Innowacyjność wymaga rutyny. Zastosowanie koncepcji design thinking w tworzeniu innowacji. *Studia Ekonomiczne*, no. 183, 230–242.
21. Razzouk, R. and Shute V. (2012). What Is Design Thinking and Why Is It Important. *Review of Educational Research*, 82(3), 330 – 348. DOI: 10.3102/0034654312457429.
22. Rozmus K. (2014). *Przedsiębiorczość w wersji lean: budowanie innowacyjnych projektów biznesowych poprzez eksperymentowanie*. in: Jasiński M. (ed.), *Innowacja – nowa horyzont. Innowacyjność ekspertów, postawy, menedżerów i urzędników*. WSB-NLU Centre for Innovation. Nowy Sącz, 83–93.
23. Rudkin Ingle B. (2015). *Design thinking dla przedsiębiorców i małych firm. Potęga myślenia projektowego w codziennej pracy*, Helion Publishing House, Gliwice.
24. Skowrońska M. (2019). Miasto i myślenie projektowe. *Design thinking jako skrzynka narzędziowa. Człowiek i Społeczeństwo*, 48, 75–90. DOI: 10.14746/cis.2019.48.5.
25. Sobota D.R. and Szewczykowski P.P. (2014) *Design thinking jako metoda twórczości. Filo-Sofija*, no. 27, 91–113.
26. Sońta-Drączkowska E. (2020). *Design thinking w zarządzaniu projektami – ocena możliwości zastosowania* in: Sońta-Drączkowska and Bednarska-Wnuk I. (eds.). *Wybrane aspekty zarządzania procesami, projektami i ryzykiem w przedsiębiorstwach*, The Publishing House of the University of Łódź, Łódź, 115–132.
27. Staniec I. and Pilawa J. (2020). The use of design thinking in the creation of academic incubators. *Journal of Economics and Management*, 41, 105–127. DOI: 10.22367/jem.2020.41.06.
28. Szewc P. (2008). Wpływ przywództwa na aktywność twórczą pracowników. *Zarządzanie Zasobami Ludzkimi*, 3–4, 37–49.
29. Śliwiński R. (2012). Zasoby kształtujące konkurencyjność polskich przedsiębiorstw. *Gospodarka Narodowa*, no. 4, 31–60.
30. Tidd J. and Bessant J. (2013). *Managing innovation: Integrating technological, market, and organizational change*. 5 ed. John Wiley & Sons, England.

## **CZYNNIKI WEWNĄTRZORGANIZACYJNE WARUNKUJĄCE SKUTECZNOŚĆ ZASTOSOWANIA *DESIGN THINKING* W PRZEDSIĘBIORSTWACH – UJĘCIE TEORETYCZNE**

### **Streszczenie**

Celem niniejszego opracowania była systematyzacja wiedzy na temat *design thinking* oraz określenie podstawowych czynników wewnątrzorganizacyjnych warunkujących skuteczne zastosowanie *design thinking* w przedsiębiorstwach. Sformułowane cele zostały zrealizowane na podstawie przeglądu kluczowej w tym obszarze, krajowej oraz zagranicznej literatury przedmiotu. W artykule dokonano zestawienia fundamentalnych definicji myślenia projektowego, scharakteryzowano kluczowe reguły tej metody oraz opisano proces *design thinking* zgodnie z konceptualizacją opartą na iteracyjnej sekwencji pięciu etapów działania. Przeprowadzony na potrzeby artykułu przegląd literatury doprowadził do wyodrębnienia podstawowych czynników wewnątrzorganizacyjnych, które sprzyjają skutecznemu zastosowaniu myślenia projektowego w przedsiębiorstwach. Należą do nich: kultura organizacyjna oparta na założeniach współpracy i eksperymentowania; sprzyjająca postawa kierownictwa wyższego szczebla w praktycznym wykorzystywaniu *design thinking*; prawidłowe rozumie-

nie istoty myślenia projektowego przez kadrę zarządczą, menedżerów oraz pracowników; konieczność uprawomocnienia metody wewnątrz organizacji oraz zapewnienie zespołom projektowym równowagi pomiędzy stopniem niezależności zespołu, a koniecznością dostosowania się do pewnych ograniczeń wynikających z istoty funkcjonowania wewnątrz organizacji. Wnioski z bieżącego badania wskazują również, że skuteczne zastosowanie metody *design thinking* jest uwarunkowane zasobami, jakimi dysponują przedsiębiorstwa. Wśród nich kluczową rolę spełniają zasoby ludzkie i informacyjne.

**Słowa kluczowe:** *design thinking*, myślenie projektowe, determinanty *design thinking*.