

## DIGITAL BANKING. A CURRENT DILEMMA SOLVED THROUGH THE DESIGN THINKING METHOD

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**Abstract:** *More natural than analytical thinking, design thinking provides solutions to common dilemmas. Fundamentally, it is a human centered and collaborative approach. It all starts with empathy, through the help of a deep research. Furthermore, banking success resides from understanding customers, not exclusively from profits. It is necessary to figure out human thinking, the needs and desires of customers, in order to have a portfolio of appropriate products and services. This is where success comes from. Having this desideratum, the paper analyzes the characteristics of the design thinking method and the digital elements that appear in the banking sector. Certainly, the biggest challenges in the banking system are generated by the digital transformation, by emphasizing the relationship with customers and current social trends. Consequently, Bank of America is an example of a successful application of the design thinking method. Likewise, the beneficial impact that the design thinking method can have on the bank's employees should not be ignored. Through this research paper, there was analyzed the environment of the banking system which is influenced by design thinking.*

**Keywords:** *banking system; design thinking; innovation; digital; employment.*

**JEL Classification:** *G21; O10.*

### 1. Introduction. The new normal in innovation

Digitalization is no longer an option for bankers, becoming a modern benchmark for financial services. Indubitably, banking must follow the direction of digitalization in order to keep up with the customer's expectations, with the changing consumer profiles, the changing generations, and the wave of technology that is taking over more and more companies and industries. Particularly, digitalization will have an impact on the way people do business and banking will not be an exception. There can already be seen a series of transformations of traditional banking, as it was decades ago, regarding its business model, developed around new digital technologies – NFC payments, online banking, alternative authentication and many more. (Larsson, Viitaoja, 2017)

On the other hand, design thinking is definitely a fashionable term today. It can be met everywhere, whether it is the corporate environment, banking employees or creative meetings. It may be stated that design thinking is the new recipe for successful products and services. Although, design thinking has been considered the secret expertise of design agencies, this process can be adopted even by those who are not experts in the field. It should be noted that, in most areas where design

thinking has been remarked, it has emerged from the analysis of the cognitive processes.

Likewise, the design thinking method helps companies create added value for customers. In general, it can be used for any disturbing issue. On the other hand, the relevance of this method is observed in the banking system by developing the banking products and services that customers really need. The involvement of a group of clients, from different fields of activity, can generate relevant opinions, as the clients think from the end user perspective. There can be made an appropriate market research through their needs and desires. Therefore, the importance of researching this method in connection with the banking system comes from the desire to provide an experience as pleasant as possible for the customers, either if it is online interaction or in a branch.

However, the first step towards design thinking was taken in 1950, by Buckminster Fuller. At that time, the concept of *design science* was introduced, applying the conscious design elements with the desire to help the earth's finite resources meet the needs of humanity, without disrupting its ecological processes. (Design Science Decade, 2020) In 1984, design started to be considered a strategic tool for different innovative strategies. (Kotler, Rath, 1984) Thus, design thinking is seen as a *human-centered approach to innovation*, paying attention both to the needs of the people and technology available. (Brown, 2008) In addition, design thinking is more a set of principles, not existing a clear framework for it. It can be stated that design thinking is more of a compass, than a map to follow or a creative way to solve sophisticated problems. Nowadays, design thinking is more important than ever, due to the new technologies and up-to-date business problems that have evolved and are becoming increasingly complex.

In fact, the process has five main steps, not being mandatory to follow a certain guideline:

- Empathize. This step represents the empathic understanding of the problem, through a detailed research of product or process.
- Define. Now, the information gathered in the first step is analyzed, being defined the problems observed.
- Conceive. Ideas are generated based on the knowledge gathered in the first two phases, in order to identify new solutions to the problem.
- Prototyping. In this step, the team proposes a number of product versions, as solutions to the problems identified.
- Test. There is a must to rigorously test the finished product using the best solutions identified in the prototyping phase. (Brenner, Uebernickel, Abrell, 2016)

As it turns out, there are large gaps in the literature, regarding the design thinking method applied in the banking system. However, two banks have stood out over time by successfully applying this method – Deutsche Bank and Bank of America. Accordingly, the aim of the current research paper is to discover, understand and explore the majority of opportunities generated by the adoption of design thinking in the context of banking system. It is desired to follow the positive impact, as well as the negative effects. The willingness is to obtain a clear image of the social environment and of the banks, but also to observe the use of design thinking. Based

on these preconditions, the research question that underlies the current paper is – *How can design thinking improve the banking experiences?*

Furthermore, *Digital Banking. A Current Dilemma Solved Through The Design Thinking Method* contains the following subjects: an introduction that presents a generic image of the content of the paper, followed by an analysis of the banking system, which explains in detail its profound changes that may be observed in the last years. On the same idea, a chart indicating customer segmentation is included in order to determine the target market of the banks. The research paper begins by analyzing the current environment, as it is desired a clear connection with reality and the possibility to use design methods in the most successful way. Then, section three exemplifies the use of the design thinking method in banking. It also presents a strategy, with the desire to launch products and services that are appropriate to the customer needs and wants. Section four - *The benefits of design thinking on bank employees* - brings to the fore a new perspective in which the employee satisfaction may be increased through design thinking. Finally, the conclusions assert the basic idea of the paper, but also the findings identified during the research.

## 2. Disruption of the banking system in Romania

Today, most bank customers prefer to keep in touch with the financial institution only through the internet. If the banks need less staff today than few years ago, it is also due to the different way in which people deal with banking services. It is generally considered that the clients will remain loyal to the banking system. Although interest rates on deposits are low, banks guarantee deposits up to a maximum amount. Banks offer long-term lending systems and thus, customers are retained, even by rescheduling debts.

Digitalization is, however, a great challenge for banks. The main obstacles in accelerating its penetration in credit institutions is related to the relatively slow transformation of processes, starting from the tools available to bank employees, internal processes, databases, new skills and digital skills that require continuous professional training. Still, there are mixed solutions on the market, in which an operation often starts online, but ends up being completed in a traditional format, with a thick documentation. (Georgescu, 2016)

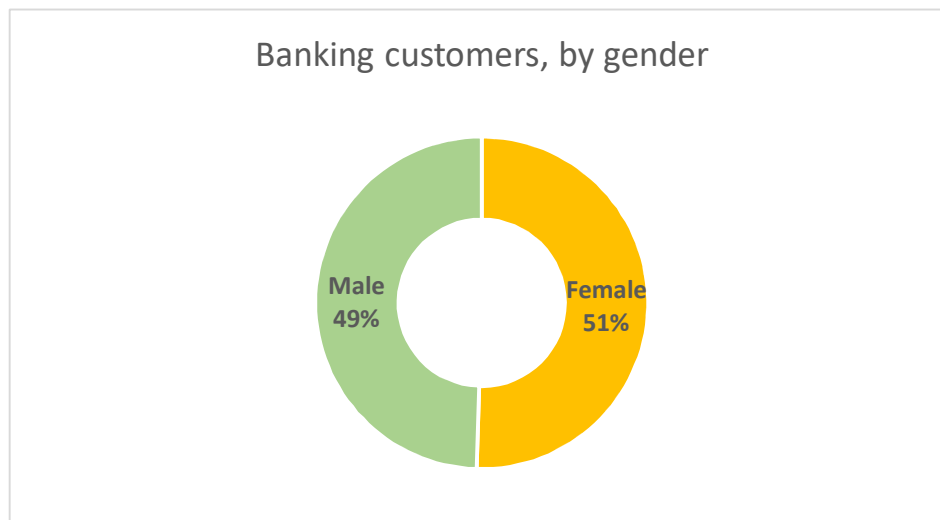
It is worth mentioning that, in recent years, three elements have been observed that led to a complete change in the banking system, namely:

- **Increased focus on customers.** It is considered that the 2008 financial crisis had unfavorable effects on customers, as they lost confidence in banks. (Gillespie, Owen, 2013) Indeed, the crisis of the banking system would not have had all the bad consequences if the banks would have been better capitalized. It is obvious that insufficient liquidity was partially at the origin of the solvency problems of specific banks. (Nagy, Benyovszki, 2013)
- **Digital transformation.** From the debit or credit card payments, to the payment with the mobile phone or with other devices through NFC technology, it has not been a long way. Additionally, 5G is known to be 100 times faster than 4G technology. Objects, devices and machines are

expected to be interconnected through 5G technology. It is not only looking for interconnecting people. It is expected to develop the mobile networks in order to support the improvement of devices and services. Efficiency and costs are two defining characteristics. (Qualcomm, 2020) Along with these two breakthrough technologies, it is a must to mention the contribution of artificial intelligence, big data, machine learning and analytics.

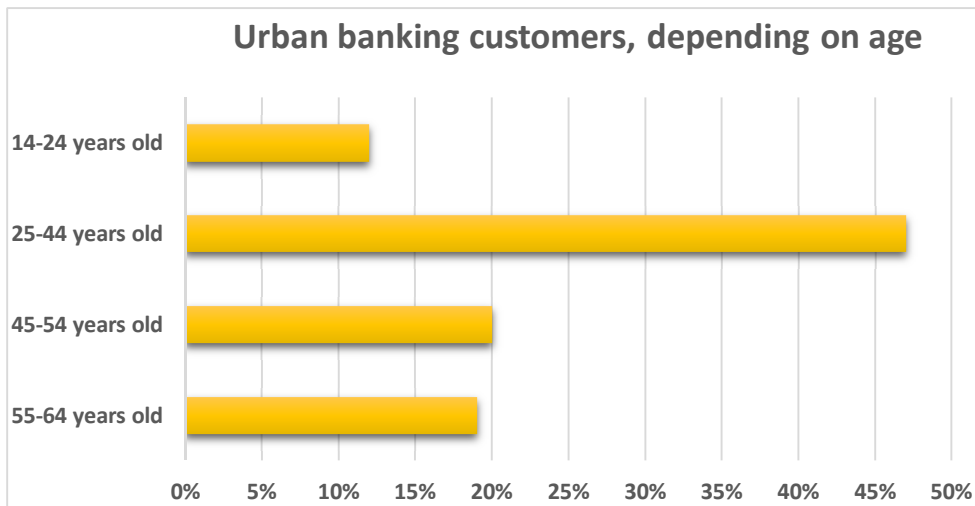
- **The changing nature of the customer's requirements depending on social trends.** This fact may be felt more intense among Millennials. If in the past the only aim was to open a basic current account, now customers are looking for additional benefits – SMS alerts, access to online banking or the possibility to withdraw cash from any ATM, worldwide for free.

In Romania, as it can be seen in the graphs bellow, most bank customers are coming from the 25-44 age group, being especially women. However, the difference between the number of men and the number of women is narrow. Young people bring significant benefits to banks, as most are employees or own companies. Therefore, they make numerous transactions, through the credit or debit card or through other digital means. At the same time, the clients want the banking employees to behave friendly, receiving transparent information about the bank's products and services. Although a large part of the banking activity moves online, it is still advisable for all the interactions to be transparent.



**Figure 1.** Banking customers, by gender

Source: Author's sketching based on BRAT (2018), SNA – Focus, and Forbes Romania (2018), *Profilul clienților băncilor comerciale din România (studiu)*, <https://www.forbes.ro/profilul-clientilor-bancilor-comerciale-din-romania-studiu-107989> [04 Nov 2020]



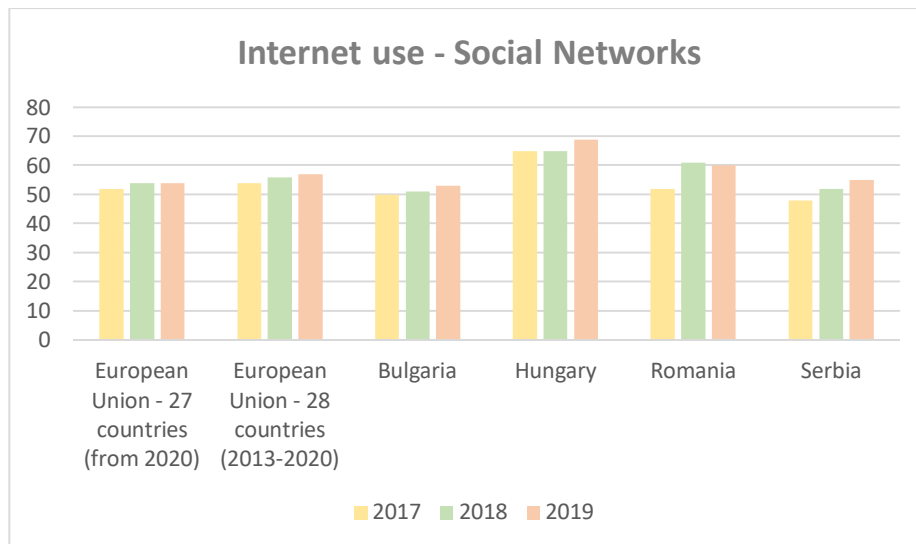
**Figure 2.** Urban banking customers, depending on age

Source: Author's sketching based on BRAT (2018), SNA – Focus, and Forbes Romania (2018), *Profilul clienților băncilor comerciale din România (studiu)*, <https://www.forbes.ro/profilul-clientilor-bancilor-comerciale-din-romania-studiu-107989> [04 Nov 2020]

On the other hand, it should be noticed the way the internet is used by Romanian, Bulgarian, Serbian, Hungarian and European users, in general. Talking about social media, one popular platform is, indeed, Facebook. Although it started as an application for Harvard students, then for several universities in the United States, in 2006, Facebook started to be available to anyone over the age of 13. It is clear that social networks have provided a quick and convenient alternative for consumers to be informed. Also, a clear segmentation of social media consumers may help companies target their markets online, according to their marketing needs. Thus, in the graph below, it can be seen how all the analyzed countries, except from Romania, registered increases in social media consumption in 2019, compared to previous years.

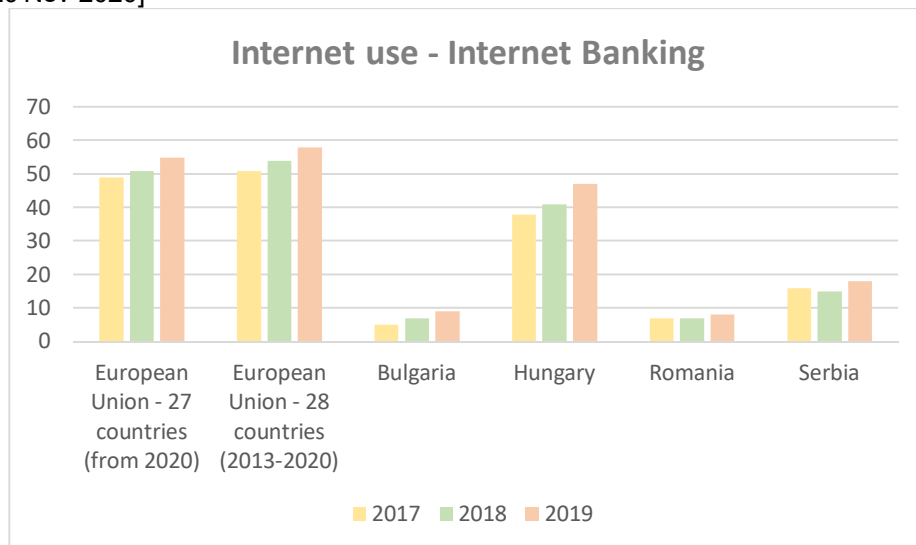
Contrary to what occurs with social media, the use of internet banking platforms is not as successful. Despite the digitalization and investments made by banks in this area, there are Romanians who prefer to keep in touch in real life with bankers. Through internet banking, many transactions can be carried out conveniently. However, in Romania, those who use it are still a minority. According to Figure 4, the trend is upward in all countries analyzed, as well as throughout the whole European Union.

Comparing the two figures, it should be noted that users prefer to use social media platforms instead of internet banking platforms. These differences may also be due to the limitation of banks in providing access to internet banking to young people, those under 18 years old, while social media is much more lenient in terms of age.



**Figure 3.** The use of internet within social networks in European Union, Romania and neighboring countries

Source: Author's sketching based on Digital Economy and Society Index, Eurostat, [20 Nov 2020]



**Figure 4.** The use of internet within internet banking platforms in European Union, Romania and neighboring countries

Source: Author's sketching based on based on Digital Economy and Society Index, Eurostat, [20 Nov 2020]

However, there are banks that allow young people over 14 years old to have access to internet banking, but they are limited in transactions. Therefore, the higher the

use of internet banking platforms, the more digitalization may increase. The offered services will get in time more numerous and diverse. However, there is a need of a digitalized population with an increased appetite for using the internet. In the situation where internet consumers use social media networks more frequently, banks must point in that direction. There can be offered personalized ads to attract their attention through Facebook, Instagram, TikTok or other platforms or there can be organized contests or online events. However, the current economic and health situation, along with the multitude of restrictions, have led to a profound change in the entire system. Financial-banking institutions, like many other companies from different sectors, turned to technology in order to continue their activities, despite the restrictions imposed by COVID-19 pandemic. Anyhow, digitalization is the future of the banking industry, as consumers will choose to work with banks that can provide remote services.

### **3. How can design thinking be successfully applied in the banking system? The role of design thinking**

Digital transformation is a vast concept and often partially implemented because it is interpreted differently. A successful approach is one that begins with understanding what current and potential customers want. This involves designing with customers the experience that the bank wants to offer. Without a clearly defined roadmap, banks risk allocating insufficient budgets, offering few resources for implementation or even delaying the fulfillment of certain activities. Thus, the design thinking method is intended to be applied to the entire customer experience – from compliance and acquisition, to awareness and assistance, followed by an analytical overview that further amplifies positive experiences and indicates less strong points. The advantages of the newcomers are flexibility, creativity and quickness. Therefore, banks that already exist on the market must focus on innovation.

An outstanding example that brings to the fore both a bank and the design thinking method comes from the Bank of America. In 2004, this bank set a goal to increase the number of active customers, with current accounts open. Thus, the bank asked IDEO for help, with the desire to establish a strategic plan to achieve the objective. The company started to observe and question the behavior of the customers. However, through a certain interaction with a client, it was observed that he would round up the amounts by adding, when calculating his expenses, at the end of the month. Two advantages may be pointed out – an easier calculation and the few cents left over added up and became a few dollars. Due to the fact that this practice was common for many customers, Bank of America developed a service that rounded the amounts of the products bought with the debit or credit cards. The cents left after the rounding went automatically to a savings account. Thus, it is not important the amount saved, but the idea of saving. (Bank of America, 2020)

Likewise, Barclays, an English bank that functions internationally, in North America, Asia, Africa and South America, is a model for other financial institutions, by putting innovation first. Back in time, Barclays was the first bank to launch an ATM in the United Kingdom. And now, they created *Chief Design Officer*, a unique job beyond the entire group. In fact, a Chief Design Officer communicates with end users, listens

to their opinion and analyzes their behavior. Thus, all the bank's products and services are adapted to the users' needs. The effects are certainly as expected, as this mindset is spread throughout the Barclays group, and the design thinking method also shapes the entire team's thinking. Altogether, the products and services that this employee analyzes are digital, offered through online banking platforms. Basically, what is launched is really relevant for the end users. (The Creative Industries, 2020)

National Australia Bank (NAB) had set a goal: to exceptional serve its SME customers, as they are a valuable customer segment for the bank. To achieve this goal, NAB has signed a partnership with a third-party company to help by observing and analyzing the behavior of SME customers. Following the market research, it was observed that the application process for a loan was not characterized by an ease of use, instead was time consuming. Also, as expected, it was noticed that an upgraded online banking platform could lead to a better perception of the customers. (Schoenmakers, 2018) The result of applying the design thinking method was seen in the launch of NAB QuickBiz Loan. Through this, a SME may quickly take an unsecured business loan online. (NAB, 2020)

Therefore, the design thinking process is, as it turns out, time consuming and, although it works with people of all ages and backgrounds, it is easier to put it into practice in a coordinated environment. Despite these limitations, the process is valuable, developing the creativity and ability of participants, but also the discovery of products and services that can give favorable outcomes.

In fact, it is of outmost importance to put oneself in the customer's shoes and evaluate the reality from the end user angle. Once the particular behavior of the clients is observed, discovered and understood, the bank may tailor its business model in accordance with the demand. In this way, a competitive advantage may be strongly built.

## HOW CAN IT BE APPLIED IN BANKING?



**Figure 2.** Three relevant elements for the application of the design thinking method in the banking system

Source: Author's sketching

Applying the theoretical elements, there can be stated the three elements of the process in which design thinking is used in banks. Firstly, to find out who the customers are, it is a must to understand the business. A realistic look at the business is needed and understanding the key elements of the company is a first step in this direction. On the other hand, understanding refers also to the customers. It is necessary to know what kind of customers would be willing to work with the bank. Besides, their income, education or age may be influential. The more a bank



focuses on serving its customers and meeting their expectations, the more successful will be. Thus, a clearer picture of the needs and desires of customers can be made by choosing a group of people from the target market to work on applying the design thinking method.

Moreover, the financial resources are established and calculated after using the design thinking method, because the correct allocation of money is required. First of all, short, medium and long-term goals must be set. Thus, these objectives should reflect the new products and services to be launched following the ideas from the customers. Knowing exactly the strategy, the allocation of budgets is more accurate. Finally, a critical look of the new product or service can be obtained by analyzing the income and expenses. Also, customer feedback is constructive and may help understand consumer behavior. Additionally, the brand and the image of the bank can be outlined by knowing the clients and figuring out the real purposes.

#### **4. The benefits of design thinking on bank employees**

Looking from another perspective, employee satisfaction is essential for the bank's image. It is not enough to create and promote a desired image of the bank, though it is very important that employees support it. Both current and past employees, even candidates who participate in interviews can write about their experiences with the bank on social media platforms. Most candidates interested in a position open at a bank ask their acquaintances about that specific bank, in order to create a clear opinion. What the employees say may make a difference in the decision of a highly rated candidate to accept or reject the position within the bank. As it may be imagined, happier employees are even more vocal and ready at any time to share their positive experiences. (Auer Antoncic, Antoncic, 2011) Thus, employees with a high degree of satisfaction are more likely to recommend the bank to relatives, friends, and acquaintances. Otherwise, no employee will risk damaging their personal relationship due to a wrong recommendation. Moreover, satisfied employees will want to work for the same bank as long as possible.

First of all, design thinking can be used to increase employee satisfaction. It is desired that these employees be loyal, work with passion and be rewarded accordingly. To aim for this goal, the employer (in this case, the bank) must start by defining its Employee Life Cycle, known as ELC. Through this, it can be observed the stage of relationship that each and every employee has with the bank. (Cattermole, 2019) One step that needs to be taken in this regard is to form teams from different departments, to share opinions and to work together. Several ideas, from different perspectives, can solve problems effectively.

A first element of design thinking comes from the human resources department to put itself in the employees' shoes. Thus, they will better understand their needs. Indeed, it is necessary to have a clear image of a satisfied employee, who will support the company and who will perform the tasks successfully. In this sense, there are certain challenges that employees will face or are already facing. Awareness of these challenges is a first step towards solving them. Thus, special attention is required on these problematic elements, in order to be solved simply and effectively and to reduce the gap between a current condition and a desired

one. The next step in the design thinking method is prototyping. Testing is an important part, which will bring the bank relevant information about how to act. If the new strategies work, then continue with them. Instead, if these are found to be ineffective, there is a must to return to the first step and start again by looking for new solutions. (Coene, 2018)

Finally, the design thinking method is universally valid. It can bring benefits to both employees and customers. In addition, through the increased satisfaction of the employees, their relationship with the clients can be improved, bringing benefits for the bank as well.

## 5. Conclusions

Design thinking seems to be the key to success, as, first of all, it brings humans to the core. Neither technology, nor profit is the crucial element that may conduct a bank to accomplishment. Design thinking invites people to be collaborative, to build on the ideas of others, to think out of the box and to work in a team of people with different perspectives.

Therefore, emerging technologies seek to automate various financial processes, leading to the launch of cost-effective banking products and services. Thus, the aim is to overcome information asymmetries, representing an essential part of banking, seen as a business. A digital economy is gradually being built, step by step, over time. However, the bank being one of the emblematic institutions of the financial system, has a decisive function for the digitalization process. In essence, banks are using technology to do what they were already doing, but better. Although years ago, customers had only the opportunity to view only the balance of the account in the online format, now the variety of transactions is increased. It is just about imagination and the involvement of design thinking in everyday activity.

Indeed, it is a precondition to mention the concepts of User Experience (UX) and User Interface (UI), being important elements of web design. The aim is to improve the experience that a user has with a specific bank. Additionally, UX seeks to increase customer satisfaction through analytical thinking, attention to detail, empathy and simplification of the processes that a customer must go through. It is intended to be all intuitive, without the need to read a user manual. Besides, UI refers to the particular characteristics of a display system, which integrates graphic elements.

Furthermore, it is desirable for the banking system to involve as much design thinking in banking activity in order to innovate. Customers are also encouraged to be part of the decision-making process, finding out what are their real needs and expectations. Forthcoming, design thinking will bring competitive advantage to banks that decide to use it.

In the end, it is advisable to make a more comprehensive analysis of the impact of design thinking on the performance of the banking industry. Moreover, it is recommended to discuss the issue with international specialists.

## Bibliography

1. Auer Antoncic, J., Antoncic, B. (2011), *Employee satisfaction, intrapreneurship and firm growth: a model*, Industrial Management & Data Systems, Vol. 111, No. 4, pp. 589 - 607
2. Bank of America (2020), *Build your savings / Automatically*, <https://www.bankofamerica.com/deposits/keep-the-change/> [3 Sept 2020]
3. Brenner, W., Uebernickel, F., Abrell, T. (2016), *Design Thinking as Mindset, Process and Toolbox*, Design Thinking for Innovation, pp. 3 – 21
4. Brown, T. (2008), *Design thinking*, Harvard Business Review, pp. 84 – 92
5. DeCenzo, D.A., Robbins, S.P., Verhulst, S.L. (2016), *Fundamentals of human resources management*, John Wiley & Sons
6. Cattermole, G. (2019), *Developing the employee lifecycle to keep top talent*, Strategic HR Review, Vol. 18, No. 6, pp. 258 – 262
7. Coene, S. (2018), *How Design Thinking and Employee Experience Go Hand in Hand*, HR Trend Institute, <https://hrtrendinstitute.com/2018/09/03/design-thinking-employee-experience/> [17 Nov 2020]
8. Design Science Decade (2020), *Design Science uses the latest technology to heal our ecology, enabling humans to be a net positive to nature*, Available: <https://www.designscience.studio/about-design-science> [29 Oct 2020]
9. Diderich, C. (2018), *Understanding the value of design thinking to innovation in banking*, Journal of Financial Transformation, Capco Insitute, Vol. 48, pp. 64-73
10. Digital Economy and Society Index, Eurostat, [20 Nov 2020]
11. Faroukhi, A.Z., El Alaoui, I., Gahi, Y., Amine, A. (2020), *Big Data Monetization Throughout Big Data Value Chain: A Comprehensive Review*, Journal of Big Data, No. 7
12. Forbes Romania (2018), *Profilul clienților băncilor comerciale din România (studiu)*, <https://www.forbes.ro/profilul-clientilor-bancilor-comerciale-din-romania-studiu-107989> [04 Nov 2020]
13. Georgescu, F. (2016), *Digitalizarea în bănci – provocări și oportunități*, Conference: The New Era in Banking: The Digital Revolution
14. Gillespie, N., Owen, G. (2013), *Restoring trust in the financial services sector*, Queensland: Industry and Parliament Trust
15. Kotler, P., Rath, F. (1984), *Design: A Powerful But Neglected Strategic Tool*, Journal of Business Strategy, Vol. 5, No. 2, pp. 16 - 21
16. Larsson, A., Viitaoja, Y. (2017) *Building customer loyalty in digital banking: A study of bank staff's perspective on the challenges of digital CRM and loyalty*, International Journal of Bank Marketing, Vol. 35. No. 6, pp. 858 – 877
17. NAB (2020), *NAB QuickBiz – Unsecured Business Loans*, <https://www.nab.com.au/business/loans-and-finance/business-loans/nab-quickbiz-loan> [21 Nov 2020]
18. Nagy, A., Benyovszki, A. (2013), *Provocările crizei asupra sistemului bancar*, Economie teoretică și aplicată, Vol. 20, No. 4, pp. 4 – 25
19. Qualcomm (2020), *Everything you need to know about 5G*, <https://www.qualcomm.com/invention/5g/what-is-5g> [5 Sept 2020]
20. Schoenmakers, R. (2018), *How 3 Innovative Banks Use Design Thinking*, In the Pocket, <https://www.inthepocket.com/blog/3-banks-innovation-design-thinking> [20 Nov 2020]

21. The Creative Industries (2020), *Design Case: Barclays*,  
<https://www.thecreativeindustries.co.uk/industries/design/design-case-studies/design-case-barclays> [28 Nov 2020]