Design Thinking to Reinvent Values in a Business Model: a 4-Step Approach Using Ideation Virtual Tools

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Abstract

The purpose of this paper is to create and test design thinking approach sequence, to redefine the value proposition. This paper suggests a 4-step systematic design thinking approach sequence to reinvent values in a business model, which was researched by a case study method. Based on the idea management approach the authors describe idea generation and evaluation processes by applying the design thinking approach and their possible moderation elements. Originality/value: a created approach could be applied by the organisations that would like to create new values or reinvent the existing ones in their business models value propositions.

Introduction

In last two decades the design thinking has emerged in various fields of the social sciences (Baker & Moukhliiss). This design thinking movement has taken place in parallel with the development of theoretical approaches related to the concepts of the value chain and the business model.

An important theoretical basis for the value chain has been laid by Porters with the competition theory (1985), where the value is regarded with business processes and activities helping to achieve the competitive advantage.

The interpretation of the concept of values has expanded significantly in the context of the various characteristics of business models (DaSilva & Trkman, 2014). Teece (2010) clarifys that the business model is a hypothetical assumption on how a business creates, delivers, and captures the value, which is most appropriate and clear definition of the nature of the value. The value proposition is the unique way of each business model on how to deliver and present the value to the customer in order to get revenues and capture the profit (Teece, 2010). The value proposition not only includes the product or service offered by the company, but more importantly it explains what kind of the solution is offered to satisfy the needs or solve the issues of customers (Payne et.al., 2017; Osterwalder et.al., 2014).

In recent ten years the design thinking methods are linked to the scientific discourse on the value creation, delivery and capturing in the sustainable and circular business models (Uvarova et.al, 2020; Geissdoerfer et.al, 2016). The topicality of business model studies and how to create values involving different stakeholders in business models (Andreassen et al., 2018; Simberova & Kita, 2020) has grown from both academics and practitioners' sides. Comparing to traditional business models, the sustainable business models assume the value proposition not just to customers, but, also, to various stakeholders, incorporating economic, social, and environmental values (Geissdoerfer et.al, 2016; Bocken et.al, 2013) thus reflecting the sustainable transition process (Uvarova et.al, 2021; Jonker et.al., 2020).

According to Geissdoerfer and his co-authors (2016) the use of design thinking methods in the value innovation process provides an opportunity to create new types of value, as well as to expand the range of different stakeholders to whom the value proposition can be addressed. At present, the value innovation is not only an issue for some practitioners, but an important priority for the top management

of companies, where creative and design thinking methods play a promising role as offer an effective approach for the ideation of new values (Leavy, 2010).

As a consequence, organisations have started to seek for systematic approaches how to define and redefine the values. This paper provides a new sequence of the design thinking approach as the answer to this demand.

To invent something new or reinvent something existing the start position is an idea. Idea management helps to provide more effective and efficient idea generation, evaluation and selection processes (Brem & Voigt, 2007), plus there are many versions of brainstorming to support the creative idea generation (Bonnardel & Didier, 2020). The authors have described idea generation and evaluation processes on the basis of idea management approach and have applied design thinking to create the sequence of the approaches incorporated in the idea management process.

Moreover, the design thinking methodology was adopted to current Covid-19 pandemic circumstances of the remote work. The ideation sessions have been adapted to the virtual environment using various digital tools to moderate and encourage group ideation sessions. The proposed methodology utilises the design sprint approach which is extremely important to engage in the active ideation process and keep the attention of remote participants in the virtual sessions. The design sprint is linked to the digital context and provides the ability to run experimental and brainstorming sessions across multiple iterations in a digital environment (Magistretti et.al, 2020).

Design thinking seems to play an important role in innovating and establishing a successful new business model (Guldmann et al., 2019; Sokolic, 2015). Another rationale is that design thinking is a human centred approach, that includes the generation of many ideas, and the adoption of a fast-prototyping approach (Foster, 2021).

In the researched case, an organisation aims to create a value proposition by generating a lot of versions, involving a lot of stakeholders and in the end value definitions will be created and verified. Based on the idea management approach the authors describe idea generation and evaluation processes by applying design thinking approach and their possible moderation elements that could be appertained to an organisation to find new or reinvent existing value propositions.

The purpose of the paper is to create and test a design thinking approach sequence to redefine the value propositions of the company. So, this paper presents a 4-step systematic design thinking approach sequence to reinvent values in a business model.

Methodological Framework

This research is based on the qualitative research methods, combining the literature review, the action research with the ideation sessions using the design thinking methods, the focus group discussions, and the descriptive analyses in order to synthesise the results of the research, implications and future

research issues. The methodological framework of this research is presented in the Figure 1, illustrating main stages of the research, the literature and data sources, as well as digital tools used.

The action research allows the experimentation with the theory in a real work of organisations and deepen the views and opinions about the enablers and obstacles of the intervention, solutions or activities performed (Somekh, 2005). This combination of the theory and practice is done with the simultaneous interaction between researchers and practitioners, ensuring the co-work within the sequenced activities of the situation analyses, the experimentation, and the systematic intervention activities, analysing and describing the practices applied, gathering the feedback, and reviewing the lessons learned (Avison et.al, 2008). The action research provides the methodological framework for researching the changing situation and innovation processes (Somekh, 2005). This type of the research is particularly relevant in current circumstances as the organisations and their surrounding environment has experienced significant changes stimulated by the Covid-19 pandemic and leading to new forms of the remote work, a rapid digital leap forward, but also nourishing the social distance between employees, customers, and other stakeholders. Furthermore, the European countries encounter the green transformation towards sustainability goals aiming to change the lifestyle and consumption behaviour of the society, the value orientation of organisations, foster the emergence of a new ecosystem with the open cooperation of various stakeholders addressing the sustainability issues. The action research provides the possibility to test the feasibility and nature of new ideas (Kaplan, 1998) that in the context of this study ensured greater options to test and advocate new values generated during the interaction sessions with involved participants. Moreover, the involved participants later become as knowledge ambassadors or more “skilled implementers” (Kaplan, 1998 – 1p.) that can promote both new values and new skills of innovating these values within their organisation.

According to Somekh (2005), this study assumed eight methodological principles of the action research as presented in the Table 1.

Table 1
Methodological principles of the action research applied within this study

Reasons and methodological principles of the action research
1. The combination of research and action
2. Collaborative partnership of researchers and participants or so called “insiders” of the case
3. The development of knowledge and understanding of a particular case
4. Action research starts from a vision of social transformation and personal engagement of individuals representing the organisation
5. Action research involved a high level of reflexivity and sensitivity of individuals influencing the whole research process
6. Action research involves exploratory engagement with a wide range of existing and interdisciplinary knowledge testing its usefulness
7. Action research evoke learning for participants through combining research, actions, and reflection of the practice
Action research requires deep understanding of the broader historical, political, economic, and ideological contexts shaping the behaviour of individuals

Source: developed by the authors based on Somekh, 2005

Within this study we combine the principles of the action research with the design thinking methods as they are closely related and foresee the active involvement of participants in the co-creation (Stier & Smit, 2021) and the ideation process (Hesmer et.al., 2011; Meslec et.al., 2020) of new values. This methodological approach allows better knowledge valorisation (Stier & Smit, 2021) to utilise the academic knowledge within the co-creation of the value innovation applying various design thinking methods.

In this paper, the definition of the idea management is based on the following assumptions: a systematic and manageable process with 2 main parts: idea generation, evaluation, and a repeated idea generation and evaluation (if it is needed) (Mikelsone et al., 2019).

Since 2000, design thinking has become academically topical and has been increasingly applied to novel challenges practically (Baker & Moukhliiss, 2020), in this case this approach will be applied to define value propositions for a company. In this paper the authors apply the definition that design thinking is a human centred approach, that includes the generation of many ideas, and the adoption of a fast prototyping approach (Foster, 2021). In this research the design thinking will be included through the design thinking approaches, for example, Persona - a persona method identifying a persona needs and desires (Chasanidou et al., 2015; Stickdorn & Schneider, 2010) and also creative thinking methods, like, Mind Mapping (Wycoff, 1991), Trend watching methods (Trendwatching, 2021) and others.

The case study was conducted in a medium-sized company located in Latvia with more than 50 employees (according to the EU recommendation 2003/361). The company works in the field of

innovation and investment consultations. The company stated a necessity to redefine the value propositions. During 8-hour session 20 managers were involved, but additionally it was required to receive ideas and evaluation also from other employees and partners. The case study process was defined in several process steps (see in Table 2).

Table 2
Case Study Steps

Data gathering method	Data analysis method	Time Period	Method application steps
Action research of the Case	Content analysis	2021	<ol style="list-style-type: none"> 1. The preparation for a session to redefine the values. 2. A pre-session. 3. A practical session moderation. 4. A post-session. 5. The desk review of documents and information gathered within a practical session. 6. The content analysis of materials of a practical session. 7. The descriptive analyses of the preparation, performance and the evaluation of a practical session.

Source: developed by the authors

The preparation for a session aimed to redefine the values and it included 2 meetings within the organization. The first meeting was organized to understand the company's needs in detail, the second one to approve a session plan. Before the second session a detailed research on possible approaches of design thinking was carried out to reach the aims of the company. The authors have evaluated more than 20 approaches to select and combine the approach to reach the aim.

In a pre-session, prior to the first meeting, an additional issue was discovered that during an 8-hour session only 20 managers of the company would be able to participate, but the company demanded the additional involvement of more than 100 employees and partners. That was the reason why the research team decided to create the pre and post sessions. During the pre-session the list of more than 50 values that were mentioned in the company's documents, strategies and normative acts was created and given for evaluation to the employees. So, the session started with the development of highly evaluated values. The preparation of the value list itself was separate research that is not described in this paper. The post session was conducted to evaluate and improve the created definitions of the value propositions. This is an additional recommendation for a moderation – if during a main session resource do not allow to involve all possible stakeholders, there is a possibility to create a pre (generation) and post sessions (evaluation).

In the Key insights the authors describe the sequence of created and tested practical session.

Results

A 4-step systematic design thinking method's sequence was made to redefine the values in a business model. Before step 1 there might have been some systematic idea collection from the strategic documents, the organisation's visions etc. and/or idea generation of new values by employees or other stakeholders.

The step 1 is a warm-up (Figure 2), it helps to understand a customer. Based on the "Persona Canvas", "Imagine Persona" approaches the authors have created the first step "Target Persona", that consists of 3 sub-steps. At the first step at least 4 questions that you would like to ask to your customers about their life-styles, attitudes etc have be generated. After each question group probable customers' answers could be written down. These questions could be without a direct aim to understand the values, but just to understand the customers. For example, "What kind of vehicles do you prefer?" Based on the answers received: a bicycle, Tesla or BMW it can give the possible directions of a person's values. The second step is to define contrasting values and evaluate where among them your target persona could place herself/himself. For example, this person is a playful or a serious one. The third step is aimed at writing down as many additional characteristics for a target persona as you can. These could be things he/she likes, does etc. The duration of the step is from 35 minutes to an hour.

The step 2 (Figure 3) encompasses a collecting and sorting activity where all ideas are categorized. The purpose of this step is to identify the ideas that are relevant to the task. There are two versions of this step. The first version of the step 1 implies that a team has a pre-defined list of values and they select top 10 the most promising ones. The second version of the step 1 is to generate the list of possible values (firstly, generate at least 20 values then select the top 10 values and do not merge these processes). During the Step 2 the top 10 values should be grouped in 3 main value groups (the main value and sub values). For example, if knowledge is the main value then innovation and open-mindedness could be sub-values. The last step includes adding of new values and additional notes. The duration of the step from 1 hour to several ones.

The step 3 (Figure 4) is targeted at refreshing the definitions of values. Firstly, copy paste the descriptions of the value groups from step 2. After that improve the descriptions by trends (Trendwatching approach), add some sentences that would show that these values are up-to-date.

Secondly, select 3 tendencies and include them in the descriptions. Thirdly, define the criteria for good value descriptions and evaluate the descriptions. In the given case 6 criteria have been adapted from Heat and Heath (2007), which encompasses six principles of sticky ideas: simplicity, unexpectedness, concreteness, credibility, emotional, stories (potential to add stories or build the stories on).

The step 4 (Figure 5) is aimed to evaluate the created value descriptions. For this step 2 approaches have been adapted – "How-Now and Wow" approach to evaluate ideas according to their innovativeness and simplicity. The second approach applied is "Dot Voting" approach to see the public opinion about the values. See a 4-step approach in the Figure 1. After all these steps the post-session could be developed to

give for the evaluation all created value descriptions to different stakeholders and give also criteria for evaluation.

This sequence was tested in the real company with the aim to reinvent their values. During the pre-session 74 values from strategical documents, normative acts, the visions of the company etc. were collected; 76 employees and partners were involved in the evaluation of these values. All values were evaluated using 5 point Likert Scale.

STEP 1 – WARM-UP: 4 groups were created and in each were 5 persons. For this step only 35 minutes were given. On average 8 questions were defined and for each question 4 answers were given. In the value scales 10 predefined values were evaluated (all group results were consistent and not conflicting). On average the groups wrote down 12 additional characteristics of a target persona.

STEP 2 - SUMMARIZE THE VALUES - during this step the teams received the list of 35 values with the highest range acquired at the pre-session. They were able to see also the 10 values which obtained the most points. Though, during the selection process the team chose values that were also not included in these 10 ones, so it was reasonable to give a wider perspective and the variation for the teams. During the second step all the team generated 3-4 groups of values and in each group 2-4 sub-values were included. Only 2-5 additional values were added by each team, so the preparation with the value collection was successful and not many values were missed. Even the groups started with the same values – till the end of this method came up to just 3 main values that duplicated but later the descriptions of a theme were quite different (in step 4 these values would be merged).

STEP 3 - ENRICH THE VALUE DEFINITIONS – during this step the teams copy pasted the descriptions of values groups, including the sub-values. Then these descriptions were enriched with 3 trends in the future that were important for this company. After this step the descriptions of values were evaluated by the criteria. If the criteria were not approved – the teams tried to improve the description. Almost all value descriptions received 4 or more approved criteria.

STEP 4 - EVALUATE THE VALUES – during this step all created value descriptions were copy pasted to this step and the same values were merged as one. Only 4 values were merged and then all value descriptions were evaluated according to their innovativeness and simplicity. There were no ideas in "Black hole," so this approach led to promising value propositions. There were 2 - NOW ideas – simple but traditional values, but all other values were very innovative. 6 - HOW ideas that were complex for implementation, but 4 – WOW ideas were easy to implement. By using this approach the company's aim was reached to define 4 value descriptions that would be innovative but simple for implementation. All created descriptions were given for public evaluation and the same values got the support.

After the session the participants and managers approved that it was unexpected 8 hours of a playful process that led to serious results. An additional note that this process was moderated in Zoom and Miro environments, but it could be also moderated over face-to-face sessions.

Discussion

This paper offers a systematic 4-step process to redefine the values. The aspiration of the design thinking approach is to provide a more systematic view on how to get to the best possible values by creating and evaluating them.

The adoption of the action research methodological framework and results gained generated new knowledge available for wider range of stakeholders inside and outside the organisation involved within the research. Somekh (2005) believe that this new knowledge and experience can be potentially useful in other contexts and settings of changing situations within this organisation or even outside its' boundaries.

A key practical implication is related to the possibility to use created sequences' templates for the value creation or reinvention process. The approach may help organisations' and enterprises' innovators who desire to create a more systematic and playful value creation process. As a result, a decision-maker will have more values to choose from while inventing new or reinventing existing business models. Design thinking and idea management may provide far more quality and playfulness to the complex innovative processes of inventing new and reinventing established values in business models.

A key theoretical implication is related to the new combination and modification of design thinking approaches to adapt them to this specific aspect of business models – a value reinvention. It may be possible to include this 4-step approach as one perspective for understanding how to design and develop business models values.

The further researches could explore the potential and effectiveness of diverse stakeholders' involvement in the value creation or a reinventing process. It may be that each of these insights play an important role in the value creation or a redefining process.

A philosophical implication is related to the dominating assumption about the role of design thinking and idea management in a business model development and innovation processes, since mostly it is related to the first stages of the innovations (Herrmann et al., 2020; Gerlach & Brem, 2017; Sandstrom & Bjork, 2010; Sandriev & Pratchenko, 2014). We may need to reconsider the idea management as a part not only to create business models but also as the process that could keep it up-to-date all the time.

An additional question is how this approach works in real-life sessions, because in this case it was applied in a web-based session. The results were very good, but there are a lot of discussions that technologies destroy creativity (Edwards, 2001; Todd, 2003; Hoffmann et al., 2016), but maybe in a systematic and well-managed idea management process with the design thinking approach it can boost it.

Conclusions

The application of design methods in the existing remote work environment has created new challenges for the virtual moderation of design thinking and ideation sessions. Digital tools help to develop attractive and engaging methods for active participation within the ideation sessions of new values. The design sprint and gaming elements integrated within the design thinking methods helps to keep the attention and engagement of participants in the longer (e.g. 8-hour) ideation sessions.

Our findings reveal that this 4 – step sequence of design thinking methods enhance the participants ability to reinvent values.

The action research approach applied allowed the close cooperation between researchers and practitioners to maximise the results of the ideation sessions. Moreover, it stimulates the development of new knowledge among the practitioners on the design thinking methods applied. The participants of the 4 – step sequence of design thinking methods for reinventing the values became as the knowledge ambassadors on these methods and may further promote these approaches within their organisation.

The 4 – step structured tasks encourage more effective ideation leading to new ideas of values. The variation of the length and type of tasks bring entertaining aspects keeping participants interested in the process and contributing to the ideation.

Declarations

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Authors’ contributions

Work has been divided equally among the authors. Authors read and approved the final manuscript.

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Availability of data and materials

All research data is openly accessible within Idea Innovation Institute, to access data contact: mikelsone.elina@gmail.com.

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Figures

Figure 1

The methodological framework of this research (source: the authors)

Figure 2

Step 1: “Warm-up” of the 4-step Sequence of Design Thinking to Reinvent Values, source: created by authors

Figure 3

Step 2 – Summarise values of the 4-step Sequence of Design Thinking to Reinvent Values, source: created by authors

Figure 4

Step 3 “Enrich the value definitions” of the 4-step Sequence of Design Thinking to Reinvent Values,
source: created by authors

Figure 5

Step 4 “Evaluate the values” of the 4-step Sequence of Design Thinking to Reinvent Values, source: created by authors