Sustainable Business Model Development

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Abstract - Velocity and intensity in business surroundings are continuously accelerating and it is no longer possible, as it used to be, to plan linearly and make strategic decisions. Instead, it is necessary to adapt to more agile planning methods and evaluations of market opportunities. For the last couple of years, the method of Business model canvas has become vastly popular, especially in the start-up community. However, this method at its essence does not take account for strategic positions, meaning it doesn’t consider analysis of the competitors and their offers, which make it unsuited for already established companies - incumbents. For these reasons this paper is based on the idea that the classical method of strategic planning should be merged with the Business model canvas method to achieve the most out of both approaches. The suggested new method is being developed step by step, through recognition of individual metamodels and afterwards their synthesis, across shared elements, to a completely new method. To prove this new method works and assure its dynamic aspect, a demonstrational prototype in MS Access tool has been created.

Keywords: business model canvas, strategic planning, SWOT, ERA model, metamodels

I. INTRODUCTION

Business model concept started to dominate in business community and has wide adoption in recent years. However in his essence Business model has little to say about competition and how to position your product or your company among other players on the market which could be crucial to survive and last. Magretta says that a business model is like a story that explains how an enterprise works. But she also distinguishes the concept of business model from concept of strategy. She explains that business models describe, as a system, how the pieces of a business fit together, but as opposed to strategy do not include performance and competition [1].

Main idea for this paper raised from this fact that business model alone cannot assure sustainability and from the other side classical strategic methods need more agility. The aim of this paper is to make a synthesis of two managerial methods using metamodeling approach: Business Model Canvas and Strategic Planning.

The proposed methods are used in real life and will be presented and described based on the experiences of Croatian company Infodom, with slightly modified data but representative enough to get an idea of how the methods are used and which benefits it brings for those who are going to implement them.

Infodom is a software solutions company based in Zagreb. It has been on the market for over 20 years and has about 100 employees. The main products are proprietary solutions for managing administrative business processes and documentation, as well as services for the implementation of global ERP software packages for integrated business processes.

Strategic Planning method has been used within the company for many years and for its implementation there is already solid knowledge and experience in place. The second method that is going to be presented is the Business Model Canvas method, which has only been applied for a few years.

II. METHODS DESCRIPTION

Methods used for creating a unified metamodel representing a new approach to innovation management and sustainable business models are described in the following subsections. For each method, an example is given, from which a table of occurrences of the main entities, their attributes and interrelationships are derived. Based on these occurrences, a corresponding Entity Relationship model is developed and presented.

A. Business Model Canvas

The business model canvas is a strategic tool and method for visualizing a company's business model, whether it is a description of an existing or a new business model. It emerged as a conceptualization and sublimation of a large number of business model methods that existed until 2004. This method took its formal form in Alexander Osterwalder's doctoral dissertation [2]. Although there are many definitions in the business and academic literature, as shown in [3], for the purposes of this paper, the definition given by the author of the method will be used: “Business model describes how an organization creates and delivers value to its customers” [4], [5].

The Business Canvas Model method is particularly suitable for introducing innovations, technical, functional changes, strategy changes, brand positioning, distribution or some other elements that arise as a result of solving problems in a new way. But for the success of innovation, the company must also create an innovation culture.
The Business Canvas Model, as shown in Figure 1 through an example, consists of nine related areas (building blocks): CS - Customer Segments; VP - Value Proposition; CH - Channels; CR - Customer relationship; RS - Revenue Streams; KA - Key Activities; KR - Key Resources; KP - Key Partnership and CS - Cost Structure.

Creation of a Business Model starts with the market segments to which we deliver goods and services. The following are the value propositions we assign to them, and the channels through which they are delivered. Infrastructure is defined in terms of key activities, resources and business partners. The following are the financial implications in the form of cash flows, ie sources of income, and expenses. "Canvas" implies interdependence and intertwining in which all elements and all stakeholders in the process participate. The related elements form a consistent approach in making strategic decisions.

Once the business model is defined, it is necessary to recognize the occurrences of the main entities, their attributes and interrelationships (shown in Table 1). Derivation of entities, their attributes and relationships starts from observing the real world and how we describe business model in natural language. Once we describe occurrences in real world we need to recognize main data occurrences and name them. When we have main data occurrences we can recognize main entity types and their attributes. Some of entities act like relationship so we name them relationship types. Once we fill in the occurrence table we can create an ERA model (Figure 2).

In order to obtain full success with Business Model Canvas it is crucial to understand that no business model takes place in a vacuum, it is always part of a business environment, and the business environment changes often and quickly, especially nowadays. However, the environment itself should not limit creativity in designing business models but, of course, only influence decisions during business model design. Sometimes, with a revolutionary business model, the environment itself can be influenced and changed, and new standards can be set in the industry.

B. Strategic planning

Strategic planning is a method used to generate a medium-term business plan, usually for a period of 5 years. Once the strategic plan is approved, it is revised every business year and is the umbrella document from which all other business plans are derived. The following will briefly describe how Infodom generates its strategic plan.

The first phase of strategic planning refers to the analysis of the existing situation: AS-IS Analysis. The first step in conducting an analysis of the current situation is dedicated to capturing the broader business environment

Table 1. Occurrences in the business model
in which the company operates. The broader business environment includes an analysis of major global trends and opportunities and threats in global markets.

After the analysis of the wider business environment, an analysis of the narrower business environment is performed, including the observation of opportunities, risks and the main characteristics of the market within the Republic of Croatia. If necessary, more detailed analysis of individual market segments as well as geographical areas can be made, which are estimated to bring special opportunities in the observed planning period.

As part of the analysis of the wider business environment, the PESTLE analysis is conducted, where potential opportunities and troubles are described in one place, grouped into four categories of factors: Political, Economic, Social, Technological, Legal and Ethical / Environmental [6].

As part of the AS-IS analysis, the situation in the IT industry and global trends are observed in more detail, such as: average income levels, YOY ("year-over-year") growth rates, average margins, number of employees, profitability and alike. The analysis of the business environment ends with an assessment of the attractiveness and intensity of competitive forces [7].

Although it is common to conduct a SWOT analysis [8], as many companies do, for the entire organization and without any specific goal, project or venture, the authors of this paper advocate a different approach. Namely, in the further chapters where the unified method will be described, the proposal will be that the SWOT analysis should be carried out for a specific project, related to the specific goal.

After the analysis of the existing situation, the TO-BE situation is approached, ie the vision of the company’s development in the next 5 years is defined, whereby the Vision and the Mission of the company have to be in line with the expectations of key stakeholders.

Strategic goals, which do not necessarily have to be quantitative, are cascaded into more specific goals, which must have their own quantitative expression, in order to make it possible to measure their progress in achievement. It is important to emphasize that the goals are always derived from the current vision and as such represent its realization, so the goals will not be specifically linked to the vision because it is assumed that they arise from it.

When the goals are defined, global and specific, then it is elaborated what needs to be done in order to achieve the goals. The activities needed to achieve global goals are grouped into strategies, and tactics are defined to achieve specific goals, which must also be aligned with defined strategies.

The process of strategic planning ends by defining specific activities, projects and initiatives through which the set goals will be achieved, ie implement the necessary changes within the organization. The procedure and implementation are carried out according to pre-determined priorities.

Table 2. Main specific goals

<table>
<thead>
<tr>
<th>No.</th>
<th>Tactics</th>
<th>Strategy</th>
<th>Specific goal</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Acquiring new customers through aggressive sales and direct marketing</td>
<td>Focus on customer needs</td>
<td>Launching MyPurchase@Cloud until 31.12.2019</td>
</tr>
<tr>
<td>2.</td>
<td>Make it simpler</td>
<td>Clean up the portfolio of products and services and invest to the new ones</td>
<td>Increase revenues from products and services in the Cloud by 30% by 31.12.2019</td>
</tr>
<tr>
<td>3.</td>
<td>Open new markets</td>
<td>Focus on customer needs</td>
<td>Acquire at least two new customers in the banking sector</td>
</tr>
<tr>
<td>4.</td>
<td>Maintain high quality services</td>
<td>Focus on customer needs</td>
<td></td>
</tr>
<tr>
<td>5.</td>
<td>Shorter time to market</td>
<td>Adapt the organizational structure</td>
<td></td>
</tr>
</tbody>
</table>

Once the Strategies, tactics and goals are defined, it is necessary to recognize the occurrences of the main entities, their attributes and interrelationships (shown in Table 3), and create an ERA model respectively (Figure 3).

III. UNIFIED METHOD
Metamodeling is the construction of a set of concepts within a particular domain, as well as a precise definition of the construct and rules needed to create semantic models. A model is an abstraction of the real world, and the metamodel is another abstraction that describes the properties of the model in the form of an abstract language for defining different metadata [9].

Modelling and metamodeling are very similar activities, differing only in their interpretation. Models are abstract representations of real processes, and when the process being modelled is the process of creating other models, the modelling activity is called metamodeling [10].

<table>
<thead>
<tr>
<th>Meta model</th>
<th>Object type</th>
<th>Attribute</th>
</tr>
</thead>
<tbody>
<tr>
<td>Business plan</td>
<td>SWOT Analysis</td>
<td>SWOT Category</td>
</tr>
<tr>
<td>Strategic goal</td>
<td>Business plan</td>
<td>SWOT Element</td>
</tr>
<tr>
<td>Strategy</td>
<td>SWOT Analysis</td>
<td>SWOT Category</td>
</tr>
<tr>
<td>Tactical goal</td>
<td>Business plan</td>
<td>SWOT Element</td>
</tr>
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<td>Business plan</td>
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</table>

Table 3. Occurrences in the business plan

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In order to create a common metamodel of a unified new method, the overlapping in entities in the individual ERA models have to be identified, and the model needs to be further expanded if needed.

Analyzing the metamodels (represented as ERA models) of the previously described methods, it can be identified that they have direct common entities: "org_unit" and "activity". However, when examined in more detail, the entity "customer" from the metamodel of Business Model Canvas is the specialization of the entity "influencer" from the other method. In addition, the entity "product" from the Business Model Canvas metamodel is a specialization of the entity "resource" from the strategic planning method. Further analysis shows that the entity "capability" is redundant, and for easier filling of the business model canvas, a new entity "business canvas" is introduced.

Starting from these assumptions, as well as the previously mentioned important remark, that in this paper the authors advocate conducting a SWOT analysis for a specific venture, a unified metamodel is created, as shown in Figure 4.

Once the metamodel of the unified method is ready, then it is necessary to translate it into a relational model in order to be able to create a database in which the data will be stored.
After the database with all the necessary tables was created, several forms for entering, displaying, modifying and deleting data were created. As an example, the main form for making value proposition and form for entering and modifying follow up activities is shown in Figure 5.

The next step is to describe in more details those activities which have the highest priority and are planned to be executed first.

Creation of Value proposition follows after the SWOT analysis, and for this purpose the Business model canvas is used. This is done by first defining the customers and the values for those customers, and then the necessary activities, resources and partners for the realization of the offer. Finally, potential revenue is identified and faced with expected costs.

IV. CONCLUSION

This paper presents how to merge two well-known management methods: Business Model Canvas and Strategic Planning into a new unified method, which enables the improvement of the strategic planning process by making it more agile and suitable for rapid and
significant changes in the business environment. On the other side, taking into account the competitive dimension into the agile methods, it makes them more suitable for creating sustainable business models.

In addition, authors argue that the SWOT analysis is carried out for specific ventures instead of general purposes, which is shown in a concrete example and incorporated in the proposal of a new method.

The resulting method that emerged from two well-known methods has inherited positive characteristic from both, making it more suitable and robust for today’s requirements. The new method has been proved to be useful and practical as it has been shown through an implementation in a software tool.

REFERENCES