Title: Determinants of Business Model Transformation: The Dewesoft Case 2000-2014

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Extended Abstract

Abstract
This inductive study leads to propositions which determinants give the company abilities to undertake a successful business model transformation. We use a longitudinal study (2000-2014) of a single case from the Hi-Tech industry. Slovenian company Dewesoft has been successfully transforming its business model of from being strategically aligned data acquisition software development company to become an independent total solution company on its market with customers from all over the world. Results suggest that four determinants play an important role in the business model transformation. The first is forming and following a technology vision, which assures that the pace of products development is not disturbed by possible challenges and motivates all those who contribute in its achieving. Next is an industry improvement orientation, which assures that everything what is developed for an individual customer is simultaneously available, free of charge for all customers. The third is attracting customers into solution co-creation and the last is exploring a possible ways of business model transformation by experimenting.

Key words
Business Models, Transformation, Strategic Alliance, Determinants, Barriers

1. The Dewesoft Story: 2000-2014

Companies Dewetron from Austria and Dewesoft from Slovenia were strategically aligned since Dewesoft was established late 2000. However, a new general manager of the Company Dewetron set up in the beginning of 2011 announced a few months later that Dewetron is going to be sold. Jure Knez (CTO) and Andrej Orožen (CEO) owners of the company Dewesoft, the main data acquisition software provider the Dewetron, realized that suddenly a big threat for their company was arisen. A possible buyer with its own data acquisition software would squeeze them easily from the market.
However, already being aware that Dewesoft’s measurement software capabilities were always limited by the performance of the hardware developed by strategic partner, Jure and Andrej were prepared and immediately responded to that threat by initiating a business model transformation. After three years of an active transformation Dewesoft is already a total solution company, which do complete hardware design, manufacturing, software development, sales, marketing and support within the same organization. However, the first experiment which have led to Jure’s and Andrej’s awareness that initial business model should be transformed was initiated three years earlier, in 2008.
The data show that Dewesoft achieved at the end of 2008, after eight years being on the market, a total earning of 1,899 mio €, a three years later (2011) it arose on 4,064 mio € and in just two following years they doubled income and earned in total 8,734 mio €. It is expected that at end of 2014 a total earning will exceed 10 mio €. Despite the fact that before the business model transformation was launched Dewesoft hadn’t had its own global distribution network, today it operates by using its own distribution network in 19 states in Europe, 13 states in the Asia & Pacific region and in the USA, Brazil and Argentina. Dewesoft has successfully changed the core logic of doing business and created a perfect fit between its own software and hardware. A new line of instruments has started to be successfully selling under new selling model. Many more business model elements are completely different now comparing them with the situation in 2008 (see appendix A). Despite the fact that Dewesoft and Dewetron are not strategically aligned any more, even more in many cases are also competitors they both still using the Dewesoft software. Dewesoft software DS-X supports only Dewesoft hardware and DS-7 supports only Dewetron hardware. 
So the main question of this research is what were determinants of its successful transformation?

2. Business model and its transformation

A review of an academic literature (Zott, Amit, & Massa, 2011) reveals that business model is a relatively new concept and that has been employed primarily in trying to address or explain three phenomena: (1) e-business and the use of information technology in organizations; (2) strategic issues, such as value creation, competitive advantage and firm performance; and (3) technology management and innovation.

Regarding to technology management and innovation two main streams of researches has been recognized. The former is related to the argumentation that business model mediates between the technical and economical domains (H. Chesbrough, 2010; H. Chesbrough & Rosenbloom, 2002) and the latter is related to an innovation of business model itself by using which introduce some new concepts like: open innovation (H. Chesbrough, 2003) collaborative entrepreneurship (Miles, Miles, & Snow, 2006) and open business models (H. W. Chesbrough, 2007).

Much less attention has been paid to firm’s business model transformation over time (Aspara, Lamberg, Laukia, & Tikkanen, 2011) which is not treated as an easy process as inertia or organisation’s dominant logic (Bettis & Prahalad, 1995) from many sources defends the status quo (Dos & Kosonen, 2010). A study done by Sosna, Trevino-Rodriges and Velamuri reveal that a severe crisis can provide or it is even necessary to initiate a real business model change (Sosna, Trevino-Rodriguez, & Velamuri, 2010) while Johnson, Christensen and Kagermann expose that companies should not pursue business model reinvention unless they are confident that the opportunity is large enough to warrant the effort (Johnson, Christensen, & Kagermann, 2008). If companies go to a business model change Chesbrough affirms that the search for a new business model often requires an extend period of co-existence between the current and the new models and expose barriers which prevent organizations to conduct experiments which could lead to business model innovation (H. Chesbrough, 2010). On the other side Markides and Charitou argue that companies could compete with dual business models and have defined four different strategies for managing dual business model. They argue that it is not necessary to split them if they are able to balance the benefits of keeping them separate on one way while on the another exploit synergies with one another (Markides & Charitou, 2004)

However a business model innovation is just a subset of broader concepts of business model design and business model reconfiguration (Massa & Tucci, 2014).

According to Massa and Tucci (2014) business model design refers to the entrepreneurial activity of creating, implementing and validating a business model for a newly formed organization and business
model reconfiguration refers to the phenomenon by which managers reconfigure organizational resources to change an existing business model. Markides emphasis that business model innovators redefine the meaning of an existing product to the customers and how it is provided to the them (Markides, 2006) and many others agree that business model innovation presents a new frontier in innovation beyond product and service innovation (Koen, Bertels, & Elsum, 2011) or technological innovation (Teece, 2010). To be a source of business model innovation, the output of design or reconfiguration activities which lead to value creation potential should be characterized by some degree of novelty, lock-in, complementarities and efficiency (Amit & Zott, 2001; Massa & Tucci, 2014).

However, not all design or reconfiguration efforts will necessarily lead to business model innovation (Massa & Tucci, 2014) just the opposite in reality many of them can lead to less novel but anyway demanding fundamental changes in how business is conducted in order to cope with a new, more challenging market environment (Kotter, 2007). Such changes are often driven by strategic issues and with the question how to improve competitive position on the market.

The research gap which we address in this article is related strictly to exploring which determinants influence to the company abilities to overcome barriers an perform successful business model transformation and not to the business model innovation however we are aware that researcher many time use them interchangeably.

The short description of the Dewesoft business story shows that Dewesoft went thru extensive and successful business model transformation however it hasn’t implemented any really innovative approach, with the exception of its core software development.

3. Method

We used a single case study design, which is justifiable when the case is representative and serves a revelatory and longitudinal purpose (Yin, 2009) and persuasive (Siggelkov, 2007). The Dewesoft business model transformation meets these criteria as we have analyzed a 14 years of its existence and we were especially focused in the period 2007-2014 when the main changes in the Dewesoft business model were happened. Not many researchers gave attention to s question what makes business model transformation successful or not, especially over time (Aspara et al., 2011) so the Dewesoft case could serves as an revelatory case. And it is a representative and unique case as well because we were studied a situation of business model transformation where partners were at the beginning of the transformation strategically aligned and at the end they became a collaborative competitors.

The data, which we used, were collected by doing interviews and analysing a secondary documentation. Interviews were semi structured and were performed individually with Jure Knez (CTO) or with Andrej Orožen (CEO) owners of the company Dewesoft. We did 5 interviews in period September 2013 – July 2014. Three of them we did in 2013 with the purpose of collecting data and two were performed in 2014 with the purpose of clarifying initial understanding of Dewesoft’s business model transformation, checking initial classification of categories, refining and collecting additional information. All interviews were audio recorded and later we did a transcript of each interview. We did interviews in Slovenian language and duration of each of them was between one hour and a half and three hours.

Before we started performing interviews we had collected a vast amount of secondary documentation available over internet (newspaper articles and interviews, reports and explanations after company won some important awards in Slovenia, some video records), we analysed Dewesoft website, and we analysed a reports from interviews done by researcher in the project Gazela, recognizing the fast growing company in Slovenia, including financial data available from the Gvin data base.
After each interview we got additional information which led us to another types of secondary information including article in journals, master and PhD thesis of Jure Knez and bachelor degree thesis of Andrej Orožen, Business Year Reports, ppt presentations and emails. By using a wide variety of sources we did a methodological triangulation of all data, which finally allowed us to build a Dewesoft story of business model transformation based on relevant and confirmed data. After collecting, analysing, and clarifying all data we codified them into four groups.

4. Results

We explored determinants, which have an influential impact to influence to the company abilities to perform successful business model transformation. There are many reasons why companies do business model transformation and there are many different ways how to execute such a transformation. We focus on our research on a special case when strategically aligned data acquisition software development company (business model 1) has been transforming its business model to a total solution company which do complete hardware design, manufacturing, software development, sales, marketing and support within the same organization (business model 2).

The study reveals that four determinants play an important role in the business model transformation. Determinants are technology vision, industry improvement orientation, customers’ solution co-creation and experimentation. Findings show also that all four determinants were part of company culture even before business model transformation was triggered and when it was triggered all four have an essential influence on business model transformation success.

Technology vision clearly mediate by the owner and CTO of the company to the employees, customers, strategic partner and owners assures that the pace of product development was not disturbed by any challenge. Technology vision clearly influence on motivation of all those who actively contribute in its achieving by giving them feeling that they contribute in developing something important to the world not just to the company or for the customers.

Industry improvement orientation is a unique approach where everything what was developed for one particular customer goes in a single software package which is immediately available to all customers free of charge. By this approach all customers from the same industry benefits and improvements move boundaries of industry capability far in advance.

Customers’ solution co-creation is next determinant which influences on a fast and successful business model transformation especially because it make possible for the customers to actively influence on solutions and in a combination with a technology vision gives them feeling that they could get even much more that had expected before.

Experimentation is an ongoing approach related to exploring the ways how business model could be improved. It was essential to do experiments even before a decision of business model transformation was accepted because it was a source of knowledge, experiences and was playing an important role of informing market about possible changes.
### Appendix A:

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<th><strong>Business model 1:</strong></th>
<th><strong>Business model 2:</strong></th>
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<tr>
<td></td>
<td>Strategically aligned data acquisition software development company</td>
<td>A total solution company which do complete hardware design, manufacturing, software development, sales, marketing and support within the same organization.</td>
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<td><strong>2007</strong></td>
<td></td>
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</tbody>
</table>
| **Products**             | • Measuring software (DW 6) for each type of measuring hardware produced by the strategic partner | • Measuring software (DW 7) for each type of measuring hardware produced by the strategic partner  
• Measuring instruments with fix number of measuring channels and with integrated measuring software (DW X) produced by Dewesoft  
• Measuring instruments with flexible number of measuring channels and with integrated measuring software (DW X) produced by Dewesoft |
| **Selling models**       | • Licencing for a measuring software (DW6) for each type of measuring hardware produced by a strategic partner | • Licencing for a measuring software (DW7) for each type of measuring hardware produced by a strategic partner  
• Direct charging for a physical unit: fixed price for a measuring instrument with fix number of measuring channels and with integrated measuring software (DW X)  
• Direct charging for a physical unit: flexible price for a measuring instrument, depending on number of measuring channels (HW and SW integrated) |
| **Free-no charge**       | • SW (DW6) development  
• SW (DW6) upgrade  
• SW (DW6) for viewing and analysing stored data | • SW (DW X) development  
• SW (DW X) upgrade  
• SW (DW X and DW 7) for viewing and analysing stored data |
| **Relationship with Dewetron Austria** | • Developing strategic partner, buyer and distributor  
• Cooperating without any formal contract | • Buyer, distributor and competitor  
• Cooperating based on a formal contract |
<table>
<thead>
<tr>
<th>Selling channels</th>
<th>• Strategic partner global distribution network</th>
<th>• Strategic partner global distribution network for the measuring software (DW 7)</th>
<th>• Dewesoft global distribution network for any other product</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ownership structure</td>
<td>• 1st founder – CTO in Dewesoft</td>
<td>• 1st founder – CTO in Dewesoft</td>
<td>• 2nd founder – CEO in Dewesoft</td>
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<tr>
<td></td>
<td>• 2nd founder – CEO in Dewesoft</td>
<td>• 2nd founder – CEO in Dewesoft</td>
<td>• 3rd founder – CEO in Dewetron</td>
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<tr>
<td></td>
<td>• 3rd founder – CEO in Dewetron</td>
<td>• 5th founder – Company Dewetron itself</td>
<td>• 4th founder – CSO in Dewetron</td>
</tr>
<tr>
<td></td>
<td>• 4th founder – CSO in Dewetron</td>
<td>• 5 key developers</td>
<td>• 5th founder – Company Dewetron itself</td>
</tr>
<tr>
<td></td>
<td>• 5th founder – Company Dewetron itself</td>
<td>• (3rd and 4th founders have sold their shares but stayed as CEO in Dewesoft Austria)</td>
<td>3 key developers</td>
</tr>
<tr>
<td>Customers structure</td>
<td>• Developing laboratories – testing engineers</td>
<td>• Developing laboratories – testing engineers</td>
<td>• Global corporations – production plants</td>
</tr>
<tr>
<td>Customers and partners in global network relationship</td>
<td>• Direct cooperation with customers</td>
<td>• Direct cooperation with customers</td>
<td>• Measuring conferences and technology vision sharing (“Area 51”)</td>
</tr>
</tbody>
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Literature