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# Business Model Boutique: A Prêt-à-Porter Solution for Business Model Innovation in SMEs

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**Abstract.** We introduce the concept of a Business Model Boutique as a means to support business model innovation in SMEs for the improvement of their competitiveness and growth. The Business Model Boutique aims to support the improvement of the competitiveness of SME's by increasing their awareness and knowledge of business modelling techniques and business model innovation concepts and by facilitating their business model innovation processes. Finally, we present empirical results from an application of our approach for the case of a new generation of Rollators to help older people cope with challenges of everyday life and mobility in urban areas.

**Keywords:** business model innovation, business model canvas, Small and Medium-sized Enterprises (SMEs), entrepreneurship, value co-creation, conceptual modelling.

## 1 Introduction

The role of SMEs in economic growth is critical (European Commission, 2013). In Europe, 99.8% of the 20 million enterprises are SME's. Together they employ 86.8 million people, which represents 66.5% off all European jobs, while 80% of new jobs are created by SME's (European Commission, 2014). The recovery of the European economy is largely based on the growth of SME's. The development, management and growth of an SME is much more difficult than it may seem from a distance. Some major difficulties that entrepreneurs face when they execute their business are related to the urgent need for adaptability to a fast changing environment, the lack of guidelines for the implementation of changes, the lack of knowledge and processes for the adaption or the transformation of their business model, and the lack of resources to keep up with the state-of-the art in business model innovation (Schneider, 2011).

However, current approaches and tools for business modeling and business model innovation operate mainly on a conceptual level and they often fail to reach the practical needs of SME's, the workaday circumstances and the concrete challenges they face. In particular, many business model frameworks leave out a great part of

idiosyncratic factors and parameters that are crucial for a successful implementation. As a result, they are seen again as having only theoretical value, but impractical and irrelevant to the needs of SME's. In general, the lack of knowledge and awareness on business model innovation and the lack of validated and targeted information, tools and processes for successfully innovating one's business model causes sub-optimal growth of SME's. The result is companies that are not as responsive and as successful as they could be and inertia, inability to exploit opportunities or even failures and unnecessary bankruptcies, which entails loss of capital, productive resources and jobs. In this paper we present the concept of the a 'Business Model Boutique' as a place that entrepreneurs can find a variety of services and tools that can be used for successfully conceiving and transforming their business models to keep them current, relevant to the competition and responsive to the emerging trends and challenges.

In an age characterised by hyperconnectivity, SMEs that exhibit reduced access to financial, human and knowledge resources are finding themselves with a relatively low or no barriers to innovate in terms of changing their business models, risking synergies and cross-overs in areas that haven't yet been explored or areas that they may have traditionally been considered as out of scope for their existing core business profile.

The Business Model Boutique aims to support the improvement of the competitiveness of SME's by increasing their awareness and knowledge of business modelling techniques and business model innovation concepts and by facilitating in general their business model innovation processes. In this respect, the aim of the Business Model Boutique is to help SME's to adapt and innovate their business model in a timely and effective way. The research approach is based on the concepts of user-centred service design and context mapping, ensuring that the needs and demands of business owners are properly addressed in the development of the business modelling concepts, the support services and the tools. The concept of organisational lifecycle is used for the development of adjusted strategic services for the business model innovation of SMEs.

### **1.1 Business Model Innovation by SMEs: Mission Impossible**

There are many business support initiatives available for companies in many countries, most of which aim to stimulate entrepreneurship and start-ups and put an emphasis to the growth of SMEs. However, research in 10 European regions shows that effective business support services are lacking, with most stakeholders stating that there is insufficient availability of effective services in their region (Probst, 2013). A wide range of methods and tools is used in these business support initiatives. The latest generation of tools use design principles, experimentation, visualisation and lean methodologies as described in (Amit, 2011). And while there has been 'published a lot of scientific and practical contributions to business model innovation literature' which should have been considered in the present paper as one of our anonymous reviewers has stated, there are not sufficient transitions from a theoretical concept to a computer-based implementation that would facilitate wide uptake of the methodology by an audience of adopters that might be (some of them) willingly ignorant of the intrinsics of the methodology, however extremely convinced to use it

in case there would be evidence of positive prior usage. Throughout the world, experiments are being held with this more creative and explorative way of re-organizing existing business and start-up new business (Ries, 2011). Many of these tools are proprietary and developed within consultancy companies, but many free alternatives are available. Table 1 summarizes some of the most influential methods and tools for the support of in the business initiatives.

**Table 1.** Overview of existing business model innovation tools and methods.

Method	Origin	Remarks
Business Model Canvas (Osterwalder, 2010)	Osterwalder	Creative commons
Value proposition canvas (Osterwalder, 2004)	Osterwalder	Creative commons
St. Gallen Business Model Navigator (Gassman, 2013)	St.Gallen Univ..	Proprietary
Business Model Diamond / STOF (Bouwman, 2012)	Novay	Proprietary
4I-Framework (Frankenberger, 2013)	St.Gallen Univ.	Method
Fluidminds way to business model innovation (Fluidminds, 2014)	Fluidminds	Method, free templates
Business model brainstorm kit (BOA, 2013)	Board of Innovat.	Board game, free e-version
BMA Elements / BMA Buildng Site (BMA, 2013)	Busin Mod Archit	Board game

## 2 The Business Model Boutique Concept and Services

The Business Model Boutique is the place that entrepreneurs visit to find a variety of tailored-made solutions about business model innovation that can be used for successfully conceiving and transforming their business models to keep them current, relevant to the competition and responsive to the emerging trends and challenges. The entrepreneurs who come to the Business Model Boutique can choose tools and services or further adjust them to their specific needs. The solutions offered are tailored to the specific needs and the profile of certain types of entrepreneurs/ companies with the use of a user-centred approach and co-design processes with a target group of entrepreneurs. The Business Model Boutique is supported in its operation by the Business Model Research Lab, which captures, stores and analyses business models and business model transformations. To be able to identify the key success factors of a specific business model, information about its operational context in which it was deployed, will also be captured, stored and analysed. The Business Model Boutique is envisaged to provide the following services:

- Business modelling: the development of business models as visual representations.
- Business model innovation: the development of improved business models, with input from user requirement, business model patterns and other methodological patterns.
- Value proposition analysis: analysis of the value proposition and its relationship with the customer and the other elements of the business model (e.g. to identify opportunities or inconsistencies).
- Sensitivity analysis: analysis of the impact of trends and events on the business model.

- Business ecosystem analysis: analysis of the impact of the evolutionary patterns of business ecosystem on specific business models.
- Business model transformation analysis: analysis of the requirements of the transformation process from an existing business model to a new one.

A variety of tools will be necessary to support the delivery of services and solutions provided by the Business Model Boutique. For instance, business modelling will require a manual for explaining the concept of business modelling and applications and tools for helping business owners understand, describe and represent their business model. Or the analysis of value proposition will require tools that support business owners to anticipate on changing customer needs and demands, and determine the impact on their business model. A business game will also serve reconsidering and better understanding one's business model, as well as developing and experimenting with new business models or business ideas. First of all, it will enable the business owners to learn or get deeper in the concepts and methods of business modelling. The most typical example of services provided through the Business Model Boutique is the improvement of an existing business model, for instance as a result of the development of new trends in the environment or the emergence of new technologies. The service process is envisaged as such:

1. The user begins with the description of the different aspects of his/her business, which ends with the depiction of the existing business model.
2. Next, the user may proceed with the analysis of the value proposition of the business model, to identify opportunities or inconsistencies, and sensitivity analysis, to estimate the impact of new trends and events.
3. Based on this, an improved business model is developed, analysed and enhanced with the use of different concepts and tools that will be developed in the Business Model Boutique.
4. At the end a business model transition path can be developed that will guide the business transformation process.

In general, business owners need to learn when to use business model innovation as a tool for improving the performance of their organisation. The time to invest is when an organisation is impacted by a game-changing event such as new customer needs or expectations, the approaching of a new, different market, some unexpected significant economic downturn, a new business owner with different ideas or a changing competitor landscape. Such events can be mapped on the different phases of an organisational lifecycle. The service concepts developed within Business Model Boutique address the different phases as well as the level of awareness of the business owner.

## 2.1 Practical Aims and Application Potential

With the Business Model Boutique we aim to bring together business model analysis with business model innovation methods. Business Model boutique aspires to democratise the access to business model innovation support tools and methods further and develop services that teach entrepreneurs how to work with and how to apply existing methods and tools. Business Model Boutique will elaborate on that and develop tools that are easy and fun to use and visually appealing. In areas where no free tools are available, Business Model Boutique will develop tools that are easy and

fun to use and visually attractive. In table 2 below we outline the current problems for entrepreneurs and SMEs, the existing tools and services to overcome these problems and the Business Model Boutique approach, which aspires to develop a next generation of tools and services for the support of business model innovation.

**Table 2.** Problems, offerings and the Business Model Boutique ambition.

Problems	Current offering	Business Model Boutique's ambition
<ul style="list-style-type: none"> <li>– <i>Entrepreneurs, pre-starters and independent professionals:</i></li> <li>– Operate individually</li> <li>– Are looking for funding</li> <li>– Focus on product and service innovation</li> <li>– Are looking for partners</li> <li>– Lack education in business strategy and innovation</li> <li>– Need to adapt faster to a changing business environment</li> </ul>	<ul style="list-style-type: none"> <li>– Awareness meetings and information sessions for pre-starters</li> <li>– Coaching</li> <li>– Network meetings, business clubs</li> <li>– Courses and training in class teaching</li> <li>– Consulting services from experts</li> </ul>	<ul style="list-style-type: none"> <li>– Provide tools and learning material for understanding and using business model innovation</li> <li>– Develop or adapt tools that show the relation between one's business model and its operational context</li> <li>– Develop or adapt business model innovation tools that link to issues specific for the phase the organisation is in.</li> <li>– Help entrepreneurs with understanding and managing their business ecosystem</li> <li>– Connect entrepreneurs</li> <li>– Provide examples and best practices in business model innovation from various industries</li> </ul>

### 3 An example Application

We present empirical results of an application case related to an innovation we have worked together to introduce in the market of what one would describe as assistive technologies but from our side we regard as a mainstream consumer product, namely what we call the ‘*Swinging Semantic Rollators*’.

Rollators have been designed for first time in Germany before exactly 100 years and they appear in their existing form since 1978 after a new design implemented in Sweden. In Germany especially their use is extremely wide, with products that are covering the entire spectrum of low-end / low-cost to high-end / high cost products covering different needs (i.e. standard, lightweight, foldable, suitable for shopping, etc.). For senior citizens, even a trip to a bakery at the same neighborhood can be a challenge. Only assembling sensors and monitoring systems will not help if the technology is not well and easily accepted by the user.

Our idea for what for the ‘*Swinging Semantic Rollators*’ aspires to transform rollators into a mobile smart environment with sensing capabilities to help increase mobility, guidance and fun for moving to older persons. We solve this problem by developing a smart assistance focused on speech-recognition for command and communication with the user, image processing for obstacles detection and user's facial expressions, and open data for route planning, safe navigation and location monitoring. Capabilities such as vital signs monitoring, proximity sensors, automatic brakes and emergency signaling call can be implemented separately and integrated

with the semantic system.

Our differential is the use of open data and semantic technologies to facilitate elderly technology usage. Similar attempts have been implemented; see (Martini, 2014), (Schwan, 2010) and (Kuusisto, 2015), however they all were primarily focused on monitoring sensors for spatial environmental objects, user's physical conditions and daily activities to provide a safely guide for people with cognitive limitations. Therefore, all solutions do not present capabilities to lower the barrier between technology and senior citizens.

In the *Swinging Rollators* venture we regard rollators as a special type of 'exoskeletons' with the capacity to take several of today's robot companions functions related to guidance, interaction and communication to support a multitude of older people's needs like emergency service request, navigation in the city, goal oriented search, as well as to enable an interaction with grandchildren and fitness motivation. To the latter, as part of the services we shall deploy in the initial 6 month timeframe of the venture are included 3 'Semantic Rollator Games' which are: (a) Rewards for walking (Get Out of Home), (b) City Trivia (Basic city policing and care for the others), (c) Capture The Flag (Scavenger Hunt).

In the venture we make intensive use of open data to facilitate mobility with traffic, weather, public events management, community city maps, terrain conditions and public transportation. A senior citizen can say "I want to go to the bakery", the weather forecast will be accessed to confirm whether it will rain or the temperature is adequate (neither too hot for the summer, nor too cold with snow or ice in the winter), check for a safe and with lower slope route, considering the terrain conditions and community city maps as well as accessibility criteria. If a bus or train is required, the offered service will check the next times and locations. As a live system, is possible to detect streets and sidewalks in maintenance avoiding this path and redirecting the users to an alternative way. If the citizen says "I am not feeling well" the *Swinging Semantic Rollator* can automatically send an alarm message to the family with the current location, a message to the ambulance service and an alarm sound to catch the attention of people around. Finally, the Rollator shall offer the ability to the family members and the medical doctor and carers to trace the route and have access to the activities undertaken by the user - this feature offers the capability to easily locate a person in case it is lost or has not contacted their family for some time. All speech interaction will be using *IntelliSem's* in house { Natural technology (IntelliSem, 2016).

For the city of Passau and for an entire population of about 17.000 rollator users there is a clear incremental trend for the aging population that is above the national average and is comparable to this of the city of Hamburg that is the national champion in the number of older persons. We estimate to attract as pilot users and testers in the initial phase of the venture 100 to 150 users for what we expect to be on a daily intensive use of more than 5 hours per day. We regard them as the 'seed capital' for the spread through word of mouth and attraction of new users. Though there are no official statistics for the number of Rollators that are currently in use in Europe and Germany in particular though there is an estimate of about half a million new Rollator users each year (Straßmann, 2013) and (Sheeley, 2013), Germany is accepted as a lead market (Levsen, 2015).

## 4 Conclusions

We applied our approach towards a business model boutique for use by SMEs in the case of designing a new advanced model for a Rollator. We engaged in the process companies that were active as OEMs in the area together with IT companies and defined a new type of product that we call the Swinging Semantic Rollator. Having in mind the low degree of innovation in this market where manufacturers mainly gave emphasis in the improvement of the design of their products with advancements in e.g. the brakes, a lighter structure with use of titanium, our results offer the opportunity of validating the theoretical concept of a business model boutique with a very practical and hands-on oriented approach. The positive effects of the application of the Business Model Boutique in the case of the Swinging Semantic Rollators venture have as follows:

(a) We introduced a new concept for an existing product; (b) We redefined the main value proposition offered by that product to its traditional market (in our case this is older people with mobility difficulties). (c) We improved the profile of the product to attract attention by other audiences and stakeholders such as telecommunications and mobile service providers, App and service developers, game companies, etc. (d) We created a field for new dynamic collaborations with actors that haven't been together before: companies that are offering daily care products for elderly persons who will co-develop with game company a new App to incentivise older persons to leave their home and participate in a Scavenger Hunt ('Capture The Flag') game, and finally (e) We contributed to the demand for Rollators that will look like the conventional ones but will offer a multitude of IT-enabled connectivity with a wide range of surveillance, health status and monitoring, personal mobility assistance, intelligent route planning and advice for any personal matter, etc.

## References

1. de Ruyter, B., van Loenen E. & Teeven, V. (2007) User Centered Research in ExperienceLab, European Conference, Aml 2007, Darmstadt, Germany, November 7–10, 2007. LNCS Volume 4794/2007, Springer
2. BOA, 2013, Board of Innovation, Business model brainstorm kit, <http://www.boardofinnovation.com/business-model-templates-tools/>, accessed at 12 March 2015.
3. BMA, 2013, BMA Elements / BMA Building Site, <http://businessmodelarchitect.eu/products/business-model-architect-building-site/>, accessed at 12 March 2015.
4. Niitamo, V.-P.; Kulkki, S.; Eriksson, M.; Hribernik K. A. (2006) State-of-the-art and good practice in the field of living labs, Proceedings of the 12th International Conference on Concurrent Enterprising: Innovative Products and Services through Collaborative Networks, Milan, Italy, 2006, pp. 349-357
5. Probst L., Monfardini E., Frideres L. and Bohn N. U. (2013) European Cluster Excellence Scoreboard, Pilot Version, September 2013, Extension of the European Cluster Observatory, Promoting better policies to develop world-class clusters in Europe, European Commission



6. Vargo, S. L., and Lusch, R. F. (2008) Service-dominant logic: continuing the evolution, *Journal of the Academy of Marketing Science*. 36, 1, 1-10, 2008
7. Amit R. & Zott C. (2011) Creating value through business model innovation, *MIT Sloan Management Review*
8. Bouwman H.ao (2012). Business Models Tooling and a Research Agenda, 25th Bled e-conference.
9. European Commission (2013) A recovery on the horizon? Annual report on European SME's 2012/2013.
10. European Commission (2014) Innovation Union scoreboard 2014
11. Frankenberger, K., Weiblen, T., Csik, M., & Gassmann, O. (2013). The 4I-framework of business model innovation: A structured view on process phases and challenges. *International Journal of Product Development*, 18(3/4), 249-273
12. Gassman O. Frankenberger K. & Csik M. (2013) The St. Gallen Business Model Navigator, working paper, University of St. Gallen
13. Fluidminds, 2014, Business Model Innovation, <http://www.fluidminds.ch/en/what-we-do/business-model-innovation.htm>, accessed at 21 April 2015
14. Osterwalder, A. (2004) "The Business Model Ontology : A Proposition in a Design Science Approach." Doctoral Dissertation. Université de Lausanne. Switzerland.
15. Osterwalder A. (2010), Business Model Generation, self published
16. Ries E. (2011) *The Lean Startup, How Constant Innovation Creates Radically Successful Businesses*, Penguin Book
17. Schneider B. (2011) *This is service design thinking*, BIS Publishers
18. IntelliSem (2016) { Natural technology, [http://intellisem.libbn.org/?page\\_id=17](http://intellisem.libbn.org/?page_id=17), accessed 5 June 2016.
19. Austin Sheeley. (2013) "Over Two Million Rollators Now in Use in Germany", [http://justwalkers.com/mobility-blog/over-two-million-rollators-now-in-use-in-germany/#.V12WB\\_195hF](http://justwalkers.com/mobility-blog/over-two-million-rollators-now-in-use-in-germany/#.V12WB_195hF), accessed 4 June 2016.
20. Burkhard Straßmann. (2013) "Es rollt: Die Generation Gehwagen macht mobil – nicht nur Rollatoren werden technisch anspruchsvoll und chic" <http://www.zeit.de/2013/12/Rollatoren> , accessed 4 June 2016.
21. Florian Martini. (2014) Gehhilfe als digitaler Gehilfe, <http://www.siemens.com/innovation/de/home/pictures-of-the-future/digitalisierung-und-software/digitale-assistenten-gehilfe-als-digitaler-gehilfe.html> , accessed 2 June 2016.
22. Ben Schwan. (2010) Der intelligente Rollator, <http://www.heise.de/tr/artikel/Der-intelligente-Rollator-990514.html> , accessed 2 June 2016.
23. Olli Kuusisto. (2015) Smart rollators with VTT technology, <http://www.vttresearch.com/media/news/smart-rollators-with-vtt-technology> , accessed 2 June 2016.
24. Nils Levsen. (2015) 'Lead Markets in Age-Based Innovations: Demographic Change and Internationally Successful Innovations', Springer, 2015.