

Business Models for Public Private Partnership: The 3P Framework

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Abstract: In this paper we outline some of the fundamental theories and developments within the area of business models. The 3P business model project aims at developing a sustainable generic business model that can support the innovation and diffusion of e-services users. An e-service user may be a private person or legal person (private or public organizations). The research approach is co-design, which emphasizes user driven innovation in the context of living labs. The project involves a number of research activities, such as workshops with future e-service users and providers, realization and implementation of new e-services, and evaluation and knowledge sharing. The outcome of the project is a validated generic business model for private public partnership.

1. Introduction

Society require that public and private organizations collaborate in order to solve the many new and unforeseen challenges of the world, e.g. global warming, elderly population in OECD countries, requirements of life long learning, network society, service economy etc. Collaboration between public and private organizations is not always easy and one inhibitor is the existing business models and underlying strategies. One of the key problems in collaborative efforts is revenue and cost allocation. This forces many organizations to rethink their business models and develop new ones. Pioneering research also show that new collaborative business models to a high degree coexists with open innovation networks [1], i.e. new collaborative business models builds upon several organisations collaborating in innovation networks. One such business model, the radical user centric model, takes the user (private or legal person), as the starting point instead of the organization. By focusing on persons' life situations and involving persons, different and complimentary services may be identified and developed. These services are delivered electronically and by a network of actors collaborating in the innovation and delivery process of electronic services (e-services). Involving persons in the development of e-services is a radical shift from the historical way of involving private persons in the design of public e-services. Instead we envision that the people and all actively participating persons (private and legal) should be continuously involved in the co-design of future e-services. This type of service is sustainable and delivers through partnership between private and public organizations. This requires a radical rethinking of existing business models.

The term "business model" has attracted a growing attention during the past decade from both academics and practitioners [2]. For example, a Google search on the term "business model" gave 5.9 million hits and 56 thousands hits in Google Scholar on December 5, 2007. Its intellectual roots can be traced back to Normann's business idea from 1979. However, the term emerged as early as 1966 in an academic journal [3]. The term has been used with different purposes relating to the public and private sector. Hence, the term seems to have both practical and theoretical relevance [4, 5]. Nevertheless the use of the term have been criticized for being unclear and superficial [2, 4-6], being based on

e-business and not traditional business [7, 8], including few conceptual frameworks and development methods [8], and lacking underlying scientific method [4, 9]. Shafer et al. [5] summarizes the critique and concludes that the term has an identity crisis. Hence, there is need for more research addressing business models.

2. Objectives

The purpose of this project is to contribute to the development of sustainable private and public business models by synthesizing business model literature into an initial 3P framework. We discuss and illustrate the validity of the 3P framework from a public private partnership. In addition, we hope to bring some kind of order to the business model concept. Our belief is that such an order can serve as stimuli for the development in new business and in different kind of public-private partnership.

3. Methodology

The project related to in this paper shows how researchers collaborate with actors from several public and private organizations. The project resulted in a new type of interaction arena between e-services users, public and private organizations. The arena, called e-Me where the users, in this case the students, can develop their ideals into a profile, which govern e-Me as a bodyguard and butler on the Internet. From the service providing companies perspective, both public and private organizations, e-Me can serve as input for new service development activities, as well as it gives a relevant and high precision channel for marketing and service delivery. The eco system of e-Me builds upon a business model incorporating both public and private partnership.

The chosen research approach is co-design [10]. This approach is both a scientific approach and development approach that acknowledge the close relationship between innovative product/service development and knowledge creation [11]. Private and public organizations constantly try to capture knowledge about ideal situations for customers or clients, which they match with knowledge about resources they have or can create. Successful organizations are able to constantly develop their knowledge about customer ideals and their own matching resources. Customers or clients on the other hand constantly try to imagine and find out knowledge about their own ideal situations and look for affordable resources, which can make it possible for them to come closer to ideal situations. In this view, researchers collaborate with businesses and organizations as well as customers in discovering the lacking knowledge. The dynamic interplay between these actors and processes constitutes the core of the co-design knowledge creation process [11]. All the way through this process there is also a constantly ongoing inspiration communication flow. The involved actors try to get inspiration from the knowledge creation in other relevant projects as well as they try to get others inspired by their work.

The development of the 3P framework is done by deriving different business models concepts from private and public settings. In this paper the 3P framework is discussed in relation to the e-Me project.

4. The 3P framework

Based on an extensive literature review we outline an integrated public private partnership business model (3P) framework. The logic of the 3P framework is the following. In order to get users to adopt (using or buying) e-services (1) a provider or several providers jointly, ought to identify the intended user (clients) segments and develop a value proposition (2). The revenue model describes the value received by the provider for the value proposition (3). The actual 'production' of the value proposition occurs in the organized business processes (4) in which resources (human, physical, intangible, and financial) (5) are used to

develop and deliver the value proposition to the users together with network partners (4). In addition, resources have to be acquired on the factor market from suppliers (7). Costs for acquiring, producing and distributing the offerings are addressed in the cost model component (6). The first seven components can be studied at any given time, but business models evolve and change over time, which is addressed in the eighth and final component evolution and management (8). In the following subsections we describe each of the components in the 3P framework.

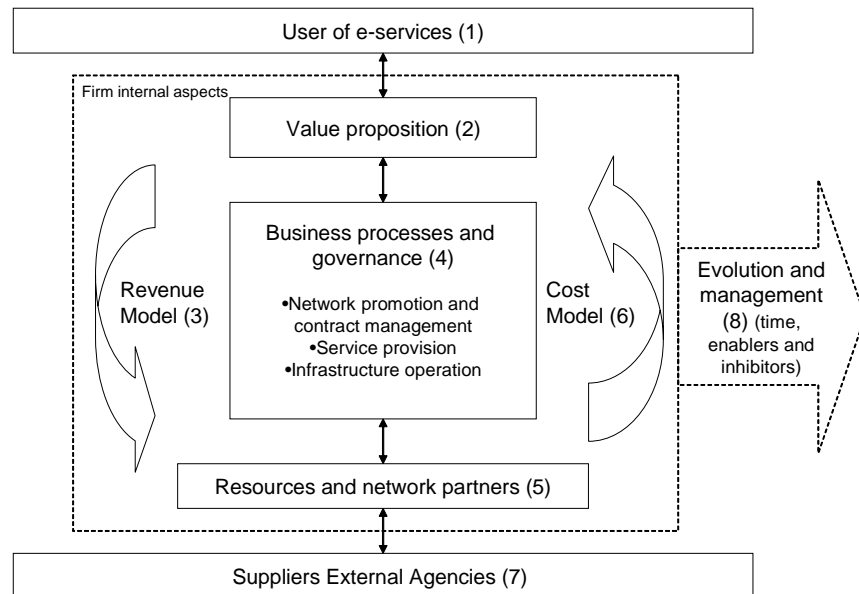


Figure 1. The Public Private Partnership (3P) Business Model framework

4.1 User of e-services

The first component captures the competitive space or the market with users and alternative offerings or distribution channels. It is based on Porter's five forces analysis [12]. The five forces are the threat of substitute products or services, established competitors, new entrants on the market, and the bargaining power of the customers and suppliers. It is critical for any business model to define and understand its existing and potential market with its customer base. Customers can be analyzed and managed in segments, such as based on location, geography, quality preferences, price sensitivity, last purchase, order frequency, and monetary value. It is also essential to analyze and understand competitors' and their value propositions.

4.2 Value proposition

The second component is the value proposition, often referred to as the offering. Its theoretical roots are the generic strategies of differentiation and cost leadership [12]. The value proposition is what a provider offers to its existing and potential users. A user can be a paying or non-paying individual organization. Value propositions are not objective, since all customers project a meaning to all offerings; therefore it is important to identify and understand these perceptions in order to understand the role of the offering [13]. Offerings are usually a bundle of services and products; see the concept of bundling and unbundling [14]. Norman and Ramirez [15] outlines a theory of the offering, including five elements: (1) physical tangible entities, such as goods and materials, (2) human activities, such as provision of service, (3) risk-sharing and risk-taking, (4) access to systems and

infrastructure, and (5) explicit and tacit information. Value is co-produced among the involved parties. This is a fundamentally different view than the classical industrial logic. [16]. Ramirez [16, p. 50] defines value creation as something that is “mutually created' and ‘recreated' among actors with different values”. This can be contrasted with Porter’s [17, p. 38] idea of value creation as the “amount buyers are willing to pay for what a firm provide them”. The ways a business bundle its offerings and price it, leads to its revenue model.

4.3 Revenue model

A revenue model describes how organizations create value for itself. Money is just one of many measures of value. Revenue models may be problematic for public private partnerships, since many public organizations are not allowed to charge for their offerings. Often are their revenues decided and given by the government. In such setting this requires another value that goes beyond monetary resources as value rather pinpointing the value in terms of utilisation for the user of the e-service. For example quality of service and higher efficiency would be two value measures for public organizations. Revenue models for private organizations usually address three areas: pricing strategies, pricing models and pricing levels. Pricing strategies deals with the overall goal of the value propositions, such as which customers segments are we targeting with our offering – high end versus low end? Or is the offering intended to promote another offering? A pricing model defines how the customer is charged for the offering.

4.4 Business processes and organizational structure

The fourth component is the business processes and organizational structure. This component addresses the activities performed to acquire and transform resources into value propositions and deliver it to the users. This is often refereed to as primary and secondary activities and is based on Porter's [17] work on value chain analysis. The value chain framework is a method for dividing business activities into smaller more manageable pieces and then analyzing each activity's impact on cost and value in order to optimize the value chain. However, the value chain is not applicable to all businesses. Stabell and Fjeldstad [18, p. 414] found that: “It is not only difficult to assign and analyze activities in terms of the five primary value chain categories, but the resulting chain often obscures rather than illuminates the essence of value creation”. Therefore, they proposed a value configuration analysis, based on Thompson's [19] typology of long-linked, intensive, and mediating technologies. Long-linked technologies apply to organizations that transform inputs to output, i.e. value chains. Intensive technologies apply to organizations that solve customer problems and called the value shop. The last type is the value network based on mediating technologies and applies to organizations that link customers to each other. Similar trends can be seen in public organisations’ strive to develop integrated e-services.

4.5 Resources and partner network

The fifth component addresses vital resources of the firm. It is essential to understand the causal links between resources, business processes, and value propositions. Value is ultimately determined by how well the resource improves cost or price (or customer-perceived quality) of the offering [20]. Malone et al. [9] applied four resource categories, including physical, financial, intangible, and human. Physical resources in telecommunication are mainly the network, radio base station, switchboards, lines, and to some extent the sales locations. Financial assets are money, stocks and bonds. Human resources are the people and their skills and competence's. Intangible assets are brands, patents, and partners. Network partners are critical because business models do not exist in a vacuum [13, 21]. They exist in partnerships or in networks of business models. Businesses collaborate with each other in the design, production, and distribution of

offerings. Private and public organisations perform different parts of needed activities in such tasks. For example, firms can outsource part of their business, such as developing software in India or using roaming agreements to utilize other telecommunications firm's network infrastructure. In industries where infrastructure, service, and devices are, converging and offerings are being bundled in different ways, we can expect a lot of collaborations, alliances, and partnerships between firms and their business models.

4.6 Cost model

Cost models, the sixth component, depict the drivers of cost. Porter [12] outlined the following generic drivers of cost and value including scale, capacity, utilization, linkage, inter-relationships, vertical integration, location, timing, learning, policy decisions, and government regulations. They are all applicable for all types value configurations (chain, shop, network), but their relative importance varies between businesses. There are costs associated with all business processes.

4.7 Suppliers and external agencies

Suppliers and external agencies is the seventh component. It is also based on Porter [12]. This component addresses a firm's acquisition of its inputs (resources) such as labor, raw material, and financial capital. In addition, policy makers and legal bodies are influential entities that both set the rules and control the market.

4.8 Evolution and management

Business models tend to evolve over time and must be managed [4]. The component evolution and management addresses how business models evolve over time and the factors enabling or inhibiting change. Its intellectual roots stem from the strategy process perspective [22]. Changes of any component may affect a business model because they are all causally related, such as new customers or competitors, changes in competing offerings, the decision to market new value propositions, business process change, resources and competence change, and production input and supplier change. Therefore, it is critical that a business model include a process dimension. The changes appear in both in exogenous (external factors) or endogenous (internal factors) processes. Management's control over changes to the business model has a fundamental impact on the overall performance of a business. This change requires bridging of cognitive, cultural, and political impediments. Strategic elements such as knowledge, norms and values about ways to conduct business processes and resource allocation may have to be re-thought. It is important for managers and people to understand the issue of bridging or attempting to overcome such factors. In addition, learning is not always simple. Under all circumstances, it takes time and requires cognitive efforts. Furthermore, knowledge is also connected to culture. Long-held conventional wisdom and widely accepted wisdom may be difficult to replace with new knowledge.

5. Results – Towards a Business Model for e-Me

In the pioneering e-Me project [1, 11, 23] an e-Me as electronic assistant (value proposition) for students has evolved. For the user this electronic assistant is both an agent that performs tasks on behalf of the user, a filter that forward information to the user based on preferences set by the user, and an integrator of different e-services. It could be said that an e-Me galaxy of e-Mes represents a matchmaker between diverse service providers and e-Me users. The service provider will have established channels to the e-Me user based on the preferences set by the user. Communication channels are both Internet and mobile based. The e-Me galaxy builds upon public-private partnership where a number of different directly or by integration supply with services to the galaxy to be used by e-Me users (users

of e-services). Examples of business processes related to the school context that the e-Me galaxy support are the co-ordination of schedules, the distribution of study results, student discount based offerings of products, and the offering of work positions related to the studies or after the studies.. This community space is to be regarded as an arena for evaluation and management. This created the possibility of having users communicating reflections (*value*), changed requirements and identification of new usage situations (new offering). In one phase of the e-Me project approx. 130 future users were engaged as co-designers during a 3-month pilot period by utilizing and reflecting of the e-Me application. During this pilot period a lot of comments were made in this community space. These comments created a starting point for other stakeholders to become involved in the dialogue. This co-design setting meant that several kinds of stakeholders had their say about the comments made by the users. This meant that several stakeholders had their say before efforts of a new version of the e-Me system were decided to be invested in. This meta-discussion also made people value and propose new versions of business models building on the old ones (evolution and management). Some important experiences and results related to the 3P framework put forward in the section above are depicted in table 1 below. This experiences and results are building on Lind et al [1, 11, 23].

Table 1: 3P framework related to the e-Me galaxy

3P characteristics	Business model characteristics for e-Me
<i>User of e-services</i>	The students (e-service clients) as one group of citizens in a certain life situation.
<i>The value proposition</i>	For students: The e-Me as filter and bodyguard towards the internet galaxy. Integration prioritized before extreme high functionality of each component. For private service providers: A predefined way to communicate with students.
<i>Revenue model</i>	Revenue through 1) reduced contact costs for partner organizations, 2) advertising, and licensing. Individual offers from service providers are filtered through the e-Me galaxy to selected student(s).
<i>Business processes and organizational structure</i>	Open structure where each partner organization has their own structure. The e-Me itself relies on predefined settings made by the user for the distribution of services (and information about services)
<i>Resources and partner networks</i>	Different kinds of service providers putting in efforts in providing with desired services. Interaction between stakeholders in a community space.
<i>Cost model</i>	Mainly maintenance costs for the e-Me as such complemented with marketing costs.
<i>Suppliers and external agencies</i>	Initially financial capital, students participating in the requirement specification workshops
<i>Evolution and management</i>	New insights from usage situations by people participating in a community space.

6. Business Models and Benefits

The e-Me project has had several phases of different design and development activities, including a pilot test (proof-of-concept). This last period of the pilot has been focusing the business models of e-Me. We have to come back on this issue that here is only our thinking about this so far. The main strategy for the moment is to apply an open source and open service idea with no or very small licensing costs. In the centre there must be an entity that protects openness and standard interfaces and protocols between e-me kernel and connected services.

In the e-Me project it was highly indicated that the students want the e-Me to continue grow and develop. Partner organizations, i.e. service providers and e-Me providers, want to continue to test the business models in larger settings. Due to this characteristics of the e-Me situation a business model based on a licensing structure allowing different partners taking different roles, depending on their purpose and wants seems therefore relevant. Such a model does also need to enhance the possibility to develop, test, deploy, and offer user-developed services [23]. In this respect the barriers for individuals and small companies could be lowered for developing and marketing services.

In each application, area then there has to be developed business models. For example, in the pilot the payment for further development comes from the e-Me provider, in this case the University College, and some of the more important service providers. In other areas, the model can be different. Maybe the most important learning experience is that there is not one business model but there has to be a person or a group of persons that constantly design and redesign a working business model. For this purpose a community space has been set up.

For the moment, there are also many initiatives starting up to test and develop e-Me in new settings and environments. Examples of such environments are e-Me for health management, and e-Me for workers in SMEs. Do however note that one person, potentially being present in different contexts, has only one e-Me. Business models developed and tested in one application area would serve as inspiration for other areas.

The development of business models is driven by the same Co-Design approach, where the different stakeholders are engaged in discussions on possible models and their consequences. The experiences from the pilot are very valuable in this work. Again there is strong connection between use, development and learning in this mutual, reciprocal process.

7. Conclusions and Final Remarks

This paper presents the 3P framework and illustrates it through the e-Me project. The project involved e-service users (students), public organizations and private organizations in the development phase and test phase. This way of running a development of new innovative IT-solutions is unique. The involvement of the user in systems development is important, but the user cannot be the only party ruling what the outcome of the process should be. Other related stakeholders need to be involved in such co-design process also. It should however be noted that users can have a very important role in putting attention towards essential aspects of the artifact to be developed. The idea of involving several stakeholders in the co-design process has been driving the project reported in this paper. This has been a strong value basis. During the first phase, the project has been driven from a philosophy of keeping the centre clear – forcing ourselves to avoid old metaphors like e-Me as an agent. The prototype and the pilot case have given us strength to put forward e-Me as an e-Me.

Another important experience derived from this project is the role that the media can have in inspiring different stakeholders to keep up the ambitions concerning the level of quality. At the time of the launch of the e-Me for students the project had impact in national TV, radio and newspapers. This drove service providers to understand the importance of supplying with wanted services, the programmers to understand the importance of delivering software with high quality.

One important lesson learned so far – in terms of how to arrange these kinds of integrated development, use and learning processes are – how to ensure that different parties involved in the process adopt a co-design perspective. Such issue becomes very clear when future users become involved as co-designers. How could we ensure that such users do find themselves as co-designers and not just an evaluator? Another important issue

is also how different users can support each other in finding good use situations that would ensure a continuous use of the artifact to be co-designed.

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