A Framework for Business Innovation Directions

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Abstract

In this report, we present a dimensional framework to analyze and design business innovation directions. Strategists can use this framework to analyze their business and set business innovation directions. Entrepreneurs can use the business innovation directions to start the development of new business models. We contribute to the business model innovation research field, presenting a dimensional framework to select business innovation directions.

Contents

1 Introduction

Game-changing business models disrupt companies, that are satisfied with their current business performance, in the long term. This is explained by S-curves, that establish the relationship between market relevance and financial performance [1]. S-curves are used in the innovation management field to illustrate introduction, growth and maturity. Figure 1 shows that market relevance S-curve matures much faster in time than the financial performance S-curve.

Incumbents can not see the danger of a new entrant into the market because they are still confident with their increasing financial performance. Incumbents are still ascending on their financial performance while their market relevance decreases. This scenario is illustrated on Figure 1 by the intersection point "A", where a company is still ascending on the financial S-curve while is descending on the market relevance S-curve.
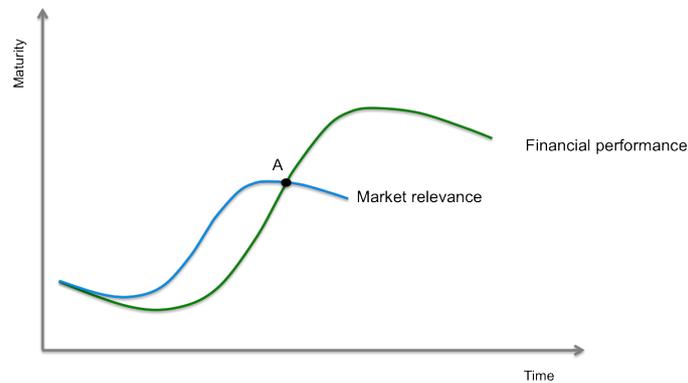
Figure 1: S-curves of financial and market relevance (adapted form Breene [1].)

The financial performance confidence influences the top management of a company to avoid new business identification and development. This financial success combined with the size of a company increases the difficulty to create new business opportunities. However, the relation between the market and financial S-curves show us the need to innovate.

1.1 Goal

Our research is aimed to help strategists and entrepreneurs to set innovation directions to innovate or develop their business.

1.2 Approach

We identified the barriers and opportunities on the selected literature to innovate business models as business innovation drivers. First, we identify the business innovation drivers by author. Then, the identified drivers are clustered into contextual categories that lead us to define the framework dimensions. Secondly, the related drivers are clustered and merged into a new inno-

vation driver if there is a relation or redundancy among them. Then, the new innovation drivers and the contextual categories define our business innovation framework. Finally, we apply the framework to analyze existing business directions.

1.3 Result

In this report, we describe the dimensions and drivers of a business innovation framework. Strategists from established companies and entrepreneurs can use the resulting framework to evaluate and articulate business innovation directions. We contribute to the business model innovation literature by defining the choices needed to articulate business innovation initiatives.

1.4 Structure of the document

In Section 2, we identify the business innovation drivers. In Section 3, we cluster the business innovation drivers. In Section 4, we merge related and repeated business innovation drivers. In Section 5, we present the framework dimensions and values. In Section 6, we apply the dimensional framework to analyze business scenarios. We end this document with conclusions in Section 7.

2 Identification of business innovation drivers

In Section 1 we explained that we need to innovate to stay market relevant. This section depicts the goal, approach and the resulting business innovation drivers identified from the literature.

2.1 Goal and approach

The goal of this section is to identify the choices, based on barriers and opportunities, that are needed to articulate business innovation directions. The identification of these choices is not being study enough in the business model innovation field [2].

We identify the business innovation drivers by studying of the relevant literature on business model innovation. The relevant literature was defined by searching on Google Scholar the keyword "business model innovation" since 2010. The first result is the article "business model innovation: opportunities and barriers" by Henry Chesbrough [3]. The article establish the dominant logic as the business model innovation barrier. We extended the relevant literature by searching the keyword "dominant logic" on Google Scholar, the first result lead us to the work of Lusch and Vargo on the service dominant logic.

Chesbrough's article is part of a special issue of business models by Long Range Planning, one of the leading international journals of strategic management. The references made by Chesbrough in this article, related books and articles of the cited authors, and the remaining articles of special issue on business models establishes the relevant literature of our research.

2.2 Result

We found that literature on guiding strategists and entrepreneurs to make choices to innovate a business model has not being studied enough [2]. We identify business innovation drivers as the choices to set innovation directions. In this section we identify the business innovation drivers as follows.

The research and innovation in the service economy recognize the work of Lush and Vargo as theoretical foundation. Lusch and Vargo emphasize the importance of service and value co-creation [4] [5], [6], [7], [8].

We identify the business innovation drivers from "goods and services" to "service and goods" from the work of Lusch and Vargo. The focus on "goods and services" takes a primary role of goods, where services just add value. The goods focus emphasize a transactional approach on value defined as value-in-exchange. The adding-value nature of services is based on Porter's value chain which places services as good's complementary activities. An innovate approach that reflect the change of the economy is about thinking in service and goods. Service is defined as the application of competences (such as knowledge and skills) by one party for the benefit of another. Service is what is important as economic activity. The service focus establish a relational approach on value, defined as value-in-use. Goods takes a secondary role, acting as a mechanism for service provision.

The dominant logic is the mindset of company about how to do business [9]. Chesbrough identifies the dominant logic trap as a barrier to innovate business models [3]. Chesbrough identifies the "product business" as a commodity

trap. In order to escape, we need to innovate using a new logic. The new logic is about thinking as a "service business". The "product business" thinking focuses on the car as a transaction. The "service business" thinking, is about offering transportations services, mobility services or even transportation experiences [10]. We identify "product business" and "service business" as business innovation drivers.

Innovating on the service economy requires a networked approach of value. Lusch and Vargo, and Chesbrough focus on the value network is based on an explicit reference on the work of Normann and Ramirez [11] on a value constellations. Normann and Ramirez propose the focal of strategic analysis from the company towards a value-creating system. Within value creating systems different economic actors (i.e: suppliers, business partners, allies and customers) work together to co-create value [11]. We identify "actors value co-creation" as a business innovation driver

Chesbrough, identifies the shift on innovation focus from "closed", in which all the value is created inside the company to "open", collaborating across boundaries of the companies to innovate. Chesbrough's business model framework, recognize that business models mature from closed to open [12]. We identify "closed" and "open" as business innovation drivers.

Henderson and Venkatraman recognize the role of networked value co-creation in business model innovation. We identify "networked co-creation" as an innovation driver. The networked co-creation is driven by relation among parties and the value proposed. Henderson and Venkatraman state that business model innovation for a company should be seen a set of external partners and relationships. The co-creation must include a set of partners and the customers. Value propositions can be generated in a "deliberated" or "emergent" manner. We recognize these two approaches as innovation drivers. In the "deliberated" approach the process of innovation is coordinated with a tight connection with the current business model. The "emergent" approach is focused on the assessment of opportunities outside the organization, looking for partners and even competitors as sources for innovation and value [13].

Henderson and Venkatraman recognize that relationships in the value network can be "exclusive" or "inclusive". "Exclusive relations" in the network are centrally controlled partnerships and alliances. "Inclusive relations" in the network are controlled, incorporating different partnerships and alliances in more loosely controlled environment. We identify these "exclusive" and "inclusive" relationships as business innovation drivers [13].

Christensen, by focusing on the impact of the innovations on the market identifies "sustaining innovation" and "disruptive innovation". Innovations can sustain the market (sustaining innovations) or disrupt the market, (disruptive innovations). Companies sustain the market focusing on the implementation of more features. The disruption of the market happens with new value propositions to underserved customers [14].

Johnson, extends Christensen's work in a business model framework. A disruptive value proposition that open new markets can be determined by barriers (wealth, access, skill or time) that constrain consumption of non-customers. We identify "non-customer barrier" as an innovation driver [15] [16] .

Markets can be transformed with new value propositions for the company's. The transformation is achieved focusing on the fulfillment of unsatisfied current customers jobs-to-be-done (customer needs) [16]. We identify "customer

transforming" as an innovation driver.

Gardner establishes the relationship between business models and the newness factor of the innovation [17]. We identify "breakthrough", "revolutionary" and "incremental" as innovation drivers. These drivers are related with the newness of the business model value proposition into the market.

Breakthrough innovations are concerned with the exploration of new technologies which have a high growth potential, but also imply higher risk. The risk is attributed to the lack of experience with the innovation that departs from the established offer of the company and its knowledge of proven business practices. Revolutionary innovations are superior to what they replace, becoming the standard choice for a relevant market share. Revolutionary innovations also have less entry barriers than breakthrough innovations, because they can be copied more easily. Incremental innovations are minor changes, exploiting existing technology. These kind of innovations are focused on cost or feature improvements in existing products, services, or processes [18], [19], [20].

In this section we identified the business innovation drivers from the selected literature. The summary of the identified business innovation drivers are listed on Table 1. The original authors are marked with a black dot and the supporting authors are marked with an asterisk.

Nº	Business innovation drivers	Chesbrough [10], [21], [22]	Lusch and Vargo [23], [24] [25]	Normann and Ramirez [11]	Venkatraman and Henderson [13]	Christensen [14]	Johnson [15]	Gardner [17]
		Authors						
1	Product business	•						
2	Service business	•						
3	Open	•						
4	Closed	•						
5	Goods and services		•					
6	Service and goods		•					
7	Actors value co-creation		∗	•				
8	Networked co-creation				•			
9	Deliberated				•			
10	Emergent				•			
11	Exclusive				•			
12	Inclusive				•			
13	Sustaining					•		∗
14	Disruptive					•		∗
15	Customer transforming						•	
16	Non-customer barrier						•	
17	Incremental							∗
18	Revolutionary							∗
19	Breakthrough							∗

Table 1: Identification of business innovation drivers from the literature

3 Identification of business innovation dimensions

In Section 2, we identified the business innovation drivers form the selected literature. This sections describes the goal, approach and the resulting business innovation dimensions of our framework.

3.1 Goal and approach

The goal of this section is to cluster the business innovation drivers identified on Table 1 and define the business innovation dimensions.

We use the business model concept as the approach. A business model is the combination of Who?, What?, When?, Where?, Why?, and How much? an organization uses to deliver a value proposition to their customers. A business model replacement improves the performance at least in four dimensions [26].

We cluster the business innovation drivers by answering four questions : What?, Who?, Where?, and How?. These questions will lead us to identify the business innovation dimensions and the related business innovation drivers.

3.2 Result

In Section 3.2.1, we categorize the innovation drivers answering the questions What?, Who?, Where?, and How?. In Section 3.2.2, we show the innovation drivers sorted by the recognized dimensions.

3.2.1 What?, Who?, Where?, and How?

Figure 2 shows the questions What?, Who?, Where and How? that will lead to the clustering of the innovation drivers and the definition of the innovation dimensions.
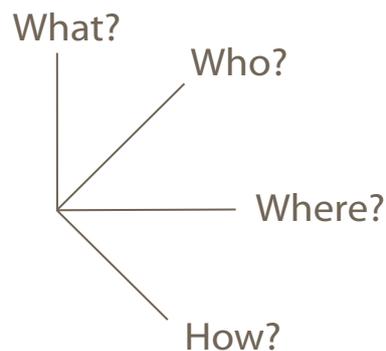

Figure 2: What?, Who?, Where?, How?

What? This question is related with what value proposition we want to create. We identify the innovation drivers related with the dominant logic to answer what value propositions we want to create.

Chesbrough identifies the dominant logic trap as a barrier to innovate business models [3]. The dominant logic is the mindset of company about how to do business. Figure 3 shows how this mindset can be visualized as an information filter inside a funnel. The organizational filter let in relevant data for the dominant logic, reinforcing the organizational behavior and filtering out information that does not fit [9].
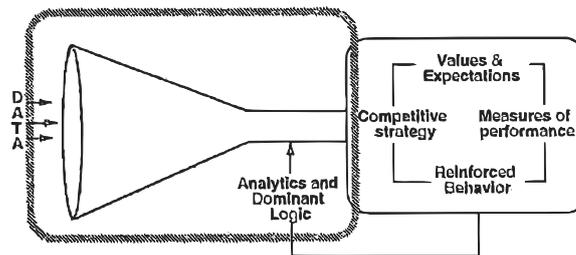

Figure 3: Dominant logic [9]

In stable environments of competition, the dominant logic helps to sustain organizations. However, the blinders of the dominant logic make hard to recognize new threats and opportunities in a competitive environment [27]. The new and unfamiliar directions of rapid industry transformations requires to learn about changing the dominant logic [28].

The recognition of shifts in the dominant logic of the market is key set business innovation directions.The importance is given by the shift about what we understand as good and service. This shift is given by the dominant logic shift from goods-dominant (G-D) logic to service-dominant (S-D) logic [4] [5], [6], [7], [8].

The dominant logic shift from G-D to S-D, changes the role of goods. Under the G-D logic, Good and services" means that goods take a primary role, where value is created and embedded in goods, and services just add value.

Under the S-D logic, service and goods" means that goods takes a secondary role acting as a mechanism for service provision. Service drive the economic activity. Service is defined as the application of competences (such as knowledge and skills) by one party for the benefit of another.

Chesbrough, in line with the G-D and S-D logics, identifies the mindset related with "product business" as a commodity trap for companies. The new logic that solves the commodity trap is about re-thinking the business as a "service business" [10].

The business innovation drivers clustered by answering the "what" question lead us to define the "logic" dimension. "Logic" includes the innovation drivers that are related with what mindset is used to create a value proposition.

Who? This question is related with who are the creators of the value proposition.

Business innovation can be initiated inside the company from a "closed" firm perspective. Within the boundaries of the firm, the innovation labor create new value propositions with a strong relation of the current business model ("deliberated" manner).

The value proposition can be created beyond the boundaries of the firm. The "open" innovation driver establish that the innovation labor is distributed. Looking for partners and even competitors outside the organization to innovate the value propositions is supported by the "emergent" approach of innovation.

Moving the focus from the firm towards a networked co-creation is based on the work of Norman and Ramirez. They propose a value-creating system in which different economic actors (i.e: suppliers, business partners, allies and customers) work together to co-create value [11].

The networked co-creation, by the perspective of Henderson and Venkatraman, can be "exclusive" or "inclusive". "Exclusive relations" in the network are centrally controlled partnerships and alliances. "Inclusive relations" in the network are controlled incorporate different partnerships and alliances in more loosely controlled environment.

The business innovation drivers clustered by answering the "Who" question lead us to define the "openness" dimension. "Openness" includes the innovation drivers related with "who" the value proposition is created.

Where?   This question is related with where our value proposition will be delivered. Answering the "Where?" question lead us to the market where our value proposition will be offered.

Christensen, by focusing on the impact of the innovations on the market identifies "sustaining innovation" and "disruptive innovation". Innovations can sustain the market (sustaining innovations) or disrupt the market, (disruptive innovations). Companies sustain the market focusing on the implementation of more features. The disruption of the market happens with new value propositions to underserved customers [14].

Johnson, extends Christensen's work in a business model framework. A disruptive value proposition that open new markets can be determined by barriers (wealth, access, skill or time) that constrain consumption of non-customers. We identify "non-customer barrier" as a business innovation driver [15] [16] .

Markets can be transformed with new value propositions. The transformation is achieved focusing on the fulfillment of unsatisfied current customers jobs-to-be-done (customer needs) [16]. We identify "customer transforming" as a business innovation driver.

The business innovation drivers clustered by answering the "where" question lead us to define the "competitiveness' dimension. "Competitiveness" includes the innovation drivers related with "where" the value proposition is offered.

How?   The "How" question is related with how new is the value proposition. The business innovations drivers related with the newness are the "breakthrough", "revolutionary" and "incremental".

The "breakthrough" business innovation driver is leads to the exploration of new technologies which have a high growth potential. The "revolutionary"

driver lead us to a superior value proposition over the existing ones, resulting in the gain of a relevant market share. The "Incremental" driver lead us to exploit existing technology, resulting in minor improvement of the exisiting market offers [18], [19], [20].

The business innovation drivers clustered by answering the "how" question lead us to define the "newness" dimension. "Newness" includes the business innovation drivers related with "how" new is the offered value proposition.

3.2.2 Resulting dimensions

We cluster the innovation drivers into four dimensions: logic, openness, competitiveness and newness.

The **logic dimension** contains the innovation drivers related with what dominant logic used to define the business value proposition.

The **openness dimension** include the drivers related with the actors and partnerships who are involved in the creation of business value propositions.

The **competitiveness dimension** contains the drivers related with the market where the business value proposition is offered.

The **newness dimension** includes the drivers related with how novel is the business value proposition.

The result of the clustering of the business innovation drivers from Table 1 among the four dimensions is shown on Table 2.

N	Business innovation drivers	Logic (What?)	Opennness (Who?)	Competitiven (Where?)	Newness (How?)
5	Goods and services	•			
6	Service and goods	•			
1	Product business	•			
2	Service business	•			
7	Actors value co-creation		•		
8	Networked co-creation		•		
3	Closed		•		
4	Open		•		
9	Deliberated		•		
10	Emergent		•		
11	Exclusive		•		
12	Inclusive		•		
13	Sustaining			•	
14	Disruptive			•	
15	Customer new-transforming			•	
16	Non-customer barrier			•	
17	Incremental				•
18	Revolutionary				•
19	Breakthrough				•

Table 2: Business innovation drivers clustering

4 Business innovation drivers values

In Section 2, we identified the business innovation drivers from the literature. In Section 3, we clustered the innovation drivers and identified the dimensions answering the questions: What?, Who?, Where?, and How?. In this section we present the goal, approach and result of merging the business innovation drivers.

4.1 Goal and approach

The goal of this section is to integrate the related or equivalent drivers from each dimension identified on Section 3. The related or equivalent drivers are merged into a new innovation driver. The innovation drivers that are not merged are keep unmodified.

4.2 Result

In the **logic dimension** we merge the logics with the same meaning. The "product business" and "goods and services" drivers are related with the mindset focused on goods and added-value services. We merge these two drivers into the "goods dominant" innovation driver. "Service business" and "service and goods" drivers are related with the new mindset focused on service. We merge these two innovation drivers into "service dominant".

Clustering the **openness dimension** relates the innovation drivers with the actors involved in the value proposition creation. The **"closed internal" driver** is generated from merging the "closed", "exclusive" and "deliberated" drivers. The three drivers are focused on the internal innovation of the value proposition. The value proposition is created within the firm in a closed and exclusive manner closely related with the current business model. The **"open actors" driver** is generated from merging the "open", "inclusive", "networked co-creation" and "actors co-creation". These three drivers open the innovation of the value proposition to external parties. The value proposition is generated in an open and inclusive way among actors.

In clustering of the **competitive dimension** we integrate the concepts using the market impact perspective. The "disruptive" and "non-customer barrier" are equivalent concepts. We keep the **"disruptive" driver** naming, in which the value proposition is defined to non-customers based on barriers that disrupt the market. The **"transforming" driver** is defined from the "customer new-transforming" to keep a consistent naming to the drivers. The **"sustaining" driver** remains unchanged, in which the value proposition is delivered to the current customers through feature improvements.

The **newness dimension** remain unchanged, including the **" breaktrough " driver**, the **"revolutionary" driver** , and the **"incremental" driver** .

In Table 3, we show the classification of innovation opportunities across four dimensions: logic, openness, competitiveness and newness.

Merging Nº	Merged innovation drivers	Logic	Openness	Competitive	Newness
1+5	Goods dominant	•			
2+6	Service dominant	•			
3+9+11	Closed internal		•		
4+7+8+10	Open actors		•		
14	Sustaining			•	
16	Transforming			•	
15+16	Disruptive			•	
18	Incremental				•
19	Revolutionary				•
20	Breakthrough				•

Table 3: Innovation dimensions merging

5 Business innovation framework

In Section 2, we identified the business innovation drivers from the literature. In Section 3, we clustered the innovation drivers and identified the dimensions answering the questions: What?, Who?, Where?, and How?. In Section 4, we identified the relevant business innovation drivers by merging the redundant and similar ones. In this section, we present an holistic view of the dimensional framework.

5.1 Goal and approach

The goal of this section is to describe the business innovation framework. The defined dimensions and values of our framework are summarized.

5.2 Result

In Figure 4, we present the business innovation framework. The dimensional framework is represented by the four-tuple (logic, openness, competitiveness, newness). The framework is suitable for analyze and design business innovation directions.

Each axis represents a business innovation dimension. We can distinguish four dimensions: logic, openness, competitiveness and newness. The values for each dimension are represented by circles.
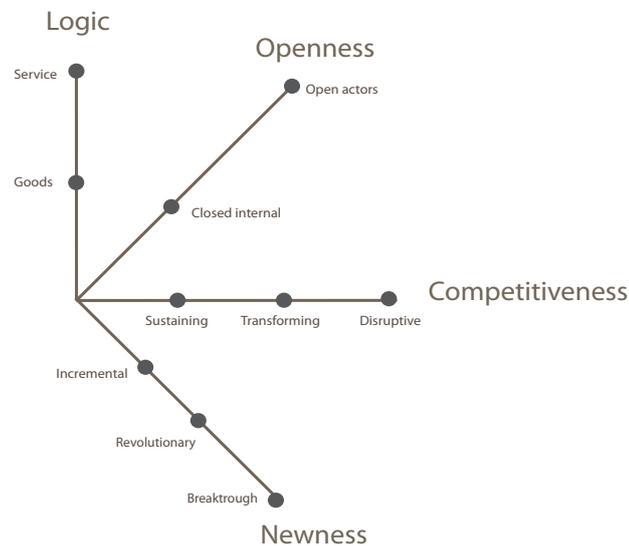

Figure 4: Business innovation framework

5.2.1 Logic

The logic dimension is related with the mindset of a company about the role of goods and services.

Goods This business innovation driver set the focus on goods. Services are the intangible that just add value. Under this logic services are added at the end of the value chain.

Service This business innovation driver set the focus on Service. Service is the process of applying competences to the benefit to another entity. Under this direction, the role of goods is established as a mechanism for service provision.

5.2.2 Openness

This dimension establishes the degree of collaboration to deliver a new value proposition.

Closed internal The value proposition is developed internally by the company. The value propositions are created in a closed way.

Open actors The value proposition is open to actor co-production. The value network of actors enables the offering of new value propositions to the market.

5.2.3 Competitiveness

Sustaining The market can be sustained by delivering more features to current consumers.

Transforming Markets can be transformed with new value propositions. The transformation is achieved focusing on the fulfillment of unsatisfied current customers "jobs-to-be-done" which are based on the customer needs [16].

Disrupting The disruption of the market is achieved targeting the non-consumers with a barrier-based value proposition. The barriers are the reasons why non-consumers can not access to an stablished value proposition. The four main barriers of VP consumption are wealth, skills, access and time. Wealth barrier consumption is related with the low-net income non-consumers who can not access to the VP due to high prices. Skills barrier consumption is related with non-consumers that are excluded by sophisticated and complicated offerings. Access barrier consumption happens when non-consumers can not get the offered VP, because they can not reach them. Time barrier consumption happens when non-consumers are not able to afford the VP due to time constraints.

5.2.4 Newness

The newness perspective is related with the novel factor of the value proposition to the market. We can distinguish three business innovation drivers in this dimension: breakthrough, revolutionary and sustaining.

Breakthrough The value propositions are based on the exploration of new technologies which have a high growth potential, but also imply higher risk. The risk is attributed to the lack of experience with the innovation that departs from the established offer of the company and its knowledge of proven business practices.

Revolutionary The value propositions are superior to what they replace, becoming the new standard.

Incremental The value propositions are based on minor changes, exploiting existing technology. They are focused on cost or feature improvements in existing products, services, or processes.

6 Examples

This section illustrates the business innovation framework to analyze business innovations.

6.1 Goal and approach

The goal of this section is to use the four dimensional framework presented in Section 5.

6.2 Result

We apply the four dimensional framework to analyze three business innovations. We selected the business innovations from different kind of industries to show how to use the framework across different domains. We selected the Google Android smartphone platform from the phone industry, the BMW electric car form the automobile industry, and, Zopa peer-to-peer lending from the financial services industry.

6.2.1 Google Android platform

The Google's android business innovation direction can be represented by the 4-tuple (service, open, disruptive, revolutionary).

Logic dimension: service   The role of goods, in this case smart-phone devices from manufacturers, is just a mechanism for service provision. Google deliver their service offer consisting on google maps, youtube, google mail among others using this platform.

Openness dimension: open   The actors participating on the value network are software developers, hardware manufacturers, telecom carriers, on-line retailers and the end-user.

Software developers increase the value proposition of google android to customers by creating innovative applications. Hardware manufacturers like HTC and Samsung, co-create the value proposition with full featured phones that take the advantage of Google software with the inclusion of sensors and processors. Carriers and on-line retailers like amazon create their own android application stores. End-users co-create value trough use, like capturing videos and increasing the content produced on Youtube.

Competitive dimension: disruptive   The value proposition of Google Android is disruptive. The disruption is achieved by focusing on access. End-consumers that were perviously excluded of the smartphone market due to high priced devices like the iPhone can access to more affordable android based devices. Incumbents like Nokia are being disrupted by Google's Android forcing them to abandon their outdated platform.

Newness dimension: revolutionary The value proposition of Google Android is revolutionary. Google Android redefine the smartphone market using proven technologies like Linux and concepts like the virtual machine.

The royalty free approach of the distribution and usage of the Android platform is helping Google to gain a leading position on the smartphone market share.

6.2.2 BMW's electric cars

The BMW's electric cars business innovation direction can be represented by the 4-tuple (product, close, sustaining, incremental).

Logic dimension: product BMW's electric cars value proposition is focused on product. The value proposition is the car with add-on services like maintenance and financing.

Openness dimension: closed BMW innovate their vehicle design with closed innovation of engines.

Competitiveness dimension:sustaining The value proposition of the electric car, sustain their luxury target market. BMW target the same customers that are already using their cars.

Newness dimension: incremental BMW's introduced minor changes to their car, introducing only incremental innovations. The innovation focus just consider the engine of the car.

6.2.3 Zopa peer-to-peer lending

In our analysis of the state-of-the-art of innovation driven business models we identified Zopa peer-to-peer lending as disruptive and breakthrough [29]. Using the business innovation framework, the Zopa peer-to-peer lending innovation direction can be represented by the 4-tuple (service, open, disruptive, breakthrough).

Logic dimension: service Zopa applies the process the competences of lending for the benefit of borrowers and investors. There are no goods involved in this business.

Openness dimension: open The actors co-create value by lending and borrowing money each other.

Openness dimension: disruptive The value proposition of Zopa is disruptive. The innovation driver is a barrier-based focusing on access. The borrowers lack access on traditional financing mechanisms.

Newness dimension: breakthrough Zopa set a new category on financial services establishing the peer-to-peer lending platform.

7 Conclusions

The four dimensional framework presented in this document is appropriate to evaluate and set business innovation directions. The four dimensions depicted in this document are logic, openness, competitiveness and newness.

The logic dimension shifts the innovation focus from goods to service. In the goods dominant logic, goods are the prservices just add-value. In the service dominant logic, service takes a primary role where goods are just a mechanism for service provision.

The openness dimension establish that innovations are not only created inside the company through closed innovation. The open innovation paradigm is collaborative way to include external ideas to deliver innovative value propositions to customers.

The competitiveness dimension is related with the market impact of the business innovation. The value proposition can sustain the market when we target our current based of customers. Disruption of the market happens when we deliver a value proposition to non-customers.

The newness dimension is related on the novel aspect of the innovation. The business innovations can be breakthrough, revolutionary or sustaining innovations.

In this work we studied business model innovation directions by answering the questions: What?, Who?, Where?, and How?. The next steps will be focused on specific business innovation directions.

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