

INNOVATING SKI RESORTS' BUSINESS MODEL

through a human centered approach

MEMORY

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Unfortunately, I cannot mention all the people who I encountered with during my six-month-journey, but I want you to know that I am enormously grateful to you. With all my heart, thank you.

II. Abstract

Ski resorts from countries with a long ski tradition, mainly in Europe and North America, are experiencing signs of participation stagnancy during the past decades. Wondering how to tackle this issue, the researcher merged two paths of his career (business models and the ski resorts management) to come up with the following research question:

How might ski resorts innovate their business models by putting special emphasis in customer empathy?

This main question counted with three more specific questions, which at the same time, are the three parts that compose the thesis:

Part 1: Foundations. *How might the current business model literature help ski resorts to understand their current business model?*

The starting point consisted of a theoretical review of business models (definition, representation, and innovation) and ski resort industry (general overview of the industry and the existing business models).

Part 2: Identifying opportunities. *How might empathizing with customers help ski resorts identify opportunities for business model innovation?*

By deep understanding how people's lives interact with ski resorts, one can identify their unmet needs or problems. In other words, through this approach, one could learn how ski resorts could be from the point of view of its users.

Part 3: Seizing opportunities. *How might ski resorts seize these identified opportunities by reconfiguring the existing business model?*

In orderThis part consisted of leveraging the identified needs into opportunities to innovate ski resorts' business model. To do so, the researcher came up with solutions, built and test mock-ups out of them and implemented them into the business model.

Problems

Some problems emerged along the research, which made it even more challenging. Dealing with them tested the researcher's rigor in the method as well as the capacity to adapt to unexpected situations. Among them, there is the underlying complexity of business models, limitations of time and resources and a high degree of ambiguity.

Conclusions

Reflecting upon the outcomes of the research, an industry found in a mature and stagnant state as the ski industry, has much more to win than to lose if they innovate their business model. What is more, they have a lot to lose if they do not challenge the status quo. Quoting the words of Frank Lloyd Wright: "Business is like riding a bicycle. Either you keep moving or you fall down."

Chapter 1. Introduction

Problem definition

The world is in a constant state of change, so are businesses. A more and more changing and competitive environment awakened the interest and possibilities to innovate within firms. Especially the innovation of business models has experienced a quick growth since the Internet boom, which opened a new range of possibilities. The reason many companies are concerned about innovating their business models is simple: increasing their performance. There is an increasing consensus about this relationship (e.g., Ireland et al., 2001; Chesbrough, 2007; IBM Global Business Services, 2006; Johnson, Christensen, & Kagermann, 2008).¹ These studies demonstrate that firms that put more emphasis on business model innovation financially outperform their competitors.²

However, not all companies explore the potential benefits of innovating their businesses. As the management theorist James March noted, two main different kinds of activities can be found in organizations: *exploration* (searching for new knowledge) and *exploitation* (extracting the most payoff from existing knowledge).³ More often than not organizations focus on just one of those activities.⁴ *Exploration* alone may not be able to generate returns and thus difficult to sustain. Otherwise, relying exclusively on *exploitation* may expose organizations to the risk of becoming obsolete when their existing knowledge does no longer payoff.

Roger Martin defines the most common path businesses follow, which embraces the two actions mentioned above. Companies are born from an *exploration* that sparks a

¹ Massa, L., Tucci, C. (2014). 'Business Model Innovation', Oxford Handbook of Innovation Management Pages 420-441.

² IBM Global Business Services consultants interviewed 765 leaders from corporate and public sectors worldwide. They found that putting twice as much emphasis on business model innovation than their competitors resulted in a financial outperformance. 'Expanding the innovation horizon: The global CEO study 2006': IBM Global Business Services, http://www.07.ibm.com/sg/pdf/global_ceo_study.pdf (last accessed 04/15).

³ March, J. G. (1991). 'Exploration and Exploitation in Organizational Learning', Graduate School of Business, Stanford University.

⁴ Martin R. L. (2009). 'The Design of Business: Why Design Thinking is the Next Competitive Advantage', Harvard Business Press.

valuable business insight. Afterward, the company focuses entirely on the exploitation of that insight, without going back to the exploration of new ideas. Eventually, this firm is outperformed by a competitor who explores and subsequently exploits a more powerful and valuable insight.⁵

As for ski resorts industry, its businesses keep on employing a rather similar business model that first ski resorts did. Differently than other industries, they do not face the fierce competition as tech companies do. In this last industry, the Internet lowered market's entry barriers for countless start-ups that came up with disruptive products and business models that threaten the largest companies. However, it is not possible to start a ski resort business in one's garage, mainly because of this industry's high entry barriers. Those concern the building and operating a ski domain, as big extensions of mountainous land as well as significant investments in facilities. The presence of fewer competitors has allowed existing ski resorts not to spend much time nor effort in innovation as other industries have.

However nothing lasts forever. Most ski resorts in Europe and America find themselves in a mature market where demand remained stagnant the last 30 years, and now it starts to show signs of decline.⁶ Firms found in such mature markets could avoid their decline only by innovating their business models (Johnson, 2010).

All the above points at a first problem statement:

(P1) Ski resorts find themselves in a stagnant and mature market because of a lack of innovation in their business models.

For a long time, organizations had been designing their strategies entirely based on decisions from the top management. These top-down managerial practices have the risk of overlooking what is happening at the bottom, where the final customer is.

Managers are realizing that looking at their business from its customers' point of view may allow them to play a win-win strategy, beneficial for both parties. Joan Margetta,

⁵ Ibid.

⁶ Vanat, L. (2014). 'International Report on Snow & Mountain Tourism'. <http://www.vanat.ch/RM-world-report-2014.pdf> (last accessed 04/2015).

the renowned scholar in the business model field, argues: *"A good business model begins with an insight into human motivations and ends in a rich stream of profits."*⁷

In the design of a business model, as in the design of products, services or processes, human insights are crucial. One of the world's leader firms in the field of design, IDEO, remarks the importance of an empathic approach to face any design. According to them, a deep understanding of people's needs may inspire organizations to unlock their creative capacity for innovation. Following Margetta's line, they point that an empathic design will be accompanied by a financial reward.⁸

The following cases are real applications of an empathic design of business models, as Next Door in Lincoln Park, Chicago. Providing free, in-person financial coaching and charging for coffee, State Farm managed to engage with Millennials who felt intimidated by banks or insurance companies.⁹ A well-known example is Apple and its devices user-friendly interfaces, which provided to kids and the elder an easier and more enjoyable digital experience.¹⁰ A last example comes from General Electric's designer, Doug Deitz, who understood how terrifying it was for kids to go through a Magnetic Resonance Image (MRI) process. The number of pediatric patients sedated for MRIs represented an astonishing 80 percent. Employing an emphatic design approach, Dietz came up with a kid-friendly experience of the MRI, which accomplished a 90 percent of pediatric patient satisfaction. The benefits for kids were as high as the benefits for General Electrics, which innovated its business model implementing together with hospitals their *Adventure Series*, eight room themes that created a kid-friendly MRI experience.¹¹

This second part manifests a second problem statement:

(P2) By putting more emphasis on human empathy, ski resorts could make significant innovations in their business model.

⁷ Margetta, J. (2002). 'Why Business Models Matter'. HBR. <http://www.hbr.org/2002/05/why-business-models-matter> (last accessed 04/2015).

⁸ Battarbee K., Fulton Suri J., and Gibbs Howard S., (2012). 'Empathy on the edge scaling and sustaining a human-centered approach in the evolving practice of design'. http://www.ideo.com/images/uploads/news/pdfs/Empathy_on_the_Edge.pdf (last accessed 04/2015)

⁹ Ibid.

¹⁰ Kelley, T. (2001). 'The Art of Innovation: Lessons in Creativity from IDEO, America's Leading Design Firm', The Doubleday Religious Publishing Group.

¹¹ Kelley, D. Kelley, T. (2014). 'Creative Confidence', William Collins.

Research Objective

Ski resorts have been around for a long time and, if nothing goes dramatically wrong, they should be there for many years more. Nonetheless, times change and ski resorts, as all the other businesses do, need to adapt to the rapid societal, environmental and economic changes to keep their competitiveness. In the last 30 years, the snow sports market has shown symptoms of stagnancy. Even after many programs and marketing campaigns aiming to grow the participant base, there are no signs that those moved the needle significantly.¹²

This research embraces a theoretical and practical process to sort out the two problem statements made previously, which merged in a single research question:

How might ski resorts innovate their business models by putting special emphasis in customer empathy?

For establishing the foundations for the innovation process, the existing business model literature and industry background are going to be reviewed. These concepts provide a solid ground to carry out the field research. Later in the field, the researcher is going to understand how people interact with skiing and ski resorts, shedding light on how ski resorts' business models could be. After these two parts, the researcher has enough information to compare ski resort's business model *as is* and *as it could be*. In the last part of the research, these opportunities are going to be seized by reconfiguring the current business model.

Therefore, the main research question can be divided into three more detailed questions:

(1) How might the existing business model literature help ski resorts to understand their current business model?

(2) How might empathize with customers help ski resorts to identify opportunities for business model innovation?

¹² Snowsports Industries America (2014), 'Downhill Consumer Intelligence Project', <http://www.snowsports.org/SuppliersServiceProviders/ResearchSurveys/DownhillConsumerIntelligenceProject> (last accessed 04/2015).

(3) How might ski resorts seize these identified opportunities by reconfiguring their current business model?

The roadmap for the first question is to review the past work done by both management academics and industry practitioners. It is important to put special attention in the industry business models. The process for the second question aims to empathize with users effectively to extract valuable information. The later filtering of that information allows to identify unmet needs or unsolved problems, namely opportunities to innovate the business model. The third and last question counts with three differentiated steps. (1) To find solutions to the identified needs, (2) to test and improve the ideated solutions and (3) to implement these solutions within the business model.

Research setting

This research was carried out in a variety of environments that fitted the needs of every different stage of the process. First of all, for everything that concerned business models, the researcher counted with the support of experts in this field from the École Polytechnique Fédérale de Lausanne (EPFL), Switzerland. Experts from Pas Grau Internacional (PGI), world leader firm in the operation and management of ski resorts, supported the research from their offices in Barcelona (Spain).

In the second part of the research counted with three case studies in three different ski resorts: Verbier (Switzerland), La Molina (Spain), and Grandvalira (Andorra). Moreover some opportunistic cases emerged, which were included in the study if relevant enough.

The last part of the research took place mainly between PGI offices in Barcelona and Grandvalira ski resort in Andorra. These two places were ideal to run brainstorming sessions and test prototypes respectively.

Thesis Outline

This master thesis counts with three main parts that address the three research questions presented above. The first part, *foundations*, counts with two chapters that establish the base for both business model innovation and the ski resort industry.

In the first chapter, the existing business model literature is thoroughly reviewed. Presenting thus a definition and representation of business models as well as business model innovation concept, barriers and ways to overcome them. In the second chapter goes through the evolution of ski resorts, different types of resort development, a global situation overview and the existing business models.

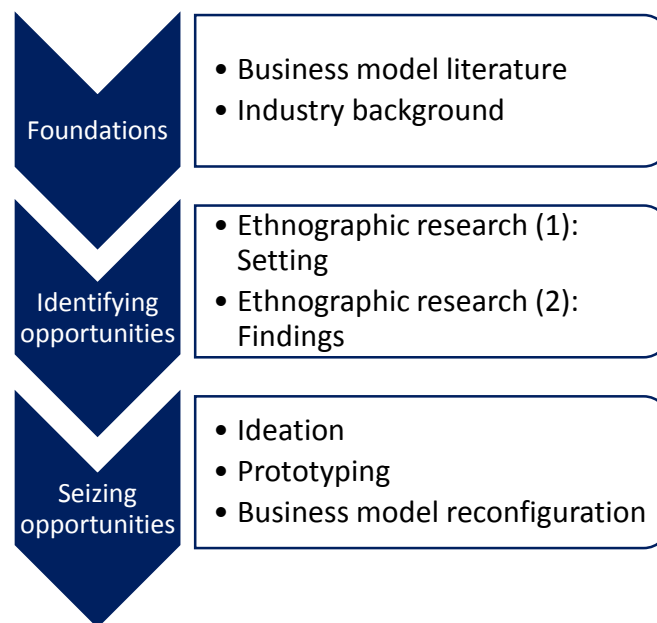


Figure 1.1: Structure of the research.

The second part, *identifying opportunities*, counts with two chapters that describe the ethnographic research carried out in the field. They detail the methodology employed, and the presentation of the findings obtained.

The last and third part, *seizing opportunities*, describes the process to convert the identified opportunities into business model innovations. It counts with three chapters that expose the processes employed for the ideation of solutions, the iterative building and testing of prototypes and finally the reconfiguration of ski resorts' existing business models.

PART ONE: Foundations

Chapter 2. Business model literature

Business models

Some say a business model can be thought of as *“a term of art”*.¹³ Others say that, *“like art itself, a business model is one of those things many people feel can recognize when they see it (especially a particularly clever or terrible one) but can’t quite define”*.¹⁴ As a piece of art, a business model is an *“elusive concept allowing for considerable interpretative flexibility”* (Massa & Tucci, 2012; Bjiker, et al., 1987).

Even though there is not a consensus about what a business model exactly is,¹⁵ there is a common and widely accepted language among academics. In this sense, Zott and colleagues (2011) envisaged four common denominators that describe the business model concept:

1. Business model is emerging as a new unit of analysis.
2. Business models emphasize a system-level, holistic approach to explaining how firms “do business.”
3. Firm activities play an important role in the various conceptualizations of business models that have been proposed.
4. Business models seek to explain how value is created, not just how it is captured.

These denominators, although useful, are not precise enough for this research. For that matter, a specific business model definition was set as a reference for this research after reviewing the most frequently employed definitions in the academic literature.

¹³ Michael L., (2014). *The New New Thing: A Silicon Valley Story*, W. W. Norton & Company.

¹⁴ Ovans A., (2015). ‘What Is a Business Model?’ *Harvard Business Review*, <http://www.hbr.org/2015/01/what-is-a-business-model> (last accessed 04/2015).

¹⁵ Out of the 103 business model publications reviewed by the authors, a 37% do not define the concept at all, 44% explicitly define or conceptualize the business model and the 19% remaining refer to the work of other scholars in defining the concept. Plus, existing definitions do not fully overlap, leaving it open to a multitude possible interpretations. (Zott, Amit, Massa 2011).

"[Business Models are stories that explain how enterprises work. A good business model answers Peter Drucker's age-old questions: Who is the customer? And what does the customer value? It also answers the fundamental question every manager must ask: How do we make money in the business? What is the underlying economic logic that explains how we can deliver value to customers at an appropriate cost?]" (Magretta, 2002).

"A business model depicts the content, structure and governance of transactions designed so as to create value through the exploitation of business opportunities" (Amit and Zott, 2001).¹⁶

"The logic of the firm, the way it operates and how it creates value for its stakeholders" (Baden-Fuller, MacMillan, Demil, and Lecocq, 2008)

"Business models are composed of two different sets of elements. (a) The concrete choices made by management on how the organization must operate, and (b) the consequences of the choices" Casadesus-Masanell & Ricart (2010)

"A business model consists of four interlocking elements that taken together, create and deliver value" (Johnson, Christensen, & Kagermann, 2008).¹⁷

"[BMs] as the rationale of how an organization creates, delivers, and captures value in relationship with a network of exchange partners" (Afuah & Tucci, 2001; Osterwalder, Pigneur, & Tucci, 2005; Zott et al., 2011).¹⁸

Among all of them, the researcher considered this last definition adequate for the research because of its clearer actions around value as well as the influence of a network of partners.

¹⁶ This definition was further used as the foundations for the representation of a business model from an activity system perspective (Zott and Amit, 2010).

¹⁷ These elements are customer value proposition, profit formula, key resources, and key processes (Johnson, Christensen, & Kagermann, 2008).

¹⁸ Referring to an organization as a business firm or other type of organization and value as economic, social or other forms of value (Massa & Tucci, 2014).

Business model innovation

The third and last part of the research is to create, validate and implement the identified opportunities into a new business model. Because of that fact, it was considered adequate to employ the following definition of business model innovation:

“The activity of designing –i.e., creating, implementing and validating- a new business model” (Massa & Tucci, 2014).¹⁹

Massa and Tucci disguise two types of BMI innovation: Business Model Design (in a new organization with no previous operating BM) and Business Model Reconfiguration (in incumbent firms with an already existing BM). The latter involves some managing conflicts that the former does not because of the existence of a prior BM.

Also, the authors note two differentiated purposes where business model innovation:²⁰
(1) act as a vehicle for innovation or (2) be a source of innovation in and of itself.

Business Model Innovation cases

Business Model Innovation is not just a theoretical concept. Real applications of this concept are present in firms that changed entire industries, disrupting the market with new business models.

- Cirque du Soleil

It was 1984 when a group of street performers created what would become the Canada's largest cultural exports, the Cirque du Soleil.

This newcomer to the Cirque industry has managed to outperform longstanding competitors in the industry like Ringling Bros and Barnum & Bailey. How? With a superior Business Model. Why superior? Because they paid close attention to what people wanted to see in their shows, both existing circus audience as well as its potential audience. They redesigned their business model to fulfill these unmet needs,

¹⁹ The authors add that designing business models consists on “the traditional entrepreneurial choices (product/market mix, organizational design, control systems, etc.) as well as the design of a boundary spanning activity system, so as to link an offering (technology or service) to a realized output market” (Massa & Tucci, 2014).

²⁰ Massa, L., Tucci, C. (2014). ‘Business Model Innovation’, Oxford Handbook of Innovation Management Pages 420-441.

even if that meant challenging concepts long taken for granted within the circus industry.

They acknowledged that having the most famous clowns in the show was irrelevant for the mass public, animal shows were disturbing, multiple show arenas were confusing, sawdust and hard benches were uncomfortable. So they cut them off as well as their underlying costs.

Moreover, there were elements that the audience was missing. Then they introduced a theme and a story line like a theater performance, came up with an original score and assorted music and dances, multiple productions, and a refined watching environment. By adding the desired elements and eliminating the rest, they could not only charge a higher price than traditional circuses but also got higher margins due to costs cuts.

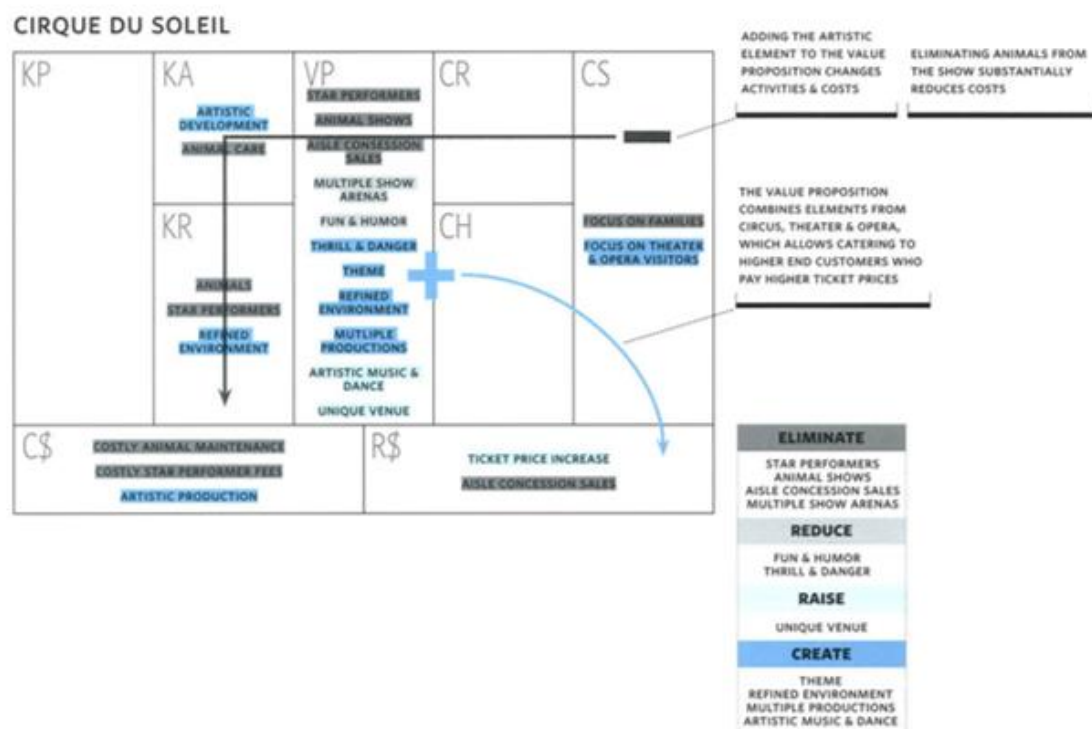


Figure 2.1. Changes in the Cirque du Soleil business model compared with the traditional circus industry, represented employing the Business Model Canvas.²¹

The Cirque du Soleil found a spot in between circus and theater, an offering that people were asking for, but no business offered it so far. Redesigning the traditional circus

²¹ Osterwalder, A. Pigneur, Y. (2009). 'Business Model Regeneration', John Wiley and Sons.

model towards a more compelling one for a broader public, allowed them to set higher prices and acquire higher volumes of customers. In less than 20 years, the company led by Guy Laliberté has achieved a level of revenue that took to the biggest players in the industry more than a hundred years to attain.²² This first example puts of manifest the importance of understanding human needs when dealing with business model innovation. Human insights can mean the difference between success and failure, the difference between the Cirque du Soleil and its competitors.

- Ryanair

In the early 1990s, the Irish airline was facing a tough competitive environment and decided to innovate its business model. They switched from the traditional model every airline did at that time towards a low-cost one.

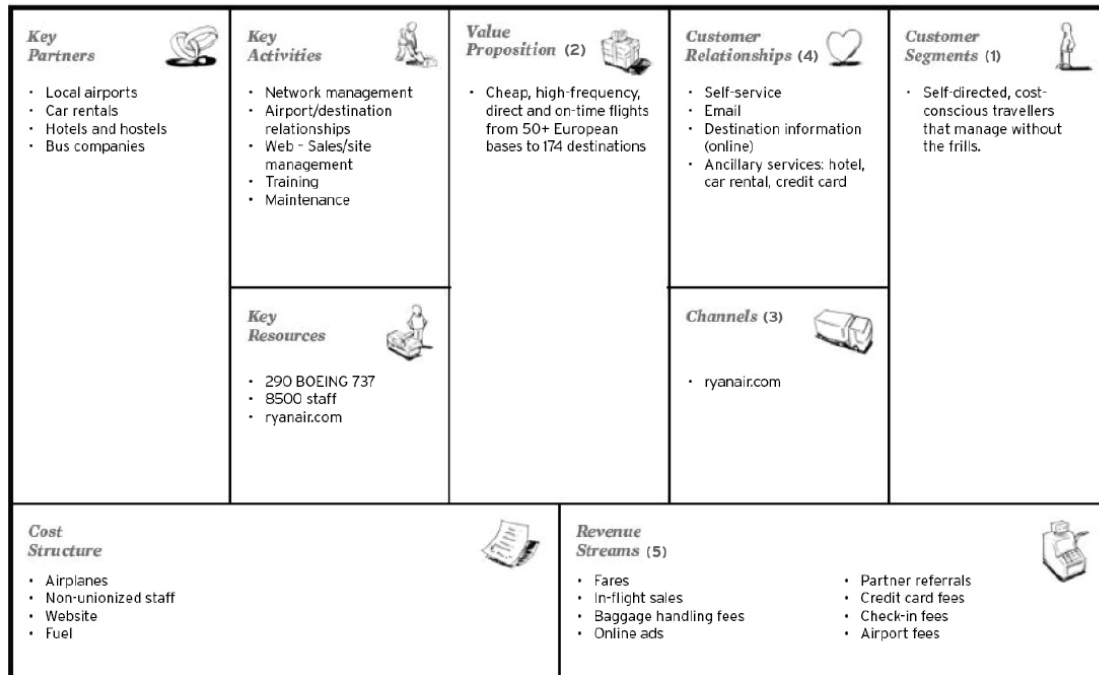
They based their new business model around cheap flights and eliminated everything else. Thus, they started making only short-haul flights with a standardized of Boeing 737s, eliminating all frills, flying to secondary airports, offering no meals and charging for any additional service.

Reducing these additional costs allowed the company to offer low fares, which resulted in high volumes. That meant greater bargaining power with suppliers and high aircraft utilization, both lowering fixed costs that eventually allowed the company to push even lower their ticket fares.

Their clear value proposition of not offering any extra services allowed them to decrease their variable costs and therefore contributing to lower down ticket fares.²³

²² Kim, C. and Mauborgne, R. (2005). 'Blue Ocean Strategy', Harvard Business Review Press.

²³ "Smart companies' business models generate cycles that, over time, make them operate more effectively." Casadesus-Masanel, R. Ricart, J. E. (2011). 'How to design a winning business model', Harvard Business Review. January-February 2011.



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Figure 2.2. Current Ryanair's business model (post-innovation), represented employing the Business Model Canvas.²⁴

Ryanair did not introduce a new technology to outperform its competitors. They kept flying people from one airport to another and with airplanes. Even so, they redesigned their business model, which allowed them to gain a significant competitive advantage.

Barriers to Business Model Innovation

BMI can have a significant impact on a firms' performance, both for the good and the bad. Academics agree that to innovate a business model successfully is extremely difficult to achieve (Chesbrough, 2010; Johnson et al., 2008; Henderson & Clark, 1990). Chesbrough (2010) exposes two types of barriers to business model innovation in incumbent firms:

- Structural barriers:

Some conflicts may emerge between existing assets and business models. The “to be” BM will compete versus the “as is” BM for a limited amount of resources, namely

²⁴ Workbook 2-Business Model Design - MaRS Discovery District. <http://www.marsdd.com/wp-content/uploads/2012/12/Business-Model-Design-WorkbookGuide.pdf> (last accessed 04/2015).

budget restrictions. This situation may prompt some businesses to manage multiple BMs at the same time. Hindustan Unilever (the Indian subsidiary of Unilever), ING Direct (the internet financial services of ING Group) or SilkAir (the low-cost airline of Singapore Airlines) are successful cases of managing multiple BMs.

However firms must be very careful managing more than a business model at a time because some conflicts may arise (Markides and Oyon, 2010). Firms may not stick to any of the BMs and being stuck in the middle (Porter, 1995) or trying to do everything for everybody (Markides & Charitou, 2004). Multiple BMs can also conflict with one another, for example cannibalizing existing customers or shifting those from high-value activities to low margin ones (Markides & Charitou, 2004).

- Cognitive barriers:

These barriers are present in managers that have been working for a long time with a unique business model. This deep involvement may bias and hinder them to understand the potential opportunities that are not compatible with their existing BM. This not receptive attitude is called *dominant logic* (Prahalad & Bettis, 1986). When managers dismiss a new business opportunity because it does not fit their preconceived business model, they are falling in a *dominant logic trap* (Chesbrough, 2003).

Overcoming barriers

Chesbrough (2010) suggests three tools to overcome the previous barriers: (1) constructing maps of business models, (2) experimenting with changes within the organizational hierarchy, and (3) engaging in experimentation. When the author talks about constructing maps, in the first point, he is making reference to the use of tools, frameworks and representations mentioned later on in the chapter.

According to him, it is crucial for organizations a commitment to experiment. This commitment must be adopted all along the organization, experimenting even in firms' organization according to the authors' second point. Moreover, when experiments fail they make a valuable contribution to the learning process, and the attitude that

organizations should adopt is encouraged them rather than sanction them (Chesbrough, 2010).

Another literature contribution to addressing these barriers is the “*discovery driven*” approach (McGrath, 2010). The author refuses an analytical approach to address BMI, which is to say, anticipating a successful BM beforehand. According to her, organizations “*must engage in experimentation and learning*”, and only by continuous experimentation and learning companies can build successful BMs.

In a similar line, Sosna and colleagues pointed at experimentation, evaluation and adaptation as a way to innovate BMs, emphasizing the concept of “*experimentation in practice*”. In their *Naturhouse* case study (a Spanish chain of dietary supplements), the researchers demonstrated how an organization can innovate its business model through a trial-and-error learning process. They did so by following the experimentation, evaluation and adaptation phases mentioned above. (Sosna et al., 2010).

All three cases remark the importance of learning from experimentation. The researcher found appropriate to follow, as the cases above, an experiment-and-learn approach for the purpose of innovating ski resorts business model.

Tools, frameworks, and representations

A business model is a systematic and conceptual rich construct, involving multiple components, several actors and complex interdependencies and dynamics (Massa & Tucci, 2014). Therefore, it challenges managers’ ability to deal with business model innovation (Chesbrough, 2007). There are a series of tools and perspectives that facilitate managers innovate business models and lower BMI barriers.

According to Massa and Tucci (2014), these tools: (1) offer a “reference language” to improve communication and collective sensemaking; (2) scaled-down simplified representations, simplifying cognition and supporting formulation and elaboration of new business design; and (3) offer descriptions and representations that allow managers and entrepreneurs to articulate and instantiate the value of their ventures, support the engagement of external audiences, and give meaning to ambiguous situations.²⁵

²⁵ Massa, L., Tucci, C. (2014). ‘Business Model Innovation’, Oxford Handbook of Innovation Management Pages 420-441.

Represented in Figure 2, these are the different tools and perspectives depending on their level of abstraction:

- *Narratives:*

It is the highest level of abstraction representation. Because of their forward-looking character, business model narratives play an important role in inducing expectations among interested constituents about how a business' future might play out (Perkman & Spicer, 2010).

- *Archetypes:*

With less abstraction than the previous example, archetypes are useful to exemplify a specific type of business model. As the *Freemium* business model (delivering a basic version of the product for free, and charging for a premium version). Or as the *Razor and Razor Blade* by Gillette (selling cheap razors to make customers buy its rather expensive blades), (Zott & Amit, 2010).

- *Graphical frameworks:*

By enumerating, clarifying and representing the most important BM elements, this framework provides a more accurate structure and organization than the two previous ones. A popular example is the Business Model Canvas (Osterwalder & Pigneur, 2010). This representation enumerates and visualizes nine essential BM components according to the authors. More than one graphical framework can be employed if the business model counts with multiple specific elements.

- *Meta-models:*

The previous representation does not express the totality of business dynamic aspects. Meta-models can overcome this limitation, as the tool presented by Casadesus-Mansanel & Ricart (2010). In their work, the authors present a BM logic based on the *choices* made by the management on how the organization must operate and their *consequences*.

- *Activity systems:*

The least level of abstraction is found in activity systems. Zott and Amit (2010) proposed an activity system approach for business model design. The authors consider the BM as a system of interdependent activities among a firm and its network of exchange partners. The difference with meta-models relies on the interdependence among activities, rather than just one-way dependencies as *consequences* that depend on *choices* in Casadesus-Mansanel & Ricart work.

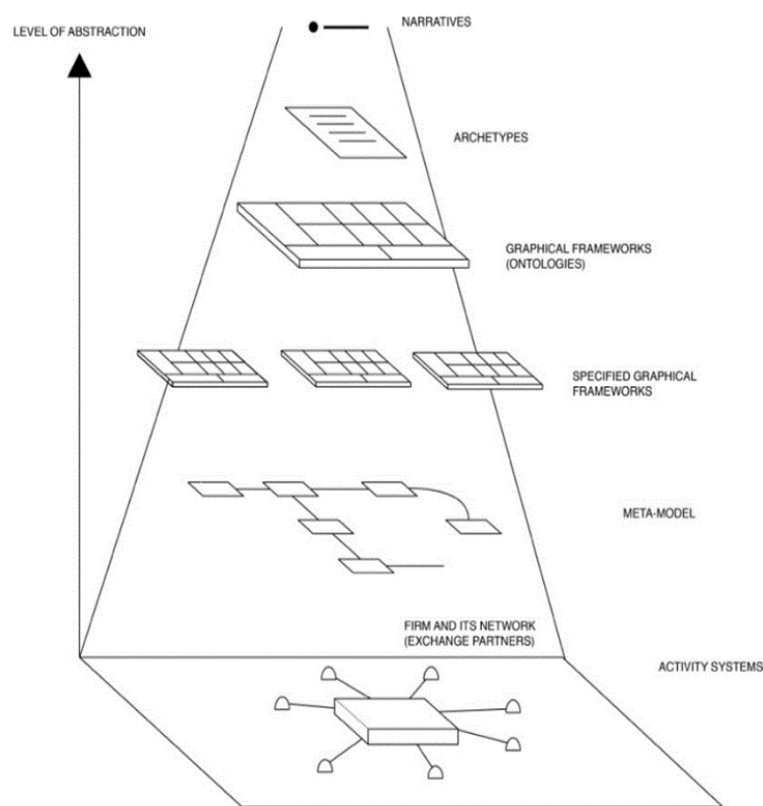


Figure 2.3 The different levels of abstraction of business models.²⁶

As mentioned above, every representation is appropriate depending on the situation of employment. Therefore, it is important to be aware of the purpose of representing business models within this research. (1) Let ski resort managers and academics understand in what these BMs consist of, and (2) have a tool to interact with them, so

²⁶ Massa, L., Tucci, C. (2014). 'Business Model Innovation', Oxford Handbook of Innovation Management Pages 420-441.

Chapter 3. Industry background

The Ski Industry history

First chairlifts were built back in the 1930's.²⁷ However winter tourism business itself took off earlier than that. In late 1860's, cities were connected with some ski villages via railway, which enabled skiing to become a commercially viable activity.²⁸ In the 1960's, commercial ski resorts with constructed slopes were born, which later on improved to fully functional ski resorts (1970's). These improved with modern high capacity lifts and snowmaking systems (1980's) and later transitioning from performance to leisure skiing (1990's). In the 2000's, ski resorts are moving towards a four-season offer with the so-called "mountain resorts". These resorts include summer activities and operate during the whole year round.²⁹



Figure 3.1. Ski industry history highlights.

²⁷ Sun Valley History - Go Northwest! A Travel Guide <http://www.gonorthwest.com/Idaho/central/Sun-Valley/svhistory.htm> (last accessed 04/2015).

²⁸ Ski Trains: A History | International Skiing History Association [WWW Document], n.d. URL <https://skiinghistory.org/history/ski-trains-history> (last accessed 04/2015).

²⁹ Ski Resorts expand year round revenues | HWRRRC [WWW Document], n.d. URL <http://www.jeffcoy.com/documents/articles/Ski%20Resorts%20Expand%20Year%20Round%20Revenue%20s.pdf> (last accessed 04/2015).

Ski resort development

Ski resort generations: from organic growth to planned development

There is no established pattern in ski resort development and management, neither sharply defined strategic groups. Experts affirm that every ski resort has a “tailored made” business model. That is because historically, ski resorts have adapted their development strategy to their specific market conditions and context.³⁰

Even with this wide variety, ski resorts have followed a certain pattern of development depending on the time they were built. Four differentiated generations of ski resorts gather the existing development alternatives. By chronological order, *traditional Swiss ski resorts, post-WWII French ski resorts, integrated ski resorts, and North American ski resorts.*




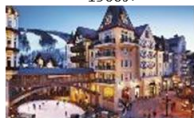
Ski resort generations – Summary table				
	1870s-1930s	1930s-1950s	1950s-1970s	1960s+
				
	1 st generation “Traditional Swiss Ski Resorts”	2 nd generation “Post WWII French Ski Resorts”	3 rd generation “Integrated Ski Resorts”	4 th generation “North American Ski resorts”
Features	<ul style="list-style-type: none"> Mostly developed out of traditional ski villages Gradual evolution and organic growth 	<ul style="list-style-type: none"> Improvement on quality and safety Diversification of ski facilities and services 	<ul style="list-style-type: none"> Planned and functional ski resort development resulting more optimal ski lift efficiency 	<ul style="list-style-type: none"> Firm master planning process Improved standards and efficiency Most cases developed by a single developer Private sector paying fees for land use
Ski lift ownership / operators	<ul style="list-style-type: none"> Government / Local communities 	<ul style="list-style-type: none"> Government / Local communities 	<ul style="list-style-type: none"> Government / Local communities 	<ul style="list-style-type: none"> Private sector paying fees for land use
Government involvement	<ul style="list-style-type: none"> Strict control on master planning process Infrastructure investments 	<ul style="list-style-type: none"> Strict control on master planning process Infrastructure investments 	<ul style="list-style-type: none"> Strict control on master planning process Infrastructure investments 	<ul style="list-style-type: none"> Master development plans to be analyzed and verified by national authorities
Examples	<ul style="list-style-type: none"> St. Moritz Davos Zermatt 	<ul style="list-style-type: none"> Courchevel Meribel Tignes 	<ul style="list-style-type: none"> La Plagne Avoriaz Les Arcs 	<ul style="list-style-type: none"> Vail Breckenridge Whistler Blackcomb

Figure 3.2. Summary Table of ski resort generations.

Swiss ski resorts

These ski resorts were born from the gradual evolution of traditional ski villages, like Wengen or Zermatt, which were further developed to afford the demand of tourists in winter. This organic growth is a clear feature of “*first generation*” ski resorts.

³⁰ Internal PGI sources.

During their planning process, ski resorts in Switzerland were under the strict control of the government and local municipalities. The ski area land was leased or sold to private investors while the Government owned the infrastructures. Those were, and still are, operated by lift companies owned by local communities. In recent times, lift companies are merging into large ski operation companies and offer a single ski pass for all the ski domain, as Zermatt Bergbahnen AG.³¹

Nowadays Swiss ski resorts are worldwide leaders in natural and environmental resources protection, setting up high environmental standards. They are also among the first to introduce car-free villages oriented to pedestrians, hot beds and cold beds concepts and acceptable skier distances among other things when planning a resort.³²

French ski resorts

After the Second World War, “*second generation ski resorts*” emerged. Their infrastructures improved in terms of quality and safety, and the base area facilities and services evolved towards a more diversified offer. The development of these resorts was still progressive, without a centralized master plan. This lack of planning led to suboptimal ski lift efficiency as a main shortcoming. Courchevel, Meribel, and Tignes are examples of these type of resorts.

Later on, in the 60's and 70's, the next generation of ski resorts came on stage. The “*integrated ski resort development*” was the result of the intensive development of ski resorts in France as La Plagne or Avoriaz. This type of development, planned and functional, separated vehicles from skiers and optimized ski lift efficiency. The planning though did not take into account the integration of the huge amount of buildings, which resulted in an unsightly architecture.³³

North American ski resorts

A thoroughly master planning process and higher development standards define the “*fourth generation*” of ski resorts. These resorts created the concept of ski village development to create a place where all skiers, either guests or residents could find

³¹ Internal PGI sources.

³² Ibid.

³³ Ibid.

services to enjoy fully their holidays. This design takes into account the proportion between real-estate and lodgment and aims to create the right atmosphere. In a manner of speaking, it “keeps the resort alive” with an all-included offer.

Another important feature is that, in contrast with the generations observed so far, this resorts are mainly developed by a single developer. All this planning and standards being under the control of a single developer makes easier to balance resort's supply and users' demand. In general terms, this results in a more optimal and profitable business. These ski resorts are located on public land leased to private companies. Those pay a fee based on the income derived from the use of the land.³⁴

Global overview

There is no consensus on ski resort Figures worldwide, because as mentioned above there are myriad ways to develop and operate businesses within the same industry. That results in many ski resorts employing different standards or measurements. However, some experts agree with a series of Figures to frame the industry globally:³⁵

- 400 million skier visits
- 115 million skiers³⁶
- 2,119 ski resorts
- 26.934 ski lifts
- USD 30-50 billion global revenues³⁷

The most representative areas in the industry are illustrated in the following Figure. Note that the Alps area, geographically located in Western Europe, is classified as a different area due to its big influence in the industry.

³⁴ Internal PGI sources.

³⁵ Vanat, L. (2014). 'International Report on Snow & Mountain Tourism'. <http://www.vanat.ch/RM-world-report-2014.pdf> (last accessed 04/2015).

³⁶ Skiers are considered as users that account for 9 skier visits per season or more. Internal PGI analysis.

³⁷ Estimated 2014, based on US skier visit spending and Alps ski area revenues. Internal PGI analysis.

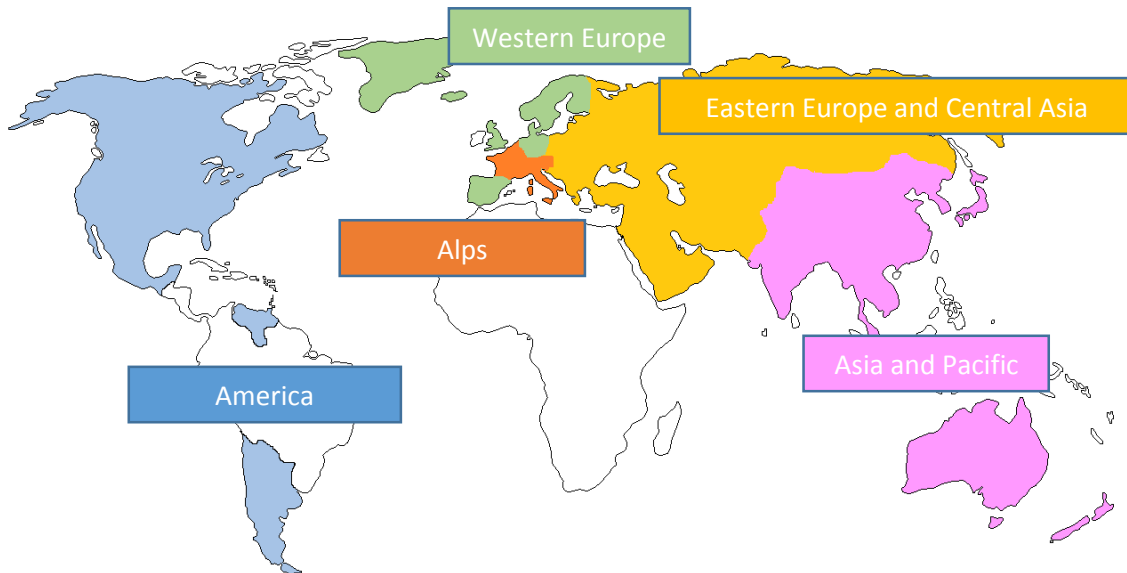


Figure 3.3. Distribution of the most representative skiing regions worldwide.

Source: 2014 International Report on Snow & Mountain Tourism.

Officially, 2.119 ski resorts have been identified, which are distributed among the geographic areas mentioned above in Figure 3.4.³⁸ The Alps represents the biggest offer of ski resorts in terms of volume, even though its smaller geographic area compared to the others.

Distribution of ski resorts worldwide

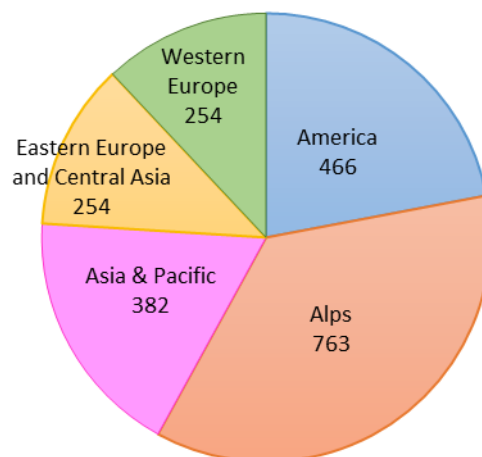


Figure 3.4. Distribution of ski resorts worldwide.

Source: 2014 International Report on Snow & Mountain Tourism.

³⁸ Vanat, L. (2014). 'International Report on Snow & Mountain Tourism'. www-vanat.ch/RM-world-report-2014.pdf (last accessed 04/2015).

Another key Figure to determine market maturity in a region is the number of major ski resorts (above 1 million skier visits per winter season). From all the 47 existing resorts, the vast majority are located in the Alps (39). Some are found in America (one in Canada and five in the U.S.) and a few in Western Europe (one in Sweden and one in Andorra).

Distribution of major ski resorts worldwide

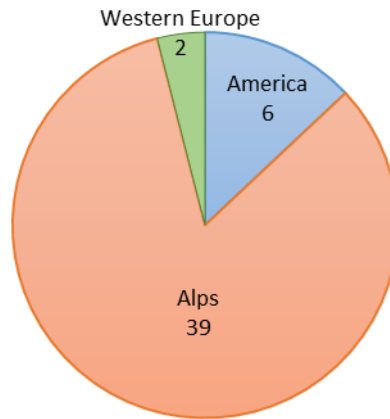


Figure 3.5. Distribution of major ski resorts worldwide.

Source: 2014 International Report on Snow & Mountain Tourism.

The evolution of skier visits worldwide has been almost flat in the past ten years, with a stagnant Figure of 400 million visits per winter season.³⁹ Global skier visits place also the Alps as a major player, followed from the distance by America and then the rest.

³⁹ Ibid.

Distribution of skier days worldwide

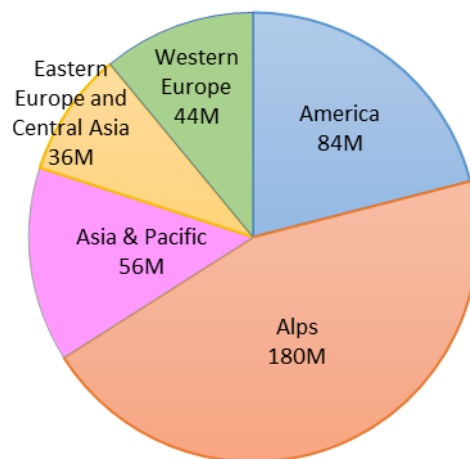


Figure 3.6. Distribution of skier visits worldwide.

Source: 2014 International Report on Snow & Mountain Tourism.

Existing business models of ski resorts

So far, four types (or generations) of ski resort had been studied in terms of their development. In terms of ownership, there are two models, the *Alps*, and the *North American* models. Plus the former embraces two subcategories, *Swiss*, and *French* ski resorts.

In terms of the value proposition, there are two types of ski resort: *Weekend ski resorts* and *Destination ski resorts*.⁴⁰

- *Weekend ski resorts* offer a daily ski outing. These resorts always operate ski facilities (lifts and slopes), and they might operate the rest of mountain businesses as F&B, ski school, rental, and retail and complementary activities as snowshoeing or dog sledding.
- On the other side, *Destination ski resorts* offer a winter holiday. Meaning that its value proposition includes everything that the other type of ski resort does, but it also includes the services of lodgment and real estate.

⁴⁰ PGI internal sources.

It is important to note that there is a high correlation between the three categories summarized in Table 3.3 (development, ownership, and value proposition). In most cases, ski resorts developed during the first and second generations belong to the model of *weekend ski resorts* and the Alps area. In these cases, the ski resort only owns the mountain facilities, most by public entities.⁴¹ By and large, these ski resorts establish consortiums with third parties, mostly private, to outsource the management of the other mountain businesses as F&B, ski school, rental, and retail and complementary activities.⁴²

Whereas the resorts developed during the two last generations have a *destination ski resort* model. Most ski resorts in North America (*4th generation*) provide ski holidays services integrated with resorts owned by a single private agent. While the other category in the Alps (*3rd generation*), provide the same holiday services but the ownership of them is highly segmented by a mix of public and private owners.⁴³

Therefore, putting these three categories altogether, three different business models emerge:

- *Alps weekend ski resorts*
- *Alps destination ski resorts*
- *North American destination ski resorts*

⁴¹ There are cases of weekend ski resorts owned entirely private, like Masella ski resort in the Pyrenees. The number of this type of resorts are a minority and its operation is almost identic to the public owned weekend ski resorts. Because of that reason the Alps weekend ski resort has been considered public owned in the classification of the Figure xx.

⁴² PGI internal sources.

⁴³ Ibid.

Criteria	Types of ski resort			
	1 st generation	2 nd generation	3 rd generation	4 th generation
Development	1 st generation	2 nd generation	3 rd generation	4 th generation
Ownership	Swiss	French		North American
	Alps			
Value Proposition	Weekend resorts		Destination resorts	

Table 3.1. Summary of all different types of ski resort present in this industry background.

These business models can be found in ski resorts like La Molina (The *Alps weekend ski resort*), Grandvalira (The *Alps destination ski resorts*) or Vail (North American *destination ski resorts*). Figure 3.7 shows the classifications of the ski resort business models mentioned above:

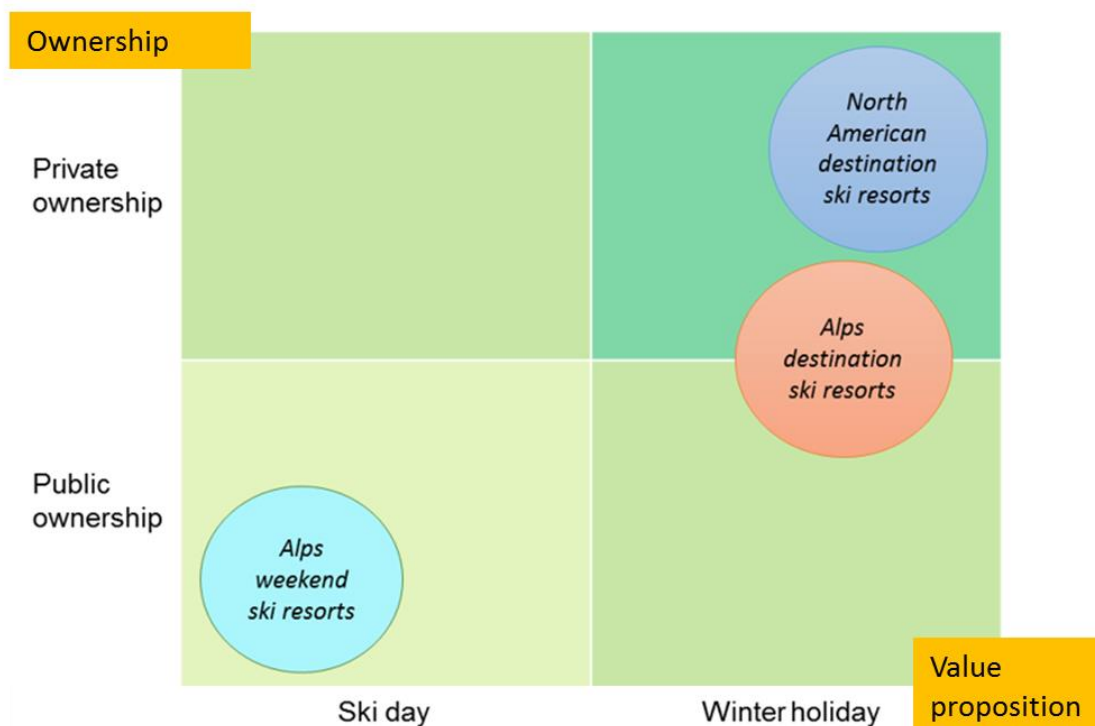


Figure 3.7. Classification of the existing ski resort business models.

Representation of the business model

Once identified the existing ski resort business models; the next step was to represent them in the tool chosen in the previous chapter, the Business Model Canvas.

The nine building blocks of the canvas were completed after studying different cases of a ski resort that belonged to each type of business model in Europe and North America.

The Alps weekend ski resorts:

Weekend ski resorts create value for customers with a ski day offer and everything bond with practicing skiing: natural beauty, thrill, the challenge of mastering the sport and a shared experience. That means that the targeted customers must have a special interest in skiing. The most relevant segments are families, friend groups, couples, and schools. These first two building blocks condition the content in the remaining three blocks on the right side of the Canvas.

The ski resort reaches its customers using two channels. Directly, through the website and ticket offices and indirectly, through travel agencies and tour operators.

Local customers, who live nearby the ski resort, are an important percentage of the total. Because of that the relationships with these ski resorts offer them special deals and offers. Other relationships are established via seasonal passes and social media communities.

In the last block of the right side are the revenue streams, which are lift tickets sold to individuals, travel agencies and tour operators plus revenues earned from the consortiums of the outsourced mountain businesses.

On the left side, the most important resources for this business model are first a mountainous land extension and second the facilities built in the mountain for skiing and the rest of Mountain businesses. It is also important to note that ski resort's brand might be a valuable resource.

The key activities address the building and operation of a ski resort, with its design, operations, and marketing. The rest of actions focus on establishing partnerships for the exploitation of the other mountain business and attracting sponsors, tour operators, and travel agencies.

Apart from the above mentioned, weekend ski resorts maximize their performance through the media, lodgment, real estate and transport companies.

In the last building block, the cost structure counts with the most important cost that this business model bears, the investment in mountain facilities and therefore, its amortization. Other relevant costs are the ones regarding employees, marketing, and utilities.

The Alps destination ski resorts:

Alps destination ski resorts create value for their customers offering a winter holiday. Apart from the ski domain, their value proposition includes lodgment and real estate. Nonetheless, by and large those are neither owned nor managed by the ski resort. Instead, the resort establishes partnerships with lodgment and real estate companies to create more value for its customers.

According to this value proposition, the customer targeted is anyone keen on resort holidays, which includes mainly families, groups of friends, couples, corporations and schools. Channels do not change from the explained in weekend ski resorts. Its relationships differ from that last business model because of the presence of international customers. These resorts operate all their mountain businesses. Therefore, the revenue streams come directly from what customers pay for the products or services that those businesses provide.

The resources stay the same than in the weekend model. Instead, activities change, adding the operation of all the mountain businesses and establishing consortiums with lodgments and real estate agents to provide the value proposition.

According to the previous activities, real estate and lodgment companies are essential partnerships. Moreover, it is important to notice that in case the ski resort is private owned, it will have to establish agreements with government and landlords to exploit the land. The cost structure does not change significantly from the previous business model. Although there is the presence of retail costs associated with mountain businesses like F&B or retail and rental, this time managed by the same ski resort instead of outsourced.

North American destination ski resorts:

North American destination ski resorts, as the previous business model, have the same value proposition based on a winter holiday offering. The main difference between this and the latter business model relies on lodgment and real estate. In North American destination ski resorts, by and large, those businesses are owned and managed by the same ski resort. This factor results in a new segment, the real estate demand. Therefore, it also changes channels and partnerships to reach this new segment with real estate brokers. Lodgment and real estate became part of the key activities and resources, and as a consequence, they are also present in both cost structure and revenue streams.

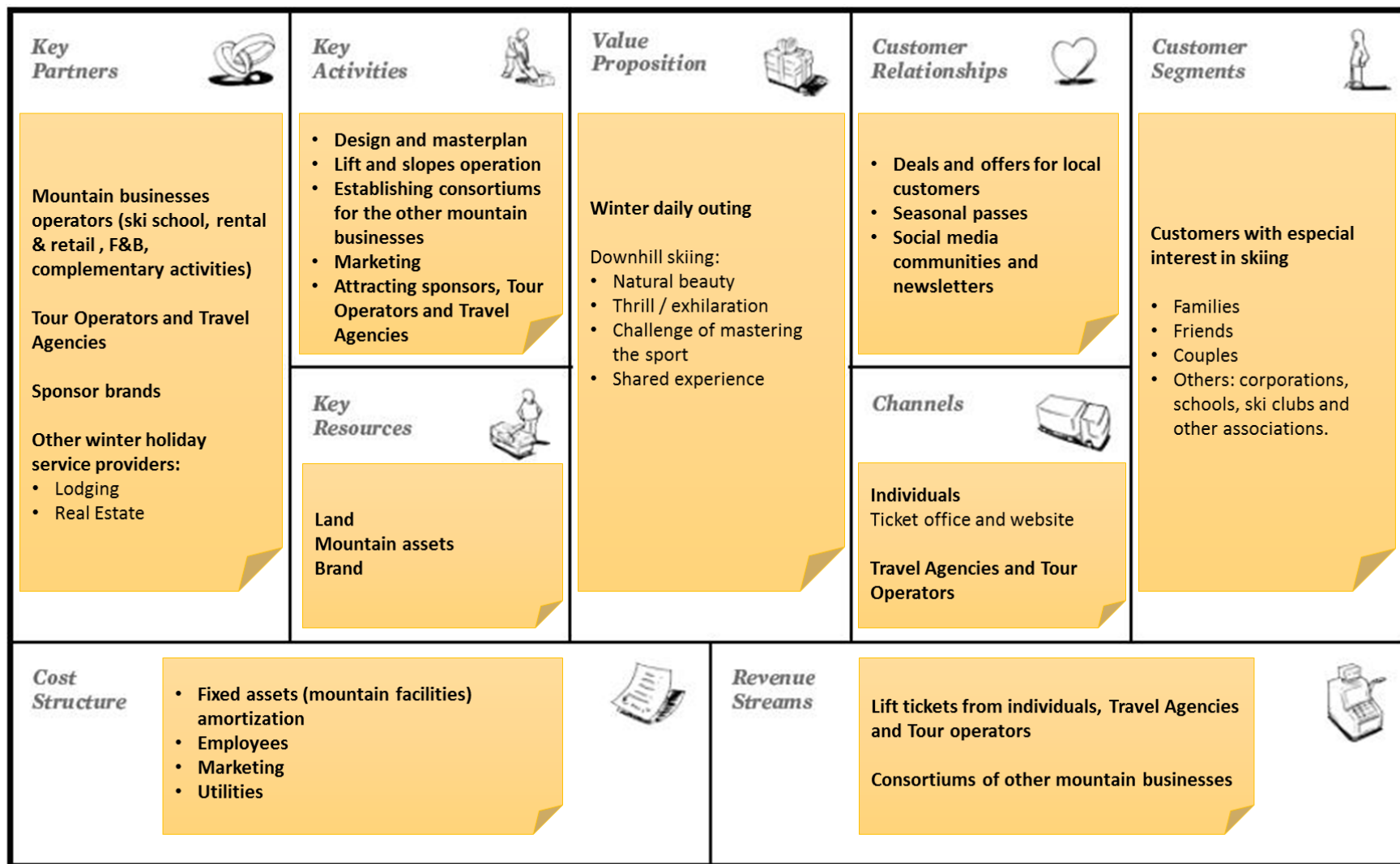


Figure 3.8. Representation of The Alps weekend ski resort business model using the Business Model Canvas.

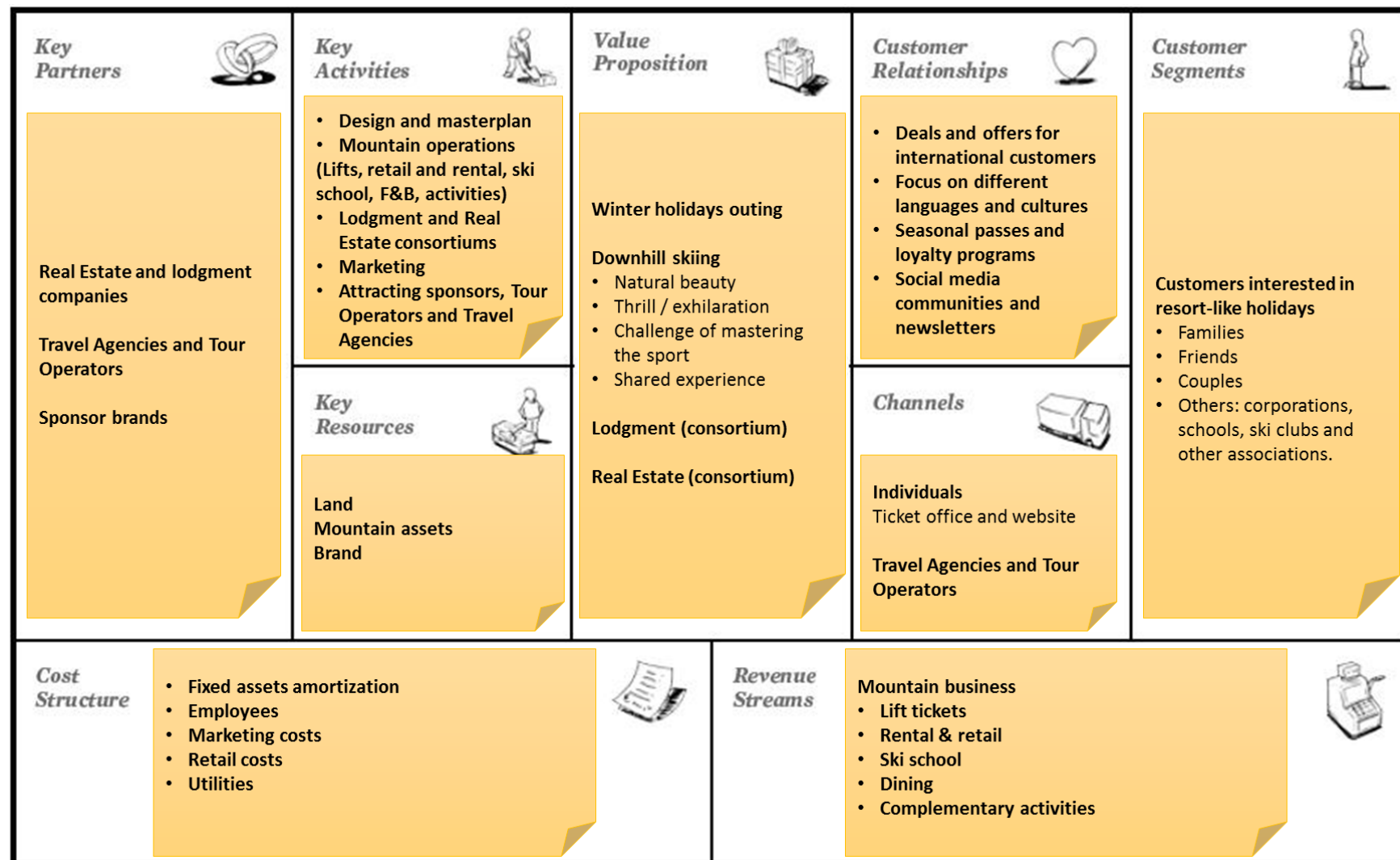


Figure 3.9. Representation of The Alps destination ski resort business model using the Business Model Canvas.

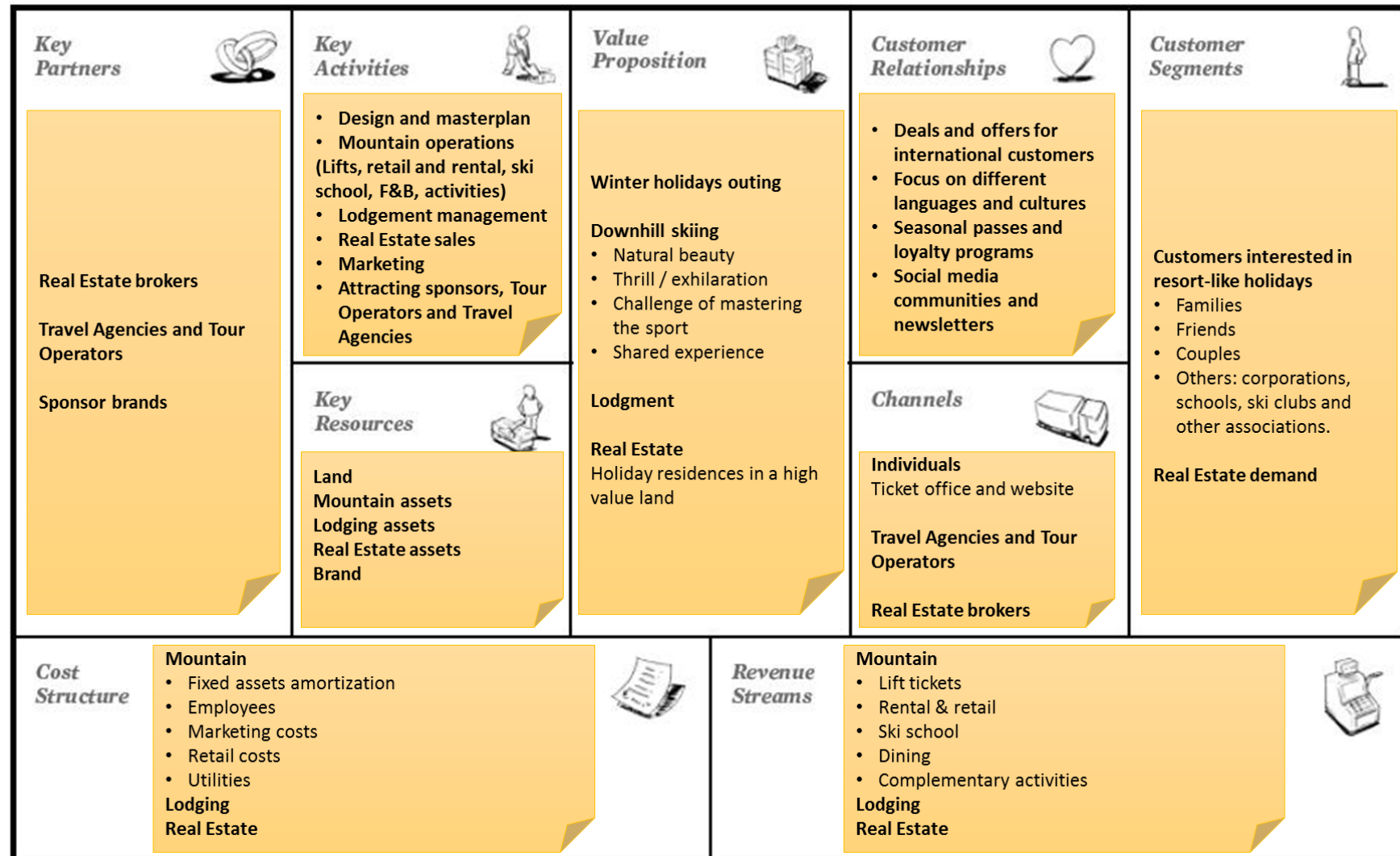


Figure 3.10. Representation of both North American destination ski resort business model using the Business Model Canvas.

PART TWO: Identifying Opportunities

Chapter 4. Ethnographic research setting

Foundations

In this research, human behavior is the cornerstone to identify opportunities to innovating ski resorts' existing business model. According to the American psychologist Abraham Maslow, the reason behind people's motivations is to achieve a series of needs. These needs are common to all human beings, but every individual meet them in a unique manner (Maslow, 1943). To explore people's needs and motivations, the researcher decided to adopt the role of an ethnographer.

In the innovation firm IDEO, they employ ethnographic research for the design of products, services, and business models. For Jane Fulton, IDEO's ethnographer researcher, this type of research helps designers to *"inform their intuition."* According to her, the design cannot be just a matter of analytical thinking. She argues that once one starts thinking about how people might respond to future experiences, one begins to imagine and empathize. But how exactly does ethnography inform designers' intuition? By exposing patterns underlying the rich reality of people's behaviors, exploring reactions to probes and prototypes and shedding light on the unknown through iterative hypothesis and experiment.⁴⁴

The strength of this type of research relies on its qualitative and interpretive nature. Instead of just relying purely on hard facts and objective data, ethnographic research demands higher personal commitment and engagement levels in the whole firm or organization. That involves actions like getting out of the office and going where customers are, being mindful and understanding social trends as well as the ecology of

⁴⁴ J. Fulton. (2008). Informing our intuition: Design research for radical innovation. Rottmann magazine winter 2008.

stakeholders, trying out unfamiliar things by oneself, etc.⁴⁵ This deep and true understanding of people's needs will open up a wide range of new possibilities for redesigning a business model.

Practical application

The following three actions are key to adopt the role of an ethnographer during the case study research:⁴⁶

- *Immerse*: Experience what the user experiences, doing what they do in the exact manner they do it. It is essential to keep in mind that there are many different users in a ski resort, and, therefore, many situations to experience.
- *Observe*: Monitor users and their behavior in the context of their lives, observing what they do and listen to what they say. However, this is not enough to know people's thoughts and feelings, which will have to be inferred by the ethnographer leveraging the collected information (*informed intuition*). Thus, there are two different sources of information: *observable facts*; what people do and say, and *inferable facts*; what people think and feel.
- *Engage*: This third and last action plays a vital role to inform ethnographer's intuition. By interacting with people, one can get specific information regarding inferable facts. Especially asking 'why,' namely motivations, leads to the reasons behind why people do what they do or say what they say. The repetitive use of questions like "Why? What is the reason for that? You did that because of...? Could you tell me more about that?" bring over the core motivations of people's behavior. Quoting Tom Kelly in his book *The Art of Innovation*: "Good, insightful observation combines careful watching with occasional well-chosen 'why?'"

⁴⁵ D. Gilmore. (2002). 'Understanding and Overcoming Resistance to Ethnographic Design Research', Interactions (pages 29-35). ACM New York, NY, USA.

⁴⁶ Hasso Plattner: Institute of Design at Stanford. Empathy field guide.
<http://www.ds.school.stanford.edu/wp-content/themes/dschool/method-cards/interview-for-empathy.pdf> (last accessed 04/15).

questions to get at the underlying psychology of a person's interactions with products or services.”⁴⁷

Selection of cases

The schedule of the research and seasonality of ski resorts did not allow a long time spent in ski resorts. Unable to change this situation, the cases were limited and had to be thoroughly chosen. As Pettigrew (1988) noted, when the number of cases that can be studied is limited, it makes sense to choose cases as extreme situations and polar types in which the process of interest is “transparently observable.” As a result, three unit of analysis were identified:

- Ski resorts: La Molina, Verbier, and Grandvalira ski resorts were chosen because of their representativeness and different features, which are shown in Table 4.1.
- Schools: A total of 4 classrooms from Bac de Cerdanya elementary school and 3 of Pere Borrell high school participated in interactive sessions. There, students could share their experiences, thoughts and feelings regarding skiing. Both schools are situated in the province of Cerdanya (Spain) and surrounded by ski resorts. There are thirteen ski resorts in a radius of 50km, all of them less than an hour drive. Among of those are La Molina and Grandvalira. The groups embraced different demographics as age, nationality and gender.
- Opportunistic observations: The experiences that fall into this category are those that the researcher went through, even that their initial purpose might not be the research in itself. Those took place in the ski resorts of Masella, Porté Puymorens, St. Cergue la Dôle and Montillon sur Gruyere. Plus ski resort's events and competitions, ski touring tours and many informal conversations with all sorts of people, which contributed somehow or other in gathering insights to identify opportunities.

⁴⁷ Kelley, T. (2001). 'The Art of Innovation: Lessons in Creativity from IDEO, America's Leading Design Firm', The Doubleday Religious Publishing Group.

	La Molina	Verbier	Grandvalira
Customers			
• Origin	National	National and International	National and International
• Ski level	Beginner-intermediate	Advanced-Expert	All levels
Modalities and facilities	Racers and disabled skiers	Freeride, freestyle and ski touring	All modalities
Weather	Few small snowfalls. Mostly warm days.	Big and frequent snowfalls. Mostly cold days.	Big snowfalls. Cold and warm days.
Geography	Not very steep and high mountains	Very steep and high mountains	Steep but not very high
Ski-village	Not unified ski village	Central ski village: Verbier	Six different resort bases

Table 4.1. Summary and comparison of the chosen ski resort study cases.



Figure 4.5. View of the valley of Cerdanya from the top of Masella ski resort, the neighbor of La Molina ski resort. Source: Masella.

Chapter 5. Ethnographic research findings

Processing the data

During the time in the field, a remarkable amount of qualitative information was collected. Therefore, it is very important the subsequent coding, sense making and validation of it. First, all the data was narrowed down to specific user needs as well as establishing relationships among these (*generation of meaning*). Second, these needs were verified or dismissed employing other sources of data (*testing of findings*).

- Generating of meaning:

One of the first tactics as a starting point for this coding phase is identifying patterns or themes. The frequency of behaviors observed might be a sign of their presence among a broader number of users. After identifying some patterns, the observations were clustered in categories.⁴⁸ The clustering process was repeated once more, establishing relationships among the previously established categories. That process resulted in four main themes: *Boredom and danger on the slopes*, *The cost of skiing*, *Ski learning* and *Skiing is social*.

- Testing of findings:

After making sense of the data gathered during a month of qualitative research, the last step was to give consistency to these identified insights. In words of the creativity scholar Sir Ken Robinson “without data, you’re just another person with an opinion.” For that matter, the vast amount of data collected in the field was tested before validating it. Then, it was necessary to contrast them with other data sources as qualitative observations from other researchers, quantitative data or previous literature.

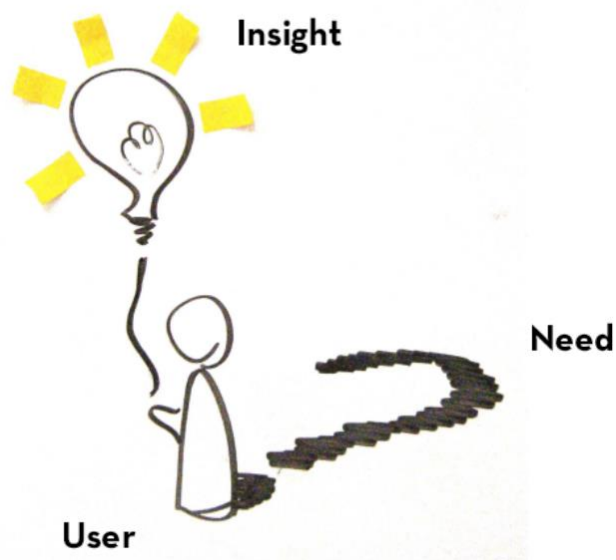
Presentation of findings

The following descriptions are just the tip of the iceberg of the work carried out. Following the previous methodologies, all the findings had been meticulously classified, evaluated and validated. However, only the findings employed in the third part of the thesis are explained in this paper. The findings, namely users’ needs, were classified

⁴⁸ It is necessary to mention that these clusters or categories were not always mutually exclusive.

according to its nature. The framework employed for that was the eight-stage model of Maslow's hierarchy of needs, which is described in detail in Annex I.

All the needs have been expressed using the *Point-Of-View (POV) Madlib*, a tool commonly employed in design thinking projects by the *d.school* in Stanford. It allows to construct an actionable problem statement from a design challenge, thus facilitating the ideation process. By combining three elements, user, need and insight, designers can easily understand and keep in mind the vision, responsibility and opportunities that every users' situation involves. It is important to articulate 'needs' as verbs while 'insights' are a synthesized statement of the reasoning that uncovered these needs, found through the analysis of the qualitative research. The brevity of the *Point-Of-View* is crucial to be focused on the objective and keep on track.⁴⁹



[USER] needs to [USER'S NEED] because [INSIGHT]

Figure 5.2. The POV Madlib converts design challenges into actionable problem statements.⁵⁰

⁴⁹ The Hasso Plattner, also known as the 'd.school,' is the Institute of Design at Stanford where students from various backgrounds work of design solutions employing a human-centered approach. Hasso Plattner: Institute of Design at Stanford. Point of View Madlib. <http://www.dschool.stanford.edu/wp-content/themes/dschool/method-cards/point-of-view-madlib.pdf> (last accessed 04/15).

⁵⁰ Ibid.

The different needs were coded according its users and hierarchy to structure and organize them.

- The word code employed corresponds to the customer segment.
- The number code corresponds to the hierarchy of the need (first digit) and the order of that need for a same hierarchy and user (second digit).

For example RS4.1

- RS → User category *Reckless skiers*.
- 4 → Fourth stage of the Maslow hierarchy of needs: *esteem needs*.
- 1 → The first need in the Table regarding *Reckless skiers* within *esteem needs*.

The following Tables summarizes the identified needs, including the nature of the need, its user, the insight that sparked it and the need itself:

User	Concept	Needs to... (<i>unmet need</i>)	Because... (<i>Insight</i>)
First-timers and skiers in the learning process	FT2.1, L2.1	To acknowledge their physical condition as well as slopes condition	They might have accidents when their physical condition is bad, but they are not aware of it
	FT2.2, L2.2	To ease the difference between intense effort in downhill and complete resting in the chairlift	That difference causes injuries and decreases skiers' enjoyment
	FT2.3, L2.3	To avoid gliding with their ski boots	It can be dangerous for skiers
First-timers	FT2.4	To acquaintance a skier who introduces them to the sport	They do not dare to try skiing out alone

	FT2.5	To control their speed and trajectory	They are terrified of colliding with other people or obstacles
	FT2.6	To get up easier after a fall (or not falling)	They find it tough and tiring
	FT2.7	Their skis not to get crossed	it might produce them a profound frustration
	FT2.8	To avoid or reduce injuries	Injuries have a significant negative impact on their lives
Skiers in the learning process	L2.4	To fix and prepare their skis near or within the ski resort	They realize whether their skis need to be prepared and fixed once they are on the slopes
	L2.5	To learn skiing cheaply	Hiring a ski instructor if or them a significant economic effort
	L2.6	To learn more intuitively	They find the current method too abstract and technical
	L2.7	To learn skiing as soon as possible	The older the skiers are, the more likely to suffer injuries and feel embarrassed
	L3.1	To learn skiing without renouncing to their skiing group privacy	The ski instructor's presence makes them feel uncomfortable
	L4.1	To learn skiing conserving their pride	It is a reason for skiers not to hire a ski instructor

	L4.2	To get short term gratifications	They can't wait for long term benefits
	L7.1	To access easily to competition	Competition speeds up the learning and tightens skiers' bond with skiing
Pro skiers	PS8.1	To share with other less experienced skiers "the greatness of skiing."	They have a higher social and environmental commitment with skiing than the rest of skiers
Kids	K2.1	To be easily visible (even in bad weather days) or to be found	It might be dangerous if they get lost, and their parents cannot find them
Youth and Kids	K3.1, Y3.1	To be inspired by their heroes or idols (mostly professional athletes)	It helps fostering their interest and participation in sports
Youngsters	Y4.1	To increase their freedom of choice when skiing with their parents	The young feel ruled by the adults
	Y4.2	To be able to ski together with their friends and without their parents	They do not have neither the money nor the legal authority to do so
Parents	P2.1	To get cheaper kids' equipment renewal	Kids grow up, but their skis, boots, and poles do not

	P2.2	Not to be disturbed by kids and keep them under control during the bar time	Either kids do disturb them or it is difficult to control them if they play outside
	P3.1	To experience a baby-friendly skiing experience	Otherwise, they opt for other more baby-friendly alternative activities
Adults	A6.1	To find a more tranquil environment to do activities that require focus (as working on their laptop or reading)	Ski resort's bars are crowded and noisy
Groups	G2.1	To ski according to their level without renouncing to the social side (the least experienced skiers in a group)	They face too difficult slopes, producing two possible results: either anxiety or splitting the group
	G3.1	To communicate in a constant way	It enhances the social side of skiing
	G4.1	To ski according their level without renouncing to the social side (the most experienced skiers in a group)	They face too easy slopes, producing two possible results: either boredom or splitting the group
Off-piste skiers	OP2.1	To be easily visible (especially in bad weather days)	It is easier to find them or get rescued

	OP2.2	To find easily their buried skis	It is like finding a needle in a haystack
Ski touring skiers	ST2.1	To ski in ski resorts	These areas are more secure, easier to access, more comfortable to ski thanks to groomed slopes and artificial snow
	ST6.1	To hike up the mountain without ski lifts	It is a more relaxing, natural and less crowded
	ST7.1	To practice this new modality in the backcountry, outside of the "regular" slopes	It is more intrinsically rewarding (you earn your turns)
Freestyle and Big Mountain skiers	FB2.1	To check the jumps landing of terrain park and anyone misses a run	It can be dangerous for both jumpers and people in the landing
	FB3.1	To perform a way of skiing far off the "traditional" skiing on the slopes	They want to emulate their idols in ski movies
	FB3.2	To feel part of a community	They use a different slang and equipment to belong to a "tribe" and thus distinguish themselves from the mainstream skier
Bored skiers	BS5.1	To pursue an objective (as scoring a goal or	They find it monotonous and get bored

		doing a faster lap) when skiing on the slopes	
Dog owners	D3.1	To experience a dog-friendly skiing	They opt for other more dog-friendly activities
Non-skiers	NS3.1	To share their day with their skier acquaintances	They may opt for other activities where everyone can participate
	NS3.2	To experience familiar and engaging skiing experience	Skiing is foreign to them and brings them too far from their comfort zone.
Passionate Music skiers	M6.1	To listen to music in a safe, social and comfortable way	It enhances the skiers' motivation but may be a hurdle, not social and dangerous
Reckless skiers	RS2.1	To find ways to ski powder snow more safely	They endanger themselves too much to do so (avalanches, crevasses), especially the non-locals
	RS4.1	To get adrenaline rushes safely	Right now they go at high speeds and jumping in the slopes endangering themselves and other skiers as well
Anxious skiers	AX2.1	To ski in a safer environment	They feel endangered by other reckless skiers, which

			may lead them to give up skiing, injuries or even death
	AX2.2	To be safe during their stops along the run	Other skiers could hit them
Traveler skiers	TR2.1	To solve problems of equipment transport	It discourages them from skiing
Families and lazy skiers	FL2.1	To optimize and ease all the process from the moment they leave home until they arrive at the ski resort	It may discourage them from skiing
Sociopath skiers	SS3.1	To share their skiing experience with as many people as possible	Sharing the experience is even more important than actually doing it
	SS4.1	To record their skiing day	It will last forever, and they will be able to share it afterward
Lift users	LU3.1	To experience a renewed ski-lift experience	The presence of other skiers may interfere their privacy
	LU4.1	To experience a renewed ski-lift experience	It is too physically static and boring, and it takes too long

Table 5.1. Summary of needs to be addressed in ideation sessions by User, Need, and Insight.

PART THREE: Seizing Opportunities

Chapter 6: Ideation

Ideation methods

To maximize the chances to find suitable solutions for the identified needs, the researcher decided to appeal to external help. Given his deep involvement with users and their needs, an external point of view could contribute to come up with new, different and fresh ideas. For that reason, he ran a brainstorming session that counted with five people. With different careers and engagement in skiing, they would work together to design solutions to address the unmet needs.

Brainstorming has become a buzzword in the business world. According to Arthur Andersen's survey, more than 70 percent of people from the business field affirm that they practice this technique at their workplace. However, the quality of their outcomes varies depending on why and how they do brainstorm. There is one company in special that has a long and successful career when it is about ideation: the design and innovation consultancy firm IDEO. In his book *The Art of Innovation*, Tom Kelley talks about how to run a brainstorming session, detailing practices that he and his colleagues in the firm have been refining for years. Inspired by his work, the researcher developed a series of guidelines for ideation session, which are detailed in Annex V.

Ideation outcomes

The different ideation contributions resulted in a series of potential solutions for each need, some of them covering even more than one need at once. The following Table illustrates needs' solutions, three of them further developed in the next chapters:

User	Need	Solution
First-timers and skiers in the learning process	To acknowledge their physical condition as well as slopes condition	Crowdsourced slopes information by ski resort users
	To ease the difference between downhill intense efforts and complete resting in the chairlift to avoid injuries	Active chairlifts, warm-up zone in lifts' upper platforms
	Not to glide with their ski boots	Ski mall: Skiers can remove their boots when they are not skiing but still in the resort
First-timers	To acquaintance a skier that introduces them to the sport	Redesigned first-timer skiing experience
	To control their speed and trajectory	Redesigned first-timer skiing experience
	To get up easier after a fall (or not falling)	Redesigned first-timer skiing experience
	Their skis not get crossed	Redesigned first-timer skiing experience
	To avoid or reduce injuries	Redesigned first-timer skiing experience
Skiers in the	To fix/prepare their skis near or within the ski resort	Ski mall: Skis preparation while doing other activities

learning process	To learn skiing cheaply	Redesigned learning experience
	To learn more intuitively	Redesigned learning experience
	To learn skiing without renouncing to their skiing group privacy	Redesigned learning experience
	To learn skiing conserving their pride	Redesigned learning experience
	To get short term gratifications	Redesigned learning experience
	To learn skiing as soon as possible	Redesigned learning experience
	To access easily to competition	Redesigned learning experience
Pro skiers	To share with other less experienced skiers " <i>the greatness of skiing</i> "	Reality shows for kids, youth and ski professionals, Crowdsourced ski learning system
Kids	To be inspired by their heroes or idols (mostly professional athletes)	Reality shows for kids, youth, and ski professionals
	To be easily visible (even in bad weather days) or to be found	Real-time communication system
Youth	To be inspired by their heroes or idols (mostly professional athletes)	Reality shows for kids, youth, and ski professionals
	To increase their freedom of choice skiing with their parents	Real-time communication system
	To be able to ski with their friends and without their parents	House and car sharing
Parents	To get cheaper kids' equipment renewal	Kids' equipment exchange platform

	Not to be disturbed by kids and control them at the same time	Ski mall: Playgrounds and kindergartens
	To experience a baby-friendly skiing day	Ski mall: Playgrounds and kindergartens
Adults	To find a more tranquil environment to do activities that require focus (as working on their laptop or reading)	Ski mall: Relaxed bar atmosphere for reading or working
Groups	To ski according their level without renouncing to the social side	Real-time communication system
	To communicate in a constant way	Real-time communication system
Off-piste	To be easily visible (especially in bad weather days) or found	Real-time communication system
	To find easily their buried skis under deep snow	Provide (sell/rent) already existing systems to finding skis
Ski touring	To feel that they earned their curves (more physically demanding activity)	Checkpoints with prize lotteries.
	To be away from the crowds and into the wilderness	Ski hut. First and last to ski. Exclusive lift time
	To ski in a secure environment, with snow guarantee, easy accessible, and comfortable skiing with groomed slopes	Checkpoints with prize lotteries.

Freestyle and Big mountain ski	To check the landing of big jumps in the terrain park	Mirrors, sensors or cams in the landings
	To perform the newest techniques of skiing in the backcountry, terrain park or urban spots	Add in regular slopes features of new terrains (New Zealand all resort is a snowpark or La Grave)
	To feel part of their tribe or community	Ski pass with identity
Bored skiers	To pursue an objective (as scoring a goal or doing a faster lap) when skiing on the slopes	Gamification of the skiing experience through group competitions and games
Dog owners	To experience a dog-friendly skiing day	An exclusive slope for dogs and their owners
Non-skiers	To share their experience in a ski resort with their friends or family who are keen on skiing	Ski mall, Real-time communication system
	To experience a familiar and engaging skiing experience	Urban ski simulator
Music passionate	To listen to music in a safe, social and comfortable way	Real-time communication system
Reckless skiers	To find ways to ski powder snow more safely	First and last to ski
	To get adrenaline rushes safely	Secured slope with no speed limit
Anxious skiers	To ski in a safer environment and do not feel endangered by other skiers	Safety perimeter

	To be safe from other skiers during their stops along the run	Secure stop spots
Traveller skiers	To solve problems transporting equipment	Ski mall: Lockers, laundry and shower services or Urban ski simulator
Families and lazy skiers	To optimize and ease all the process from the moment they leave home until they arrive at the ski resort	Ski mall: Lockers, laundry and shower services
Sociopath skiers	To share their skiing experience with as many people as possible	Real-time communication system
	To record their skiing day	Real-time communication system
Ski lift users	To experience a more physically active, quicker, more entertained and more private ski-lift experience	Active chairlifts, gamification of the chairlift experience

Table 6.1. Summary of user needs and solutions.

Chapter 7. Prototype

By definition, a prototype is *“an early sample, model, or release of a product built to test a concept or process or to act as a thing to be replicated or learned from.”*⁵¹ Three key verbs appear in the previous definition: to build, to test and to learn. Building prototypes allows to create low-cost, rapid and flexible objects and scenarios. They allow to prove the effectivity of solutions ideated to solve users' problems and later on, to refine them to increase their effectivity.

Prototyping is a highly iterative process that counts with three differentiated phases:

1. **Build:** Prototypes bring ideas to life. There are infinite ways to prototype an idea or solution, but all of them aim to accomplish a single purpose: Help users understand a solution as they interact with it.
2. **Test:** After the building, prototypes are ready to help users understand and interact the ideas behind them. Thus, designers can observe how the solution they came up with works in a real situation.
3. **Iterate:** The information users provide in the previous phase allows designers to reconsider the assumptions initially made and redesign the prototype accordingly. They build a second version of it, test it and build another version and so forth. This iterative process can last as long as the designers find it appropriate, even when the idea is already in the marketplace.

The contributions that prototyping makes in this research, and, therefore, the reasons why it has been chosen as a resource are:⁵²

- **To empathize with users:** Prototypes simulate important aspects of users' lives, like relationships, places or objects. Because of that, they are an additional opportunity to empathize with users and get new insights.

⁵¹ Wikipedia's prototype definition. <http://www.en.wikipedia.org/wiki/Prototype> (last accessed 05/15).

⁵² M. Buchenau, J. Fulton Suri (2000). Experience Prototyping, IDEO San Francisco. <http://www.hci.stanford.edu/dschool/resources/prototyping/SuriExperiencePrototyping.pdf> (last accessed 05/15).

- **To explore and evaluate ideas:** Prototyping ideas contributes to either confirm or reject the ideas based on the experience users have when testing them. They can also be the source of answers and new ideas thanks to users' feedbacks.
- **To communicate ideas:** Through their interaction with prototypes, users can better understand solutions. It helps to establish a shared point of view between users and designers.

Prototype 1: Real-time communication system

Why this solution?

As exposed in the findings, skiing has an important social component. However skiing with other people means gathering people with different skills. When the group skis down easy slopes, the advanced get bored. When they ski down difficult slopes, the beginners get anxious. Then skiers face a dilemma; they have to choose between a sociable but bored or anxious skiing experience and in the other case, enjoying the ski runs in loneliness. In the field many cases of both situations were observed, advanced skiers that left behind their first-timer friends in the beginner slopes as well as expert skiers that stayed on the beginner slopes teaching their first-timer friends.

What is it exactly?

Among the solutions proposed in the ideation session, there is one that all the team specially liked and took advantage of nowadays available technologies. Putting together headphones, microphones, action cameras and mobile networks, skiers can enjoy real-communication within the whole ski domain. Therefore, even if the team split up, they still keep in touch. They can talk to any person of the group via microphone and headphones, plus watch on their smartphones' screens what is recorded by their partners' cameras.

The real-time communication ski experience was born by pushing the social component of skiing to the limit. Skiers love socializing and find that skiing with others is vital to enjoying the activity. Nonetheless in some situations skiers are not able to fully

communicate due to the speed or distance for example. That is why this solution is designed to facilitate both audio and visual communication among a group of skiers.

The prototype

Today's technology made possible to share audiovisual content among skiers. The audio was possible using headphones, microphones and mobile phones in a regular call. As for the video, action cameras were positioned on the users' helmets and connected via Wi-Fi connection to smartphones. Through the smartphone, skiers watched what was being recorded by their partners' cameras and talk to them live.



Figure 7.1. Setting of the real-time group communication prototype.

The test

Groups of two people tested the prototype at a time. The groups were that reduced because as a first prototype it aimed to be quick but effective. In later and more developed versions, the test can be done with larger groups of people.

During the test, users did two ski runs each and three in total. In the first run, they skied down together, talking to each other via their microphone and headphones. In the second run, one of them skied down recording with the camera. Meanwhile, the other person watched the recording using a smartphone, and they kept talking through the

microphone and headphones. In the last run, they switched roles, and the one skiing down got the smartphone and vice versa.



Figure 7.2. Testing of the real-time communication system prototype.

The iteration

After getting the feedbacks, collected in Annex VII, it turned out that the original idea could solve other potential problems skiers had. For example integrate all the elements (camera, microphone, and headphones) in one helmet, keep the recorded video and audio as a holiday memory or that friends or relatives could join the skiing holiday from home via remote connection. All these examples show the remarkable effectiveness of prototyping. By testing, not only strengths and weaknesses were pointed out, but a new range of opportunities emerged.

The feedbacks from the testing of the first version are very insightful to design subsequent versions of it. Even though this second iteration has not been carried out because of this research's limitations, the following are the points to be taken into account for its hypothetical design:

- Mounting headphones, microphone and camera into a single helmet and employ no wires for the connection. That would make easier for users (managing one element instead of three) plus it promotes the use of a helmet.

- Enable users to share the content recorded by linking the system to the social media.
- Develop a user-friendly mobile interface with the voice, video and GPS uses.
- Define a privacy policy and explain it to users.
- Enable the option to choose who you want to communicate to or who you want to block from a conversation.
- Disable microphones when two or more users are too close from another.
- Communicate the ability to keep the recording as a memory of the ski day.
- Use an interface embedded into the ski goggles to preview the information while skiing not only in your mobile phone.
- Including ski instructors, beginners and small children in the next testing.

Prototype 2: Ski mall

Why this solution?

For some users, as they leave the city, they leave behind some of their favorite weekend outings. Going to the mountains usually means not being able to go shopping new clothes, to participate in yoga lessons or to watch the last theater play. While this might be irrelevant for skiers, it is crucial for their non-skiers relatives who join the skiing outings. It is hard to go to a ski resort if you are not keen on skiing. As much as it is for skiers to renounce to their favorite activity because their relatives are not keen on skiing. Moreover, this solution addresses the problem of transporting ski clothes and equipment back and forth from home to the ski resort.

What is it exactly?

To give a response to that need, a series of activities other than skiing are proposed. The existing alternatives, as dogsledding or snowshoeing, are not the ones users would do back in the city. Then what if these users are looking for activities they are more familiar with? Activities they would do if they stayed home instead of going to the ski resort? The ideation team, inspired in shopping centers, came up with the idea of a service building at the base of the ski resort.

However, there was a shortcoming for skiers. For the concept to work, skiers should be able to go to this place as they would go to a shopping center back in the city. That means wearing regular shoes and clothes. For that purpose, the team thought of the “*changing space*” where skiers could have a shower and leave their clothes to be cleaned and their skis to be prepared. This space counts with showers, lockers, and laundry and ski preparation services.

With all the above, both skiers and non-skiers could enjoy a day full of activities from morning to evening, without renouncing to any of their preferred activities. Plus the “*changing space*” allowed skiers to access the ski resort in regular clothes and without transporting neither ski clothes nor equipment. They could leave all their skiing equipment in the resort for the next skiing day.

In a regular basis, skiers could use some services of the center in the early morning, before going to the slopes, as drinking coffee or attending to yoga lessons. While those are skiing, their non-skier relatives could enjoy the day with their favorite activities, like shopping, fitness sessions or wellness. In the afternoon all of them, skiers and non-skiers, could gather together and enjoy an activity that does not require skiing skills. For example, watching a theater play or cinema movie, play a bowling game or enjoying a dancing night in the disco.

The prototype

For the second prototype, users need to understand the differences between their current ski experience and the one that this idea would involve. As a first prototype, it was uncertain the direction towards the idea would evolve. Thus, it should be a simple, flexible and quick to build.

The quickest and less costly way to prototype this solution was representing it in a story represented graphically, like a comic strip. The story talks about two families, the Smiths, and the Robinsons and compares the current ski experience (Smiths') and the proposed one (Robinsons'). Throughout the story, the different benefits and disadvantages of each experience are represented.

The test

The testing involved skiers as well as their non-skier relatives who joined the skiing outings. It consisted in showing the story to these users and got their impressions afterward. Apart from their reactions, three questions were asked at the end regarding the feedback categories *I like, I wish, What if*.



Figure 7.3. Testing of the ski mall prototype.

The iteration

For the hypothetical second iteration of the prototype, the following points would be taken into account for the design of a second version:

- To define the kind of atmosphere: more focused on families, young people, couples, etc. Maybe even designing different spaces for different atmospheres.
- Explain in deeper detail the “*changing space*” concept and the ski resort’s policy.
- Including playgrounds and kindergartens for kids.
- Create specific daily sessions and a schedule accordingly.
- Create specific seasonal events and a calendar accordingly.
- Offer the possibility of using trolleys. Think of their designs taking into account the snowy and muddy paths of a ski resort.
- Including a drive-through for fast food and drinks.

- Considering the feasibility of building the facility up in the mountains.
- Including boot-dryer service with the lockers in the “*changing space*”.

Prototype 3: Urban ski simulator

Why this solution?

Accessibility is one of the main disadvantages of skiing in front of other leisure activities or sports. Nonetheless, this makes this activity very special and different from any other. Many people cannot practice it as often as they would like or even try because it is hardly accessible. Not only in terms of distance, which makes it a time-consuming and expensive activity, but also in terms of skills and equipment. With this little accessibility, users need to put an extra degree of engagement and willpower to go skiing. Unfortunately some people, even putting all their willingness, they cannot afford it.

What is it exactly?

The golf industry also presents little accessibility. It is an expensive activity, with a high skills barrier and requires a great deal of equipment. What if someone wants to try to play golf? Maybe some people would like to try it out, but going to the golf course may overwhelm them. Same for skiing.

Overall, the golf industry also shows symptoms of decline. However, a business within this industry is thriving these days: *TopGolf*. This firm experienced a 221% growth in its first three years and fifteen locations across America and Britain. Its founder Ken May describes the concept as “*affordable, unstuffy and fun.*”⁵³ The idea behind it is based on introducing golf via the casual hang-out for a drink with friends or dates. In *TopGolf*, the activity of golf itself plays a secondary role, shifting from “*let’s go to the golf course*” to “*let’s have a drink and try luck hitting white golf balls*”. This offering increases accessibility that in turn changes people’s golf perception.

⁵³ The future of golf: Handicapped. The Economist. <http://www.economist.com/news/christmas-specials/21636688-though-thriving-parts-asia-golf-struggling-america-and-much-europe> (last accessed 05/15).

The urban ski simulator aims to do exactly the same that *TopGolf* is doing. Employing the most advanced ski simulators together with a virtual course and sensors, users could perceive the activity as *"let's have a drink and enjoy some ski runs"*.

This solution consists in a simulator composed by three elements. (1) A conveyor belt with a special material that allows its users to glide using alpine skis and boots (2) a screen that will display virtual images of the track the skier has to follow (3) sensors that connect the skier's moves with the virtual images in the screen. This sensors allow to score how good is moving the skier in the conveyor belt according to the virtual images shown in the screen.

The urban ski simulator combines a hang-out with friends or dates and the activity of skiing. Merging the most ski-friendly simulators available, like *Ski Magic* with an embedded software that challenges and rewards users, allowing the gamification of skiing. Either if you are already a ski practitioner or you never tried it out, the simulator is something you can try easily.

The prototype

The set up for the prototype was inside a real bar, which made users experience the hang out atmosphere with other people, music, and drinks. Employing two computer screens, users could watch images of the ski simulator as well as the virtual images.

The test

The testing took place in a real bar where users were welcomed at a Table. After ordering some, they were taken to what the prototype was about. Then, users watched two screens. One screen was showing in what the ski simulator consisted of; that is to say, *what they would do*. The other screen showed the virtual images of a ski downhill, so *what they would watch while using the simulator*. At the end users expressed their doubts, comments or suggestion as well as answered questions regarding the feedback categories *I like, I wish, What if*.



Figure 7.4. Testing of the urban ski simulator prototype.

The iteration

For the hypothetical second iteration of the prototype, the following points would be taken into account for its design:

- Explore the safety of the simulator in deeper detail.
- Establish which policy the business will have regarding alcoholic drinks.
- Try different virtual images, not only a ski downhill.
- Include the option of ski lessons.
- Include wearing ski boots and doing physical exercise in the testing.
- Offer the option of participating in open competitions and show results in a scoreboard.
- Include real prizes in exchange of the points you earn in the game.
- Discuss the idea with people related to gyms and schools.
- Include season-pass holders in the testing and proposing them special deals.
- Offer the possibility to book the simulator for large groups.

Chapter 8: Business Model Reconfiguration

Then the next step was to implement the prototypes into a business model. To do so, it was necessary constructing maps of business models, which at the same time would help to overcome barriers to business model innovation. In this case, the Business Model Canvas was the tool employed to represent three reconfigured business models.

Prototyping was the main source of information for the business model reconfiguration. That is the reason it is strongly advisable to keep on iterating the prototypes to hone them continuously as well as the business model itself. Each iteration can bring new insights, as value propositions or customers that have been overlooked, potential partnerships or additional revenue streams to name a few. The nine building blocks that compose the Business Model Reconfiguration are illustrated at the end of the chapter and thoroughly described in Annex VIII.

BMR 1: Real-time communication system

The Business Model Canvas was employed to highlight which elements need to be added to the existing ski resort business model to build a business model around this idea. To make its value propositions possible, it was necessary to employ different technologies. Since ski resorts are far from being tech companies, it was decided to do what most of them do around technologies: outsourcing. Thus, partnerships with different manufacturers and telecom companies are essential for this business model. Plus, as the Figure 8.1 shows, the elements shown in Figure 8.4 are complementary to the current ski resort business model. The concept can be adopted by any ski resort business model, either by *The Alps weekend ski resorts* or *The Alps destination ski resorts* or *North America destination ski resorts*.



Figure 8.1. The composition of the complete business model of the real-time communication system.

BMR 1. Real-time communication system	
Actions	<ul style="list-style-type: none"> Establishing partnerships with manufacturers of helmets, cameras, and microphone as well as with telecom companies. Adapting the current channels to communicate, sell and deliver the value proposition. Investing additional resources to afford the system, its operation and maintenance.
Challenges	<ul style="list-style-type: none"> The design, construction and management of the services building. Establish partnerships with all the outsourced businesses linked to the offered services.
Benefits	<ul style="list-style-type: none"> Create a whole new business concept, completely different from a ski resort, which implies the development of the simulator and its embedded software with their respective partnerships plus finding a suiTable solution

Table 8.1. Summary of the main actions, challenges and benefits of the real-time communication system Business Model Reconfiguration.

BMR 2: Ski mall

As in the previous case, it is important to note that the elements described in the nine building blocks from now on are not the whole business model. As shown in Figure 8.2,

the complete version is composed by merging the current ski resort business model's elements with the ones proposed below.

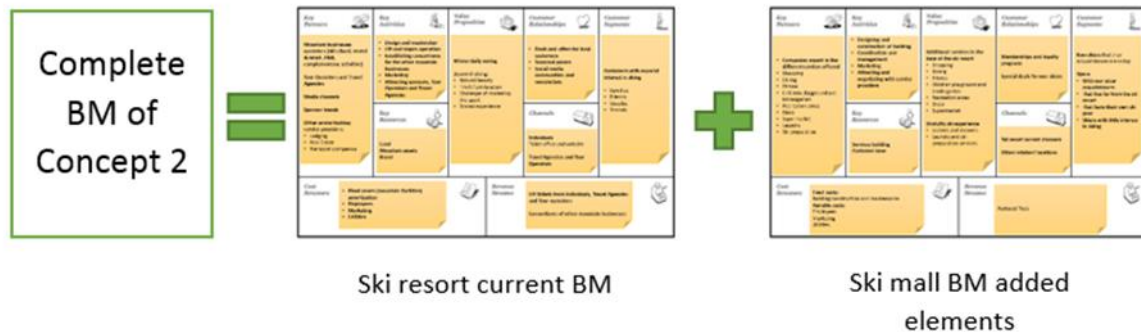


Figure 8.2. The composition of the complete business model of the ski mall.

This business model is considered more appropriate to be adopted by either *Alps weekend ski resorts* or *Alps destination ski resorts*. As learned in chapter number 3, these kind of ski resorts count with a series of businesses owned by several independent agents. This fact results in a lack of integration and, therefore, the inexistence of a unique venue that acts as the nuclei of the resorts. Therefore, they do not create the right atmosphere, in a manner of speaking, “to keep the resort alive” as *North American destination ski resorts* do.

As in the previous business model, the ski resort strategy is to rely on its core competencies and outsource anything else. For that matter, ski resorts leverage the big concentration of people they have, a key requirement for a shopping center or similar business. Then, being able to build on its land, the ski resort can design an integrated and accessible space with all the desired services. The service businesses, however, are not operated by the ski resort. Instead, they are outsourced to specialized companies as fashion retailers, supermarket chains or fitness centers among others.

BMR 2. Ski mall	
Actions	<ul style="list-style-type: none"> • Creating awareness of the services among the skier community. • Achieving a significant margin between revenues and costs, given the technological complexity of the system and its underlying expense. • Coordination between partners and the ski resort, given the significant number of partners with different interests.
Challenges	<ul style="list-style-type: none"> • Bearing an important initial investment with long-term benefits. • Coordination between service providers and the ski resort in the operation and promotion of the services. • The integration of the construction within the resort according to functional and environmental aspects.
Benefits	<ul style="list-style-type: none"> • Obtaining significant revenues besides the existing ones from ski resorts operations. • Improving the customer experience and, therefore, increase loyalty from the current customers plus possibility attracting new ones. • Leveraging the partnerships network to create awareness of the new services at the same time than promoting the ski resort.

Table 8.2. Summary of the main actions, challenges, and benefits of the ski mall Business Model Reconfiguration.

BMI 3: Urban ski simulator

This last business model does not depend on existing ski resorts as the two previous examples did. That means that it has almost no entry barriers for agents other than ski resorts. Also, feedbacks associated different situations and emotions regarding the skiing in the mountains or the urban simulator. For that matter, users did not consider choosing between the two activities, rather they thought them as complementary.

For all the above, seemingly the simulator and ski resorts have differentiated value propositions. Therefore, they are not likely to cannibalize the existing demand or to shift it from high-value activities to low margin ones. What is more, these two kinds of

businesses could take advantage of their synergies creating new demand and increasing loyalty for both businesses. As in the first case, this concept can be adopted regardless of the ski resort business model, either by *Alps weekend ski resorts* or *Alps destination ski resorts* or *North America destination ski resorts*.

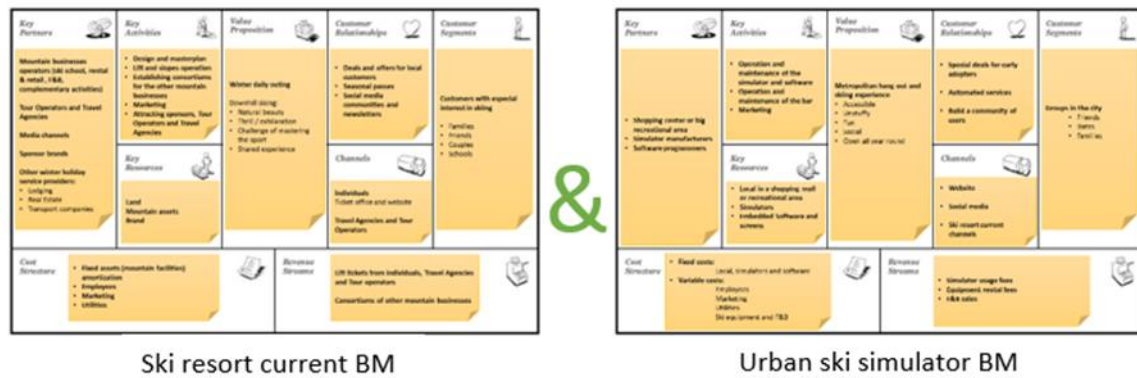


Figure 8.3. For this third concept, the ski resort will count with two different business models.

BMR 3. Urban ski simulator	
Actions	<ul style="list-style-type: none"> • Create a whole new business concept, completely different from a ski resort, which implies the development of the simulator and its embedded software with their respective partnerships plus finding a suiTable solution
Challenges	<ul style="list-style-type: none"> • Bearing an investment with long-term benefits. • Leveraging the synergies between the two businesses (ski resort and ski simulator). • Coordination between simulator manufacturers and software programmers to develop the desired experience. • Building a community of customers that contribute to growing the simulator's popularity.
Benefits	<ul style="list-style-type: none"> • Create new demand for ski resorts (enlarge the participants' base). • Improving the customer experience and, therefore, increase loyalty from the current customers. • Obtaining significant additional revenues besides the existing ones from ski resorts operations.

Table 8.3. Summary of the main actions, challenges, and benefits of the urban ski simulator Business Model Reconfiguration.

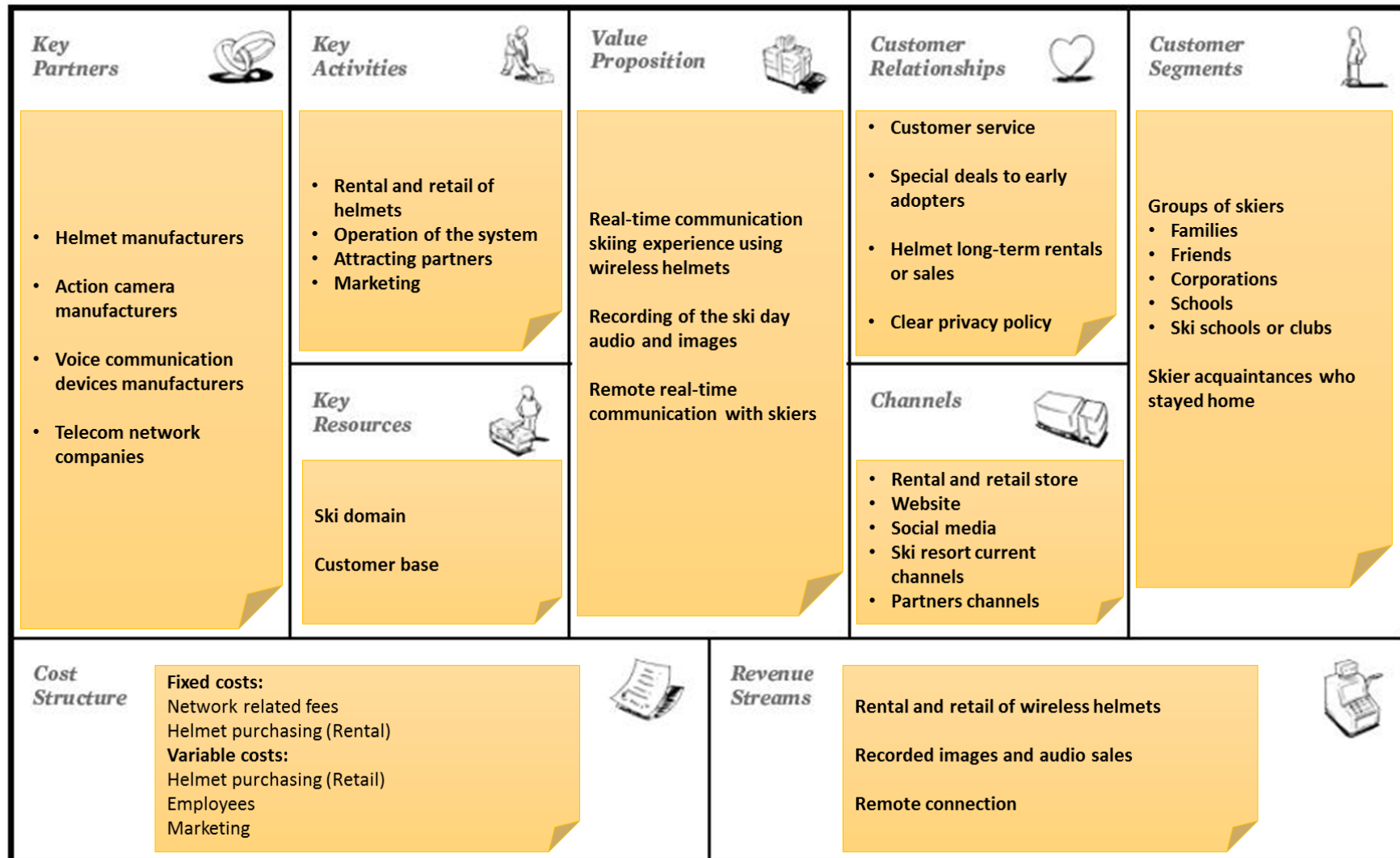


Figure 8.4. Representation of the business model added elements for the real-time communication system adoption, employing the Business Model Canvas.

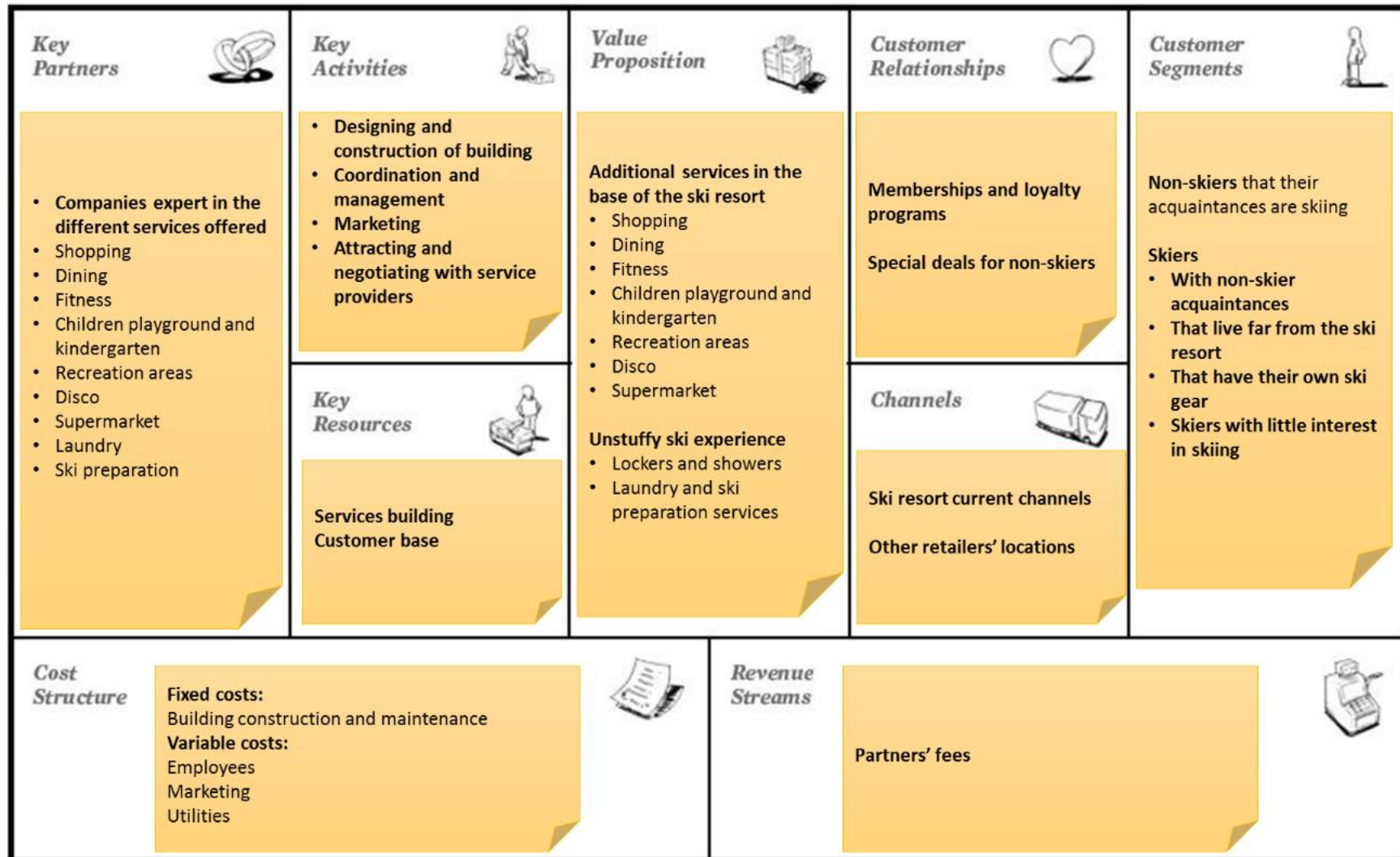


Figure 8.5. Representation of the ski mall business model using the Business Model Canvas.

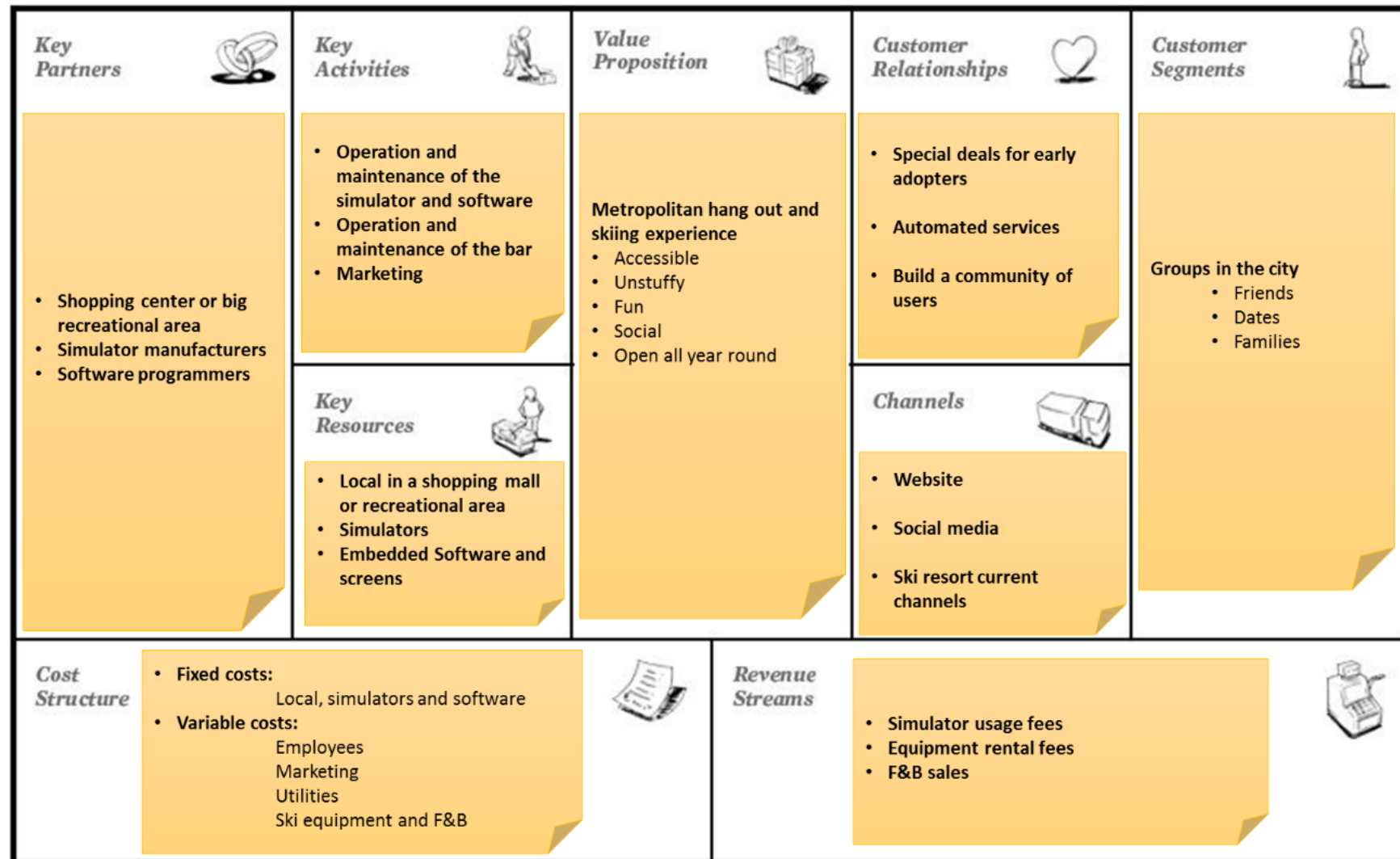


Figure 8.6. Representation of the urban ski simulator business model using the Business Model Canvas.

Chapter 9: Conclusions

Because of his career, the researcher is interested in ski resorts management and business model innovation. The motivations for choosing this topic, though, go beyond the own researcher interests. He chose this topic because of the current state of the industry. Ski resorts from countries with a long ski tradition, mainly in Europe and North America, are experiencing signs of participation stagnancy during the past decades. For firms in such a mature and saturated market, the only alternative to avoid the decline is to innovate their business model, according to business model innovation experts. The researcher, in front of that evidence, decided to engage in business model innovation to change the current direction of the industry.

This last chapter has been divided into three sections. The first one is a reflection about the process, of special interest for management academics. It summarizes and discusses the different methodologies, their inherent benefits and shortcomings as well as suggestions based on the researcher's experience. The second part is a reflection about the outcome, of special interest for ski resort managers. It summarizes and discusses the principal findings, with the researcher's recommendations about how to seize the content of this research. The last section is about the limitations of this research and thus the need for further research.

About the process

The researcher agrees with ethnography researchers that by immersing, observing and engaging with users, it is possible to innovate a business model. According to that human-centered approach, the researcher spent almost 30 days in different ski resorts, an elementary school, and a high school among other places. In these locations, he looked for insights, namely unmet needs, which pointed at how a ski resort could be from its users' point of view. The amount of data gathered was daunting. In such a way that the subsequent coding and sense making of all that information was an arduous task. Because of that, not only this last part but the whole process of identifying needs requires to be methodic and rigorous.

Once identified, it was time to leverage those opportunities. This part counted with three main stakeholders: An ideation team, ski resort users and ski resort managers. The first step was designing solutions to fulfill users' unmet needs. At that point is where the ideation team steps in, participating in various brainstorming sessions that required high doses of creativity and teamwork. However, the information behind an idea is not that easy to convey to users. To make this convey as effective as possible, prototypes of these ideas were built, enabling users to understand and interact with them.

The last step was the reconfiguration of the ski resort business model to implement these prototypes (and the ideas behind them) into the business. This design process might be complicated, given the inherent complexity of business models plus the participation of multiple agents in the design. The Business Model Canvas was employed to ease these shortcomings. Its structured graphical representation acted as a common language for all the parties implied in the design.

In short, the whole process proved to be feasible. It resulted in three different business model proposals together with several opportunities identified. Even though these business models should be implemented for real to verify its ultimate success, the prototyping phase with ski resort users pointed to a high potential.

However, the high number of variable factors, stakeholders, and the complexity of both business model and human behavior makes this process challenging. It is essential to be rigorous and structured, at the same time it is important to establish some constraints, as the researcher did with a limited number of cases within a limited amount of time.

Another important characteristic of the process is its high degree of ambiguity. Even though an initial roadmap is necessary, the situation can change significantly depending on the research findings or solutions designed, which are beyond the control of the researcher. For that matter, one needs to be able to adapt rapidly and effectively when something unexpected takes place. Ambiguity can also make firms, in this case, ski resorts, reluctant to engage in an experimentation process like this research. The high uncertainty and inability to predict the outcome represents a high barrier for innovation. That is the reason the researcher suggests having initial conversations with a firm before engaging in such innovation processes. It is important to make clear this uncertainty, its

benefits and disadvantages to acknowledge until which degree the firm is committed to it. No need to mention that the researcher must be entirely committed to it to aspire to any chances of success.

In the researcher's opinion, an industry found in this mature and stagnant state, as the ski industry, has much more to win than to lose if they experiment in the pursuit of innovation. What is more, they have a lot to lose if they do not challenge the status quo. In other words: "business is like riding a bicycle. Either you keep moving or you fall down."⁵⁴

About the findings

The outcome of this research aims to be a useful resource for ski resorts that are willing to innovate their business model. As previously explained, the research is divided into three main parts. As for the first part, the researcher identified three business models in the ski industry. These are *The Alps Weekend ski resorts*, *The Alps destination ski resorts*, and *North American destination ski resorts*. Each one has its particular characteristics as geographical location, resort development, ownership, targeted customers, investments, policies, etc.

In the second part, this time in the field, the researcher identified users' needs and classified them in 4 main themes. Those are *Boredom and danger on the slopes*, *The cost of skiing*, *Ski learning* and *Skiing is social*. People's behavior, not only in ski resorts but in general, has experienced significant changes in the past years. Today's generations are influenced by events like the 11S, the financial crises of 2007-2008, Arab Spring, Fukushima nuclear disaster, increased effects of Global Warming and a more globalized world through the internet. These constantly changing panorama makes Generations Y and Z differ in many ways from Baby Boomers.

In the last part of the research, some of the identified needs were addressed in the ideation sessions. Ski resorts can adopt ideas from there as well as from the three prototypes and business model proposals. However, not all the needs identified were covered in this last part due to the research limitations explained further on. For that

⁵⁴ Quote from the American architect Frank Lloyd Wright. Cited from <http://www.quotes.net/quote/185> (last accessed 06/15).

reason, the researcher presents down below a discussion of the findings, together with recommendations accordingly.

For the first set of needs, *Boredom on the slopes*, ski resort customers are looking for something beyond the traditional skiing on the slopes. To do so they shift to other modalities as ski touring or freestyle skiing, away from the slopes in the terrain park, backcountry or exotic destinations as Japan or Alaska. They reject traditional skiing in pursuit of experiences that enhance creativity, freedom, which are more intrinsically rewarding and closer to nature. In short, the traditional skiing results boring to the new generations, who do not content with a mere leisure activity and aspire to something more meaningful. For that matter, the researcher suggests that ski resorts should redesign the traditional slopes with elements of growing activities. For example, including extreme sports (like sports part of the X Games), endurance sports (as Ironman or Ultramarathon) or "tourism experience" (enhancing the interaction with the local community, where the tourist thinks in novel ways, learns and gets inspired).⁵⁵

Other skiers tackle this boredom by descending at high speeds and doing jumps, both actions overpassing their skills and therefore out of control. In these situations, they endanger other skiers as well as themselves, resulting in psychological traumas, injuries or even death. The researcher recommends that ski resorts should take measures to help skiers feel safe. They can either protect them with solutions like the "*Safety perimeter*", or improving the skills of these reckless skiers by promoting ski learning. Regarding the latter, during the research it emerged a relationship between skiers' proficiency and risk perception. The higher it is their ski proficiency, the higher is the risk perceived.

Another important fact for that main theme is the state of flow, which affects directly to skiers' involvement and satisfaction. This state is not possible when skiers feel either bored or anxious. A common source of bored or anxious skiers is the fact of groups of skiers with different skills. Ski resorts should find solutions to keep the social component

⁵⁵ Beta Groups Aster turismo de experiencia. <http://www.slideshare.net/Giana.Andonini/beta-groups-aster-turismo-de-experincia-english-version-of-our-page-at-catarse> (last accessed 06/15).

of these groups without renouncing to the state of flow, as the prototype "*Real-time communication system*" is designed to do.

The cost of skiing theme highlights the major costs associated with skiing, which are lodgment, transport and equipment. These costs, not just economic but time-consuming, put skiing out of many people's reach. The researcher suggests offering a more accessible alternative to these publics, as it does the prototyped solution "*Urban ski simulator*". There is also a generational shift around how people interact with these three concepts, showing an unwillingness to own a house, a car or even ski equipment. The researcher suggests to ski resorts to take into account the growing interest among youth in sharing economy. As for example, in lodgment (as Couchsurfing), traveling (as BlaBlaCar) and equipment (as GearsCommons).

Due to the remote location of ski resorts, to travel with ski equipment is a vital but problematic task. Some firms are already addressing the issue of traveling with sports equipment. In air travel, Douchebags (ski industry) and Clubs to Hire (golf industry). As for ground travel, this research provides a solution with the prototyped solution "*Ski mall*" with its concept "*Changing space*".

A last insight within this theme is the perception that inexperienced skiers have about ski lessons. They find that it is a dispensable cost and they usually avoid hiring a ski instructor to save money. But this research found that they are unaware that their enjoyment will be lower or inexistent plus they will entail a danger for other skiers as well as for themselves. The recommendation for ski resorts is to create awareness of the consequences of this decision as well as offering alternatives that incur lower prices as autonomous learning or crowdsourced learning, both proposed in this research.

The fourth theme, *Ski learning* showed to have a big impact on many of the needs mentioned so far. It is a fact that skiers' proficiency is directly related to their engagement, and so it is with ski resort revenues.⁵⁶ Plus by improving skiers' skills, their boredom or anxiety can be dramatically reduced. For that matter, the researcher

⁵⁶ Snowsports Industries America Report, 2011. Revisiting growing the snow sports industry. <http://www.snowsports.org/wp-content/uploads/2015/05/Revisiting-Growing-the-Snow-Sports-Industry1.pdf> (last accessed 06/15).

suggests redesigning the existing learning process, especially for first timers and beginners. In their days, skiers are overwhelmed and do not enjoy the experience, afraid of injuries and embarrassment. According to this research, the current learning process is too abrupt. The recommendation is to design a smoother and more gradual process, as it does the proposed solution of *"Redesigned first-time experience"*.

Other findings point that, overall, the existing learning process is too technical and benefits are obtained in a too long term. The suggestion, in this case, is to make it more intuitive together with short-term gratifications, as with a gamification of the process.

The last theme, *Skiing is social*, shows the high social component of skiing and how important it is for users. As other aspects, the way of socializing has also shifted across generations. The internet allows to reach lots of people almost instantly, overcoming the barriers of distance and time, but at the same time reducing the human contact.

The researcher recommends ski resorts to keep this shift in mind, which can bring new opportunities, as the need for being constantly in touch with others. An opportunity that has been leveraged in the design of the *"Real time communication"*, a prototype and subsequent business model reconfiguration proposed in this research. The interaction of different collectives it is also an important factor that affects to ski resorts. Youngsters and their parents have conflicts of authority and autonomy. Other skiers are constrained by those who cannot ski, as non-skiers relatives and friends, babies or pets. This fact shows why ski resorts should focus in an offer that embraces these collectives' requirements in the same place that skiers practice this sport. For example, as done in the *"Ski mall"* prototype and business model reconfiguration.

To sum up, this research counts with the content explained above, divided into the three main parts. All of these resources can be useful for a ski resort, but every one of them in a different manner. First, existing ski resort business models can help firms to have a clear understanding of their current functioning. Second, identified opportunities can guide ski resorts to find unmet needs within their business. Third, sized opportunities can provide them directly with a designed solution.

In the researcher's opinion, all of the above can contribute to shifting the current state of the industry and help ski businesses to excel in a mature and saturated market.

Limitations and need for further research

Indeed, this research is limited. It has been only six months of work of one single person (although the researcher counted with the invaluable contribution and support from numerous people). Even making a meaningful contribution, the scope of this research is rather modest compared to what a ski resort could achieve if they dedicated their time and resources to innovate their business. To exemplify the dimensions these kind of studies can reach, the Snowsports Industries America (SIA) has an ongoing research to *“provide definitive information on how to increase participants, participation, and product sales”*.⁵⁷ To reach their objective, they will review the existing documentation, do interviews and focal groups and on-hill research. In total it will last 18 months, and it will have an estimated cost of 200.000 American dollars.⁵⁸ In his work, the researcher demonstrated that any ski resort, no matter how big or small it is, can innovate its business. That means to increase their performance without spending big amounts of money. Rather they should spend time where its customers are to empathize with them.

For all the above and according to the researcher's criteria, further research should be carried out within the following points:

- **More quantitative evidence:** Qualitative insights can be very inspirational, but they are weak without quantitative data backing up them. Even though all the findings have been contrasted with other sources of information, it was not possible to back up the totality of them with quantitative evidence. The researcher recommends to include quantitative studies at this point of the research to increase the consistency of the findings. More robust results support decision making and reduce the chances of dealing with false opportunities.
- **More prototyping:** The research has showed the effectiveness of prototyping and the little resources it requires. It proved to be a tool to innovate and empathize at the hand of all ski resorts. Even though the feedbacks from users

⁵⁷ Snowsports Industries America. Downhill Consumer Intelligence Project.
<http://www.snowsports.org/portals/0/documents/PDF%20-%20Original%20DCIP%20Proposal.pdf> (last accessed 06/15).

⁵⁸ Ibid.

who tested the prototypes were very insightful, snow in the mountains melted, and skiers went to the beach, which did not allow to test further versions of them. Fortunately for ski resorts, next winter there will be snow and skiers again, which will allow them to build, test and iterate prototypes.

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