SERVICE DESIGN FOR INNOVATION IN SMALL AND MEDIUM BUSINESSES

DISEÑO DE SERVICIOS PARA LA INNOVACIÓN EN PEQUEÑAS Y MEDIANAS EMPRESAS

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ABSTRACT

An innovation program designed and implemented with two Peruvian small, medium business in health and hotel industries focused on value creation goal while developing products and services innovation. For insights, ideas generation, solutions validation and prototyping proposals at the front-end open innovation strategy were used both indirect and direct methods; trends research, customer journey mapping, ethnography, interaction with users with depth interviews and dynamic group sessions. The research sought both to test the program and deploy the methods developed in business to advance capabilities for knowledge management and iterative processes. As a result small and medium businesses can develop Services Design according to their human and financial limitations using processes based on four axes; scanning the environment immersion learning, gamification, Lean and Design Thinking. The research concluded there are alternative paths that take into account and involve greater collaboration of users that businesses can explore and exploit. Innovation processes do not have to be long, uncertain or expensive for small and medium businesses.

Key words: Innovation management; Small and medium businesses strategy; Innovation processes; Service innovation; Service design.

RESUMEN

Un programa de innovación con dos pequeñas y medianas empresas peruanas, en la industria de la salud y hotelera, fue diseñado e implementado con el objetivo de creación de valor a través de la innovación de productos y servicios. Para Insights, la generación de ideas, la validación de soluciones y la propuesta de creación de prototipos en la estrategia de innovación abierta front-end se utilizaron métodos indirectos y directos; investigación de tendencias, mapeo del viaje del cliente, etnografía, interacción con usuarios con entrevistas en profundidad y sesiones dinámicas de grupo. La investigación buscó probar el programa e implementar los métodos desarrollados en las empresas para mejorar las capacidades de gestión del conocimiento y procesos iterativos. Como resultado, las pequeñas y medianas empresas pueden diseñar servicios de acuerdo con sus limitaciones humanas y financieras utilizando procesos basados en cuatro ejes; escaneo del entorno de la empresa, observación y entrevistas en profundidad, gamificación, Lean y Design Thinking. La investigación concluyó que hay caminos alternativos que tienen en cuenta e implican una mayor colaboración de los usuarios que las empresas pueden explorar y explotar. Los procesos de innovación no tienen que ser largos, inciertos ni costosos para las pequeñas y medianas empresas.

Palabras clave: Gestión innovación; Estrategia pequeñas medianas empresas; Procesos innovación; Innovación servicios; Diseño servicios.

INTRODUCTION

According to Mina, Bascavusoglu-Moreau and Hughes (2014) the study of the open innovation practices of British companies concludes that companies in the service sector are more open to external knowledge than manufacturing firms. Another conclusion of the study is that collaboration in innovation of service companies tends to increase with the intensity of Research & Development and human capital.

The Peru innovation program focused on small and medium sized businesses in the health and accommodation services sector. In our hypothesis, the management of capabilities through structured processes including scanning of the environment, observation, in-depth interviews and the validation of ideas and solutions with workshops and iterative sessions, could be valid for small and median businesses innovation with limited human and financial resources.

The search for external sources of innovation and the development of innovative services in large businesses are supported by three factors:
First, software and technology that allow us to obtain more complete information, discover unexpected patterns that can be immediately identified and followed. Second, an organizational structure includes a culture of innovation, risk taking, autonomy, flexibility, proactivity and collaboration with users.

Third, the human intangible capital with innovators skills: Associate (establish connections between problems or ideas from unrelated fields), Question (pose questions that do not fit in common sense), Observe (analyze the behavior of users to do things in a different way), Networking (knowing people with different ideas and perspectives), Experiencing (building interactive experiences and provoking unorthodox responses to see what ideas emerge), (Dyer, Gregersen, & Christensen, 2011).

However, small businesses need integrative competences to incorporate innovation of external sources and the management of co-creation processes. These competencies were developed during the project to explore the changes and trends that occurred in the environment of organizations mainly and managed tacit and explicit knowledge.

The innovation programs used methods of listening (discovering trends, customer journey map), immersion (learning through ethnography and in-depth interviews), problem definition, ideation, validation (dynamic group sessions), prototype to generate value creation. It didn't use the Stage-Gate process (Cooper, 1988) of linear methods of ideation (market research), development (Research & Development), tests and validation (production), launch (market diffusion); Linearly executed stages with control points where innovation activities are verified before moving on to the next.

Stage-Gate is a process that by including users at a late stage of the tests, (contrary to the program developed in Peru) has a higher cost of time and money for the firm to incorporate the modifications requested by users. Although an updated Stage-Gate approach incorporates practices to contrast the criticisms (linear, bureaucratic, without context or based experimentation) of Becker (2006) and Lenfle and Loch (2010) and make less relevant the phases sequence of ideation, business case definition, development, test, launch.

As defined by von Hippel (2001), obtaining information on the users needs and their environment is very complex, conventional market research techniques are superficial, techniques such as ethnographic studies are difficult and time-consuming. In addition, the pace of change in markets and the needs of users grow faster and faster. This author perspective is not so much to understand the users needs accurately and in detail, but the goal is for users to participate in an iterative and learn-by-doing process of product and service innovation. Although users often have a lot of information related to needs about what they might want, at the begining of the process of designing new services they do not usually know what they want or cannot say exactly what they want.

Facing these difficulties, the projects were designed and executed using iterative methods of trial-and-error with group dynamic sessions (innovation games, Design Thinking), aiming for prototypes proposals. Changes in society and technologies establish new relationships between organizations and users, which might be exploited in the creation of value through iterative collaborative processes available not only to large businesses or a specific industry. The managerial research approach both tested the program and deployed the methods developed in both businesses to advance these capabilities.

Theoretical framework

Insights and absorptive capacity

The process of developing new products and services (NPD / NSD) in its front-end phase includes discovery and learning practices. The program followed the Customer Development (Blank, 2003) included the Customer Discovery developed along three axes (scanning of the environment, participant ethnography, in-depth interviews) and the Customer Validation (through group dynamics), for an understanding of how the products or services are used, the associated benefits in the context of use.

As was mentioned earlier in the introduction, the meth-

odology used in the research is different from the Stage-Gate process (Cooper, 2014), mainly for two reasons: the use of users in the initial phases of the NPD and the absence of the linearity of the process based on the generation of ideas followed by phases of development and implementation and ending in a final phase of product launch and evaluation.

Coolhunting

The scanning of the environment is used to identify, collect and translate information about external influences, including trends, signals, alerts, events and expectations from different stakeholders (Albright, 2004; Bishop & Hines. 2012). Trends are longer-term changes, they are deeper than fads, at some point they are recognizable in what could be considered the turning point (Gladwell, 2002).

Through Coolhunting, trends are identified and analyzed, business opportunities are detected and competitive advantages are established by anticipating changes in consumer demands and knowing future scenarios. The process of identifying significant changes in the external environment in general and specific to the industry in particular are relevant for decision making.

To understand trends in a region or industry the Trend-Watching, Consumer Trend Canvas tool (2013):
- Basic consumer needs, the desire to feel good about yourself while minimizing risk.
- Inspiration of trends of other industries, types of business, other situations where similar situations occur.
- Drivers of changes (global macro trends) and triggers (technological, social, economic) analyzed using the PESTLE model.
- Expectations and satisfaction of emerging consumers, analyzing what consumers want and what they currently have.

Netnography

Content analysis is a systematic and objective study to identify emerging trends and signals by collecting and analyzing information from sources such as the Internet and media, newspapers, television, speeches (Evans & Sommerville 2007; Bell, 2009). This research uses Netnography an interpretive research methodology which are basically ethnographic research techniques optimized to the Internet (direct horizontal and vertical social networks, and indirect as forums, blogs, chats) to listen to the users' ideas and opinions as objective sources of information.

Bartl and Tusche (2016) mention that Netnography covers the following theoretical aspects: Qualitative research that includes criteria such as the selection of the topic, the type of language used (is done manual-ly), online community research, recognizing key words, trends, identify lead users and target groups; Quantitative research such as volume, frequency of messages and interaction, the monitoring of information on the web through software tools to track, extract data such as keywords to discover patterns and trends; finally the customer integration research.

Product management innovation involves both a well-structured product development and a structured process of knowledge management. Knowledge can be distinguished from information, knowledge occurs dynamically through social interaction (Ernst, Brem, & Voigt, 2013) and in social networks content is always changing and users are responsible for evaluation mechanisms.

The Internet allows conversations that were not possible before and also provides researchers access to a large number of participants, to people who would otherwise be difficult to reach in addition to the anonymous feature of many of the online interactions and the absence of an intrusive investigator.

Social networks allow updated information to the organizations in order to develop an open innovation strategy in the use of purposely managed knowledge flows, users insights, bidirectional communication, co-creation of products and services, promotion channels.

Customer Journey Map

The mapping of the consumer's journey is an accumulation of the interactions that the consumer has in the end-to-end journey that is, before, during and after the experience of a product or service. In the mapping are recorded the most important points of contact for the consumer, sequence and frequency used and those responsible for the organization at each point of contact. The satisfaction perception at a point-of-contact is an accumulation of metrics from different processes of web pages, stores, chat, call centers, (Maechler, Neher, & Park, 2016).

In spite of the functional departments responsible for providing the service at these points of contact do not have a holistic view of the consumer experience, do not participate in the generation, development of new products and services and their goals are to maximize efficiency and productivity in individual transactions.

Can be defined two objectives of analyzing the consumer experience; one marketing oriented focused on pursuing the attraction, conversion and retention of the consumer and the other in the knowledge management.

In the first case the co-production of products and services is developed at the level of marketing (contacts with the brand), CRM (organization and effectiveness

of relationships with customers and prospects), Service Blueprinting focused on terms of multichannel distribution and efficiency of processes. Bitner, Ostrom and Morgan (2008) suggested service blueprint as a tool to identify consumer relationships with the organization, but also organizational elements such as physical elements and operational stages visible and invisible to the customer.

The second case involve front-end phase innovation tool. Personal information and preferences exchanged in real-time or not, process of orders and reservations, experiences supported by conventional face-to-face contact or by technology as a complementary or essential role of the experience, assisted, improved or enhanced (Neuhofer, Buhalis, & Ladkin, 2014). Understanding the context of the consumer pains in an ecosystem, managing this knowledge and creating dynamic feedback mechanisms to help the company continuously improve its operations and strategy. Although, Clatworthy (2011) mentions the design of contact points is not sufficiently addressed in scientific research, nor is innovation through different points of contact.

Ethnography

Ethnography is an "anthropological method that makes observations about how people really behave in their context. It does not bring preconceived theories to prove, but develops explanations of what is observed" (Bessant, 2015).

Silverstain and DeCarlo (2009) reckon that the best way to obtain a deep understanding of the client is through ethnography, observation and empathic methods. Ethnography allows us to perceive the needs of customers by deepening in people's daily routines through the observation of their behavior in real life environments (Moritz, 2005).

"Understanding how people live, observing the behavior of people on their terms, not in ours " (Anderson, 2009), ethnography goes beyond observation to move from unstructured observations to discovering the underlying meanings behind behavior; understand feelings and intentions in order to deduce the logical implications for strategic decisions (Mariampolski, 1999).

It is a totally consumer-centered process that does not use traditional market research techniques to ask people questions about their preferences, desires and needs that may not work since there is no proven correlation between what they say and how they really behave. In the observation researchers shared the same scenario as the participants in the service delivery, which represented an opportunity to learn and perceive the same reality.

The observation roles covered a range that included participated observation through mystery shopper involved in the entire purchase process, non-participated observation in which user activities were recorded and that included:

Space, the place or physical places; actor, the people involved; activity, a set of related acts that people do; object, the physical things that are present; action, individuals actions that people make; event, a set of related activities that people carry out; time, the sequence that takes place over time; goals, the things that people are trying to achieve; sensation, emotions felt and expressed. *(*Spradley, 1980).

In-depth interviews

Ethnography and in-depth interviews help put the researcher in the skin of the interviewees. In-depth interviews are an effective tool to generate perceptions about clients, behaviors and needs and to discover their values and opinions (Polaine, Lovlie, & Reason, 2013). The interview in real contexts helps the interviewees remember and focus on specific details, and allows the interviewer to understand the social and physical environment and interpret its effects (Stickdorn & Schneider, 2010).

The importance of interviews in-depth reflect a tradition of emotionalism (Gubrium & Holstein, 1997), where the study of perceptions, meanings and emotions behind these users is prioritized. The objective is to achieve the greatest confidence among the participants in all stages of the process to encourage the exchange of ideas among them.

Qualitative researchers emphasize the intimate relationship between the researcher and what is studied, and the situation limitations that shape the research. They look for answers to questions that emphasize how social experience is created and gives meaning (Denzin & Lincoln, 2000).

Ideas validation and prototype proposals

Studies on open innovation in small businesses suggest that innovation processes in SMEs are very different compared to large companies because they have more flexibility in making quick decisions and reacting to changes in the environment (Vossen, Blackmon, Cagliano, Hanson, & Wilson, 1998). However, they face limitations in terms of material, human and resource factors (Acs & Audretsch, 1987). Although these limitations should not be a disadvantage to develop dynamic capabilities and competences to innovate with collaborative processes and innovative organizational culture.

"Given that explicit knowledge is usually considered easier for competitors to imitate, tacit knowledge is increasingly seen as a key to competitiveness" (Weidenfeld, Butler, & Williams, 2016). Businesses have the

opportunity to manage that knowledge through group dynamics given that tacit needs are expressed in the interaction. Füller, Mühlbacher, Matzler, & Jawecki (2010) define the tools, enjoyment related to interaction, tasks of innovation, closeness to the category of products and creativity of the participants as important factors when selecting people in co-creation activities.

The data collection provided in the observation and in-depth interviews phases, makes it possible to construct the value proposition canvas (Osterwalder, Pigneur, Bernarda, & Smith (2014). Observed things about the customer segment, the jobs to be performed, the pains (risks, obstacles) and profits (benefits, results) are compared to the decisions relating to the products and services, the benefits and solutions for the target customer segment. The greater the adjustment on both sides in the client's perspective, the greater the value created (Osterwalder et al. 2014). Designing customer proposition values might be the first step to understand opportunities not exploited by current offers and business models in the industry.

A first approach is the change from a conception of users as participants limited to the later stages of the innovation cycle to participants in the first phases of front-end innovation, ideation and validation. The second approach is that the user is always a co-creator of value. The user, besides being an external source of ideas in the development of new products and services, must be the facilitator of social and market acceptance through experience and perception, essential for the determination of value.

Trial-and-error processes with users in the creation and development of new products and services may focus on a few tasks. Von Hippel (2001) considers that concentrating the process within a single product design task greatly facilitates the transfer of information of the user's needs. Small Data provide depth of perception about users in a volume and format that makes it viable and feasible to be used. Small Data as apparently irrelevant behavioral observations that contain very specific attributes that break perceptions of unmet customer needs (Lindstrom, 2016).

In Workshops for services development besides Brainwriting were used innovation games such as Buy a Product and Service, Speed Boat, 20/20. Each collaborator expressed particularly versions of what is a good service according to their interests and needs and subsequently difficulty generating an agreement. Afterwards, Design Thinking sessions helped to clarify feasible and viable solutions. Design Thinking starts with empathy with users and their context, clear definition of the problem, ideation of solutions, prototyping and evaluation or feedback. This methodology, in addition to empathy and collaboration, needs optimism that it is possible to find a more adequate solution, an integrat-

ing thought of contradictory aspects, divergent thinking of alternatives not previously existent and experimentalism.

In Services Design the use of prototypes is conditioned by the characteristics of the service sector that is, intangibility, heterogeneity, inseparability and perishability (Zeithaml, Parasuraman, & Berry, 1985). However, in the workshop's sessions, in addition to the tools based on visualizations, cards, post-it, canvases were used prototypes that reinforce the change from the analytical to the experiential and the quick test of the service experience (Polaine et al, 2013). The prototypes include physical objects, models or simulations for the exploration of concepts (Meroni & Sangiorgi, 2011) and validation of solutions through debate, discussion and participation of users. The prototyping is a concept, the visualization of an idea and is used to validate ideas or solutions although for the final test the minimum viable product might be used. Prototypes do not have to have the attributes or benefits of the product as opposed to the minimum viable product that is a version of the final product.

Prototypes can be of three types; Physical through material artifacts (cardboard, polystyrene foam, collage, photo montages, videos). 3D printing allows users to intervene in any phase of the production process, from the initial idea to the fully manufactured product (Rayna, Striukova, & Darlington, 2015). 3D is an important co-creation tool for SMEs in the prototyping phase, although limited in terms of user innovation.

The second type is virtual reality in which the users interact through avatars or digital representations of themselves. The role-play in socio drama is also a form of prototype because it allows to co-produce experiences and service situations that are not yet real. The simulation of a real environment or situation helps the participants to consider the possible consequences of their actions and the possible actions and future reactions of other participants (Bell,2009).

The third type the storyboard that can be developed on paper or digital. Creating three lines horizontally through the story map, the critical capacities are placed in the upper space, the capacities that turn into a more commercially acceptable product in the intermediate space, and in the lower part the most important ones that could be built later. The story map shows and defines the type of user, purpose, motive and order of interaction.

Although the service sector has a degree of difficulty added by its intrinsic characteristics that we referred above, prototypes supported by technology can increase the perceived service tangibility, recreate environments, interpersonal relationships through a sequence of events and force a detailed observation of

the service process.

The minimum viable product allows to verify the right track through the build-measure-learn feedback loop. The minimum viable product does not have to be commercially viable, but it must have the least number of characteristics that allows testing the ideas and basic capabilities that let consumers to achieve the results they expect. From there, it is time to make corrections, create the set of necessary functions based on the objectives and list of pains of the first phase of definition and ideation and try it again. Three types of characteristics must be present in the MVP: The attributes that customers expect to be present in a product, attributes that are not absolutely necessary, but that are known and increase the satisfaction of the use of the product by the user and the attributes that users do not even know they want, but that contribute to a state of excitement when they find them.

The creation and capture of value manifested in the Den Hertog model (2000) of innovative services with the introduction of a new service in the market includes client interface (new forms of what customers are involved in the production of the service, e.g. manage minibar from an mobile application), the service delivery system (new ways in which real services are delivered to customers e.g. concierge through twitter) and technology in terms of efficiency.

The process of designing services is essentially a process of knowledge development in which the analytical phases of search and understanding are mixed with phases of synthesis of experimentation and innovation. The exploration of ideas from practical processes with observation and interviews, conversion with dynamic group sessions into concepts and prototypes and then practical application in the form of product or service proposals.

The iterative process of development of new products and services used is stable as opposed to the information of the needs of the users that will have novel components for each new product or service desired.

MATERIAL AND METHODS

Innovation program designed and executed in the first semester 2018, included businesses of health tourism (hospital Solidaridad) and accommodation (3 star Hotel Gold Infinity) industries. The project had a minimal budget for hotel and hospital mystery guests and workshop sessions costs. The business selection was according four criteria; services sector; small and medium size; industries and Chilean user journey with high interdependence in the search of products and services; destination Tacna, Perú.

Tacna is a southern Peruvian city with essentially commercial activity and it has the only free zone in the coun-

try, with 320,000 inhabitants and 40 kilometers distance from the Chilean border it has mainly inbound Chilean tourism from regions as far as the capital Santiago. The Chilean tourist profile is a multi-consumer with trips a la carte and fragmented visits several times a year, with low spending on transportation (buses and collective cars) and high spending on entertainment, shopping and beauty/health at the destination.

Chilean tourist go to Tacna to rest, stroll, they value kindness, the absence of stress and the treatment received which is above economic value of functional activities such as dental braces revisions or leisure time of shopping, eating out.

The Gold Infinity hotel has an excellent location, with basic services/good price for its category. Although, received reservations through travel platforms and social media and the evaluation by the clients are good or very good, the word of mouth is important. At the hotel the critical touch points are the arrival at the reception, contact with the room and cafeteria. The analysis of hotel netnography revealed the superior hospitality of the staff, good value for money and location, and the use of WordCloud tool discovered that the most significant words were excellent, attention, very good, we will return, personal.

The hospital Solidaridad is a one stop shop experience, the clients go directly to information or cashier since there are numerous specialties and not only is very fast to have an appointment, but they are available all day. The hospital doesn't use a web page or social media.

The initial phase had the participation of twelve commercial engineering and administration students of the Universidad Nacional Jorge Basadre Grohmann (UNJBG). Generated 39 ideas based on Brainstorming and Design Thinking workshop. In the categories Coolhunting (14), Customer Journey Map (16) and Netnography-Social Networks (9). 21 ideas were discarded for being repeated, or they did not generate enough votes of the participants. Of the 18 ideas initially selected, only 2 ideas technological related were considered for later in the program. They were related with communication with reception, cafeteria schedule and were proposed apps for concierge and to adjust clients preferences for example breakfast time. The proposal of a 360º video promotion and possibility to choose room in web page were suggested as opportunities to test.

The hotel observation has been carried out in two phases. First, 2 groups of two students from UNJBG stayed for one night, four months later 2 groups of two students from Arturo Prat University (Chile) stayed as mystery guests at the hotel. Observations included reception, double rooms, cafeteria, rest areas.

The main conclusions from the Peruvian students were

focused on Human Resources, their lack of attention, warmth and heterogeneity of the quality of service. As for the comfort of the rooms the absence of air conditioning, proper temperature upon arrival and ventilation in the rooms were the negative points commented. In the cafeteria no variety at breakfast is what enhanced the observation. Problems of internal communication, decoration and the absence of security guard were also commented.

The Chilean students perception as clients contradicted the Peruvians students experience, they didn't see any pains on hotel staff and regarding room comfort they only commented no heating and no communication with reception. In-depth interviews with Chilean clients older segment revealed concerns not only about the comfort of the rooms but the cafeteria as well. Besides the absence of intercom, fan/heating and amenities, as far as breakfast is concerned the lack variety in the products (although local products such as chicha morada drink from corn Peru's Andean region, or pastel de choclo corn pastry were rejected) diversity of options (products without lactose, stevia), water dispenser and mainly cafeteria timetable that do not adapt to the Chilean habits. As a reminder between the two observations the Chile time regarding Perú hour changed from +2 to +1 which explains in part the neglect from Chilean students to cafeteria timetable issue.

In-depth interviews with both Chilean hotel regular clients (20 interviews, within 40/50 years old segment, chosen in casual or incidental non-random sample method) and the Chilean students mystery guests (4 interviews, within 20-year-old segment chosen convenience non-random method test) provided similar conclusions. Demographic segment it was irrelevant meanwhile geographically (country) segment brought a total different perspective. The applied research showed that the decision to which segments the business wants to deliver the value proposition is crucial.

The research carried out at the Solidaridad hospital with two groups Peruvian (4) and Chilean (6) students as mystery guests included information desk, cashiers, general medicine, specialty consultations, dermatology, dentistry, ophthalmology, gynecology, physical medicine and rehabilitation, massage and bruxism treatments.

The observation pointed to four key factors: Uncertainty, confidence, facilities and prices. The uncertainty is the result of the information not being available on a website or social media, the client is not immediately recognized, and the employees don't anticipate the initial contact at the information desk. Confidence is limited by the fact the information provided was not updated and needed to be more accurate, there was the impression of absence of authentic interest in the client's requests as well. In terms of comfort, there were doubts

about the decoration and maintenance of facilities, toilets, access to the second floor and availability of water.

Again, perceptions from different segments were widely different, only the Peruvian mystery guests' observations made notice of hospital opening hours, no heating and prices concern. Although the prices of the consultations are very accessible, the treatments, medical exams and drugs prepared in situ were considered excessive by these users which are related with lower purchasing power. These concerns were discarded altogether.

RESULTS

The innovation program later stage of Gamification and Design Thinking was able to identify and eliminate pains and concerns there were not priorities and finally detect top three problems and three validated solutions in order to innovate and add value for customers and both businesses.

The process included four innovation games Buy a Product and Service, Speed Boat, 20/20 and Brainwriting, with six Chilean participants all hotel and hospital users. The last game using lateral thinking provided valuable and funny ideas such as recommendations to give samples at consultations whenever possible, e.g. chiropod, dermatology, dentistry, etc. Person disguised as cat doctor to distribute pamphlets with information and interact with older people and children. A stand of information located outside the building to stimulate initial contact and greetings.

Hospital timetable, noises issues and hotel amenities availability, welcome snack, exterior view and personalized attention at cafeteria were immediately discarded with Buy a Product and Service game. Later with Speed Boat and 20/20 games hotel issues such as food alternatives, amenities, water fountain, food variety and hospital issues decoration and maintenance, heating, water availability and prices were disregarded as well.

The innovation program methods and processes deployed to both businesses proposed the following measures:

At the hotel cafeteria timetables, options of different kinds of products, water and coffee machine, amenities were not considered top priorities. Although heating, intercom and food breakfast assortment range were main concerns, the ideas got more votes were technological solutions providing hardware tablet, and/or software hotel mobile application, or WhatsApp communication with reception/concierge. The food assortment could be overcome with nearby local restaurant for nonstop light food delivery with asking orders by the same app which could manage cafeteria hours as well. Some other restaurants suggestions and helpful information

such as taxis might be included in the app but needed to be tested.

At the hospital facilities decoration and maintenance, water fountain and employee greetings were not considered top priorities. Although second floor accessibility, information updated and accurate in situ and on the internet and real concern on clients request were main concerns. The proposals at Design Thinking sessions suggested three main solutions. Build a glass elevator in the middle of the main floor; hire a community manager that improves communication either in social media or in situ screens information, an automatized client evaluation system of customer satisfaction (after each service usage) all incrementally improved customer experience.

DISCUSSION

Cognitive bias is a major concern for customer discovery in NPD/NSD, from the initial phases of desk search of Coolhunting, Netnography and participant observation, in-depth interviews methodologies. The perception of input by the researcher depends on his / her knowledge processing skills, cultural limitations and emotional / behavioral understanding. These difficulties affect the understanding of the meaning of a social phenomenon and, subsequently, the process of ideation.

Collaborative efforts, innovation culture, teamwork and organizational structure, multidisciplinary integrative research and innovation manager soft skills such divergent thinking, nonlinear vision can alleviate cognitive bias obstacle. In the innovation program developed with users and mystery guests from Perú and Chile, balanced processes of group ideation, validation and experimentation contributed to avoid proposing solutions based on subjective social reality.

Innovation doesn't have to be an expensive process with uncertain results whatever business size and resources. With experimentation-based decisions the most relevant aspect is risk reduction by more accurately addressing the needs / demands of the end users.

The capabilities management used in the program allowed understanding the context of the problem (pain) and consumer gain reflected in the exercise of the value proposition. It was tested and confirmed that initial selection of the right group segment is crucial for value proposition and incremental service innovation success or failure. Chilean customers segment regardless of age it was vital in both cases of hotel and hospital.

However, it was the dynamic group sessions, including Gamification and Design Thinking, that were conclusive for prototyping proposals and service innovation focused on client. Either technological (mobile application, WhatsApp account, tablets availability), partnerships value with nearby restaurants, reservations and personalized options at hotel cafeteria or easier and nicer upper floor access, accurate and update hospital information and a transparent evaluation system that brings confidence on Chilean patients.

The classical market research methodologies (etnography, in-depth interviews) fulfill the role for pains definition, although they are not decisive because observation is limited by the heterogeneity of the service delivery, users´ experience, researcher bias and the relevance of face to face meetings is limited by interviewer skills.

The tacit and explicit knowledge management and Service Design tools based on customer discovery, customer validation and prototyping proposals helped to create loops of feedback to support the businesses continuously improve its operations and strategy.

Since the value in services is directly related to providing the experience of interaction and simultaneity between production and delivery, further research might explore the relevance to create feedback mechanisms of user journey mapping and points of contact. Also it is needed further researched partnership networks creation, sustainability and the competitiveness of small businesses.

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