UNVEILING THE SHOPPING CENTER INNOVATION OBSTACLES

TEEMU ROPPONEN
Aalto University
teemu.ropponen@tkk.fi

SANNA UOTINEN
Aalto University
sanna.uotinen@aalto.fi

RIIKKA HÄNNINEN
Aalto University
riikka.hanninen@aalto.fi

ARHI KIVILAHTI
Aalto University
arhi.kivilahti@aalto.fi

ABSTRACT

The shopping center - once considered a place for effective shopping - is in the midst of changes. Shopping centers are becoming more and more places for spending leisure time and doing activities that do not always involve shopping for products, i.e., shopping centers are becoming service-oriented. Developing services in turn requires that shopping centers will need to be increasingly involved with their customers and other stakeholders, to define value creation patterns for services. Participatory innovation is a promising way of gaining insight from customers and even outsourcing some parts of the innovation process. However, compared to a single organization utilizing participatory design, the shopping center environment presents new challenges and obstacles to the innovation process. The value network within the shopping centers is rather complex. Also, the business of shopping center management has in the past been mainly concerned about efficiency and logistics, with much less concern for services or promoting the collaboration between the different stakeholders in the shopping center. There is currently exists very little research on participatory innovation and its challenges in the retail industry. This article presents a case study of participatory innovation in one Finnish shopping center. The purpose of the case study was to gain understanding of what kind of innovations shopping center visitors are after, what kind of collaboration patterns would be needed to implement these innovations and what kind of obstacles to such collaboration exist. We found that there is currently practically no support for fostering the process from ideas into potential innovations.

INTRODUCTION

In recent years, shopping centers have become a popular format of retailing and taken a strong position in Finland's retail markets. Today there is a total of 73 shopping centers in Finland with over 300 million visitors per year. The market share of shopping centers has been growing during the last years and in 2009 was approximately 14%. (Finnish Council of Shopping Centers, 2010.) The shopping center industry is, however, in the midst of radical changes, highlighted by some current megatrends, like the rise of ecological consciousness, the growth of e-commerce and services becoming more important in our society. Shopping centers are an example of a business area heading towards a direction where the value is not solely created by goods, but by services (Ostrom et al. 2010). According to Furseth et al. (2010), in the future the focus needs to be on the customer experience rather than on the products themselves. The competitive advantage could be achieved through more innovative service operations. At the same time, consumer behavior is becoming more fragmented and consumer needs less predictable (Uncles 2006). These changes challenge shopping centers to introduce more customer-centric approaches in order to understand customers, serve them better and to produce new innovations.

In this paper, we present initial findings from the 4D-Space project, in which researchers and shopping center customers have co-innovated new services together. The purpose of the project was two-fold: on one hand we wanted to incorporate participatory innovation in a new environment, in the shopping center business in Finland and on the other hand, we wanted to find digital service innovations that could be developed and researched further. In addition to producing plenty of new ideas to be developed further, the research has highlighted organizational barriers that affect co-innovation process in the shopping center environment. The purpose of this paper is to examine what kind of barriers there are in the shopping value network and innovation processes that hinder the utilization of user-centric innovation in the case of a particular shopping center.

Results from our case study demonstrate that that the shopping center is not organized to handle the kind of innovation development the users would like to see. The organization and operations are currently not tuned for collaboration between different stakeholders and users, but rather remains very much oriented towards an efficiency-based product sales space renting business.

The paper is organized as follows: the first section explores the relevant research regarding participatory innovation, new service development and innovations in the retail industry, and. Then we continue explaining our methodology and the data gathered in the case study. In the Results section, we present findings from workshops and stakeholder interviews and describe the value network within the shopping center. Finally, in the Discussion, our methods and results are evaluated, validation considered and future work suggested.

LITERATURE AND THEORY

The phenomenon where users are taken into company's innovation processes as partners has many synonyms and the different nuances of them are not completely established even if the term "participatory design" has been already used since 1970s. Sanders & Stappers (2008) use the term co-design to "refer to the creativity of designers and people not trained in design working together in the design development process". Buur and Matthews (2008) prefer the term "participatory design" maintaining that one of its unique strengths is the ability to introduce novel user-driven practices to organisations having traditional ways of working. The implementation of participatory design brings various stakeholders together to confront each other with very different perspectives on the issues.

According to Hardagon (2003) innovation is not something that a genius person does in solitary - rather innovations can emerge when networks connect and link people, ideas and objects together. To achieve successful service innovations companies need to do things for and with the customer in new ways. The move from 'user as subject' towards a 'user as a partner' paradigm challenges the roles of designer, the researcher and the former 'user' (Sanders & Stappers, 2008). Furseth et al. (2010) define service innovation as an activity where known products, services or processes are combined or created in a new way. The innovation is to combine known solutions, or create new services, processes or business models, and either sell these on market, or employ them for internal increased value. Service innovation is a business model innovation that gives the users or customers a better experience or higher value. Furseth et al. (2010) identify three types of service innovations:

- innovation in the service aspect of products
- innovation in services already available
- the creation of new services

While there have been some recent efforts to examine service innovation generally (e.g., De Jong & Vermeulen, 2003; Furseth et al., 2010; Ostrom et al., 2010), there appears to be only little specific focus on retailing (cf. Martin 1996). In fact Hristov (2008) goes on to argue that there is barely any research on the meanings and pratices of innovation in retail sector. According to Hristov (2008) keywords "retail innovation" generated only 13 results, whereas "technological innovation" generated 13 916 results.

De Jong and Vermeulen (2003) state that retailing and other consumer-oriented services, where the innovation is dominated by suppliers, are often considered less innovative, as distinct from production-intensive services, such as banks and wholesale services, which put substantial effort into the simplification of their service offerings. One reason for relatively low scores on innovativeness in retailing, when compared to other sectors, might be due to the difficult measurement of innovativeness through traditional measures of R&D (Hristov, 2008).

Ganesan et al. (2009) point out that in most retail organizations supply chain partners earn rewards for cost savings and efficiency improvements. Thus, innovations in retail context usually involve changes in products and processes, which focus either on reducing costs or improving efficiency. According to Ganesan et al. (2009), in retail industry the shift from R&D-centric innovation programs to open innovation platforms has been rather slow. However, Martin (1996) found that direct customer participation and the usage of customer information during the service development process were some of the key factors of new successful retail services.

DATA AND METHODS

This article presents a case study (Yin, 2003) of one shopping center in Finland and comprises literature studies, interviews with shopping center management as well as participatory ideation and innovation workshops with actual and potential customers of the shopping center.

As part of the 4D-Space research project, we are carrying out a pilot project in participatory innovation together with a shopping center Iso Omena - the 5th largest shopping center in Finland, located in Espoo and owned by the retail developer Citycon. Citycon is the market leader in Finnish shopping center business and states in its vision that that it is "an active owner and long-term developer of its properties" (Citycon, 2010). Citycon also "develops its retail properties systematically and on a long-term basis, which increases their value" (Citycon, 2010). Iso Omena was considered and inter-

	Goal	Method(s) used	Results
WS1	Context study, un-covering issues that are "issues" by users	Walkshop, semi-structured group questionnaire	Audio recordings and group discussion results regarding context . Based on these, 10 themes were raised up.
WS2	Ideation	4D-Pads, group work	Identification of where the themes are or should/could be present in the environment.
WS3	Idea development through story telling	Video stories, group work	Video stories, each group presented at least two distinct topics
WS4	Concept refinement	Group work with questions	Concepts…
WS5	Prorotype evaluation	TBD	TBD

Table1: Workshops and methods.

esting platform for research not only because of its interest in participatory innovation, but also due to the fact that the shopping center is considered to be and marketed as being "like a small city". Also, the nearby area is undergoing big changes in future years in terms of construction. The western extension to the metro line in the Helsinki area will reach Iso Omena in 2014. Also, a new interface terminal for buses will also be built and connected to Iso Omena. Further, Citycon is planning to extend the shopping center by 5 000 m2 of retail space – with the considerable growth in the customer flows of the metro and bus terminals, new possibilities to increase the sales of the shopping center are created.

We have had a series of workshops, with two groups (roughly 20 people altogether) innovating new services for the shopping center. The workshop participants were recruited in two ways: firstly, by using the Iso Omena Facebook group and secondly using Qaiku social media service. The goal of using these two services was to reach various kinds of people - both committed customers of Iso Omena as well as "outsiders" who may have different kind of insight and interest in the topic. Our goal was to get a heterogenous participant group so that the type of innovations would vary and thus help expose as many issues as possible. We succeeded in the sense that participats ,aged 25-65, included people who had shopping as their hobby or retail technologies as a profession (these could be considered lead users) but also people who were living nearby and are customers of Iso Omena, but not necessarily very into shopping.

Four sessions of workshops have been implemented, with at least one more planned. The aim of the workshops has been to generate ideas for future retail services and test participatory innovation methods in the development of shopping centers. The participants have created various new kinds of ideas and concepts and also developed these concepts further - utilizing methods like walking and observing within the shopping center (walkshops, see Korn & Zander, 2010), speaking out loud, marking ideas on a printed blueprint of the shopping center and creating videos with storytelling or even short "play" that explains the ideas. In addition to workshops we have had a closed Facebook group for participants and researchers to elaborate on ideas and discussions between the workshop meetings. The workshop themes are summarized in Table 1.

Approximately 450 ideas were found from the audio transcripts from the workshops and from the Facebook conversations. The exact amount of distinct ideas is smaller because from these 450 ideas duplicates were not counted out. The 450 ideas were read aloud and organized with the affinity diagram method to groups in collaboration with five researchers. In the affinity diagram, similar issues are collected together (Beyer & Holtzblatt, 1999) - for example, using Post-It -notes that can be relocated easily. From these rather vast groups, key ideas were selected according to their popularity among the users in workshops and based on the possibility of generating digital services out of them. Eight idea combination themes were thus generated and named in an inspiring way. Users could comment the themes and vote the most interesting ones in an Internet poll. We will continue developing the most popular themes further in the upcoming workshops.

Three themes were selected for this paper for further analysis by the writers. These particular themes were selected because they are quite different from each other. The researchers estimated the amount of effort and involvement needed for implementing these. The radar plot diagrams were used to visualize the estimates.

In addition to the workshops, Iso Omena manager and marketing manager were interviewed separately, in the form of semistructured interviews. The goal of the interviews was not to walk through the innovations but rather to gain a high-level understanding of the the innovation process within Iso Omena. Based on literature, interviews and our own analysis, we have drawn out the value network of Iso Omena as well as drawn out observations about the current status of the new service development process.

Figure 1: 4D Cards, depicting themes of the 1st walkshop.

Figure 2: Workgroups have marked places for innovations into 4D-Pads.

RESULTS

INNOVATIONS OF SHOPPING CENTER USERS

The eight themes, their descriptions and example ideas within the theme are described in Table 2.

COLLABORATION PATTERNS

In order to examine the business environment of Iso Omena more closely, we identified the value network of the shopping center, based on the interviews, shopping center literature, and our own analysis. The network, depicted in Figure 3, enabled us to mirror the users' ideas to the business environment and highlight what kind of collaboration patterns and changes they would require. According to Pepparda & Rylanberd (2006) the value network is the context in which the firm operates, assesses customer needs, responds to customer demands, gets resources and deals with competitors. In our case, we first wanted to focus on the internal business environment of the shopping center and left other stakeholders, such as competitors, outside the network.

In order to understand and estimate the amount of collaboration and stakeholders needed to produce the innovations, we further simplified the value network to six stakeholders: the customer, shopping center, grocery stores, specialized stores, public services and restaurants & leisure services. We went on to estimate the amount of effort needed by each stakeholder (type) in each of the three chosen concepts. We estimated the needed effort on a scale of 0-5, from no involvement (0), to light or optional involvement (1-2), medium involvement (3-4), up to heavy involvement (5).

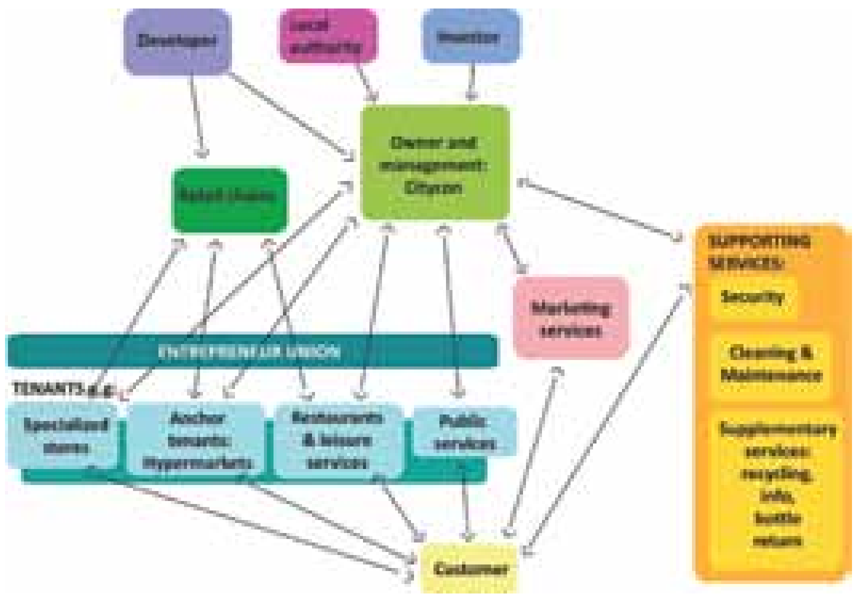

Figure 3: The value network of Iso Omena

Theme	Description	Example Ideas
Sparkling car park!	Car park - the heart of Omppu? Car park can be more than just a place for cars.	Events, like Fire Brigade expo for families; DIY car shop; tire changing service
Apple drill!	How deep to drill? Short visit or a long stay? Janitor or community manager can help you to perceive the surrounding better in Omppu.	Robot hostess; chatting with the salesman in internet; speed shopping
Information worth knowing!	Who, what, where and when? Targeted product information! The needed information comes to the customer and not the other way around.	Product info: nutrients, local food, environmental effects; ad shower, hotspots for information; personalized offers to phone
Omppu's feng shui!	Visuality and the spirit of the place! The customers feel that their values are taken into account.	Addresses for the stores; renaming the places; energy displays for stores; co-operation between stores
On the stage!	Stage physically and virtually! The stage gather people together to listen each other or a local band.	Open mic, the stage is yours; organizations' presentations; collective gaming
Store3!	Breaking the barriers of stores! Shopping can be like walking through the magical forest.	Showroom exhibitions; serendipity, finding the treasure; bringing "the old" to Omppu e.g antiquarian shop
Vip-Omppu! Omppu-Club!	The next level of regular customer ship? Omppu is corner store for some customers, can these customers be taken care of in a special way?	Vip-omppu in mobile; interaction between a customer and a store; "not the card but the way of life"
Wormhole!	To be and to not be at the shopping centre! Wormhole is a place to take it easy.	Silent place; workplace; oasis for resting; day spa and luxury toilet; places in another context

Table 2: Categorization of ideas into themes.

The idea of *Wormhole* is a collection for a number of ideas that were related to the theme of spending time in the shopping center without necessarily spending money or at least not being "shopping". In other words, there needs to be space and time for relaxing and chilling out in the shopping centre. The theme consisted of separate ideas like quiet space, day spa, working spaces, meeting places, soft seating and using spaces in different contexts. The estimated collaborative effort needed to produce *Wormhole* is depicted in Figure 4.

Based on the estimates, Iso Omena has the biggest role in creating and providing the Wormhole service. Public services, restaurants and leisure services and specialized stores also have a considerable role, while hypermarkets do not. The researchers are somewhat unsure about the role of the customer in providing the service. The fact that Iso Omena is the biggest stakeholder might also imply a potential for a new player to handle the business of the new service. This was not yet consid-

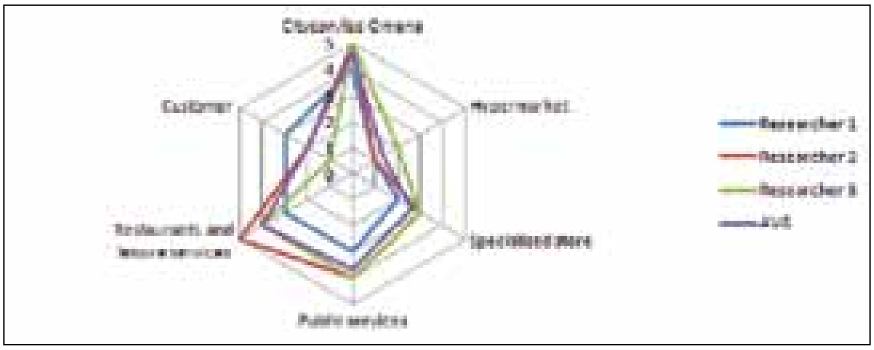

Figure 4: Mapping the collaborative effort needed by Wormhole.

ered further.

Information worth knowing is a container for concepts related to targeted information for users, typically but not necessarily referring to services available on a mobile phone. The needed information comes to the customer and not the other way around. At the best, even marketing messages seem like useful information. The concept can include, e.g., product info: nutrients, local food, environmental effects; ad shower, hotspots for information; personalized offers to phone.Estimated efforts to produce *Information worth knowing* are depicted in Fig 5.

Information worth knowing seems to engage all the stakeholders, and roughly by the same amount. Some differences are in the interpretation of effort needed - one of the evaluators has emphasized Iso Omena, hypermarkets and specialized stores more than others. The differences are likely to be related to interpretations of what this idea really contains. The role of the specialized stores is nonetheless the most significant.

The *On the stage* theme is about using the stage in the shopping center more actively and for more interesting purposes, and for showcasing non-commercial activities as well. The theme relates to the expressed needs for experiences as well as the locality of the shopping center - i.e., participants called for use cases like Hyde Park -spirited speeches, displays of local bands and artists and presentations by NGO's.

Of the three ideas under closer scrutiny, it can seen that the *On The Stage* concept requires most effort by customers themselves, not only by the stakeholders operating within Iso Omena. In addition to the customer role, the role of Iso Omena role is estimated to be moderately large. The hypermarkets are involved very little or not at all, while the role of specialized stores, public services and restaurants and leisure services may vary, depending on the implementation.

OBSTACLES OF INNOVATIONS

Based on the interviews with shopping center management, we can identify and highlight at least five larger obstacles, and several smaller ones, to implementing user innovations:

Current business environment does not appear to demand innovativeness

The interviewees stated that Finland is a rather small market area meaning that there is no need or possibility to specialize in any narrow segment. In addition, there seems to be no urgent need to develop shopping center services because the market situation was seen rather stable. However, some future challenges, like the metro line and the accompanying changes, were recognized at the same time. The attitude towards innovativeness was also uncovered when it was brought up that some improvements, such as environmental improvements, are implemented only if they are required by tenants or customers. In this sense shopping center development appears to be more reactive rather than proactive, even though Iso Omena could take a stronger role and lead the way.

Emphasis on numerical data to justify decisions

Another related obstacle is that every new innovation or improvement has to be seen economically profitable. Citycon defines itself as a property owner which aims primarily to increase the value of the property. Thus, the business aims for efficiency meaning that every innovation has to be justified economically to be implemented. This makes it difficult for users' ideas to come true because most of them were not directly related to buying and the profit may be realized only indirectly and in the long term.

The emphasis on the numerical data was also revealed when discussing the requirements of implementing users' ideas. The first step would be to carry out a market research to find out whether there is a larger demand for those innovations. Market research is, however, expensive and it slows down the implementation of innovations.

Limited resources, no organization to take ideas further

It was noted that there is no R&D group or person who is clearly named business responsible for new service development, rather everyone (in the shopping center employee team) is to contribute their ideas. This has sev-

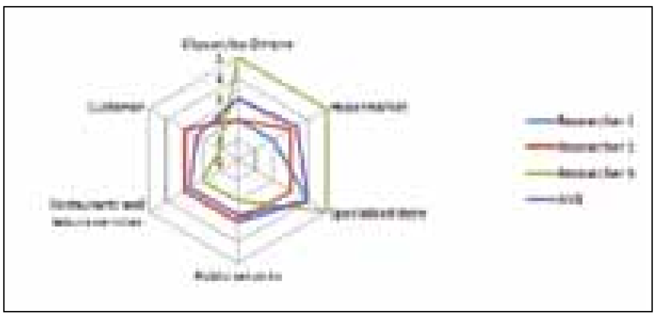

Figure 5: Mapping the collaborative effort needed by Information worth knowing.

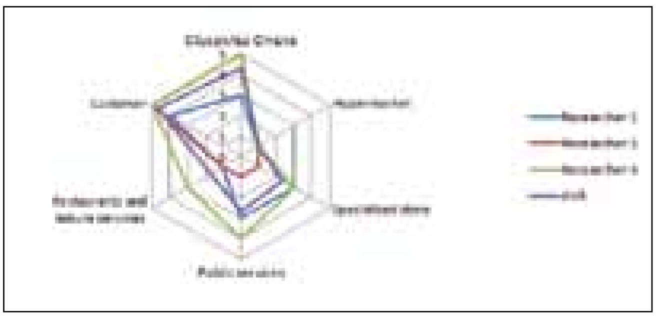

Figure 6: Mapping the collaborative effort needed by OnThe Stage.

eral implications for user innovations. There is neither actor nor service innovation and development process to take users' ideas further. There is no process for evaluating, piloting and deploying new service ideas, not in the company itself (Citycon) or with the other shops. Thus, it was noted that ideas should be fairly complete concepts when they are brought to Citycon.

In addition, the shopping center management team was found to be rather small and most supporting services, like marketing, are bought outside the firm. This results in the lack of resources for developing new innovations. If implementing user innovation would need a new actor, there is always a threshold to by a new service outside. While being eager to hear about the ideas and innovations developed during the workshops, the shopping center management has yet to take a lead on the innovation process. This can be seen in the way how taking the user innovations further was considered:

> *"if YOU [i.e, researchers] want to develop the concept, to see how far it is possible to take, then let's take it further..."*

Little dialogue with shopping center customers

The dialogue between the shopping center and its customers was found to be rather superficial. Customers can contribute to services by giving feedback in shopping center or via website or Facebook page, answering customer inquiries, or giving feedback to tenants. Also, it was noted that shopping center management follows social media and what is talked about Iso Omena. Even the interviewees noted that the threshold to give feedback may be quite high, which makes the feedback quite occasional – it is usually given when something has gone totally wrong. Iso Omena has also been planning to establish some sort of customer panel in order to get feedback and spontaneous response to current plans. This all implies that customers are still perceived as feedback givers rather than co-creators or co-innovators to the extend envisioned in research and in success stories in participatory innovation.

Little collaboration between the tenants and focus on (near-term) marketing

The tenants of the shopping center have a joint association, entrepreneur union. The main focus of this collaboration between the shopping center and the shops is marketing - for example, planning of joint campaigns and events at the shopping center. The union meets monthly, with two larger annual meetings. However, it was noted that in many shopping centers, the union has been quit because it has been difficult to find mutual understanding between tenants. It was noted that if implementing a new service would need joint effort from tenants, it may be difficult to motivate them. Thus, it seems that tenants perceive each other rather as competitors than collaborators.

Based on the interviews, the business environment of Iso Omena appears to be rather complex. It was striking that there is no process to take users' ideas further and ideas easily collide against organizational barriers.

DISCUSSION

Interestingly, a majority of the ideas and innovations developed by the users had nothing to do with the "core" buying process of products. This can be a result of the chosen workshop methods which allowed the participants to ideate and discuss quite freely and also because the workshop facilities were provided by Iso Omena and not by any store that sells goods. Also, quite a large number of ideas were not directly linked to digital services, which were the main starting point of the organizing the workshops in the beginning. This tells that it is difficult to keep the ideation space open and at the same time try to guide the innovation process towards a specific target such as digital services.

Although the project is not yet finished, we have discovered issues with regard to e.g. conflicts within stakeholder interests and with the nature of innovations or ideas developed by participants. From the Iso Omena's viewpoint, development activity is mostly seen as getting feedback from the customers and tenants. On the basis of numerical evaluation data it is easier and faster to make decisions compared to the fuzzy and raw idea data. This feature of fastness and visibility is a challenge for participatory design because it takes time and effort to interpret and demonstrate its results (c.f. Kujala, 2003). The result of participatory innovation can be a truly new kind of demand for which there are practically no tools or processes for implementing it. In addition, because nearly all the new features in the shopping center have to gain numerical data support before they can be implemented, it can effect to the amount of new features that are even considered because of executing survey costs.

The workshops and interviews have also revealed that the processes for engaging in dialogue between the shopping center and its customers are missing, both in terms of customer feedback as well as more rigorous involvement e.g. in service development. Besides traditional marketing channels, the shopping center does not have tools or forums to interact with customers to know their wishes, ideas, and aspirations. Often marketing is taking care of the customers but when it is more about customers creating new ideas, is the marketing department the right business function for take care of the innovation process? At least the marketing approach should target more towards longer term development, not only sales campaigning.

The role of researchers during this project has been to mediate between the shopping center and customers, trying to formulate new forums for collaboration. In the future workshops, our aim is to bring more players together to develop some ideas further.

The chosen methods require quite intensive amounts of work, both for workshop facilitation as well as analysis of results. The participatory innovation workshops have been found to be useful in uncovering missing forums and other obstacles to implementing innovations but there is no indication that the ideas are actually better than those conceived by industry experts.

The radar plot evaluations of the themes were done by three researchers of the 4D-Space research group. In the future, the evaluations could be done by service development experts, giving the radar plots more reliability. In that case attention should to be paid to the describing the theme and its ideas clearly. Even though the researcher had worked with the themes a lot, it was not always clear what exactly was the core idea of the theme, resulting in variation in the radar plot figures.

It should be noted that higher level executives from Citycon, the owner of Iso Omena, were not interviewed. Also, in future work, it would be beneficial to interview the other stakeholders within Iso Omena, which would certainly highlight the tenants' points of view.

Naturally, it will be interesting to develop the concept ideas further and prototype them in a live environment - an activity that is planned for 2011. This will undoubtedly uncover new obstacles and create improved understanding of the shopping center reality. The first results from our participatory innovation workshops in Iso Omena, one of the first studies in the shopping center environment, have indicated some innovation obstacles that exist in the shopping center business. While this study does not necessarily provide data that could be generalized, it is likely that similar issues are found among other industry players. We are currently also in the process of interviewing a number industry experts and executives in the retail industry in Finland and thus also seeking for research results on innovation process obstacles on a general level and across the business.

ACKNOWLEDGMENTS

Above all we would like to thank the participants of the workshops. We would like to thank Iso Omena and Citycon management for providing the facilities and other resources for conducting our research. The 4D-Space project has been funded by MIDE Institute, a 100-year fund of Aalto University School of Science and Technology.

REFERENCES

Beyer, H. & Holtzblatt, K. (1999) Contextual Design. Interactions. Volume 6, Issue 1, Pages 32–42.

Buur, J., Matthews, B. (2008) Participatory innovation. International Journal of Innovation Management 12(3), 255-273.

Mager, B. (2009) Service design as an emerging field. In Miettinen, S., Koivisto, M. (eds.) Designing services with innovative methods. 28-42.

Citycon Plc annual report 2009. Available online at http://www.citycon.fi/UserFiles/citycon/File/Citycon_VSK2009_ENG.pdf . Ref. Nov 1, 2010.

De Jong, J.P.J & Vermeulen P.A.M. (2003) Organizing successful new service development: a literature review. Management Decision 41 (9), 844-858.

Finnish Council of Shopping Centers (2010) Finnish Shopping Centers 2010. Available online at http://www.rakli.fi/kky/attachements/2010-04-15T12-53-4265.pdf . Ref. Nov 1, 2010.

Furseth, P.I., Cuthbertson, R. & Reynolds, J. (2010) The Value Dynamics of service innovation. Proceedings in The XXI ISPIM Conference: The Dynamics of Innovation. Bilbao, Spain. 6-9 June 2010.

Ganesan, S., George, M., Jap, S., Palmatier, R.W. & Weitz, B. (2009) Supply Chain Management and Retailer Performance: Emerging Trends, Issues, and Implications for Research and Practice. Journal of Retailing 85(1), 84-94.

Hanington, B. (2003) Methods in the Making: A Perspective on the State of Human Research in Design. Design Issues 19 (4), 9-18.

Hardagon, A. (2003) How breakthroughs happen. Harvard Business School Press Boston, Massachusetts.

Hristov, L. (2008) "Innovation in Service Industries: executive perspectives in retailing", unpublished D. Phil. Thesis, University of Oxford.

Korn, M. & Zander, P. "From Workshops to Walkshops: Evaluating Mobile Location-based Applications in Realistic Settings". 2010 In "Observing the mobile user experience" Proceedings of the 1st International Workshop. Held in Conjunction with NordiCHI.

Kujala, Sari (2003) User Involvement: A review of benefits and challenges. Behaviour & Information Technology 22(1), 1-16.

Martin, C.R. (1996) Retail Service Innovations. Inputs for Success. Journal of Retailing and Consumer Services 3 (2), 63-71.

Ostrom, A.L., Bitner M.J., Brown, S.W., Burkhard, K.A., Goul M., Smiths-Daniels, V., Demirkan H. & Rabonowich E. (2010) Moving forward and making difference: Research priorities for the Science of Services. Journal of Service Research 13(1), 4-36.

Pepparda, J. & Rylanberd, A. (2006) From Value Chain to Value Network: Insights for Mobile Operators. European Management Journal 24(2-3), 128-141.

Sanders, E.B. -N. & Stappers, P.J. (2008) Co-creation and the new landscapes of design. CoDesign, 4 (1) 5-18.

Uncles, M.D. (2006) Understanding Retail Customers. In Krafft, M. & Mantrala M.K. (eds.) Retailing in the 21st Century. Current and Future Trends. Heidelberg: Springer. 159-173.

Yin, R. (2003) Case study research: design and methods. 3rd edition. Thousand Oaks: Sage Publications.