

USER ENGAGEMENT AT JYVÄSKYLÄ PAVILJONKI TRADE FAIR CENTER

Cases: FinnGraf 2009, Electricity,
Telecommunications, Light & Audio Visual
2010 and Tekniikka 2010

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Abstract <p>The purpose of the thesis was to analyse the experiment cycles of user-engagement in service development for Lutakko Living Lab at three trade fairs organized by Jyväskylä Paviljonki Trade Fair Center. The objective was to involve Paviljonki customers in service development by identifying the areas for improvement and generate suggestions for new services.</p> <p>The research was based on the video recorded face-to-face interviews with exhibitors and the reports on the interviews with visitors elaborated by research teams. The data was stored in the Lutakko Living Lab archive. The collected recorded interviews were processed and analysed with a computer assisted qualitative data analysis software NVivo.</p> <p>The significant role of user engagement in service development was experimented through three iterations, with exhibition hall facilities, layout, information flow and accommodation in Jyväskylä as the main identified areas for improvement. Incremental improvements were noticed after each trade fair. A radical improvement under implementation was the new Sokos Hotel Paviljonki in the Lutakko region. The main suggestions for new services were more refreshments points in the trade hall and child care service.</p> <p>Paviljonki applied a customer-oriented approach to its business through service co-creation and co-innovation with its service users, thus reducing the risks related to improvement and new service development.</p>		
Keywords User-engagement, customer satisfaction, customer-orientated service, co-creation, co-innovation, service improvement, new service development, trade fair, Paviljonki, Lutakko Living Lab, NVivo		
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Tiivistelmä Opinnäytetyön tarkoituksena oli analysoida käyttäjäosallistumisen kiertoprosessia palveluiden kehittämisessä Lutakko Living Labille. Nämä kiertoprosessit toteutuivat kolmilla messuilla Jyväskylän Paviljonki Messukeskuksessa. Tavoite oli liittää Paviljongin asiakkaat palveluiden kehittämisprosessiin tunnistamalla yhdessä kehittämisalueita ja luoda ideoita uusille palveluille. Tutkimus perustui videotallennettuihin, kasvotusten tehtyihin haastatteluihin, joita tehtiin niin näyttöilleasettajien kuin vierailijoidenkin kanssa. Tutkimus perustui myös tutkimustiimien, haastatteluiden pohjalta kokoamiin raportteihin. Kerätyt tiedot säilytettiin Lutakko Living Labin arkistossa. Kerätyt ja tallennetut haastattelut jalostettiin ja analysoitiin NVivo nimisen, tietokoneavusteisen, kvalitatiivisen tiedon analysointiohjelmiston avulla. Käyttäjäsallistumisen merkittävää roolia palveluiden kehittämisessä kokeiltiin toistamalla samat työvaiheet kolme kertaa eli kolmen iteraation ajan Tärkeimmät tunnistetut kehittämisalueet olivat näyttelyhallin tilat, näyttelykojujen sijoittelu, tiedonkulku ja majoituksen löytäminen Jyväskylässä. Pieniä parannuksia havaittiin jokaisen messun, iteraation, jälkeen. Suuri toteutusvaiheessa ollut parannus oli uusi Sokos Hotel Paviljonki, jota rakennettiin Lutakon alueelle. Tärkeimmät ehdotukset uusiksi palveluiksi olivat seuraavat ehdotukset: lisää virkistyspisteitä näyttelyhalliin ja lastenhoitopalvelu. Paviljonki sovelsi asiakaslähtöisyyttä liiketoimintaansa yhteistyössä palveluiden käyttäjien kanssa, yhdessä luomisen ja yhdessä ideoinnin kautta. Tällä tavalla Paviljonki vähensi palveluiden kehittämiseen ja uusien palveluiden luomiseen mahdollisesti liittyviä riskejä.		
Avainsanat (asiasanat) käyttäjäsallistuminen, asiakastyytyväisyys, asiakaslähtöinen palvelu, yhdessä luominen, yhdessä ideointi, palvelun parantaminen, uuden palvelun kehittäminen, messut, Paviljonki, Lutakko LivingLab, NVivo		
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CONTENTS

1	CREATING SERVICES WITH PEOPLE.....	4
1.1	Main Research Questions.....	5
1.2	Purpose of research.....	6
2	AN INSIGHT INTO RESEARCH PARTIES	7
2.1	Jyväskylä Paviljonki	7
2.2	Jyväskylä Paviljonki Trade Fair Center	8
2.3	Trade Fair User Engagement at Lutakko Living Lab.....	9
3	KNOWLEDGE BASED INNOVATION.....	12
3.1	Knowledge creation in temporary clusters.....	12
3.2	Innovation Process	13
4	CO-CREATING INNOVATIVE SOLUTIONS	15
4.1	Business advantages of user-engagement	15
4.2	User-engagement in Service Development Process.....	16
4.3	Service innovation model	18
4.4	Degrees of user-involvement and their intensity.....	20
5	SUSTAINABLE DEVELOPMENT AT JYVÄSKYLÄ PAVILJONKI.....	22
6	RESEARCH DESIGN.....	24
6.1	Research philosophy	24
6.2	Research approach.....	25
6.3	Research strategy and methods.....	26
6.4	Data collection.....	28
6.5	Validity of research	34
7	FINNGRAF TRADE FAIR RESULTS	36
7.1	Exhibitors' Feedback Results.....	36
7.2	Visitors' Feedback Results	38

7.3	Conclusion of FinnGraf 2009	39
8	ELECTRICITY, TELECOMMUNICATIONS, LIGHT & AUDIO VISUAL TRADE FAIR RESULTS	41
8.1	Exhibitors' Feedback Results.....	41
8.2	Visitors' Feedback Results	50
8.3	Shadowing Results	56
8.4	Conclusion of Electricity, Telecommunications, Light & Audio Visual 2010	57
9	TEKNIKKA TRADE FAIR RESULTS	59
9.1	Exhibitors' Feedback Results.....	59
9.2	Visitors' Feedback Results	68
9.3	Shadowing Results	71
9.4	Idea tree and idea map results	72
9.5	Conclusion of Tekniikka 2010	74
10	DISCUSSION.....	77
10.1	Co-creating and Co-innovating services at Jyväskylä Paviljonki.....	77
10.2	Applicability of the research results.....	79
10.3	Suggestions for future experiment cycles	79
10.4	Jyväskylä Paviljonki improves with its customers	80
	REFERENCES	82
	APPENDICES	84
	Appendix 1. The action research spiral	84
	Appendix 2. Trade Fair User Engagement at Lutakko Living Lab Poster	85
	Appendix 3. Set of tree nodes extracted from NVivo	86
	Appendix 4. Coding pictures in NVivo	87
	Appendix 5. User Centred Service Engineering with NVivo at Lutakko Living Lab: The Case of Paviljonki Trade Fair Center	88
	Appendix 6. Little number of customers during first day of Tekniikka	96

Appendix 7. Idea map implemented at Tekniikka 2010	97
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FIGURES

FIGURE 1. Lutakko LL stakeholders involved at Paviljonki.....	10
FIGURE 2. Innovation process	14
FIGURE 3. Service development process through user-engagement	18
FIGURE 4. User-centered Quadruple Helix Model at Jyväskylä Paviljonki	19
FIGURE 5. Umbrella concepts ‘user-driven’ and ‘user-centric/user-oriented’...21	
FIGURE 6. Paviljonki Trade fair Center Experimentation Pilots	27
FIGURE 7. Idea Tree	29
FIGURE 8. Coding process in NVivo	33
FIGURE 9. Exhibitors’ overall satisfaction with FinnGraf 2009	37
FIGURE 10. Type of companies participating at Electricity, Telecommunications, Light & Audio Visual 2010	42
FIGURE 11. Degree of exhibitors’ satisfaction with services at Electricity, Telecommunication, Light & Audio Visual 2010	44
FIGURE 12. Exhibitors’ satisfaction with the number of visitors at Electricity, Telecommunications, Light & Audio Visual 2010	46
FIGURE 13. Visitors’ purpose of the visit at Electricity, Telecommunications, Light & Audio Visual 2010	51
FIGURE 14. Information sources on the organization of Electricity, Telecommunications, Light & Audio Visual 2010	52
FIGURE 15. Categories of exhibiting companies at Tekniikka 2010	59
FIGURE 16. Degree of exhibitors’ satisfaction with service at Tekniikka 2010 ..	61
FIGURE 17. Visitors’ areas of activity at Tekniikka 2010	68
FIGURE 18. Means of transportation used by visitors of Tekniikka 2010	69

1 CREATING SERVICES WITH PEOPLE

Innovation is a compulsory and essential part of developing business strategies for growth. In the case of the service industry, the growth covers not only the expansion of the business operations, but most important, a continuous improvement of service and its differentiation from the competition.

Nowadays, business is focusing on relations between partners and clients, these established relations giving a competitive advantage in the market. This issue is critical, especially for the service providers. The companies offering services gain competitiveness through their ability to build long lasting customer relations and manage their operations through a customer centered approach.

Customer-driven strategy reflects the focus of a service company on delivering solutions to its clients and fulfilling their needs, increasing the customer satisfaction and the customer retention rate. This requires knowledge on customer's real needs that is deepened in consumer's "black box" which is constituted from how the client perceives the service and the factors that influence the choice of the service provider (Kotler, Wong, Armstrong & Saunders 2005, 256). More knowledge on their needs is created through client involvement into the development process, which covers both the service improvement and new service development. This approach leads to the creation of new solutions as services that will match the users' needs.

This study of customer satisfaction and user engagement in service design will be conducted on the case of trade fairs organized by Paviljonki International Congress and Trade Fair Center. A previous study was conducted by another JAMK University of Applied Sciences student –Elina Nevaranta (2008), whose work, assigned by Jyväskylä Fair Ltd, aimed at analysing exhibitor satisfaction with the service. The present work, which represents a project run by Lutakko Living Lab, is focused not only on the service users' satisfaction (both exhibitors and visitors at the trade fairs) but also on engaging them in the service design process.

The research is based on the material gathered during the three trade fairs: FinnGraf (24.-26.9.2009), Electricity, Telecommunications, Light & Audio Visual (3.-5.2.2010) and Tekniikka (5.-7.10.2010), these being mainly business to business fairs. The data gathered consists of video recorded interviews and questionnaires filled in by

exhibitors and visitors. Because a service company cannot limit its operations only on the core service, it should take into consideration all complementary services that will contribute to building a better and unique customer experience - "No profit grows where is no pleasure taken" (Shakespeare, *The Taming of the Shrew*, Tranio, Act 1 Scene 1).

1.1 Main Research Questions

Understanding customer's mind represents a complex task. The challenges faced are that the researcher has to develop an understanding of the customers' perception of the service provided by Paviljonki and ensure that the data collected and analysed is objective and has not suffered any deformation caused by the researcher's personal experience and background. Another challenge is to make the customers speak about their experiences with the service received. According to Lundkvist and Yakhlef (2004, 251), Leonard-Barton (1995) affirms that customers are easier to understand in their natural settings than in the artificial ones, where their behaviour is more likely to be influenced by external factors. That is why the interaction with the interviewees should minimize the pressure and make the customers comfortable by putting them in a user- friendly environment of the trade fair hall.

The study also underlines that more information is obtained out of 'informal' data than out of the 'formal' data gathered through structured interviews (op. cit. p. 395). The challenge behind this fact is that the researcher has to develop a structured interview but be flexible in the process of data collection to enable the inquiry for more details, this contributing to the collection of a richer data set.

The research leads to gathering a large set of data. According to Lundkvist and Yakhlef (2004, 251), Kaulio (1997) affirms that it may require considerable effort to capture the "tacit insights" of customers. This knowledge stays with the customer and can be dug out by engaging the user in knowledge creation. As a result, the research questions should cover the areas of customer satisfaction and idea generation for service development, but also allow the respondents to give more feedback.

With the above in mind, based on the material on the three trade fairs the present research tries to find answers to the following research questions:

1. How can the existing Paviljonki services offered to exhibitors and visitors be improved?
2. What new services could be offered by Paviljonki to exhibitors and visitors?

The research focuses on these two questions but also discovers information about exhibitor's opinions regarding trade fairs, by comparing them with Paviljonki's events. The research also touches customer satisfaction through hearing client's "voices" and complaints, and identifying user's suggestions for improvement.

1.2 Purpose of research

The purpose of research is to contribute to the development of the service of Jyväskylä Paviljonki and emphasize the importance of its service users in its service development. This is done by finding answers to the research questions by engaging the exhibitors and visitors in giving their feedback on their experiences at the trade fairs, stating the problems faced and what solutions they would like to receive.

Feedback represents a valuable source of new ideas for the existing and new service development. Positive and negative comments of the service users represent a valuable data in determining the degree of satisfaction with the service. Complaints play a critical importance that allows the researchers to identify the areas for future improvement and what new services should be developed.

The research will study the sustainable development of the trade fair center taking into consideration the improvements that were implemented after each event and the degree of customers' awareness of the improvements implemented. This study is based on a real service business and represents an opportunity to learn on how to improve the future conducted researches.

The content of the work is constituted from an introduction to the parties involved in the research, description of the applied research methods and the results of the collected data analysis. The final results of the research represent the trade fair customers' suggestions for improvement and ideas for new service development. Based on the findings, the final conclusion will be emphasized.

2 AN INSIGHT INTO RESEARCH PARTIES

2.1 Jyväskylä Paviljonki

Jyväskylä Paviljonki is situated in the heart of Finland and in the innovative ecosystem –Lutakko. It represents a truly versatile trade fair and congress center by providing services starting with small to large scale conferences, trade fairs and exhibitions, annual meetings, mass events and other various types of festivities.

Jyväskylä Paviljonki divides itself into three companies, each of them being responsible for specific operations that enable the entity to run its activities. These are represented by two limited companies and one group:

- Jyväskylä Congress Center Ltd., which specializes in organizing conferences and meetings. It provides its customers with meeting packages (auditoriums, meeting and negotiation rooms, assistant's service and required equipment)
- Jyväskylä Fair Ltd. – organizer of the meetings, events, trade fairs and exhibitions. Together with the large exhibition hall of 20000 m², it has become one of the largest organizers in Scandinavia
- Keskimaa Group that takes care of the restaurants within Paviljonki. It is involved in the events organized by the above mentioned companies that require catering services (Jyväskylä Paviljonki 2011).

This work is focused on the activity of Paviljonki Trade Fair Center and all the services including catering, meeting rooms and other facilities. The reason behind this selection is that the trade fairs gather together national and international companies and specialists from various industries. By exhibiting their products and services new partnerships are established that build future networks.

Jyväskylä Paviljonki organizes more than 1000 events yearly, which attract over 400000 visitors (Hämäläinen, Ruuska 2010) and a large number of exhibitors at the trade fairs organized. Participants come to the events with expectations and the information on the service improvement stays within them. By their engagement in

the improvement process of the delivered service, Paviljonki becomes a truly active participant in the innovative development of the region.

2.2 Jyväskylä Paviljonki Trade Fair Center

Jyväskylä Paviljonki Trade Fair Center organizes professional trade fairs aimed mainly for business to business contacts, and exhibitions for business to consumer interaction.

Jyväskylä Trade Fair Center's operations are run in co-operation with its subcontractors that cover the following services: transportation within the exhibition hall, waste management, electric power supply, equipment delivery, posters and signs, exhibition restaurants, cleaning, etc. The company assists its clients with information on accommodation and also facilities like cleaning, catering and parking places (Jyväskylä Paviljonki 2011).

The company also delivers tailor-made services according to the clients' request. Exhibitors that require the company to set in their stand can decide on a ready-made or individualized stand. In the case of the latest, the exhibitor selects the elements the stand will be constituted from. The company also delivers other tailor-made services, according to the clients' request, such as possibility to book meeting rooms and areas for product presentation during the trade fairs.

The above information is important to present in the beginning of the research, because these aspects will be touched in the presentation of the research results, which arise from the feedback collected.

The engagement of Trade Fair Center's users in the co-creation of the future service represents one of the cases run by the Lutakko Living Lab. The aim of the research is to test the users' involvement in the service engineering process for a deeper understanding of the customers' mind and turning them into active participants in service development.

2.3 Trade Fair User Engagement at Lutakko Living Lab

Lutakko represents a modern residential area of Jyväskylä, with 2500 residents and a number of companies (Lutakon asukasyhdistys ry 2011), Jyväskylä Paviljonki being one of them.

JAMK University of Applied Sciences tries to turn the Lutakko region into a user-driven open innovation environment. The aim is to develop innovative products and services together with companies, users, consultants, universities and local authorities and form user-driven networks across industries. The innovative development of Lutakko is run through a Living Lab Methodology (Hämäläinen, Ruuska 2010).

The European Network of Living Labs (ENoLL) defines Living Lab (further referred to as LL) as a “real-life test and experimentation environment where users and producers co-create innovations” (The European Network of Living Labs 2011). By turning residents and service users of Lutakko into active actors in service design, Lutakko Living Lab becomes a member of the Human Tech Living Lab.

Human Tech Living Lab means that customers and community are engaged in the creation of new solutions and their testing will be held by LL. Learning from the pilot testing will bring valuable knowledge, especially new experience in creation of user-driven innovation. This is what Lutakko LL works on in the case of user engagement at Jyväskylä Trade Fair Center. The three trade fairs: FinnGraf 2009, Electricity, Telecommunications, Light & Audio Visual 2010 and Tekniikka 2010, represent the experimentation pilots for user involvement in service design.

Each pilot test executed by the Lutakko LL covered the main activities of the LLs, which the European Network of Living Labs defines as:

- Co-creation: active participation of the service users and providers in co-designing the service
- Exploration: learning from and with the users, identifying new opportunities for improvement
- Experimentation: implementing the co-created ideas for improvements and testing them with service users

- Evaluation: assessing the degree of innovativeness and customer attitude and satisfaction with it, learning from the user engagement and testing process (The European Network of Living Labs 2011).

The contribution to the service development of the Trade Fair Center comes from its stakeholders that are presented in Figure 1:

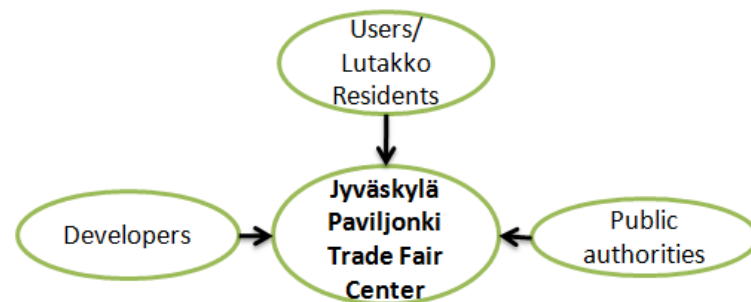


FIGURE 1. Lutakko LL stakeholders involved at Paviljonki

JAMK University of Applied Sciences is one of the developers. Through its students, who are engaged in the data collection and analysis, as well as the research conducted by Lutakko LL members, this research becomes a true learning environment, both for the trade fair center and the students learning from their participation in a “live” research. Furthermore, students’ involvement acts as a stimulus in the implementation of user-engagement in service engineering in their careers over time.

Lutakko Living Lab empowers the users and residents of Lutakko area to be active players in the development of their own region. By motivating trade fair customers to take part in co-creation of the service together with Jyväskylä Paviljonki, Lutakko LL applies a user-driven innovation approach. This proves its status of a Human Tech Living Lab.

Public authorities also play a significant role because they offer support to Jyväskylä Paviljonki’s decisions for radical innovations, which require more financial resources and longer time for implementation than in the case of incremental innovations. At the same time, authorities’ involvement motivates the residents to participate in collective action for innovations.

Figure 1 is a representation of development in two levels:

- User-centered level in developing the service offered at the trade fairs
- Company-centered level where Living Lab is focused on the development of Lutakko region, but its activity is contributing directly to the creation of new solutions for Jyväskylä Paviljonki and indirectly to the development of the area.

These approaches toward learning must be taken into account by the trade fair center and Lutakko LL when implementing the knowledge created in innovating the service and development of the region.

3 KNOWLEDGE BASED INNOVATION

Creating innovative solutions to the existing problems and their implementation in the service design constitutes the driver to a successful business. Appropriate solutions can be developed with the help of customers because they are the end users of the service and “evaluators” of its quality level. In order to orient the development process of the service in the direction of solving the real problems of the users, the company requires knowledge on customer insights. Knowledge creation is built on a constant learning about customers and their behavior in their natural environments as well as in the exhibition hall where they experience the existing service.

3.1 Knowledge creation in temporary clusters

The interaction of exhibiting companies with their customers (clients, suppliers, partners, etc.) determines a “vertical interaction” (Batheit, Schuldt 2005, 3), which represents the interaction between players of the same value chain: suppliers, customers and other third parties engaged in the exhibitor’s operations. On this account, trade fairs are seen as temporary clusters, gathering companies that are interrelated in their operations (op. cit. p. 2). This statement also relates to the trade fairs held by Jyväskylä Paviljonki. Exhibitors invest their resources in participation at trade fairs aiming at extending their networks within industries. The trade events are seen as learning and networking environment where the members of the temporary created cluster are establishing new contacts at local, national and international level.

Besides learning from the players within the same value chain, the exhibitor cannot avoid interactions with competitor companies. Batheit and Schuldt (2005, 3) define interaction with competitors as a “horizontal interaction”. For exhibitors it also constitutes a valuable source of learning about the trends in the certain industry and identifies what areas of its own product or service needs improvement to keep up with the changes in the business environment. In addition to seeing trade fairs as temporary clusters, they can be interpreted also as a matrix of vertical and horizontal interactions. By engaging actors from different value chains, Paviljonki has the chance to see its service from various angles, expressed by trade fair customers who see exhibitions as

an opportunity to open up or as a thread of competitor's break of the Intellectual Property Rights.

Paviljonki as a trade fair center is engaged in "vertical interaction" with the exhibiting companies but also with their customers - visitors of the trade fairs. The interaction between Paviljonki and exhibitors will result in improved interaction between companies and their customers inside the temporary cluster. The trade fair center is facilitating the creation and functionality of temporary clusters through engaging the user in service innovation and development.

3.2 Innovation Process

The advantages of most small and medium sized businesses in innovation lie in being flexible, dynamic and responsive, where as the disadvantages are categorized as a lack of required resources (Brychan, Miller & Murphy 2011, 10). As part of a service industry, the trade fair center must be as dynamic and responsive as possible regarding the needs and wants of its customers because a service company lives on good service. The downside of being able to respond quickly to fast changing situations and to implement new innovation on a short schedule is usually the limited amount of available resources. Implementing new innovation takes time with a limited number of employees and financial resources required for new technologies can be hard to find.

Innovation is accompanied by high risks and uncertainty due to the ambiguity of the customer's needs that remain still unfulfilled at the moment. Solution to this existing problem is the direct interaction with the trade fair service users and the collection of their feedback. Feedback represents a valuable source of information and enables the researcher to understand the service provided from the perspective of the users. However, it does not lead only to an understanding of the customers, but also to learning from them and creating knowledge on customers' needs, discovering the problems that they face from the stated complaints. As the customers express their opinion, the risk of implementing unsuitable innovations and technologies diminishes significantly. Therefore, customer should participate in the service innovation process, especially in the initial stages, by giving their feedback on the service experienced.

Innovation ideas can be created within R&D, from customers' new service ideas and their feedback, as represented in Figure 2. The last ones have their advantage because the information obtained represents users' voice and their true needs and obtaining this information does not require any resource investments, only constant effort on feedback collection, its analysis and presentation.



FIGURE 2. Innovation process

Different innovation processes bring various outcomes. Often, new innovation implementation results in new problems. At the first sight it might seem a bad thing to arouse new problems and questions but this is actually how the innovative process works and stays in motion. In order to discover new technologies and new innovation there is a requirement for problems to exist.

One of the most effective ways to create new innovation is through the company's customers and from the end users of the service. Customers tend to see the provided service from a different angle than the service provider because of their goals. The company offering the service wants the best possible profit and a sustainable, steadily growing amount of customers, while customers are looking for the best possible service at the lowest possible price but are willing to pay more for certain service qualities which are important to them. Engaging the service users in sharing their feedback after each trade fair will lead to a deep understanding of the customers' perceptions of the service received and on the improvements implemented, whether they are incremental or radical innovations.

4 CO-CREATING INNOVATIVE SOLUTIONS

Trade fairs represent an environment where the exhibitors and visitors are engaged in interacting among them and learn about each other by exhibiting and presenting their existing and new products and /or services. Traditionally, a two way learning is present: exhibiting companies detect the needs of their existing and potential customers and visitors discover the existing solutions to their problems.

An additional way of learning that is being implemented by the modern society is learning with the users, which implies the trade fair center's learning from its clients. The reason behind this is that knowledge of the areas and ways of improvement lay within the service users and this valuable information can be passed on to Paviljonki through communication with its customers and their involvement in service design.

4.1 Business advantages of user-engagement

Turning the trade fair user into an active participant in improving the existent and developing new services brings a number of advantages to the company that tries to minimize risks and uncertainty. According to Lundkvist and Yakhlef (2004), Barton (1995), Gales and Mansour-Cole (1995) state that the uncertainty that arises in the innovation process can be reduced by the customer engagement in service improvement. This is because the company gets to the core of the problem through the customer who speaks about the problem and asks for solutions.

Solutions to the problems are found from the customer feedback, which is a valuable source for problems and ideas identification. In spite of the important role the feedback plays in orienting the business toward its client, the trade fair center should try to make its service user a permanent participant in the innovation process, both through feedback and idea regeneration for innovation.

As stated by Lundkvist and Yakhlef (2004, 249), Rothwell (1994) argues that with the customer involvement the cost/time service development curve shows a beneficial situation. The benefits are both for the trade fair center through cutting costs by developing a required service and shortening the time needed for improvement

implementation, and for customers who receive the required service in shorter-period of time- reduced “time to market” and as a result, “time of acceptance” by the customers of the improved or new service (Edvardsson, Magnusson, Gustafsson&Kristensson 2006, 17). This results in a win-win situation for both parties, who are “passengers” of the same boat. Together they can work toward the creation of better experience of exhibitors’ customers at the trade fairs or “sink” by failing in delivering the user-friendly environment that will attract more visitors. Enhancing the trade fair service experience of the exhibitors’ clients should constitute the main motivation for their engagement in the service design process. Only the exhibitors who are in direct contact with their own clients can identify what can be improved at the stands to make the visitors’ stay pleasant and effective. Knowledge of the overall experience at the trade fair can be gathered also by the research team.

Customer interaction and his integration in the service improvement process give Paviljonki an opportunity to learn about the customer value and understand “the internal value-generating process” of the service user (Edvardsson et al. 2006, 3). This knowledge contributes to the improvement of the existing service and development of new ones that will match the customer needs, in this way building value to the clients through delivering “superior and differentiated service” (Edvardsson et al. 2006, 16) that will lead to better experience during trade fairs.

Customer’s involvement is a proof that Jyväskylä Paviljonki cares about its clients and wants to deliver a better service that will satisfy their changing needs. Practically, this leads to more customer commitment toward the service of the trade fair center, as a result to long-term customer relationships.

4.2 User-engagement in Service Development Process

Service improvement represents a significant part of Jyväskylä Paviljonki Trade Fair Center’s strategy for continuous development. It implies both service “perfection” and new service development (further referred to as NSD).

Service “perfection” refers to the process of service improvement by making some incremental changes, while NSD denotes the creation of new service, being it an

incremental or radical innovation. In both cases, the service-user should be a part of the knowledge creation on how to develop the offered service.

As affirmed by Lundkvist and Yakhlef (2004, 250), Gersuny and Rosengren (1973), Kaulio (1998), Finch (1999) and Nambisan (2002) state that customers perform five roles: “resources”, “co-producers”, “buyers”, “users” and “products”. In the case of the trade fair center, the customer input is exercised by the clients through their participation at the service development. They constitute a source of valuable information on customer expectations and the degree the existing service fulfills their needs. Nevertheless, the service users become active co-designers of the service or even co-producers of a product, depending on the faced problems and solutions that can be delivered within the time frame and resources available. These two functions executed by the clients are part of the first stage of the service development process, called by de Jong, Bruins, Dolfsma and Meijaard (2003) the “search stage” (Ojanen, Lanne, Reunanen, Kortelainen&Kässi 2008, 5).

Like the traditional NSD process, the service development engaging the customers involves their participation in idea generation. Through customers’ feedback, Jyväskylä Paviljonki learns from its users about the limitations of its service and looks for a possible solution together with its clients. The idea for development has to be screened and evaluated in order to measure its effectiveness and if it is worth implementing it. The reason behind this evaluation is that the solution adopted has to create value not only to the customers who are actively engaged in service design, but to all the clients of trade fairs.

The trade fair center’s customers play a significant role not only in the early phase of service development, but also in the second stage of the development process defined as “implementation stage” (op. cit. p. 5). As a result, the customers test the improved or new service before it is launched. This aims at reducing risks and uncertainty that surround the service innovation process. The advantage of this approach in service innovation is that the customer will not only receive an enhanced value, but also will keep coming back and be a user of the service, these constituting the customer output. The user engagement in service development is represented in Figure 3:

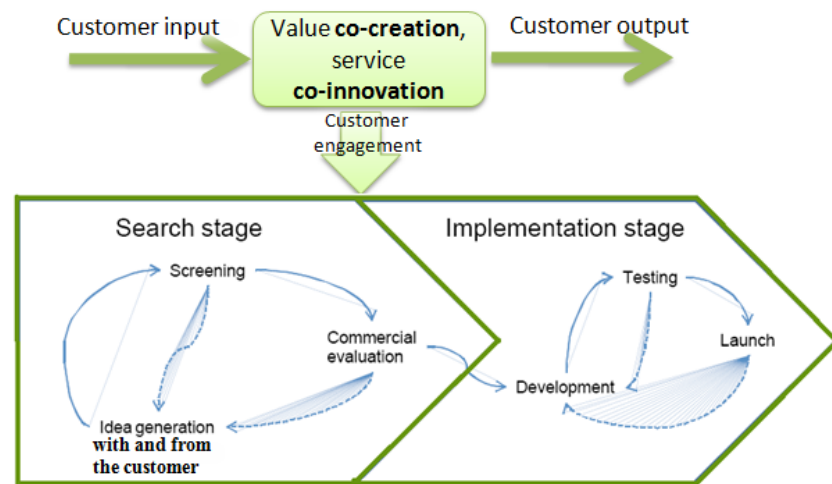


FIGURE 3. Service development process through user-engagement (Modified from Ojanen et al. 2008, 5)

The original representation of the NSD process was adapted to the user engagement in the trade fair service development by emphasizing the customer as a part of the entire process. By empowering the customer in decision making, the service is co-innovated and co-created by both parties: customers and company. As a result, the service will be user-centered.

4.3 Service innovation model

Innovative solutions are being co- created by Jyväskylä Paviljonki with Lutakko LL members, student researches, public authorities, and most important - with trade fair service users. This type of cooperation innovation form the Quadruple Helix (further referred to as QH), which represents a shift from linear to systemic, open and user-centric innovation models(Arnkil, Järvensivu, Koski&Piirainen 2010, 6).

The QH innovation model is rooted in the Triple Helix concept, which is represented by the developers, public authorities and companies engaged in the development process, but it excludes users. The emerging need to develop and deliver improved and new service for higher customer satisfaction has led to the need to not only understand the customer, but also make him part of the innovation process. Therefore, in this research it is considered the customer-centered Quadruple Helix, which is one

of the four QH models: Triple Helix+ users, the firm-centered living lab, the public-sector-centered living and citizen-centered QH (op. cit. p. 65-73).

In the case of the trade fair center, its customers are placed in the center of the helix, they playing the role of the “axis” around which the service design is run by the Paviljonki, Lutakko LL and JAMK and public authorities, as presented in Figure 4:

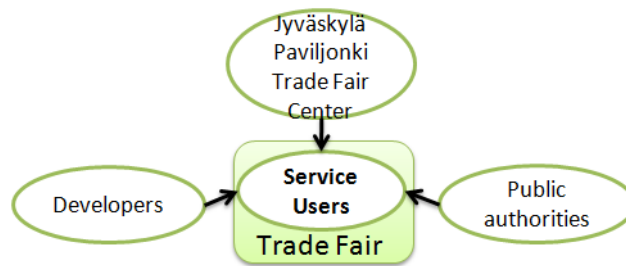


FIGURE 4. User-centered Quadruple Helix Model at Jyväskylä Paviljonki

The service design with customer participation in the user-centered QH model is a constant process, but the improvements implementation and their evaluation is done cyclically after each organized trade fair. This type of user-engagement approach represents an open and user-driven innovation where new knowledge is continuously created.

Although customers of the trade fair center should be part of the service improvement process, currently not all the customers are committed to this act, although there is an effort to integrate them in the creation of new solutions. This situation proves that the degree of involvement of the clients depends on their attitude toward development: development of the own business activity but not of Paviljonki Trade Fair Center, or an understanding that their integration in the service development contributes to the community development.

The customers must be motivated to become active participants in the service development of the trade fair center. The motivation can be created by making the trade fair exhibitors and visitors aware of the:

- significant role they play in knowledge creation and development of the Lutakko region

- importance of feedback in enhancing the service experience after the implementation of the required improvements
- knowledge creation on what creates customer value.

Looking from a different angle at the customer motivation to be part of the innovation process, it becomes clear that exhibitors should put more effort because their prior aim at the trade fair is to maintain existing networks and build new customer contacts. But this is possible only when the visitor in the role of the existing or potential customer comes to the trade fair and has a pleasant experience at the event. The key knowledge on what makes the positive customer experience with the stands and the presentation of the companies lies within the exhibitors, who are in direct contact with the visitors. The exhibiting companies have the knowledge on what equipment and facilities they need to make the customers' visit at the trade fair stands a successful one. The conclusion aroused from this view is that exhibitors are customer –oriented, wanting to deliver an environment that will be favorable to interact with their clients. In consequence, the exhibitors must be engaged in service design because sharing their knowledge about the customers' needs, knowledge to which Paviljonki has hard access to, will contribute to the right decisions in improving the service.

4.4 Degrees of user-involvement and their intensity

The more motivated the exhibitors and visitors are the more engaged they are in solution creation and more ideas for innovations are obtained. More customer benefits are created if the customer shares knowledge on his own or client's needs and expresses his dissatisfaction with the service. This information is very valuable because it enables the company to identify new ideas for incremental and radical innovations from the perspective of the users.

According to Arnkil et al., there is a differentiation of the user-led innovation into:

- user-oriented innovation: the service is designed for the user, but not necessary implies customer's implication

- user-centered innovation: the service is designed with the user and leads to the service co-creation
- user-driven innovation: the service is developed by the user (Arnkil et al. 2010, 17-23).

Although these concepts are placed under one umbrella, they imply different intensity of user involvement, as presented in Figure 5:

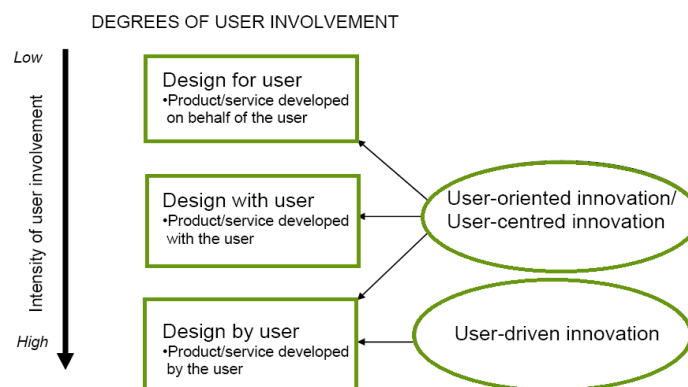


FIGURE 5. Umbrella concepts ‘user-driven’ and ‘user-centric/user-oriented’ (Arnkil et al. 2010, 21)

The above presented service designs with user involvement are interrelated because the service improvement starts with the user, whether the process implies user’s engagement or not. In the case when Jyväskylän Paviljonki designs the service for the user, its customer receives the services developed by the trade fair center based on the intuition what the client’s requirements are and on the current trends within the industry. A less risky approach is designing the service together with the customer. At the moment, the exhibition center is positioned at this stage. It is focusing on service co-creation and co-innovation with its service users. The company shifts its focus from user-oriented to user-centered approach.

The ideal innovation system is the service design by the user, but it requires more effort in creating an understanding of this concept into the customer’s mind. However, Paviljonki should consider user-driven innovation and take action toward it by turning its service from user-centered to user-driven approach.

5 SUSTAINABLE DEVELOPMENT AT JYVÄSKYLÄ PAVILJONKI

Sustainability refers to the long-term survival of a company from environmental, social and economic aspects (Doane, MacGillivray 2001, 9). The entity has to avoid focusing only on short-term growth. Instead it must take into consideration environmental issues, create value to the community through its contribution to the development of the region and deliver benefits to the customers by managing changes in the service offered. Managing change and value creation is a concern of economic sustainability, which refers to “how companies stay in business” (op. cit. p. 15).

Sustainability in the service industry represents a constant action towards service development and its innovation through a continuous chain of incremental improvements that will ensure a good service performance in the future. Sustainability can be reached through various ways: constant research on the trends in the market and the changes appeared, analysis of the degree the existing service satisfies customer needs, creating concepts for new innovation and testing it with customers, etc. Sustainability is related to learning because the service provider has to learn from its internal and external sources about its service, in this way gaining new insights on its service from the point of view of the employee and customer. The employees are aware of the limitations the company is facing. Furthermore, they have experience in service delivery. In this way, employees contribute to the understanding of sustainability “from the inside” of the entity, while business partners and customers form knowledge on company’s sustainability “from the outside” (op. cit. p. 20-29).

In the case of Jyväskylä Paviljonki, the trade fair organized over a certain period of time represents a cycle in which the company has the opportunity to identify the weak areas of the service provided and take corrective actions. The knowledge on the needed improvements and ways of doing them is obtained from the clients’ feedback. Being in contact with the exhibitors, visitors and also third parties involved in arranging the events create a “learning network” (Bessant, Tsekouras, 1) that enables knowledge creation and its sharing within the parties involved.

A learning network is also established between the trade fair center and Lutakko Living Lab. The learning system created assures experiential learning that constitutes

a cyclical process. The knowledge system created is based on the cycle of experiential learning elaborated by Kolb and Fry (1975), which represents the knowledge creation as a chain of the following steps: concept creation, experiment, experience and reflection (op. cit. p. 5). In the situation of the trade fairs the concept creation of new services involves the users through the collection and processing of their feedback. This allows the stakeholders involved in the innovation process to make explicit the knowledge on the customers' faced challenges and needs. The innovation elaborated is experimented in order to measure its degree of solving the customers' problems. This stage requires service users' involvement to detect the customer satisfaction or dissatisfaction with the service level and new innovation implemented. From the described steps the trade fair center, Lutakko LL and other parties involved gain experience in improving the service and get new insight on the customers' wants concerning the innovation. It also leads to a reflection on the implemented actions, learning what went wrong and generating new solutions.

In order to ensure a sustainable development, Jyväskylä Paviljonki together with its customers and partners has to ensure the constant implementation of the learning cycle after each trade fair. This work was undertaken by Lutakko Living Lab through its engagement in the feedback collection, processing, analysis and passing the valuable knowledge on customers' needs to the representatives of Paviljonki. This knowledge becomes a valuable asset for the company in running its service innovation process.

Sustainability ensures success over time, not only to Jyväskylä Paviljonki but also to its partners. The companies have to work on becoming efficient in creating solutions for the existing problems in the way that will enhance the customer value. According to Bessant and Tsekouras, effective operations are directly proportionate to "collective efficiency" (op. cit. p. 1), which represent the collective participation of the companies within the same vertical interaction chain in efficiency creation through contributing to and participating in the service development process in every iterative cycle.

Sustainability of the trade fair center can be measured in terms of increased satisfaction with the service, active user-engagement in service development, long-term shareholder value, technologies developed, business diversification and growth. With these terms taken into consideration, sustainability will be achieved by Jyväskylä Paviljonki and its partners by having knowledge to always create new solutions, which will attract customers to experience a sustained service.

6 RESEARCH DESIGN

The research design turns the research questions into action. In this sense, a clear plan is developed by the research team to express the purpose of the conducted research and detail all the steps of the process. The research questions of the present case aim at measuring the degree of customers' satisfaction with the service received, identifying the strong and weak sides of the service and areas for improvement, as well as spot the hidden needs of Jyväskylä Paviljonki's clients.

The research on service quality and customers' satisfaction implies a systematic collection of feedback over iterative cycles of service development. The researcher considers a number of decisions that have to be made before implementing the actual research: research tool, target audience to be involved in the research, type of data collection and decisions on sampling. The last one is very important to consider due to the impossibility to include in the research all the trade fair service users (Greener 2008, 10) because of high expenses, limited time available for face-to-face interviews and in some cases refusal of the service customers to be part of the research. However, the sample chosen has to be representative in order the research to bring valid information.

The data gathered from the interviewees is analyzed in a systematical way to generate knowledge for decision making on improvements after each cycle. The deformation of the data has to be prevented because it has the unfortunate ability to render portions of the data useless and therefore create inaccurate results for the research and lead in poor decisions.

To understand the knowledge that is being created through the research and its significant importance, the research team has to have a deep understanding of the research philosophy.

6.1 Research philosophy

It is essential to understand the philosophical stance of the research, which represents the "development of knowledge and the nature of that knowledge" (Saunders, Lewis

&Thornhill 2007, 101), because it highly influences the research methods applied and why those particular methods are chosen. From the reader's point of view, research philosophy provides a good understanding on the factors that influence the research and on how the researchers perceive the research questions.

The philosophical stance adopted by this research is pragmatism, covering also interpretivism. The pragmatism position is due to the practical approach in collecting the data through the research questions (Saunders et al. 2007, 110), which aim at covering various perspectives on the service. Interviewing exhibitors and visitors at Paviljonki Trade Fair Center proved that user-engagement is essential in service development by minimizing the uncertainty in decision making and enabling creation of needed additional services. This approach is consequently put to tests over cycles during the trade fairs organized.

The research also adopts interpretivist epistemology because of the need to take into consideration the factors that influence the respondent during the interview: pressure exercised by the new environment, customers flow in the exhibition hall, etc. Time and place in which the research is conducted has an influence on the clients who give their feedback. The place of the conducted research is the busy trade fair hall, crowded and with plenty distractions. The aim of the exhibitors interviewed is to meet existing and potential customers. Therefore, their focus while being interviewed can be on finishing the interview rather than on providing their real opinions.

In order to understand the influencing factors and the situation the respondent is placed in, the researcher has to enter the world of the research subject (interviewee) and see the world through its eyes (Saunders et al. 2007, 106-107). Understanding the respondents' mindset is critical in getting an insight on the realities behind their answers.

6.2 Research approach

There are two different ways to approach a research: the deductive and inductive approaches. With deductive approach, theory is put to test through the research steps: a hypothesis is drawn from the theory, tested and the results are examined. If needed, the theory is modified according to the obtained results. Inductive approach begins

with data collection in order to understand the nature of the problem. The data is analyzed and from the research results the theory is formulated (Saunders et al. 2007, 117-118).

The present research conducted in Paviljonki adopts a deductive approach because a hypothesis exists from the very beginning which can be stated accordingly: services of Paviljonki can be improved through engaging the user in the service development process. The two research questions are established on the basis of this hypothesis and they aim at gathering valuable information during the three trade fairs: FinnGraf 2009, Electricity Telecommunications Light & Audio Visual 2010 and Tekniikka 2010. The quality of the research questions is put to test during the events. The results of the analysis of the data collected will confirm or decline the theory.

6.3 Research strategy and methods

Purpose of the current research is to find answers to the research questions: How can the existing service be improved and what new services should be developed? Rather than just try to answer these questions by observing and analyzing the services through the perspective of the researchers, the research team is motivating the exhibitors and visitors, who come to trade fairs at Paviljonki, to give their feedback. In this way the service users are involved in the idea generation for new service improvements and the information gathered is precise, up-to-date and relevant for making further decisions.

The nature of this research can be described as exploratory. The exploratory study aims at finding answers to the above mentioned research questions and also at exploring various viewpoints in order to gather diverse information. With the research being mainly qualitative, diverse information provides better insight to the research problem.

The research represents an action research based on the survey strategy because through questionnaires the users can be engaged in sharing their feedback, in this way being an active part of the service development effectively. The present action research focuses on the iterative process of planning, undertaking action and evaluating the results (Saunders et al. 2007, 141). As seen in Appendix 1, research is

planned, executed and evaluated. After each circle, the research moves on to the next cycle where these steps are repeated. As presented in Figure 6, the iterations of this research are represented by the three trade fairs in which this research is conducted in. FinnGraf (24.-26.9.2009), Electricity, Telecommunications, Light & Audiovisual (3.-5.2.2010) and Tekniikka (5.-7.10.2010) trade fairs represent consequently the first, second and third iterations.

Paviljonki Trade Fair Centre Experimentation Pilots

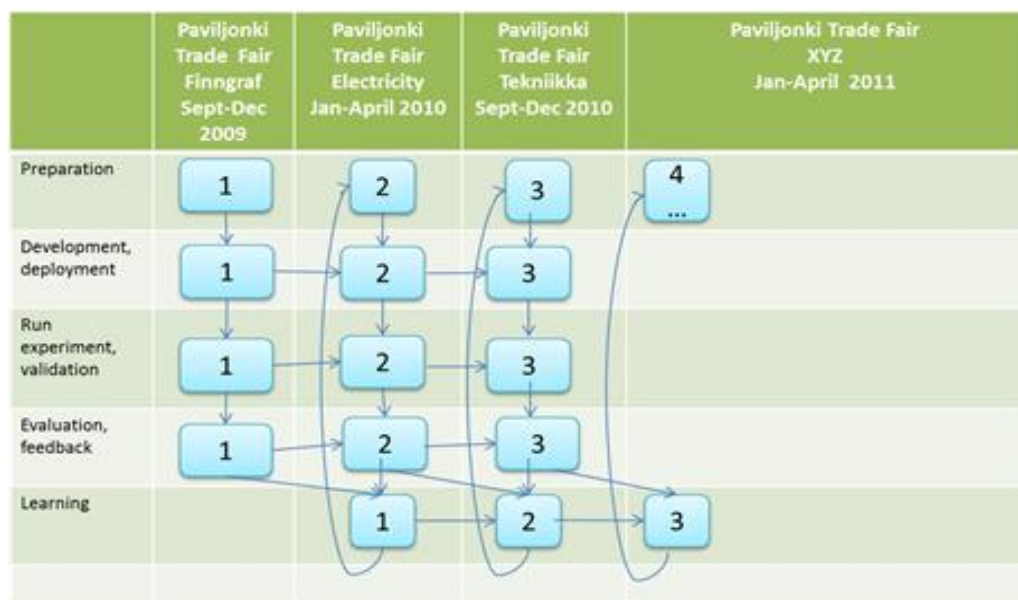


FIGURE 6. Paviljonki Trade fair Center Experimentation Pilots (Krawczyk, Hirsilä, Surugiu, Ruuska&Linna 2011, 2)

Iterations enable to observe the implementation and learning process with the service development. Through iterations it becomes easier to identify the areas which need to be completely redesigned and areas which need little adjustment. Possible new problems and areas of development are more likely to be identified when knowledge on the customers' needs derived from the data collected at the previous trade fairs is available. As a consequence, the results of the service development from the past iterations should be visible in the present trade fair. The preliminary results are represented in Appendix 2.

6.4 Data collection

The data collection is the critical stage when the research team gets in direct contact with Jyväskylä Paviljonki's clients. The exhibitors and visitors are made aware of the feedback collection process and are engaged in sharing their experiences.

Based on the research questions, the research teams developed separate questionnaires. Consistency over the data collected by all the teams is ensured through the elaborated questions that aim at measuring the customers' satisfaction with the service and let them express their attitude toward the service at the trade fairs. This is possible through the open questions that form the questionnaire that is administered through face-to-face interviews.

The essential goal of the research is to capture the service user complaining about the service and giving suggestions for incremental or radical improvements. In this sense, the feedback collection was ensured through interviews and filled in questionnaires.

In order to present the real interaction and enable further analysis of the data, the research teams were provided with video and audio recorders. The recorded data ensured a deeper analysis of the data, taking into consideration not only the information expressed throughout the interview, but also presenting the environment the interviewee was placed in.

The "idea tree" and "idea map" are the new tools implemented at Tekniikka trade fair in order to enhance the data collection. An exhibition stand was set up for the idea tree and map and run by JAMK students. The basic concept of this ideation is to encourage trade fair participants to write their suggestions for improvement on post-it notes and then stick them to the idea tree and on the map of the exhibition hall, as presented in Figure 7. As a motivation, people were offered free coffee or tea in exchange for their ideas. To avoid the idea tree stand only being identified with suggestions for improvement, people were also encouraged to share their positive experiences with the service provided by Jyväskylä Paviljonki.



FIGURE 7. Idea Tree

The information gathered from applying the described tools constitutes the primary data that has to be processed and the significant results presented. To ensure data diversity, the researchers apply shadowing and capture the trade fair hall on pictures. By shadowing, the student in the role of an investigator follows the subject's actions from the moment of entering to exiting the trade fair hall. The subject in the present research is the visitor who comes to the event with set goals: meeting the exhibiting companies, get an insight of the trends within the certain industry, etc. The observation is made on visitors' behavior, enabling an understanding of the trade fair environment seen from the perspective of the participants.

The environment of the trade fair hall, as well as the surroundings were captured on pictures for further analysis and related to the feedback given by trade fair participants. The pictures can complement the results of the data analysis, presenting the real environment of the exhibition hall; marketing signs disposed in the surroundings, traffic signs that show the direction to Paviljonki Trade fair center, etc. A weak point of the captured pictures is that they represent the researcher's view and their interpretation may be affected by his perception of the situation. However, similar to the video recorded interviews, the photographs illustrate the real circumstances.

Sampling

The aim of the research at the trade fairs is to involve all the exhibitors in sharing their feedback. This fact but also the homogeneity of the participating exhibitors (coming from the same or related industries) are the reasons for applying homogeneous

sampling, which is a purposive sampling method that supposes selection of cases from a similar group, and their in-depth study (Saunders et al. 2007, 232). In this sense, the total number of the exhibiting companies was divided by the total number of the research groups, each group being allocated an equal number of companies to be interviewed. The research teams targeted to interview all the assigned exhibitors, but in the case of time limitation, exhibitors were selected for the interview.

Beside the exhibitors, the targeted respondents are visitors. Unlike exhibiting companies, visitors do not experience the service in pre-arrangement of the trade fairs, but only during the events. Their feedback gives a different insight into the service from the perspective of experiences with the trade hall: arrangements of stands, user-friendly environment and information provided, etc. In comparison with the concrete number of the exhibitors, the number of the visitors cannot be estimated but it is considerable. Therefore, the decision to implement heterogeneous sampling was made. The heterogeneous method represents a non-probability purposive sampling method that aims at obtaining diversification in the data collected and does not necessary assure representativeness (Saunders et al. 2007, 232). This decision ensures that a large number of visitors will be interviewed, they belonging to different groups of interest: visiting representatives of legal entities to establish new contacts, citizens interested in the field, students, etc. Questioning representatives of various groups of visitors will give a deeper insight into the service provided from the perspective of the visitor.

Qualitative and Quantitative Data Collection

A set of qualitative and quantitative data was collected during the trade fairs. However, the research team was focused more on the collection of qualitative data. It consists from video recorded interviews with the exhibitors where they were addressed open questions, in this way motivating to give detailed feedback on the service received and experience with the organization of the trade fair and the event itself. The captured feedback forms a rich data set that represents a source for potential innovation (Krawczyk, Hirsilä, Surugiu, Ruuska&Linna 2011, 1). Although qualitative data gives in-depth answers and allows deepening to the root of the research questions, more effort is required for its collection and analyzing. The thread of the qualitative data analysis is that the results are more likely to be influenced by

the mindset, values and experiences of the researcher than in the case of quantitative data.

Although quantitative data is precise and diminishes the deformation of the data, its weak side is that it limits the respondent to the proposed choices. That is an additional reason for the researchers to focus on the collection and analysis of qualitative data to gain the in-depth information on research questions. The research is implemented with the assistance of quantitative data in order to provide a view on the demographics of the respondents: location of the exhibitor company, number of times participating at the trade fairs organized by Paviljonki Trade Fair Center, etc.

The research is based on the information that is generated from primary and secondary data. The primary data is represented by the recorded interviews that require their processing and analysis in order to deliver valuable information. These are the cases for Electricity, Telecommunications, Light & Audio Visual 2010 and Tekniikka 2010 trade fairs, where the exhibitors' feedback was video recorded. Because of the lack of the original video files captured during FinnGraf 2009 trade fair, the research is based on the secondary data that is constituted from the reports written by the research teams which were involved in the data collection and its analysis at the events. As the questionnaires were answered both by exhibitors and visitors, the research on the visitors' satisfaction with the service during the three trade fairs is based on the project reports too. This is because the interviews with the exhibitors' customers participating at the trade fair were not captured on the video camera due to their refusal to be recorded, the research teams' time limitation and their focus on exhibitors' feedback collection.

The secondary data enables the researches to deepen in their research. Yet, the disadvantage of using secondary data is the lack of real control over data quality (Saunders et al. 2007, 262). Every source of secondary data is carefully evaluated and only the ones that are evaluated well enough are included in this research. This way the research, conducted by the students and Lutakko Living Lab, becomes relevant and is able to produce valid information for Jyväskylä Paviljonki.

In order to produce information, it is necessary to subject the collected data to a transformation process so it becomes valuable information (Hardcastle 2011, 7). Collecting the data at the three trade fairs with the help of questionnaires combined

with structured interviews led to the collection of a rich data set. The researchers analyzed the gathered data with the assistance of computer aided qualitative data analysis software (CAQDAS) called NVivo.

The difference of valuable and non-valuable information must be identified. This can be done by assigning different attributes for the information, such as its form, content and timing (op.cit. p. 7). The form of the information: written or oral, video or audio recorded or information existing only in people's minds, can affect the quality of the data. The challenges in collecting primary data are the interviewee's misunderstanding of the asked questions or his lack of knowledge on the subject, these leading to irrelevant content of the information. In addition, language barrier is directly affecting the degree of data accuracy. The foreign language for the interviewer or interviewee can cause deformation of the information gathered. Furthermore, time is the factor that turns the present information irrelevant over a period of time as things change and new practices are taken into use.

The non-valuable information has been found and excluded to avoid the deformation of the data and in order to keep the research relevant and precise.

Processing the data with the help of NVivo

The video recorded interviews, which serve as primary data, were processed and analyzed with NVivo software. The video files were imported to NVivo and transcribed. Transcribing is the process of reproducing the verbal information into written form. The interviews that were held in Finnish were translated and transcribed into English, in this way overcoming the language barrier in further analysis process.

The transcribed interviews were coded into free (no interrelations with other codes), tree (the map of codes) or new nodes. The codes represent the categorized qualitative and quantitative data that facilitates the data analysis process. The process of creating the codes is presented in Figure 8:

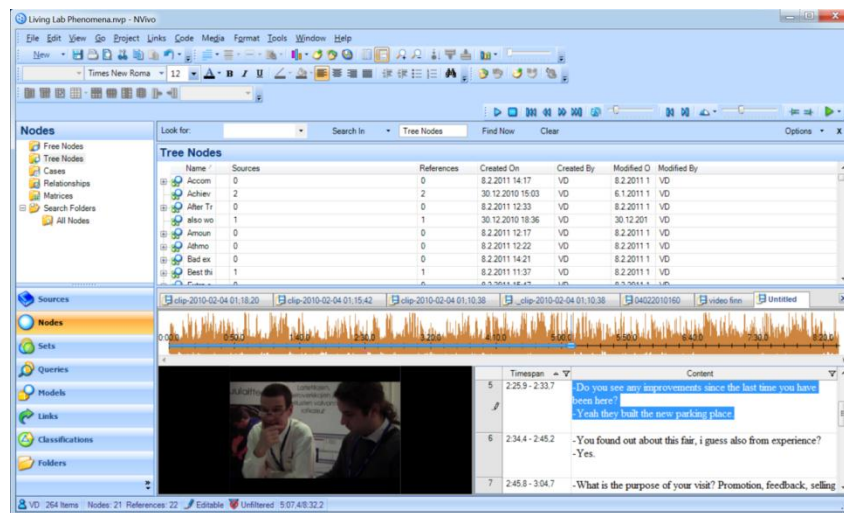


FIGURE8. Coding process in NVivo

The challenge with coding in NVivo system is the group coding caused by individual coding that may lead to inconsistent nodes. The research team overcame this challenge by elaborating the set of codes together and by strongly cooperating throughout the process. The set of tree nodes created during the coding process is presented in Appendix 3.

The research team coded pictures taken during the trade fairs in order to assist the research results. An example of picture coding is presented in Appendix 4. Although pictures represent real moments in time and space, their interpretation is subjective.

More details on the data processing and analysis with NVivo is presented in the published article “User Centred Service Engineering with NVivo at Lutakko Living Lab: The Case of Paviljonki Trade Fair Center” (Krawczyk et al. 2011) attached in Appendix 5.

The data analysis process with NVivo led to the identification of patterns that contribute to the creation of valuable information that will help the company in making corrective decisions for service improvement.

Ethics

An important approach in conducting the present research is ethics, which represents the awareness of the researcher of the morals and taking them into consideration when planning, designing the research, collecting and analyzing the data.

Running the research based on ethics, the potential interviewees were informed of the purpose of the research, who is in charge of the data processing and analysis, to whom the final results are presented and where they will be applied. Based on this, the decision to participate in the research belongs to the trade fair participant. However, the trade fair center's customers are introduced to the significant role they play in the development of the service.

The decision of the interviewee to not be recorded but questioned only by the researcher is respected. The willingness to share the feedback and the time assigned for it is appreciated and valued.

Confidentiality and privacy motivates respondents to give more details on their experience with the service. This is the reason behind the decision to keep the anonymity of the exhibitors and visitors participating in the research.

Transparency of the research

The research is based on transparency principle. The transparency is ensured through the clear and explicit presentation of the research results. Furthermore, Lutakko Living Lab keeps the process of data collection and its processing open to its partners. This enables the third-parties to be aware of the methods used for the research, what are the preliminary and final results and be part of the service development. Transparency also ensures credibility of the research outcome.

6.5 Validity of research

A number of issues related to data quality need to be taken into consideration such as reliability, interviewer and respondent bias and validity (Saunders et al. 2007, 317-318). Although the data collected throughout the trade fairs may vary, its reliability persists because the knowledge created from the analyzed data presents the reality of a certain moment in time.

Since the data is collected through face-to-face interviews, two types of bias need to be examined: interviewer influencing the interviewee during the conversation and vice versa. The answers of the respondent can be affected by the tone of voice and body

language of the interviewer. As the researchers collecting feedback from Jyväskylä Paviljonki' service users are not experienced professionals in conducting face-to-face interviews, a certain amount of data deformation is bound to happen. However, the validity of the results is assured through a deep and detailed analysis of the data collected, taking into consideration all the challenges faced during the interviews and in their analysis: the "noise" of the exhibition hall influencing the respondent's focus on the asked questions, turning implicit knowledge into explicit results of the analysis without causing its deformation, etc.

Validity of the research, which can also be called construct validity, tries to find out if the results of the research really demonstrate what they are supposed to demonstrate (Saunders et al. 2007, 150). It is important to find out whether the methods used in data collection are valid in order to confirm the credibility of information. Paviljonki wants relevant knowledge on its service level perceived by its customers to develop its services to the right direction.

Due to the fact that the research run during the three trade fairs is based on the same research questions, Lutakko Living Lab together with JAMK students is able to provide Jyväskylä Paviljonki with consistent knowledge on its clients' experience with the service and present their suggestions for improvements.

7 FINNGRAF TRADE FAIR RESULTS

FinnGraf is a fair focused on graphical design and the industry behind it with a slight interest in art industry. It is the largest exhibition event of its field in Scandinavia, with hundreds of exhibitors and thousands of visitors mainly consisting of business professionals and professionals of the art world from all over Europe. The fair was held between 24.9 – 26.9.2009.

According to Paviljonki, FinnGraf 2009 fair attracted more than 8 000 visitors, which is considered a success (JyväskyläPaviljonki 2009). This trade fair is organized by Jyväskylä International Congress and Trade Fair Center every two years.

The results of this trade fair are generated from reports, which are secondary data, compiled by the students involved in the data gathering process. These reports are stored in the Lutakko Living Lab archive.

7.1 Exhibitors' Feedback Results

A total of 58 exhibitors were interviewed during FinnGraf 2009 trade fair. Most of the interviewed exhibitors were Finns but there were also exhibitors from Sweden, Germany and other European countries. All exhibitors were interviewed with the assistance of a questionnaire and were asked about their attitudes and opinions toward the services of Paviljonki Trade Fair Center. The results of the analysed interviews and the suggestions for improvement given by the exhibitors are portrayed in the following.

The business fields of most of the exhibiting companies participating at FinnGraf 2009 were manufacturing, retailing and services. This gives information on the nature of the fair. As the fair was directed toward graphical design and art industries and most exhibitors are manufacturers, retailers or service providers, a clearer picture of their needs and wants inside the trade fair hall can be formed.

Many of the exhibitors participate at trade fairs between one to five times per year. Few exhibitors mentioned their participation at more than 10 or even 20 exhibitions per year. Most participating companies have been at FinnGraf in previous years and

also plan to participate in the future. Some exhibitors were not pleased with this fair because of the smaller number of visitors and size of the fair compared to those in the previous years.

The division between international and national companies in FinnGraf is 46% international companies and the rest, 54% are companies operating on a national level. Purposes for participating in FinnGraf are marketing and sales since the main reasons mentioned by exhibitors were to demonstrate and show products, but also gain new business contacts.

On a general basis, the exhibitors are pleased with the organization of the trade fair and the way Paviljonki handles problems. However, a quarter of the interviewed exhibitors were not pleased with the media coverage of the fair because of the decreased number of visitors and the fair being of a smaller size than in previous years. Although a smaller fair attracts more specific business people, not all exhibitors managed to establish new business contacts. This can mean that the marketing of the fair did not reach a big part of exhibitors' potential and existing customers.

Out of the total number of exhibitors engaged in the research, 70% are pleased with the facilities provided by Paviljonki and 24% rate them as excellent. Encounters with the Paviljonki staff were rated as excellent by 48% of the exhibitors. Therefore, it can be concluded that Paviljonki's staff was helpful and friendly in solving exhibitors' arisen issues. Even if the interviewed exhibitors were very satisfied with their experience at FinnGraf 2009, there were 4% of the respondents measuring their experience as average, as presented in Figure 9:

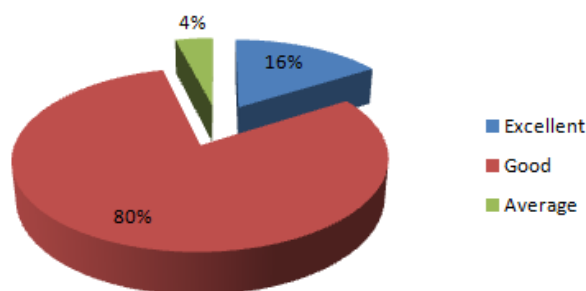


FIGURE 9. Exhibitors' overall satisfaction with FinnGraf 2009

The results on overall satisfaction are promising because none of the exhibitors rated their experience as below average or bad. The challenge for Paviljonki and its employees is to turn the average into good and the good into excellent.

Exhibitors' suggestions for service improvement

Exhibitors are a valuable source of information regarding most of the services Paviljonki has to offer, therefore, their opinions and views on the quality of these services can be seen as crucial for their development.

Several exhibitors would have preferred to have cheaper and more easily available accommodation. Most hotels in Jyväskylä and even in the neighbour towns are fully booked during trade fairs organized by Paviljonki and accommodation can be extremely difficult to find, especially if the decision to participate at the trade fair was made close to the actual time of the event.

The biggest improvement many exhibitors would like to see at future trade fairs is the increase in the marketing efforts for FinnGraf. Many exhibitors feel that FinnGraf 2009 could have had more visitors with more intense marketing. It was mentioned that through directed marketing more business people could be attracted to the trade fair.

7.2 Visitors' Feedback Results

As exhibitors can provide Paviljonki with valuable information related to its most services and, especially facilities, visitors' feedback is a source of meaningful information to Paviljonki too. Visitors are in a position to provide a full picture on how a single user perceives the services in the trade fair center and what kind of improvements could be done in order to enhance visitors' experience and therefore making the environment better for business and individuals.

The results of the visitors' questionnaire are based on the answers of 102 visitors at FinnGraf 2009 trade fair, representing approximately 1,28% of the entire number of visitors. About 90% of interviewed visitors were from Finland and only 10% come from other countries such as Italy, Macedonia, Estonia and Czech Republic.

The main purposes to attend FinnGraf 2009 mentioned by interviewed exhibitors were searching for business partnerships and learning about the new trends of the industry.

Almost 60% of visitors arrived to Paviljonki by car. The interviewees were pleased with the parking arrangements. Some visitors mentioned the high price of parking and wished it to be cheaper. Other means of transportation mentioned were by bus, bicycle, train and by foot.

Out of the total number of the interviewed visitors, 68% were satisfied with the overall atmosphere at FinnGraf, 17% rated it as excellent and 15% perceived the atmosphere as average. A total of 83% of respondents were pleased with the services offered by Paviljonki in such way that 64% rated the services as good and 19% said that the services offered were excellent. Only 17% of visitors rated the services as average and considered bigger improvements for future FinnGraf fairs and for other exhibitions organized at Paviljonki.

Visitors' suggestions for service improvement

In order to improve the atmosphere at FinnGraf 2009, the interviewed visitors suggested exhibitors to offer more performances, especially product presentations and seminars. Respondents look for enlarged space for the stands to exhibitors who want to give presentations and seminars for visitors. These special presentations and seminars can be mentioned in the marketing of the fair and they have the possibility to attract more visitors to FinnGraf and other trade fairs.

Visitors mentioned their interest in international exhibitors because of today's globalized world. They affirmed that a larger international group of companies would give smaller companies a chance to create international business contacts. In addition, interviewees required stands with refreshments drinks.

7.3 Conclusion of FinnGraf 2009

FinnGraf 2009 was perceived as a well-organized trade fair. In order to keep it at a high professional level to which customers, both exhibitors and visitors, want to participate in the future, Paviljonki has to keep developing its services. This is best

done by engaging the service users into the process of service development and making them see that their wishes are being heard and by making them understand that providing feedback is valuable and does not go unnoticed.

Among the main issues that both exhibitors and visitors encountered during FinnGraf 2009, were parking and the small size of the fair in such a way that exhibitors would have wanted to see more visitors at the fair and visitors would have wanted to see more exhibitors at FinnGraf. As the price of parking is per day, it could be changed to be charged per hour to better meet the requirements of visitors because most visitors will not stay at the trade fair for the entire day. In order to avoid making the exhibitors pay a high price for parking, the price of parking could be included by Paviljonki in the FinnGraf participation fee paid by exhibiting companies.

Extended marketing is needed to increase the number of participants. Providing excellent service to both exhibitors and visitors will result in increase in customer loyalty and generate word-of-mouth, which will build the reputation of Paviljonki as a world class trade fair center.

As the areas for improvement were identified at FinnGraf 2009, the progress on solution implementation would be closely examined at the next trade fair Electricity, Telecommunications, Light& Audio Visual 2010. Service users would be engaged in the service development process also at the above mentioned trade fair being held at Paviljonki International Congress and Trade Fair Center.

8 ELECTRICITY, TELECOMMUNICATIONS, LIGHT & AUDIO VISUAL TRADE FAIR RESULTS

The Electricity, Telecommunications, Light & Audio Visual Trade Fair is an international, the largest and most traditional exhibition in the industry of electricity (JyväskyläPaviljonki 2010).

The event, during which the research teams collected the data, was held during three days: Wednesday, Thursday and Friday (3.-5.2.2010). According to Paviljonki, the exhibition attracted almost 16000 visitors (JyväskyläPaviljonki2010). The satisfaction of the exhibitors with this number of visitors represents one way to measure the success of the exhibition.

The research results are generated from the exhibitors' and visitors' interviews. The feedback analysis of the exhibitors and visitors are kept separately because both parties have their specific roles in the fair and have certain types of expectations from the event and the service received.

8.1 Exhibitors' Feedback Results

Participation at the event and in data collection enables the research team to have a clear understanding of the event and the environment the exhibitors were placed in. However, the analysis of the trade fair is held on the primary data constituted from 20 video interviews with exhibitors that represent a real evidence of the shared feedback.

The advantage of the video interviews is that the researcher does not only have customer speaking, complaining and giving suggestions for improvement, but also the chance to analyse the body language of the interviewee. Yet, the pressure that the video camera can execute on the respondent must be taken into consideration.

Companies that participated at the trade fair run their operations on national and international level, as presented in Figure10:

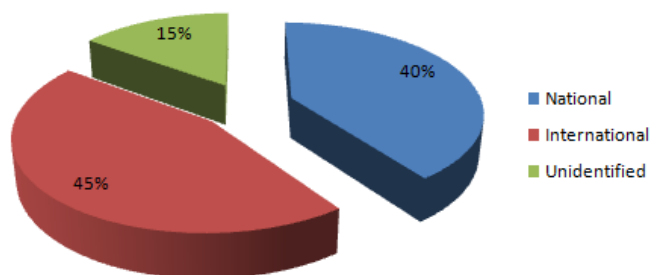


FIGURE 10. Type of companies participating at Electricity, Telecommunications, Light & Audio Visual 2010

Because of the noise in the trade hall, exhibitors' focus on their customers and distraction from the questions, a quarter of the respondents did not identify their company's type. Nevertheless, the feedback of both national and international companies is very critical in service development because they can both share their experience with previous and present national and international exhibitions. In this sense, 50% of the respondents stated that they participate more than five times a year at trade fairs organized in Finland and abroad, out of which 10% participate at exhibitions also in the role of visitors in order to get new insights of the situation within their business industry and meet new B2B partners.

Along with the exhibitors' experience with trade fairs abroad and at other exhibition halls within Finland, the previous experience with Paviljonki's service is essential in identifying the current perceived improvements. The analyzed interviews show that 45% of the respondents have participated earlier at the events organized by Jyväskylä Paviljonki Trade Fair Center. Out of these loyal exhibitors, 10% keep coming back at each Electricity, Telecommunications, Light & Audio Visual trade fair. Moreover, 25% of the total number of interviewees identified the exhibition as a historical moment for their companies since it was the first time to exhibit their entity and products at a trade fair. As stated by them, they visited earlier the trade fairs organized by Paviljonki as visitors, and only after learning about the events, decided to participate as exhibitors.

When asked the way they found out about the trade fair, 35% of the respondents mention that the exhibition became a tradition, as affirmed: "from experience", "previous experience", "visited it for several years", etc.

In order to understand the needs of the exhibitors at the trade fair, it is essential to identify their purpose of participation. The respondents followed various aims at the same time, meeting new and existing customers being the most of interest to 50% of the exhibiting companies. Along with customer contact, 45% of the companies participating at the fair aimed at promoting the company and its products, and 15% directed their efforts toward selling and networking with participating companies.

When asked to compare the trade fairs organized by Paviljonki with other trade fairs arranged in Finland and abroad, 25% of the respondents stated that Paviljonki is well organized, more flexible and it is easier to cooperate with it, as affirmed: “Operating and doing business with Paviljonki is more human when compared to Helsinki. The problem of colouring the white cord into black was solved at no cost”, “There are more visitors in Paviljonki than in Helsinki and Oulu”, ”There are more companies from the same business field” and “...the best fair. In comparison with Helsinki fair center, Paviljonki is assessed with 5”. Because of the central location of Jyväskylä, it attracts a large number of customers from all the country. In addition, it is an industry specific trade fair that attracts companies from the same field in the same place throughout the exhibition days, this making the fair a very attractive event for both exhibitors and visitors who learn about their partners and competitors.

Continuous development of the service is part of Paviljonki’s activity. Its customers’ perception of the improvements is very essential in identifying the degree of clients’ awareness of their previous suggestions’ implementation. In this sense, 25% of the interviewed exhibitors noticed improvements. Out of this, 10% of the respondents were aware of improved parking place, as stated by them: “new parking place” and “there is parking garage”, others stating facilities: “better air conditioning” and improvement of the fair at a general level: “the fair has improved significantly”.

Exhibitors’ satisfaction with the service

In order to be able to measure the success of the organized event, it is essential to assess the degree to which the service of Paviljonki enables the fulfilment of exhibitors’ expectations and achievement of the set goals for the trade fair. With this aim, there were investigated exhibitors’ assessment of the information package that was received in time before the trade fair, the logistics operations run by Paviljonki that enables a better service in arranging the trade fair stands, facilities provided

throughout the events, problems faced during the event, etc., all being presented in Figure 11:

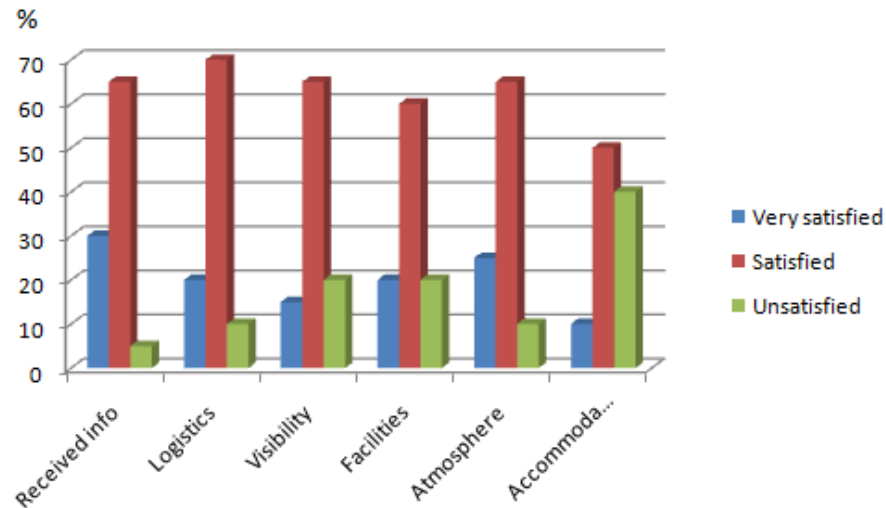


FIGURE 11. Degree of exhibitors' satisfaction with services at Electricity, Telecommunication, Light & Audio Visual 2010

The information package received before the trade fair was seen as very useful by the exhibitors, 30% of respondents finding it very satisfying because all the information was presented in time and additional services were provided, as mentioned by the interviewed companies' representatives: "Information flow has worked really well", "very good" and "It contained everything we needed: card and name tag". The number of satisfied exhibitors with the received information constitutes 65% of the interviewees. The information flow through emails was appreciated by 20% of the satisfied companies. This proves that email is a very important element in communication that saves the time of Paviljonki's customers. Yet, there were identified customers that have experienced some lack of information, they constituting 5% of the interviewed exhibitors. They were not aware of the meeting rooms where they could have meetings with their customers and they wished to receive more information on the possible free time activities in Jyväskylä: "info on restaurants across the town" and "would like to see more extra curriculum activities organized by Paviljonki and the hotel". However, the last ones are not directly related to the organization of the trade fair, and 35% of the total number of respondents do not require information on free time activities and support that it is not Paviljonki's

responsibility: “no need”, “the brochure that already exists on what to do and see in Jyväskylä is enough” and “not the job of Paviljonki”.

Logistics was well run by Paviljonki throughout the entire period of stands' arrangements. The only problem faced by 10% of the exhibitors was the long line in moving-in process: “difficulties in move in process” and “long line to move in by car, too heavy material to carry in hands”.

Although the companies have equal chances to attract more customers at their stand during the trade fair, the location of the stand can play a critical role in some of the situations. The less satisfied exhibitors with their location, that constituted 20% of the interviewed customers, stated that they would prefer for the next trade fair a more central location, confirmed through: “might be more central located”, “I would like to have our stand in the bigger hall”, etc. However, the majority of the exhibitors was satisfied with their stand location and the visibility it gives (65%) and even very satisfied (15%). Here it is important to mention that the company has a direct impact on the location through the time of registration for the event, sources available for participation and other factors.

Along with internal factors, external factors represented by facilities offered by Paviljonki shape the experience of the exhibitors with the trade fair service. The trade fair center's facilities are perceived as of high level by 20% and good level by 60% of the respondents. Yet, 20% of the interviewed exhibitors experienced some problems with the service: long lines and crowded restaurants, high price, lack of enough equipment for arranging the stand and lack of enough parking places: “parking the car was problematic...no available place close by”, “long lines and expensive food in the restaurants”, “the extension cable fried on the first use” and “not enough sockets led to troubles in connecting all the electrical equipment”. In addition, 10% of the respondent found the layout of the trade fair hall as difficult to move around.

All together, the general atmosphere during the trade fair is positive. Only 10% of the interviewed companies' representatives affirmed that the atmosphere is affected by the lack of customers. This was caused by the little number of customers that approached their stand. From the total number of interviewed exhibitors, 25% of the respondents wished for more customers. This is because the cost of participation at the trade fair is very high and they expect it to be remunerated with new or existing customer

contacts. Exhibiting companies' satisfaction with the number of visitors is presented in Figure 12:

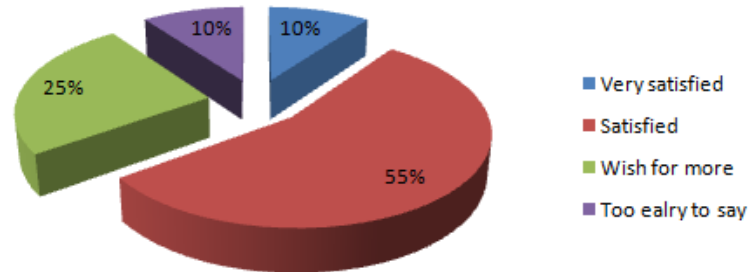


FIGURE 12. Exhibitors' satisfaction with the number of visitors at Electricity, Telecommunications, Light & Audio Visual 2010

It is important to specify that the research teams were facing time pressure. That is why the feedback collection started in the first day of the trade fair when the respondents could not give full answers to the questionnaire because it was too early to conclude the exhibition's results.

There has been noticed a correlation between the exhibitors' satisfaction with the number of visitors and the advertising of the trade fair – the more customer contacts the exhibitor makes, the more satisfactory he finds the advertising of the event. There were 25% of less satisfied respondents, who suggested improvement of advertising and a better choice of channels for marketing communication - professional journals and magazines, since Electricity, Telecommunications, Light & Audio Visual is an industry specific trade fair.

Good vs. bad experiences

From the collected and analysed data, two main characteristics were underlined as best experience at the trade fair: trade fair center's location and its specialization in a specific industry. This is confirmed by 10% of the respondents who mentioned the location of Jyväskylä Paviljonki as a strategic asset for the company: "most popular location in Finland" and "best location for fairs - center of the country". The specialization of the fair in one industry –electricity which led to a congregation of companies from the same industry was perceived as the best experience by 10% of the

interviewees, as affirmed: “professional fair concentrated on our business field” and “large spectrum of companies from the same business field”.

In addition, there were single best experiences perceived by the respondents, which are:

- flexibility of Paviljonki’s employees which led to an enhanced customer satisfaction with the trade fair service, as remarked “Paviljonki is very flexible, also in building the stand”
- customer contacts that remunerated the efforts of the exhibiting companies to participate at the trade fair
- the magazine elaborated during the fair that presents useful information of the event and its flow, as stated “Fair magazine is a good service, especially when it is well edited”.

Because of different approaches and experiences with the trade fair service offered by Paviljonki, the interviewed exhibitors perceive the same situation in various ways, even in total opposite ways. This is the case of 10% of the exhibitors who wished for more customer contacts, as affirmed “hoped for more contacts “and “expect more visitors”.

Difficulties in finding accommodation in Jyväskylä were perceived as a bad experience by 20% of the interviewees. This situation is caused by too little number of accommodation places, problems in booking the hotel and its location at long distances from the trade fair center, as mentioned: “problems with booking the hotel and very expensive “, “problems with accommodation, we stay in line”, “hotel booking represents an unsolvable problem because the hotels have to survive all year” and “accommodation is 30 km from the city”. The problem is that hotels have to run their business all around the year, but the highest demand for accommodation is during the trade fairs organized by Paviljonki, when a large number of exhibitors and visitors from Finland and abroad are participating at the event.

The service of the restaurants was seen as expensive and very crowded by 10% of the interviewees, this fact being confirmed by “long lines and expensive food in the restaurants” and “crowded restaurants”. In addition, 10% of exhibitors experienced troubles with electrical equipment – with electrical cord and lack of enough sockets:

“the extension cable fried on the first use” and “not enough sockets... we had troubles in connecting all the electrical equipment”.

Single less pleasant experiences mentioned by the respondents are:

- customers with various interests caused by the specialization of the trade fair in several business areas, as stated “customers too wide spread: stores for electricity, customers of telecom or lightening equipment”
- high participation price
- difficulties in registering online for the event: “difficulties in making the reservations”
- difficulties in finding the way in the trade fair hall: “Hard to find your way around Paviljonki”
- the place for the stand was not prepared for the next use: “carpets' plastic was not removed so we had to do it ourselves”
- the name of the exhibiting company was not listed on the website of the exhibition: “no name added on the website”
- parking: “problematic because there was no available place close by”.

The service company learns from the complaints of its customers. It takes a lot of efforts to satisfy all Paviljonki’s customers, that is why the patterns represent a priority. However, each complaint is taken into consideration.

Suggestions for improvement

Involving service customers in giving their feedback and suggestions for improvement enables Jyväskylä Paviljonki to develop its service according to the changing needs and wants of its customers and diminish the risk in failing to fulfill its customers’ expectations.

From the processed data, exhibitors’ suggestions for improvement were identified, that can be divided into five categories: suggestions for advertising, facilities, trade fair hall layout improvements, accommodation and other proposals for service development.

- Suggestions for improving the advertising campaign

Suggestions for improving the advertising campaign for the future trade fairs were given by 15% of the interviewed exhibitors, the ideas shared being: “better media coverage...to be more visible...it is a professional exhibition, so maybe magazines, not television and radio”, “more exhibition advertisements on Internet” and “more announcements in Russian and other languages”.

➤ Suggestions for improving facilities

From the exhibitors engaged in interviews, 15% mentioned facilities as one of the areas to be improved by Paviljonki. The suggestions for improvement were related to free internet connection, improve the restaurant services and diminish the lines, one of the options being setting a R-Kiosk in the trade fair hall, as stated: “Free Wireless”, “because of long lines and expensive food the restaurant services should be improved” and “introduce a small kiosk: R-Kiosk in the fair center”.

➤ Suggestions for improving the layout

The exhibiting companies were concerned with the improvement of the layout, 15% of them proposing to locate companies from the same business field close to each other and also display maps around the exhibition hall in order to ease the movement around the trade fair hall, as suggested: “Place companies from the same business field in the same area, the layout will be easier to navigate”, “place closer companies from the same field... now everything is dispersed all over” and “there could be some map at the door”. The map of the trade fair hall is displayed at the entrance of the hall, but placing maps all over the trade fair or attaching the map of the exhibition hall in the information package of the exhibitors and visitors will lead to a clearer movement around the trade fair.

➤ Suggestions for solving the accommodation problem

Accommodation continues to be an emerging problem. The respondents face difficulties in finding and booking hotels for the period of time when the trade fair is held. That is why, 15% of the respondents suggested building more hotels to increase the accommodation capacity, Paviljonki to be involved in finding accommodation and offer transportation to the trade fair hall from hotels, especially in the case when the hotels are located outside Jyväskylä, as referred by exhibitors: “more hotel accommodation”, “should include accommodation during exhibition period” and

“arranged transportation from hotels to Paviljonki and back... it is quite a small town, not too many taxis”.

➤ Other proposals for service improvement

Along with the suggestion mentioned above, there were some unique ideas for improvement that are not left aside, they being the following:

- improvement of the timetable of the trade fair: “The opening ceremony moved for tonight. This gives only one evening to invite customers”, “timetable displayed in a better way”
- make the information access easier: “information was somewhere to be found but wasn't in the information folder”
- introduce the bar coding system that will enable the exhibitor to register its customers that visit his stand for statistical purposes: “the barcode system should be included in the stand so you can count the visitors”
- increase the number of available electrical equipment to put at exhibitors' disposal: “more sockets” and “buy new extension cords”.

The exhibitors' feedback is a very critical source for suggestions for improvement of the trade fair service because they share not only their fulfilled or unfulfilled needs, but possess the knowledge on the visitors: what attracts visitors to a stand, what the purpose of the visit is and how their needs can be satisfied.

8.2 Visitors' Feedback Results

Visitors represent very critical players in the process of a trade fair organization because the event is designed to attract more customers and make the exhibitors' products aware to their existing and potential consumers. That is why Paviljonki should maintain its customer-centred service, which will be turned into a customer-driven trade fair service in the nearly future.

Engaging visitors of Jyväskylä Paviljonki in sharing their feedback on the service experienced at the trade fair is very essential in building a pleasant and memorable

customer experience. This is the reason why the research teams conducted interviews with visitors at the exhibition.

The research on visitors' satisfaction with Jyväskylä Paviljonki' service is based on the secondary data, constituted from 150 interviewed persons, out of which 65% attended the exhibition with the purpose of finding information on the industry trends (43% of the respondents) and new products (22% of interviewed visitors), as presented in Figure 13:

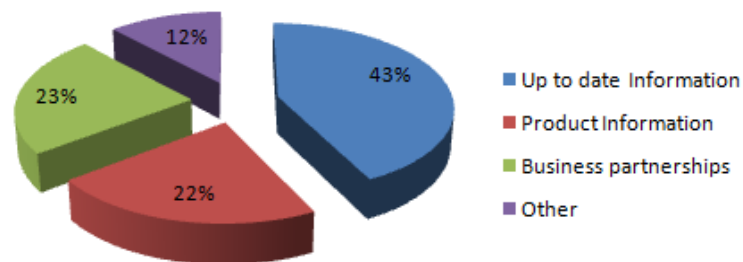


FIGURE 13. Visitors' purpose of the visit at Electricity, Telecommunications, Light & Audio Visual 2010

The category of other purposes includes the students' interest in the event and their visit based on the recommendation of their teachers. This segment of visitors found out about the trade fair from their professors, which constitutes 11% from the information sources. This fact proves that there is an interest from the academic field in Paviljonki's service which is seen as an opportunity to interact with the real business world and implement knowledge through research.

The good customer relations and loyalty of the customers toward their partners was noticed through the information sources that were named by the visitors: 21% mentioned that Paviljonki informed about the up-coming event, while 19% received an invitation from the exhibiting companies, as presented in Figure 14:

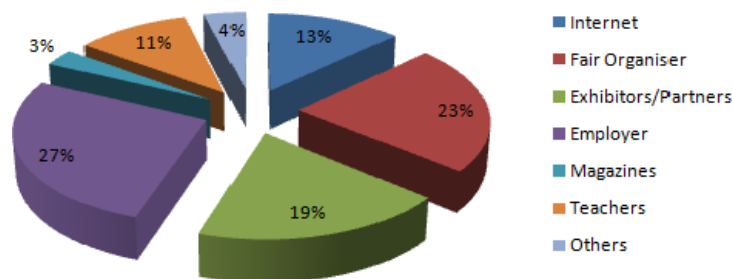


FIGURE 14. Information sources on the organization of Electricity, Telecommunications, Light & Audio Visual 2010

The main internet source constituted the website of Paviljonki, where visitors that are active players in the electricity, audiovisual and lightening industries follow the upcoming events. The website is perceived as a good source of information on the exhibiting companies, which helps in planning the route around the trade fair hall, as stated: “the websites offers a better way to orient and pick interesting companies”. The better experience with the service and satisfaction of the needs the customer receives, the more interested he becomes in attending the trade fair in the future. Therefore, visitors’ experience with trade fairs is an essential source of information on how the trade fair customer perceives the organized event by comparing to the services offered at other trade fairs. From the total number of respondents 69% had previous experience with trade fairs organized by Jyväskylä Paviljonki Trade Fair Center and other exhibition centers, while 31% were participating at the exhibition for the first time.

The opinions of the services received at Paviljonki were contradictory. However, the professional touch of the trade fair was appreciated by the visitors, as stated: “more professional”. The exhibition was seen as intensive, well organized and with good facilities and customer service by 36% of the respondents who participated at trade fairs earlier, as affirmed: “very intensive atmosphere”, “lots of happening in a small area”, “bigger, better”, “very spacious facilities for the stands”, “the halls are divided into areas -it is more clear”, “there are restaurants and cafes in Paviljonki”, etc. Yet, some of the interviewed visitors described the present event as similar to those organized by other exhibition halls, as mentioned: “not significantly different from other fair centers”, “Paviljonki is suitable, although Pirkkala (Tampere) is better organized”, etc.

The customers' attitudes toward the services offered by the trade fair center are shaped by their experiences with the trade fair hall, interaction with exhibitors and assistance offered by Paviljonki's employees.

Good vs. bad experiences

The good experiences felt by the visitors of Electricity, Telecommunications, Light & Audio Visual Trade Fair contribute to the creation of the image of Paviljonki and the events it organises.

The respondents identified the variety of exhibiting companies and their innovative products' presentations as the main best experiences, this being proved by: "a lot of exhibitors", "a lot to see", "variety, diversity", "new products", "product presentations" and "innovations in light sector".

Beside the diversity of the trade fair, there were more remarks on positive experiences, as follows:

- meeting new people, creating new contacts and networks establishment
- Paviljonki's service
- well organised exhibition.

Positive feedback on the service received represents remuneration to Paviljonki's employees for their efforts in organizing the exhibition. However, constructive feedback on the problems faced is a more valuable source of ideas for improvement that must be taken into consideration.

Along with the positive experiences, the interviewed visitors faced some difficulties, which were identified by the research team. This knowledge gave Paviljonki the chance to improve its service, especially in the layout of the exhibition hall. It was perceived as unclear, this causing confusion and led to visitors getting lost in the hall's areas, as stated by 8% of the respondents: "messy layout", "easy to get lost", "got lost all the time, it was a bit unclear", "more signs needed", "maps are too small, not enough signs, marking of the halls is confusing", "it was hard to find the right place", etc. The problem of getting lost was experienced both by visitors and exhibitors.

Restaurant services represent another element of the service that attracted the attention of the interviewed visitors. The problem faced were the long lines in the restaurants and high prices, as mentioned: “the restaurants were too small”, “not enough food”, “not enough restaurants”, etc. The reason for the restaurants being crowded was the large number of visitors and exhibitors engaged in the trade fair.

Along with the cafeterias, accommodation remains a problem faced not only by exhibitors but also by visitors. Although visitors mainly make a one day trip to the trade fair, there is still request for more hotel accommodation capacity, especially for foreign visitors: “too few opportunities to get a hotel” and “every single hotel from Jyväskylä to Laukaa is full”. In addition, the international visitors experienced difficulties in finding material provided in English, as affirmed: “the brochures found are only in Finnish”.

Other single remarks were detected during the interviews, they being the following:

- the high parking price: “the price for parking is ridiculous”
- difficulties with online registration for the event
- the cloak fee
- the opening hours: “the trade fair was closing too early”.

Based on the problems faced, comparison of the present fair with the ones visited earlier and noticing missing services, the interviewed visitors shared their suggestions for service improvement.

Suggestions for improvement

The suggestions given by the visitors who participated in the research were categorized into five groups according to the area of improvement that the given ideas related to: ways to reorganize the layout and facilities, improvement of customer service and organizational support.

- Suggestions for improving the layout

Because of the complexity in moving around in the trade fair hall, the respondents suggested to place companies from the same business field in the same exhibition hall: “put the same industry in the same hall”. The same suggestion was given by

exhibitors. They also required clear maps of the layout to be available in the hall, but also attached to the information package that the customers received. In addition, color and “you are here” signs were required by the visitors in order to ease the movement among the hall, as stated: “map of Paviljonki hall”, “map in brochures”, “more detailed maps”, “better signs”, “color (codes) for the areas”, “more visible signs around the fair area...the signs could be a little bit bigger and placed a little bit higher”, etc. Furthermore, visitors are willing to receive more guidance that will enable them to save time when trying to find the exhibitors of interest: “more guidance”, “clearer guidance”, “special program with guides, who will take them through the exhibition and show what they want, certain products”, etc. A suggestion coming from the research team is to place Paviljonki’s representative who have the knowledge of the exhibitors’ location in the trade fair hall and lead visitors in the right direction.

➤ Suggestions for improving facilities

Although the visitors were satisfied with the facilities offered, the suggestions for improvement were given to restaurants and special areas for meetings and small breaks. The respondents shared their ideas of increasing the number of the restaurants and make them more visible, supported by: “increase the number of restaurants”, “more restaurants”, “increase the visibility to cafes and restaurants”, etc. A simple solution to the long lines in restaurants was to build small points where refreshments can be bought, idea generated from: “refreshments like water available elsewhere as well, not just in the restaurants”.

Areas for discussions were another requirement of the visitors. The need not to be bothered by the trade fair noise while having a meeting with business partners is the driver for this suggestion. This fact is supported by the following: “some private areas, VIP zones for discussions ... without a lot of noise and interruption from the outside, so that they can concentrate on the deal”. Together with exhibitors, the interviewed visitors wanted to have internet access in these specialized areas, as well as in the trade fair hall.

➤ Suggestions for improving the existent services

Visitors who participated in the research underlined their will to make Electricity, Telecommunications, Light & Audio Visual an international trade fair: “make the

event more international”, “more international touch”, etc. This is one of the reasons behind the requirement of providing information in English, including the brochures, as stated: “more information in English”, “brochures in English”, and creation of a “language service”.

Other suggestions were related to:

- presentation of exhibiting companies: “presentations - to learn more about a certain company, to narrow the frame of business”
- having the car parking free of charge: “free parking”
- free cloakroom: “no fee for leaving coat”.

➤ Suggestions for improving the organizational support

The support that the visitors ask from the trade fair organizer concerns the accommodation. The respondents suggest Jyväskylä Paviljonki to offer its help in booking hotels, by sharing information of the existing accommodation and contacting the hotels. The suggestion of the research team is to have agreements with them during the exhibition period.

8.3 Shadowing Results

Shadowing gives an insight on consumer behaviour and enables to notice the challenges they face when interacting with the trade fair services. During Electricity, Telecommunications, Light & Audio Visual Trade Fair 2010 the research students shadowed 23 targets. The time scale assigned was 15 minutes from the visitors’ entering the trade fair, this being the case of 87% of the targets. In the rest of the situations, the assigned time was the entire length of stay of the visitors: one hour in 9% of the cases and 5 hours in the remaining 4% of the target visitors.

It is important to mention that only 30% of the analysed visitors came into groups that split into small teams in order to visit all the trade fair halls.

In the case of the visitors that were shadowed only when entering the trade fair, 60% experienced difficulties with the registration. However, only 25% of them received

help from Paviljonki's employees. In addition, this target group had unpleasant experience with the cloakroom, 35% of them complaining about the cost and the slow service.

In the case of shadowing the visitors throughout their entire length of stay at the trade fair, the targets checked in through the registration and cloakrooms without any problems and after using the services of the restaurants (coffee), they entered the exhibition area. Based on their route in the trade fair center, visitors were divided into two categories: visitors with a clear set goal to reach during the fair (meeting certain exhibitors, establishing networks, etc.), this group constituting 67% of targets and visitors interested in attending the exhibition for own purposes, this group being represented by 33% of the visitors.

The number of the visitors that were subject of shadowing does not cover all the visitors of the event, but enables to detect the problems that the trade fair customers may face during their visit.

Things noticed by the research team

The exhibition hall was kept in proper conditions. However, the smoking areas placed at the entrances needed consideration because their disorder creates the first impression of the service.

8.4 Conclusion of Electricity, Telecommunications, Light & Audio

Visual 2010

The overall event was perceived by Jyväskylä Paviljonki's customers as a success: exhibitors were offered the necessary services in arranging the stands and in maintaining them, while visitors were given the opportunity to meet the exhibitors from the same industry gathered in one place.

The improvements noticed during this trade fair are the online registration and arrangements of meeting rooms. The online registration for the event saved customers' time and avoided the long lines at the entrance in Paviljonki. Customers

perceived the presentation rooms, suggested to be improved by exhibitors and visitors of FinnGraf 2009, in a positive way since it was an opportunity to better present the company and have a closer contact with exhibiting companies and visitors. However, the information flow concerning facilities for meeting and presentation rooms was not strong enough to reach all the exhibitors, this causing dissatisfaction.

Even if the interviewed exhibitors and visitors are satisfied with the service, there are some areas that need consideration and improvement, these being:

- the layout of the trade fair by rearranging the position of the exhibiting companies from the same industry branch
- facilities by having more restaurants, refreshment points and small kiosks in order to avoid the long lines, introduce free wireless internet
- better information flow concerning the possibilities to book meeting and conference rooms for product and company presentations
- services as more parking places, more electrical equipment available for exhibitors
- assistance in registration for customers that did not register online, displaying the map of the hall and more visible signs, as well as Paviljonki placing employees in each hall to orient visitors in the right direction, in these ways avoiding visitors getting lost
- maintaining the exhibition area in proper conditions (smoking areas)
- accommodation by having agreements with hotels to ensure the availability of rooms during the events organized by Paviljonki.

The new service suggested by exhibitors was the bar coding system that will enable the exhibitors to register its customers that visit their stands for statistical purposes. This idea was passed to Paviljonki. The implementation of the suggestions of the customers and research team will be identified during Tekniikka 2010 Trade Fair.

9 TEKNIikka TRADE FAIR RESULTS

Technology exhibition Tekniikka represents gathered business players from automation, maintenance solutions, electronics and software industries (JyväskyläPaviljonki 2010). This professional trade fair gives an insight in the industry of technology and on its trends.

Tekniikka 2010 took place from Tuesday to Thursday (5.-7.10.2010). The trade fair attracted over 10,000 visitors (JyväskyläPaviljonki 2010). This number proves the interest of professionals in the exhibition.

9.1 Exhibitors' Feedback Results

The exhibitors' satisfaction with the trade fair service offered by Jyväskylä Paviljonki during Tekniikka 2010 is based on primary data which is constituted from video recorded interviews with 40 exhibiting companies.

Tekniikka remains a significant trade fair that attracts companies from the field of technology, 48% of the exhibitors involved in the research are running international operations, as presented in Figure 15:

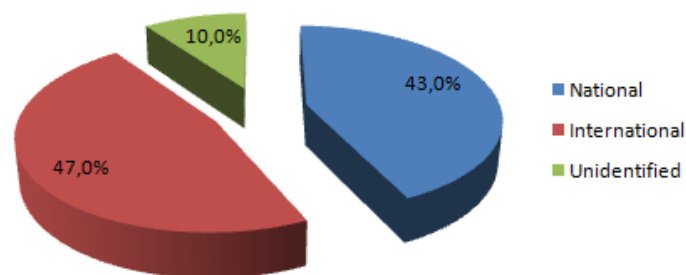


FIGURE 15. Categories of exhibiting companies at Tekniikka 2010

The national companies include also local companies that are interested in making themselves known within the industry, establish partnerships and learn from the new trends within the business field.

The respondents' previous experience with trade fairs contributes to generating new ideas for improvement for the existing services offered by Paviljonki. However, the first impression of participation at the trade fair and all the necessary assistance that is needed to the first time participants at the events organized by Paviljonki gives a deeper insights on the elements that the company must emphasize on: the detailed information package, assistance in building the stand, making known the possibilities to present the products in separate rooms designed for meetings and presentations. The insight of the new customers were analysed based on the 20% of the respondents that participated for the first time at the exhibition.

From the 80% of the respondents, who had previous experience with trade fairs, 40% participated at international exhibition abroad, some of the countries named being the USA, Germany, Netherlands and China. Their participation at events organized outside Finland, as well as within the country makes them a valuable source of information of ideas for improvement when asked to compare the previous exhibitions they visited with Tekniikka 2010. Almost every fourth interviewed exhibitor said that Paviljonki is better than the fair centers they were comparing to, stating: "compared to other trade fairs this is better, the position is good, good infrastructure, center of the city, good connections", "this is the best place in Finland to have trade fairs... flexible, not a bureaucratic place... nice place" and "high technical level".

Over 53% of the exhibitors who had previous experience with Paviljonki trade fair mentioned that the service improved lightly through more car parking spaces, better service, etc. However, 3% of the respondents experienced troubles with the paying the parking place, as complained: "no improvements, has gone worse... everything costs more, and for instance the parking meters only take coins".

There are factors that influence the overall experience with the trade fair, they being related to the services that Paviljonki offers to its exhibiting customers like move-in process, catering, security and cleaning, all together contributing to the creation of the atmosphere of the exhibition. The distribution of the results of the analysis on the satisfaction with these services is illustrated in Figure 16:

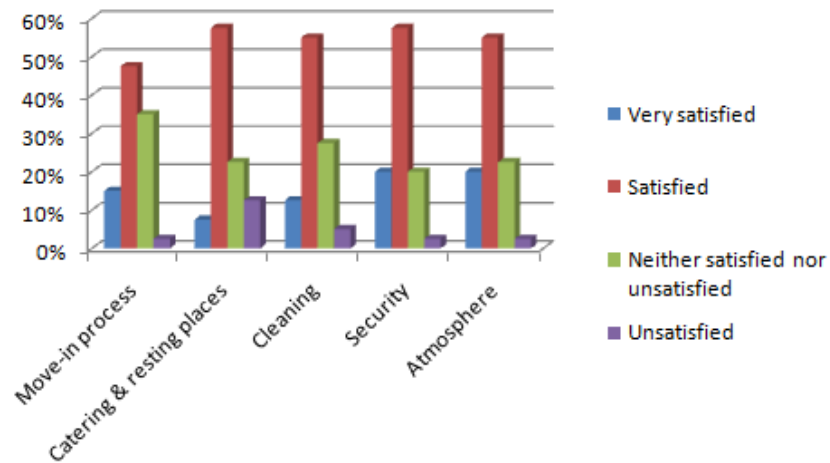


FIGURE 16. Degree of exhibitors' satisfaction with service at Tekniikka 2010

The assistance offered by Paviljonki's representatives during the move-in process led to 48% of the customers being satisfied and 15% very satisfied. The reason behind the 35% of the respondents keeping the position of "neither satisfied nor satisfied" is that they did not possess the knowledge on this issue since they were not directly involved in the process.

Although the exhibitors were satisfied with the restaurant services and resting rooms, a particular attention was given to the 13% of the respondents who were dissatisfied with the catering services, the reasons being the poor menu, overpriced meals and lack of general seating areas outside the restaurants, as mentioned: "should have a little bit more variety of the menu", "the space is not so comfortable", etc.

The work of the cleaning service was evident to over half of the respondents. However, the unsatisfied exhibitors were claiming that they did not see any cleaning person. The fact behind this issue is that the general cleaning is done before each exhibition day and the cleanliness is maintained throughout the day.

Along with the cleanliness, security plays an essential role in creating the pleasant and safe environment for the exhibition. The safety was felt by 58% of the respondents who identified it as satisfying and 20% as very satisfying, these facts being confirmed

through: “I feel safe. I don't see the security, but it's like automation, it should work well and you shouldn't find out that it exists”, “I am pretty safe”, etc. In spite of satisfied exhibitors, there were 3% of the respondents who were worried about safety because did not see any of the security person in the trade fair hall.

The trade fair, at general level, was a success and the effort of the trade fair center's employees was appreciated by the respondents. Even if the overall atmosphere was very pleasant, the dissatisfaction of 3% of the visitors was caused by the lack of customers, as stated: “pretty slow the first day”, “lack of customers”, “little number of customers”, “lack of visitors”. The little amount of visitors in the first day was noticed also by the research team. The pictures taken in the trade fair hall, presented in Appendix 6, prove this fact.

One considered reason behind the little number of visitors was considered the overlap of exhibitions, as 5% of the respondents mentioned: “I was told there is another trade fair in Helsinki at the same time” and “...too many exhibitions at the end of the year... many exhibition are organized at the same time”. The conclusion was that Paviljonki is losing visitors who decided to visit Helsinki Trade Fair: “Customers have to choose between Jyväskylä and Helsinki”.

Another perceived reason of the lack of customers is the insufficient advertising of the trade fair. The opinion on advertising was contradictory among the interviewed exhibitors, a group not being aware of the campaign because did not see any advertisements, while others stating that the advertisements were placed in professional magazines and in the internet. Even if the advertising was perceived as an element that needs more attention, 5% of the respondents were very satisfied and 38% - satisfied. These segments were the ones who noticed the advertisements and in some cases they constituted the first sources of information about the trade fair.

Accommodation

Accommodation represents one factor that influences the overall experience with the trade fair. Although the accommodation capacity is limited in Jyväskylä region, 60% of the interviewed exhibitors mentioned that they were satisfied with the hotel service. Their solution to the problem was booking early in advance, as stated: “It is not a problem since we know about the trade fair one year beforehand”, “no problem with

accommodation ... booked hotel quite early”, “booked hotel rooms in Alexandra Hotel almost one year beforehand”, “no problem with accommodation if booking in time”, etc. This is the situation of the exhibiting companies that have a high interest in the trade fair and have become loyal customers to Paviljonki over years.

During the analysis of the data on accommodation, a strong customer relationship was noticed in the case of 8% of the satisfied exhibitors, they staying at the same hotel over years – Alexandra Hotel, this fact being confirmed by: “We booked hotel rooms in Alexandra Hotel - an amazing place. We stay there every time”, “We stay at Alexandra”, etc.

The very early hotel booking was perceived as an inconvenience by the companies who make their decision to participate at the trade fair shortly before the event. This segment is the one who required more hotel capacities. It is important to mention that 5% of the interviewed exhibitors were aware of the decision to build a new hotel – Sokos Hotel Paviljonki in Lutakko next to the Trade Fair Center, this news being announced on the 4th of October 2010 (only the day before the trade fair).

Good vs. bad experiences

The service offered by Paviljonki was perceived by the respondents in various ways, sometimes the opinions being contradictory, as in the case of parking places, move-in process, etc.

The arrangements of the exhibition hall (the stands and facilities offered) were mentioned as good experience by 33% of the exhibitors engaged in the research. This is because the event went smooth without any incidents, as mentioned: “everything has gone so that you do not have to enforce anything”, “facility wise all good”, things going well”, “mainly well organized”, “everything was organized well”, etc.

In addition, 8% of the respondents mentioned the customer contacts they managed to build as a good experience, as affirmed: “met new customers and enquires”, “met new people”, “meeting good customers”.

Along with the common good experiences, there were single remarks on the service received, they being the following:

- improved service when speaking about the arrangements of the booth: “There is better service concerning the booth compared to previous time”
- convenient and time efficient online registration: “Easy registration via Internet”
- responsiveness of Paviljonki’s personnel: “Lost the stapler but got one from Paviljonki easily”
- arranged parking places: “you get parking places”. The respondent was also aware of the second parking lot: “there is a second parking place where you do not pay with coins and pay when leaving”.

There were unpleasant experiences concerning the accommodation because of the difficulties in finding available hotel rooms during the trade fair. Yet, there wasn’t any other significant bad experience perceived by the respondents. However, 5% of the interviewees found the website and the information displayed complicated: “quite good, but could be easier to use” and “the information is there, but difficult to find ... it does not mean that the website is not well organized, but that it is a new one and it takes time to figure it out”. However, these situations cannot represent the overall experience of all the exhibitors.

There were more single remarks on bad experiences, they being the following:

- problems in finding accommodation for loyal customers, which caused their not coming at the exhibition, as mentioned: “good customers are not coming because they cannot find a room in hotel, so I booked rooms for them”
- drunk people caused by drinks offered at some of the stands: “the only bad experience is the drunk walking people here”
- troubles with light installation at the stand: “there were not enough lights at our stand, so we had to put our own lighting in booth”
- parking that had to be paid with coins and not with the card: “I did not have any coins on me”
- lack of detailed information: “didn’t know a lot about seminar possibilities”.

Based on the overall experience with the service and exhibitors comparing Tekniikka 2010 trade fair with other exhibitions, some missing services were identified.

Wanted services

There were quite few remarks on missing services, the main being the improved information package. The exhibitors showed low interest in information about free time activities, but in receiving information concerning the next trade fairs, feedback of the number of visitors and information about restaurants and car rental services, as stated by the exhibitors: “We are interested in information about next trade fairs, interested to know about them as well”, “feedback of the number of visitors would be good to know” and “information about restaurants, hotels, car rental service”.

One more remark was related to the availability of small places where the exhibitors and visitors could get more coffee without staying in line in the restaurants. This service was asked by 8% of the interviewed exhibitors, their comments being: “not enough coffee stands”, “more coffee machines” and “more coffee for us”.

Based on the problems and challenges that had to be faced, the interviewed exhibitors proposed their suggestions for improvement the trade fair service.

Suggestions for improvement

The suggestions for improvement given by the exhibitors who took part in the research were divided in the following categories: services, facilities, information, timetable and accommodation.

➤ Suggestions for improving the existing services

The given suggestions for service improvement were related to the restaurants and marketing actions within the trade fair hall.

Restaurant service was identified by 8% of the respondents as an area to be improved. The suggestions given were related to the existing menu as to include more variety of food: “should have a little bit more variety of the menu”, “more variety of food” and “add desert”. In addition, 3% of the respondents suggested canceling the food coupons system to pay on order, as mentioned: “food coupon service can be improved... it is inconvenient ... there are some you do not use or you do not have enough... some kind of identification saying - this is for (...)”.

An additional suggestion for service improvement was to have available people for marketing purposes (to spread flyers to visitors) in order to attract more visitors to the stands, as required: “to receive more specific services like hiring special persons who would spread flyers to visitors”.

➤ Suggestions for improving the facilities

The ways seen by exhibitors for improving the facilities are through improving the electricity installations that will lead to better lightening at the stands and make it at no cost: “more light”, “more electricity for one stand” and “payment for electrical equipment to be free of charge”.

The car parking can be improved by making it possible to pay with the bank card instead of coins. More parking spots were asked by the exhibitors.

The representatives of the exhibiting companies suggested arranging seminar rooms with necessary equipment for meetings with customers. Although this possibility already exists, not all the interviewees were aware of them. Others were not interested because their stands were equipped with small meeting rooms.

Exhibitors experienced a significant need for coffee which was not easily available. The suggestions were to insert in the trade hall more coffee stands and coffee machines.

➤ Suggestions for improving the information flow

The website of Jyväskylä Paviljonki was perceived as complicated in use by 8% of the respondents. They stated that the information is there but it is time consuming to find it, as affirmed: “the information is there, but difficult to find”. The suggestion given was to create some fast links on the website that will take the user to the information needed, as advised: “put some fast links on the webpage, easier to use”.

➤ Suggestions for improving the timetable

The suggestions to better arrange the timetable was caused by the little number of visitors. The idea to shorten the trade fair period from three to two days was mentioned by 8% of the interviewed exhibitors: “maybe only Wednesday and Thursday are enough”, “first day was too silent”, etc. On the other hand, there were

exhibitors who found the middle of the week the right time for exhibitions, but suggested that the number of customers could be increased through longer opening hours which will enable the visitors to come on a suitable time: “Tuesday to Thursday is good ... earlier start times, maybe at 9 am”.

Another significant suggestion is to check carefully the timetable of exhibitions organized by other trade fair centers. This is due to the fact that many events are organized during this period of time, and also at the same time with Tekniikka, this being one of the reasons of the little number of customers: “check the timetable of other exhibition companies - many exhibition are organized at the same time” and “fair organizers are eating each other, for example, there is a similar fair going on in Helsinki and our customers are there”. There were requests from 5% of the exhibitors to move the trade fair toward the beginning of the year in order to avoid the overlapping: “move the exhibition to the beginning of the year” and “Maybe in the first period of May or June would be also possible”.

One more suggestion in schedule rearrangement was to have the opening ceremony straight away after the closing hour of the trade fair: “the opening ceremony requested to take place immediately at 17:00 o’clock when the trade fair was over”. This will enable the exhibitors to have more time for arranged meetings with their customers.

➤ Suggestions for improving the accommodation

The exhibitors who experienced problems with accommodation showed interest in receiving information about hotels. Their suggestion to build more hotels was well met when informed about the construction of the new hotel in Lutakko area.

The collected, processed and analyzed feedback represents a valuable asset to Paviljonki since the areas for potential improvement were identified. The company will direct its efforts and resources toward the most relevant and needed areas for improvement, but taking into consideration also the ideas that will contribute to the innovativeness of the service.

9.2 Visitors' Feedback Results

Visitors are vital in providing valuable information to Paviljonki Trade Fair Center. With the assistance of visitors Paviljonki is able to create a pleasant experience both for visitors and exhibitors thus improving the satisfaction they have regarding Paviljonki's services. It is important for the trade fair center to engage the visitors as users in the service development process. This way the services can be developed according to the wants and needs of the service users.

The visitor feedback results presented in the research is constituted from 250 separate visitor interviews.

The largest part of the visitors - 92.8% are Finns and only 7.2% - other nationalities (Polish and Estonians). International visitors perceive the service of Paviljonki in a special way. They compare their experience at Tekniikka 2010 with previous international exhibitions. They may have suggestions for new services which are missing at the current trade fair, but were noticed at other events held by other exhibition organisers. Through their engagement in giving feedback on the service received, Paviljonki develops knowledge on ways for its service improvement and also on how to become more international and attract more visitors from abroad.

The range of professions of Tekniikka visitors emphasizes the interest of various groups into the technological trade fair. As presented in Figure 17, most of the respondents - 34.8% were manufacturers, they seeing Tekniikka as an opportunity to identify the industry new trends, establish new business contacts and maintain the existing ones.

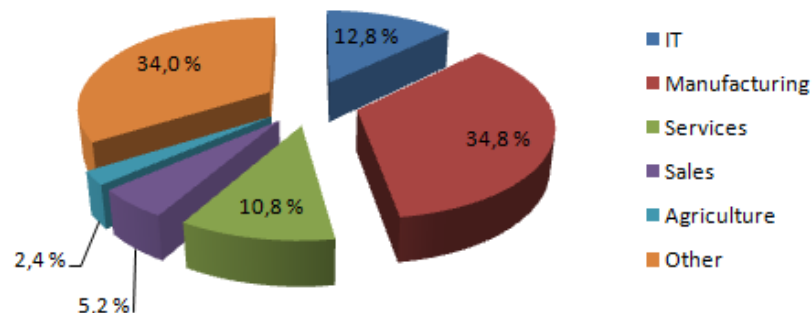


FIGURE 17. Visitors' areas of activity at Tekniikka 2010

The well-presented information technology industry at the trade fair attracted visitors active in IT, followed by visitors employed in services that support the creation and especially maintenance of technologies. These services can also develop into separate business sectors as the world is becoming more service-oriented.

The section other is represented by students interested in technologies as their study field, students who were interested in seeing the way the event is organized and held and students engaged in customer satisfaction research.

Transportation means used by visitors

The transportation means visitors used to come to Jyväskylä Paviljonki and the feedback given enables Paviljonki to identify the degree of visibility of the trade fair center and if more guidance should be given before arrival.

The biggest part of the interviewed visitors came to the exhibition by car, this group constituting 43.5% of the respondents. The feedback given on visibility was positive because Paviljonki is situated along major highways and the road signs help in finding the way. Although the parking facilities were appreciated by the respondents, the parking fee was perceived as too high. Suggestions given for parking were related to the payment for the parking spot, so that the payment will not be only in cash, but also with bank card or credit card.

The good connections and close bus and train stations brought a quarter of the interviewed respondents to the trade fair center, as presented in Figure 18:

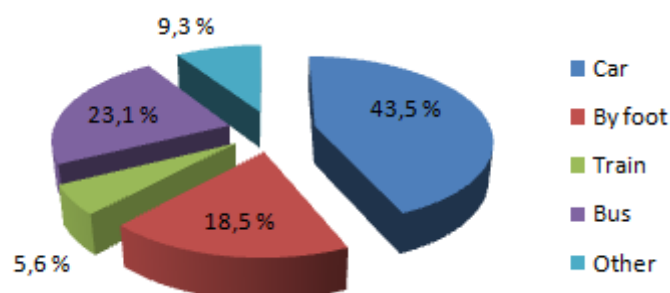


FIGURE 18. Means of transportation used by visitors of Tekniikka 2010

The respondents, who came by bus, used the public busses or chartered busses, in the case of the students who came in organized groups from other regions of the country. The other means of transportation mentioned by the interviewed visitors were bicycles, for their convenience in reaching the trade fair in reasonable time and no need to stay in traffic jams or pay for parking.

Satisfaction with services and facilities

More than 60% of visitors were satisfied with the cafeteria and restaurant services offered by Paviljonki and only 6% of the respondents expressed their dissatisfaction with the restaurant services. The dissatisfaction resulted mainly due to the small size of the restaurant this leading to long queues and to the inability to find seating places. The rest of the respondents, 34% did not have an opinion regarding this issue. This fact is because they either only arrived to Tekniikka when interviewed or did not plan to stay at the trade fair long enough to have lunch or even a break.

Overall satisfaction with the services provided by Paviljonki was rated at a high level. Out of the total number of the respondents, 12.4% said that their satisfaction was at an excellent level and that their experience could not have been any better. Although 74% of the interviewed visitors stated that they had a good experience at Tekniikka 2010, there were 13% of the respondents who rated the services received with an average level. These visitors stated that certain facilities, such as restaurants and bathrooms, were not up to the standards they are used to seeing in other trade fair centers such as in Helsinki or Tampere. Only 0.6% of visitors stated their dissatisfaction with Tekniikka 2010 experience. These were a few foreign visitors who found it very difficult to navigate inside the trade fair halls because of the lack of signs in English.

Good vs. bad experiences

The researchers asked visitors about their good and bad experiences regarding the services and facilities provided by Paviljonki during Tekniikka 2010. Interesting

innovations and well-presented exhibitors were mentioned as positive aspects of Tekniikka.

In addition, some bad experiences were recorded, which relate to navigation inside the trade fair halls, catering and parking services. Many visitors said that they had difficult time trying to find their way around the trade fair center as the maps were displayed only at the entrances, the stand numbers were marked with very small signs and there were no separate maps or guidance in any of the trade fair halls. The catering services, meaning restaurants and cafes, were referred to as too small, crowded and expensive. Furthermore, the parking service was a major issue among visitors as it was mentioned to be too expensive and difficult to always pay in cash. The suggestion was to install machines that take bank cards.

Suggestions for service improvement

During Tekniikka trade fair, many visitors were disoriented with getting around the trade fair center. Therefore, the respondents suggested more maps and better guidance in the halls. Some interviewees suggested Paviljonki to provide pocket size maps of the area in which every exhibitor is marked at its own place.

Other suggestions given were to increase the number and the variety of the restaurants and cafes in order to avoid lines and long waiting time. Besides the catering service, the parking price was asked to be lowered.

In addition, the interviewed visitors wanted more of the exhibiting products to be possible to test. The suggestion to Paviljonki was to deliver this message to the exhibitors so the issue can be implemented in future trade fairs.

9.3 Shadowing Results

Three cases of shadowing were completed during Tekniikka 2010, two of them being cases of businessmen walking in the exhibition hall and the third one being an observation of Paviljonki's representative.

First group of two businessmen was very determined by having a clear picture of the trade fair. It seemed that they had an agreed plan on which exhibitors to see and what kind of information to gather.

Second group of two businessmen were less organized with their visit, but were very interested in gathering information from many exhibitors. They paid considerable attention to various machines on display and took time to talk with company representatives to gather more details.

An observation on the responsiveness of Paviljonki's personnel was done through witnessing an accident at one of the stands. The researcher saw a shelf falling and breaking. The trade fair center's employee was at the place and took care of the incident in a few minutes. The situation proved the responsiveness of the staff and ability to deal with unplanned circumstances.

9.4 Idea tree and idea map results

During the three days of the trade fair, the stand run by students from JAMK University of Applied Sciences, attracted visitors and exhibitors to share and leave their comments on missing services and ways to improve the exhibition. The motivation was the user's engagement in the service development and the coffee that was offered as remuneration. In this way, the stand contributed to solving the need for coffee that was perceived by a large number of participants.

There were collected 71 comments: 57 notes on the idea tree and 14 ideas on the idea map, all of them being anonymous. The idea map is presented in Appendix 7. The gathered comments were related to the layout and orientation, facilities and other single comments.

➤ Layout and orientation

The layout was perceived as confusing because of the lack of enough signs. The suggestion given by 20% of Paviljonki's customers engaged in ideation were to display more maps of the exhibition hall in each of the trade fair room, keep the maps similar and consistent, put signs on the doors, insert more signs of info desk, restaurants, restrooms and exits in addition to the signs to emergency exits. These

ideas are generated from the following comments: “clear signs (restaurant, bathroom, exit)”, “the maps should be similar”, “more maps on each side of the hall”, “place signs on the doors”, “show signs of more exits than just the emergency exits”, etc.

A common suggestion given by 8% of participants was to insert footprints on the floor in order to ease the orientation within the halls, as stated: “maps on the floor”, “signs on the floor so you know where to go”, etc. In addition, there was asked for info persons, as mentioned: “someone to ask information from”.

➤ Facilities

One missing service noticed by the participants was the lack of water vending machines, this being identified on 7% of the notes, as following: “Machine for drinks”, “water machines placed close by”, “water points”, etc. Another suggestion is to lower the current prices of the drinks, which are available from the restaurant, as affirmed: “cheaper drinks”.

An additional facility that was missing was the lack of sitting places, beside the restaurants and stands, where visitors could have some time to gather their thoughts and take a small rest. The respondents required more areas endowed with sitting places. This is proven by: “more places to sit beside restaurants and stands”, “more chairs, sitting places” and “resting places”. Furthermore, there were requirements from 3% of the participants to lower the parking price, as mentioned: “cheaper parking” and “cheaper parking price”.

Along with the above presented findings, there were given single suggestions for facilities improvement that are the following:

- set in bank machines in the exhibition hall: “bank automats in the building”
- develop child care service for the time the visitor/exhibitor is attending the trade fair: “a place to leave your children while you go around the fair”
- display more trash bins within the trade halls, in this way maintaining the cleanliness of the exhibition environment: “more trash bins”.

➤ Other single comments

The single remarks on existent services and ideas for new service development, identified in the notes put on the idea tree and idea map, are the following:

- place exhibiting companies from the same business field in the same exhibition hall: “exhibitors should be arranged by their business fields, for example, automation companies in the same place”
- create a system that will match the interest of the visitor with the exhibiting companies: “matching service to match people based on the registration information they give in the beginning”
- offer more coordination during the trade fair: “more coordination from Paviljonki to exhibitors”
- shorten the exhibition time: “shorten the exhibition period from 3 to 2 days”
- make the information available also in English: “more information in English”
- increase the awareness of the event by displaying advertisements and info notes at all Paviljonki’s entrances: “At one of the entrance there is no sign of the trade fair going on. Ads please”
- put signs in the hall that direct to the medical emergency: “if there is a medical emergency there should be better signs toward the info”.

The suggestions for improvement are analyzed and the ones that will generate a better service to a larger part of the trade fair service users will be implemented. However, all suggestions are taken into consideration and some cases may require longer time for implementation.

9.5 Conclusion of Tekniikka 2010

The overall experience with Tekniikka exhibition was felt by exhibitors and visitors in a positive way. The trade fair service users noticed improvements based on the suggestions given during Electricity, Telecommunications, Light and Audio Visual 2010. This was the case of the timetable that was moved from Wednesday to Friday to Tuesday to Thursday. The reason behind this change in time line is the little amount of visitors on Friday. However, the timetable remains a question of each service-user’s experience with the trade fair. That is why the research team suggests asking Paviljonki’s customers a question concerning the dates of choice of the upcoming event when registering online. Based on the majority of the answers, the right decision will be made.

In addition, there was noticed an improvement in the smoking areas which were cleaned and kept in better conditions compared to Electricity, Telecommunications, Light and Audio Visual 2010.

The accommodation problem is in the process of being solved since the new hotel – Sokos Hotel Paviljonki in Lutakko started to be built at the end of October 2010 (Jyväskylä Convention Bureau 2010). The announcement was done on October 4, 2010 and already during the exhibition, the respondents were aware of the news.

Along with the implemented improvement, the suggestion given by exhibitors during Electricity, Telecommunications, Light and Audio Visual 2010, for new service of the bar coding system installed at each of the stand was not yet implemented at Tekniikka 2010. The reason behind this could be the short time for its implementation.

Things that still need improvement are the information flow, advertising and facilities. Even if there were exhibitors who booked seminar rooms, there were companies that were not aware of this possibility. This proves that Paviljonki should make sure that it provides enough clear information about the possibilities to organize conferences, meetings, presentations for their customers and inform the exhibitors about the opportunities to rent seminar rooms and other facilities.

The information flow should be better managed also during the trade fair. Jyväskylä Paviljonki offers statistical information on the number of visitors per day during the event, but it did not reach all the exhibitors. This is because the information was offered in audio and printed form in the mornings of each exhibition day. The suggestion of the research team is to create a system or a separate column on the webpage of Jyväskylä Paviljonki International Congress and Trade Fair Center, where all the participants will be introduced in, and serve as a medium for sharing and spreading real-time information, which would be easy to access from the stands and use the data for own purposes.

Advertising still remains an issue under question. It was related to the little number of customers. Therefore, exhibitors suggest having more advertisements displayed in the professional marketing channels like professional magazines and websites that would attract more of the target audience to the event.

Along with advertising, parking is the facility that was asked to be improved throughout the three iterations. Even if more parking places were created, the price of the parking spot was still perceived as too high.

Even if the layout of the exhibition hall for Tekniikka has been improved according to the suggestion given during Electricity, Telecommunication, Light and Audio Visual 2010, the exhibitors from the same industry being placed in the same area, visitors were still lacking the signs and maps that would ease their movement around the trade fair and finding the exhibitors of interest.

Visitors and exhibitors engaged in the research gave valuable suggestions for improvement, they being potential solutions of existing problems. This is the case of the visitors who want their interests matched with the exhibitors from the trade fair through a special software. This solution already exists, but it is not yet implemented at the trade fairs. It is offered by an innovative startup company based in Lutakko, named mBrlla. The solution it offers is a mobile web based software that creates added value to visitors, exhibitors and organizers by registration into the system, introducing the interests and receiving a match of interests with the target group, this saving time and giving real time results, leading to valuable contacts (mBrlla 2011). mBrlla software has not been tested yet at the trade fairs, but it represents a clear solution to the visitors who need help in finding the right exhibitors that match with their interests, in this way helping them in reaching the set goal for the exhibition. In order to diminish the risks when launching the software at trade fairs, the next research should measure the interest of visitors and exhibitors in receiving such a service through this software. This can be done by including a question asking their interest in such solution.

Ideas for new services given by trade fair users during the research were to set in more refreshments points, water vendor machines and bank machines within the trade fair hall. An additional new service required is the child care where children could remain under supervision while visitors attend the trade fair. This suggestion given by the visitors could contribute to an increase in the number of visitors in the late hours of the afternoon.

The research conducted at Tekniikka 2010 and the results of the data processing support the importance of engaging the trade fair service users in designing the service.

10 DISCUSSION

Through the three experimentation pilots implemented at each of the three trade fairs analysed, the research team learnt the significant impact of user-engagement in service and product development. Additionally, each iteration was a critical stage in learning about research planning and on how to run a user-centered approach to the problem. With this aim, each action survey was carefully planned based on the results of the previous experimentation. Based on the results of each of the iterations, the questionnaires were improved in the preparatory stages in order to diminish the influence of the interviewer over the respondent and to enable detailed knowledge of how existent services can be improved and what new services can be developed. Neutral open questions are the key to a customer being able to express his needs and satisfaction with the service received.

10.1 Co-creating and Co-innovating services at Jyväskylä Paviljonki

By placing the customer in the center of the service development process and engaging him in designing the service through his constructive feedback, Paviljonki is shifting its service from a customer-oriented to a customer-centered approach, in which the service is created with the customer. Thus, the areas for improvement, restaurant facilities, information flow and parking, were identified in the research process. The implementation of the suggestions for improvement given by the customers were noticed during the iterations, such as better restaurant service through more variety of food and more parking places. The price of parking still remains high which causes dissatisfaction among the customers, but the facility is appreciated as it solves the problem of searching for parking places in Jyväskylä. Through customer engagement in service development, an improvement in the information flow was noticed after each iteration. However, new areas for improvement were identified. The customers need more information about the future events arranged by Jyväskylä Paviljonki International Congress and Trade Fair Center, real time information of the number of visitors for statistical purposes, more detailed information on the possibility to book meeting and seminar rooms, and inserting fast links on the webpage of

Paviljonki to ease the search of information. Some of the suggestions given are under consideration, while others are under implementation. Those under consideration include the requests for more refreshment points, water vending machines and resting places, as well as the ideas for new services such as a bar coding system inserted at the exhibitors' stands and child care service. Together with the incremental changes, radical innovations will contribute to the development of the trade fair service. The problem with accommodation was identified after each experimentation cycles. After the second iteration, a solution for this problem was implemented, which was the new coming hotel in Lutakko region.

Service co-creation represents a path toward a service concept that will create a better customer experience by diminishing the limitations of the current service. During the three iterations, the customers engaged in the research identified two limitations of the layout of the trade fair hall: the placement of the exhibiting companies operating in the same business and the lack of guidance within the exhibition hall. The implementation of the given suggestions was noticed after the third iteration when the companies from the same business field were placed closer to each other in the exhibition area.

However, the more numerous signs placed in the trade fair hall to guide the visitors were still perceived as insufficient after the third iteration. Concerning this issue, the research team has an idea for an innovative solution to the mentioned problem, which is the creation of a software that will operate on any mobile device and will provide a real-time map of the trade fair hall. It will act as a navigator in which the visitor will enter the coordinates (name of the exhibiting company) and be shown the way. The implementation of the idea is very risky and the ambiguity about what the customer expects from this solution is very high. That is why, if the trade fair center perceives it as a potential solution, the next research should measure the interest of the visitors in receiving such a service. If the interest is high, the solution has to be developed in a customer-centered way by engaging the service users in designing the software. Co-innovating and co-designing new services but also new products, based on knowledge co-creation will not only turn Paviljonki's service into an enhanced customer experience, but also the trade fair center into an innovative environment. The latest is the aim followed by Lutakko Living Lab that tries through its projects to turn Lutakko into an innovative region, where the services of the companies will be customer-oriented to gradually become customer-driven in time.

10.2 Applicability of the research results

The research conducted represents one of the case studies run by Lutakko Living Lab. It aims to experiment with user-engagement in the development process of the service and identify its relations to customer satisfaction with the improved service. The three experimental cycles demonstrated that user-engagement in service development is the driver toward user-centered trade fair service. It also proved that service development is a continuous process and that innovation lies within the users. It has to be brought out through involving the service customers in designing the trade fair service.

The research results are valuable to Jyväskylä Paviljonki International Congress and Trade Fair Center because they represent customers' positive feedback on the good work the exhibition center is doing and also give suggestions for future improvements. In addition, the results contribute to the work of Lutakko Living Lab to turn Lutakko into an innovative region through innovative companies that offer innovative solutions, with Paviljonki as one of the contributors as it is based in this area and attracts most of the visitors throughout the year.

The research represents a real example on how to develop user-centered service and the role the user plays in innovation development. The results obtained support the theory on user-involvement in the improvement of the existing service and development of new services and products.

10.3 Suggestions for future experiment cycles

The consistency of the data is very essential to the research conducted by Lutakko Living Lab. Even if the questionnaires are based on the same research questions, the future research teams should develop one questionnaire for the face-to-face interviews. The future researchers should moderate the interview, but avoid influencing the answers by stating their personal opinions.

In order to diminish the loss of data, the questionnaire can be introduced in a mobile device (tablets) and after it would have been filled in, the data will be directly sent to the system where it will be stored and analysed. This refers to the quantitative data,

while the qualitative questions should continue to be video recorded, this giving a better insight not only on the suggestions given, but also on the body language of the respondents and also on the environment in which the interviewees were placed in. A suggestion here is to acquire better microphones to overcome the noise from the trade fair hall and result in a better quality of the audio.

Data processing and analysing is an issue that needs considerable attention. When processing the collected data with NVivo in a group, good co-operation of the team members is required in order to ensure consistency in the codes. This is the essential stage on which the entire research results are built on. During the present research, this challenge was overcome by the research group through collective elaboration of the list of codes and continuous co-operation during the data analysis.

In order to build better knowledge of the customer needs, the suggestion given by the research team is to engage third parties in service development (companies that arrange the stands for exhibitors). The reason behind this decision is that they possess knowledge of the needs of their customers and have good or bad experiences of trying to satisfy their customers' requirements at Paviljonki. The engagement of the third-parties in service development will enlarge the knowledge creation network.

In addition to structured interviews, trade fair service users can be engaged in focus group sessions during the next experimental cycle. Although it requires a lot of time, the research questions can be approached in a deeper way, and more valuable answers can be obtained that will be turned into co-developed solutions.

10.4 Jyväskylä Paviljonki improves with its customers

The service user cannot be kept apart from the service design, because the service is no longer designed for the user, but with and by the user. Co-operation with customers increases the competitiveness of the companies that build knowledge networks with their clients. This requires customers' integration in the product and service development though empowering them to share their feedback on the service received. The company not only stores the suggestions for improvement, but implements them

in the near future. The service development is a continuous process and the evaluation of the improvements implemented should be constant.

Customers represent an essential asset of Jyväskylä Paviljonki. It must be enhanced through intensive interactions and strong relationships in developing solutions with them for the problems that they face. Solving their problems through the service designed with them will lead to an increased satisfaction with the trade fair service and to the creation of an innovative network. It is not enough to be competitive as a company, but to create a competitive innovative environment.

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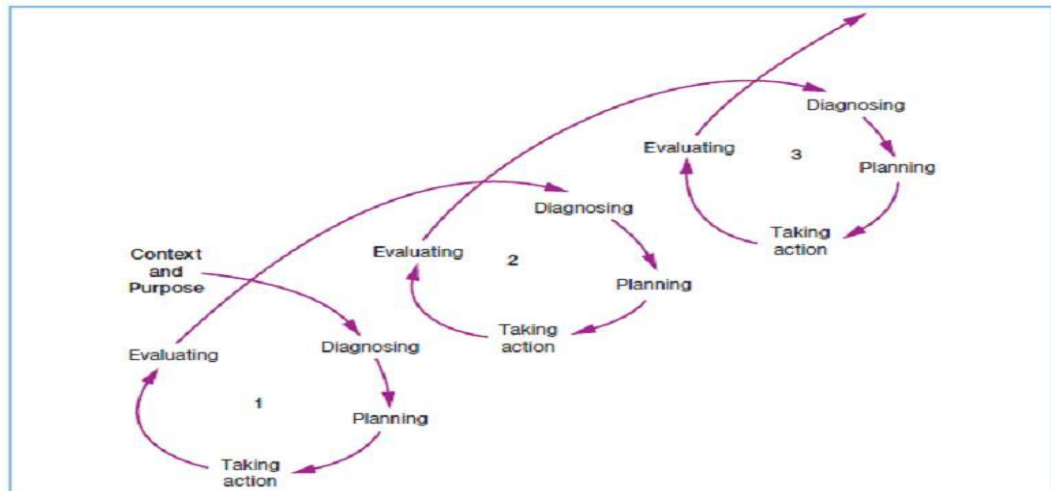
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APPENDICES

Appendix 1. The action research spiral (Saunders et al. 2007, 141)



Appendix 2. Trade Fair User Engagement at Lutakko Living Lab Poster

CREATING COMPETENCE



Trade Fair User Engagement at Lutakko Living Lab

Background

Lutakko Living Lab is an innovation ecosystem run by JAMK R&D department. The co-operation between Paviljonki Trade Center and Lutakko Living Lab at JAMK University of Applied Sciences started in autumn 2009. Young researches participate in the trade fairs by collecting data on customer satisfaction with the services offered by the trade center, feedback and suggestions for improvement.

Research design

Students from two courses:
 1) Global Product Development
 2) Research Methods for Business
 participated at three trade fairs:
 FinnGraf FinnVisual (24.-26.9.2009)
 Electricity, Telecommunications, Light
 and Audio Visual (3.-5.2.2010) and
 Tekniikka (5.-7.10.2010).

At the moment the research team has 60 recorded exhibitors interviews during the three trade fairs and 245 filled in questionnaires by visitors during Tekniikka Trade Fair.



Research objectives

Find answers from the feedback of exhibitors and visitors to the following research questions:

1. How can the existing Paviljonki services offered to exhibitors and visitors be improved?
2. What new services could be offered by Paviljonki to exhibitors and visitors?

Research methods and techniques

The research methods used in collecting the data are quantitative and qualitative data captured on videos during face to face interviews, feedback gathered through questionnaires, notes, shadowing and tree notes.

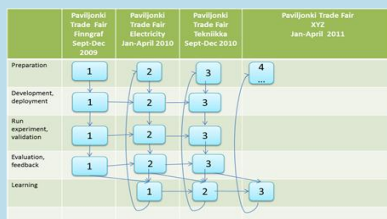
The gathered data is being analyzed by the research teams and Living Lab team. The data is processed using the nVivo tool.

The results obtained are informed for further improvement and used in the next experimental cycle.




This pilot has been conducted and utilized since autumn 2009:





Paviljonki Trade Fair Centre Experimentation Pilots



Examples of user and researcher feedback about incremental changes

Evidence	Feedback Implementation
<p>Difficulties in move-in process mentioned by exhibitors: "Difficulty in moving in process", "a bit problematic bringing the materials in... it takes a lot of time"</p> 	Under consideration
<p>Increasing the awareness through marketing Exhibitors complaining about the little number of visitors: "The low number of people of visitors yesterday was a disappointment. We expect more visitors", "it would be nice if there was more people here" Exhibitors suggested to improve the marketing of the fair: "More exhibition advertisements on internet", "I would like hear more announcements and in several languages", "the marketing of the fair could be more visible or there should just be more of it", "just generally to be more visible", "it should be more visible"</p> 	Under consideration
<p>Problems with parking Exhibitors mentioned: "parking the car was a bit problematic", "I couldn't pay for the parking with bankcard or a credit card, I had to use cash", "how the parking has been arranged for the exhibitors has been bad"</p> 	Partly implemented, yet more improvements needed

Examples of radical ideas/ significant changes

Evidence	Feedback Implementation
<p>Problems with accommodation Exhibitors feedback: "Very difficult to get hotel accommodation from Jyväskylä", "the hotel situation in this area is horrible", "the hotel booking is a problem here", "The only thing I am not satisfied is the hotel booking" "the hotel capacity is so low", "customers are not coming because they cannot find a room"</p> 	Sokos Hotel Paviljonki in Lutakko is under construction.
<p>Exhibitor and visitor feedback Difficulties in finding the way in the exhibition hall: "Hard to find the way around", "I was just walking and noticed I was third time here" Rationale: provide visitors and exhibitors with maps of the exhibition hall</p> 	The elaboration of a software solution for the mobile devices to help moving around the fair is under consideration (mBrlla)

Results

Living Lab's view is that considerable success in innovation can be gained through a continuous stream of incremental improvements made over a sustained period of time (Bessant 2006). Living Lab Lutakko supports that user feedback is a potential source of incremental and radical innovation. Based on the results of the visitors and exhibitors feedback analysis decisions for improvement were taken or are under consideration after each trade fair. The participants have already noticed improvements of Paviljonki service when comparing with their previous experience at fairs.

References

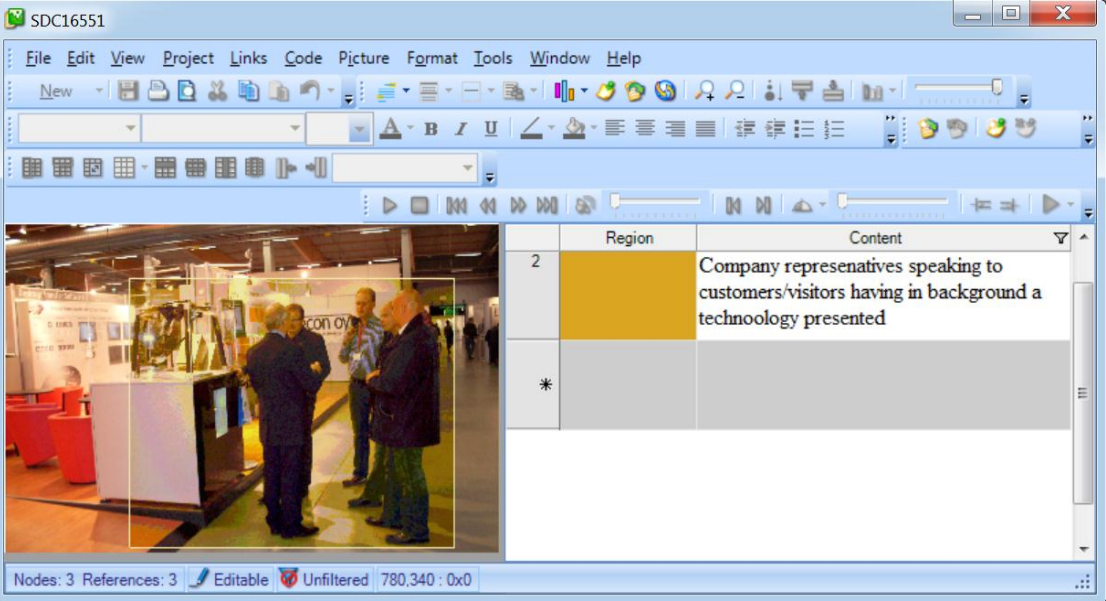
www.jamk.fi/livinglab



Appendix 3. Set of tree nodes extracted from NVivo

Type	Name	Mer	Sources	References	Created On	Created By
Tre	Purposes to attend the events		0	0	30122010 15:01	VD
Tre	Users' perception		0	0	30122010 16:43	VD
Tre	Transportation means		0	0	30122010 16:52	VD
Tre	How often do they use the service		0	0	30122010 18:03	VD
Tre	How did they know about the event		0	0	30122010 18:38	VD
Tre	HOW TO IMPROVE		0	0	30122010 19:06	VD
Tre	Information recieved before the Trade Fair		0	0	822011 12:19	VD
Tre	Athmosphere		0	0	822011 12:22	VD
Tre	Price of participation		0	0	822011 12:24	VD
Tre	Major Coverage		0	0	822011 12:26	VD
Tre	Facilities		0	0	822011 12:27	VD
Tre	General Opinion on Trade Fair		0	0	822011 12:28	VD
Tre	Missing Services compared to other Fairs		0	0	822011 12:31	VD
Tre	After Trade Activities and Information		0	0	822011 12:33	VD
Tre	Amount of visitors		0	0	822011 12:17	VD
Tre	Feelings compared to previous Fairs		0	0	822011 13:50	VD
Tre	Stand location		0	0	822011 14:05	VD
Tre	Accommodation		0	0	822011 14:17	VD
Tre	Bad experience		0	0	822011 14:21	VD
Tre	Meeting points		0	0	822011 14:24	VD
Tre	Improvements		0	0	822011 14:35	VD
Tre	Services for exhibitors		0	0	822011 15:21	VD
Tre	Extra comments		0	0	822011 15:47	VD
Tre	Feelings compared to Fairs from other locations		0	0	822011 16:47	VD
Tre	Promotion of the Fair		0	0	822011 17:02	VD
Tre	Internet		0	0	822011 17:09	VD
Tre	Good Experiences		0	0	822011 17:53	VD
Tre	Paviljonki's Location		0	0	822011 17:56	VD
Tre	Move-in process		0	0	822011 22:17	VD
Tre	Parking place		0	0	822011 22:21	VD
Tre	Hillarous Comments		0	0	1522011 11:14	VD
Tre	Suggestions		0	0	1522011 11:51	VD
Tre	Company's Opreations		0	0	1522011 12:03	VD
Tre	No. of fairs participating at, per year		0	0	1522011 15:30	VD
Tre	Participation at other Trade Fairs		0	0	1522011 15:32	VD
Tre	Activity		0	0	1522011 15:33	VD
Tre	Best thing about the Trade Fair		1	1	822011 11:37	VD
Tre	Lightening		1	1	822011 12:12	VD
Tre	also work for JAMK		1	1	30122010 18:36	VD
Tre	Achieved the purposes		2	2	30122010 15:03	VD
Tre	Visited similar event		4	4	30122010 16:55	VD
Tre	will attend again		15	15	30122010 18:37	VD
Tre	Visited Paviljonki before		23	25	30122010 18:02	VD

Appendix 4. Coding pictures in NVivo



The screenshot displays the NVivo software interface for project SDC16551. The main window is split into two panes. The left pane shows a photograph of three men in business attire standing at a trade show booth. A white rectangular box highlights a specific area within the photo. The right pane contains a coding table with two columns: 'Region' and 'Content'. The first row has a yellow background in the 'Region' column and contains the text 'Company representatives speaking to customers/visitors having in background a technology presented'. The second row has a grey background in the 'Region' column and contains an asterisk '*'. The bottom status bar shows 'Nodes: 3 References: 3 Editable Unfiltered 780,340 : 0x0'.

	Region	Content
2		Company representatives speaking to customers/visitors having in background a technology presented
*		

Appendix 5. “User Centred Service Engineering with NVivo at Lutakko Living Lab: The Case of Paviljonki Trade Fair Center” by Piotr Krawczyk, Matti Hirsilä, Tatiana Surugiu, Juha Ruuska and Saara Linna

User Centred Service Engineering with NVivo at Lutakko Living Lab: The Case of Paviljonki Trade Fair Center

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Abstract

We present results of an on-going project at Jyväskylä Paviljonki Trade Fair Centre in which we use action research method with multiple techniques to capture user feedback and (computer aided qualitative data analysis software) CAQDAS package NVivo. This paper reports on initial experience, introduces preliminary results and emerging patterns based on cumulative data from three consecutive cycles of the action research. Recording user feedback not only helps to show the evidence of user centricity but more importantly it provides a rich dataset as a source of potential innovation. Vast qualitative data sets require the use of appropriate tools like NVivo to efficiently search for emergent patterns from user feedback in quest to create or unlock existing value added. The user feedback is then used for both incremental as well as radical changes in service engineering.

Keywords

Living Lab, NVivo, Service Engineering, Trade Fair Center

1 The Trade Fair Case: User Feedback in Service Engineering

1.1 Background

- **Case:** Electricity, Telecommunications, Light and Audio Visual 2010 Exhibition in Paviljonki - Jyväskylä Trade/Fair Centre
(http://www.jklpaviljonki.fi/sahko2010/eng_elec.php)
- **Stakeholders:**

Project team: users (~250 exhibitors and ~16000 visitors), ~100 student researchers, 3 lecturers, 3 permanent LLL team members. Institutional stakeholders: JAMK University of Applied Sciences, Paviljonki Trade Fair

Centre, Center of Expertise Programme – OSKE - Tourism and Experience Management Competence Cluster, JYKES–Regional Development Agency.

- **LL Project Objectives/Research Questions:**

How to improve existing **Paviljonki** services offered to exhibitors and visitors? What new services could be offered by **Paviljonki** to exhibitors and visitors?

- **LL Research Methods and Techniques: Action Research**

A generic framework for LLL experimentation activities during 2009-2010 and beyond can be found in the (cf. Figure 2).

Paviljonki Trade Fair Centre Experimentation Pilots

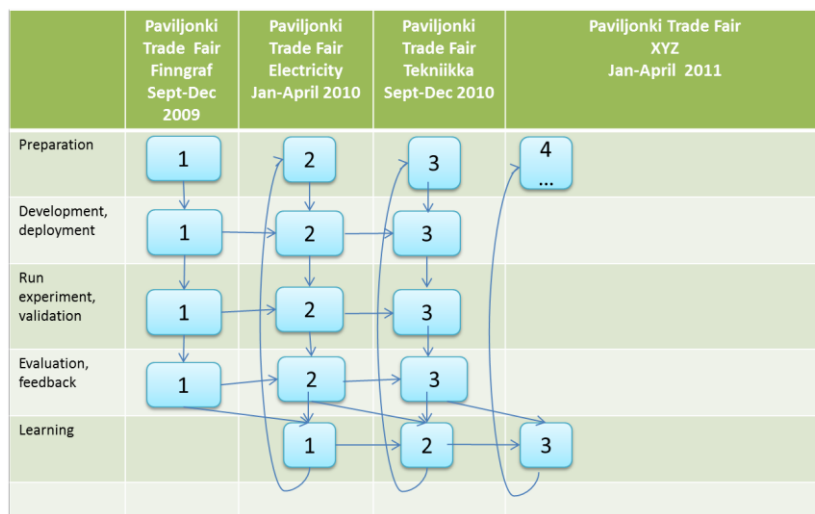


Figure 1: Cyclical Nature of the Action Research based Innovation Process at Paviljonki Trade Fair

1.2 Processing data with NVivo

To process the data a CAQDAS package called NVivo has been used for qualitative data analysis. The data (videos) from all three trade fairs were imported to the programme.

The reach dataset has been transcribed, coded and emerging patterns reported. There were difficulties in transcribing some parts of the videos because of poor audio quality. The videos with interviews held in Finnish were translated into English so that all the data can be processed in the next stages of the process.

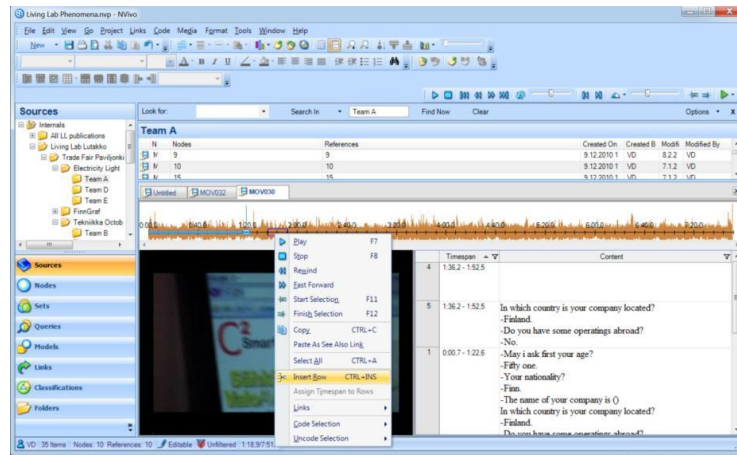


Figure2: Transcribing videos

Transcribing stage is followed by coding. Coding refers to identifying the key phrases that denote complaints, positive and negative feedbacks, ideas, suggestions on improvement, things/services that are missing, etc. and grouping them into categories (tree nodes).

Coding helps in grouping the codes in search for pattern recognition.

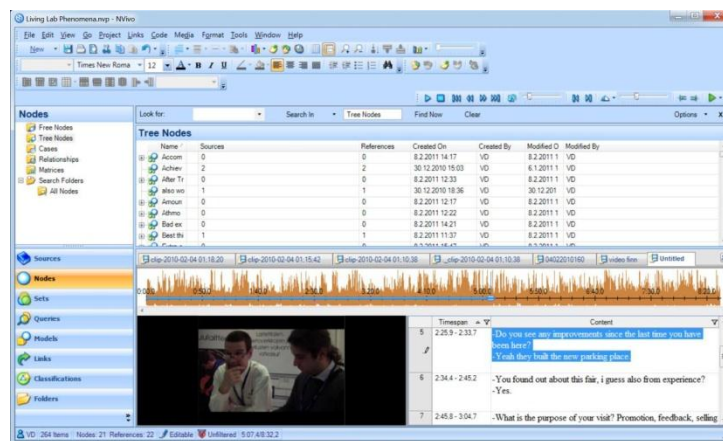


Figure3: Coding process

When coding NVivo allows creating a new code (figure 4) or add the part of the transcription to existing codes selecting them from the tree nodes (figure 5).

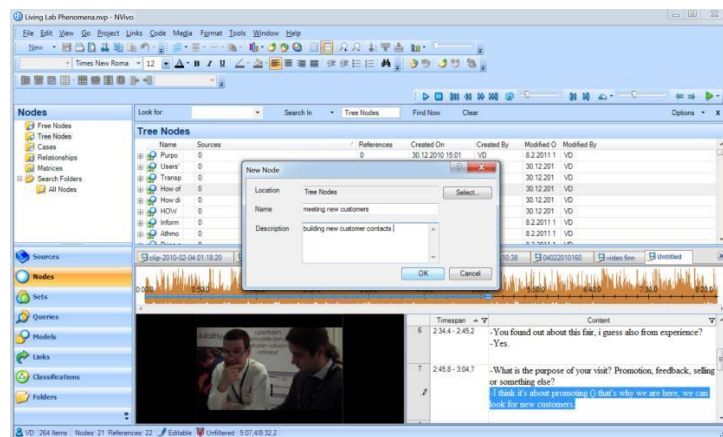


Figure4: Creating new codes

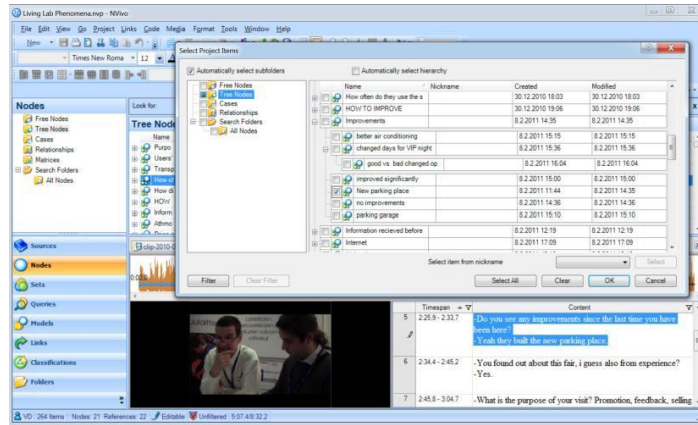


Figure5: Creating tree codes

The next step is to create the cases and their attributes. Cases refer to each exhibitor, while the attributes are the characteristics decided by the research group. Attributes constitute the casebook. Each attribute has a filter which helps in filtering the relevant data for particular cases.

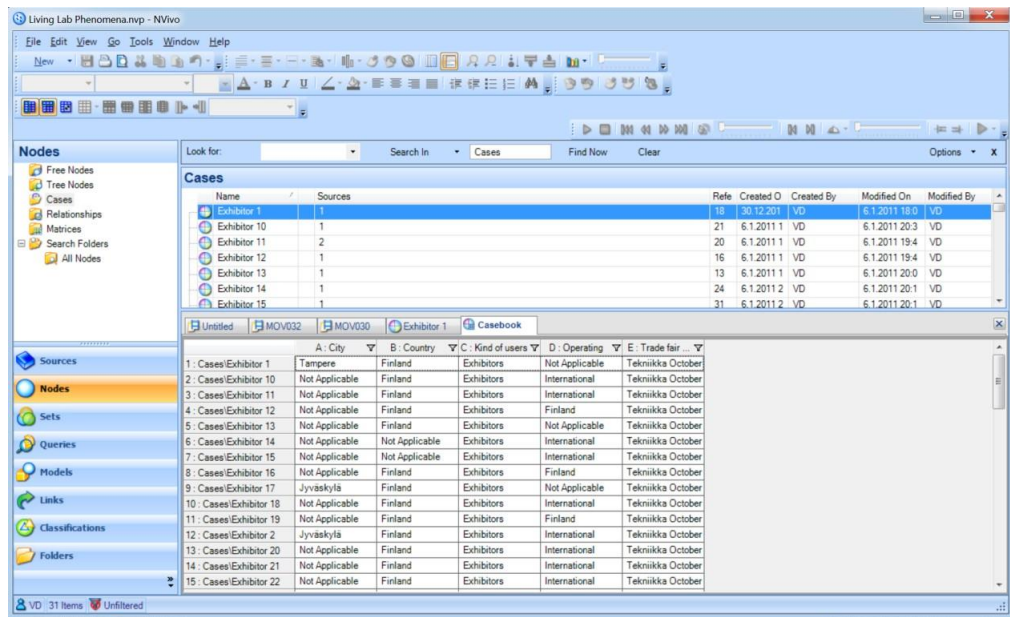



Figure6: Casebook with attributes

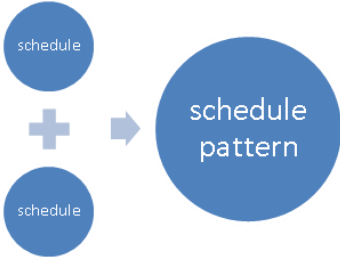




Sample of emerging patterns based on user feedback as a source for incremental and radical service engineering is presented the following paragraph.

1.3 Results–Incremental vs. Radical Ideas from User Feedback

Data Collection Technique	Number of Observations
Exhibitors questionnaires	207
Exhibitors interview videos	110
Visitors questionnaires	560
Visitors interview videos	12
Shadowing	14
Mysterious Customer	20

Table1: Multiple Methods of User Feedback Capture

Feedback Type and Source	Evidence	Evidence of feedback implementation/ Impact/ Value Added
Field Research User Feedback Date: 3-5.2.2010 Place: Paviljonki, Electricity fair Source: Exhibitor	 Captured on Video, Request to change the schedule as to	Not implemented Under consideration while planning the next Electricity trade fair

<p>Field Research User Feedback Date: 5-7.10.2010 Place: Paviljonki, Tekniikka Source: Exhibitor</p>	<p>not overlap with weekend break Rationale: during the weekend there is low visitor turn out due to the nature of the trade fair</p>  <p>Schedule Pattern Major customer (Sick) requests to change the schedule Wed-Fri instead of Tuesday-Thursday Rationale: it is easier for the customers to leave the offices and visit exhibition at the end of the week</p>  <p>Schedule Pattern Captured on Video</p>	<p>Not implemented</p> <p>Under consideration while planning the next Tekniikka trade fair</p>
<p>Feedback Type and Source</p>	<p>Evidence</p>	<p>Evidence of feedback implementation/ Impact/ Value Added</p>
<p>Field Research Researcher Feedback Date: 3-5.2.2010 Place: Paviljonki, Electricity fair Source: Exhibitor</p>	<p>Captured in Photo during “Mysterious Customer” walk through by multiple students during both FinnGraf and Electricity fair</p>  <p>Captured on Photo Request to clean the cigarettes litters or add some with more capacity. Rationale: to make otherwise clean looking entry space tidy, and without unpleasant odors for arriving visitors</p>	<p>Implemented Multiple cigarette litters with enough capacity for cigarette buds captured in photo during “Mysterious Customer “ walk in Fall 2010</p>  <p>Impact evidence</p>
<p>Field Research User Feedback Date: 3-5.2.2010 Place: Paviljonki, Electricity fair Source: Exhibitor</p>	<p>Captured on video, request good quality espresso coffee shop/stand</p> 	<p>Limited scale implementation: Pilot with coffee stand and ideation tree during Tekniikka fair 5-7.10.2010</p>




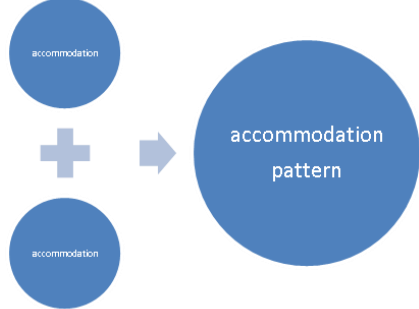


		 <p>Under consideration, there is a plan to pilot coffee stand with proper espresso machine in the near future, this may be run by students, as part of little entrepreneurial spin-off</p>
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Table2: Examples of user and researcher feedback resulting in suggestions for incremental changes

Feedback Type and Source	Evidence	Evidence of feedback implementation
Field Research User Feedback Date: 3-5.2.2010 Place: Paviljonki, Electricity fair Source:Exhibitor	<p>Captured via questionnaires and during interviews many feedbacks of the same kind from different sources forming pattern</p> <p>Not nearly enough accommodation places in the city and no dedicated conference hotel in the area</p>	<p>Conference Hotel Planned Building to start in the near future (as early as next year)-feedback served as an independent validation of the urban and business planning decision in the area</p> 
Field Research User Feedback Date: 5-7.10.2010 Place: Paviljonki, Tekniikka Source:Exhibitor	<p>Pattern captured on video</p>   	<p>Evidence of Feedback implementation photo from the hotel building site captured in Fall 2010</p> 


Field Research User Feedback Date: 5-7.10.2010 Place: Paviljonki, Tekniikka Source: Exhibitor	Major customer reporting accommodation problems, prizing the decision to build the Conference Hotel. Another returning customer giving the example of Key Account/Major Customer not being able to book a hotel room, consequently they had to book 6 months in advance the hotel rooms for most important customers	
Field Research Researcher Feedback Date: 3-5.2.2010 Place: Paviljonki, FinnGraf fair Source:Exhibitor/ Researcher	Captured in Photo during “Mysterious Customer” walk through by researcher  Request to offer more information in English about Fair Center including road signs and various signposts and billboards/screens	Not implemented Upon consideration

Table3: Examples of Radical Ideas/ Significant Changes

2 Conclusions/ Lessons Learned

We have tried to address a number of challenges at the technical level of the Living Lab operation:

- how to efficiently capture, store and process vast amount of data?
- how to efficiently and reliably capture the full audit trail of evidence:

User Centricity Evidence-> Patterns-> User Feedback follow-up/ Impact-> Sustainable Iterative Cycles of Service Engineering with Clear Evidence of Unlocked and/ or Added Value through Measured and/ or Documented Impact

Based on our experience NVivo emerges as a useful tool for qualitative data analysis.

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Appendix 6. Little number of customers during the first day of Tekniikka 2010



Appendix 7.Idea map implemented at Tekniikka 2010

