Customer Journey – a method to investigate user experience

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ABSTRACT

Workplaces are stages for work experiences. There is a need to understand the experience as a definitive factor in workplace management. However the ways to investigate the experience are many and there are many perspectives to approach the methods. This paper aims to answer the question how to asses the work environments from the user perspective, as part of user experience?

The methods for user orientated workplace management are presented. The conclusions indicate the different objects of different methods, which all together provide rich data for workplace management, user organisation and other stakeholders – for the ones creating user experiences.

KEYWORDS: Customer Journey, Work Environment, Usability, Method

INTRODUCTION

We are entering – or have already entered – the experience economy (Pine and Gilmore 1997; LaSalle and Britton 2003). For the building owners and facility managers it is a challenge to understand how they, from their part, could create environments that enhance user experience. Although the term "user experience" has been used extensively in recent years, it has been associated with a wide range of meanings (Forlizzy and Battarbee 2004). Unlike usability, user experience tends to include wider human experience dimensions (such as pleasure, fun, and other emotions) and also may have a temporal or longitudinal component. The customer experience is a blend of company's physical performance and the emotional evoked, intuitively measured against customer expectations across all the moments of contact (Shaw and Ivens 2002)

While usability tends to be focused on task efficiency and effectiveness measures, user experience includes emotional and perceptual components across time. The user experience consists of perceptions that shape emotions, thoughts, and attitudes. User experience involves a constant feedback loop repeated throughout the usage lifecycle including from initial discovery through purchase, out-of-box, usage, maintenance, upgrades, and disposal. (Beauregard *et al*. 2007) The concept of customer satisfaction is outcome-oriented focusing mainly on functionality of the service/product. Experience in contrast, is process-oriented including all the moment of contacts and emotions during the experience (Schmitt 1999).

If user experience is the significant factor in designing, constructing, maintaining and developing e.g. work environments, one has to understand how to increase knowledge about

user experiences in work environments. It is essential to shift the focus from working processes towards employee experiences. The question arises: How to assess the work environments from the user experience perspective?

To answer this question this paper proposes a methodology for assessing the experience as customer journey. The methodology is built in a gross-disciplinary manner: the post occupancy evaluations (Barrett and Baltry 2003), usability walk-through audits (e.g. Nenonen and Nissinen 2005; Riihiaho 2002) and service process evaluations (Gummesson and Kingman-Brundage 1992) are combined with insight from customer journey (Christopher, Payne and Ballantyne 1991). It is suggested that these analysis could enable to understand user's experiences, activities and factors, which are significant for the usability.

POST OCCUPANCY EVALUATION, USABILITY WALKTHROUGH, CRITICAL INCIDENT TECHNIQUE AND CUSTOMER JOURNEY

Facility oriented approach – Post Occupancy evaluation

Post-Occupancy Evaluation - POE (Preiser *et al.* 1988) is the process of systematic collection of data on occupied built environments, analysis of these data and comparison with performance criteria. POE's are particularly aggravated to the users' needs, preferences and experiences. It assesses how well buildings match users' needs, and identifies ways to improve building design, performance and fitness for purpose. Building users are all people with an interest in a building - including staff, managers, customers or clients, visitors, owners, design and maintenance teams, and particular interest groups such as the disabled. It uses the direct, unmediated experiences of building users as the basis for evaluating how a building works for its intended use.

POE is also a formal way of determining whether a recently occupied or remodeled building is performing as was intended in its programming and design (Horgen and Sheridan 1996). Post Occupancy Evaluation can be used for many purposes, including fine tuning new buildings, developing new facilities and managing problem buildings. Organisations also find it valuable when establishing maintenance, replacement, purchasing or supply policies; preparing for refurbishment; or selecting accommodation for purchase or rent. (Preiser 1989.)

Indicators for success of the building are for instance a high occupancy level, a positive appraisal by occupants and visitors, and easy to let (low vacancy rate, small number of movements). Indicators for failure are for instance complaints of users, negative comments of experts, high running costs or a burglary rate above average. Over the years there is a growing awareness of the importance of Total Building Performance Evaluation, also including technical aspects, building physics and costs (Preiser and Schramm 1998).

There are numerous methods of data-collection such as questionnaires, individual and group interviews, behavioural mapping, technical assessment tools and mathematical models, each with its own pros and cons. World-wide sound instruments such as the Real Estate Norm, Serviceability Tools and Methods and other scaling techniques are used in order to measure functional aspects such as usefulness, accessibility, health, safety, and flexibility. (Voordt 1999)

Some critics claim that such assessments concentrate too much on technical aspects of the buildings. It is focusing on building, giving feedback instead of feed-forward and needs additional methods to achieve the user. (Alexander *et al.* 2005; Voordt 1999)

Usability oriented approach – Usability walkthrough

A CIB Task Group 51 "Usability of buildings" has been created to apply concepts of usability, to provide a better understanding of the user experience of buildings and workplaces. Usability is defined as the "….effectiveness, efficiency and satisfaction with which a specified set of users can achieve a specified set of tasks in a particular environment" According to this definition, a product's usability is determined by 3 key factors:

- Effectiveness – whether users can achieve what they want to do with the product
- Efficiency – how long it takes them to achieve it
- Satisfaction – their feelings and attitude towards the product

The first level of the usability decomposition is what is called usability attributes. Usability attributes are precise and measurable components of the abstract concept that is usability. Usability attributes include e.g. that systems are easy and fast to learn, efficient to use, easy to remember, allow rapid recovery from errors and offer a high degree of user satisfaction.

It also means bringing the user perspective into focus. The term usability describes whether or not a product is fit for a specific purpose. Usability, or functionality in use, is concerning the buildings ability of supporting the user organizations economical and professional objectives. (Jensø *et al.* 2004)

The methods to assess usability are developed mostly in information and communication technology. However they can be applied to physical built interfaces and infrastructure as well as to virtual interface and infrastructure. Heuristic Evaluation (Nielsen and Mack 1994) identifies usability problems early in the design phase. One can provide mock-ups, in order to avoid usability problems. Formal Usability Inspection can be additional for mock up assessment. Riihiaho (2000) describes the usability walkthrough as the method, which guides the analysts to consider users' mental processes in detail instead of evaluating the characteristics of the actual interface. The method can be used also in very early phase in the design process to evaluate designers' preliminary design ideas. On the other hand the context of the tasks and the users' characteristics must be well specified so that the users' mental processes will be articulated. Cognitive Walkthrough (Rowley and Rhoades 1992); (Wharton *et. al.* 1994) is a task oriented usability inspection method. Its focus is on ease of learning. Cognitive walkthrough is based on a theory of learning by exploration according to which users try to infer what to do next using cues that the system provides.

Pluralistic Walkthrough (Bias 1991) looks into how users react in different situations. The pluralistic usability walk-through session include participants from several groups: the users (present or potential) of the workplace, system developers like architects, designers and constructors and usability experts. It is best used in the early stages of development, as the feedback garnered from pluralistic walkthrough sessions is often in the form of user preferences and opinions. Together the participants gather information about the usability by

inspecting the workplace. In the end of the session the whole group discusses the findings they have made.

Feature Inspection (Nielsen and Mack 1994) aims to find out if the feature of a product (e.g. meeting rooms) meets the users need and demanding. This method is used at its best in the middle stages of development. At this point, the functions of the product and the features that the users will use to produce their desired output are known. This can be enriched with consistency inspections, which look for consistency across multiple products from the same development effort. Guidelines and checklists help ensure that usability will be considered in a design. Usually, checklists are used in conjunction with a usability inspection method. (Nielsen 1993).

Usability assessing methods are interested in understanding the development of interface from the user perspective. It is widening the perspective from functionality to functionality in use. However the logic for usability walkthrough has to be approached more specific way.

Process and experience oriented approach – Critical Incident Technique and Customer Journey

Walk-through audits have been used also in service industries, mostly in hospitality industry (see Fitzsimmons and Fitzsimmons 2004; Fitzsimmons and Maurer 1991). The service process audits have some insight that lack from e.g. post occupancy evaluation. This insight is related to the fact that service process audit literature notices the process nature of services and starts analysis by defining the processes that are carried out in certain premises. As Koljonen and Reid (2000) put it:

> *An understanding of any professional service creation and delivery system begins with a comprehensive description of the client service process.*

A basic method to understand and to describe service processes is service blueprinting. The method was introduced by Shostack already in 1984. In service blueprint the service processes and interactions are visualized as a flowchart (see for example Koljonen and Reid 2000). This approach has some disadvantages; first, it typically looks at the processes rather from company than customer perspective. Second, the blueprint illustrates only the observable actions or events (Kingman-Brundage 1989).

Other methods for analyzing service processes are service mapping (Kingman-Brundage 1989; Gummesson 1993; Gummesson and Kingman-Brundage 1992) and sequential incident technique (SIT) (Stauss 1993; Stauss and Weinlich 1995). The first is, as service blueprinting, more company focus whereas SIT is more customer focused.

Sequential incident technique draws from critical incident technique (CIT) in which the customer is asked to describe those moments in service process that were in some respect exceptional – either in good or in bad. Then the data is classified into different types of experiences with content analysis. (Bitner *et al*. 1990) For our purposes the approach has two limitations; first the process dimension is not clear and second the normal incidents are excluded from the analysis. Sequential incident technique bypasses these problems. It looks at entire processes and includes also those incidents that are not exceptional. As Stauss and Weinlich (1995) state: “The fundamental purpose of the method is to record all incidents customers perceive in a specific service transaction sequentially in the course of the

consumption process." The first step is to construct a "customer path diagram" (compare with blueprinting). This diagram shows the typical path customer follow when involved in some service process. Suggested methods for data gathering are single interviews, group interviews, surveys and observation. The aim is to understand what customers typically do during the service process (Stauss and Weinlich 1995). This is called customer journey.

The customer journey is the cycle of the relationship/buying interaction between the customer and the organisation ("what we put our customers through if they wish to, and do, do business with us"). It is a visual, process-oriented method for conceptualising and structuring people's experiences. Customer-journey means the customer's transition from never-a-customer to always-a-customer. This has been described by others (Christopher, Payne and Ballantyne 1991) as a customer staircase or ladder. On this journey the value of customers will change. These maps take into account people's mental models (how things should behave), the flow of interactions and possible touch points. They may combine user profiles, scenarios and user flows and reflect the thought patterns, processes, considerations, paths and experiences that people go through in their daily lives.

The customer life cycle usually starts when the customer wants or needs a product or service and will continue to the point where the product is reclaimed, redeemed or renewed. The organisation's aim is to manage this journey in such a manner that maximises value both for the customer and for the organisation. Different authors use different amount of phases in customer journey. They are summarised in Table 1.

Table 1. Phases in customer journey

Phases from customer to commitment perspective	Phases from customer experience perspective	Phases from process perspective
Suspect - could the customer fit to company's target market profile	Need - I'm considering a purchase – who should I approach?	Orientation
Prospect - customer fits the profile and is being approached for the first time	Enquire - I make general enquiries to possible suppliers.	Approach
First-time customer - customer makes first purchase	Approach - I decide to make more specific enquiries to a selected few	Action
Repeat customer - customer makes more purchases	Recommendation - They make recommendations and/or send proposals	Depart
Majority customer - customer selects your product/company as supplier of choice	Purchase - I decide to purchase and place my order with one supplier	Evaluation
Loyal customer - customer is resistant to switching suppliers; strong attitude	Experience - They supply and I use the product or service.	
Advocate - customer generates additional	Problem - I have a problem that is	

Phases from customer to commitment perspective	Phases from customer experience perspective	Phases from process perspective
referral currency	reported to and handled by the supplier. Reconsider - I'm considering purchasing something else – should I go back?	

The Customer Journey is a systematic approach designed to help organisations understand how prospective and current customers use the various channels and touch points, how they perceive the organisation at each touch point and how they would like the customer experience to be. This knowledge can be used to design an optimal experience that meets the expectations of major customer groups, achieves competitive advantage and supports attainment of desired customer experience objectives.

When the customer path or user journey is understood, the SIT moves on to second phase – namely assessing the customer experience during this path. This is done with interviews or surveys. After the entire data has been collected, it may be then analyzed. If they survey is conducted, then statistical methods are applicable. If the customer experience is studied by interviews more qualitative methods are applicable. (Stauss and Weinlich 1995)

METHODS IN INVESTIGATION OF USABILITY OF BUSINESS PARKS

The usability of business parks can be approached by methods presented above. One way to define Business Park itself can be defined either in a product orientated way "*A landscaped area containing high tech, other amenities for business purposes, as distinct from high-tech park or a science park. Building density is lower than would be usual in a traditional industrial estate. Business Parks are preferentially located where motorway, rail and airport communications are within a short distance."* Narains (2006) or in a process orientated way as:*" Collection of companies of more or less related activities, in close proximity, exploiting the benefits of synergy"* (Promitheas 2006)

Business park consist on several buildings, which of course provides possibilities to use post occupancy evaluation in a relevant way, because the quantitative data is easy to collect. Post occupancy evaluation provides also comparative data if the surveys are conducted before and after the change, e.g. removal.

Usability walkthrough method in business parks rises up a question, who is the user. There is need to define different user groups. The tenant organizations in the business parks form one user group. Their customers are important users too. Thirdly the service providers in the business park are one user group. The usability is different for different user groups.

Critical incident technique concentrates in service processes in the business park – this method is relevant when understanding business park in process orientated way. The method allows information especially about the service processes within a business park and indicates the service blueprints in the service environment.

Customer journey in Business Park allows researcher to investigate the user experience as a part of the customer journey process. This differs from usability walkthrough method in a way that in customer journey one defines the moments of relationships during the customer journey. Usability walkthrough concentrates on usability of the functions of the environment.

Table 2 summaries the characteristics of different methods. Together they provide a complete illustration of the phenomena as well as rich data.

Table 2. Summary of different methods

Method	Research Object	Research Techniques	Presentation of results
Post occupancy evaluation	Building	Survey - quantitative	Diagrams
Usability walkthrough	Attributes, usability of functions of the buildings	Participative interviews during the walkthrough (discussion during walkthrough) or after the walkthrough (silent walkthrough) Observations	User paths and maps Qualitative descriptions Classifications Recommendations
Critical incident technique	Service process	Interviews – qualitative Observations	Descriptions of transactions – process descriptions, service paths
Customer journey	Process	Interviews – qualitative Surveys - quantitative	Customer journey map illustrations Process descriptions Diagrams

CONCLUSIONS

This paper described the methods to assess usability of work places. The Post Occupancy Evaluation (POE) method is focusing on building as object instead of process. Usability walkthrough is focusing on qualities of different functions within a building, its attributes. Customer journey provides data about the processes and user experiences in the work environment. These different orientations provide a possibility to gather rich data from the work environment and weight the customer experience from different angels.

The tangible and intangible elements of user experience are both measurable. The advantage of the methods presented in this article is that they can uncover those small details that affect the workplace experience – sometimes to a really great extent. Still they also allow increasing understanding in more general level. Nevertheless, the usage of different methods demands more investigations in order to provide sufficient new data for evaluating and developing user experiences in the workplaces.

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