

## **DESIGN SUPPORTING A ‘CUSTOMER-PERCEIVED INTIMACY’-STRATEGY IN HEALTHCARE SERVICES**

**Martens, Carmen (1,2); Herssens, Jasmien (1); Delcourt, Cécile (2)**

1: University of Hasselt; 2: University of Liege

### **ABSTRACT**

Given that we live in a time within a growing competitive healthcare market, the customer experience and healing opportunities are on top of the priority list. However, little attention has been dedicated on how to merge the disciplines of architecture, healthcare and management to create healthcare environments to enhance the customer experience and the healing process. The goal of this paper is to explore how design can foster customer-perceived intimacy within a healthcare context to achieve enhanced customer outcomes, such as customer well-being. Understanding the importance of customer-perceived intimacy is paramount, as customers are constantly exposed to intimate situations. The study suggest that there is potential for such situations to be wrought with problems involving complexities associated with human cognition, emotions, physiological responses, and behaviors. A literature review is undertaken to highlight the antecedents and the short-term and long-term outcomes of customer-perceived intimacy. As a result, the paper provides a conceptual framework that raises many questions that need to be answered. In doing so, a solid foundation for future inquiry has been laid.

**Keywords:** Customer intimacy, Design process, Experience design, Healthcare services, Service design

### **Contact:**

Martens, Carmen  
University of Hasselt/University of Liege  
Arts and Architecture/Management Sciences  
Belgium  
carmen.martens@uhasselt.be

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## 1 INTRODUCTION

Both healthcare consumerism and the growing competition between healthcare providers challenge the healthcare industry (Suess and Mody, 2017). Hal Wolf (2018) suggests that there will be a patient-led healthcare revolution that will change the way healthcare is delivered today. Patients will eventually grow into health consumers who have a careful understanding of their own wants and needs and expect the healthcare industry to react immediately and in a personalized, much more tailored way (Patient@Home, 2018). Therefore, healthcare providers continuously concentrate on patient-centred care and aim to enhance the quality of that care. One facet of the emphasis on patient-centred care is the focus on the customer experience (Lee, 2011). Consequently, a change in paradigm emerges where “patients” are recognized as “customers” (Suess and Mody, 2017).

The growing interest in and efforts to improve healthcare facility customers’ experiences has led to various design studies, including research that has examined the role of the environment in the healing process. Consequently, the healthcare sector acknowledges the servicescape (i.e. the design of the physical environment of a service organization (Bitner, 1992)) as an important feature (Fottler *et al.*, 2000). However, too little attention has been dedicated on how to merge the disciplines of architecture, healthcare and management and to unite their research to create adequate tangible healthcare environments through an optimal architectural design to enhance both the customer experience and the healing process. As Khullar (2017) states: “Hospitals are among the most expensive facilities to build, with complex infrastructures, technologies, regulations and safety codes. But evidence suggests we’ve been building them all wrong — and that the deficiencies aren’t simply anaesthetic or inconvenient. All those design flaws may be killing us.” (Khullar, 2017). Insights in design strategies that link customer experiences with design principles are currently missing (Herssens, 2017, 2019). This is most visible in extreme situations such as hospitals in which “the utilitarian building types have generally led to the main attempts at system building” (Lawson, 2006, p.102). Most hospitals are designed by means of using a rational problem-solving attitude, but it is this focus on rational use, modularity and standardisation which has led to the lack of experiences. Therefore, they lack a holistic approach with attention for social, cultural, physical, and psychological support, while a primary aim within a healthcare facility is to satisfy customers’ needs for comfort, safety, security, convenience, privacy and support. Most patients arrive at healthcare facilities with feelings of stress, unease, and anxiety, and an unfamiliar environment will only strengthen their negative emotions. Furthermore, patients are less empowered and knowledgeable about their received service. They are often expected to cooperate and deliberately disclose very personal information or intimate parts of their body (Berry and Bendapudi, 2007). But these patients may feel highly vulnerable (Anderson *et al.*, 2013) and an inadequate perceived environment may increase uncomfortable feelings. In turn, they may not self-disclose personal information while this information might be key in the healing process.

The goal of this paper is to explore how supportive design solutions can foster customer-*perceived* intimacy (CPI) within a healthcare service context to—in fine— achieve enhanced customer outcomes, such as customer well-being. This study proposes to broaden the concept of customer intimacy by highlighting the customer perspectives and thus the customer outcomes, caused by both intangible (i.e. interpersonal) and tangible (i.e. design of the physical environment) factors. Therefore, the term customer-*perceived* intimacy is coined, defined as “the perceived meeting (and exceeding) of customer needs and wants from a customer’s perspective, facilitated by a holistic experience of both intangible (i.e. interpersonal) and tangible factors (i.e. design of the physical healthcare environment).” An extended multidisciplinary literature review was undertaken supported by a conceptual framework to highlight both the antecedents (i.e. the architectural components of the healthscape) and the short-term (cognitive, emotional, physiological and behavioural responses) and long-term outcomes (i.e. wellbeing and repurchase behaviour) of customer-*perceived* intimacy (CPI).

## 2 CONCEPTUAL FRAMEWORK

The conceptual framework focuses on healthscapes (i.e. the design of the physical environment of a healthcare service organization) and their effect on customer-*perceived* intimacy, including users’ short-term cognitive, emotional, physiological and behavioural responses within the hospital and long-term outcomes, such as well-being and repurchase behaviour.

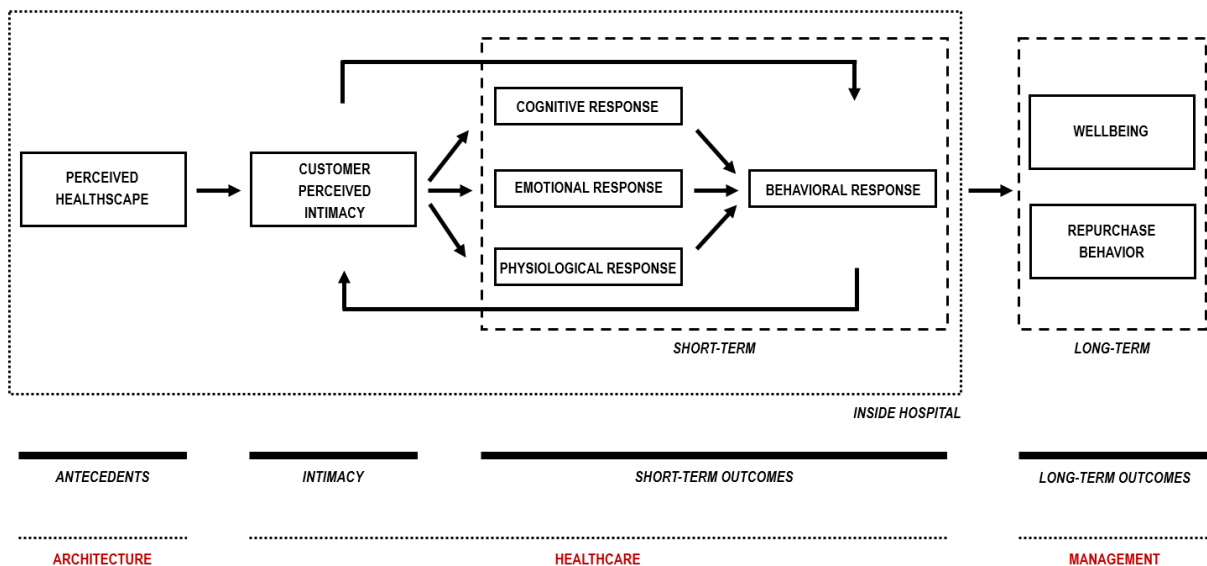


Figure 1. Conceptual Framework

## 2.1 Perceived healthscape

Various studies indicate how the design of the physical environment may function as a facilitator in achieving managerial goals and healing opportunities. On one hand, the design of the physical environment may be used as a tool in the creation of customer experiences. On the other hand, there is a growing acknowledgement because of evidence-based design, that the design of the physical healthcare environments can affect patient medical outcomes and care quality (Ulrich, 1984; Ulrich *et al.*, 2010).

Previous hospital designs were designed to meet the medical objective, but lack a holistic approach with attention for social, cultural, physical, and psychological support, while a primary aim within a healthcare facility is to satisfy customers' needs for comfort, safety, security, convenience, privacy and support. As good design enables and bad design disables (Hogan, 1993), inconvenient environments may create disabling situations in terms of physical, cognitive, cultural or social inclusion (e.g., privacy issues, disorientating corridors, bad acoustics, bad access for disabled people, bad smell) (Herssens, 2017, 2019). Most patients arrive at healthcare facilities with feelings of stress, unease, and anxiety, and an unfamiliar environment will only strengthen their negative emotions. Furthermore, patients are less empowered and knowledgeable about their received service. They are often expected to cooperate and deliberately disclose very personal information or intimate parts of their body (Berry and Bendapudi, 2007). But these patients may feel highly vulnerable (Anderson *et al.*, 2013) and an inadequate perceived environment may increase uncomfortable feelings. In turn, they may not self-disclose personal information while this information might be key in the healing process. In the same vein, staff may need to reveal very personal and negative information to patients, which is a delicate task that must be carried out in a suitable environment. Studies prove that both staff and patients withhold parts of the story or refuse extra exams in a double room (Barlas *et al.*, 2001; Mlinek and Pierce, 1997). Other studies show that the design of the physical environment can be therapeutic if it removes these environmental stressors, joins patients to nature, offers possibilities to enhance feelings of being in control, and provides opportunities for social support and relaxation (Malkin, 2002).

Adequate research and a holistic design strategy should support architects in the design process by providing them with an understanding of customer needs and expectations, and supportive evidence for their selected design solutions to convince all stakeholders. Especially in the healthcare sector, where different stakeholders are present, and budgets are under growing pressure. Therefore, the healthcare industry is keen in the proven value and effect of solutions. Erik Jylling emphasizes that the healthcare sector: *"have to have the ability to assess that the solutions are also in favour of being integrated in the system. So, it should benefit the patient, the outcome, and it should also benefit the spending of the public economy."* (Patient@Home, 2018).

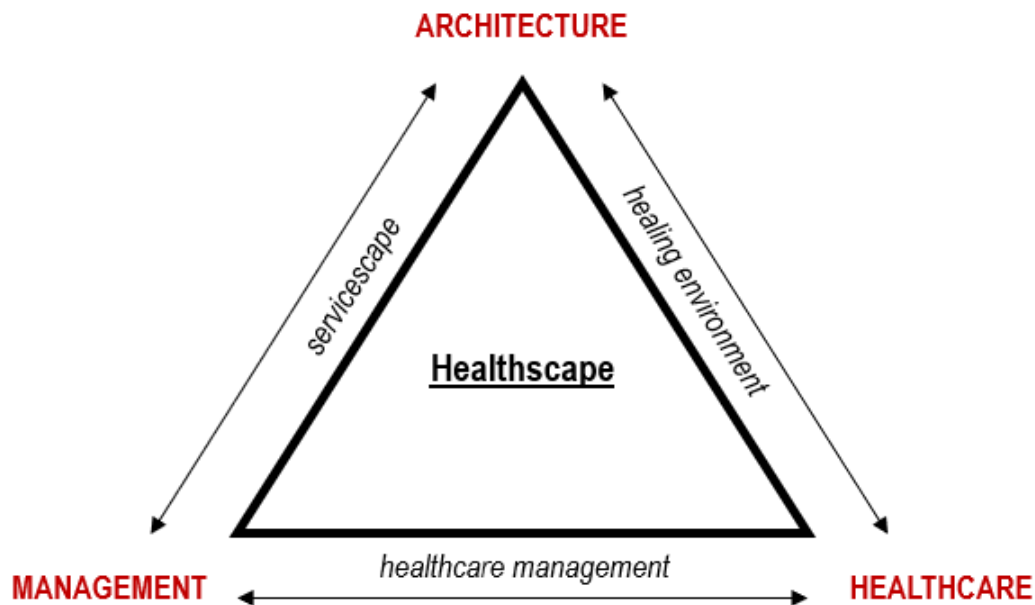


Figure 2. Healthscape model, the link between architecture, management and healthcare literature

### 2.1.1 Architecture-management: design of the 'Healthscape' for customer experiences

The relationship between humans and the design of the physical environment is discussed in the management literature by Bitner (1992), who first coined the term 'servicescape' referencing to the design of the physical environment, which affects both customers and employees in service organizations. The servicescape model by Bitner (1992) drew the origin from the term 'atmospherics' defined by Kotler (1973) as the effort to design buying environments to produce buyer specific emotional effects that enhance his purchase probability. The study shows how the design of the physical environment is a crucial component, as it signals the customer with an indication of the service offered, while it also affects the way in which the service is positioned and differentiated. It (1) may have a strong impact on customers' perceptions (Bitner, 1992), (2) may be very influential in communication the firm's image (Bitner, 1992), and (3) influence the customer's ultimate satisfaction with the service (Bitner, 1990; Harrell *et al.*, 1980). Similar to what customers do in other services, patients may compare hospitals and select providers on the basis of their reputation. It is therefore important for healthcare providers to build and nurture their reputation, also regarding keeping a proactive, loyal and co-creating customer base.

While other service industries such as hospitality and retail have appreciated the role of the design of the physical environment on customer satisfaction and even tries to enhance the environment to exceed the customer's expectations, it was only later that the healthcare industry recognized its importance (Fottler *et al.*, 2000). Hutton and Richardson (1995) coined the term 'healthscape', by modifying Bitner's servicescape (1992) framework and deepening Kotler's atmospherics (1973). Healthscape refers to the servicescape specific to any healthcare service, which concerns the 'tangibles' (i.e. the design of the physical environment) captured through our senses of sight, smell, sound, taste, and touch (Hutton and Richardson, 1995). Various studies investigated the role of the design of the physical environment, such as Parasuraman, Zeithaml, and Berry (1988) who proposed a widely used measurement tool to assess customer perceptions with service quality (i.e. SERVQUAL). Next to the dimensions of "reliability", "responsiveness", "assurance", and "empathy", the tool includes "tangibles" to measure service quality. Within the healthcare context, comparable studies (e.g. Ulrich, 1984; Verderber, 1986; Wilson, 1972) suggest that the existence of windows and outside views impact patients' experiences. Bowers and Swan (1992) explain that patients find it difficult to judge healthcare service delivery because of its technical nature, therefore, the tangible elements (e.g. physical settings, ambience, layout, infrastructure, etc.) of the service encounter play a major role in evaluating the overall service quality. Stern *et al.* (2003) propose an assessment tool that explores customers' needs and satisfaction in healthcare. The dimensions include the design of a physical environment that "(1) facilitates connection to staff, (2) is conducive to well-being, (3) is convenient and accessible, (4) is caring for family, (5) is confidential and private, (6) is considerate of

*impairments, (7) facilitates connection to the outside world, and (8) is safe and secure*” (p. 20). Thus, various studies show that tangibles (i.e. the design of the physical environment) are crucial for customers perceptions, although the service itself is intangible (i.e. interpersonal).

### **2.1.2 Architecture-healthcare: design of the ‘Healthscape’ as a healing environment**

The impact of the environment is already known since ancient times. Locations of the Asclepieia (i.e. the healing centres of ancient Greece) were carefully selected, using thermal springs, designed on spectacular views, and creating buildings for leisure activities, closely located to medical buildings (Christopoulou-Aletra *et al.*, 2010). Alvar Aalto and Richard Neutra, leading architects from the modern period, stress the advantages of well-planned architecture, and the influence of nature for healing in their architecture (Sternberg, 2009). Contemporary science points out to the strong relationship between emotions and health and has found evidences that confirm those connections, providing scientific explanations through transdisciplinary researches. The built environment is strongly linked to the emotional health, and at the same time, it is a widely accepted opinion that emotions directly affect the overall health (Sternberg, 2001).

Hospital design, in terms of its architecture, is a highly complex system because of its technical requirements, logistics and operation management. Most hospitals are designed to meet its medical objective, but they lack a holistic approach with attention for social, physical, and psychological support. These “hard facilities” (Ulrich *et al.*, 1991) usually work against the process of healing. Increasing interests in and efforts to improve healthcare facility users’ experiences led to implementations of design research that have studied diverse user groups to explore the role of the environment in the healing process (Arneill and Devlin, 2002; Fottler *et al.*, 2000). Consequently, there is a growing acknowledgement that the design of the physical healthcare environments can affect patient medical outcomes and care quality (Ulrich, 1984; Ulrich *et al.*, 2010). These studies are part of the domain of evidence-based design (EBD) and draws from various disciplines including environmental psychology, evolutionary biology, psychoneuroimmunology, and neurosciences.

This increasing scientific evidence shows that poor design works against the well-being of patients and in certain instances can have negative effects on physiological indicators of wellness, such as anxiety, delirium, elevated blood pressure, and increased intake of pain drugs (e.g. Ulrich, 1984; Wilson, 1972). Design should do more than produce health facilities that are satisfactory in terms of functional efficiency, cost, and codes. Designers should promote well-being by creating physical surroundings that are “psychologically supportive” (Ruga, 1989). Ulrich *et al.* (2008) concluded after an extensive review of empirical studies on evidence-based healthcare design, that “*well-designed physical settings play an important role in making hospitals safer and more healing for patients, and better places for staff to work*” (p. 1). Examples of built-related stressors in hospitals are a lack of contact with nature, a lack of physical and mental stimulation, a lack of privacy, and noise (Berry and Bendapudi, 2007). Therefore, improving the design of the healthscape is integral to improving healthcare itself, next to intangible (i.e. interpersonal) antecedents such as, clinician competencies, service process design, organizational culture, and a host of other factors (Ulrich *et al.*, 2010).

## **2.2 Customer-perceived intimacy**

The change in paradigm within the healthcare industry, more precisely to recognize “patient as customer” and the need to meet and exceed customer expectations makes a customer intimacy-strategy a logical step and source of inspiration. This focus on creating value for the customer as a strategy was already recognized in 1993 by Treacy and Wiersema. They identified three value disciplines – operational excellence, product leadership, and customer intimacy, from which companies must choose to align their overall strategic functioning of the organization. Focussing on one of the three value disciplines will enable the organization to meet and exceed customer expectations and thus add real value to the customer’s experience. Given their definition, customer intimacy means focusing on delivering not what the market wants but what specific customers want. Those pursuing a strategy of customer intimacy, continually tailor and shape services to match the specific demands of the customer (Treacy and Wiersema, 1993), and may therefore correspond to the emerging healthcare consumerism. Throughout the years, the concept customer intimacy remained largely dormant and unspecified. However, various academic peers refer to attaining customer intimacy as an important aspect to develop and maintain successful customer relationships (e.g. Akçura and Srinivasan, 2005, Beetles and Harris, 2010, Fournier, 1998, Johnson *et al.*, 2006, Kai-Uwe Brock and Yu Zhou, 2012,



Price and Arnould, 1999). Previous studies examined the concept within various sectors (e.g. banking sector, the mobile telecom sector, the automotive sector, advertisement sector,...) but do not provide a sufficient understanding of customer intimacy in healthcare service contexts.

Although, the definition of customer intimacy highlights the customers' perspective by achieving and exceeding customers' wants and needs, previous literature on customer intimacy mainly focused on firm outcomes such as creating and maintaining successful customer relationships, customer loyalty, customer satisfaction, customer trust, word-of-mouth, commitment, information disclosure, customer availability, advisor status, repurchase intentions, and profitability (e.g. Akçura and Srinivasan, 2005, Beetles and Harris, 2010, Bügel *et al.*, 2011, Fournier, 1998, Johnson *et al.*, 2006, Kai-Uwe Brock and Yu Zhou, 2012, Liu *et al.*, 2011, Price and Arnould, 1999, Stern, 1997, Treacy and Wiersema, 1993, Yim *et al.*, 2008). Although, there are differences in what managers thought their customers valued and what customers said they valued (Parasuraman *et al.*, 1985; Woodruff, 1997), the actual customer outcomes are currently lacking in literature.

Further, healthcare services are interpersonal services in which customers and employees interact with each other within the organization's physical facility. Thus, people's purchasing decisions include the "total product" (Suess and Mody, 2017), a holistic perception of both intangible (i.e. interpersonal) and tangible (i.e. design of the physical environment) factors. Previous research on customer intimacy mainly focused on these interpersonal factors and have stated intangible antecedents, such as customer knowledge, operational flexibility, and employee competence (Habryn *et al.*, 2010; Treacy and Wiersema, 1993). A key parameter that is neglected is the tangible (i.e. design of the physical environment) factor, or what is referred to here as the servicescape (Bitner, 1992).

Accordingly, to broaden the concept by emphasizing the actual customer outcomes and a holistic perception of the customer experience including both intangible (i.e. interpersonal) and tangible (i.e. design of the physical environment) factors, the term "customer-perceived intimacy" is coined. Given the above, we propose the following working definition of customer-perceived intimacy in healthscapes: "*Customer-perceived intimacy in the context of healthcare, is the perceived meeting (and exceeding) of customer needs and wants from a customer's perspective, facilitated by a holistic experience of both intangible (i.e. interpersonal) and tangible factors (i.e. design of the physical healthcare environment).*"

### 2.3 Short-term and long-term outcomes

The environmental psychology literature argues that customers in service organizations react to the physical environment in a cognitive, emotional and physiological way. In addition those responses are what influences their behaviours in the environment (Bitner, 1992), (see Figure 1.).

The perceived healthscape may evoke cognitive responses (Golledge, 1987; Rapoport, 1982) which (1) affects people's beliefs about a place, and (2) assists people by distinguishing an organization by categorization. For example, it helps people to distinguish the children's department from the radiology department within a hospital. Furthermore, it (3) allows the customer to classify the organizations mentality. This way, the environment can be seen as a way of nonverbal communication (Jencks, 1980; Rapoport, 1982). Emotional responses refer to the subconsciously aroused feelings of the customer in response to a particular stimulus (Grace, 2007). Emotion-evoking characteristics of environments include two dimensions: pleasure-displeasure and the degree of arousal (i.e. amount of stimulation or excitement). Environments that evoke pleasant feelings are likely to be ones where people prefer to spend time (Donovan and Rossiter 1994; Mehrabian and Russell 1974), whereas unpleasant environments are avoided. Likewise, arousing environments are experienced positively unless the excitement is mixed with unpleasantness (Mehrabian and Russell 1974). Unpleasant environments that are also high in arousal (e.g. noise, confusion) are especially avoided. The perceived healthscape may also affect customers in purely physiological ways. Physiological responses are the essentially uncontrollable bodily responses of the customer in response to a particular stimulus (Grace, 2007). Those physiological responses (e.g. shivering because of low room temperature) may in turn directly influence whether or not people stay in and like a particular environment (Bitner, 1992). Behavioural responses are the controllable actions or reactions (e.g. verbal responses) of the customer in response to the a particular stimulus (Grace, 2007). Environmental psychologists argue that people react to places with two opposite ways of behaviour: approach (i.e. desire to stay, explore, and affiliate) and avoidance (Mehrabian and Russell, 1974). The behaviours of customers are to a great extent driven by individual internal responses (cognitive, emotional and physiological) to the

environment. In addition, the healthscape can affect the degree of success customers experience in achieving their plans once inside (Darley and Gilbert, 1985) (Russell and Snodgrass, 1987). For example, when a patient enters a hospital and (1) is confused because he or she cannot find signage giving directions to the assigned care department and (2) is emotionally distressed because of crowds, poor acoustics, and low temperature, the patient is unable to carry out the purpose for entering the environment, at least not very easily or in time. Here the healthscape hinders the achievement of the customer's goal (Bitner, 1992, p.61). In addition, the perceived healthscape has an impact on all social interactions within the environment. Barker (1968) suggests that recurring social behaviour patterns are related to particular physical settings and that when people encounter typical settings, their social behaviour can be predicted.

On the long-term, this may have an impact on customers' attitudes such as their overall well-being and customers' behaviour such as repurchase behaviour. A basic assumption underlying this exploration is that the customer has a choice among healthcare service providers; that is, the healthcare industry is competitive, and the customer has the option of switching healthcare providers after a bad experience.

### 3 CONCLUSION AND FUTURE RESEARCH STEPS

Given that we live in a time within a growing competitive healthcare market, the customer experience and healing opportunities are on top of the priority list in healthcare services. Therefore, understanding the importance of customer-perceived intimacy is paramount, as customers are constantly exposed to intimate situations. The findings of this study suggest that there is considerable potential for such situations to be wrought with problems involving complexities associated with human cognition, emotions, physiological responses, and behaviours. As a result, this research provided a conceptual framework that raises many questions that need to be answered. However, in doing so, a solid foundation for future inquiry has been laid.

As this is a first paper within a bigger research, the proposed framework needs further exploration. In a next step interviews are conducted with patients to obtain comprehensive and valuable insights about their expectations and experiences and the influence of the design of the physical environment. The interviews provide insight into the attitudes, motivations and behaviours of the participants. The basis for the interviews is formed by the problem analysis, literature research and conceptual framework discussed in this paper.

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