

# Service innovation through touch-points: the AT-ONE touch-point cards

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## Abstract

In this paper we review the area of touch-point innovation in services and specifically describe the development and use of a card-based toolkit developed in the AT-ONE project - the AT-ONE touch-point cards. These cards have been developed to assist cross functional teams during the first phases of the new service development (NSD) process. This paper describes the development of the tools, their intended use and their evaluation. The results show that the toolkit assists the innovation process and helps develop team cohesiveness. The card-based approach offers a tangibility that teams find useful, and that offers multiple usage alternatives. Discussion and suggestions for further work are included.

**KEYWORDS:** Touch-points, cross-functional teams, service design, innovation

## Introduction

Touch-points are the points of contact between a service provider and customers. Each time a person relates to, or interacts with, a touch-point, they have a service-encounter. This gives an experience and adds something to the person's relationship with the service and the service provider. The sum of all experiences from touch-point interactions colours their opinion of the service (and the service provider).

Touch-points are one of the central aspects of service design. They describe one of the major differences between products and services, and are the link between the service provider and the customer. In this way, touch-points are central to the customer experience. It is not surprising then, that touch points are mentioned as one of the three pillars of service design (Koivisto 2009 p .142)

Due to the importance of touch-points as part of service design, there is a lot of interest regarding how a project team can innovate within the area. This paper considers existing touch-point research and describes the development and use of a card-based toolkit used to help project teams develop innovative new services.

## Research into Touch-points

Despite being a major part of service design, there is little, or no, documented research within the area (Howard 2009). We have to move to other disciplines to find research into touch-points, yet this research has a different focus and approach. Existing knowledge comes mainly from practice-based consultancy within service design, and can be traced back to literature from marketing and CRM (customer relationship marketing). This literature generally focusses upon the need for strategies for the integration of multiple channels, often with focus upon integration into a CRM system. In marketing and CRM, the term multi-channel delivery is often used instead of touch-points, and the focus has been mostly upon CRM systems themselves, rather than customer experiences or touch-point interactions. Design of individual touch-points is not covered, nor is innovation through touch-points considered, other than at a cursory level.

However, the concept of designing points of contact between the service provider and the customer is not new. Shostack (1984) introduced thinking around touch-points as part of services, using the term tangible evidence as part of what she termed 'service blueprinting'. She describes touch-points as follows:

*... everything the consumer uses to verify their service's effectiveness. The setting, including colour schemes, advertising, printed or graphic materials and stationary, all proclaim a service's style. The design should not be carelessly delegated to outsiders or left to chance Shostack 1984 p137*

Shostack also used the term "orchestration" to describe how these points of contact should be designed.

In the medical domain, the term emotional touchpoints has started to appear in the research literature (eg. Dewar, et al 2009). The use of the touchpoint term here is more in alignment with usage in service design, in relation to the customer experience. However, the term is specifically applied in their article as an interview tool for eliciting critical incidents during a service journey - ie. as an evaluative tool for completed services, rather than as an innovation tool during the early stages of the design process.

Within marketing, integrated marketing (Iacobucci and Calder 2003) places most importance upon touch-points. Integrated marketing combines three elements that are closely related to service design; an understanding of consumer behaviour, focus upon brand and the link to customer experience. Integrated marketing takes a holistic view of services, in which coordination of touch-points is one major part of linking what is termed contact experiences to the brand:

*in a more complex consumer experience ... there may be literally hundreds of small elements of experience the consumer notices. (Fortini-Cambell 2003 p63)*

In CRM, the focus is upon using technology to organise and automate relationships with customers and prospective customers. It is often centred upon automating and integrating interactions, often with a focus upon efficiency rather than upon the customer experience:

*CRM is a management approach that seeks to create, develop, and enhance relationships with carefully targeted customers to maximise customer value, corporate profitability, and thus, shareholder value (Payne and Frow 2004 p527)*

Within CRM research the term touch-points has been used within a context of maximising profitability and shareholder value. Technology is used to organize, automate, and synchronize business processes—principally sales activities (Payne and Frow 2004, Hogan,

et. al. 2005). Recent developments in CRM practice show a new attention towards touch-points as part of the customer experience (Choy 2008),

Unfortunately, there is a lack of literature that provides methods, approaches or case studies describing how a project team can work to achieve the goals described in the literature. Much literature covers the importance of touch-point orchestration (Payne and Frow 2004, Holmlid 2008, etc). However, there is little literature available regarding how this is done, how this could be done or how this should be done. The work described here, describes therefore a methodology to assist cross-functional teams when working with touch-points.

Holmlid (2008) states that 'For design management the challenge becomes one of both coordinating multiple service channels, and the coordination between service channels' (p7). There is therefore a clear need for assistance that helps project teams achieve these two goals, yet little or no research to help project teams with the 'what' and 'how' of touch-point orchestration and innovation exists.

## Research questions

The research presented here contributes to the limited discourse around touch-points by identifying categories of touch-point innovation and by proposing an approach to innovation suitable for cross-functional project teams. Further, a toolkit and its evaluation is described.

The research questions explored in this paper are:

1. How could cross-functional teams innovate service touch-points during the early stages of a project ?
2. In what way can design-based tools assist team integration at the first stages of a project?

## Context

### At the fuzzy front end of the innovation process

The fuzzy front end (Smith & Reinertsen, 1998) describes the phase at the start of the NSD (New Service Development) process and has come into focus during the past years. This phase is described as the most important part of service innovation by innovation managers (Allam and Perry 2002, Allam 2006). This is because the earliest phases of the development process offer the greatest opportunity for transformational innovation. Approximately 66% of life-cycle costs are decided during this phase, whilst only about 5% of development costs are utilised (Berliner and Brimson, 1988). Kelley and Storey (2000) summarise its importance in this way:

*While previous management disciplines have rationalised and routinised the back end of the new service development (NSD) process, the front-end of the process remains a knowledge-intensive black art that appears, from all industry studies available, to be consuming an increasingly large portion of the total concept to cash-flow cycle time. (Kelley and Storey 2000 p.45)*

The fuzzy front end is increasingly being focussed upon by designers, as they are given a more explorative and open brief (Sanders and Stappers, 2008). This phase is also seen as an opportunity to lift design up to a strategic and tactical level of an organisation.

### **Cross-functional development teams**

Cross-functional development teams are now used in most development projects. Such teams include relevant stakeholders, representing different functional areas within (and from outside) an organisation, and diverse disciplines (de Jong and Vermeulen, 2003, Gladstein et al 1992, Sethi et al 2001). The process and tools described in this paper are aimed at assisting cross-functional development teams, where the team, together with designers, explore the project mandate and develop ideas together, through workshops. This, amongst other things, aims to aid the development of team collaboration and communication (Sarin and O'Connor 2009), and helps maintain a common understanding and a shared vision of the object of development (Molin-Juustila 2006).

### **The AT-ONE project**

This work is part of the AT-ONE research project. AT-ONE is developing process support, and tools, for cross functional teams during the first stages of the NSD process. The AT-ONE method helps teams map, ideate and conceptualise potential new services through a structured series of workshops (Clatworthy, 2008).

Each of the letters of AT-ONE relate to a potential source of innovation in services, and the letters can be seen as a set of lenses through which a service can be viewed. The method therefore runs workshops with focus upon each of the following lenses:

- A - New combinations of ACTORS who together can provide improved services
- T - Orchestration and development of TOUCH-POINTS to provide innovative services
- O - Developing new OFFERINGS that are aligned to brand strategy
- N - Understanding customer NEEDS and how new services can satisfy them
- E - Designing customer EXPERIENCES that wow the customer

The work described here relates to the development of the method for innovation in touch-points, the letter T in AT-ONE. The context for this work is therefore upon innovations based exclusively upon focussed workshops on touch-points in which cross-functional teams work together.

## **Method**

The research approach taken was one of participatory action research (O'Brien 2001) in which the author was involved in planning, developing and evaluating the support tool through several iterations.

### **Use context/requirements specification**

The idea for developing a tangible tool emerged when we started running workshops in the AT-ONE project three years ago. As part of the Touch-Point workshops, we found

ourselves using touch-point examples to help with both mapping and analysis (before a workshop) and for idea generation during the workshops themselves. In addition, we identified a need for activities that help build project team cohesiveness, common understanding and common goals.

This need is supported by research into design and collaborative teams (Molin-Juustila 2006), and from literature in which showed cards or games as an innovation support tool (Brandt 2008, Brandt and Messeter 2004, Halskov and Dalsgård 2006).

Based upon existing research into touch-points, cross-functional teams and card-based tools, the project therefore developed a card-based tool with the following seven functions:

#### A. Team building for cross functional teams

1. To build a common understanding of touch-points and their role as part of a holistic service design
2. To assist with team cohesiveness and mutual respect within the team for different disciplines and views

#### B. Analysis and mapping:

1. To gain an overview of the multiple touch-points used during the customer journey
2. To identify critical touch-points during the customer journey
3. To understand the limitations and possibilities of each touch-point that the company utilised
4. To identify who is responsible for design, development and maintenance of each touch-point

#### C. Idea generation

1. To generate ideas regarding how to innovate through changes in touch-point usage, design or implementation.

### **The development process for the cards**

The development process has been iterative and evolutionary during the past three years. Several touch-point workshops have been held with cross-functional teams from industrial clients and in addition, student projects, working with industrial clients have also utilised the cards as part of the workshop process. The cards were initially developed to enrich existing innovation workshops based upon the touch-point analysis and mapping. A need was quickly identified during these workshops to have a checklist of possible touch-points, to save time and to reuse knowledge. We found however, that developing the cards helped further develop the tools, so the tools and cards developed together. The tools and the cards have been prototyped several times and improved each time, most recently during workshops during the Autumn of 2010.



Figure 1: The first cards were images of individual touch-points and fairly large. Their tangibility was good, but they were too large when mapping complex service systems involving many touch-points.

The first cards were images denoting different touch-points. They were larger (ca. 15x15cm) and placed on foam-board. This made them tangible elements that were easy to handle and share and a strong improvement on post-it notes. However we found two problems with them. Firstly, they were too large and unwieldy when many touch-points were being grouped - they simply took up too much space on a table. Secondly, it was unclear from some of the images, which touch point they represented - the images were ambiguous.

The second cards were made as an innovation game for one of the industrial partners in the project. The intention here was to identify touch-points specifically for lottery and betting contexts. This time the cards were of normal playing card size. We found that the size worked well for the game context, and was a size that worked both on tables and on walls, when used for group work. In the images, we attempted to show both the touch-point and the use context. This caused two types of confusion. Firstly, ambiguity of some images, caused confusion, similar to the first series. Secondly, the association to context made it difficult to distinguish between the object in the images as a touch-point (for example a glass) or the context being a touch-point (a bar). This confusion raised questions within the group during group processes and transferred focus from the innovation process to discussion of card meaning. Although not a significant problem, it interrupted the flow of conversation.



Figure 2: The second series of cards were playing card size and incorporated into a game. They incorporated more contextual information about the cards by often including contextual information in the images.

During development of the third, and present set of cards, the project leader and designers discussed the issue of confusion and multiple interpretations. This led to two decisions. Firstly, that we would put the name of the touch-point on the card. This enabled a quick recognition of the touch-point, and together with the image, presented an unambiguous representation. This led to a discussion regarding the choice of images for the cards, and the usage of the cards themselves. Were they to be abstracted and inspirational for idea generation in themselves, or should they be concrete representations of the touch-points? We chose to make them as clearly descriptive and concrete as possible based upon the confusions earlier reported. This eliminated the problems mentioned earlier, and smoothed out group processes, allowing the group to focus upon the innovation process rather than negotiation of meaning.



Figure 3: The final cards added a text label to the image, and contextual information was reduced. This was found to improve group processes. (photo: Nina Lysbakken)

### Innovation tools developed using the cards

The cards can be used in different ways, depending on the requirements of the project. In this way, they assist the divergent phase of the front end of innovation.

#### Use context 1: Mapping an existing situation.

The cards help map out an existing situation. For example, the team can go through each stage of a service (or customer) journey and pick out the touch-points that are relevant at each stage. From this, many aspects can be discussed, such as which touch-point is most important to the customer, which are used in sequence, which are most frequently used etc. This helps get the discussion moving around how customers view the service through touch-points, and how they often jump between them.

#### Use context 2: Identifying so called ‘pain points’

Once the service journey has been mapped out, then there are many options open to a project team, depending upon level of ambition. One of the things we find useful is to identify the touch points along the service journey that don’t perform particularly well from a customer point of view, and why. This can be a useful means for improving consistency of experience along the service journey.

#### Use context 3: Whose touch-point is it anyway

In large organisations, different departments can be responsible for the design and content available through different touch-points. This often comes as a shock to an organisation, but is something that is usually noticeable from the customer perspective. There can be different tones of voice, interaction styles, use of images, typography and especially different terminology. Identifying who is responsible for each touch-point and finding ways of

coordinating between them can be very useful. This assists an organisations co-ordination activities around the customer experience.

#### **Use context 4: Touch-point migration**

An organisation might get lazy, or might just not have routines in place for updating their touch-points. Over time, a touch-point might become out of date or there could be a better touch-point alternative that can be used as a replacement or addition. This is particularly relevant when it comes to use of technology and discussions regarding self service. Going through the touch-point cards can give ideas for new touchpoints and can help map out a migration strategy from one touch-point to another.

#### **Use context 5: Touch-point addition or subtraction**

This challenges today's situation by removing important touch-points. Based upon the touch-point mapping, the main touch point at each stage of the service journey is removed, and idea generation used to find a better replacement. If it cannot be replaced, then the team has gained a deeper understanding of the touch-points importance and role. An alternative to this is to pick a random card at each step of the service-journey and discuss how it could be used to improve the service. We have added some specific touch-points for this, such as "service integrated into a product" or "smart phone". This can be a useful task in many ways, particularly to help challenge today's situation, which might have deep historical roots and need updating.

#### **Use context 6: Forced association to create new services**

In this task participants are forced to create a service based upon random cards: they pick two (or more) random cards from the pack and design a service based only upon these cards. Forced association is an idea generation technique to force you away from logical thinking, and doing this with the touch-point cards forces the team to break with pre-conceived understanding. It's a fun and challenging way to look at touch-points, and often unearths useful reflections regarding a service.

## **Evaluation**

The project has carried out two AT-ONE workshop series per year, for each commercial partner in the project, and have therefore evaluated over 10 iterations of the touch-point toolkit. This means that the cards have been used together with a broad set of service providers and, additionally in several student projects.

The evaluation of the cards has combined several methods: observation, group discussions, questionnaires, and semi-structured interviews with workshop participants.

### **A. Team building for cross functional teams**

Mulin-Juustila (2006) discusses the five critical elements that together create team cohesiveness during the fuzzy front end: personality barriers, different cultural thought worlds, language barriers, organisational responsibilities and physical barriers. Similar elements are identified by Persson (2005) and Pei (2009). Of these, the cards, used as part of collaborative workshops, have shown positive effects upon all. However, it is difficult to distinguish between the role of the cards and the role of the workshop process in these positive team building results. Comments from participants support their use in team

building; *'very useful as a common point of reference'*, and that *'the use of visual tools simplified the process and created a common understanding in the group'*.

## B. Analysis and mapping

The cards received positive reactions when it comes to their ability to assist the analysis and mapping of existing situations. They were seen to assist both holistic understanding, by allowing a visual overview of all touch-points, and the ability to focus upon individual touch-points. This seems to be aided by the combination of clear images and texts, which allows them to be viewed individually, but also in combination. This ability was also useful when identifying critical touch-points or possibilities or limitations of individual touch-points. The same can also be said when it comes to identifying who is responsible for each touch-point. Some workshop participants compared the content of the cards to a checklist, others said that *'the process is built up like Lego blocks, meaning that you can unfold ideas on a large scale'*.

## C. Idea generation

The cards were given positive evaluations in terms of their potential for generating new ideas. Firstly, the cards encouraged both systemic innovation (changing the whole service system) and innovation in individual touch-points. For individual touch-points, innovation related to both removal (or addition) of touch-points, but also upon changes to the interaction design of an individual touch-point. Further, the cards aided alignment of touch-points to brand strategy. Workshop participants commented upon the cards ability to *'make you both concrete and experimental at the same time'* and their ability to *'open up the process'*.

One issue was that the cards might inhibit radical thinking in which invention of new touch-points could arise. Similarly, it was commented that a missing touch-point could potentially have consequences, since using the cards constrained thinking within the alternatives given. This is something we have considered, but have not experienced when running workshops. The cards deliberately suggest a very broad range of touch-points, many of which are outside the scope of traditional touch-point thinking. Indeed a common comment is that participants initially considered many touchpoint cards unnecessary or irrelevant. Once used, this changes to an expression of how useful the broad approach turned out to be. However, it is difficult to know if a potential solution is inhibited, without using controlled testing procedures, which have many practical disadvantages in the project context. We have met the thought that the cards can constrain idea generation, but in reality have not been able to identify situations in which this occurs.

Over time, we have identified a need to continually update the touch-points, such that they remain up to date. As an example of this, we have had to add a new category of touch-point - the iPad/tablet, since this was launched during the first 6 months after the last set of touchpoints was produced. We see that the touch-point cards need continual updates to remain contemporary.

## D. Needs elicitation

Recent developments in the AT-ONE project have included the cards during the customer insight phase of a project. The cards have been used as an aid for needs elicitation when interviewing potential users of a service. For example, we have recently used them to elicit preferences regarding touchpoints when contacting customer service in a

telecommunications company. They were found to be useful and allowed potential customers to compare different touchpoints, prioritise touchpoints and think aloud about touchpoint preferences. This is a new and promising area of use for the cards, and one which we will be exploring in more detail in the future.

## Discussion

The touch-point cards and related tools fulfilled the requirements identified from both research and practice. They had a positive effect upon team collaboration, assisted with analysis and mapping processes and aided idea generation. In addition, they showed similar benefits to results found in other domains, regarding the use of cards as part of a collaborative process.

One clear issue regarding the cards is the danger that they can in some way constrain thinking within the contents shown. Experience from using the cards in workshops and the evaluations did not raise this as an issue, although it is clearly a factor to consider in future evaluations.

A second issue is whether the tool directs innovation towards incremental innovation rather than encouraging transformational innovation. Again, experience shows that this is unlikely, although it is dependent upon how the cards are used. A focus upon analysis and mapping of an existing system can constrain thinking towards incremental changes. However, the cards have been used for innovation without an analysis of an existing solution, and this constraint was not visible. We did notice, however, that design students particularly enjoyed using methods such as 'forced association' or 'can I use it here'. The open nature of this form of use was considered exciting and liberating, even though many ideas generated were not usable in a commercial context. The same did not seem to be true of participants with business or marketing backgrounds. They disliked the open approaches offered by these techniques, and considered them inefficient (large number of irrelevant ideas in relation to relevant) and preferred to use mapping and analysis based approaches. This finding supports the difference between design thinking and business thinking and highlights design's abductive approach, as described by Margolin and Buchanan 1995.

Finally, the recent use of the cards as support for user-interviews offers a new area of use. Initial trials of the cards as part of customer insight work shows that the tangibility of the cards assists semi-structured interviews.

## Further work

Since this is one of the first pieces of research discussing the 'how' of touch-point innovation in project teams, further work is needed to verify the findings presented here. We would like to see additional work related to the tasks and activities that a project team need to do to innovate through touch-points. Secondly, we would like to explore alternative representations of the touch-points, using more abstract representations or using richer representations. This would allow us to identify if there is a relationship between representation and innovation outcome. Finally, we would like to develop a team game, based around the touch-point cards to see if this adds to the innovation potential.

## Conclusion

This research has identified seven aspects of touch-point innovation of relevance to cross-functional teams. Two of these aspects relate to team building through the use of cards and workshops. Four relate to analysis and mapping of touch-points, which assist touch-point orchestration. Finally, one aspect relates to idea generation based upon changes in touch-point usage.

Evaluation of the card-based toolkit shows that the toolkit has a positive impact upon all seven of these. Firstly, the results show that a card-based approach to innovation in teams can successfully be transferred from product innovation to service innovation. This is perhaps not surprising, but is a valuable affirmation of design-based tools in service innovation. Secondly, that the toolkit assists touch-point orchestration by assisting with analysis and mapping of touch-points in a group context. Finally, the toolkit assists with idea generation. It aids new ways of orchestrating touch-point combinations, and with the identification of new touch-points.

Further work is needed to discuss and further develop the seven aspects of touch-point innovation described in this paper. We would also like to see exploration of alternative and richer touch-point representations to explore the effect of representation upon innovation. We would like to see the development of one or more design games to support the tools presented here. Finally, we would like to further explore the potential that the cards have for eliciting user insights.

Acknowledgement: The research work presented here is supported by the Norwegian Research Council.

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