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# Towards the Counter Free Store: Requirements for Mobile Sales Assistants

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**Abstract**

Ubiquitous assistants in retail environments can be useful not only for customers but also for salespersons by supporting their work. Providing product and customer information anywhere in the store, is the first step on realizing the vision of the counter free store. To ensure both, usefulness and acceptance of ubiquitous sales assistants, this paper describes in a first step user requirements towards mobile assistants generated in two focus groups with customers and salespersons. We present the identified requirements (e.g., aspects of sales processes, spatial situations, tool mediated cooperation, and information transparency) and discuss how ubiquitous technology should support the high situatedness of the sales situation.

**Author Keywords**

Retail; requirements; touch device

**ACM Classification Keywords**

H.5.m. Information interfaces and presentation (e.g., HCI): Miscellaneous.

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### Introduction

Due to shopping apps and web shops, shopping from home or on the run will gain more importance. Nevertheless, physical stores will not disappear since their advantages are still present: They allow shoppers to be advised by a real person in a face-to-face situation, experience products in reality before buying them and have them in their hands immediately after purchasing them. Thus ubiquitous and mobile technology will not make physical stores obsolete, but it will change how people interact in these shops. The use of mobile systems and devices has already started to change the appearance of shops, people's shopping behavior and the way salespersons interact with customers. By using mobile technology, the salespersons will have the possibility to access information remotely and fulfill their tasks everywhere in the shop. The future salesperson is mobile within the shop, has access to technology anywhere and is not bound to the counter anymore.

In the tradition of user centered design, it is important to investigate the salespersons' requirements towards these ubiquitous future systems that will be used to support the salespersons during their everyday activities in the shop (consulting, presenting products, accessing customer history, payment, etc.). Also the customers play an important role, as the salespersons' requirements can only be investigated by understanding the sales situation holistically. Research regarding ubiquitous and especially mobile technology to support shopping is mainly focusing on tools supporting the customers and not the salespersons (e.g., see [9]). A structured set of requirements for a mobile assistant is missing for this target group. For that purpose this paper presents the results of a

requirement analysis on mobile in-shop assistants from both the salespersons' and customers' view.

### Background

Today, there are a large number of mobile applications available that serve to assist in specific contexts (e.g. during navigation, shopping, dining). Current challenges in mobile HCI relate to the spread of technology to our homes and everyday lives with a shift from a rather narrow task-orientation to qualities of everyday experiences ([2], [4]).

#### *Mobile assistants for retail*

For the retail context, mobile assistants (tools) can be clustered in the following three types:

- Many shopping apps are available for customers, like the Amazon app that is not supposed to be used in a shop. These systems enable the customer to find product information, ordering, paying, etc. online.
- Most of the mobile tools that support the salespersons are meant to make payment spatially independent from a terminal or even a shop, e.g. by enabling mobile payment (see [8], [12]) for marketers. Other tools provide detailed (business) customer and product data in the field, also in offline mode with the ability to sync transactions and data with the retailer's backend systems at the end of each day [3][11].
- Existing tools that are meant to support the mobility in shops are usually not supporting the entire sales process (from consulting in the beginning to the transaction). Most of these tools only enable to

support a single phase of the sales process, e.g. product presentation or payment only [7].

#### *Research Gap*

While related work has addressed research on assistance systems for customers as well as the sales personal regarding multi-modal interaction [6]; as described above, we know little about requirements for mobile systems supporting salespersons during their sales activities in shops and during the entire sales process. Following a user centered design process we aimed to support the development of a mobile consultant tool for salespersons. As initial point we set up two focus groups with salespersons and customers.

#### **Our Approach**

Following the goal to identify requirements for mobile consultant tools we aimed to get insights in the current selling process, as salespersons and customers experience it. The main research question was: *Which situated requirements can be identified for a mobile technology supporting salespersons in stores and the entire sales process?*

#### **Focus Groups with Stakeholders**

##### *Participants*

We conducted two semi-structured focus groups following [1] and [5]. To take into account the typical stakeholders of a sales situation in a shop (salespersons and customers), one focus group was with experienced salespersons working in the telecommunication sector (as this is the primary domain of our industrial partner) and another one with potential customers that are experienced in buying or being consulted in this kind of shops. In the first focus group seven salespersons participated (five male and

two female), that were aged between 21 and 30 years. In the second focus group we had eight customers (6 male and 2 female attending the group discussion), aged between 24 and 66.

##### *Study Setup*

The focus groups were facilitated by two researches, one moderating and the other one taking field notes. Both focus groups started with an open discussion regarding the usual and “perfect” consulting and sales situation. Further on the participants were guided to discuss about innovative consulting situations considering the concept of the counter free shop with salespersons that are mobile within the shop and have the possibility to access all the information they need from every place in the shop.

##### *Analysis*

The focus groups were video recorded after the participants gave their informed consent. With the material we conducted a qualitative content analysis according to [5]. During the content analysis we aimed to reveal the most relevant themes regarding the participant’s experiences in sales situations that were discussed in the focus groups. Moreover, the analysis focused on the different perspectives of the stakeholders (salespersons and customers). Based on the identified themes and sometimes contrary perspectives of salespersons and customers we identified requirements for mobile consultant tools.

#### **Results**

The following main topics and requirements have been identified in the analysis: sales process, spatial situation, tool mediated cooperation and information

transparency. These issues have to be considered when developing a mobile consulting tool for salespersons.

#### *Sales Process*

**Needs analysis:** From a salesperson's view the needs analysis is the essential part of every sales conversation. It basically consists out of a set of questions to identify what system properties would fit the customer's habits and wishes. It is highly important from a salesperson's perspective to identify the customer's needs before presenting a product. If the needs analysis is successful, the salesperson just has to present a single or few products that fit the customer's needs. The comparison of several products is not aimed-at by salespersons, the customers could be overwhelmed by the options and leave the shop without buying anything.

**Contrary view of customers:** Contrary to what the salespersons are willing to provide to the customers, the customers want to see different products when going to a shop. They are missing a good *product comparison* in a shop and feel dependent on the information provided by the salespersons (trust is low). Moreover, in current sales situations the customers feel *pressured by the salesperson* to conclude the sale. The customers would like to think about an offer and decide later on if they want to buy a product or not. This is due to the differing perceptions and expectations towards the sales situation.

When designing a consulting tool for salespersons, it is important to *make the needs analysis visible* to the customer as it is performed by the salespersons. A lack of transparency in what product is presented may be misinterpreted as attempt by the salespersons to keep

options from the customer and, for example, just presenting a more expensive option. A tool should overcome the mismatch between customers and salespersons needs by making the needs analysis visible and enable to make a pre-selection of 2 to 3 best fitting products. Moreover, a consultant tool should provide just the relevant information, as identified in the needs analysis, e.g. if a customer is mainly interested in using a mobile phone over a long period of time without recharging and not in shooting high definition videos, the consultant tool should highlight the battery capacity and not the camera's specifications.

#### *Spatial Situation*

**Mobility of salespersons in the shop:** The mobility of salespersons in the shop and their independency from the counter is appreciated by the salespersons as well as by the customers. A salesperson moving from the area behind the counter closer to the customer is considered as more personal by the customers. Salesperson and customer can stand shoulder to shoulder and are not separated and distanced through a counter, strengthening *the feeling of solving a problem together*. The salespersons appreciate that they are not bound to a counter anymore and could consult directly in front of a product and access all relevant product information from the mobile device and don't have to walk back to the counter. Nevertheless, some customers want a physical barrier (counter) between customer and salesperson, e.g. they would feel more comfortable to sign a contract at a counter.

A mobile consultant tool should enable the flexibility and possibility to conduct the sales conversation where

it is most comfortable for the customer, e.g. in front of the product, sitting on sofa or at a counter. It will be only used and accepted by the salespersons if the salespersons can really be mobile in the shop and don't have to run back to the counter or another device or pc to check e.g. the customer's data. Thus, to enable a mobile sales situation within the shop, a mobile consultant tool should be integrated in the existing software infrastructure in the shop. This is important as usually several systems covering different aspects of the sales process (payment, inventory control system, customer management system, etc.) are running simultaneously.

#### *Tool Mediated Cooperation*

**Posture:** Regarding the posture of the stakeholders when using a mobile consultant tool, the salespersons as well as the customers appreciate the possibility of changing position during the sales conversation, e.g. standing opposite to each other during the conversation or side by side when presenting a product.

**Cooperation:** The customers would like to use the tool on their own but also together with the salesperson. This would raise trust in the salesperson. It has to be considered, that there is information that should not be seen by the customers, such as a ranking of the customer in the company's system.

As the position varies with every customer, for the development of a mobile consultant tool the meaning of body language and body positions have to be considered. For example, standing with the open body side towards each other provides a personal sales situation for the customer. For this reason the tool has to be sensitive regarding the salesperson's handedness.

For example if someone is left-handed, the tool should still provide the possibility to stand in an open body position to each other (so that there is no hand in between). Moreover, a mobile consultant tool has to deal with the desire of customers to use the tool together with the salesperson, although there is still information that is primary intended for the salesperson, e.g. by switching between a salesperson and a presentation mode.

#### *Information Transparency*

**Transparency of the pricing:** Customers are criticizing that in current sales situation the pricing is often not reasonable. They want to know why a product is priced as it is and they don't want to be trapped by costs. On the one hand it is crucial for customers that extra packages are not hidden in an offer and on the other hand for salespersons to sell these extra packages.

**Understandable Terms:** Many customers can't deal with product information and specifications that are to technology driven. They want the product specifications and characteristics to be translated by the salespersons to be understandable for average consumers.

A mobile consultant tool should make the *pricing transparent* and make visible why a product is priced as it is. Still, the tool should support offering extra packages or accessories, because it is essential for salespersons to sell these extra packages. A possible way to integrate these extras is to support the compilation of personalized offers making transparent where the cost origins from but also where the benefits of a higher price could be. Moreover, a mobile consultant tool for salespersons should provide product

specifications and characteristics by using *common terms*, e.g. is it better to show the battery life in hours instead of mAh (milliampere-hour). This would support the transparency of the presented information and increase trust in the salesperson. Nevertheless, for technically interested customers, the tool should provide the possibility to display these kind of technical specifications as well, but not by default.

### Discussion and Conclusion

In general, considering the high **situatedness of the sales situation** is the key for a successful mobile sales support tool. No situation is the same, so is no customer. Customers can not be stereotyped, as a salesperson reported in the focus group: *"If someone comes in the shop with dirty clothes this could be the head of a construction company who is willingly to equip his staff with new durable mobile phones"*. Further on, relevant information in a sales conversation has to be filtered and delivered to each customer individually, depending on the customer's knowledge and needs.

Different people want to get different information from the salesperson. Due to the wide heterogeneity of customers themselves and their needs, the sales situation is very situated and different with every customer. In a specific sales situation the salesperson has to adjust the selling strategies to a specific customer. A mobile consultant tool has to support the situatedness of the sales situation and should function in a very flexible way. It is important that the interaction design of the tool does not interfere with the skills and techniques that are needed to make a good job as a salesperson. On the positive side, such a tool can help to adapt the selling to the customers' needs

by providing the customers with personalized information, their most comfortable spatial location in the store and the transparency necessary not to feel cheated upon.

We argued that while online shops and mobile devices allow enjoying shopping activities independent from time and location, real shops can provide satisfying experiences. While the retail industry welcomes online shoppers, they are also interested in binding their customers to their brands through face-to-face sales in real shops. Providing salespersons and customers with state of the art devices to improve cooperation and the shopping experience is an important step for the future of retail. So far we have investigated mobile technology that has already started to influence the retail context. We believe that other off-the-shelf technologies, that many people already use in their homes, will have a similar impact on the future of retail and how people will interact within shops. The requirements we have listed should also be relevant for usage of other technologies but should be adapted with care.

### Future Work

Our findings are a first attempt to outline the needs of the stakeholders (salespersons and customers) of the counter free store and the requirements for mobile touch devices for salespersons. The identified themes are a first categorization of relevant issues that have to be considered when designing mobile consultant interfaces for in-store usage. In order to get more insights in the concrete relationships, further research is needed. One of the biggest challenges for the development of ubiquitous consultant tools is, how the situatedness of sales situations can be supported by mobile and distributed interfaces. It needs to be further

investigated how the mismatches and different needs of salespersons and customers can be overcome by those interfaces. Therefore, our findings have to be implemented and evaluated in real usage scenarios.

Within our first results on the support of the sales process through mobile tools, we encountered the importance of posture, movement and physicality between the salesperson, the customer and the product. Thus, we see the counter free store only as first step towards a retail environment that takes body movement and posture stronger into account. This kind of physicality is also one of the strongest distinctions between a virtual and a real store. Mobile devices allow this free movement to some extent, nevertheless future stores will have to include more interaction approaches taking this into account. In our future work in the retail context we will therefore focus on aspects of bodily and movement based interaction between customers, salespersons as well as products and the implications for interactive technology that arise from that.

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