How to Improve the Overall Pre-purchase Experience Through a New Category Structure Based on a Compatible Database: Gittigidiyor (Ebay Turkey) Case

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Abstract. Customer journey mapping is a continuous process that demands end-to-end innovation through qualitative and quantitative user research. It helps to identify key points where service or communication breakdown is most likely and where they are mostly valued. Buyer journey mapping study of Gittigidiyor (Ebay Turkey) revealed the fact that the frequency of the repeat purchase was significantly limited although a high traffic and average visit time were observed. This finding pointed to the need to improve the pre-purchase experience in the web site towards motivating the users to visit more and inspiring them to buy more items. Relying on solid quantitative and qualitative research, this paper presents the action set taken for the realization of this goal. In this context the main action of the process is to renew the category structure through a focus on compatibility, which subsequently enabled the integration of a set of effective improvements. Firstly, this approach led to the improvement of a new listing creation process for the sellers by implementing an innovative and error-free experience. It also enabled to improve the search usability by presenting more relevant results, which was supported with a new smart auto suggestion feature in the search engine box and with smart compatibility filters in search results. The new compatible structure between vertical and horizontal categories brought the implementation of some persuasive features. It provided the increase in count of payment (COP) per item and average selling price (ASP) through cross-selling and up-selling features. Finally, the pre-purchase experience was supported by the integration of product rating/review mechanisms and targeted e-mailing based on previous purchase history of the customers.

Keywords: Pre-purchase · Customer journey · Compatibility · Search · Persuasive

1 Introduction

Understanding the customer journey is becoming increasingly important as the number of both digital and offline touch points increases. Consumers base their decisions on interactions across multiple media types, devices and locations [1]. This creates a

challenge for marketers to interact at important moments that might influence buying decisions. Customer journey mapping enables to find the the key moments that create the frustration and satisfaction in the journey of the relevant person. The buyer persona journey mapping study in Gittigidiyor (Ebay Turkey) revealed some pain points in the pre-purchase phase which resulted in the significantly low frequency of the repeat purchase for the first-time buyers. Major problems emerged from the lack of capacity to support the product search, to present complementary product recommendations and reviews in the decision-making process and finally to present targeted follow-up actions like e-mailing for retention. It was evident that the pre-purchase experience should be re-structured in detail.

This paper presents the road map through a set of actions which aimed to improve the pre-purchase experience through a new structure and relevant implementations of new features. In this context firstly the "Cellphone and Accessories" category is chosen as the experiment category, since it enabled the implementation of inter product compatibility with a huge range of items. This category is re-structured with the inclusion of new product catalogues based on compatibility specifications. The new structure subsequently enabled the integration of a set of effective improvements such as a new listing creation experience for the sellers, improved search usability and the ability to offer complementary product ratings/reviews and recommendations through persuasive features.

2   Using Customer-Journey Mapping as a Reference for UX Strategy

Understanding the customer journey is becoming increasingly complex as the number of digital and offline touch points proliferate. However, it's important to try and create an accurate map of how customers are interacting with a brand in order to optimize marketing channels and campaigns [1]. From a survey of almost 2,000 digital marketers and ecommerce professionals, 86 % of companies said that 'profitability and increased revenue' were a major benefit, while a similar proportion (83 %) said that 'identifying pain points and reducing customer struggle' were a significant benefit [2]. However, even in organizations that have been developing their digital competencies and tools, analytics and CRM have traditionally tended to be used in isolation, only 17 % of brands have the ability to fully analyze the customer journey [2].

Customer journey mapping enables the company to see things from the customers' point of view and to deliver information, messages and services at the most appropriate time through the most appropriate channels. It helps to identify moments of truth where service or communication breakdown is most likely and where they are mostly valued. In each phase of the journey, it is aimed to identify the possible actions, motivations and questions of the persona. The resulting document can be used as a reference to design the overall UX strategy.

3   Improving the Pre-purchase Experience

In this context, the "Customer Experience Strategy & Project Development Team" in Gittigidiyor (Ebay Turkey) designed and conducted a research process to map the customer journey of the buyer persona. The research process was based on both quantitative and qualitative studies. Two online surveys enabled to reach a user base of 8000 customers. Qualititative insights were derived from in-depth interviews targeting 6 different buyer personas. Interviews with a sample of 30 customers are still in progress.

The resulting map revealed significant pain-points in the pre-purchase phase. Though the web site was a leader in the market-place ecosystem with 13 millions of registered users and a high daily traffic/average visit time, the frequency of the repeat purchase after the first-time purchase was significantly low. The customers struggled to find the products they needed throughout the enormous number of listings and they were not supported in the purchase decision process with complementary offerings. Follow-up actions like e-mailing did not provide efficient results to provoke retention. There was a solid need to improve the pre-purchase experience in the web site towards motivating the users to visit more and inspiring them to buy more items by smart product recommendations. In this sense, firstly it was decided to renew the category structure by focusing on compatibility, which in long term enabled to implement new features to support UX.

4   A New Category Structure Based on a Compatible Database

Technological products are compatibility dependent, in other words, the product's relevance is determined entirely by its compatibility with another product the user already owns or plans on buying [3]. Typical compatibility dependent products include accessories (e.g., a case for a smartphone), products used in conjunction with other products (a bluetooth headphone to use with a smartphone) and spare parts (a Powerbank charger that needs to have a charger tip which matches the user's smartphone). Inter-product compatibility is essential to the user for these types of categories [3]. Unless the site provides a way to browse products based on their compatibility with the items the user already owns, the user is forced to navigate through an endless stream of noise just to find a few products that are potentially relevant to them [3]. Compatibility databases provide the basis for such navigational features and a lack of compatibility database in relevant product verticals can have hugely negative usability and business implications, resulting in lost sales, anxious customers, and returned orders [3].

The findings of the customer journey mapping overlapped with the statements provided by the study above. Each item had lots of specifications and it took a long time for the sellers to create the listing with the correct product description. Listings with incorrect product info caused difficulty for the users to find the relevant product or it contributed to the increase in the number of returns. These findings thus led the strategy team to define a road map towards renewing the category structure by focusing on compatibility. The "Cellphone and Accessories" category was chosen as the scope of

the study, since that category presented the most inter-product compatibility with a huge item base.

A quantitative survey conducted with the 5700 users in different segments who previously bought from this category provided findings that emphasized the need for compatibility:

- The users, who bought their smartphones from Gittigidiyor but did not not prefer to buy a complementary accessory, declared that they would be willing to buy an accessory if they were offered any complementary products within the site.
- The users, who bought their smartphones from Gittigidiyor, declared that they gave their old phones to their family members. They told that if they were offered an efficient way of selling their old phones on the Gittigidiyor, they would be willing to do so.
- The users, who bought their previous smartphones from Gittigidiyor but preferred to buy their current phones from a different platform, declared that there were not any communication efforts in Gittigidiyor, which presented timely offers to provoke them to change their phones.
- The users, who only bought their smartphone accessories from Gittigidiyor but preferred to buy their smartphones from a different platform, declared that lack of user reviews and product videos in Gittigidiyor led them to different platforms.

	Catalogue Specs	Compatibility Specs
Cell Phone	· Make · Serie · Model · Color · Internal Memory	· Charging Input · Operating System · Max. Micro SD support · Headphone input · Bluetooth Version
Charge, Data Cables	· Make · Model · Color · Cable length	· Connector A · Connector B
Headphone	· Make · Model · Color · Headphone Type · Microphone	· Connector · Remote · Operating System compatibility

Fig. 1. An overview from the renewed category structure based on compatibility

All the catalogues were renewed due to the principle of inter-product compatibility with the addition of new compatibility specifications in product catalogues. In a total of 44 sub-categories, brand new catalogues of the most popular brands and models were re-created by the inclusion of the correct and updated compatible specs. For the cell-phone sub-category 10000 catalogues from the last 10 years were renewed and 7000 extra

catalogues were created. In the cell-phone accessories sub-category 300000 catalogues were investigated and 1000 new catalogues are recreated (Fig. 1).

4.1 A Brand New Product Definiton/Listing Experience Based on Compatibility

As mentioned above, current listing creation process in Gittigidiyor did not enable the sellers to present the detailed specifications of their products easily and thus caused frustration in the seller experience, which resulted in the incorrect presentation of the product info to the buyers. In this context, a new listing creation process, which provided a fast and error-free experience based on the new compatible category structure, was designed for the sellers (Fig. 2).
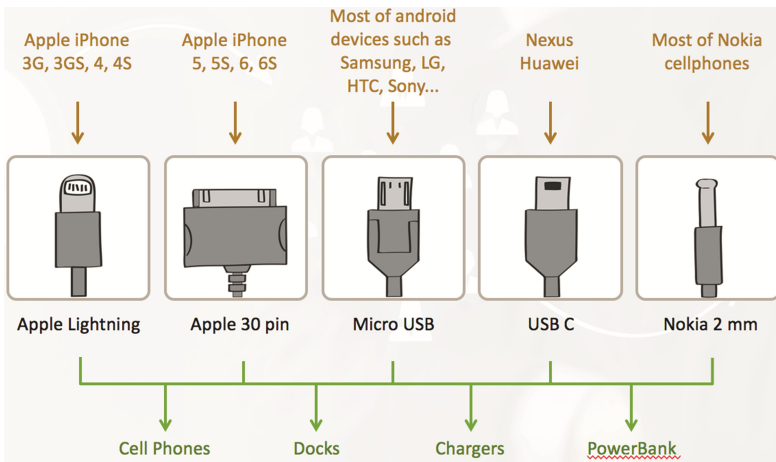

Fig. 2. Screenshot from the renewed listing creation process of a Powerbank charger

As an example, when creating a listing for a powerbank charger which enabled the charge of various smartphones by providing different tips, rather than selecting the name of the tips from a pre-defined menu, the sellers can choose through a set of the drawings of the tips that corresponded to the 90 % of cell phones in the market.

4.2 Improving Search Usability

On-site search is a key component of almost any e-commerce website. However, the poor state of search in e-commerce is industry-wide and most websites have an opportunity to gain a truly competitive advantage by offering a vastly superior search experience to their competitors'. The search usability is heavily influenced by non visible factors, such as search logic and product data integration [4]. In this context, the integration of the new compatible database into the search algorithm "Best Match" provided the opportunity to improve the end-to-end search experience both in the momentary search and post-search phases.

The compatible database enabled to improve the momentary search experience by the implementation of a smart auto-suggestion in the search engine box. The smart auto-suggestion feature enabled to present instant product recommendations specific to each user profile (Fig. 3). For example, a search query such as "white headset for iphone" generated different suggestions for the logged in users, whose previous purchase history was already known, when compared to the products offered for the anonymous visitors. In this case, logged in users who searched for "white headset for iphone" was presented with the white headset that is specifically compatible with his own smartphone, which he previously purchased from Gittigidiyor. On the other hand, an anonymous visitor who searched for "white headset for iphone" was presented with the iphone compatible white headset that had the best user rating (Fig. 4).
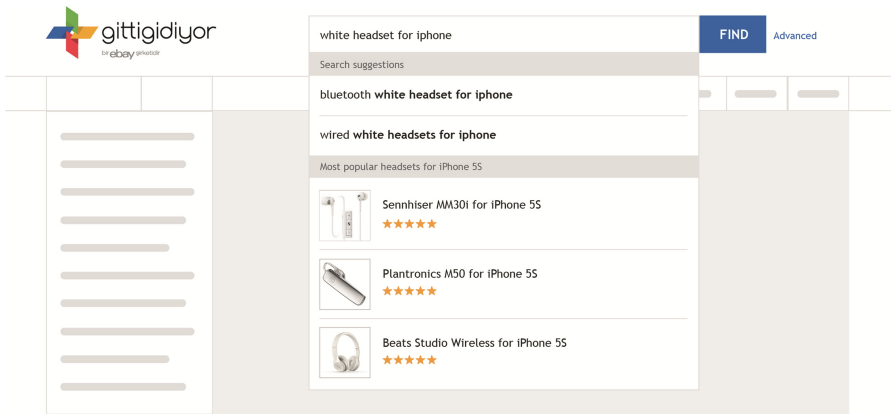

Fig. 3. Smart auto-suggestion that presented specific results for the relevant user profile
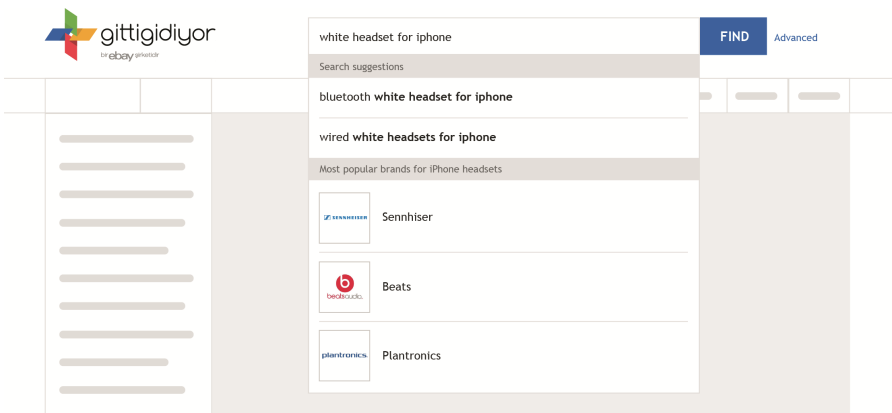

Fig. 4. Smart auto-suggestion that presented the best user rated products for the anonymous visitors.

When done right, filters enable users to narrow down a website's selection of thousands of products to only those few items that match their particular needs and interests [5]. Yet, despite it being a central aspect of the user's e-commerce product browsing, most websites offer a lackluster filtering experience. In fact, a 2015 benchmark of 19 leading e-commerce websites reveals that only 16 % of major e-commerce websites offer a reasonably good filtering experience [5]. In this sense, the compatibility specs were used as search filters in the post-search phase which let the users make fast comparisons within the listed products (Fig. 5).
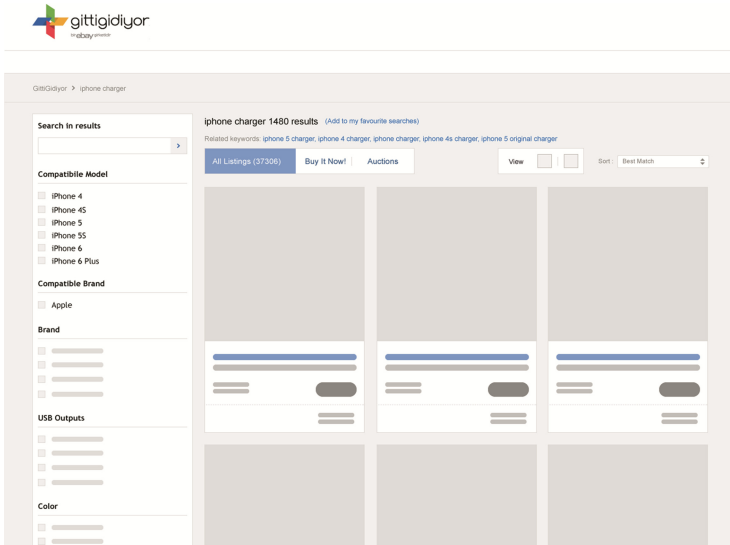

Fig. 5. Compatibility specs are presented as search filters in the left-hand menu

4.3 Persuasive Design Implementations

When creating and optimizing the ecommerce customer journey, not only do we need to ensure that we make this as frictionless as possible, but also that we make it as persuasive as possible [6]. Brands employ diverse persuasive features to support pre-purchase and retention in the customer journey.

The new compatible structure between vertical and horizontal categories brought the implementation of new persuasive features such as cross-selling/upselling, rating/ review features and targeted e-mailing.

4.3.1 Cross-Selling and Up-Selling

According to Forrester research analyst Mulpuru, product recommendations through upselling or cross-selling features are responsible for an average of 10−30 % of e-commerce site revenues [7]. Upselling is when the seller encourages the customer to spend more than they had originally intended. A cross-sell is when you recommend your customer to buy a product that compliments their existing purchase, but is from a

different category (or vendor) [7]. The implementation of cross-selling and upselling supported by the new compatible database in Gittigidiyor provided a solid increase in count of payment (COP) in terms of items and average selling price (ASP). Related additional items (cross-selling) or upgrades, add-ons or more expensive items (up-selling) were effectively recommended to the users in the product page (Fig. 6).
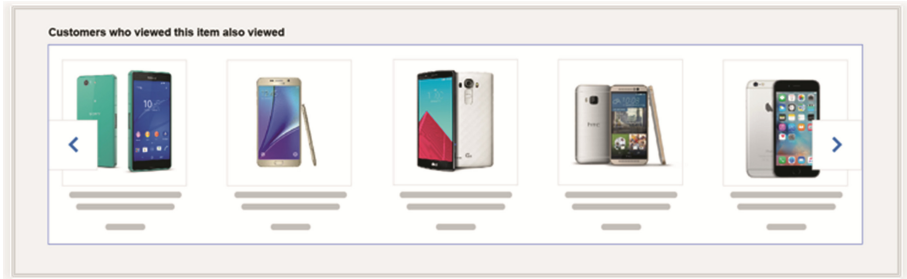

Fig. 6. The implementation of up-selling in the product page

4.3.2 Product Rating and Review

Product ratings essentially function as a type of social proof for users, letting them tap into the "wisdom of the crowd", using good ratings as a proxy for "high quality" or "value for money". The users rely on ratings to gauge a product's quality or value – especially in verticals where they lack domain knowledge or have little prior product experience [8].
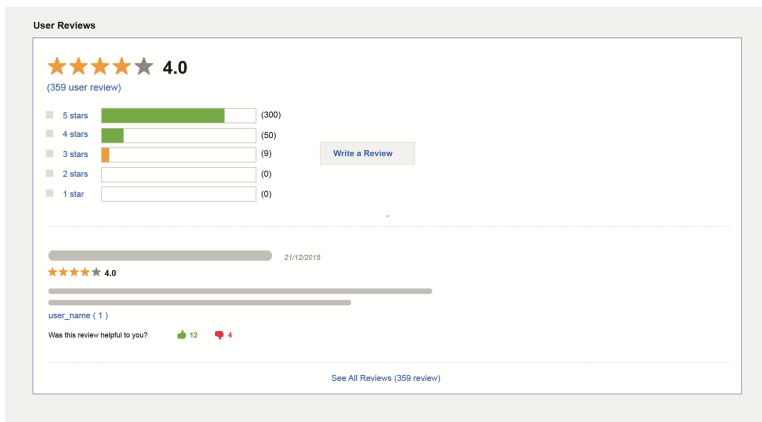

Fig. 7. Screenshot from a user review

Gittigidiyor did not have a product rating/review system and the customers oriented towards the competitors and the social media channels to find trustful reviews. In order to overcome this issue, the pre-purchase experience was supported by the integration of a product rating/review mechanism as a persuasive feature in the product page. The

rating/review mechanism included the feedback on the usefulness of the review as well. In this context, one of the future goals is defined as making Gittigidiyor website a product research and review gateway for the customers (Fig. 7).

4.3.3   Targeted e-mailing

In order to provoke repeat purchase and thus retention, the purchase history of first time buyers was investigated in detail and targeted e-mails proposing compatible products due to previous purchase were sent to these users.

In this context, targeted e-mails which pushed for upselling of a new model, were sent to 2000 existing customers who bought iPhone 5s or older from GittiGidiyor between 2011−2013 (Fig. 8). An eightfold increase in open and click rates was observed.
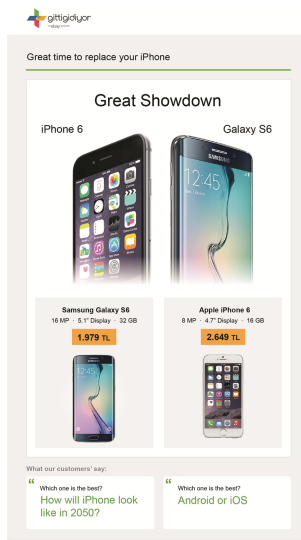

Fig. 8.   Targeted e-mail which pushed for upselling of a new model

Referring to this positive response for the case mentioned above, a smart e-mailing template, which was supported by the new compatible database, was designed. This template, which was based on the previous purchase history of the customers, automatically generated user-specific e-mails that either offered complementary products or provoked upselling of a new model. For example, for the customers who currently used iPhone 5s were offered with highly compatible complementary products. Besides timely offers to replace their iPhone 5s with a brand new iPhone 6s could also be delivered to the same user profile via this smart e-mail mechanism. At this point, Gittigidiyor could serve as a channel in which users could both sell their current smartphone and buy a new one as well (Fig. 9).
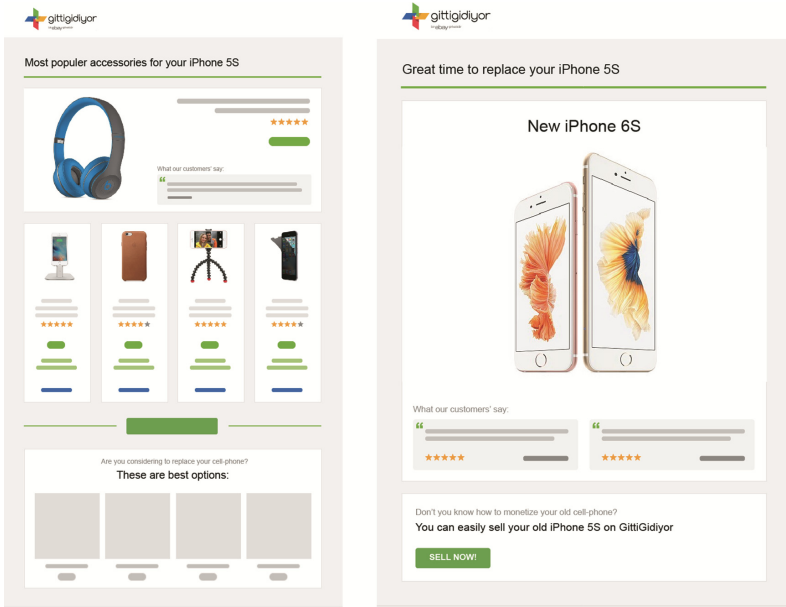
Fig. 9. User-specific e-mails automatically generated by the smart e-mail template due to the previous purchase history of the customers, which either offered complementary accessories or pushed for the upselling of a new model.

5   Conclusion

The findings of the research process to map the customer journey of the buyer persona in Gittigidiyor revealed the significant need to improve the overall pre-purchase experience towards providing a balanced increase in revisit and repeat purchase rates. Major problems were observed as the lack of support for the product search, for presenting complementary product recommendations and reviews in the decision-making process and finally for creating targeted follow-up actions like e-mailing for retention. This paper presented the set of actions which aimed to improve the pre-purchase experience through a new category structure and relevant implementations of new features in the scope of "Cell-phone and Accessories" category. The paper provided the following implications for the improvement of pre-purchase experience in Gittigidiyor.

- The category structure was re-invented due to the principle of inter-product compatibility with the addition of new compatibility specifications in product catalogues. In a total of 44 sub-categories, brand new catalogues of the most popular brands and models were re-created by the inclusion of the correct and updated compatible specs.
- A new listing creation process, which provided a fast and error-free experience based on the new compatible category structure, was designed and implemented for the sellers.

- The search usability was improved by the integration of compatibility specs into the search engine algorithm. The compatible database enabled to improve the momentary search experience by the implementation of a smart auto-suggestion. The compatibility specs were also used as search filters in the post-search phase, which enabled the users to make fast comparisons within the listed products and reach the searched item faster.
- As part of persuasive design implementations, cross-selling and upselling features supported by the new compatible database in Gittigidiyor provided a solid increase in count of payment (COP) in terms of items and average selling price (ASP).
- A reliable rating and review mechanism was introduced to act as a proxy for finding quality products.
- Smart targeted e-mails proposing compatible products due to previous purchase history of the customers were used as follow-up features to provoke repeat purchase and retention.

This study emphasized the importance of mapping the customer journey through user research to reveal key points, which in long term can enable the establishment of a solid UX strategy by prioritizing the phases to focus on. Considering the lack of user-centered studies on pre-purchase experience in e-commerce platforms specifically in Turkey, this study contributed to the relevant literature by providing a road map to improve user experience in similar environments. The implementation of the features presented in this paper are still in progress and further research will focus on measuring the impact of these features on user experience through various metrics.

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