THE INTEGRATION OF SOCIAL MEDIA IN PRODUCT CONFIGURATION SYSTEMS

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Abstract: *The objective of this paper is to analyze the potentials of social media in mass customization. Configurating a product to the specific needs of each customer requires information exchange and interaction with the customer. Social media can be used not only for communication purposes but also to help the customer in the configuration process and enlarge the shopping experience. By analyzing 412 web-based product configurators we identified the status quo of social media usage in mass customization and discuss possibilities of integrating social media elements in configuration systems. To illustrate our results we give examples and show how social media can be applied.*
Key words: *Social Media, Mass Customization, Interaction, Configurator*

1. INTRODUCTION

The rise of social media tremendously affects the relationship between company and customer as well as the relationships between the customers themselves. The improved access to information enables a clearer picture about the activities and products of a company, e.g. by visiting the company´s Facebook fan page. In contrast, producers receive additional valuable information through the social network profile of the visitor. Customers can communicate with each other, share knowledge and find users with the same interests [1].

The same crucial role of communication can be found in product configuration. Rogoll and Piller state that "the interaction with the customer is the core business of a mass customization process" [2]. Interaction processes with customers include both, the incorporation of customer requirements and the specification of product properties by the customer. The interaction with the customer is realized by a web-based configurator, which allows users to design their own products [3].

2. SOCIAL MEDIA – AN ACTIVE USER PARTICIPATION

Social media allow active participation of internet users and imply a high spread of ideas and knowledge.

Unlike the early days of the internet, today the customer creates his own content and is in a constant exchange of information with companies and other users [4].

The term social media is defined as applications, which support information exchange, relationship building and relationship management as well as communication and collaborative cooperation. This encompasses the social web and the data provided by the users, which are the basis for the communicative exchange on a platform [5]. Social media include blogs, wikis, social networks, multimedia platforms and online communities. For this paper we analyzed the integration of the two applications Facebook and Twitter into the online available product configuration systems and quantified the existence of other social media applications.

3. THE CONNECTION OF SOCIAL MEDIA AND MASS CUSTOMIZATION

The interaction with the customer is a key element of mass customization, as the product is developed in a joint process between the company and the customer. It enables the handling of questions, criticism and feedback of users. Interaction can be managed via different channels. Offering a hotline or email is the classical option. But as social media gets more important, it is also necessary to deal with this channel.

According to a recent study of IBM, the most important reasons why consumers use social media are "getting discounts or coupons" and "purchasing products and services" (see Fig. 1) [6]. It seems obvious that the combination of configuration systems with social media applications could be an effective way to raise customer purchases.

An important fact is that all interested customers have equal access to the platforms [7]. Many companies already have a social media presence which is mostly used for advertising and communicating news or contests. Moreover social media are used to involve the user in the product development process or to improve existing products [8].
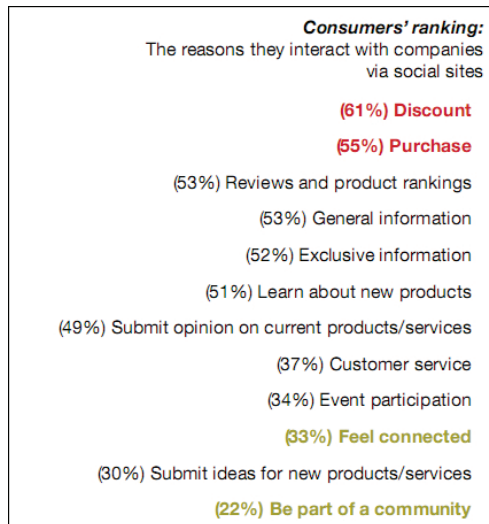
Fig. 1. Consumers' reasons of social media usage (n=1056 consumers)

In contrast to the consumers' ranking, businesses have a different perception regarding the reasons customers interact with the company via social media. As evident from Fig. 2, the points "purchase" and "discount" are ranked as least interesting for customers in the companies' perspective. But as already shown in Fig. 1 customers prefer to interact with companies via social media if they get the value they seek [6].
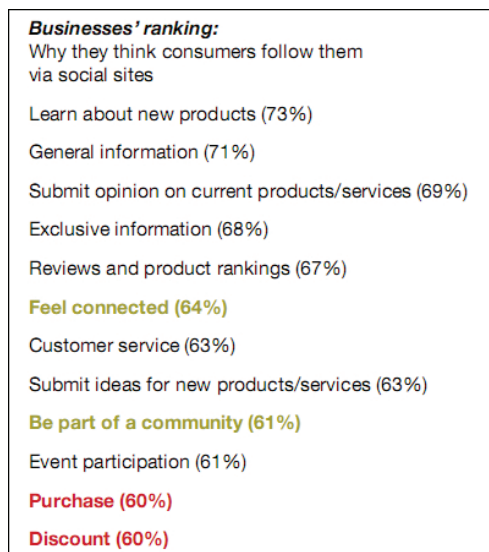

Fig. 2. Businesses' reasons of social media usage (n=351 business executives)

In the field of mass customization, the effects of social media can be used to reduce the uncertainty about the performance of the user's own design. Via social media, users can share self-designed products with other users and get feedback. In addition, users can be inspired by the designs published by others. The inclusion of social media in the configuration process also allows a group to customize a product together. The mutual support of the participants also largely replaces a necessary customer service. Some

sites even allow the sale of their own designs to other clients [1].

4. METHOD AND RESEARCH QUESTIONS

The Configurator Database powered by cyLEDGE [9] currently contains currently 840 web-based product configurators in 15 industries. The highest number of configurators can be found in printed products & giftware, apparel and house & garden, as shown in Fig. 3. A sample of 412 randomly selected configurators among all industries was used to analyze the usage of social media. The results were clustered to answer the following research questions: What are the possibilities of connecting social media with a configurator? How many companies, who offer product configurators, use social media? Among which industries and countries is the usage of social media the most widespread? Where lies the best potential and what are the advantages for companies that offer product configurators in combination with social media platforms?
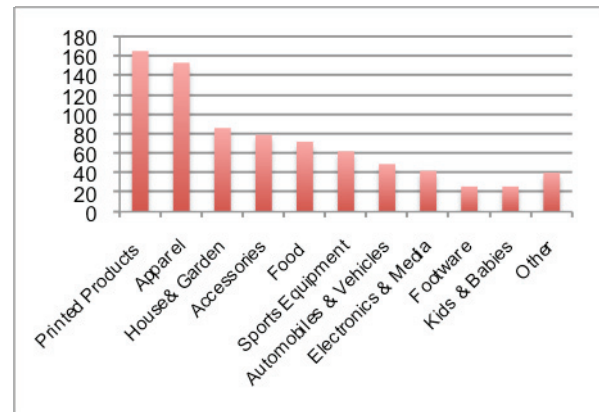

Fig. 3. Industries of the Configurator Datatabase (n=840)

5. RESULTS AND EXAMPLES

By analyzing 412 configurators we detected different possibilities of connecting social media with a configurator. Besides integrating no social media channel, we distinguished four types of social media usage:

1. Running social media accounts
2. Using social media icons and sharing
3. Using a social media login in the configurator
4. Embedding the configurator in the company's Facebook fan page.

5.1. Running social media accounts

First of all mass customizer can run a social media platform to communicate with their customers. In our study we focus the two most used platforms Twitter and Facebook.

Facebook

Facebook is a very popular platform among companies doing mass customization. 72% of all

analyzed companies offering a configurator (n=412) have a Facebook fan page. UK is the leading country in Facebook usage with 77%. The difference to US, Germany and Austria is very low, as in these countries Facebook usage is also quite high.
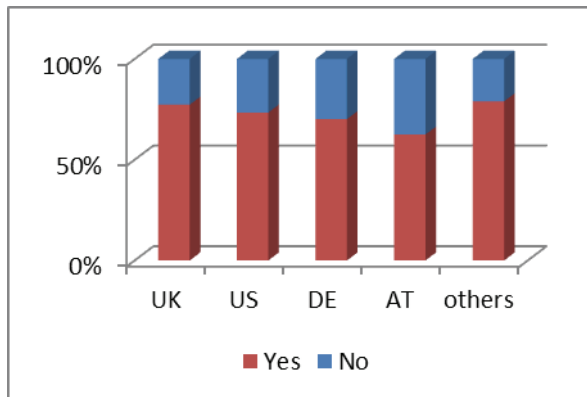

Fig. 4. Facebook usage per country (n=412)

Regarding the different industries there is no big difference in Facebook usage. In almost all industries more than 50% of the companies use the social media platform Facebook. The average number of fans is with 156.235 surprisingly high. The company with the most fans is Converse with over 32.000.000 fans followed by NIKEiD and Dell. Nevertheless Converse and Dell have company fan pages whereas NIKEiD offers a fan page only for the mass customization concept.

An interesting fact is that some companies have a Facebook fan page but still do not integrate the Facebook icon in their website. So they ignore the wide range of possibilities to use the advantages of social media. Some websites either use just the "Like" feature or the Facebook icon, although it would be recommended and easy to use both features.

Twitter

58% of all analyzed websites with integrated configurator (n=412) use Twitter for interacting with their customers. Fig. 5 shows that UK is also the leading country with 73% of companies who use the application.
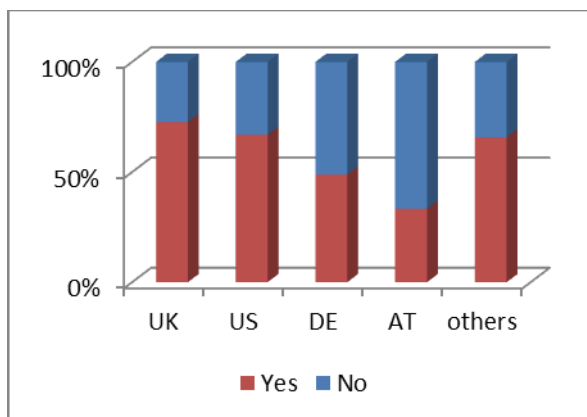

Fig. 5. Twitter usage per country (n=412)

Within the industries of the Configurator Database [9] Footwear, Electronics & Media and Accessories lead our statistic (see Fig. 6). The average number of followers is 4833. The most followers can be counted in the Lexus Twitter account with 302.821 followers and NIKEiD with 96.230 followers and Your M&S with 86.523 followers. Also in this case Lexus has only a company Twitter page. In contrast NIKEid and your M&S offer a Twitter page solely for mass customization purposes.
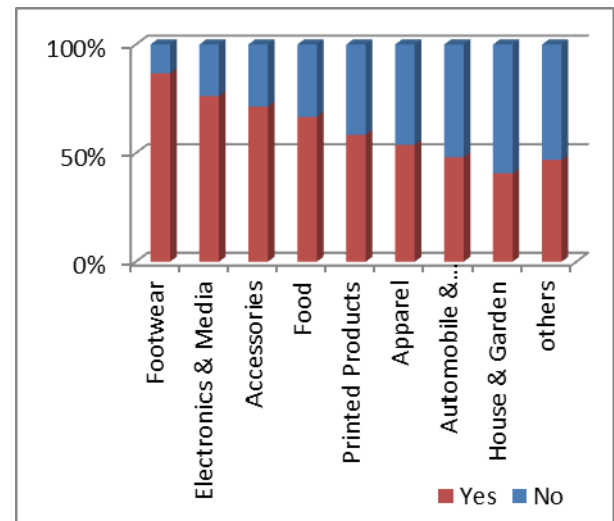

Fig. 6. Twitter usage per industry (n=412)

Contrary to this successful social media usage there are also companies which do not work with their account and have 30 or less followers. The reason can be found in not implementing or implementing it in the wrong way in the company's website and ignoring the content expectations of the users.

Summarized social media is used from more than 50% of the analyzed companies, nevertheless there lies much more potential, as the strategic implementation often lacks.

5.2. Using social media icons and sharing

Beside the usage of an own social media application, there are other ways of connecting social media to a website with a configurator. The easiest form to do this is via social media icons. These icons can be placed on the website and allow users to connect the company's website with their own social media accounts, but don't imply that a company uses these platforms. We found out that 160 configurators apply social media icons on their website. The most used other applications (except Twitter and Facebook) are Google+ and YouTube whereby each platform is used 56 times. Also very common are shareboxes which include different icons. Of high importance are also photo platforms (e.g. Pinterest, Flickr). For mass customizer these photo platforms can be very helpful to allow the sharing of the customers´ creations.

Very popular is the sharing possibility on Facebook. The "share" or "like" button can be either used to share the whole website or to share one special product. 150 out of 412 configurators offer the opportunity of Facebook sharing. As mentioned above, such sharing options can help users getting feedback or show their created product to their social network.

5.3. Using a social media login in the configurator

The next step of including social media in a website offering a configurator is a social media login. This means that the user can directly import information from his Facebook site (e.g. profile pictures, friends, posts…) to the configurator. Our analysis shows that only 5 configurator websites offer such options. A social media login provides the potential of connecting the virtual world with real products. The following companies using configurators with this method were detected:

- CowCrowd (www.cowcrowd.com)
  Users can personalize a wooden pendant with the profil pictures of their Facebook friends
- Leitz (www.leitz-create.com)
  Users can imprint folders with the profil pictures of their Facebook friends
- eThreads (elementalthreads.com)
  Users are able to design a bag and put their designed masterpiece on their Facebook timeline
- BIG HUGE LABS (bighugelabs.com)
  Users can create a mosaic with the pictures of their Facebook albums or the pictures of their flickr account
- My M&M'S (www.mymms.com)
  Users have the possibility to put pictures of their Facebook albums on chocolate candies

5.4. Embedding the configurator in Facebook

The most intensive way of social media usage for mass customization is building up a configurator in Facebook. With this application a company directly addresses its Facebook fans. Out of the analyzed configurator websites we found 7 companies who use Facebook as additional platform for mass customization.

- Lexus offers a car configurator on Facebook, if users click the "Like" button. It's not possible to buy the car online (www.facebook.com/lexus)
- Audi DE implemented a car styler on Facebook. Users can choose between different design options but can't buy the configurated car online (www.facebook.com/AudiDE)
- Nail-designer allows users to create and buy their own nail design via Facebook (www.facebook.com/nailsticker)
- Nina Footwear offers users to personalize and buy shoes via Facebook (www.facebook.com/NinaShoesDotCom)
- AstraDirekt implemented a Facebook configurator to individualize the shape and color of a locker box (www.facebook.com/pages/AstraDirekt-Eure-Schließfächer)
- Die Jeans integrated a Mini Jeans Designer to show users how easy a jean can be personalized (www.facebook.com/diejeans)

6. CONCLUSION

In a nutshell social media is quite common in the world of mass customization and configuration. 72% of all analyzed companies (n=412) have a Facebook account and a bit more than the half of the analyzed companies use twitter. Nevertheless there is still a high potential to improve the social media usage. Only 38% of the companies apply social media icons on their website and only 36 % offer the opportunity of sharing.

A high potential also lies in using a social media login for the configuration process, as only 5 companies offer a connection to Facebook albums in order to personalize the product with social media components. Furthermore merely 8 companies embedded the configurator on their Facebook fan page.

We see a rising potential in a close connection between social media and configurators:

1. Enlarge the community by spreading the idea of customizing and personalized products through viral effects
2. Get honest feedback via direct communication with the consumers
3. Simplify the login process by using the Facebook login data
4. Use the photo upload and albums from Facebook or other social media applications

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