

An Approach for Businesses to Increase Customer's Willingness to Share Personal Information Online

A Case in the Airline Industry

Emma S.G. Slot

Faculty of Technology Policy and Management, Delft University of Technology

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Abstract

In the era of digital communication, the relationship between businesses and customers has changed. Businesses provide online personalized services within their ecosystem based on customer data, but at the same time, customers are reluctant to share personal information. In this article, an online trust building tool is proposed to increase customer's willingness to share information. A conceptual model is constructed on the relationship between customers sharing information in an online context and businesses providing online personalized services. Customer conditions for information sharing from the conceptual model are validated by a survey under a selection of Transavia airlines' customers. After conducting a principal component and linear regression analysis, it is found that these customers do not necessarily find monetary or non-monetary benefits the most important conditions for online sharing information. Moreover, gender and age do not have influence. The factor that appears most important for sharing information relates to trust. Customers with a higher general trust and higher institutional trust, are willing to share more personal information with the company. Therefore, literature on trust building is reviewed and four trust building principles are constructed: experience, security, transparency, and trusted sources. For each of the principles, constructs are identified in literature and validated by exploratory customer interviews. The list of constructs is the input for a trust building tool for companies to increase their online trustworthiness. The tool is a basis for a discussion with businesses. These discussions can create insights in how a business can become more trustworthy in the eyes of the customer, and can as a result lead to gaining more customer information.

Keywords

Online personalization, information sharing, trust building, business ecosystem, customer values

1. Introduction

In the last two decades, major changes in communication between companies and customers have occurred. A digital business to consumer market has arisen, in which communication changed from a face-to-face exchange of information and products or services to an exchange via online channels like company websites and social media. Four general challenges due to digital

communication for businesses have been identified.

1. Differentiate due to increased global competition

Since companies no longer have to build networks of local agents and offices, more companies started to take advantage of low barriers to entering the digital market (Hoong, 2013). To capture the attention of the wider markets and maintain customer loyalty, businesses have to constantly come up with

innovative strategies (Ingleton & Thomas, 2011). Important business strategy elements are price, products and experience (Good, Pagel, & Gibbons, 2015). But in these strategies, also meeting the changing customer values appeared to become more and more important in the competitive digital environment.

2. *Meet changing customer values*

Customer values are changing because of the increased comfort with technology (Hoong, 2013). Customers are more intelligent, informed, connected, and have more options to choose from (Good et al., 2015). They control “every aspect of the conversation, the timing, the channel, and the content” (Killian & McManus, 2016, p. 540). Customers become more inclined to complain when things go wrong and expect better services from a company (Hoong, 2013). Customers will also expect firms to be ahead of them, like knowing what they need before they themselves have shown the need (Good et al., 2015). The new generation of customers “have begun to weigh a new set of factors more heavily in their purchase, disrupting the customer value equation” (Ringquist et al., 2016, p. 1). In order to be more competitive and build a deeper relationship with customers, companies need to understand who the customers really are and what they care about. Products and experiences in line with their values should help customers along on their journey to pursue their passions and goals.

3. *Integrate business efforts in business ecosystems*

The offerings to customers are more and more provided within an ecosystem of businesses within varying disciplines. For example, companies are working together to provide secured payments, reviews, product accessories, additional services, etcetera. Advances in digital communication made businesses become “more interactive, creating distributed operations and partner relationships to deliver value” (Heald & Ref, 2015, p. 2). “Stand-alone offerings of third parties, sometimes from small companies or even individuals” (Hirt & Willmott, 2014, p. 6), became part of so-called business ecosystems,

assembling the entire service. James Moore, introducer of the term business ecosystem in 1993, defines a business ecosystem as a network of organizations and individuals, each of which is master in its own domain, who collaborate to provide more intuitive, real-time, integrated solutions and services (Moore, 2006).

4. *Collect and use increasing amount of customer data*

In the digital world, the amounts of customer data generated and stored have expanded within a short period of time. The idea of segmenting and analyzing customers through combinations of attributes such as demographics, customer purchase metrics, and shopping attitudes and behavior rapidly evolved (Manyika et al., 2011). Companies get to know their customers via online data instead of physical contact. Nowadays, companies more and more have to predict customers’ situation and preferences based on their enormous trails of data created by communicating, browsing, buying, sharing, and searching (Manyika et al., 2011). Companies collect customer data “with greater granularity and frequency, capturing every transaction, and attaching all possible personal information” (Manyika et al., 2011, p. 21).

The four challenges of digital communication lead to a change in business strategy to meet customer’s online demands. Offering personalized services became a way for companies to meet the customer demands and differentiate themselves in the highly competitive online environment. Business ecosystems were created by which the services are offered and customers’ data is gathered.

However, customers became hesitant to share personal information online. “Many consumers are suspicious about the amount of data that is collected about every aspect of their lives, from what they buy to how healthy they are” (Manyika et al., 2011, p. 15), and see “the data flood as [...] an intrusion of their privacy” (Manyika et al., 2011, p. 1). The consequence is that companies and their business ecosystems can offer less personalized services or services that not fully serve the customer’s needs and values. As a result, companies may struggle with loyalty and reputation issues, while

customers deal with privacy concerns and services in which they are not interested.

From a customer perspective, it is unclear to what extent and under which conditions customers are willing to provide personal information online to organizations. From a business perspective, it is unclear what businesses should do to make customers willing to share personal information online and what the implications of this action would be on the business and its ecosystem. This makes it hard for companies to really get to know the customers, to offer them the right online service, and to start a deeper customer relationship. The question that arises is formulated as follows:

How can businesses increase the customer's willingness to share personal information online?

To answer this question, the article is structured as follows. First, section 2 proposes a scientific conceptual model of information sharing and online personalization. This model will give insight into the relevant concepts and the relationship between the customer and the company. In section 3, the customer conditions for sharing information are validated by customers in a case study by means of a survey and data analysis of the survey results. The empirical case to validate the findings is Transavia Airlines, a Dutch low-cost airline. Based on validated conditions, an approach for businesses to increase customer's willingness to share information online is created in section 4. A conclusion and discussion of this study are presented in section 5.

2. Conceptual model of online personalization and information sharing

Based on a review of lists of definitions of personalization in an online context in the articles of Adomavicius & Tuzhilin (2005), Fan & Poole (2006), Montgomery & Smith (2009), Vesanen (2005), (2007), Vesanen & Raulas (2006), the following definition of online personalization is constructed: "*Online personalization is the tailoring of certain offerings by businesses in business ecosystems*

to consumers of these offerings based on knowledge about them with certain goal(s) in mind." A service that meets the customers' needs can be convenient for a customer and can make the service more competitive. However, to enable these services, it requires the customers to share personal information and companies to employ the right personalization strategies tailored to customers' tastes (Chellappa & Sin, 2007).

By means of a literature study, insight in the process of information sharing by customers and online personalization by companies is gained. The two central concepts in the conceptual model are 'customer's willingness to share information' and 'company's personalization efforts'. For both concepts, conditions and factors for sharing information and offering personalized services are identified from literature. Besides, categories of information and personalization are constructed. In the following, the conditions and factors, and the categories are described. At the end of this section, the conceptual model is presented.

1. Customer's willingness to share personal information online

The information a customer shares for online is influenced by the conditions: trust, demographics, benefits, and the context in which information is shared. The factor trust is constructed to cover concepts like privacy concern, trust, transparency, and control, which are frequently mentioned by several authors (Chellappa & Sin, 2002; Dinev et al., 2006; Farag Awad & Krishnan, 2006; Jai & King, 2016; JungKook & Lehto, 2010; Kobsa, Knijnenburg, & Livshits, 2014; Morey, Forbath, & Schoop, 2015; Stevenson & Pasek, 2015; Taylor, Davis, & Jillapalli, 2009; Vesanen, 2007). The factor trust can be divided into institutional trust (trustworthiness in the Internet medium and website) and personal trust (individual propensity) (Dinev et al., 2006). Demographics that are expected to influence information sharing are age and gender (Jai & King, 2016), and digital skills (Stevenson & Pasek, 2015). Benefits can be divided into non-monetary and monetary benefits (Taylor et al.,

2009). Lastly, the context, which includes the domain in which the information exchange occurs (Chellappa & Sin, 2002) and the effort it takes to share information (Dantas & Carrillat, 2013), may influence the customer's willingness to share information. Context is however left out in the remainder of the research project, since the model will be applied in a case in the airline industry.

The information shared by a customer can be divided into four categories: context, identifiable, preferences, and lifestyle information. This categorization is created by bundling similar categories of information identified from literature (Chellappa & Sin, 2002; Morey et al., 2015; Schubert & Koch, 2002; Wattal, Telang, Mukhopadhyay, & Boatwright, 2005). As a structure for the bundling, a distinction was made between explicitly and implicitly provided information, and between information that is identifiable (directly linked to a person) and unidentifiable.

2. Company's personalization efforts

The online personalized services a business would offer to a customer is influenced by two main factors; costs of personalization and value for customer information. The costs can be divided into direct costs to customize personalized offerings, and indirect costs for security, liability and trust building (Chellappa & Sin, 2002). Organization's perceived value for information can be divided into benefits from delivering improved products and services, targeted marketing, and data sales to third parties (Morey et al., 2015).

The different online personalization categories vary from alerting the customer, making the service easy and cross-selling, and enriching the service based on the customer's values. Since this categorization of Eagan (2016) covers most of the other categorizations in reviewed literature, this categorization is used for this study. These personalized services can be offered by a business alone or by a partnership of businesses within the ecosystem. This research is scoped to one-to-one personalization (Arora et al., 2008), which means that every single customer is individually targeted by the organization.

The created conceptual model is presented in Appendix A. In the conceptual model, there is an exchange between the two parties. The two arrows, representing information and personalized service categories, are assumed to be dependent on each other. Customer information is needed to provide online personalized services, and on the other hand, online personalized services should be delivered in order for a customer to share information.

3. Validation of the customer conditions

To test the customer conditions on the willingness to share personal information online, the customer conditions from the conceptual model are applied in a single case study. The case for testing the model is Transavia Airlines. Transavia is a low-cost airline based in the Netherlands, that has the goal to become leading in digital customer service. The data is gathered by means of an online survey, sent out to customers of Transavia. The sample received a personal survey link (in order to trace their gender and date of birth) and was asked to participate voluntarily. Criteria for the sample were: the respondent has booked by him or herself on the Transavia website, has flown with Transavia in 2016, and is Dutch speaking. From the survey sample of 5,944 customers, 266 customers filled in the survey (4.5% response rate). The average age of the sample group is 55 years and 57.4% of the respondents in the sample is male.

By means of principal component analyses, new factors for trust were created. The trust factor is divided into institutional trust, personal trust, and control. A linear regression analysis is used to assess the impact of the independent factors (age, gender, institutional trust, personal trust, control, digital skills) on the dependent factor customer's willingness to share information online (Appendix B). From this analysis, it became clear that only the trust conditions 'institutional trust', 'personal trust', and 'control' have a significant impact on information sharing. After testing individual variables, also the digital skills indicator 'frequency of social media use' appeared to have a significant impact on information

sharing. It can be concluded that customers appear to find trust a very important when sharing information.

4. Approach for businesses to increase customer's willingness to share personal information online

A valid customer condition which businesses could influence is 'institutional trust'. This implies that an improved online trustworthiness of the company could lead to receiving more customer information. Since this research aims to provide an approach for businesses to increase customer's willingness to share information, the concept of online trust building is further elaborated on.

To define principles for online trust building activities for businesses, a literature study is conducted. Online trust building factors have been identified from literature, that included theoretical frameworks or lists of factors on influencing online trust (Alam & Yasin, 2010; Banarjee & Banerjee, 2012; Ha, 2004; C. J. Hsu, 2008; M.-H. Hsu, Chuang, & Hsu, 2014; Kang & Hustvedt, 2014; Kim & Park, 2013; Srinivasan, 2004). Four online trust building principles have been constructed by matching groups of similar trust building factors. The designed principles are experience, security, transparency, and trusted sources (Appendix C **Error! Reference source not found.**). Other trust building factors like brand reputation and company size cannot easily be adjusted by a company and are therefore not further included as trust building factors in this study.

Each of the trust building principles can be measured by several constructs. Literature is reviewed to identify the constructs per principle (Appendix C). Besides, exploratory customer interviews validate and contribute to the list of constructs. This led to the addition of two extra constructs (Appendix C). The validated list of constructs is input for a tool to build online trust. The tool is a visual presenting the trust building constructs per principle, within the business and within the ecosystem (Appendix D).

In general, the tool is a basis for assessing and redefining strategy and actions to increase the online customer trust in the company. It is

advised to walk through the constructs and their guidelines with someone representing the company. Preferably this is someone on a higher level, for instance a manager, who has a good overview of the organization and knowledge of the organization's strategies. This enables a better use of the tool since the person can give background information on certain online choices and can delegate tasks to the different departments to improve an online trust construct.

The online trust building tool has multiple functions for which it can be used by a manager. Therefore, different use cases are described to give an overview of the functionality of the tool. Different ways of using the tool are: a check whether the constructs are present, identification for improvement possibilities of one or more constructs, identification of tensions between the trust constructs and the business goals, input for a business strategy to include constructs, and input on how the business ecosystem can be utilized to build trust. As a result, of the actions based on the use of the tool, there is a higher willingness expected of customers to share information with the company.

5. Conclusion, discussion and future research

In this paper, an online trust building tool is proposed to increase customer's willingness to share personal information online. A conceptual model about information sharing and online personalization is created in which conditions for customers to share information were defined from literature. Valid conditions for customers to share information are exposed by analyzing case data of Transavia Airline's customers. Conditions that have a significant influence on information sharing are 'institutional trust', 'personal trust', 'control' and 'social media use'. Customers with a higher personal trust, a higher trust in the institution, or use social media more frequently, are willing to share more personal information with the company. Customers who prefer a high level of information control are less willing to share information.

Of the valid conditions that influence customer's willingness to share information, institutional trust is a factor that companies can influence. The approach to increase customer's willingness to share information therefore focuses on trust building. Four trust building principles are designed for companies: experience, security, transparency, and trusted sources. Each of the principles contains constructs that a company should meet to increase its trustworthiness in the eyes of the customer and to gaining more customer information. An online trust building tool is created which includes all the constructs. The tool has various use cases, from a check whether constructs are present to input on how to cooperate with the business ecosystem to increase trust.

In this research, there is a discrepancy between the conceptual model and the findings from the data analysis. Various reasons may explain this discrepancy. One reason may be that it is difficult to conceptualize complex concepts and human behavior according to reality. It could also be possible that the statements in the questionnaire measured the complex customer attitudes in a wrong manner.

Areas for future research can be to apply the conceptual model and tool in different domains to validate also the context condition. Besides, future research can define a way to prioritize trust building constructs, to make the tool more effective.

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Appendix A - Conceptual model of information sharing and providing personalized services

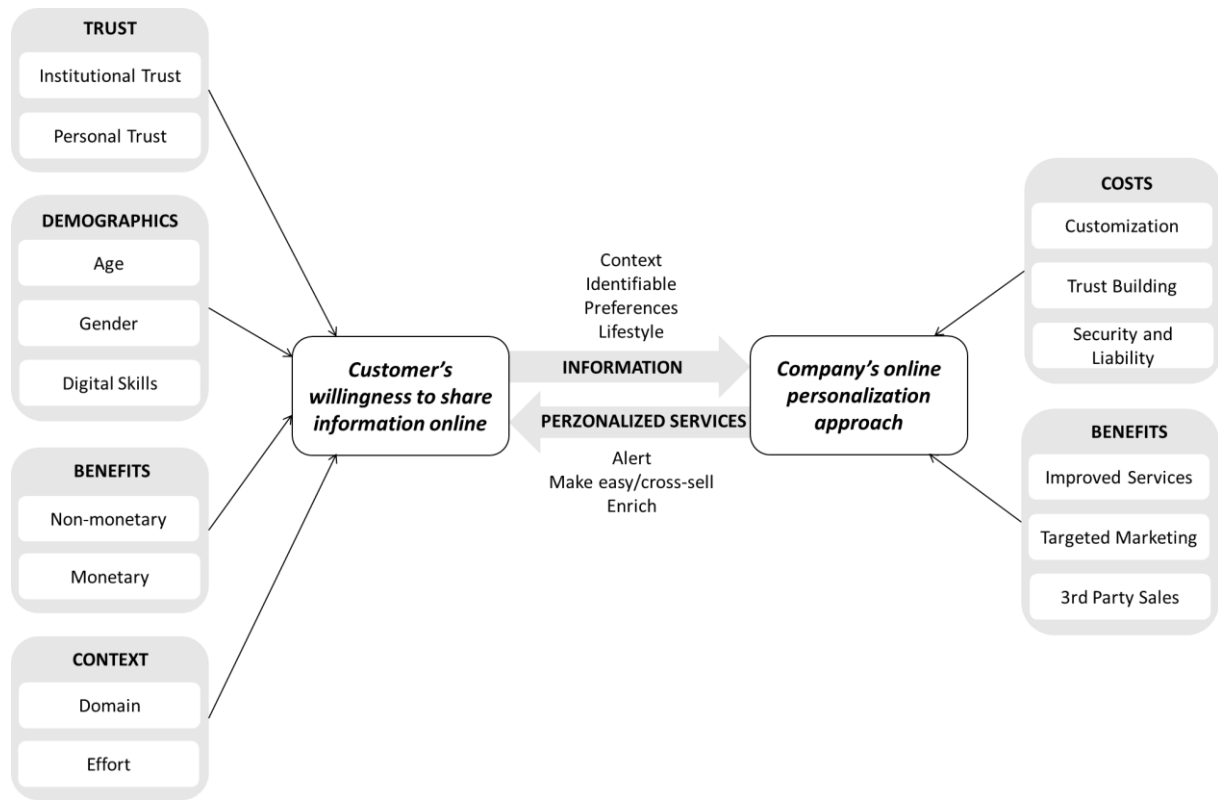


Figure 1 Conceptual model of sharing information and providing online personalization

Appendix B – Regression analysis

Table 1 Regression coefficients (Dependent variable: INFOSHARING)

Model	Unstandardized		Standardized		Sig.
	B	Coefficients Std. Error	Beta	t	
(Constant)	-0.734	0.296		-2.481	0.014
Gender	0.087	0.113	0.043	0.769	0.443
Age	0.004	0.004	0.057	0.924	0.356
DIGITALSKILLS	-0.090	0.081	-0.090	-1.110	0.268
FREQSM_reversed	0.082	0.026	0.234	3.141	0.002
INSTITRUST	0.278	0.061	0.278	4.526	0.000
PERSTRUST	0.236	0.064	0.236	3.681	0.000
CONTROL	-0.126	0.055	-0.126	-2.277	0.024

Appendix C – Trust building principles and constructs

Table 2 Factors influencing online brand trust

Author(s)	Publication and Method	Factors that form the online trust frameworks
Alam & Yasin (2010)	<ul style="list-style-type: none"> Journal of Theoretical and Applied Electronic Commerce Research Survey 	Good online experience, quality of information, word-of-mouth, security, brand reputation
Banarjee & Banerjee (2012)	<ul style="list-style-type: none"> International Journal of Business and Social Research Survey 	Integrity, security and privacy, useful information, convenience in use, web design, word-of-mouth
Ha (2004)	<ul style="list-style-type: none"> Journal of Product & Brand Management Survey 	Security, privacy, brand name, word-of-mouth, good online experience, quality of information
Hsu (2008)	<ul style="list-style-type: none"> International Conference on Cyberworlds 2008 Survey 	Reputation, third-party assurance, customer service, propensity to trust, website quality, system assurance, brand
Hsu, Chuang, & Hsu (2014)	<ul style="list-style-type: none"> Internet Research Survey 	Security and privacy, IT quality, reputation, feedback, interaction, identification, shared vision
Kang & Hustvedt (2014)	<ul style="list-style-type: none"> Journal of Business Ethics Survey 	Transparency, social responsibility
Kim & Park (2013)	<ul style="list-style-type: none"> International Journal of Information Management Survey 	Reputation, size, information quality, transaction safety, communication, word-of-mouth referrals
Srinivasan (2004)	<ul style="list-style-type: none"> Information Management & Computer Security Literature review 	Security, past experience, third party recommendations

Table 3 Online trustbuilding principles based on the factors from literature in Table 1

Online trust building principle	Factors influencing online trust from literature
Experience	Good online experience, quality of information, past experience, information quality, website quality, useful information, convenience in use, web design, IT quality, interaction, identification, shared vision
Security	Security, privacy, security and privacy, transaction safety, third-party assurance, system assurance
Transparency	Integrity, transparency, social responsibility
Trusted sources	Word-of-mouth, third party recommendations, word-of-mouth referrals, feedback

Table 4 Experience trust building constructs

Constructs	Author(s)
1. Information quality	Abareshi (2016); Aghdaie, Piraman, & Fathi (2011); Aladwani & Palvia (2002); Banarjee & Banerjee (2012); Essawy (2006); Filieri (2015); Fung & Lee (1999); C. J. Hsu (2008); Kaur & Madan (2013); Kim & Park (2013); Y. D. Wang & Emurian (2005)
2. Website appearance	Aghdaie et al. (2011); Aladwani & Palvia (2002); Banarjee & Banerjee (2012); C. J. Hsu (2008); Kaur & Madan (2013); Y. D. Wang & Emurian (2005)
3. Ease to navigate	Aladwani & Palvia (2002); Banarjee & Banerjee (2012); Fung & Lee (1999); C. J. Hsu (2008); Kaur & Madan (2013); Paliszkievicz & Klepacki (2013); Y. D. Wang & Emurian (2005); Yoon (2002)
4. Social media presence	Abareshi (2016); Paliszkievicz & Klepacki (2013)
5. Customer support	Banarjee & Banerjee (2012); Kaur & Madan (2013); Paliszkievicz & Klepacki (2013); Y. D. Wang & Emurian (2005)
6. Contact options	Kaur & Madan (2013); Paliszkievicz & Klepacki (2013)
7. Website download time	Aladwani & Palvia (2002); Filieri (2015); Fung & Lee (1999); Kaur & Madan (2013)
8. Domain name	Kaur & Madan (2013); Y. D. Wang & Emurian (2005)
9. Advertisements	Kaur & Madan (2013)

Table 5 Security trust building constructs

Constructs	Author(s)
1. Trust seal	C. J. Hsu (2008); Kaur & Madan (2013); Peterson, Meinert, Criswell, & Crossland (2007); Y. D. Wang & Emurian (2005)
2. Transactions	Aghdaie et al. (2011); Banarjee & Banerjee (2012); Kaur & Madan (2013); Paliszkievicz & Klepacki (2013); Yoon (2002)
3. Privacy policy	Banarjee & Banerjee (2012); Kaur & Madan (2013); Peterson et al. (2007)
4. Refund policy	Aghdaie et al. (2011); Banarjee & Banerjee (2012); Kaur & Madan (2013)
5. Login options*	<i>*Input from customer interviews</i>

Table 6 Transparency trust building constructs

Constructs	Author(s)
1. Company information	Aladwani & Palvia (2002); Kaur & Madan (2013); Paliszkievicz & Klepacki (2013)
2. Pricing	Banarjee & Banerjee (2012); Kaur & Madan (2013); Lowe (2015)
3. Corporate behavior	Egels-Zandén & Hansson (2015); C. J. Hsu (2008); Kang & Hustvedt (2014)
4. Order tracking	Aghdaie et al. (2011); Banarjee & Banerjee (2012); Egels-Zandén & Hansson (2015); Kaur & Madan (2013); Yoon (2002)

Table 7 Trusted sources trust building constructs

Constructs	Author(s)
1. Reviews on own site	Banarjee & Banerjee (2012); Fung & Lee (1999); Kaur & Madan (2013)
2. Reviews on external/partner sites	Abareshi (2016); Filieri (2015); Ha (2004); Kim & Park (2013); Paliszkievicz & Klepac (2013)
3. Offline worth of mouth	Alam & Yasin (2010)
4. Referral links*	<i>*Input from customer interviews</i>

Appendix D – Online trust building tool

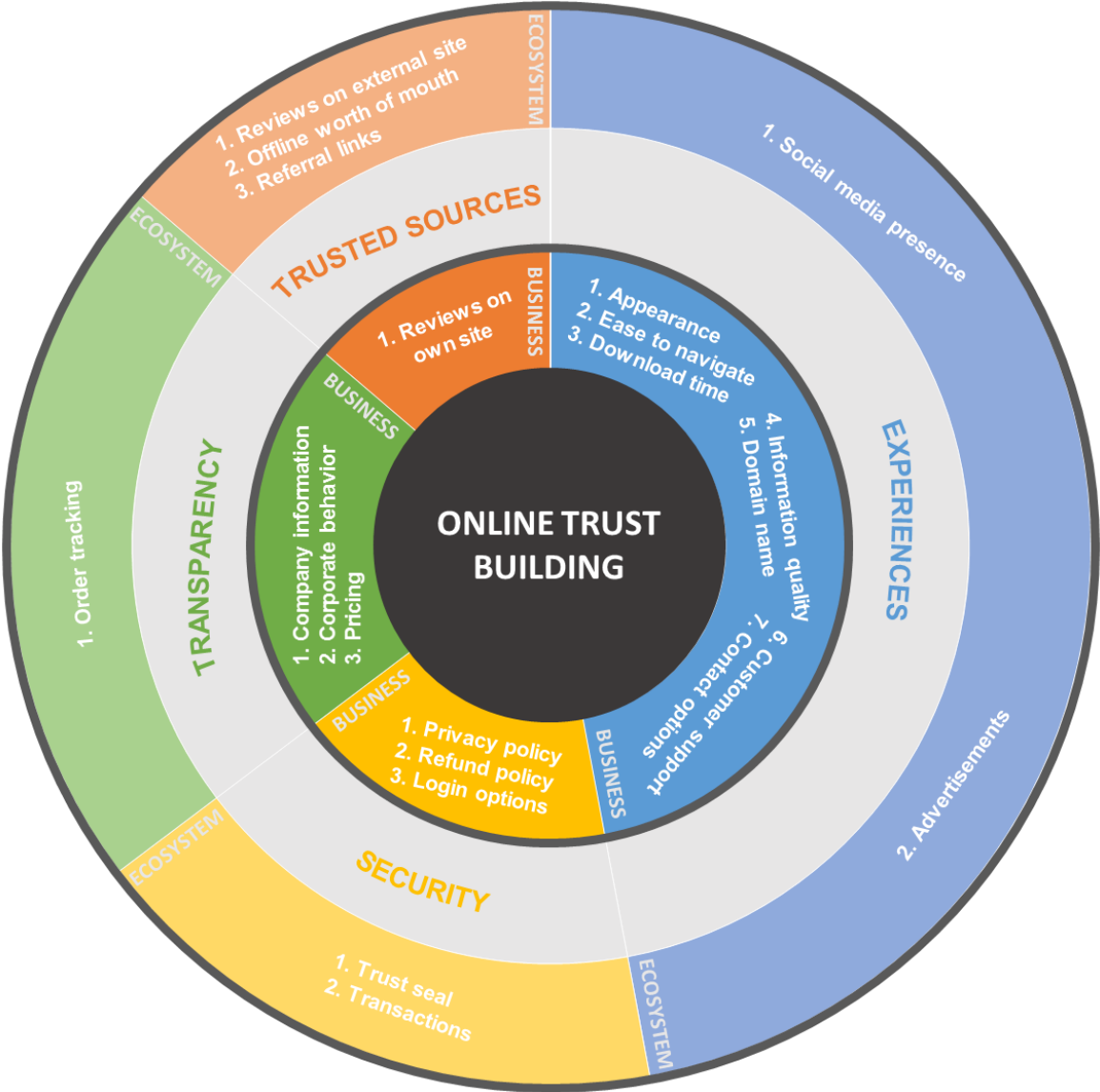


Figure 2 Online trust building tool