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Productization Framework of

a Web Application

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The goal of the thesis was to study service design of web applications and to create a marketing strategy and marketing best practices for productization of the web application. The purpose was to elaborate the matter on both a strategical and a hands-on level to understand the approach from enterprise and startup point of views.

The topic was studied based on web application case examples and using industry related marketing and analytics tools. The purpose was to identify design features and marketing practices that have made the applications in the case examples successful. The matter was further studied from the perspective of digital customer experience, combining service design and marketing into one comprehensive productization framework which to build on.

The findings clearly indicate the value of great service design and application functionality. Web applications should be developed by utilizing user feedback and testing already in pilot stages. In marketing of the application, social media trends must be utilized throughout the application lifecycle. The examples and studies indicate that social media and influencer based marketing have risen to support inbound marketing methods.

The findings also indicate how marketing and service design together build long-term brand appeal for the web application. The study clearly demonstrates that today's brands are born in social media.

Keywords	web application, service design, customer experience, online marketing, social media

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Tekijä Otsikko	Juho Itkonen Verkkopalvelun tuotteistaminen ja markkinointi
Sivumäärä Aika	42 sivua 17.5.2017
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Insinöörityön tavoitteena oli laatia strategia verkkopalvelun tuotteistamiseksi. Aihetta tutkittiin sekä strategisella että käytännönläheisellä tasolla pyrkien tarjoamaan työkaluja suurempien yritysten ja startup-yrittäjien tarpeisiin.

Aihetta tutkittiin tarkemmin verkkopalvelun tapausesimerkkien ja yleisesti käytössä olevien markkinointi- ja analytiikkatyökalujen avulla. Tutkimuksessa hyödynnettiin myös alan kirjallisuudesta ja verkkolähteistä löytyvää sähköisen markkinoinnin ja palvelumuotoilun teoriaa tarkoituksena todentaa verkkopalveluiden tunnusomaisia menestystekijöitä.

Tapausesimerkkien menestystekijöitä tutkittaessa voitiin laadukkaan palvelumuotoilun ja verkkopalvelun käytettävyyden todeta olevan avainasemassa. Verkkopalvelut tulisi alusta alkaen kehittää ja suunnitella käyttäjäpalautetta ja sosiaalista mediaa hyödyntäen. Sekä tapausesimerkit että tutkimuksessa hyödynnetyt lähteet todentavat sosiaalisen median ja vaikuttajamarkkinoinnin nousseen verkkosivujen rinnalle tärkeimmäksi sähköisen markkinoinnin kanavaksi.

Tutkimuksessa huomattiin, kuinka markkinointi ja palvelumuotoilu tukevat toinen toistaan muodostaen käyttäjälle verkkopalvelun brändivaikutelman. Nykyään uudet brändit syntyvät sosiaalisessa mediassa, joten tämä ulottuvuus tulee ottaa keskeisesti huomioon palvelun koko elinkaaren ajan.

Avainsanat	verkkopalvelu, palvelumuotoilu, käyttäjäkokemus, digimarkkinointi, sosiaalinen media

Contents

1   Introduction

People look for unique customer experiences when using web applications. Good customer experience includes the core service itself but also the whole customer experience from online to offline. As web applications are connected to goods or services in the offline world, the applications are often seen only as tools in people's mobile devices. Customer experience is created and improved constantly to satisfy the customers thoroughly. People are not just looking for a product; they also prefer to experience the brand. Functional web applications play an important role throughout the experience, especially now that the borders of online and offline world are constantly narrowing.

When customers initiate a relationship that expands beyond economic transactions, a company can achieve high levels of loyalty and brand following. The company may find itself with a group of zealous customers who protect, market and defend the application and the brand.

I have worked with web applications throughout my career and seen the transformation from the 1990's stand-alone websites to modern multi-platform services and mobile applications that are simple to use. The technology has changed considerably during this period which has made it possible for applications to become intimately integrated part of people's daily lives.

The topic of this thesis is a productization framework of a web application. By a web application I mean a mobile application or a website the purpose of which is to gain users and create revenue. The topic is dealt with in detail through four steps – digital customer experience, service design, marketing strategy and marketing practices. My ambition is to give design and marketing guidelines for professionals productizing and managing web applications.

2 Digital Customer Experience

As far as web applications are concerned, basic functionalities should always be easily understood and controlled. Even the first three seconds should give enough reasons for new customers to stay engaged with an application. Problems include a complex user interface, poor reliability or accessibility, poorly designed or implemented functions, outdated or incorrect key information (such as price listings). The application should be running firmly with no major flaws.

Every experience needs to be understood in terms of how each customer interprets his/her own interactions with the service. Users give away vast amounts of personal data to service providers to offer them tailored and meaningful customer experience. A user who has earlier entered multiple fields of data to find the right vacation does not want to start again from the beginning when revisiting the website or application. Users are expecting applications to identify their behavior for tailored customer experience, as seen in Airbnb website in Figure 1. On this occasion, the customer experience is strongly affected by the ease of returning to the previous session. To correctly track customer actions and reactions, it is important to assess both process and output measures throughout the encounter.

Web applications stimulate the senses of customers in numerous ways. Comprehensive assessment of the customer experience should take all sensory input into account. This does not mean that all applications need to provide tons of multimedia but careful evaluation of needs and expectations should drive the use of sensory elements. For instance, forerunner brands are now providing virtual and augmented reality experiences to engage with their audiences which works well if sneakers are sold but which might be unnecessary for an application that has been created to fulfill the tax refund.

Customer reactions may come from the practical or the emotional experiences of the service. Cognitive responses are more rational and evaluative, and emotional responses tend to capture the moods, attitudes and feelings of the customer. The ease of use may bring positive cognitive experiences. Uncertain feeling of application privacy may on the other hand bring up negative emotional reactions.

Customers always compare their current experience with prior experiences they had with similar services. Prior experiences set up several expectations, and how well or poorly

the expectations are met significantly influences the judgement of the current experience. It can be concluded that it is necessary to evaluate experiences relative to experiences with competitors or best-of-class experiences. If there is a better option already on the market, an innovative approach should be chosen, as Airbnb has done with their service seen in Figure 1.

Figure 1. Airbnb website. Copied from Airbnb Inc. (2017) [1].

The website which presents a destination with vivid and colorful appearance serves as a good example. The user interface is clear and informative as seen in Figure 1. Good customer experience comes from great functionality and ease of the service. The application is tailored according to browser behavior of the user making the experience more customized. [1.]

3 Web Application Service Design

Service design is a major success factor of any web application. All aspects of functionality and design reflect customer satisfaction and evangelism (when customers become voluntary advocates, actively spreading the word on behalf of the company [2,140]). Five feature categories as presented in the study of Rafi Mohammed and demonstrated by industry examples are functionality, intimacy, evangelism, customer experience and design. [2,135.]

3.1 Functionality

3.1.1 Usability

Usability is measured by how well the application anticipates the user's needs and creates a path that allows the user to achieve his/her goals. Usability is affected by many elements, including page or application structure, graphic design and load speed. [2,135.]

3.1.2 Speed

Speed refers to a speed required to display the application for the user. While broadband has become standard in home and office use, the bandwidth is still an issue for majority of the developing world. People demand fast user experience to accomplish their goals and will generally not tolerate waiting times of over 10 seconds [3,211]. [2,136.]

3.1.3 Reliability

Reliability indicates the time that users can use the application properly. Sometimes parts of the application are down because of the system or connection problems and sometimes they cannot be loaded properly for the users' goals to be accomplished. Poor accessibility is always an immediate turn off. [2,136.]

3.1.4   Security

Users think of security when they are required to give their credit card information or when other personal data is needed for their goals to be accomplished. Users too often feel an application is too unsecure for their usage. Many mobile applications require extensive user rights which makes users immediately suspicious. [2,136.]

A great industry example of application functionality in web application is the Uber taxi application. Uber provides a user-friendly way to order a taxi and make a secure payment directly via a mobile application. The user experience is smooth and reliable from registering the account to ordering and checkout. Figure 2 demonstrates the actual order of a ride with the in-application receipt system which makes the purchase process very convenient and secure for both parties. [4.]
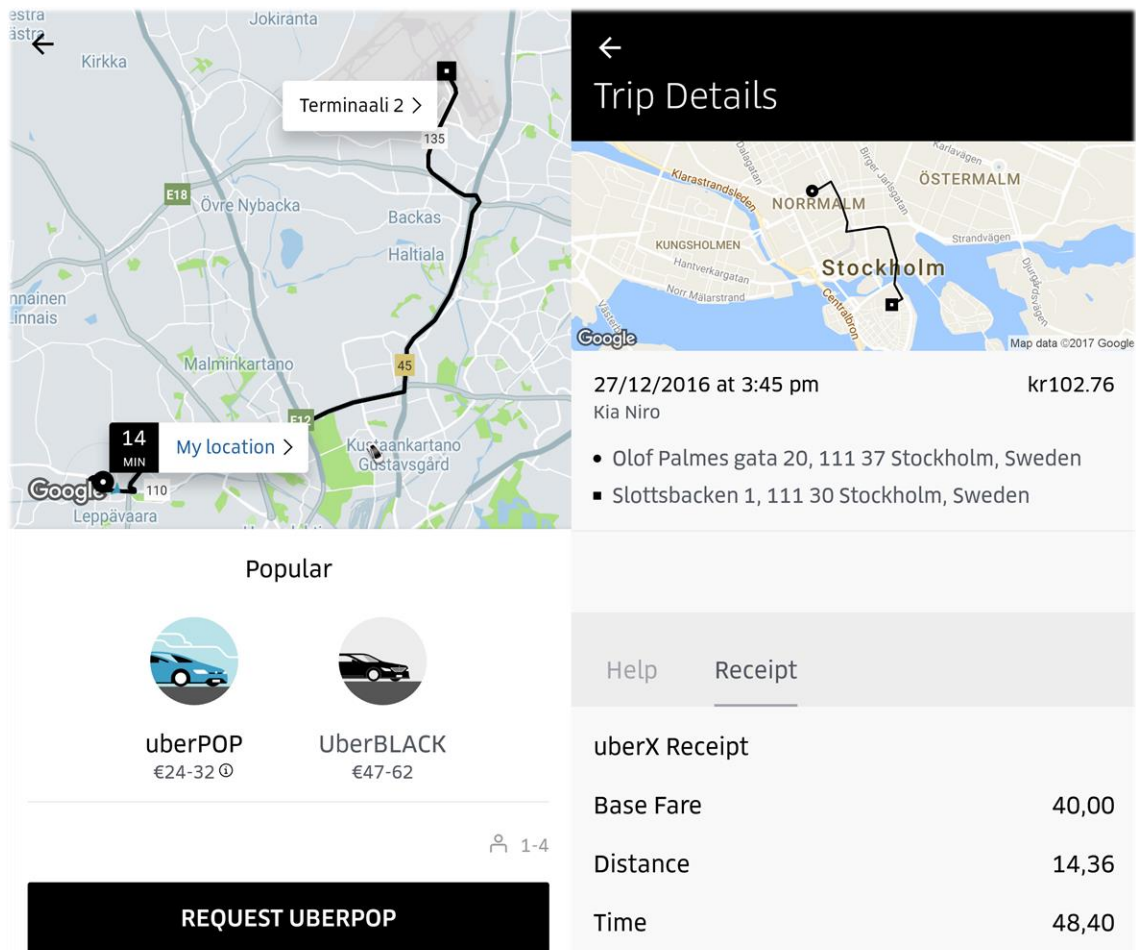

Figure 2. Uber mobile application. Copied from Uber Technologies Inc. (2017) [4].

3.2 Intimacy

3.2.1 Intimacy with the Brand

When application can provide the features of functionality, the customers can be shifted to an experience that invites intimacy with the brand. Now the customer begins to internalize the experience and emphasize the meaning of the brand. Customers become part of the brand and they are happy to share this intimacy with it. [2,137.]

3.2.2 Customization of Application

Customization means the application's ability to change itself for each user. When application customization is initiated or managed by the company, it is called tailoring, and when it is done by the customer, it is called personalization. Applications have increasingly become more tailored and personalized with the mobile hardware that has provided more efficient ways to characterize user behavior. HTML5 (a markup language used for structuring and presenting web content) introduced support for making applications which are loaded as web pages but can store data locally and continue to function while offline. [2,137.]

3.2.3 Communication between the Service and Its Users

Communication refers to the dialog that takes place between the service and its users. Traditional *company-to-user* communication refers to communication such as email or social media push or application notifications from a company to a user. *User-to-company* refers to communication from a user to a service provider in the form of feedback or via social media. Social media integration and instant messaging provides quite effective ways for constant feedback and *two-way* communication. [2,137.]

As social integration and early user feedback is vital for understanding user behavior, the communication between developers and application users should be frequent already in development stage. A good example of this is a food delivery service and application Wolt, seen in Figure 3. They have created the service very early on from social aspects by entering the market with early application version and constantly developing

new application versions by user feedback. When early users are engaged with the application they will later act as evangelists and do the necessary viral marketing (word of mouth marketing on the Internet) for the company. [5.]

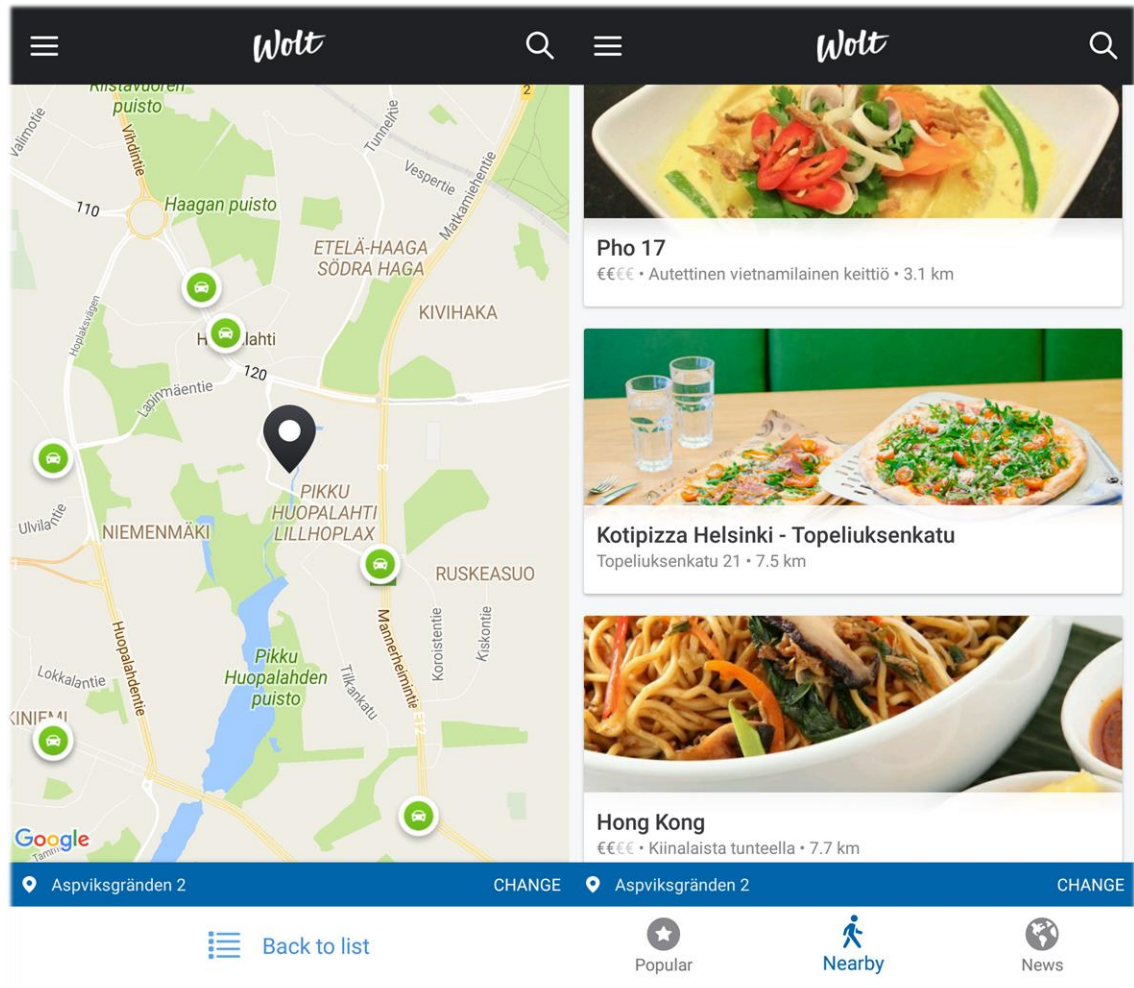Figure 3. Wolt mobile application. Copied from Wolt Enterprises Oy (2017) [5].

3.2.4 Consistent Experiences with the Application

Consistency refers to the experiences that the user has when using the application. The expectations are influenced by the previous experiences with the company and its services so it is equally important that the customer experience is constantly measured and developed. [2,137.]

3.2.5 Exceptional Value from the Service

A user can be convinced that the application offers exceptional value for him/her. People make their opinions on applications and like to attach to some of their favorite ones. Commitment is not done by pure logic but a customer may think that the service is giving him/her exceptional value for some reason. [2,138.]

3.2.6 From Consumption to Leisure Activity

Users begin to think of such visits on application as a pleasure. In the offline world people often like to window-shop or browse for entertainment, and the same is true for online activities. Websites and mobile applications are offering a huge amount of content for the fans and browsing through different applications can be pure fun. [2,139.]

Browsing on the consumer electronics reseller Verkkokauppa.com website, seen in Figure 4, can be pure fun if you are even remotely interested in gadgets. From time to time one might end up ordering something. The online store has recently renewed their customer review feature which has created an active user community on the website. [6.]

Figure 4. Verkkokauppa.com website. Copied from Verkkokauppa.com Oyj (2017) [6].

3.3 Evangelism

3.3.1 Application Users as Evangelists

When application users have gone through operational matters and start to integrate with the brand they become evangelists. This kind of users become one with the brand and cannot wait to spread the word about the application. They think the service gives them exceptional value and they openly show their love towards it. [2,140.]

3.3.2 Spreading the Word

People love to spread the word about application and service they have good experiences with, and that is very valuable marketing for the company. In the online world,

enthusiastic users have promoted such services as Airbnb, Uber and Wolt for the use of masses. [2,140.]

3.3.3 Active Community Membership

While not all customers will engage in community offerings, some often want to communicate with like-minded people who share the same passion about the service. Also, the ones who just participate in conversation are still bonding emotional ties with the company. [2,141.]

3.3.4 Enthusiastic Brand Following

The key perception is that the brand needs the evangelists' experience with the service and the company is incapable of managing the customer experience without the evangelists. In information technology industry, very enthusiastic brand following can be found from the Apple support community seen in Figure 5.

Figure 5. Apple Support Communities. Copied from Apple Inc. (2017) [7].

The reason for the brand following is that Apple cares about its customer community and can be considered as good example in utilizing the power of the evangelists. Most active customers will engage with the brand and help the company developing their products even further. This proves that the evangelists are very profitable for the company and they have enormous viral impact on the market. [2,141.]

3.4   Customer Experience

3.4.1   Create a Description of the Target Customer

An effective way to assess customer behavior is to write a short story about the application user. The intent is to utilize market research, customer-visit data and collective insights from user tracking and profiling data. It is good to understand what motivates customers, what fears they might have, and which of their problems can be addressed. The objective is to create a rich description of the people at whom the service is targeted. [2,144.]

3.4.2   Develop Use-Case Scenarios for Each Target Segment

Putting yourself into the customer's shoes is an effective way to provide the service for the actual customer needs. By participating in social media and other customer activities is one way to find out the ways for the customer needs.

Spotify with the application seen in Figure 6 is the provider of music streaming services. They provide personalized application views and tailored music content with automatically updated playlists. Music is something profoundly personal for everyone so tailoring the listening experience will make the customer really connect with the service. [2,145.]

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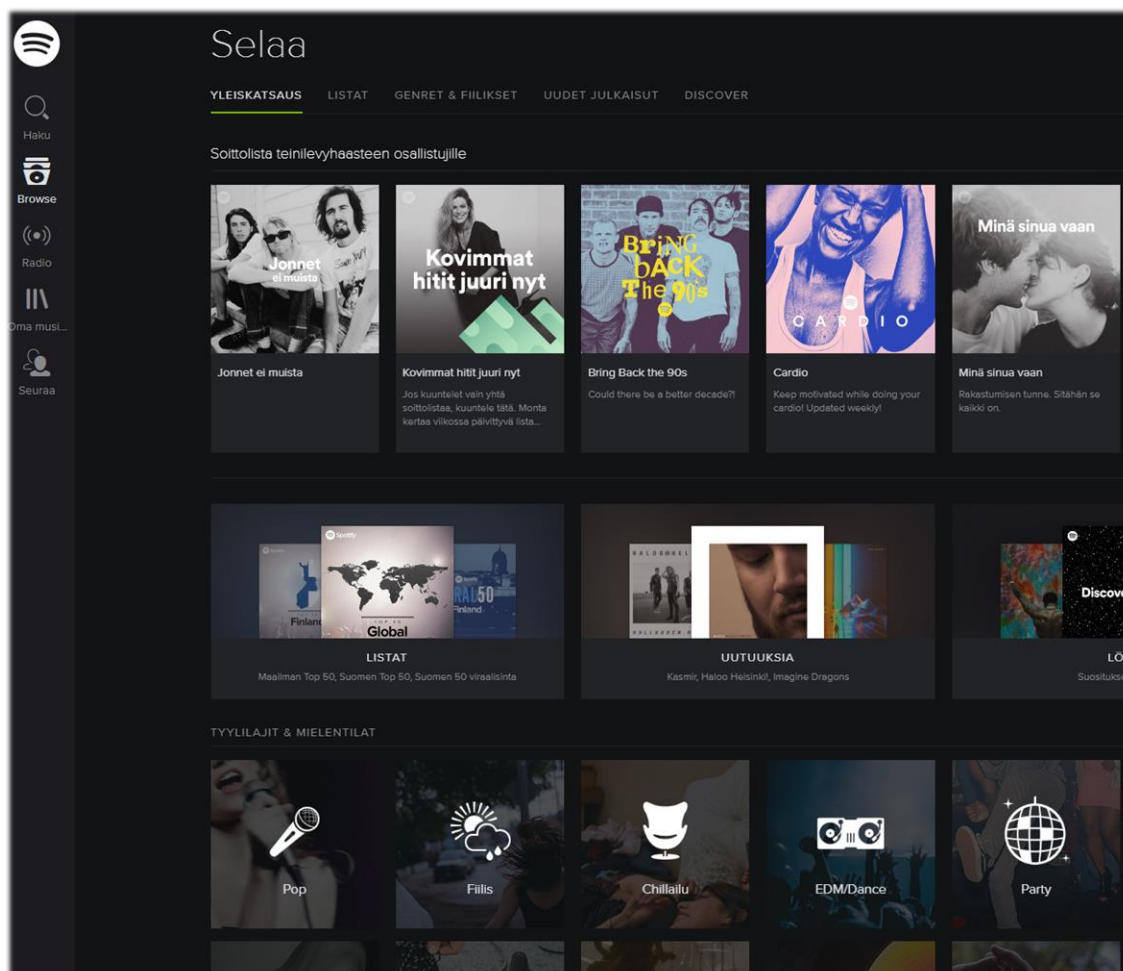
Figure 6. Spotify Music. Copied from Spotify Technology S.A. (2017) [8].

3.4.3 Effectively Integrate the Online and Offline Experience

Because customer experience involves more than just online experience of the application, it is essential that offline and online activities are integrated for the smooth omni-channel (a cross-channel business model that utilizes online and offline channels efficiently) experience as depicted in Figure 7. Often a brand is targeting the same customer online and offline so it is even more important that these activities support each other. While retail stores remain the primary avenue of purchasing, mobile browsing has become the primary method of engagement. [2,146;9.]

Figure 7. Omni-channel customer experience. Copied from Microsoft Corporation (2017) [9].

3.4.4   Continuously Monitor and Adjust

Companies should be aware of how their customers move across experience levels. This is necessary because competitors change, technology develops and customers learn about the features and requirements every day. The online environment changes rapidly and today's features may be useless tomorrow. A company must maintain a customer-centric focus and constantly monitor their audience for the changes. [2,150.]

3.5   Design

3.5.1   Design Features to Pay Attention to

The goal of a commercial web application is to attract visitors and generate revenue. A well-designed application attracts target segment customers and untargeted customers.

Context captures the aesthetics and functional look-and-feel of the service. Some focus more on graphics and design features while others focus on simplicity and practical use. Both approaches should be taken into consideration.

Content is text, video, audio and graphics of the service as well as everything that is presented such as product, service and information offerings.

Community includes social media, message boards and live chats for customers to interact.

Customization is defined as the site's ability to modify itself or to be modified.

Communication represents the dialog between the company and customers.

Connection means the ways to connect different communication channels in the application.

Commerce is defined as a transactional capacity of the service, referring to the sales of products or services, shipping and payment options and checkout. [2,161.]

3.5.2   Look for Design Trends from the Industry Examples

As a web developer or marketing professional one should look for the best in class industry examples to keep up with the current design trends. The best websites and applications are enlisted annually in many occurrences such as in U.S. based Webby Awards which is overseen by the International Academy of the Digital Arts & Sciences. As seen in Figure 8, the British newspaper The Guardian was one of Webby Awards winners in 2016. The user experience is rich with information maintaining intuitive and clear overall experience at the same time. [10.]
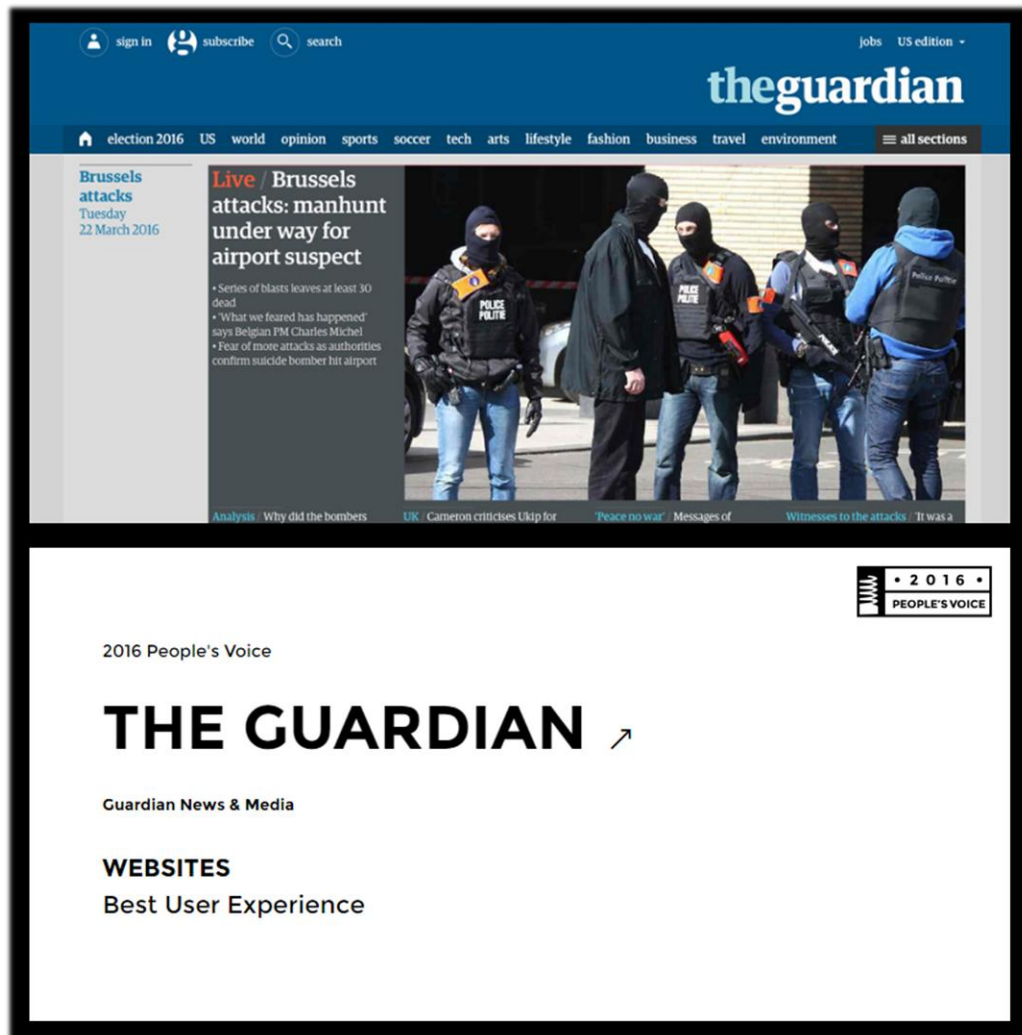
Figure 8. Webby Awards. Copied from The Webby Awards. (2017) [10].

3.5.3 Developing Applications for Different Platforms

HTML5 applications work uniformly throughout the different platforms. If users access the application through a browser that supports each language's capabilities, the application should perform the same across platforms. [11.]

Native applications are based on the native language of the platform the applications run on. The challenge with native applications is that each platform requires its own application, and some platforms require different versions to support different devices on that platform. [11.]

3.5.4 Careful Application Testing Before Launching

Testing the application before launching is crucial for its eventual success. Developing is more cost-effective when design glitches can be screened early in the process. Any usability faults on the actual product after the launch are considered very expensive and complicated to remove and will probable cause serious user dissatisfaction. [12,297.]

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4   Web Application Marketing Strategy

4.1   Creating Value by Online Marketing

Online marketing is the process of building and maintaining customer relationships through online activities to facilitate the exchange of ideas, products and services that satisfy the goals of all parties [2,4]. To be successful online, one should understand the rules and values of the rapidly changing technology environment.

4.2   Online Marketing Framework

Some of the marketing studies [2,9] identify online marketing in seven consecutive stages as seen in Figure 9. These stages followed by best practices will be introduced in this thesis.

Stage 7
Evaluating the Marketing Program

Stage 1
Framing the Market Opportunity

Stage 6
Leveraging Customer Information through Technology

Stage 2
Formulating the Marketing Strategy

Stage 5
Designing the Marketing Program

Stage 3
Designing the Customer Experience

Stage 4
Crafting the Customer Interface

Figure 9. Online Marketing Framework. Modified from Mohammed (2003) [2,9].

4.2.1 Framing the Market Opportunity

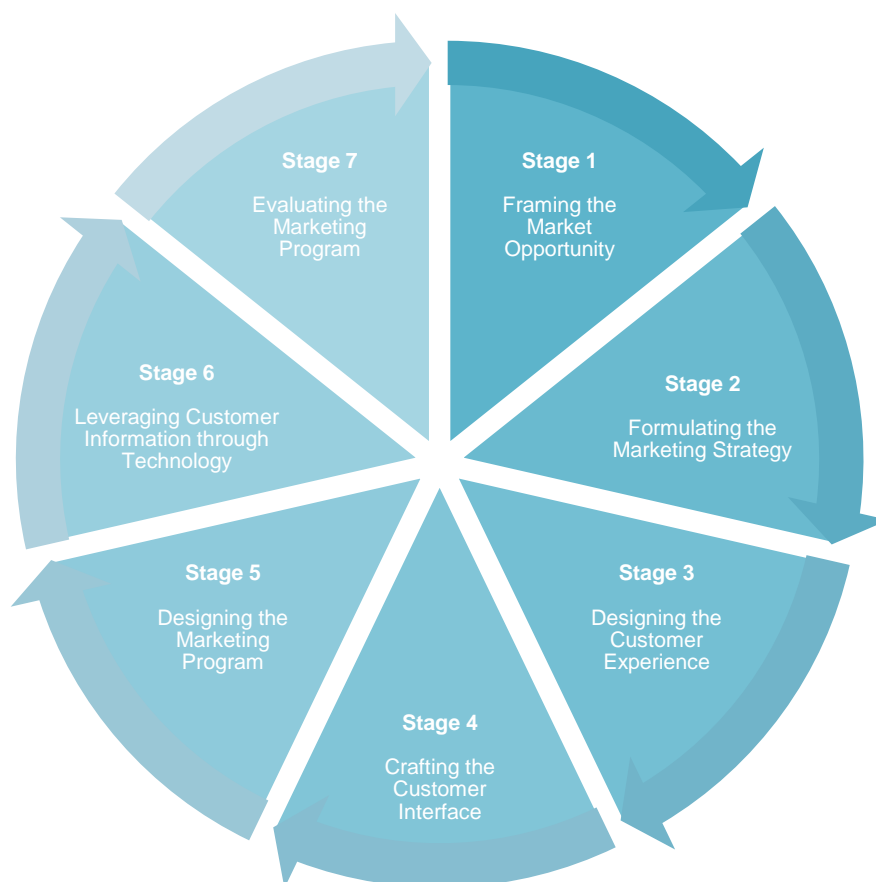The first stage is to collect sufficient online and offline data. For example, the management team of a company is constantly looking for relevant information from the market to understand if they should take actions towards a certain business opportunity. In this stage, the management team is trying to make an informed choice about the opportunity by gathering data from the market, often using data-driven market research. [2,20.]

4.2.2 Formulating the Marketing Strategy

Company's core business strategies are taken into consideration when planning marketing strategy and online marketing activities. Startups (companies in their early growth stage) born into the pure online world can be more flexible and experimental with their online strategy as they have no earlier brand management requirements in traditional marketing channels. [2,21.]

4.2.3 Designing the Customer Experience

The customer experience should correlate with the company's positioning and marketing strategy. It is vital to understand the customer experience that needs to be delivered to meet the market opportunity. Online environment provides huge opportunities for marketers to provide truly specialized and individualized customer experiences. This is something that companies should focus on even more to be successful online. Better interactivity and individualization comes along with development of technology and will provide new opportunities for technologically-savvy marketing professionals. [2,22.]

4.2.4 Crafting the Customer Interface

The value of service design and application functionality should not be underestimated. Since online interaction is now mediated via any Internet-enabled device, the technology can provide whole new areas of interaction and individualization. A well-designed application attracts target segment customers and untargeted customers. [2,23.]

4.2.5 Designing the Marketing Program

As the target segment has been decided, it is time to design the marketing program. The key is to understand the audience and its behavior. The distinctive feature of online marketing is the ability to target the message in an extremely sophisticated way. This way the resources can be steered into channels and platforms that provide the most cost-effective conversion for the current situation. [2,23.]

4.2.6 Leveraging Customer Information through Technology

Companies use technology to obtain, organize, analyze and utilize customer-relevant information. In data-driven organizations, the information is used throughout the company for better decision making. From strategically selecting the target audience to learning and acquiring customer behavior, data helps professionals assessing the profitability and key actions per customer segment. Today this information cloud is referred to as big data. Companies have just started to understand the concept, and talking about utilizing big data is going to be more common in the future. [2,25;13.]

4.2.7 Evaluating the Marketing Program

When evaluating the overall online marketing program from both customer and financial aspect, it is important to use different kind of metrics for the process. These metrics may vary from the traditional offline marketing evaluation metrics to the online metrics, comprising the financial and customer approach. [2,25.]

4.3 Tools for Execution with the Online Marketing Mix

The online marketing mix (the set of marketing tools that are used to pursue marketing objectives in the target market) as seen in Figure 10 combines the traditional marketing mix factors *product, price, promotion* and *distribution* with the two typical success factors from the online environment - *community* and *branding*. "Community" represents the level of interaction between users and "branding" is the key factor of building long-term relationships with a customer base. [2,15.]

Figure 10.   The online marketing mix. Modified from Mohammed (2003) [2,15].

4.3.1   Product

The product can be a service or physical goods that the company is selling. On the online market, there is a wide variety of goods from clothes to insurances and from groceries to cars. Virtually everything can be found for sale on online marketplaces, and anyone can buy anything at any time of the day. [2,13.]

Here are seen Google's (Alphabet Inc.) examples of a product component in the online marketing mix.

- Web-based products

- Operating systems

- Desktop applications

- Mobile applications

- Hardware products

- Services

A product component of the marketing mix determines the outputs of the organization. [14.]

4.3.2 Price

Price is an increasingly important marketing lever when products are sold online. Online customers are very price conscious and price is one of the most crucial factors for the customers. Pricing includes such strategies as loyalty programs, volume discounts, subscription models and targeted price promotions. [2,14.]

Here are seen Google's (Alphabet Inc.) examples of a price component in the online marketing mix.

- Freemium pricing (Gmail)

- Market-oriented pricing (Chromecast)

- Penetration pricing (Fiber Internet TV)

- Value-based pricing (AdWords)

Different pricing strategies are set to satisfy various customer segments with various kinds of products. [14.]

4.3.3 Communication

Marketing communication includes all types of company-level communications, including public relations and social media. High value advertising campaigns can introduce products to the masses but often it is viral marketing that works better since satisfied customers are willing to tell others about a superior product or service. Good marketing communication will encourage customers to build a stronger bond with the brand and be committed to their products. Basically, all online success stories include exceptionally good corporate communication and viral activity behind them. [2,14.]

4.3.4 Community

A community is a set of relationships between people who share a common interest or enthusiasm towards a company or its products. Communities are formed rapidly in the online world and especially in social media whenever there are even a few to share the interest. Communities are a positive phenomenon for a company and they often tend to improve the loyalty of their customers. [2,14.]

Companies have started to invest more in communities and hired professional community managers to engage and interact with the online customer base. Virtually all the big online brands leverage communities as part of their marketing strategy. Apple Inc. serves as a good example with a lot of people following it online through different mediums. [2,14;7.]

4.3.5 Distribution

The online environment provides a vast range of distribution channels for a company's products and services. Companies operating in an omni-channel environment also provide online product information for the purchase at a retail store. Broad levels of distribution channels impact both customer awareness and the potential for more customer exploration of the company and its offerings. [2,14.]

4.3.6 Branding

Branding is an outcome or result of the company's marketing and communication activities. A well-known and strong brand boosts all activities whereas a weak brand makes marketing and communication hard to complete. For example, a social media campaign for a well-known consumer brand would show better results than a similar campaign for a less known brand. Brand value can be a huge competitive advantage but it can only be achieved by long-term marketing communications and great overall customer interaction on all levels. [2,15.]

Top growing global brands can be seen in Figure 11. Apart from Facebook, Amazon and Adobe the fastest brand growing is currently taking place among the large retail companies, all with very successful online marketing activities. All the growing retail brands have heavily invested in social media as well. [15.]
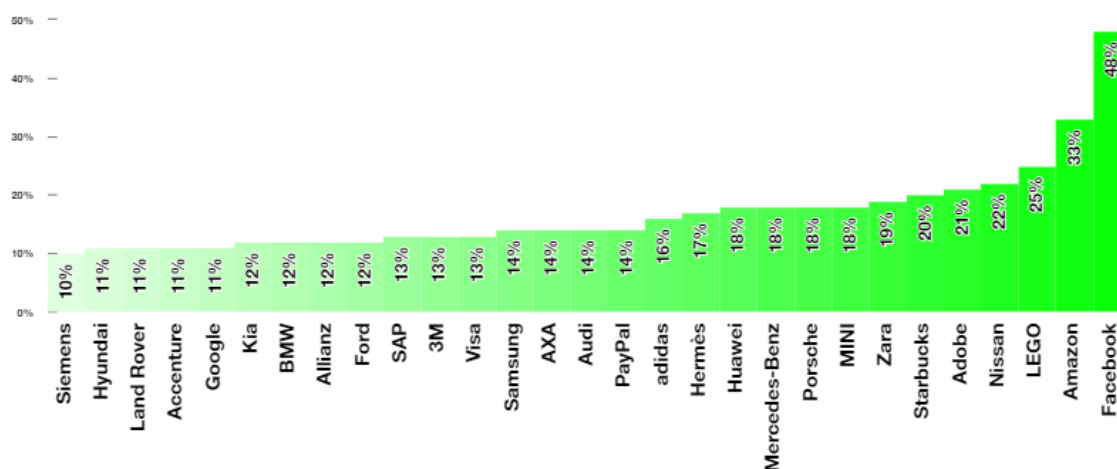
Interbrand
Top Growing Brands

Figure 11.   Top growing global brands. Copied from Interbrand (2016) [15].

4.4   Success Factors of Online Marketing

Marketing has always been the business of anticipating and managing change, and technology has been the principal tool for managing the transition. An ever-changing variety of tools and applications presents an adaptive challenge for today's marketing executives. Critical skills for competent online marketer include customer advocacy and insight, integration, balanced thinking, and a willingness to accept risk and ambiguity [2,18].

4.4.1   Customer Advocacy and Insight

The endless curiosity for customers and marketplaces is a vital feature for today's online marketing professional. Serving customers' needs and providing positive customer experience are critical components. Since technology enables much greater interaction and activities can be truly customer-centric, it is important for professionals to utilize these components in marketing. Marketing professionals will need to collect data from various sources and effectively translate them into marketing strategies and tactics. [2,18.]

4.4.2 Balanced Thinking

Online marketing professional needs to be highly innovative and creative yet analytical. [16,171]. Successful executives are simultaneously able to adapt to new channels and capable of creating content on the ones that are already providing results. Decision making is rapid and professionals should be able to be creative and of course technologically-savvy. [2,19.]

4.4.3 Willingness to Accept Risk and Ambiguity

Having the courage to try new things is the key to developing breakthrough campaigns with viral potential. Using lean marketing methods, which are a method of creating more value for customers with fewer resources, and living and learning with the audience is the key. If something has worked with someone else, it does not mean you should mimic that strategy. If one has just started using Twitter, it might be disagreeable to hear that twittering is one of the five estimated trends dying in 2017 [17]. [2,19.]

The pace and speed of things has changed so one should react more quickly and manage more information than ever. Strategic planning allows visioning and visualizing the market opportunity of a solution but as the future cannot be predicted, the most important feature could be the ability to adapt to change. [3,1.]

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5   Online Marketing Practices

5.1   Business in Omni-channel Environment

5.1.1   What is Omni-channel Experience

Customers expect seamless omni-channel experience with their day-to-day web applications. People are increasingly consuming the brand simultaneously in online and offline environments. Very typically a company website or mobile application is used as an additional information channel in offline retail situations. Consumers are looking at their phones while experiencing the actual physical product in a retail store. [9.]

5.1.2   Omni-channel Business in Practice

In 2016 over half of the visits to retail websites were done on mobile devices while the actual purchasing was conducted still mainly in the retail store. Obviously, the number of online checkouts has equally increased every year and in some industries, they have already surpassed cash register revenue. While the retail logistics might be the next revolutionized area with the increasing usage of autonomous drones, people have already started to get accustomed to buying goods online and picking them up from stores. [9.]

5.2   Viral Boost from Social Media

5.2.1   What is Social Media

In the last decade, social media has evolved into huge multi-cultural cross-platform web of channels with different audiences. Social media constantly evolves and changes in a fast pace so one must be very adaptive and flexible to find the right audience. On the other hand, when earlier has creating a global marketing campaign been basically free.

- Social media consists of a constantly evolving set of multi-platform social services such as Facebook, Twitter, Youtube, Instagram, Snapchat and Linkedin.

- Some social media services are website based and some work only as stand-alone applications with very limited integration with the websites.

- Content in social media should always be relevant and responses to queries should be rapid.

- The community aspect of social media can be used to gain revenue but also to provide customer support.

- Today's brands are born in social media.

5.2.2 Social Media Marketing

Online marketers with sufficient resources have endless possibilities to target their message in social media. When audience is already categorized by their demographics and interests, the campaign can be targeted in a very efficient way. As described in a social media related marketing industry blog, Facebook allows very accurate advertisement targeting by user demographics including gender, age, location, language and interest filters [18]. The principles of targeting advertisement messages can be seen in Figure 12.

Figure 12.   Facebook ad targeting. Copied from Markkinointiviestintätoimisto Kuulu Oy (2017) [18].

Sponsored content is shown to users with desired demographics in their news feeds' in Facebook as seen in Figure 13. In addition to company based push advertising, Facebook is effectively utilizing users' Internet browsing behavior to display sponsored content. Many times, have users encountered targeted advertising right after visiting a company's website. [19.]
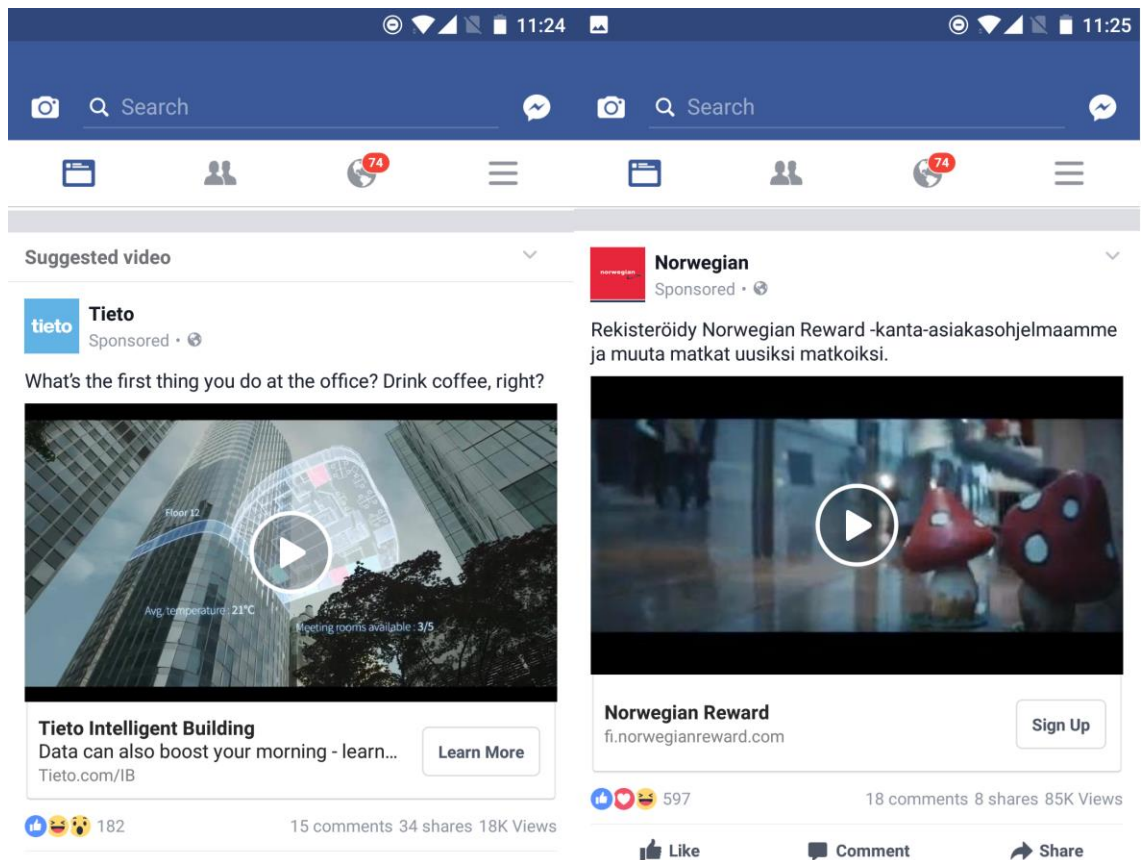
Figure 13.   Examples of Sponsored content in Facebook. Copied from Facebook Inc. (2017) [19].

According to a study, companies are now heavily investing in social advertizing platforms [20]. As seen in Figure 14, in terms of ROI (i.e. return on investment), more than 95 percent of social media managers say Facebook offers the best return on investment, followed by Twitter and Instagram. Snapchat seems to be quite irrelevant for the marketers if matters are considered purely on investment basis.
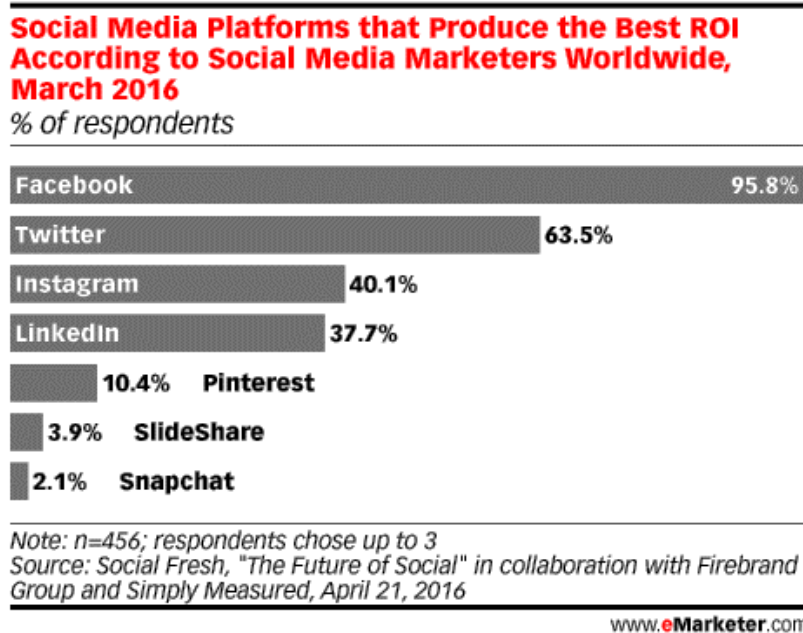
Figure 14.   Comparison of marketing channels. Copied from Newberry (2016) [20].

5.2.3   Social Reviews and Gaming

Social reviews are trending method of utilizing different platforms for marketing. Users are naturally interested in what others say about a service or a product and therefore pay extra attention to reviews. Reviews have started to gain more visibility in search engines and social media which makes them an even more relevant part of marketing strategies. [21,170.]

Another still growing trend is social gaming. According to some studies, half of people aged from 18 to 44 consume games in social media daily. Online marketing has always been about engaging with the audience and gaming is a natural way to put that into practice. [22,230.]

Great viral campaigns can spread global within days. One can hardly imagine any of today's global web applications, as introduced earlier in this thesis, becoming successful without the current social media channels and their enormous viral potential.

5.3 Earned Media and Influencer Marketing

5.3.1 Concept of Influencer Marketing

Consumers, whether being B2B consumers or B2C consumers, are increasingly being driven and influenced by respected and influential persons in their social networks. An influential person might be a journalist, academic, social person, blogger, community leader or a friend. Therefore, the customer buying process is ultimately based on trusted opinions in social networks. Brand marketers know this and they want to get to influencers to get to customers. The set of digital communications channels is rapidly growing and will provide huge opportunities to data-driven online marketing, as seen in social media advertizing example in Figure 13. [23.]

5.3.2 Leveraging Business through Earned Media

One can start by following and communicating with local influencers first and expand the network to cover the industry across country borders when feeling more comfortable with the level of expertise. Social media as seen in Figure 15 is obviously the right medium to look for professional connections easily without the limitations of the physical world. In the world of influencer marketing the key is to provide information to audiences willing to listen. [23.]
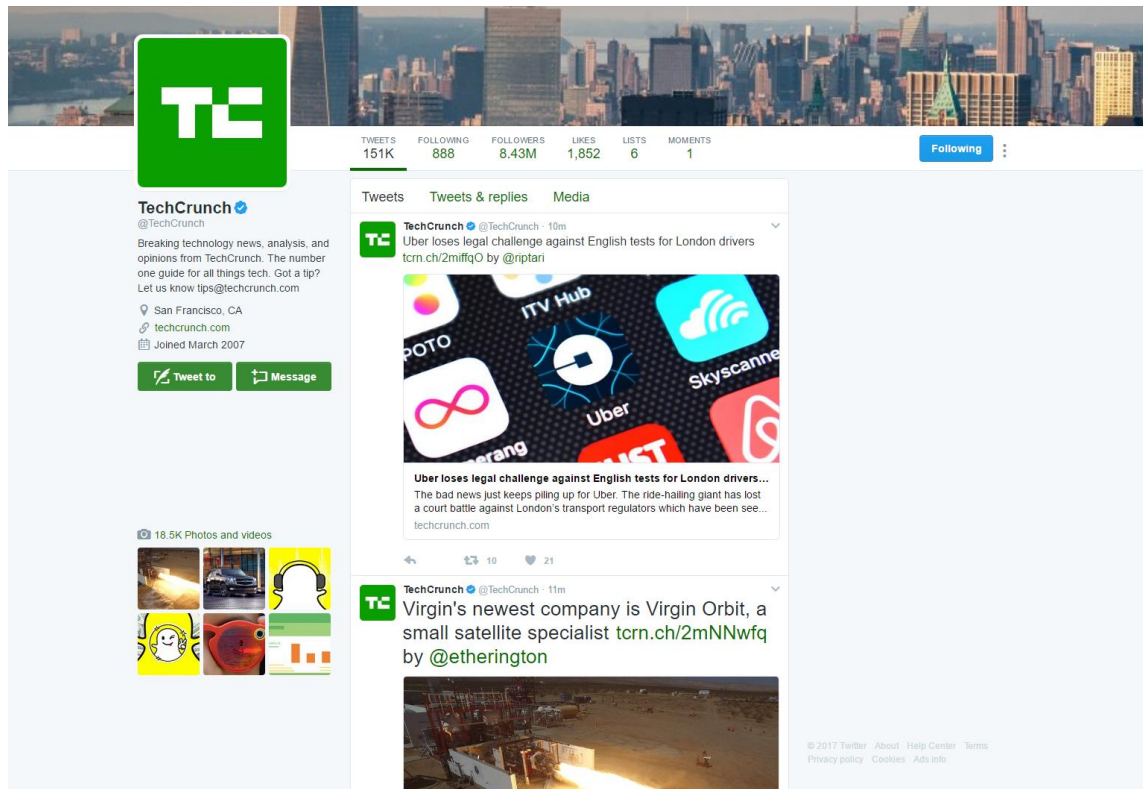
Figure 15.   TechCrunch Twitter account. Copied from Twitter Inc. (2017) [24].

Today's top technology media include outlets such as TechCrunch [25] or Engadget [26] (see Figure 16), which has been categorized as the most influential consumer electronic blog [27]. These outlets represent the new breed of media outlets that every global tech professional is reaching out to. They also operate in a wide range of platforms and their journalists are active social influencers in their networks. Getting the right attention by such influencers is easier after engaging by expertise in social media [23].
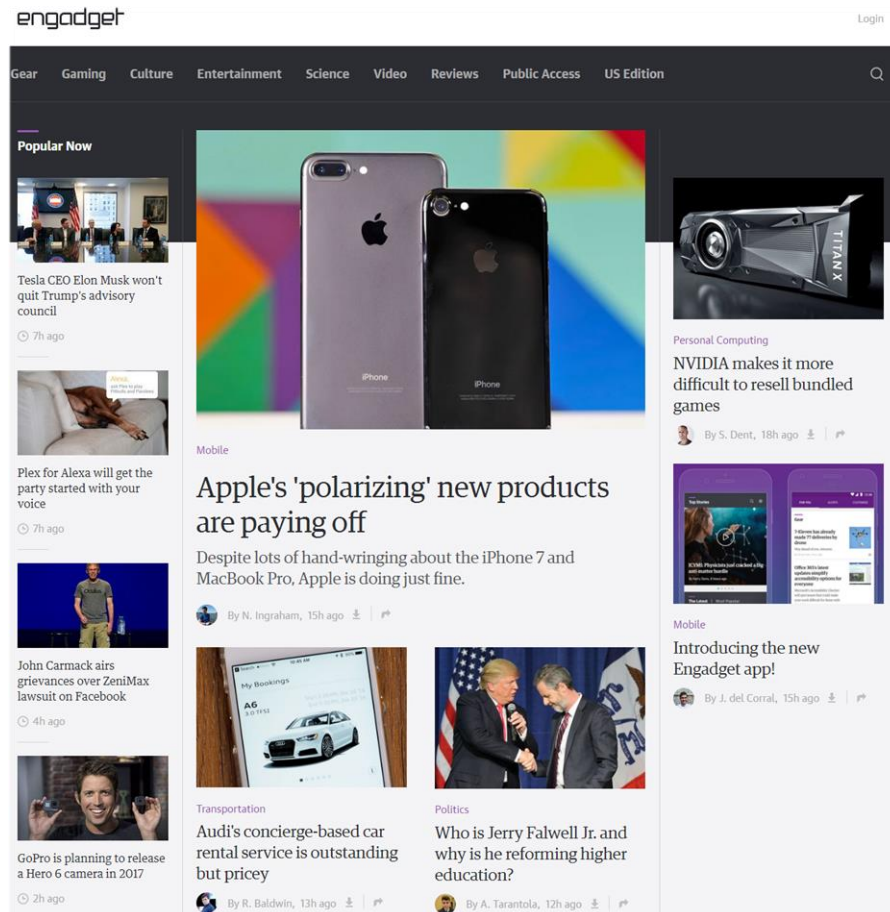
Figure 16.   Engadget website. Copied from Engadget Inc. (2017) [26].

5.4   Website as a Hub of Communications

5.4.1   Website Analytics as a Source of Information

The last step for effective online marketing is a website. A website is a channel where one can measure, analyze and connect with the audience mostly on his/her own terms. After understanding the audience website behavior, it is easier to focus on certain areas of website. While the inbound traffic has moved to mobile devices the existing fundamentals of website analytics remain relevant.

With website analytics software, such as Google Analytics seen in Figure 17, the following questions can be answered:

- Where are customers visiting from?

- What kind of devices are visitors using?

- Where are they leaving the website?

- How long are they staying?

- Which search engines are delivering the traffic?

- Which campaigns generate most revenue?

- Which search terms have highest conversion?

- Where do visitors drop out?

Figure 17.   Google Analytics. Copied from Alphabet Inc. (2017) [28].

5.4.2   Search Engine Optimization
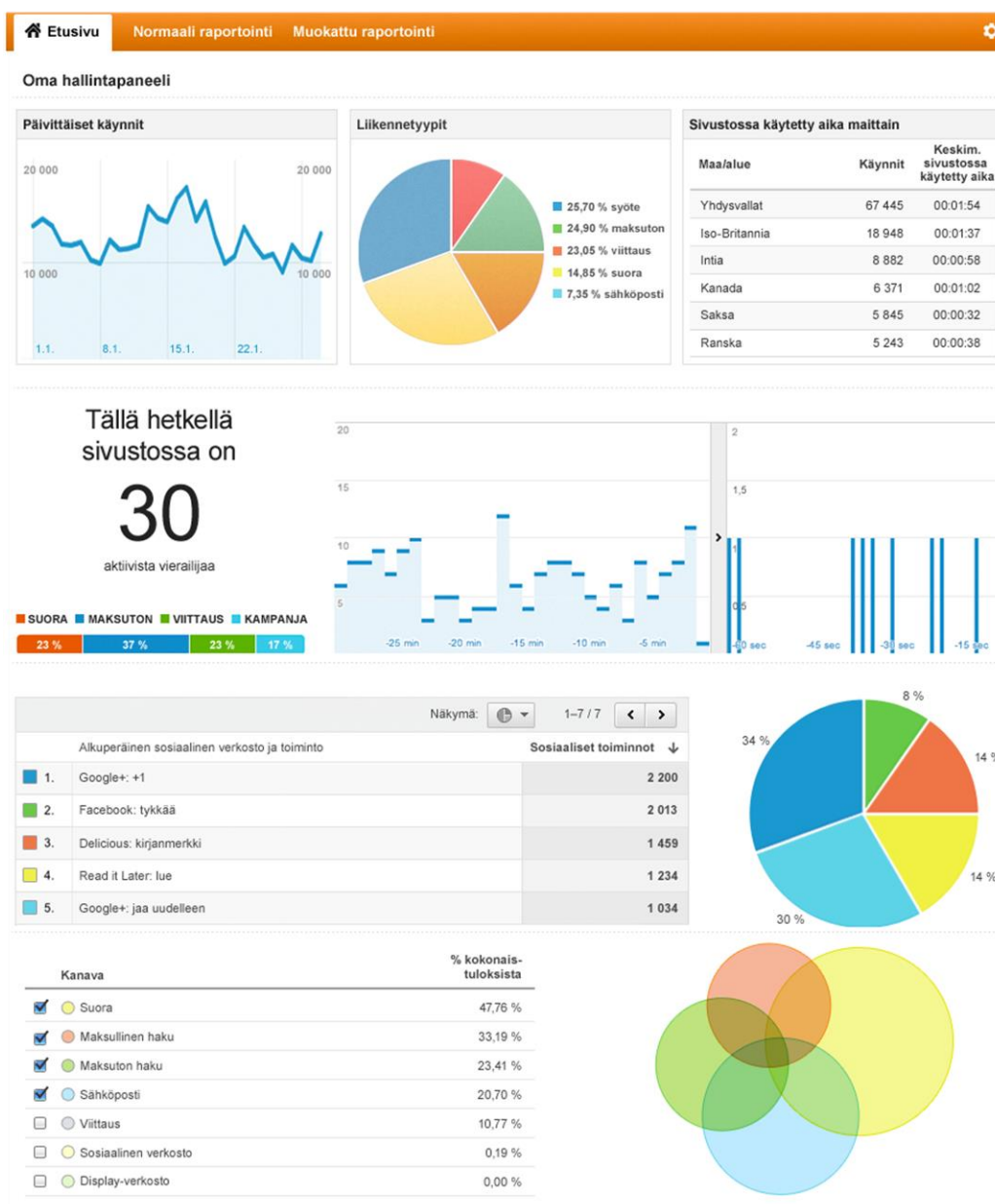
With mobile devices getting increasingly more capable, the difference between tradi-tional web experience and mobile experience narrows day-to-day. In the coming years web design is going to be more uniform so developers do not have to pay that much attention to what kind of devices the audience will be using. Even today most websites should be running perfectly fine with any device thanks to responsive web design.

Analyzing the audience and optimizing the content is still one very effective way of driving profitable traffic to a website. People now look for information more than ever and opti-mizing content with the search engines is a terrific way to achieve results. Even more than earlier, great SEO (i.e. search engine optimization) can be achieved by creating relevant content since all the major web content management systems work technically well in terms of SEO. [29.]

Rather than adjusting a website with a SEO gimmick, a website should be a hub of com-munications and social media should be integrated and cross-linked with website. Social media platforms are extremely SEO friendly which is another reason to be present in all relevant channels.

To provide faster answers to searchers, Google now shows website content elements directly on the first page of search results as seen in Figure 18. These elements include paid ads, local packs, carousel results and knowledge graphs. This way there are more opportunities to provide relevant content, for example geographical information of the service. [30.]

Figure 18.   Google search heat map. Copied from Barysevich (2015) [30].

5.4.3 Inbound Marketing

Figure 19 shows the average inbound traffic sources for both enterprise and consumer websites measured in research. On a general level, it can be said that direct and organic traffic sources are still by far the most important ones while referral sources provide more traffic on B2B than on B2C. Paid and social sources represent the minority of traffic with more effect on consumer than business websites. In the end, analyzing is the only way to make information based decisions for an individual website. [31.]
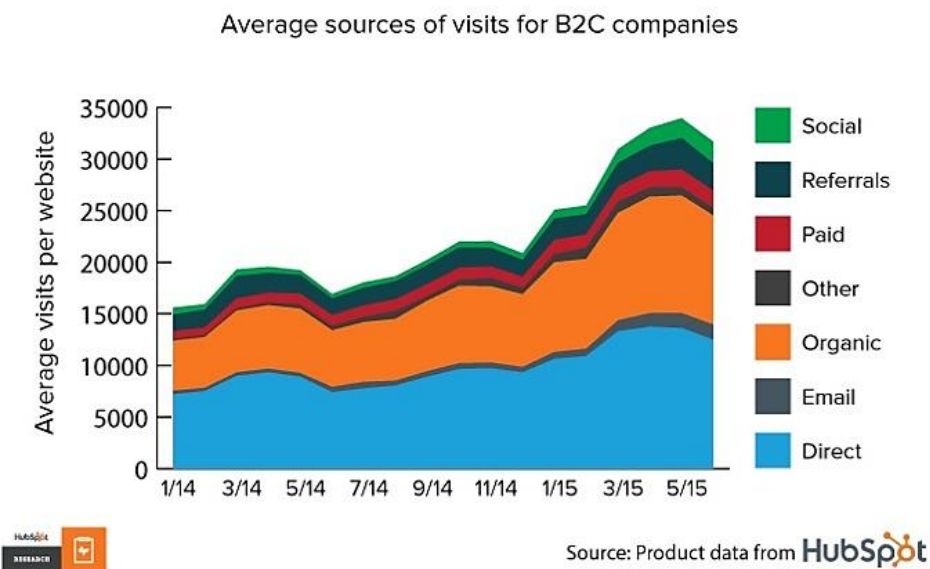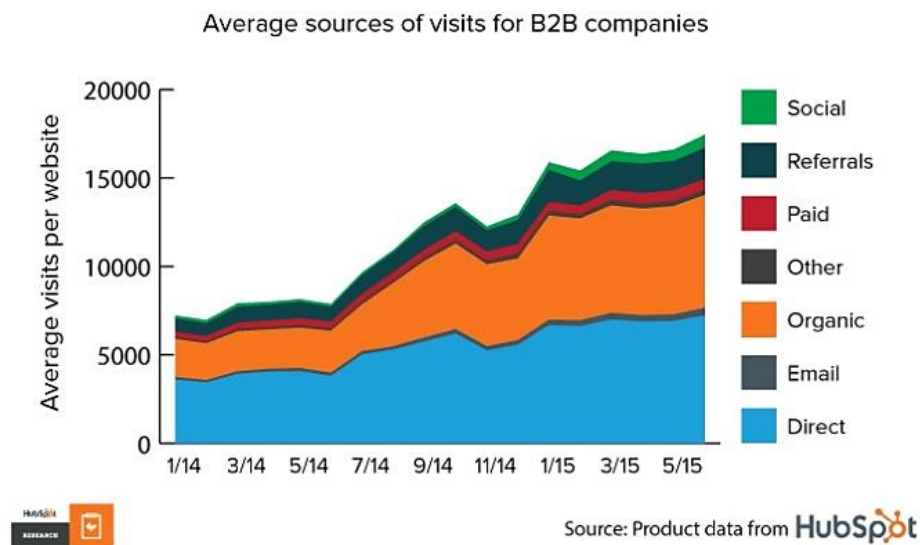
Figure 19.   HubSpot inbound research. Copied from HubSpot Inc. (2016) [31].

The most important thing is to understand the core function of a website. When the goal is set for certain action, the resources can be set to convert website users towards the desired action. Conversion actions may greatly differ from one another, some of the websites existing mainly for informative purposes and others being sales lead generators or direct sales channels. Constant website analytics is the key to understanding the sources of inbound traffic.

6 Conclusion

As the topic of the thesis was a productization framework of a web application, the main purpose was to give design and marketing guidelines for professionals productizing and managing web applications. The topic was dealt with in detail through four steps – digital customer experience, service design, marketing strategy and marketing practices. Digital customer experience and service design features were studied based on web application case examples (e.g. Airbnb, Uber, Wolt and Spotify). Marketing practices were studied using industry related marketing and analytics tools.

After going through the case examples several recurring features of successful web applications can be identified. In short, they all have great functionality and design, they are all very intimate and personal, and they all embrace brand awareness. These attributes are created so that social aspects are utilized throughout user experience. As social integration is so vital, it can be said that web applications should be designed and developed from a social perspective by utilizing user feedback and testing already in pilot stages.

More than ever, great service design and application functionality are valued now. With most of the world accessing the Internet on mobile devices, website design has become more uniform. When millions of people are using a certain web application, the user experience must be kept consistent yet tailored throughout different platforms. With such requirements, there is a huge demand for capable designers and web developers, not to mention professionals who possess an eye for application user experience as well. Behind even the simplest mobile application there is always plenty of coding power crafting the user experience. When users are counted in millions there is a lot to develop to keep user experience swift and smooth for everyone.

As far as marketing of an application is concerned, social media trends must be utilized through the application lifecycle. In marketing practices, social media and influencer based marketing has risen to support inbound marketing and search engine optimization. In many ways, utilizing social media allows more cost-effective results than what can be achieved by inbound marketing. Capable professionals can achieve impressive results with a marketing push targeted by accurate demographics and user interests. As seen in cases presented in the thesis, social approval has become the number one factor in

online decision making. Whether being in business-to-business or consumer space, people actively look for social references from social media or search engines before making the buying decision.

In conclusion, it can be said that service design and user experience are vital success factors of any web application. From startup entrepreneurs to enterprise level marketing executives, the customer experience should be kept consistent across all the channels to achieve great customer satisfaction. In a socially networked economy, the greatest brand appeal is gone with carelessness as quickly as it is built elsewhere with newly engaged viral following.

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