

REAL TIME WEB AND CUSTOMER SATISFACTION

Carina Arisa Xicola

Prof. Dr. Jordi Oller

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Resum

En la societat actual, tot canvia molt ràpid i la tecnologia s'està convertint en una part fonamental de les nostres vides. La gent és cada vegada menys pacient, més exigent i menys conformista, i les empreses tenen cada vegada més dificultats per vendre els seus productes. Si es realitza correctament, les empreses poden utilitzar les noves tecnologies per augmentar la satisfacció del client, per diferenciar-se dels competidors i fins i tot, augmentar les seves vendes i ingressos.

Paraules clau: Real Time Web, Satisfacció del client, Real Time Marketing, atenció al client, proactivitat, personalització

Resumen

En la sociedad actual, todo cambia muy rápido y la tecnología cada vez se convierte en una parte más fundamental de nuestras vidas. La gente se vuelve cada vez menos paciente, más exigente y menos conformista, y las empresas cada vez tienen más dificultades para vender sus productos. Si se realiza correctamente, las empresas pueden utilizar las nuevas tecnologías para aumentar la satisfacción del cliente, para diferenciarse de sus competidores e incluso, aumentar sus ventas e ingresos.

Palabras clave: Real Time Web, Satisfacción del cliente, Real Time Marketing, Atención al cliente, pro actividad, personalización

Abstract

In the current society, everything changes really fast and technology is becoming a fundamental part of our lives. People is becoming less patient, more demanding and nonconformist, and companies have increasing troubles to sell their products. If done properly, companies can use the new technologies to increase customer satisfaction, to differentiate from their competitors and even increase sales and revenues.

Keywords: Real Time Web, Customer Satisfaction, Real Time Marketing, Customer Service, Responsiveness, Customization

1. INTRODUCTION

Nowadays it is well known that customers must be at the center of every company, because no company can survive without customers. But it hasn't been always like this. For example, after the Second World War companies entered into a wide expansion were they had no need to think about customer satisfaction. They were only focused on production and market share because as customer demand was bigger than the offer available, customers were guaranteed to all companies.

This trend has changed with time until the point that, already for some years, the range of products and services available to the customers is really vast. The competition among companies is one of the most aggressive of all the times and companies have to think of new strategies to increase revenues. And one of the most convenient efficient is to invest on customer satisfaction. Different studies have shown that a satisfied customer will be willing to buy again and recommend the experience, while an unsatisfied customer can cause important damage to a company (Blacshaw, 2008).

The profile of customers has also changed in time and nowadays customers are more difficult to satisfy. Thanks to technology, customers are more informed and less loyal to the companies. They are always looking for the best deal and consequently, they have higher expectations on everything.

The crisis and fast-changing environment makes it even more difficult for companies to satisfy their customers. These days everything changes really fast: business, customers' psychology, employees, competition... and companies need to change at the same speed or even faster in order to survive. A good description of this new era in customer satisfaction is the following one:

"If you are not able to immediately provide an answer to your customers' request, they will not hesitate to find it and make decisions through search engines, carrier websites and social media" - Dave Acker (Vertafore)

And in fact, a recent study done by Lithium Technologies has shown that customers expect brands to respond their digital queries and complains in near-real time (Lee, 2013). But they are not the only ones talking about real time. According to Infogroup Targeting Solutions and Yesmail Interactive an 83% of marketers said that they were planning to use, or to increase their use of, real-time data in marketing campaigns.

Real Time Web technology is a recent concept that allows users to have access and always available all the necessary information as soon as it is published by its author. The creation of content is becoming easier and as feedback can be received at a higher speed, it motivates the creation of even more content until a never-ending circle is created. As Susan Weinschenk, a behavioral psychologist, states in her blog, these technologies can be really addictive and are the fuel of a "dopamine-induced loop" of seeking behavior and instantaneous reward. Every unread email, every unseen tweet, each new alert and notification is like Pavlov ringing a bell (Weinschenk, 2009).

Real Time Web technologies have been the future and they still have a lot of place to grow and be developed, and therefore this research will focus on how the application of these technologies can help to improve customer satisfaction.

Due to the double profile of Business and Tourism studies from the author, this research will cover both kinds of companies: product and services.

This research has been motivated by the combination of two elements. On one side there are the concerns of the author about the increasing discomfort of customers and the willingness to find a solution. And on the other side there is the interest in technology and the understanding of its importance in current society. Subsequently, following questions have come up:

- Q1: *Can Real Time Web improve customer satisfaction?*
- Q2: *Can Real Time Web improve responsiveness of a company?*
- Q3: *Can companies, both product and service, benefit from technology and how?*
- Q4: *Can Real Time Web simplify the management of customers' feedback?*

This research aims to give clear insights on Real Time Web Technologies in order to improve customer satisfaction. Its purpose is to provide the main guidelines in the use of these recent and high evolving technologies, the Real Time Web.

2. HYPOTHESES

As stated before, customers are becoming more difficult to satisfy due to a combination of factors such as the crisis, higher expectations, large number of competitors, amount of information available, fast trend changes... and companies have to be able to adapt to all these challenges.

This research wants to prove that companies can take advantage of the increase in the use of technology among the 21st century society and expects that:

- H1 If Real Time Web is introduced to a company, the level of customer satisfaction will increase*

At this point two considerations have to be done:

On one hand, the concept **companies** can be very heterogeneous and therefore the need to classify emerges. But as this research aims to provide the main guidelines in the use of Real Time Web technologies to improve customer satisfaction, only a generic classification will be done. This classification will be depending on the offering of the companies and therefore there will be two groups: those providing services and those offering products.

On the other hand, **Customer Satisfaction** is a latent variable and cannot be measured directly. Therefore, Servqual Approach will have to be used to indirectly measure it. This approach defines 5 dimensions which will then be used as indicators of customer satisfaction:

- **Tangibles:** physical facilities and equipment available, appearance of the stuff...
- **Reliability:** performing the promised service dependably and accurately
- **Responsiveness:** helping customers and providing a prompt service
- **Assurance:** inspiring trust and confidence
- **Empathy:** providing a caring and individual service to customers

Once all these specifications are done, the following sub hypotheses come up:

H2 If Real Time Web is introduced in a company, its responsiveness will increase.

As real time web allows users to have content as soon as it is created by its author, the research expects that the introduction of Real Time Technologies might help companies to answer faster to the feedback of their customers.

H3 If Real Time Web is introduced to a company, its empathy and customization will increase

As the information is available at a higher speed and less energy and resources have to be used to get it, this information can be treated faster and better. Therefore the research also expects that Real Time Web can simplify the process of customization.

Because products and services have different features the research expects that:

H4 In order to increase customer satisfaction, Real Time Web will have to use different approaches for companies offering services and for companies offering products

Nevertheless, for the products group, there will be a subdivision based on the type of contact the companies have with their customers. The research will differentiate two types of contact: direct and indirect. In the first subdivision there will be for example the companies with face to face sales. Instead, the second subdivision will include those companies that do not get to see the customer in person, the contact they have is through social networks or directly selling online. Once this subdivision is done, the research expects that:

H5 Real Time Web will have to use different approaches to increase customer satisfaction of product companies in direct contact with the customer and product companies in indirect contact with the customer

3. METHODOLOGY AND SOURCES USED IN DATA COLLECTION

In order to test and prove the hypothesis expected from this research, both qualitative and quantitative methods will be used. The research will start with the qualitative method of interviews in order to collect as much information as possible. These interviews will be done to companies using Real Time Web Technologies. This will allow extrapolating the ideas that have work for them as well as to gather information regarding companies' responsiveness, customization and empathy from the companies' point of view (H2, H3). See appendix for the interviews' template.

Afterwards a Benchmarking analysis will be conducted among companies using Real Time Web Technologies. From this comparison, the distinctive features will be also extrapolated. Once the main ideas and features are determined, they will be put together in order to form the first guidelines in the use of Real Time Web Technologies.

These first guidelines will then be used to design an opinion survey that will be then conducted among potential customers. The survey will investigate customers' thoughts and aims to understand whether the introduction of special features and ideas pointed out in the previous analysis would increase their satisfaction.

The survey is organized in 4 parts. It starts with a generic and demographic question: age and nationality, to have some information about the responders. After that they are requested to

rank different options to contact a company for a request or complain. Between the options they can find the two traditional channels of going to the store and calling, the two modern channels of Email and contact form from the website, two modern channels using real time web technologies: Facebook and Twitter, and finally an option others in case they would like to choose a channel not mentioned.

Afterwards, three opinion questions about responsiveness and customization will bring insights on H2 and H3 from consumers' point of view. The first one is an open question about responsiveness, to understand which perception does people have. The second one links active companies on the Internet and customers' likelihood of purchase. And the third question aims to understand until which extent customers want customized products or services by asking whether privacy.

Finally, the last three questions of the survey make the respondent imagine three different scenarios. The first one is the online purchase of a shirt, i.e. product company in indirect contact with the customer. The second scenario imagines the purchase of a shirt, but this time from the store, i.e. product company in direct contact with the customer. And finally the third scenario supposes the purchase of a restaurant meal, i.e. a service company. In each scenario, the different features and ideas extrapolated from the previous benchmark analysis are presented to the responder, who is asked to qualify them. The responder must then choose between three options: "I don't like it", "Indifferent" and "I like it". When choosing the option "I like it" the research will assume that the introduction of that feature or idea would increase their satisfaction

After a deep analysis of all the results collected, the research will be able to define the approaches to be taken to increase customer satisfaction in both service and product businesses and for all kinds of contact between company and customers (H4, H5).

The necessary data will be collected through online and on-street surveys. The respondents will be both chosen by simple random sampling, meaning that each individual from the population can be chosen with the same probability. Online surveys will be conducted because they are a useful and time saving tool since they allow having the data directly in the computer.

4. THEORETICAL FRAMEWORK

Real Time Web is a recent concept and therefore both theory and empirical investigations are mostly in the exploratory stage. Nevertheless, there are some interesting books and papers about it and several thinkers that will give an approach to this research.

In 2004 Inderscience Enterprise Ltd. published the article "*Boost customer loyalty with online support: the case of mobile telecom providers*" written by two professors and a doctoral candidate from Maastrich University (Allard van Riel, Jos Lemmink and Sandra Streukens), and another professor from the Swedish School of Economics and Business Administration. The objective of the research done was to determine the relative effects of satisfaction with online supporting services on the one hand, and with offline core services on the other, on loyalty to the service provider. They found out that online transactions were widely perceived as risky but that the lack of online support implicated lack of customization. They also proved that responsiveness had a significant direct effect on satisfaction, however, most currently offered services could not be described as truly interactive. Customers were searching and introducing information but few of them were really entering into an active dialogue with the site. And here is where this research will come into play: it will study how real time web technologies can improve the responsiveness of the site in order to improve customer satisfaction. The paper also points out that it becomes critical when customers have immediate and unique problems that need immediate answers from an expert and not from a FAQ database. And this point makes even more obvious that Real Time Web may bring a huge improvement in satisfaction. Finally, they also emphasize and encourage companies to make online support an

attractive alternative because it is a less costly option than other person-to-person contact services and can have higher impact in satisfaction.

In 2008 the European Public Administration Network (EPAN from now on) published the report “*Customer Satisfaction Management*” to provide an overview and integrate existing methods and techniques around customer insight, including examining the importance of customer needs, expectations and satisfaction. As it collects a lot of information on the topic we are going to do the research, it will give us some understanding of the insights of customer satisfaction. The paper also highlights that even though there is an increasing trend to use ICT to improve service delivery and to promote participation, there is still a limited use for managing the service users’ feedback. The study concludes that the real challenge is not the capability to use measurement and assessment tools, but to be able to turn the information collected through these methods into action. This research will try to give more insight on how to use technology to benefit from customer’s feedback.

For a better understanding of the more technical details behind the Real-Time Webs, such as the ones stated at the beginning of this document, following books will be used. First of all, “*Building the real-time user experience*”, written by Ted Roden and published in 2010 by O’Reilly Media Inc. **Ted Roden** is a thinker on Real-Time Web who was a member of the Research & Development group at New York Times and later he founded the company Fancy Hands.

Second of all, “*CRM Fundamentals*” written by Scott Kostojohn, Mathew Johnson, and Brian Paulen, and published in 2011 by Apress. And finally, “*Real-Time Webb Apps*”, which is written by Jason Lengstorf and **Phil Leggetter** and was published in 2013 by Apress. In addition, information will also be extracted from Phil Leggetter’s webpage (<http://www.leggetter.co.uk/>), as he is a reference person in the topic of Real Time web and defines himself as a passionate of Customer Service and Real Time Web Technologies.

5. REAL TIME WEB. DEFINITION AND HISTORY

6.1 WHAT IS REAL TIME WEB?

It is well known that definitions are challenging and not easy to be approved by a wide majority. And it becomes even more challenging when the topic to be defined is as new as Real Time Web Technologies. Even though the concept of Real Time Web has been around since 1996, a globally and accepted definition didn’t appear until last year 2013.

Therefore this research will use this globally accepted definition, which is the following:

“The **Real Time Web** is a set of technologies and practices that enable users to receive information as soon as it is published by its authors, rather than requiring that they or their software check a source periodically for updates” - Wikipedia

For a better and deeper understanding of what real time is, there are three fundamentals in which real time web is based on:

- Instant availability and discoverability of information, meaning that all content published has to immediately appear in all the searches done about that. Until the apparition of Real Time Web, you had to wait some days until the new content was discoverable.
- Pub Sub (short of Publisher-Subscriber pattern). This feature allows keeping track of everyone who shows interest in a topic so that if there is new information available, it can be immediately delivered to them.

- Instant delivery of data. Every time that there is new information about a topic, this is immediately delivered to everyone who showed interest in that topic (known as subscribers).

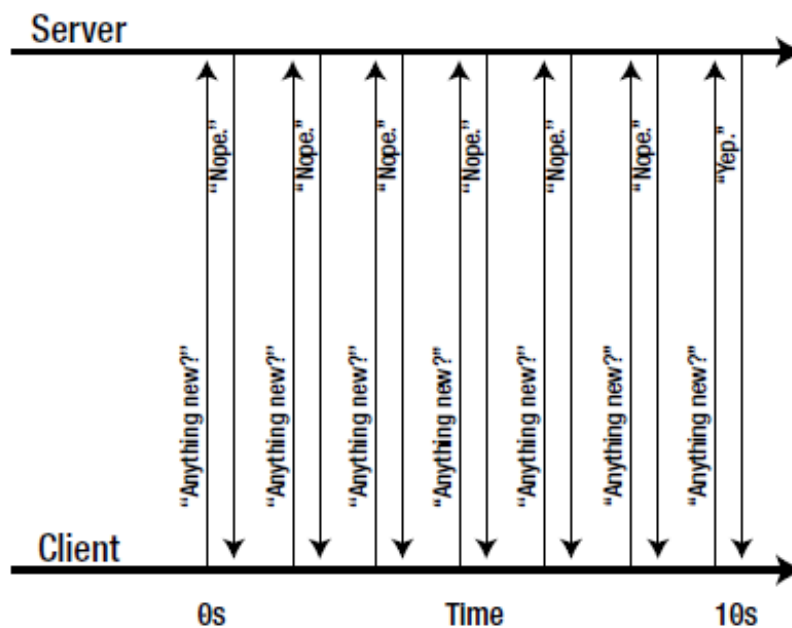
6.2 HISTORY OF REAL TIME WEB

The first request-response protocol was documented in 1991 and it was the Hypertext **Transfer Protocol**, more known as HTTP. With this protocol a client requests for data and a server provides it. After that, the connection between client and server is closed.

Few years later, in 1996, **Java Applet** was introduced to create a persistent connection between client and server, i.e. the connection between client and server was not being closed after the delivery of data. Instead, the connection remained open so that if there was new data available it could be immediately sent to the other. This small application opened the doors to the *asynchronic* world: no more requests nor reloads of the whole page. But it never became popular for three reasons: (1) a lawsuit, (2) the need to implement an unconventional feature such as Sun JVM LiveConnect and the (3) requirement of downloading and configuring plug-ins.

It was not until around the year 2000 when developers managed to hack the web browsers with persistent HTTP solutions. First it appeared the **Polling**, which automated the request process. Instead of the client asking for data, an engine was automatically sending HTTP requests to the server each x seconds to check for updates (see figure 1).

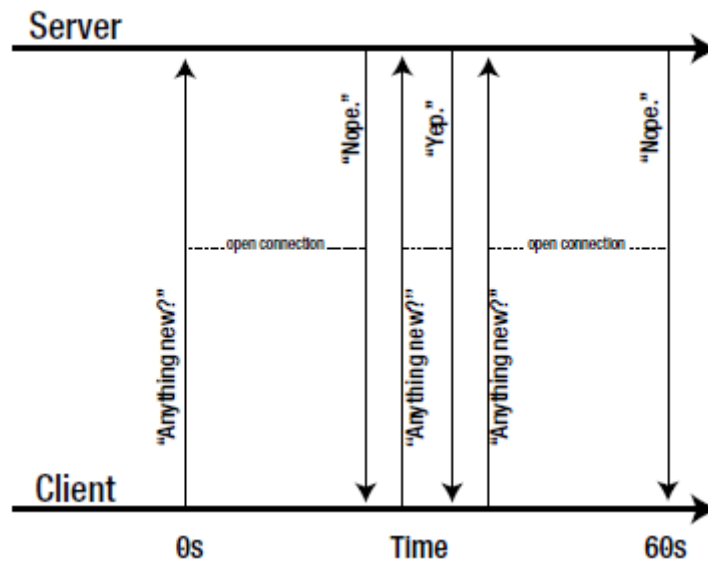
Figure 1: Polling sends HTTP requests frequently to check for new information



Source: Real time Web Apps

Even though Polling allowed receiving information as soon as it was available, it also created a lot of useless and bothering traffic of HTTP requests that slowed down the web. Soon after that it appeared **HTTP Long-Polling**, which partially decreased this useless traffic. As usual, the client requests for information to the server, but if the server doesn't have anything to provide it keeps the request open for a certain period of time. Once the server has information available or the time ends, it replies to the client and it closes the request (see figure 2).

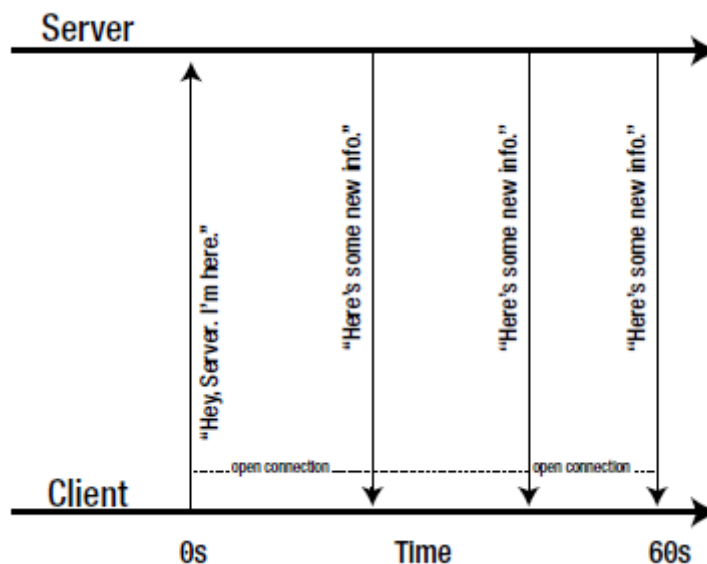
Figure 2: HTTP Long-Polling keeps a request open for a period of time to check for updates



Source: Real time Web Apps

And finally the open connections appeared with the **HTTP Streaming** (also known as server push). As always, the server provides data to the client but in this case, it doesn't close the request. Instead, the request remains always open to allow that if new data is available to the server, it can be immediately sent to the client without the need of a new request.

Figure 3: HTTP Streaming sending updates of a single request



Source: own elaboration

During all this time, these real time web technologies were basically used by finance related companies. In this sector, a millisecond of difference in the reception of data can really make a difference between a lot of money made or lost.

In 2007 a group of employees from Google Inc (Bret Taylor, Jim Norris, Paul Buchheit and Sanjeev Singh) launched **FriendFeed**, a real time feed aggregator that consolidated the

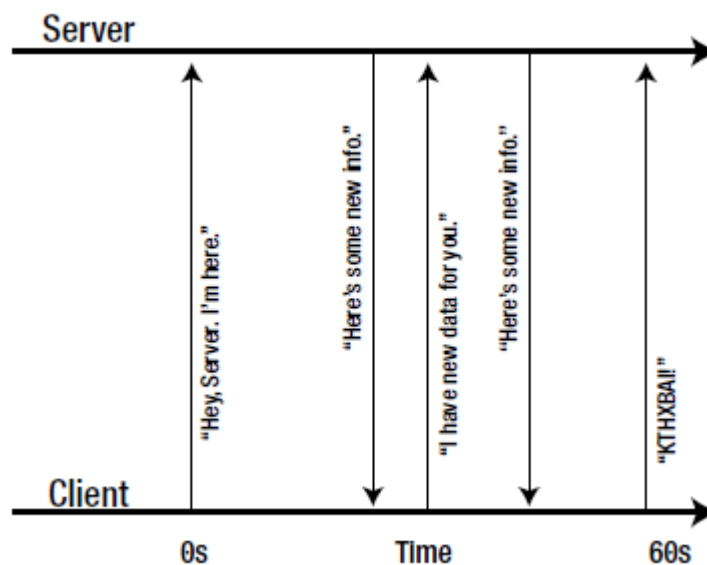
updates from social media, social networking and all other kinds of RSS or Atom feed. The main advantage of this technology was that as soon as new data was available, it was immediately discoverable through search. Until that moment, people had to wait some days until the content published in the web was discoverable. In 2009 Facebook bought FriendFeed and real time web started to become mainstream but focused on the search and the discoverability of data. Social networks played a really important role in the instant delivery of data. They allowed to easily knowing who was interested in which data so that as soon as new data was available it could be delivered to the people interested.

For some years, many developers were working on these technologies to improve them and to achieve the real time push without having to hack the browsers. None of the above mentioned technologies was standardized by the Internet Engineering Task Force (IETF, Organization in charge of creating standard with relation to Internet to improve Internet usability).

And finally in 2011 the IETF standardized two solutions for real time web:

- **Server-Sent Events** and **Eventsource API**: a formalization of the existing HTTP Streaming.
- **Websocket**: this protocol and API allowed a 2-way communication between a client and a server over a single connection (see figure 4)

Figure 4: Websockets bidirectional communication



Source: Real time Web Apps

Therefore, up to now Websockets seem to be the best and most accepted option for real time web because they allow a bidirectional communication that translates into truly interactive applications.

6. CUSTOMER SATISFACTION

Until the 1990s, no one put any effort on either customer satisfaction or customer services. Around the Second World War the consumption was quite restricted and once it ended, economies started a wide expansion. At that time, gain new customers was fairly easy and therefore no one stopped to think about how to improve their satisfaction. The focus was only in market share.

During the 1980s, companies started to focus on improving operational efficiencies and new managerial theories such as Just-in-time¹ and Total Quality Management² appeared. By then, gaining new customers was a bit more difficult and companies started investing money on marketing. And finally some leading managers realized that treating customer service as a strategic tool could provide competitive advantage. And so the era of the post-sales and after-sales started. Together with this appeared Market Research, to analyze the reactions of the customers to different “stimulus” from the company (e.g. how company solves the errors, how quickly they correct...).

Then the 1990s arrived together with a recession that obliged companies to reduce their size. Many people lost the job and with it, the idea of a job-for-life disappeared. As a result, customers stopped believing in loyalty and concepts such as balanced scorecard³ and customer relationship management were introduced. Rapidly the research in customer satisfaction increased a lot because gaining new customers was more difficult than ever.

Nowadays, due to the environment of crisis, the new profile of customers and the big competition among companies, companies need to look for new ways to gain competitive advantage.

7. FIELD WORK

8.1 INTERVIEWS TO COMPANIES USING REAL TIME WEB

From all the Interviews requested, only KLM, Virgin America and Phil Leggetter replied to the request. KLM were the first one to reply, via internal message from Twitter, which replied within half an hour. Even though it was quite fast, it was to say that they could not reply to the questions for this research because as it would take too much time, the response rate would decrease.

After 2 days Virgin America replied with a thanking email and responding all the questions. The company said that the customers contact them very frequently via Facebook, Twitter, the Contact form from the website and other channels, and regularly by phone or email. When asked about responsiveness, the company considers itself low in answering, mainly because of man power and volume of requests. They pointed out that the volume depends on the season of the year. With regard to technology, they state that technology provides a way for instantaneous response and allows them to gather information about their guests quickly. For them, customization is important and they always try to provide a personal response to their customers. In short, they really do think that Technology and Customer Satisfaction is a good mix.

After 3 days, Phil Leggetter also replied to the request. In his opinion, “Real time web technologies provide the opportunity for product and service providers to build and use solutions that enable them to react and engage with their customers”. In addition, he gave Twitter and Olark as example of this use. However, he also points out that the solutions achieved via Real Time Web don't remove the fundamental requirements when providing great customer service and delivering a satisfactory experience. For instance, he says that when products or services say they offer customer support via Twitter, they should not try to take the conversation off of Twitter as quickly as possible to more traditional communication mediums i.e. email.

8.2 BENCHMARKING ANALYSIS

In this section of the research, a benchmark analysis will be conducted among companies of different industries and sectors using Real Time Web Technologies. This analysis will only focus on the distinctive features and ideas that have worked for these companies with regard to Real Time Web Technologies.

8.2.1 KLM

KLM, which stands for Koninklijke Luchtvaart Maatschappij (Royal Dutch Airlines), is the flag carrier airline of the Netherlands and it is the oldest operating airline in the world. In 2004 it merged with Air France to create the Air France – KLM group, a global leader in air transport carrying 77.3 million passengers and generating €25.5 billion in revenues in 2013 (Air France – KLM Group, 2014).

When talking about technology and customer satisfaction, KLM is one of the best references of all the sectors. KLM has been declared one of the most socially innovative companies for already some years.

Our Social Journey

Our social journey is the name given to KLM's social media strategy. Until now, they have done several campaigns to reinforce their reputation. Everything started in 2011 with the opening of the route Miami – Amsterdam when a DJ asked the airline to reschedule the opening to one week earlier to be able to go to the Amsterdam Music Festival. The company challenged him by telling that they would reschedule it if he could get enough people to fill a plane. The customer managed to find enough people willing to go to Amsterdam that weekend and KLM opened the route a week earlier. In addition, they receive the World Record Guinness for organizing the party at a highest height.

Since then, KLM has based its campaigns in trying to surprise and engage with its customers. The company is really active in the social networks and it even shows to its followers the average responding time and how often it is updated. Usually this response time goes from 5 minutes to 45 minutes, depending on the moment of the day and the day of the week.

Meet & Seat

This program allows customers to log in with Facebook or LinkedIn and see who else will be flying on the plane. Passengers can then see the profiles of the other passengers and even where they are sitting so that they can decide to sit near people with same interests as them.

Etag & Etrack

This system allows passengers to keep track of their luggage and know, at every moment, where it is. It consists of three parts: an electronic label called Etag, a small device called Etrack and a mobile app. The Etrack must be placed inside the luggage and the passengers must log in with their account in the Etag. Automatically the flight details are then shown in the screen of the Etag. In this way, when they arrive to the airport they simply need to drop the luggage without having to stop at the desk. From the mobile app, the passengers can see at every moment where their luggage is.

8.2.2 Virgin America

Virgin America is a California-based airline whose mission is to make flying good again by means of new planes, attractive fares, excellent service, lots of fun and innovative amenities reinventing domestic air travel. In 2013 the airline carried 1.577 thousand passengers and generated \$14.2 million in Net Income, being the first full year of profitability after some years of losses (Virgin America, 2014).

Virgin America started to be operative in 2007, in 2008 they opened the first social accounts and in 2009 they created a social media team. Since then, the company has been developing different social media campaigns and has been awarded for them. For instance, the Airline Passenger Experience Association (APEX) has named Virgin America the Best Overall Passenger Experience for 4 years in a row (from 2010 to 2013). To see all the rewards please refer to the Appendix.

Experience Virgin America

In order to be in line with their mission, Virgin America has a special focus of attention into the experience of their customers, for which they have an individual and interactive website totally dedicated to that. There, they show and explain everything they have to offer to their customers in order to provide them with a great flying experience.

Virgin America was the first airline to offer in-flight wifi to its passengers, and it is taking a lot of advantage for that. At the back of each airplane seat, customers can find a screen that will be the base of their entertainment. From there customers can order food and drinks, watch live or On Demand TV and movies, play songs and videos etc. And thanks to Real Time Web Technologies and the partnership with Gogo Inflight Internet and Here on Biz, Virgin America is also offering a Seat-to-Seat Chat and an in-flight social network.

In addition, Virgin America is also offering 12 different moodlighting for the different moments of the day, and therefore the ambience of the cabine is always the right one.

Social Media Campaigns

Virgin America realized that 70% of their bookings from 2010 came from the web channels and therefore they decided to focus their advertising campaigns to those channels (website, Facebook, Twitter, Foursquare, Loopt, Groupon and Klout). In addition, given that profile of highly technology consumers customers, they become the first airline providing Wifi on every flight.

In 2010 Virgin America partnered with Klout to give free flight to Twitter **influencers**. These persons have a the power to impact a considerable amount of people. If done correctly, by giving them a free flight the company can get an important amount of free advertising.

Also that year and with the opening of two new destinations in Mexico, Virgin America decided to launch the promotion "**2-for-1 Tacos and Tickets**". This campaign consisted in sending a digital promotional code for 2-for-1 flight tickets and 2-for-\$1 tacos to anyone checking in at a specific Taco restaurant. Within four hours that location received 1.300 checkins and Virgin America lived the fifth highest sales day of that year (The Real Time Report, 2011).

In 2011 San Francisco's airport opened a new Terminal and to celebrate it the airline decided to hide little presents all around the terminal and give clues to find it to the persons that checked in to the new terminal via Facebook or Foursquare. In this way customers got to discover the terminal in a different way and they event got presents.

Also that year, Virgin America created a photo contest called “**Awkward Family Photos**” to celebrate the new flights to Orlando, home of Disney and therefore an important family destination. The families that received more votes got free tickets for the first Orlando flight, which was shared with Richard Branson, founder and chairman of Virgin Group.

To improve customer loyalty, Virgin America also allows its customers to earn points by checking in via Foursquare, Facebook Places, Gowalla or Twitter.

All these social campaigns and actions resulted into an increasing growth and engagement during the last years.

8.2.3 Amazon

Amazon is the world’s largest online retailer and the 7th most Innovative Company of the World (Forbes, 2013). Apart from selling, it also produces consumer electronics, with the Amazon Kindle e-book reader and the Kindle Fire tablet computer as the most important ones, and provides cloud computing services. As stated on its website, Amazon’s Corporate Mission is to be the Earth’s most customer-centric company for four primary customer sets: consumers, sellers, enterprises, and content creators.

And actually Amazon it is also well-known for his customer focus strategy and its good customer service reputation, and a good example of this is that in 2013 it was the best considered Brand of 2013 in the United States (Business Insider, 2013).

Amazon has developed plenty of customer-facing projects and it is constantly seeking to introduce new technologies and new devices to simplify the life of its customers. Therefore it is a good reference for this research. The main features that allowed Amazon to differentiate from their competitors thanks to Real Time Web Technologies are the following ones.

Amazon Recommendations

In order to execute a purchase, all the customers must identify themselves with an Amazon Account. Thanks to this account, Amazon is able to have profiles of all his customers and establish a big data base of activity and purchase information. Afterwards, this information can be used to identify common interests among customers and provide recommendations of items they may like.

These recommendations are based on different factors such as which items a customer has rated and how, the items that the customer has in his Amazon Wish List, the time when the customer purchases, the recommendations the customer has done, items that a customer with similar interests has bought, etc.

With this feature, Amazon can provide a customized product and service to their customers by simply analyzing all the data collected during users’ activity.

1-Click Order

Because sometimes customers might need to complete their order in a fast way, Amazon has enabled the 1-Click Ordering. The payment method and shipping address of the first order the customer does will be set as default. From there on, every time the user wants to proceed with an order, he simply has to click the button “Buy now with 1-Click” and the order is automatically charged and delivered to the default method and address. The customer can change the default information can be changed at any time.

With this feature, Amazon is able to provide a fast and convenient service to its customers.

Mayday Button

On 25th September 2013 amazon released the Kindle Fire HDX, which incorporated a revolutionary new feature of customer support: the **Mayday Button**. When clicking this button, an Amazon Tech Advisor appears on the screen of the tablet to help the customer. This Tech Advisor can talk to the customer and draw on the screen of the tablet, but he cannot see the customer itself.

The Mayday Button is a free service from Amazon and it is always available (24 hours a day, 7 days a week and 365 days a year). With this new feature, Amazon is now giving a non-stop, simple and personalized tech support to their customers.

Amazon Lockers

Amazon it is also offering what they call the **Amazon Lockers** in order to adapt to customer needs. Because people now spends a lot of time outside home, it was becoming more difficult to deliver the packets, and the option to leave the packet in the mailbox or doorstep it is not as secure as people would like. Therefore Amazon decided to install some metal compartments in highly frequented locations, such as supermarkets, grocery shops or drugstores, where they can send the packets and the customers can pick it up at their convenience.

These lockers simplified and made easier the delivery of the packets to the customers. As they are located in places where customers go often, it does not suppose an additional activity or extra cost for them. When the packet is delivered to these lockers, the customer receives a notification and a pick up code. From that moment, the customer can go to the locker, write the code that he has received and take the packet.

Amazon Dash

Recently, the company has also introduced the **Amazon Dash**, a small device that allows consumers to add items to their online shopping list by simply saying the item or scanning its barcode. This device is connected to both the Wi-Fi of the house and the Amazon account from the customer and allows them to update their shopping list from everywhere and at any time. In this way, when they want to actually proceed with the shopping, they can simply open the shopping list they have been updating the previous days and confirm the order.

8.2.3 Starbucks Corporation

Starbucks Corporation is the largest coffehouse chain and the 19th Most Innovative Company of the World (Forbes, 2013). Its mission is to inspire and nurture the human spirit – one person, one cup and one neighborhood at a time. The company is human-focused and it is always trying to engage to its customers (Starbucks, 2014).

Since already some time, Starbucks is developing a new Internet-of-Things Strategy. Back in 2008 Starbucks bought Coffee Equipment Company, a small american company firm that produces The Clover, a special coffee brewing machine. This machine uses an innovative technology that allows to control the brew time, the temperature and all the other factors that influence the final taste of the coffee. With this, Starbucks can provide the perfect coffee for each of its customers. In the near future, this machine will keep track of the coffees and settings that each customer chooses. In this way, customers will simply need to scan the phone into the machine and all the necessary information to prepare the drink is sent automatically.

Another action in the experimental phase is the wireless charging mats that allow customers to charge their smartphones or tablets via wireless. They simply need to have a smartphone or ~~tablet designed to be charged like this, or they can use a special case that enables this~~

characteristic if it does not come with the device, and place the phone on the mats that can be found around the store (Elgan, 2014).

What is already a reality is the fact that customers can pay their drinks directly from their smartphone. The only thing they have to do is to download the Starbucks app from the App Store, unfortunately is not available in the Google Play Store (Utermohlen, 2014).

Starbucks is planning to take several other actions in order to implement its Internet-of-Things Strategy. The company is experimenting the introduction of Internet into the refrigerators and coffee makers such that they can advise the employee when there is something wrong, e.g. when a carton of milk has to be thrown.

Finally, Starbucks also showed interest in experimenting with big-data sensors in their ceramic cups in order to gather information about the speed at which customers drink the coffee, the size of their sips, the amount of coffee left, etc. (Elgan, 2013).

8.2.4 Others

Olark is a company that provides **live chat** and real-time monitoring for any website in order to improve the support towards the customers and help to boost the sales of the website.

Nowait provides a **waiting list** that can be accessed from the phones of the customers, they only have to download the app. Customers can then join the waiting list of the restaurant and in the meantime they can go somewhere else. The restaurant can send notifications to the customers to inform them that the table is ready, to recommend them places to go in the meantime or even to send them offers and discounts.

Instead of normal tables, Inamo and Pizza Hut are using **interactive tables** for some of their restaurants. These tables allow customers to order and pay their meal without the need of a waiter. They can also use the table to see what is going on in the kitchen of the restaurant and to play while they wait.

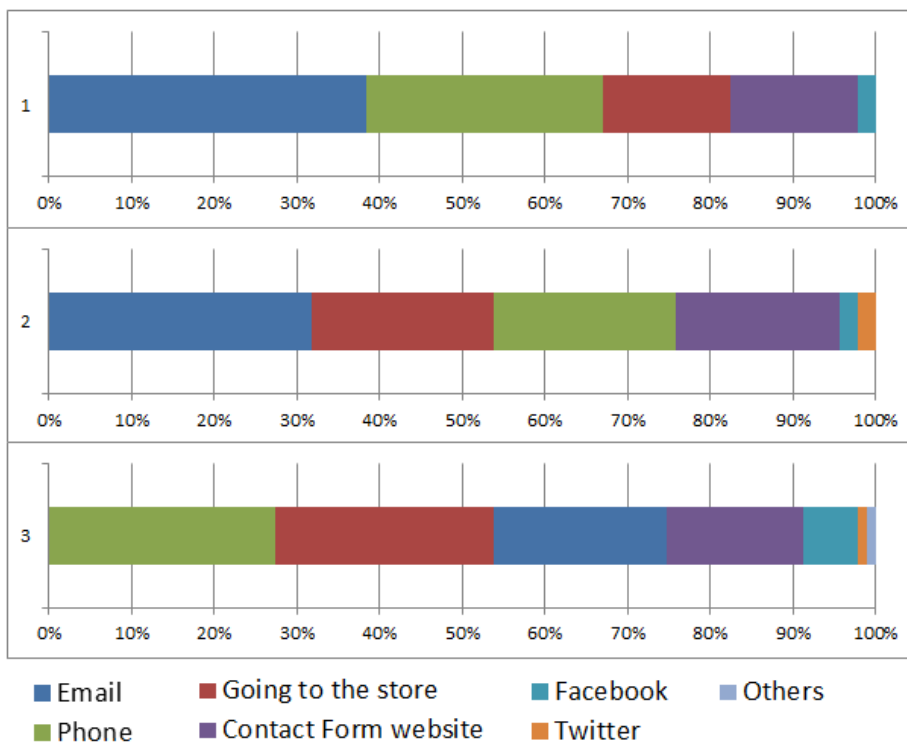
8.3 SURVEY AMONG CUSTOMERS

Just as demographic information, from the 100 respondents that completed the survey, 50% are Spanish, 25% Italian and 25% International, all of them aged between 15 and 51 years old.

The first question asked to the respondents about which channels would they use to contact a company brought to the results presented in graphic 1 and graphic 2. In the first place, the majority of the respondents would use either the Email or the Phone, with 38% and 29% respectively. Other channels that would be used are the contact form from the website and directly going to the store.

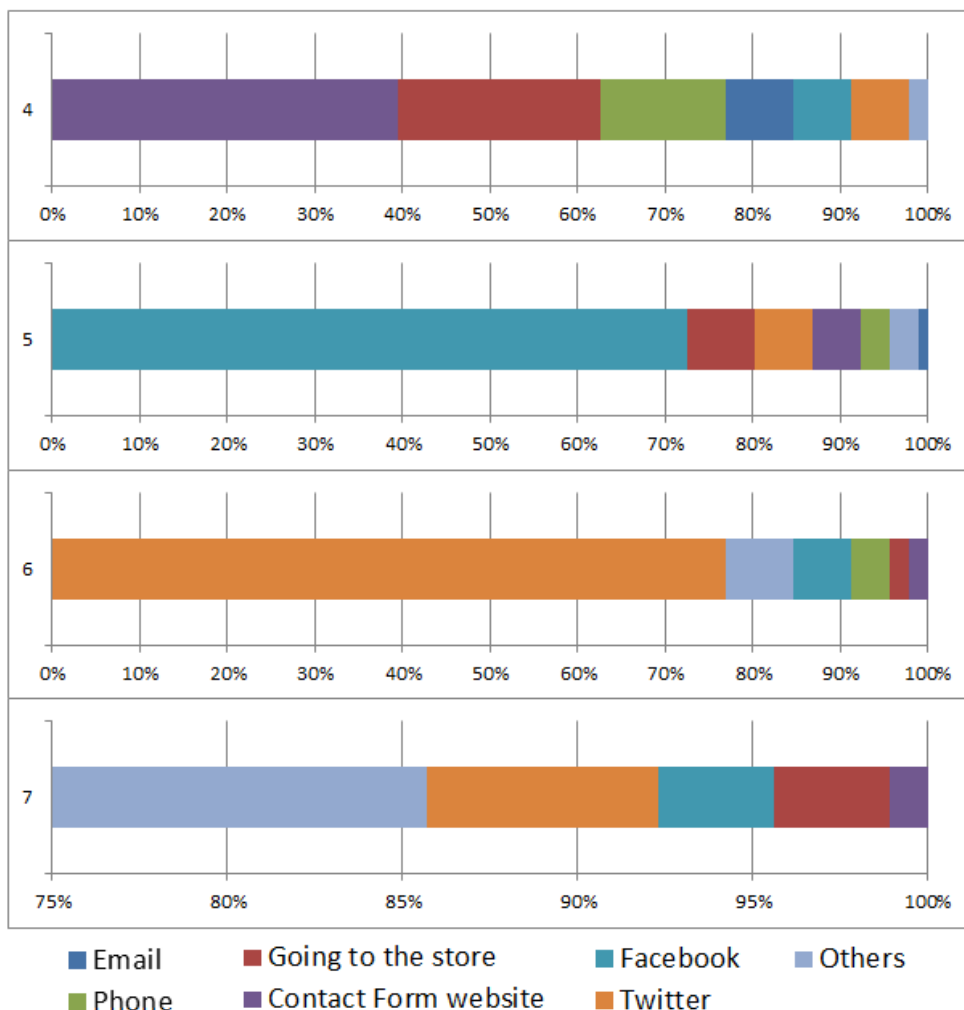
As second and third choices, the majority of respondents kept choosing Email, Phone, Going to the store and the contact form from the website. It is not until the 4th choice that Social Networks start to be chosen. In fact, as graphic 2 shows, the majority of the respondents would choose Facebook as 5th option (73%) and Twitter as 6th option (77%).

Graphic 1. First 3 choices of channels when contacting a company



Source: Own elaboration

Graphic 2. Last choices of channels when contacting a company



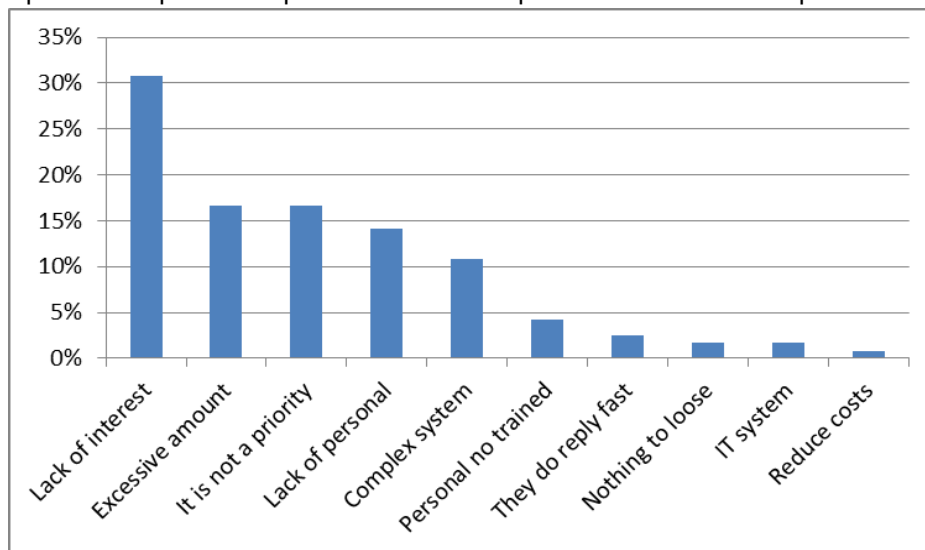
Source: Own elaboration

Internet is a strong and widely chosen option when it refers to traditional online channels but instead, Social Networks are the last options. Therefore it can be stated that respondents still prefer the traditional channels to contact a company, both offline and online, rather than the most modern ones.

When asked about the responsiveness of the companies, most of the respondents coincided with their answers. The most frequent answers have been: lack of interest, excessive amount of requests and complains, busy companies that do not put customer service as a priority, lack of personal and complex organizational systems not able to manage customer service. In addition, few respondents added other reasons such as bad IT systems or companies following a strategy to reduce costs. However, 3% of the respondents stated that companies do reply fast enough to customers' requests and complains.

After all, the general perception about responsiveness is that companies do not care about customer service because they do not have it as a priority and they do not allocate enough resources to its management.

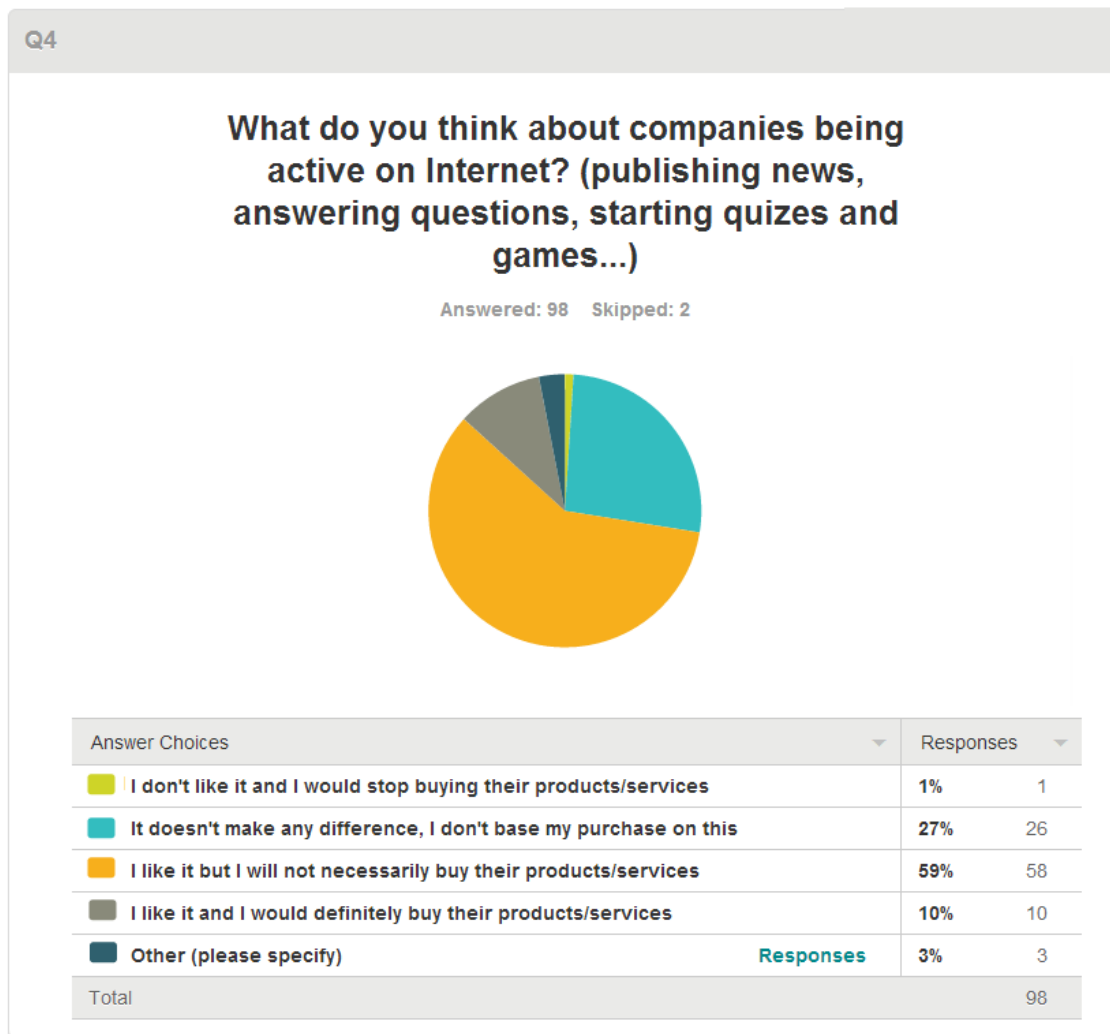
Graphic 3. Responders' opinion about the responsiveness of the companies



Source: Own elaboration

When respondents were asked about companies being active on Internet, 59% of them said that they like companies that are active but that they would not necessarily buy their products or services. Another 27% said that does not base the purchase on whether the company is active on Internet or not but still, it gives them a good impression if they do so. Only a 10% of the respondents would definitely buy the products

Graphic 2: Opinion about active companies on Internet and purchase likelihood



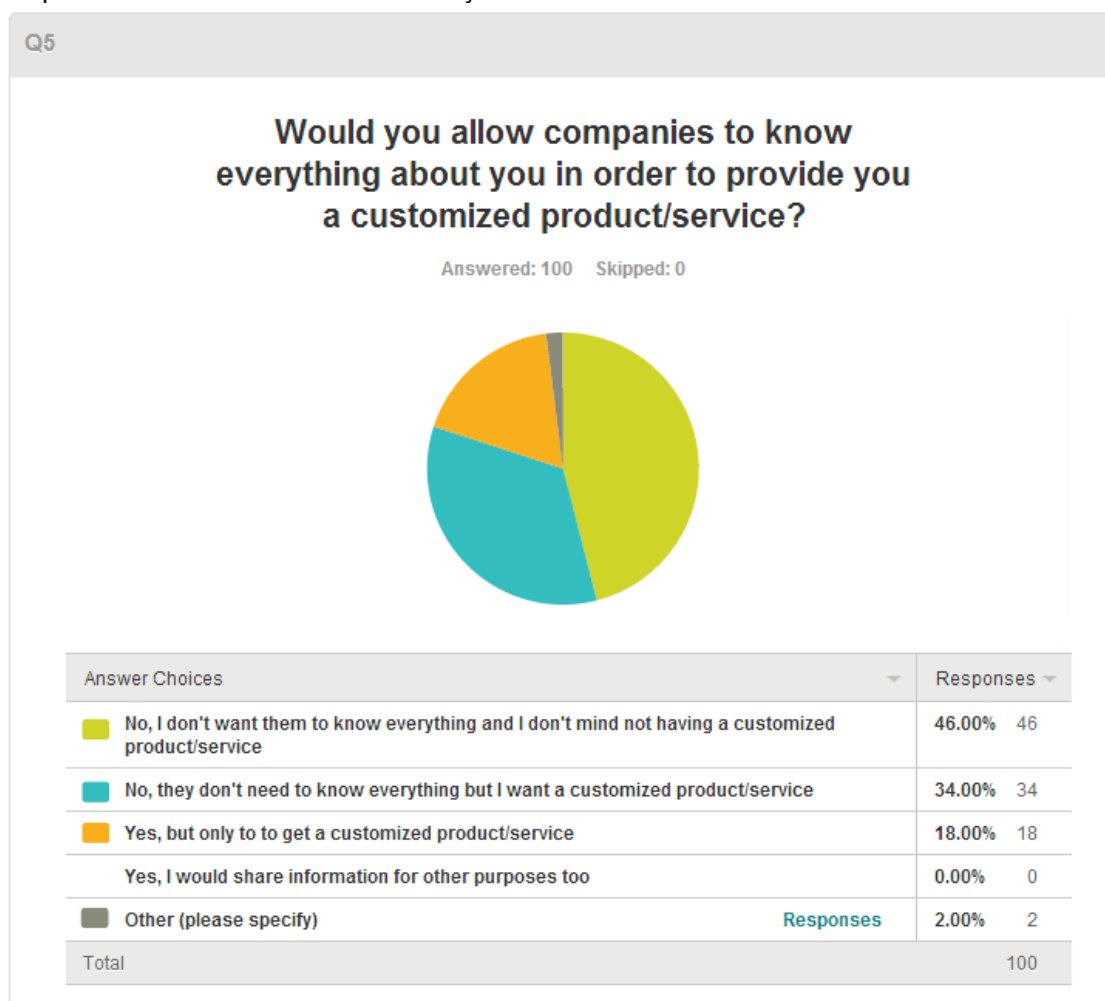
Source: Own elaboration

As shown in graphic 3, when it comes to customization of the product/service and privacy, 80% of the respondents refuses to share its personal information with companies and nearly half of them would renounce to receive a customized product. Instead, a 34% still wants companies to provide them a customized product/service without having to share its personal information.

In contrast, 18% of the respondents are willing to share their personal information only if it is used to receive a better personal product or service, and no one of them is willing to share it for any other reason.

In addition, some respondent stated that companies should only know the minimum indispensable, mainly about their customer preferences, to offer an appropriate service and to avoid repressing behaviors such as it happened in Turkey.

Graphic 3: Customization versus Privacy



Source: Own elaboration

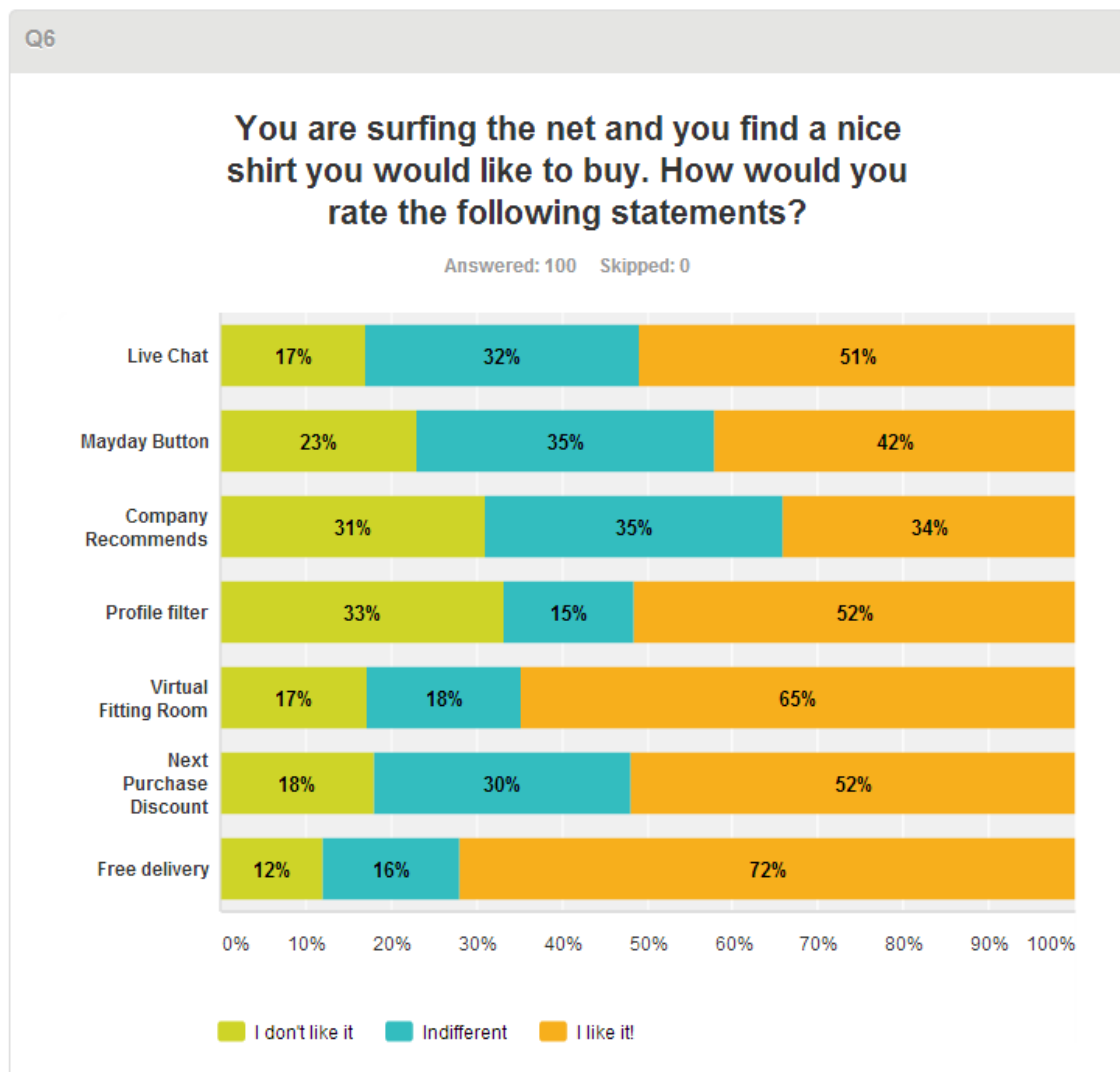
Graphic 4 shows the results of the first scenario presented to the respondents, which is the online purchase of a shirt. It can be seen that the features and actions that would increase their satisfaction the most are: with 72% of likes, receiving a free delivery while they are still evaluating the purchase; with 65% of likes, having a virtual fitting room to see how the shirt they are buying would look like on them, and with 52% of likes both receiving a discount for the next purchase and having a filtered website when logging in with their profile.

From this first scenario can be pointed out that rewards are highly valued by the customers, either if they are immediate rewards (Free delivery) or delayed rewards (Next Purchase Discount).

With regard to customization, respondents seem to prefer to have a profile that filters the right information for them, rather than having the company sending recommendations based on their preferences. This result can be explained with the previous answer, where a majority of the respondents stated that would not like to share personal information with companies.

With regard to customer support, respondents prefer to write to the companies via Live Chat rather than calling them with something like the Mayday Button.

Graphic 4. First scenario: Product company with Indirect contact

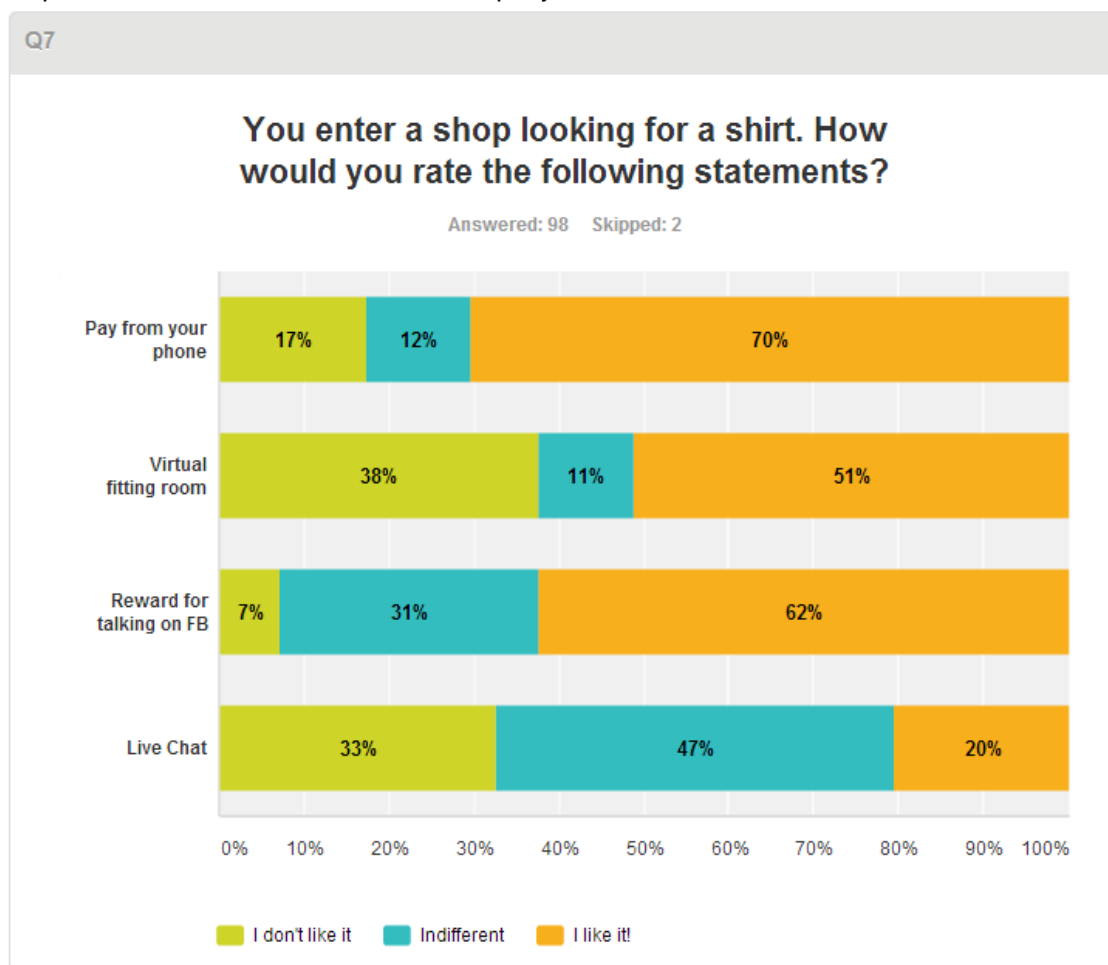


Source: Own elaboration

The Graphic 5 shows the results obtained from the second scenario presented to the respondents, which is the in-shop purchase of a shirt. In this case, what increases their satisfaction the most is to have the option to pay from the phone, which received 70% of likes. The initiative of rewarding customers with a small gift because they mentioned something about the brand on the Internet also has a positive impact on satisfaction; it received 61% of likes.

In this scenario, the virtual fitting room and the Live Chat would not bring such a big improvement in satisfaction as in the previous scenario. Half of the respondents would like to have the virtual fitting room but only 20% would appreciate to have a Live Chat with the employees.

Graphic 5. Second Scenario: Product company with direct contact



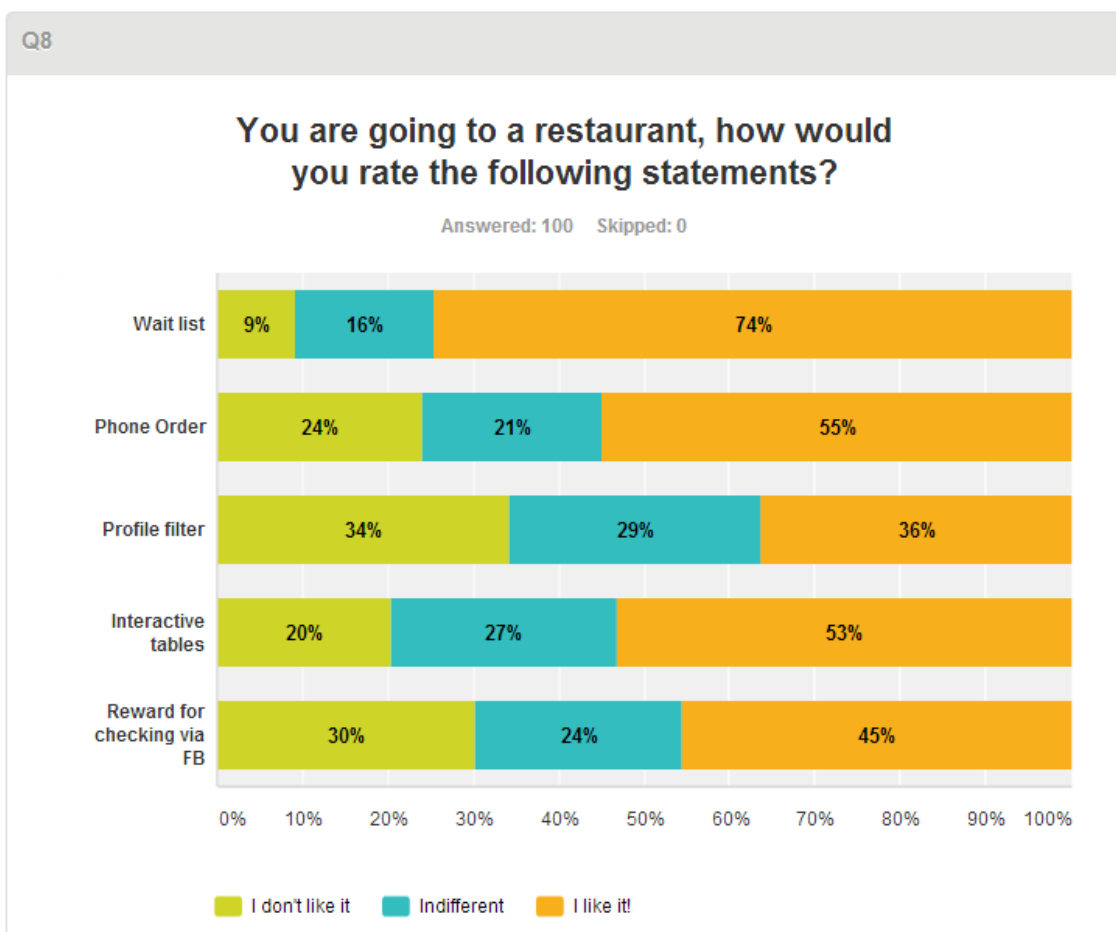
Source: Own elaboration

And finally, the results of the last scenario presented are shown in graphic 6. In this case, the possibility to join an online waiting list, the possibility to order from the phone and the interactive tables is what would increase responders' satisfaction the most, with 74%, 55% and 53% of likes respectively. What this three options have in common is that they focus on the time the customer has to wait to enjoy the service, either by allowing them to do something else, by entertaining them or by reducing this time.

In this scenario, the initiative to reward customers because they said something on the Internet would not have such an impact as in the other scenarios, but still it received a significant 45% of likes.

With regard to customization, only 36% of the respondents would like to have a customized menu, which again, it is in line with the results obtained in the previous questions.

Graphic 6: Third Scenario: Service Company



Source: Own elaboration

8. CONCLUSIONS

The aim of this research was to give clear insights on Real Time Web Technologies in order to improve customer satisfaction. To do so, five hypotheses were proposed and tested. Once the methodology has been conducted and the results have been analyzed, the following conclusions can be drawn.

The introduction of Real Time Web Technologies allows companies to integrate and synchronize all the information they have available. In this way, with only one platform companies can follow up all the different channels of communication and have always an updated profile of its customers. This would allow the company to solve the problems easier and faster than before and, even with the same number of employees, more requests could be handled. Therefore, **the introduction of Real Time Web Technologies does increase the Responsiveness of a company (H2).**

Customers are reluctant to share personal information with companies and they would even be willing to renounce to receive a customized product or service before sharing their information. With Real Time Web, companies can be closer to their customers, know what they do and react accordingly. Real Time Web Technologies provide companies with a lot of different information about the customers, which companies can then use to provide a customized service. Therefore **if Real Time Web is introduced into a company, its customization increases (H3).**

The different scenarios studied in the research proved that **product companies and service companies cannot use the same approaches to increase the satisfaction of their customers (H4)** because customers have different needs. Service companies must focus the use of Real Time Web Technologies to fill in the time their customers spend waiting to enjoy the service, either by entertaining them or by reducing this time to the minimum. Instead, product companies must focus the Use of Real Time Web Technologies to the simplification and acceleration of its selling processes. The different scenarios also proved that **product companies in direct contact with the customer cannot use the same approaches as a product company in indirect contact with its customers (H5).** Those companies in indirect contact with the customers must focus in using Real Time Web to provide a live, realistic and fast service to its customers, eliminating all the barriers of the indirect communication. Instead, companies in direct contact with the customer must focus on accelerating the selling process and rewarding its customers.

And finally, it can be concluded that **if Real Time Web is introduce into a company, the satisfaction of their customers increases (H1).**

9. DIRECTIONS FOR FUTURE RESEARCH

Following the forecasted trends for next years, future research related to customer satisfaction should now start moving and focusing on predictability technology as well as on the Internet-of-Things. Real Time Web has opened the doors to the development of these two new fields, which some big companies are already focusing on.

In addition, this research has focused on customers external to the organization, i.e. those customers buying the products or services of the company. A goal of future research could also be to focus on internal customers, i.e. anyone within an organization. It is really important to take care and train the internal customers because they have a big influence on external customers. Further research could also focus on the different value of the products and services bought to study the different approaches to be taken in order to increase customer satisfaction.

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APPENDIX

For the Appendix please refer to the other pdf file.