A study into growth hacking based on:
Snapchat, Spotify, and 9GAG case studies.

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Contents

1. Introduction 3

1.1 Problem Statement 3

1.2 Scientific and Societal Relevance 4

1.3 Structure of the paper 5

2. Theoretical Framework 6

2.1 Viral Marketing and Contagion 6

2.2 Network Effects and Tipping Points 9

2.3 Diffusion of Innovations 11

2.4 Lean Startup 15

2.5 Growth hacking 16

2.6 Real life applications (best practices) 18

3. Data and Methodology 19

4. Case study: Snapchat 20

5. Case study: Spotify 26

6. Case study: 9GAG 32

7. Conclusion 36

8. Limitations and Recommendations for Future Research 39

Bibliography 41

Appendix 47

Survey Results 49

1. Introduction

In the 21st century, the world experiences constant ongoing innovation, and as a result individuals, as well as organizations, have to find ways to adapt to these changes. This applies to the field of marketing as well. In the last decade, marketing strategies went through a variety of radical innovations, especially due to technological progress. About ten years ago, the main means of marketing were considered to be television, radio, billboards, and some other mainstream channels, but in the past couple of years the situation changed drastically. At the moment, online marketing is considered to be one of the main tools to promote products and services (Kotler & Armstrong, 2010). It is a form of marketing which uses internet as the main source of delivering information about the product to consumers. One of the newest online-based marketing strategies is growth hacking. Growth hacking is focused primarily on the growth of the company by attracting more consumers to use their exclusive product or service through constant use of social metrics, creativity, and customer-oriented strategies (Holiday R. , 2012).

Companies such as Facebook, LinkedIn, Dropbox, Twitter, Instagram and AirBnb all use growth hacking as their main growth strategy, and the product itself, in each of these cases, was an important pillar for the exponential growth (Empson, 2013). The concept of growth hacking will be explained and analyzed more thoroughly in the following sections of the paper.

1.1 Problem Statement

Besides the abovementioned successful examples, there are a lot of companies in the world that are struggling with one basic question - how to help their company grow. It is estimated that about 75% of all startups fail because of various reasons like poor management, business model failure, lack of resources and knowledge, etc. (Blank, 2013; Lussier, 1996). Perhaps if some of these startups would try to learn from other companies' mistakes and follow the example of the successful companies, the failure rate would decrease.

This paper aims to identify what exactly a growth hacking strategy incorporates, and what were some of the growth hacking strategies implemented by the companies Snapchat, Spotify, and 9GAG, and as a result led to a significant increase in the number

of active users for each of these companies. Namely, these three companies were selected as all three of them are online-based companies (which is one of the main criteria for implementation of a growth hacking strategy) (Patel & Taylor, 2013). Both Snapchat and Spotify are considered to be "unicorns" - companies that are valued at $1 billion or higher, based on fundraising (Griffith & Primack, 2015). Snapchat ranked 5th in the unicorn list, being valued at $15 billion, has about 100 million active users as of January 2015, and was recognized as the fastest growing company in 2014 (Griffith, Kasudia, Nusca, Primack, & Roberts, 2015; Mander, 2015). Spotify ranked 12th with a valuation of $8 billion (The Unicorn List, 2015). Spotify has over 75 million active users as of June 2015 (out of which 20 million are paid accounts) (TheSpotifyTeam, 2015). 9GAG is a social media website, which focuses on user-generated content, and has an Alexa rank[1] at the moment of 228 (thus having a rank of 228 compared to all the other websites) (9GAG Alexa Rank, 2015). 9GAG has 80 million active users, as of January 2015 (Russell, 2015). Even though each of the selected companies focuses on different strategies and provides different services, each of these companies proved to be successful and grow at a very fast pace. The results of the following research could be used as certain guidelines for startups that are planning to launch their businesses. Based on the formulated problem statement and the mentioned goals of this research paper, the research question is formulated as follows:

Which growth hacking strategies implemented by Snapchat, Spotify, and 9GAG, led to a significant growth in terms of active users[2] for each of these companies?

1.2 Scientific and Societal Relevance

As mentioned earlier, the importance of online marketing strategies is increasing steadily, and a wide range of previous researches focused on the analysis of these strategies (Kiang, Raghu, & Shang, 2000). In the past decade, online marketing also became a topic taught in higher education institutions, thus special textbooks were

[1] Alexa rank is a global website traffic rank, which compares the performance of a website relative to all the other existent websites over the past three months. It is calculated by combining the calculations for estimated average unique visitors and the estimated number of website views (Alexa, n.a.).
[2] Active users are the unique users who logged-in or performed an action on the specific website during a month (or 30 days) (Opinion, 2011).

introduced that explain each and every aspect, component, and principle behind online marketing (Grossnickle & Raskin, 2001).

The implementation of online marketing strategies in online applications are of great interest for researchers as well. Several researches focused on studying different aspects of online applications. One of the papers tried to address the issues related to privacy concerns of Snapchat and presents an experiment for image retrieval from Snapchat from various devices (Khan, Mashiane, & Shozi, 2015). Another study focuses on studying consumers' behavior of Spotify users (Zhang, et al., 2013). 9GAG is also an application which managed to gather researchers' attention, some of them raising serious issues related to this platform, such as promotion of gender stereotypes and discrimination (Anggiarima, 2013; Wagener, 2014).

Even though a lot of research has been done about different social networks, applications and online marketing, there are not many papers studying the concept of growth hacking. One of the reasons could be the fact that growth hacking is a relatively recent term and did not gain its popularity yet.

The research about growth hacking is also societally relevant, especially from the perspective of startups. The results of this research could help startups with their strategy choice and long-term planning. Also, growth hacking could become a new topic studied in universities and colleges in the near future, thus it is a relevant topic for the new generation of professionals such as entrepreneurs and marketers.

1.3 Structure of the paper

The structure of the following paper will be as follows: the Theoretical Framework will explain the main concepts and strategies that would help to get an understanding of the ideas behind growth hacking. Topics such as viral marketing, contagion, network effects, diffusion of innovations, principles of lean startup will be explained, finalizing the section with an extensive explanation of the topic which is of primary relevance for this research – growth hacking. Also, several real life applications will be presented in this section. After the Theoretical Framework, the Data and Methodology section will follow, focusing on explaining the flow of the research. The research will be a combination between qualitative research – based on relevant literature review, and quantitative research – implemented with the help of an online survey. Three case

studies will follow, describing each of the earlier mentioned companies Snapchat, Spotify, and 9GAG, focusing on their growth patterns. At the end of each case study, some additional implications about the survey results will be discussed. The main results and outcomes will be concluded in the Conclusion section, after which some additional limitations and future research implications will be discussed. All the relevant graphs and tables can be found in the Appendix of this paper.

2. Theoretical Framework

2.1 Viral Marketing and Contagion

Viral Marketing (VM) is a marketing initiated strategy that focuses on consumer activity that spreads the message about a product or service on the market. This is done through the use of catchy-phrases, pictures, slogans, icons, or a combination of these, as fast and capturing an audience as wide as possible (focusing on specific target groups) (Sohn, Gardner, & Weaver, 2013). Opinion leaders and early adopters play an important role in VM, as they can assure a quick spread of the information throughout their networks (Beckmann, 2001). Armstrong and Kotler (2011) give the following definition for VM "…the internet version of word of mouth marketing – Web sites, videos, email messages, or other marketing events that are so infectious that customers will want to pass them along to friends" (Armstrong & Kotler, 2011). Fattah also claims that VM is just "word-of-mouth on steroids" (Fattah, 2000). Thus, VM is quite often associated with word-of-mouth (WOM), which could be defined as the buzz created around a product or service due to consumers' active communication regarding their consumer experience related to it. However, there are quite some considerable differences between the two concepts, mainly differences related to the speed and the way the information is transferred from one consumer to another (Dichter, 1966). Even though WOM helps in transferring the message at an increased speed, it cannot be compared to VM, as the speed of distribution in this case is at a very high level. Another difference could be considered the nature of the distributed message, as WOM usually presumes high verbal and low visual messages whereas VM mainly focuses on high visual messages rather than verbal. The distribution of information in case of VM also focuses on "push" only information, in the meantime WOM focuses on both "push"[3]

[3] "push" marketing strategy – brings the product directly to consumers (Paul & Donnelly, 2002).

and "pull"[4] information. A downside of VM is the fact that it has a limited reach, namely the amount of people that have internet access, WOM being unlimited in this sense (Beckmann, 2001).

VM is considered to be "viral" due to its tendency of mimicking an epidemic. Looking at an infectious disease epidemic, several important factors can be found that in fact create the viral effect. Thus, an epidemic is caused by a pathogen that has a strong transmission rate, does not cause an immediate die-off of the infected individuals and, includes infection in a significant proportion of a population. Following this pattern, marketing message is transmitted from one person to other, in a rapid and self-replicating manner (Sohn, Gardner, & Weaver, 2013). In marketing, the message that could generate an epidemic can be transmitted through an email, video, tweet, purchase, and other channels.

Many VM success stories attracted the attention of researchers, entrepreneurs and marketers. Most of the successful examples focused primarily on the media and transmission of information. Some examples are Groupon, Facebook, YouTube, Twitter, etc. (Sohn, Gardner, & Weaver, 2013)

The main trigger behind VM is the viral product design, which would stimulate peer-to-peer influence and adoption. These viral characteristics normally focus on the content and psychological effects content that can influence user's willingness to share the product with his peers. Viral characteristics enable communication, generate notifications of users' activities online, create personalized invitation, or enable embedding of product information on websites and social networks (Aral & Walker, 2011). There are two main viral product features, and namely:

- Personalized referrals – users can send personalized invitations to their list of friends/followers (they have the option of attaching a personalized message).
- Automated broadcast notifications – notifications that are passively triggered by user activity. Once a user engages into a specific activity (by updating his status or sending a message), his list of contacts can receive notifications about

[4] "pull" marketing strategy – motivates consumers to seek the product or brand through an active process (Paul & Donnelly, 2002).

these actions. These notifications could eventually encourage friends to adopt a certain product themselves, or at the very least raise the awareness about it.

Thus, viral characteristics (or features) can be attributed to two dimensions: activity and personalization. The level of activity can be high in case of active user engagement and low for passive features, which are automatically generated on behalf of users (e.g. notifications). There can also be high and low levels of personalization, where high level focuses on personalized features that are targeted and tailored towards a specific group, and low level of personalization is based on broadcast features that are less selective when it comes to targeting a specific audience. Thus, personalized referrals involve both, high level of activity and personalization, whereas automated broadcast notifications are classified as having low level of activity and personalization. Generally, active-personalized features are considered to be more persuasive. Nevertheless, broadcast notifications should not be underestimated, as the pervasiveness of these notifications may lead to higher levels of overall adoption (Aral & Walker, 2011).

In his book "Contagious: Why Things Catch On", Jonah Berger focuses and explains 6 main principles or the so-called "STEPPS" that help the content become contagious. The first principle is Social Currency, people are willing to share and talk about things that make them look good in society. Thus, a product should have clear characteristics that stand out in consumers' eyes and it is important to promote the exclusivity of a specific product in order to make it more desirable to potential users. The second principle is represented by Triggers. Instead of focusing solely on a catchy message, it would be beneficial for the company to also create additional triggers around the product that would constantly send cues to consumers triggered by the environment and daily situations. The next principle is Emotion, as each message evokes some emotions which activate consumers' feelings. It is important to focus on high-arousal feelings in order to stimulate contagion, as for example excitement, awe, anger, and others. Principle 4 is focusing on Public, as individuals often perceive public behavior as a social norm and as a result tend to imitate their actions, thus it is important to switch the focus of messages and ideas from private to public. The next principle is related to Practical Value and the way the company delivers this practical value to their consumers. It is essential to promote the features of the product that meet consumers' needs in an easy and digestible way, which as a consequence will facilitate the spread

of word in society. The last principle is focused on Stories, as people tend to think in terms of "narratives" rather than in terms of information, it is important to create a message around a product with a coherent story line which could be easily shared from one individual to another (Berger, 2013).

2.2 Network Effects and Tipping Points

Network effects, also referred to as positive externalities, is a situation in which one individual's welfare is affected by the actions undertaken by other individuals in the network without any previously agreed upon compensation plans (Shapiro & Varian, 1999). One of the easiest examples to explain network effects would be by analyzing a social network and its users. The benefit one might derive from using the social network is directly related to the overall number of users of that particular social network. Thus, when a new individual joins the social network, any other already existent user benefits from it, as his/her welfare increases. The same works with another classic example – the telephone; the more people use it, the more valuable the telephone becomes to each user. Considering that in both cases an increase in welfare occurs, it is clear that a positive externality is present.

Thus, when network effects are present, a potential consumer takes into account his/her own reservation price and the total number of users of that particular good or service. The easiest way to model this when a given amount of people z are already users is with the help of a function of the form r(x)f(z), where r(x) stands for the consumer's intrinsic interest in the good, and f(z) estimates the benefit derived by each consumer from having z other users. When price $p* > 0$ and quantity z (which takes values between 0 and 1) form a self-fulfilling expectations equilibrium, then $p* = r(z)f(z)$ (Easley & Kleinberg, 2010).

In order to explain the equilibrium, three main intervals will be analyzed (as presented in Figure 1, Appendix). First, it will be explained why values of z other than 0, z' and z'' cannot be considered as equilibrium points:

- z is between 0 and z', "downward pressure" occurs, which means that a consumer will value the good at less than p*, and thus wish they did not purchase the good. This would decrease the demand.

- z is between z' and z", "upward pressure" occurs, the valuation of the good will be slightly higher than p*, and consumers wish they purchased the good, which as a result increases the demand.
- z is above z", again a "downward pressure" occurs, which, as explained in the first situation, would bring the demand down.

It is clear that point z" is a stable point, thus in situations in which a fraction slightly more than z" purchased the good, the demand will come back to point z", and if the fraction of purchasers is slightly less than z", the demand will be pushed up back to z". Point z', however, is an unstable equilibrium; if slightly more than z' is purchased, the demand will increase to the higher point z", and when slightly less is purchased the demand will be driven to the equilibrium at point 0. Thus, if the population purchases exactly z', this point can be an equilibrium; if the population is slightly off from this point, the equilibrium shifts away as explained earlier (Easley & Kleinberg, 2010).

This point z' is considered to be a critical point for the success of the good, also called the tipping point. If the producer can increase the expectation for the number of purchasers above z', this could help to increase the demand and their market share and arrive to the stable equilibrium at point z". Thus, point z' represents the main hump that the company should overcome in order to be successful (Easley & Kleinberg, 2010).

In his book "The Tipping Point", Malcolm Gladwel focuses on three rules of epidemics that help determining "the moment of critical mass, the threshold, the boiling point" (Gladwell, 2000).

The first rule is the "Law of the Few" which states that the success of a social epidemic depends on the effort of relatively few people that possess a certain knowledge and social skills. In economics, this rule is also known as the 80/20 rule or the Pareto principle[5]. Gladwel distinguishes between three types of people who help an epidemic take off. The first type is represented by "connectors" or social hubs – people who know a lot of people and are connected to people from an array of different social circles such as cultural, professional, economic circles, etc. people who have a special gift of making new friends and acquaintances. Second are the "mavens" who are well-informed people, especially about the marketplace, and are willing to share their knowledge with

[5] for many events, roughly 80% of the effects come from 20% of the causes (Newman, 2006)

their network. The third type is the "salesmen" – very charismatic people with strong negotiation skills. Once people listen to them, they tend to agree and share their opinions (Gladwell, 2000).

The second rule is "The Stickiness Factor". A message, product, content should be "sticky", thus memorable for consumers, which as a result enhances the later-on recognition of that specific content. An example could be the "Sesame Street" – a popular children's show that managed to make "television sticky" (Gladwell, 2000).

The third rule is "The Power of Context", which explains that epidemics are highly sensitive to the external environment. All, even minor circumstances and surroundings play a role for an epidemic. Thus, the Power of Context states that behavior could be seen as a function of social context. The example explained along the lines, concerned the decreased level of crime in New York in 1990', which according to the author happened by combating the minor crimes (such as graffiti and farebeating), which as a result decreased the level of all types of crimes (Gladwell, 2000).

Once the epidemic caused by network effects is passed its tipping point, it can create a bandwagon effect, which represents the phenomenon when the rate of adoption of certain beliefs, products, trends increases the more other consumers had already adopted them (Colman, 2003). It can be characterized as the probability of adoption increasing with respect to the proportion of individuals that already adopted. Microeconomics explain the bandwagon effect as follows: individual's preference for a good increases as the total number of people purchasing it increases (Leibenstein, 1950). As a result, the network becomes more valuable because more people adopt and join the network, which cause positive feedback loops and exponential growth of the epidemic.

2.3 Diffusion of Innovations

Diffusion of innovations (DOI) is a theory, popularized by professor Everett Rogers, which aims at explaining how, why, and at what rate innovations spread throughout populations (Rogers, 2003). Rogers explains diffusion as the process by which innovation spreads via communication through specific channels over a period of time among the people in a social system. DOI shares some of the fundamental ideas of viral

marketing, as the spread of information about a specific product follows the epidemic pattern to a certain extent.

DOI primarily focuses on "reinventing", changing and improving the products, rather than persuading consumers to change and adapt to the product (Rogers, 2003). This aspect resembles the idea behind the minimum viable product (MVP) and product market fit (PMF), which focus on constant iterations of the product design until it suits consumers' needs (these concepts will be discussed in more details in the following sections of this paper). Thus, continuous improvement of a good or service is the key to spreading an innovation.

There are five main characteristics that facilitate the diffusion of innovations (Rogers, 2003):

- Relative advantage – providing a better or superior alternative to existent available options, which could relate to an economic advantage, convenience, satisfaction, prestige (relative advantage in characteristics that are highly valued by consumers).
- Compatibility with existing practices – the extent to which the innovation is compatible with consumers' norms, values, past experiences, needs.
- Ease of use – ideas and innovations that are easy to use are adopted more rapidly than innovations that require their consumers acquiring new skills.
- Trialability – potential users should be able to try and experiment with the innovation, as the trialability of the product will decrease the level of perceived risk by the adopter.
- Visible results – individuals tend to adopt faster innovations which showcase visible results, as this lowers the uncertainty about the product, and stimulates the discussion among peers about the innovation.

Diffusion occurs through five steps, which correspond to consumer's decision making process: knowledge, persuasion, decision, implementation, confirmation. In the decision step, the individual has to decide whether to accept or reject the innovation. However, an individual might also decide to reject the innovation at any other point in time. Communication and peer networks, which can be referred to as WoM, have an immense importance for the diffusion process as these are the main factors that help spread the adoption. Individuals tend to believe their friends and peers more than

traditional advertising as the information shared by people that they know is perceived as more credible and trustworthy. As the adoption spreads from early adopters to early majority, peer communication becomes more and more important. This is also what the Bass Diffusion Model[6] predicts, which is shown in Figure 2 in Appendix.

Researchers divide the population in five categories of adopters, depending on the time when they adopt the innovation (Figure 3, Appendix). Each of the groups have their own personalities, which is why each of them should be approached in a different way, at different points in time (Rogers, 2003).

The first category is innovators, represented by 2.5% of the population. Innovators are risk-takers, have a high social status, are interested in new technology and other types of innovations, are more financially secure than the other categories, and have more exposure to scientific resources and more contact with the other innovators. Financial resources and risk tolerance allows them to adopt innovations that might fail in the future. The best way to attract this group is to track them down and create partnerships with them regarding the design process of a particular project.

The second category is early adopters, which is represented by 13.5% of the population. Early adopters are also risk-takers, have financial liquidity, high social status, are well connected and well informed about the latest trends. Compared to the innovators, early adopters are much more discreet in adopting a product. They are constantly on a lookout for innovations and like having an advantage compared to their peers, which explains why early adopters do not require high levels of persuasion. This group has the highest degree of opinion leaders among all of the categories. Opinion leaders have a great influence on the rest of the society and have a higher exposure compared to other consumers, which as a result help an innovation's "takeoff[7]". Early adopters like to talk about their successful experiences, which intensifies the buzz around innovations. The easiest way to cooperate with early adopters would be by offering them a trial session of the innovation and improve it based on the received feedback. The company should try to maintain a relationship with the early adopters in order to receive regular feedback.

[6] Bass Diffusion Model – diffusion model for adoption of new products, developed by Frank Bass (Bass, 1969).
[7] Takeoff – the point at which the number of adopters of the new product grows rapidly, accompanied with a jump in sales (Stremersch, Tellis, & Yin, 2003).

The next category is early majority, represented by 34% of the population. Representatives of this category normally have an above-average social status, are connected to early adopters, and sometimes could be even seen as opinion leaders within their network. Early majorities are comfortable with new and progressive products as long as they have proof of all potential benefits that they can extrapolate from the product. They are risk averse and cost sensitive, looking for simple and better ways of fulfilling their needs. To attract these individuals, a company could focus on mainstream media and opinion leaders. To encourage the buzz produced by early majorities, the company could decide to distribute giveaways or organize contests for consumers. To keep this group pleased, the company should not forget about the simplicity of its products and strong customer service.

The fourth category is - late majority, represented by 34% of the population. They adopt a product after the average adopter. These individuals are characterized by average social status, high skepticism, little financial liquidity, risk-aversion, influenced by the fears and concerns raised by laggards. To engage late majorities, the company should increase the convenience of the product and decrease the costs, point out the risks of being left behind this innovation, and make sure to respond quickly to criticisms from laggards.

The last group – laggards – consists of 16% of population. This group is the last one to adopt an innovation. Laggards are averse to changes and see a high risk in adopting a new idea. They are primarily focused on traditions, have low social status, lowest financial liquidity, and are older compared to the other categories. In the early stages, the company could ignore the concerns and opinions of laggards, however once it reaches the point of working with late majorities the company has to focus on solving and addressing the criticisms coming from laggards. In order to engage this group, the company should try to raise the group's familiarity with the innovation (perhaps through trials), and present them with other successful examples of laggards adopting the same innovation.

There is one more category of adopters, called leapfroggers, who are the resistors of an innovation that have to skip (leap over) several generations of technology in order to reach the most recent one (Schumpeter, 1942).

2.4 Lean Startup

The lean startup concept was first proposed and defined by Eric Ries, a Silicon Valley entrepreneur (Ries, 2011). When developing the idea, Ries was influenced by his mentor Steve Blank, also a Silicon Valley entrepreneur and academic. Steve Blank is widely recognized for developing the Customer Development methodology, which is the main pillar at the basis of the lean startup concept. Customer Development methodology reveals how startups and entrepreneurs can improve the success and growth of their product or service by focusing on a better understanding of their consumers (Ries, 2008). The main focus of the lean startup is on "validated learning", scientific analysis, and iterative releases of the products (which would minimize product development cycles), measurement of progress, and receiving customer feedback. Ries argued that by iteratively building products and services, startups can reduce the risks on the market and avoid the need for large funds for initial product development and launch (Ries, 2011). This also goes in line with the main assumption behind growth hacking strategies, which are mainly focusing on low-cost strategies that would lead to a great increase in consumer base by iteratively improving their product with new and innovative ideas.

There are several main lean startup principles. First of all, the minimum viable product (MVP) is a product which allows for a high level of validated learning about consumers while exerting a low level of effort. MVP's main goal is to test the central hypothesis and help the entrepreneurs learn about customers' opinions about the product as soon as possible. An MVP could also be compared to a pilot experiment or product. Constantly improving MVP based on the received feedback helps the company to reach Product Market Fit – the product that meets and syncs with consumers' needs. The second principle is continuous deployment for software development, thus the written code for an application is immediately used in the production, which as a result reduces the cycle times. Split testing or A/B testing is also a lean startup principle. Usually, a split test represents an experiment in which consumers are exposed to different versions of a product. This allows the team to observe consumers' reactions to the distinct versions of the same product and measure the impact of these versions as an actionable metric. The next principle is actionable metrics, which help a business to take decisions and elaborate on future strategies. Pivot is regarded as a method for organizing business and developing new products by changing the initial direction. Lean startup also

practices innovation accounting by measuring the progress of the company, planning future milestones, and establishing priorities. Last but not least is the Build-Measure-Learn principle, which represents a loop process of turning initial ideas into final products. The full process incorporates the following phases and actions: idea, build, code, measure, data, learn (Ries, 2011).

Steve Blank, in his paper "Why the Lean Startup changes everything", also explains how a lean startup is different from a regular startup. On average, around 75% of all startups fail, and this is the problem that the lean startup strategy tries to address. Instead of a business plan, Blank suggests that startups should summarize the existing hypothesis in a business model canvas, which could be seen as a diagram for value creation for both consumers and the company. Secondly, lean startups should make use of Customer Development for testing the hypothesis, which should be done through direct contact with consumers by asking for feedback about a range of different aspects of the company (starting with the product itself and ending with the distribution channels used by the company). The third difference lies in the agile development, which could be any strategy that reduces the cycle times, including the continuous deployment strategy and iterative releases of the product (Blank, 2013).

In 2011, Steve Blank initiated the Lean LaunchPad class at several US universities, which teaches young entrepreneurs how to reduce the failing rate of their startup with the help of customer development and agile development.

2.5 Growth hacking

Growth hacking is a relatively recent term, which was coined in 2010 by Sean Ellis in his blog named "Find a Growth Hacker for Your Startup" (Ellis, 2010). Growth hacking is a marketing strategy developed by technology-based companies, and its main focus is on creativity, analytical thinking, and social metrics which help the company grow and attract more customers or users, thus the only metric that really matters for assessing the success of the company is the growth. It is considered to be a part of online marketing, and some of the most used techniques that are a part of the growth hacking strategy include:

- Search engine optimization – the process of manipulating different factors which would influence the website's visibility in the search engine results (Davis, 2006).
- Website analytics – measuring, collecting, analyzing, and reporting of web data and information in order to understand and optimize the web usage (US Patent No. US20080183745 A1, 2008).
- Content marketing – any marketing strategy that incorporated the creation and sharing of media and publishing content that would help to attract new customers or retain the existent ones (Rowley, 2008).
- A/B testing – randomized experiment with two variants – control and treatment, equivalent to the two-sample testing in statistics (Kohavi & Longbotham, 2015).

The person in charge of developing a growth hacking strategy is a growth hacker. Multiple marketing experts and entrepreneurs tried to define the term, and for example the very first definition given by Sean Ellis was "a person whose true north is growth. Everything they do is scrutinized by its potential impact on scalable growth" (Ellis, 2010). Later on, Andrew Chen introduced the term to a larger audience, saying that a true growth hacker is in fact "a hybrid of marketer and coder" who tries to find new and innovative ways to attract new customers with the help of "A/B tests, landing pages, viral factor, email deliverability, and Open Graph" (Chen, 2012). Aaron Ginn tries to outline the main characteristics of a growth hacker, who has a "mindset of data, creativity, and curiosity" (Ginn, 2012). An effective growth hacker is believed to be disciplined, good at prioritizing the tasks, testing multiple different ideas, and always being analytical in the decisions regarding the growth drivers that should be kept and cut out of a specific strategy. As the main problems faced by startups are no budget for marketing expenses and lack of traditional marketing background, growth hackers have to combat these issues by pursuing low-cost and innovative alternatives for the mainstream marketing strategies, focusing mostly on social media and viral marketing as a substitute for advertising or traditional media tools such as TV, radio, newspapers, and others. (Holiday R. , 2012).

Growth hacking strategy is of great interest and importance for start-ups, as it allows for a lean start-up launch, thus focusing primarily on growth, and budgets secondly (Hockenson, 2013).

Thus, growth hacking could be considered as any strategy implemented by a company which focuses on its growth. The growth, which occurs as a result of implementing a growth hacking strategy, follows the pattern of an epidemic and could therefore be considered a viral marketing strategy. Growth hacking presumes a constant iterative improvement of the product or service of main interest. Thus, one of the company's main goals is to reinvent and change the product based on consumers' needs, and as a result achieve the Product Market Fit. Early adopters and opinion leaders play an important role in this case as they help spread the epidemic and overcome the tipping point of the product. In order to assure the success of the product, it is also important to make sure that growth hackers focus and target the right category of adopters over time. Generally, growth hackers are trying to find additional ways to facilitate and speed up the adoption for different groups, for example by "reinventing" the product and making it easy to use, making the product or the message around the product catchy, creating partnerships with opinion leaders, offering (free) trials. Growth hacking appears to be one of the main strategies at the basis of lean startups and incorporates all of its principles (Holiday R. , 2013).

As data and literature regarding the operation of the companies Snapchat, Spotify, and 9GAG might be limited because of some privacy concerns and regulations, this paper will focus on analyzing several specific points in order to evaluate the growth hacking strategies implemented by them:

- Degree of referrals
- Degree of brand recognition/awareness
- Special updates of the application, which could be seen as additional features
- Degree of user-friendliness of the application (e.g. easy-to-use)
- Integration with other social media networks
- Additional actions undertaken by each specific company

2.6 Real life applications (best practices)

As already mentioned, a wide range of different online-based companies focus mainly on growth hacking strategies. Several real life applications will be outlined below.

One of the earliest implementations of growth hacking strategies was done by Hotmail. To attract new users, Hotmail added an additional "Get Your Free Email at Hotmail"

tagline at the end of all the emails sent from their existing users. A link was included along with the tagline, thus friends, families, colleagues of the existing users could easily click on the link and subscribe to the Hotmail service. As a result, Hotmail's user base grew from 20,000 to a million users in about 6 months (McLaughlin, 2014).

Another famous example is the Dropbox's Referral Program. For each pending signup from a referral, existing users (who referred the program) received additional 500 MB of free Dropbox storage space. In 15 months, the number of users grew from 100,000 users to 4 million (McLaughlin, 2014).

Instagram is another social network that uses growth hacks in their overall marketing strategies. Instagram took an existing technique – cross posting to another platform, and brought it to a new level by introducing the cross posting to almost any other online platform (Facebook, Twitter, Tumblr, Flickr, Foursquare, and other international social networks as VKontakte, etc.) (McLaughlin, 2014).

3. Data and Methodology

To answer the research question and find solutions for the problem statement, a combined qualitative and quantitative research will be performed.

The qualitative research will focus on an extensive analysis based on the literature review, which will be presented in the form of case studies for each of the following companies: Snapchat, Spotify, and 9GAG.

The quantitative research will be performed with the help of an online survey which aims to study consumers' opinions about each of the three applications, mainly focusing on consumers' willingness of referring the application to their friends and acquaintances, the degree of brand recognition among the respondents, as well as identifying which features related to each of the applications are of main importance for consumers. The survey was distributed online, in the researcher's social network, as this would allow for the gathering of information from a sample which is of interest for this research. The sample for this study is represented by young adults (18-30 years old), who are also the main target of each of the studied applications. As all three companies are online-based, the best way of distributing the survey is through social networks which would assure that the right audience is attracted for the study. The

survey consisted of four main sections: the first three sections were addressing questions related to each of the applications. The last section consisted of general questions regarding the respondent's background (age, sex, nationality, occupation) (Q22, Q23, Q24, Q25 in Appendix – Survey Results). A total of 7 questions were addressed per application. The questions were similar between the different applications. The first question for each of the applications was asking the respondents whether they used or had at least heard of the application of interest before (Q1, Q8, Q15 in Appendix – Survey Results). The second question was addressed to the respondents who answered in the previous question that they used or heard of the application before and asked about the source from which they found out about the application (Q2, Q9, Q16 in Appendix – Survey Results). The remaining 5 questions were directed at users of the specific application. The first of these questions asked about the frequency with which they use the application (Q3, Q10, Q17 in Appendix – Survey Results). The next question from this set asked which devices they normally used the application on (this question allowed for multiple answers, thus if an individual used the application on both PC and smartphone, he/she could choose both answers) (Q4, Q11, Q18 in Appendix – Survey Results). The third question aimed at finding the degree of referrals among the respondents, asking whether they referred some of their friends to the application before (Q5, Q12, Q19 in Appendix – Survey Results). The last two questions were related to the features of each of the applications; in the first of these questions respondents had to rank the given features based on their own preferences and valuation (Q6, Q13, Q20 in Appendix – Survey Results), whereas the second question asked them to mention additional features or characteristics of the application that they liked (Q7, Q14, Q21 in Appendix – Survey Results). Results of the survey will be discussed in the Case Study sections, as well as in the Conclusion.

4. Case study: Snapchat

In 2011, Stanford University students Evan Spiegel, Bobby Murphy, and Reggie Brown created a new photo-messaging application called Snapchat. Snapchat allows its users to send pictures and videos and to customize them by adding drawings and text to a particular list of "friends" (Bilton, 2012). These pictures can be accessed for a limited time, ranging from 1 to 10 seconds, afterwards the pictures or videos are hidden from

the recipient's list, while not using any memory storage of the sender's device, and are deleted from the Snapchat servers (Alba, 2012). To view the snapshots, users have to keep contact with the touchscreen of the particular device, thus hindering the option of taking a screenshot, which is an option and is allowed by the application. In that case, the sender will receive a notification about the screenshot, thus, making sure that their users are aware of the fact that someone else possesses their shot (Colao, 2012).

Snapchat creators describe the core goal of the application as follows: "It's about communicating with the full range of human emotion -- not just what appears to be pretty or perfect" (Spiegel, 2012). Thus, the company is trying to motivate its users to reveal their candid shots with a closed group of people. Snapchat founders have seen the need for this application as a solution to those moments where people have to detag themselves on social networks or use Photoshop to embellish their shots.

In 2013, Snapchat released a new version, and introduced design and speed improvements, including swipe navigation, in app profiles, double tap to reply, and an improved friend finder (Fitz-gerald, 2013).

The main growth hacking strategy of Snapchat stems from the unique and innovative features of the application. Another feature, which made it easier to share moments of users' lives, was the introduction of "My Story". The main idea behind this feature is that users can create personalized video montages consisting of pictures and videos taken during the day, and this montage can be broadcasted to their full list of friends, who can access and view them unlimited times during a 24-hour time span. After 24 hours, the content disappears. The user posting "My Story" can also track and see the list of friends who viewed their montage (Etheringtin, 2013).

In May 2014, more new features was introduced, namely - new messaging and video chat features (Meyer, 2014). Now users could send short texts to each other as a reply or comment to pictures, which would facilitate the use of the application (as otherwise, users would have to switch to a different application in order to proceed with messaging). By default, the texts would disappear once they are read and a notification is sent to the recipient only at the start of the conversation. As already mentioned, at the same time a video chat feature was introduced. A special sign "Here" would appear in the chat window, which would signalize that "your friend" is available to engage in a video chat. The "Here" function, is however different from the general "online"

mentioning, as the former actually shows you the availability of your friend for a video chat session, whereas just an online mentioning would not necessarily show the readiness of a user for video chat (Hamburger, 2014). Video chat was introduced in order to keep the fluidity between the conversations ongoing on Snapchat and to avoid situations in which both users type simultaneously, which would disrupt the conversation (as users might touch upon different topics at the same time, which makes it more complicated). Also, another feature was added with the update - push notifications which would indicate that a friend started typing in the Snapchat chat, instead of just showing in-app typing indicators.

In June 2014, an extension of "My Story" was also added to the application, this time allowing for the creation of crowd-sourced montages that could be broadcasted to all users of Snapchat (Snapchat, 2014). The new feature was called "Our Story", and would normally feature large events and gatherings like festivals, sport games, international holidays. Any user that captured a snapchat related to any of the ongoing events can send their snaps and videos (which should be no longer than 10 seconds) to Snapchat headquarters, where the clips would be combined and cut into a short 2-3 minutes video, which is available for viewing to all the users. Along with this update, Snapchat also decided to change their logo from a smiling ghost to a faceless one, explaining that each and every user is the "face of Snapchat" (Snapchat, 2014).

One of the latest introduced features is "Discover", which started earning advertising revenue for the company. Different ad partners, represented by companies such as CNN, MTV, National Geographic, Yahoo!, Cosmopolitan, and others, distribute publishing content, incorporating their advertisements into the material. It is estimated that the advertisements are worth ten to fifteen cents per view, and on average there are around 500,000 to 1,000,000 views per day, this being the main major for-profit feature implemented by Snapchat (Snapchat, 2015).

Multiple concerns and criticisms were raised related to Snapchat, namely regarding their privacy and security regulations. In August 2013, an Australian security firm – Gibson Security, shared the information about the application's vulnerability (Blue, 2013). In December, Snapchat declared that they implemented additional features to improve their security, however, on New Year's Eve Snapchat was hacked. Hackers decided to publicly reveal about 4.6 million usernames and phone numbers of Snapchat

users, trying to raise awareness in consumers' minds about the poor privacy security of Snapchat (Skillings, 2014). Another issue raised by critics is related to the "deleted images policy". Main feature of Snapchat is that it immediately deletes the snaps, however company's privacy page warns the users that they cannot guarantee that all the messages will be deleted immediately, and even when Snapchat deletes the messages, they are still available in backup for a specific period of time (Snapchat, 2013). In October 2014, it was declared that hackers managed to distribute about 100,000 "deleted" snaps, calling the hack "The Snappening" (trying to make a reference to another big hack of iCloud storage) (FoxNews, 2014). Snapchat, however, announced that these images were retrieved from some other parties, and denied that the hack actually occurred. In May 2014, Snapchat was voted as one of the most unreliable companies by Electronic Frontier Foundation. Out of the six main criteria based on which the reliability of each company was judged, Snapchat managed to meet just one criterion – "publishing law enforcement guidelines" (Smith, 2014).

Despite all the criticism, Snapchat is still one of the fastest growing companies in the world. In this paragraph, more attention will be paid to some statistical descriptives that can help analyze the growth of the company. In May 2012, it was established that 25 images were sent per second. As of November 2012, there were about 20 million snaps shared per day (Gallagher, 2012). This number increased to 60 million snaps per day in February 2013, and had a dramatic increase to 400 million snaps per day in November 2013. This increase could be reasoned by the main updates that took place in 2013 that improved the interface and made the application more user-friendly, and the introduction of "My Story". As of May 2014, it was revealed that about 700 million video and photo messages are shared per day (Shontell, 2014; Lunden, 2014). For comparison, the average amount of pictures taken per day is 1 billion, which means that about half of all pictures are taken using the Snapchat application. At the same time, it was announced that the Snapchat Stories are viewed about 500 million times per day (Shontell, 2014). In August 2014, Snapchat was valued by a Silicon Valley venture capital firm – Kleiner Perkins, at $10 billion, at the time when Snapchat had about 100 million active users (Abbruzzese, 2014).

The main demographic of the Snapchat users falls between the age of 13 and 23 years, with a steadily growing audience of 40 years and older (van Hoven, 2014).

In 2014, Snapchat was recognized as the fastest growing application in terms of users by GlobalWebIndex . Starting with the first quarter of 2014, until the end of the year, the application managed to grow by 57%, a considerable part of this growth is considered to be caused by the increase in teenage use – which was estimated to be around 15%. Snapchat is followed by other applications, such as: Facebook Messenger, with a growth rate of 50% over 2014, however critics consider it to be an unfair statistic, as users were "forced" to download and use the application in order to continue communicating on Facebook (from devices such as: smartphone, tablets, etc.); other companies which had a more "organic growth" were Instagram and Pinterest, each with a growth rate of 43% (Mander, 2015) (Figure 4, Appendix).

Touching upon the main features, issues, and statistical descriptives, an analysis of the survey results will follow. Seven different questions, related to Snapchat usage were included in the survey. Each question, and its results, will be analyzed in particular in order to learn more about consumers' opinion about the features of the application, and their willingness to refer the application to their friends.

122 respondents participated in the survey related to Snapchat. 63% of which mentioned that they used this application before, 30% stating that they are not using the application, but they've heard of it before, and only 7% stated that they neither use the application, nor have ever heard of it (Q1 in Appendix – Survey Results).

The next question asked the consumers how they found out about the application. Only the respondents that answered "Yes, I use this application" and "No, but I've heard of it before" in the first question, had to tell about the channels from which they heard about Snapchat. 84% of these respondents stated that they found out about Snapchat from a friend. This could be the first signal of a high referring activity of Snapchat users, which could be one of the reasons of a rapid growth. 6% said that they found the application themselves, 4% saw an advertisement about Snapchat, and 5% mentioned other sources (opinion leaders, such as bloggers; other websites as: Youtube, 9GAG, Mashable) (Q2 in Appendix – Survey Results).

Follow-up questions were addressed just to the actual users of Snapchat (which represented 63% of the total sample).

The next question asked the respondents about the frequency with which they use the application. Most of the users stated that they use the application daily (38%), the

second most popular option was “2-3 times a week” (18%) (Q3 in Appendix – Survey Results).

The biggest majority, 99% of consumers, are using the application on their smartphone and 8% also use Snapchat on their tablets. One of the respondents, however mentioned that he/she also uses the application on a PC, which is obviously a spurious answer, as there is not a PC version of Snapchat. The answer could be caused by respondent’s misinformation (Q4 in Appendix – Survey Results).

When the consumers were asked about the number of friends they referred to Snapchat, 40% replied “more than 3”, 35% replied “less than 3”, and 25% stated that they did not refer any of their friends (Q5 in Appendix – Survey Results). Thus, it can be concluded that about 75% of the sample referred at least one person, which once again proves a high willingness of consumers to refer the application to other potential users.

The consumers were then asked to rank six of the main Snapchat features based on their own valuation (1-being the highest rank; 6-being the lowest rank). The following six features were presented in the questionnaire (the presentation is according to the ranking results) (Q6 in Appendix – Survey Results):

1. Sending instant pictures (which are not using my device's storage space)
2. Writing and drawing on my pictures
3. Sending instant videos (which are not using my device's storage space)
4. Creating "My Story" (Snapchat Stories add Snaps together to create a narrative which can be accessed for 24 hours)
5. "Our Story" (Stories contributed by the Snapchat community at all sorts of events)
6. "Discover" (snaps from famous media companies, like: CNN, MTV, Cosmopolitan, National Geographic, etc.)

The last question related to Snapchat asked the consumers to list additional features that make Snapchat more appealing to them. Some of the listed features were: additional filters for pictures, easy-to-use, instant communication, live chat, “Sending stuff you see but are not worth a real picture”, and more (Q7 in Appendix – Survey Results).

Thus, the following main conclusions can be derived from the abovementioned results:

- 75% of respondents referred at least one friend to Snapchat.

- 84% of respondents heard about the application from a friend, which signalizes a high referring willingness to potential users.
- The three most important features of Snapchat according to users are represented by the main idea behind the application: send instant photos and video messages, including additional notes.
- Consumers indeed perceive Snapchat as the application that allows them to send "less sophisticated" pictures to their friends – which was creators' core goal.

5. Case study: Spotify

Spotify is a music streaming application that provides access to music content from different record labels, such as: Sony, Universal, Warner Music Group, etc. Spotify was developed in 2006, in Stockholm, Sweden, and launched at the end of 2008 (Salmon, 2009). The company was founded by Daniel Ek and Martin Lorentzon. At the moment, Spotify has two headquarters: Spotify Ltd which operates as the parent company is headquartered in London, and Spotify AB which is in charge of research and development is headquartered in Stockholm. The application gives the opportunity to browse and search the music by artist, album, genre, playlist, etc.

Spotify follows a freemium[8] business model, thus its main revenue stream comes from subscriptions to their premium account. As of its launch, it was possible to use the free features, however the free account was available just through a personal invitation only, so that the company could manage the growth of its service (Spotify, 2008). Another source of revenues is advertising placements to external third parties. There are seven main types of ads available on Spotify: audio-, display-, billboard- ads, homepage takeovers, branded playlists, lightbox, and advertiser pages. Ads run for a maximum of 30 seconds, and are streamed in-between the songs (Spotify, 2014). Spotify has to pay off royalties to the copyright holders for the streamed music. Approximately 70% of total revenues are paid out as royalties (Spotify, n.a.). In its first year of operation, Spotify declared a loss of about 31.8 million kronor (approximately $4.4 million) (Nylander, 2009).

[8] Any user can access the basic services for free, however if they want to access the additional features, users have to subscribe in order to be able to use the latest (Kumar, 2014).

Users can choose to use the application for free, however in that case several limitations and inconveniences are present. Free users cannot scroll through or skip the ads, can listen to music just in a shuffle mode, do not have the option of listening to music offline, and have a limit of 5 skips of songs.

Spotify Premium subscription fee is $9.99 per month. The Premium account removes all the advertisements and limits (that are present for free accounts), and allows for unlimited mobile usage on the mobile devices online, as well as offline. New users also have the opportunity of trying out the free trial of Premium features for 30 days. In this case, users have to fill in their payment information, and terminate the subscription before the end of the trial period, in case they do not want to extend and pay for the Premium features afterwards.

In some of the countries, such as: Sweden, Finland, the Netherlands, UK, France, Norway, etc. users can buy and download Spotify tracks for approximately 1 euro from their partner 7digital music store (Spotify, 2009).

At the beginning of 2010, Spotify announced the introduction of two additional types of accounts – Spotify Unlimited (which is pretty similar to Spotify Premium, however the later can stream music at a higher bitrate and allows offline access to the playlists) and Spotify Open (a reduced-feature version of the Spotify Free, which allows free streaming of music up to 20 hours per month) which are available just in some specific regions (Spotify, 2010).

Since November 2011, Spotify integrated with Last.fm, thus Spotify users could send over the songs (they are listening to) to their Last.fm account. The later collected all the information about music preferences based on favorite songs and playlists, and could generate recommendations based on the music browsing history (Black, 2011).

In November 2012, Spotify received additional funding from Goldman Sachs, raising about $100 million, which led to a total valuation of the company at that point in time of $3 billion (Bradshaw, 2012).

In December 2012, it was stated that Spotify provided access to about 20 million songs (Lanxon, 2012). The Spotify application allows the import of music from iTunes, and the option of syncing it with a device. Users have the opportunity to create their own playlists, share them, and even edit the playlists along with some other users. Playlists

auto-update once the author changes it by adding or deleting songs. Many other websites and social networks support sharing Spotify playlists and songs, which can be rated, discussed and shared with other individuals (Spotify, 2014).

It is possible to sign up to Spotify through active Facebook and Twitter accounts. Once users are connected to Spotify through these social network accounts, they can access their friends' playlists and favorite songs.

In 2013, it was stated that the single "Get Lucky" produced by Daft Punk, was the song with the highest number of plays during a single day from Spotify's history. This song also was one of the ten-most played songs of that year. Some other artists that were also featured in the annual review were Avicii, Macklemore, Ryan Lewis and others. It was also mentioned that 24 million active users streamed about 4.5 billion hours of music during 2013 (Gibsone, 2013).

In June 2014, Spotify updated their Web API, which allowed external developers to integrate Spotify content in some other applications. It also allowed to return additional information such as information about artists, albums, songs, playlists, etc. (Spotify, 2014)

At the end of 2014, a new update was released called "Top Tracks in Your Network", which is a personalized automatically updated playlist based on the music that your friends (or people you are following) are listening to (Constine, 2014).

In April 2015, Spotify managed to raise additional funding by attracting Goldman Sachs and Abu Dhabi sovereign wealth fund (SWFI, 2015).

Spotify operates in a competitive market, however manages to hold its leadership position. Some of the competitors are: Pandora, Tidal, iHeart Radio, Deezer, SoundCloud, and the recently released Apple Music. Pandora is an application very similar to Spotify, which features extensive online radio stations. Similar to Spotify, Pandora operates under a "freemium" business model. Compared to most other music streaming applications, users can purchase the premium version of Pandora application for $4.99. Its music library consists of approximately 1 million songs. Another competitor – iHeart Radio focuses on offering online radio streaming, but also allows to stream music based on a search. iHeart Radio is available solely for free, however, users have limitations of 15 skips per day, and 6 skips per radio during an hour.

Advertisements are also present in the application. Its music library offers around 20 million songs (White, 2013). One of the most recent companies to enter the market was Apple, with their new application – Apple Music, which was released on June 30th, 2015. Apple Music has 5 million more songs in its music library compared to Spotify. The premium version, similarly to Spotify, is priced at $9.99, with additional special deals (as student or family deals). However, Apple Music's free version is very limited, and all that it offers is listening to new global radio stations and the option of using Apple social media. This way, Apple hopes to motivate users to pay for the premium account. Apple is planning to make its application available for Android users in fall 2015 (Blanco & Mitroff, 2015).

There is a lot of criticism related to Spotify, mainly because Spotify fails to compensate the artists fairly for using their discography, which motivated some of the artists to opt out of Spotify (Guttenberg, 2012). A lot of critics point out that Spotify's "free" aspect is unsustainable and that the company should do something about its business model. In 2011, Projekt Records label stated that Spotify is a service that does not respect and reward artists' efforts accordingly, adding that their label would never be a part of this concept (Resnikoff, 2011). Also, the introduction of Spotify forced sales in some regions to decrease dramatically, which affect even more artists' incomes. In 2014, Vulfpeck – an American funk band, funded a concert tour using Spotify royalties received for their album Sleepify, which was a fully silent album. The band promoted their album by encouraging the users to stream the album while they were sleeping, in order to receive higher royalty payments from Spotify. In about a month, the album was pulled off Spotify, however the band already managed to raise $20,000 in royalties (Welch, 2014).

There is also a positive side to increased usage of Spotify, and namely "Spotify's impact on piracy". In 2013, as a reply to the criticisms against the exploitation of artists, Spotify stated that people pirate way less, once they have a free and legal alternative. This could be proven by real life examples, as music piracy decreased considerably in the following countries: Sweden, Denmark, USA, Norway, the Netherlands and UK. As an example, the numbers related to music piracy in Norway were presented, and in 2008 the country had about 1.2 billion pirated songs, whereas in 2012 it decreased to about 210 million songs (Spotify, n.a.).

Despite all the criticisms by artists, record labels, and critics, Spotify is growing steadily. In March 2011, it was announced that the customer base consisted of about 1 million paying subscribers in Europe, and this number doubled by September of the same year (BBC, 2011; van Grove, 2011). In August 2012, that number increased to 4 million paying users, which generated a revenue of at least 20 million euro per month (Sanburn, 2012). By the end of 2012, there were around 20 million active users, out of which 5 million were paying users (Weber, 2012). In March 2013, Spotify had 24 million active users (6 million paying) (Sloan, 2013); May 2014 – 30 million active users (10 million paying) (Brustein, 2014); January 2015 – 45 million active users (15 million paying) (Spotify, 2015); and about 75 million active users as of June 2015 (20 million paying) (TheSpotifyTeam, 2015). At the moment, Spotify is available in about 58 countries.

As already mentioned, the survey contained 7 questions related to usage, features, and willingness to refer friends to Spotify. The results to each question will be analyzed and discussed separately. In total, 104 respondents participated in the Spotify survey.

The first question asked the respondents whether they had used this application before. About 64% of all respondents stated that they use Spotify, 24% of which are "Premium" users, and the other 40% are using the free version of Spotify. 34% mentioned that they have never used the application before, but they heard of it. Only 2% neither used nor heard about Spotify before, which signalizes that overall the brand awareness is at a high level (Q8 in Appendix – Survey Results).

Those who answered in the first question that they are using the application or at least heard of it before, were asked to mention the source from which they found out about this particular application. The majority (55%) mentioned that they heard about Spotify from a friend. 23% of the respondents found out about it from ads; 16% stated that they found the application themselves; and about 7% found out about the application from some other sources: news, their boss, "from installer of Sonos device" (Q9 in Appendix – Survey Results).

The next five questions were targeted specifically at the users of Spotify.

The first question in this range asked the users about the frequency with which they use the application. The vast majority – 48% mentioned that they use Spotify on daily basis.

The second most popular choice was 2-3 times a week with 17% of the respondents (Q10 in Appendix – Survey Results).

Users also had to mention on which devices they accessed Spotify most often. This question allowed for multiple answers. Thus, 83% stated that they are using the Spotify service on their PC/laptop; followed by 66% who are streaming music from their phone/smartphone; and about 28% are using Spotify on their tablet. One respondent also mentioned that he is streaming music from Spotify application through his Sonos device (Q11 in Appendix – Survey Results).

The next question was aimed at identifying how many users referred their friends to this application. Respondents could choose one of the three answers: none; less than 3; and more than 3. About 40% stated that they referred more than 3 friends to Spotify; 34% referred less than 3 friends; and the remaining 26% did not refer any friends to the application. Overall, 74% of users that filled in the survey referred at least 1 friends to Spotify (Q12 in Appendix – Survey Results).

The last two questions were focused namely on some of the features of the studied application. The first question asked respondents to rank the presented five features, from the most preferred one (1) to the least preferred one (5). The following list shows the options in the ranked order (Q13 in Appendix – Survey Results):

1. Listening to music for free
2. The option of listening to music offline
3. Having access to the latest hits
4. The option to create my own playlists
5. The option to check my friends' playlists

The last question asked respondents to mention some other Spotify features that they find enjoyable. Some of the answers were: diverse music presented in Spotify's large databases, user-friendliness, the availability of moody playlists (you can find and stream playlists based on your mood), up-to-date, available on a wide range of devices, etc. (Q14 in Appendix – Survey Results).

To conclude on the survey results, several main points will be highlighted:

- 98% of respondents heard about the application before, and only 2% did not know about Spotify, which signalizes a high level of brand awareness.
- 55% found out about the application from their friend
- 48% of users use the application on a daily basis
- 74% of users referred at least one friend to Spotify, which emphasizes a high referral level among Spotify users.
- Favorite features are: music available for free (for free accounts), and the option of listening to music offline (a Premium feature).

6. Case study: 9GAG

9GAG is an online platform, launched by several students from University of Hong Kong in April 2008 (Ren, 2012). The website represents a collection of humorous user-generated content[9], focusing on funny pictures, videos, gifs, etc. (Gannes, 2012). The platform was launched with a motto "Just for fun", and the founders were trying to create a website that would cheer up their users and bring some positive emotions during their busy working or study days. Initially, the website was called 9GAG, because of its layout. There were 9 funny pictures, referred to as "gags", per page. The layout has changed over the years, allowing the users to scroll through the posts, without going on the "next page". The new slogan of 9GAG also changed to "Why so serious?" which is a famous Joker quote from the movie "The Dark Knight" (based on the series of famous comics about Batman). Originally, no ads were displayed on the website, which were included later on. In May 2015, ads were also included in the mobile applications.

9GAG was initially a "side project". At that time, co-founders had several other ongoing projects, such as StartupQuote and Songboard. Founders decided to follow the 500 Startups accelerator program, and 9GAG participated in Y Combinator's incubator, which helped 9GAG's user base increase to about 70 million unique visitors per month (Phaneuf, 2012). At that point in time, the founders decided to drop out of the rest of the projects and focus solely on 9GAG. As a result to this instant growth, 9GAG

[9] User generated content – any type of content created by users of a specific social media platform, or some other online websites and services (e.g. blogs, posts, chats, forums, tweets, images, video, etc.) (Chua, Juanzi, & Moens, 2014).

managed to receive funding of about $2.8 million from several Silicon Valley investors and venture capitalists (Wee, 2012). This was a considerable support for company's engineering team growth in Hong Kong and Silicon Valley.

In July 2012, 9GAG managed to launch an application for iOS and Android. Later on, they also introduced a mobile application for Windows Phone 8 and Blackberry 10 (Barsi, 2012).

As already mentioned, general content on 9GAG represents humorous pictures, often called "memes" – an idea, behavior, action that spreads from one individual to another within a culture, in the form of an image, hyperlink, video, hashtag, etc. (Dawkins, 1989). Users can up- or down-vote and comment the posts available on the website. The content is divided in different categories, as for example: hot, trending, fresh, comic, meme, cosplay, geeky, gifs, etc. Some of the most popular image memes are: Confession Bear, Overly Attached Girlfriend, Awkward Penguin, Bad Luck Brian, Polandball and many others. Most of the memes have a top and bottom captions, the former usually describes a situation, whereas the later presents a humorous follow up caption related to the initial situation (9GAG, n.a.).

Besides the original 9GAG website, users can also check out exclusive funny videos on 9GAG.tv. The videos are retrieved from YouTube and embedded on the website. Just as on the original website, users can up- and down-vote the videos, comment, and share them to other social networks.

9GAG has a strong website culture, and the users are normally referred to as 9GAGgers. In summer 2014, 9GAG also launched 9CHAT, where 9GAG users could log in with their account and chat with some strangers who are also 9GAGgers. It is also possible to create specific chat groups in different sections (Gannes, 2012).

In January 2015, 9GAG launched its first mobile game called 9GAG "Redhead Redemption", a game in which two siblings are trying to survive the zombie apocalypses (Harding, 2014). The game incorporates several of the main 9GAG icons: a redhead, a baby, zombies, cats which help you with the quest, there is even a potato gun. The zombie trend started from memes and videos related to the famous "The Walking Dead" series, which happened to have a lot of fans on 9GAG. Recently, in June 2015, 9GAG released its second mobile game called "Ramen Celebrity". The goal of the game is to create the perfect Ramen place, and attract as many customers and

celebrities as possible, keep them pleased with your services, and as a result expand your Ramen. The new game incorporates some of the most discussed and popular celebrities on 9GAG, such as: Gordon Ramsay, Freddy Mercury, Nicholas Cage, Leonardo DiCaprio, Kim Kardashian, and others (Norman, 2015).

9GAG has several competitors, which are also focusing on "funny" user-generated content, namely "memes". Some of these websites are: reddit, 4chan, SomethingAwful, Digg, I Can Has Cheezburger, etc. A lot of controversy is ongoing among these websites. In 2011, 4chan and 9GAG had an open conflict, namely because of ownership issues over some of the memes that were featured on both websites. Each of the sides was claiming that the memes originated from their website. The evidence however seemed to support 4chan's side. Ray Chan's (one of the 9GAG co-founders) reaction to this conflict was as follows: "9GAG does not create memes or rage comics, but helps spread them". Similar conflicts aroused multiple times between 9GAG and reddit (Gannes, 2012).

Some criticisms were also raised related to the content that is shared on the website. Several research papers discuss and analyze the content that is presented on 9GAG. One of the studies raised the question of gender inequality and gender stereotypes. The researcher analyzed a range of images that highlight gender stereotypes through wording, pictures, or a combination of wording and picture (Anggiarima, 2013). Another study also analyzed 9GAG content based on cultural stereotypes and discrimination, claiming that such websites as 9GAG promote discrimination between different human races and cultural backgrounds (Wagener, 2014).

Despite all the criticism and ongoing online "wars", 9GAG proves to be a successful startup which is growing at a fast pace. In an interview from July 2012, Chris Chan – one of the co-founders reported that the website had more than 80 million unique visitors and about 2 million page views in the previous 30 days (Ren, 2012). It is also known that the most website's traffic occurs from such locations as workplace and school.

9GAG has an Alexa rank of 213, which shows its ranking relative to all the other websites in the world. 9GAG has a Google page rank of 6/10. The 5 countries with most users are: 11.6% of 9GAG users come from USA; India – 11.6%; Germany – 7.4%; France – 3.5%; Brazil – 3.5%. Approximately 15.85% of traffic comes from

referrals from other websites like: 9gag.tv; feedly.com; twitch.tv; symbaloo.com, etc. Around 19.79% of traffic comes from social media websites: Facebook, Twitter, Youtube, Reddit, VK.com (9GAG Alexa Rank, 2015).

Next, survey results will be analyzed. In total, 103 respondents participated in the survey related to 9GAG usage. 64% replied that they are using the application, out of which 6% even tried creating their own content. 23% did not use the application, but heard of it before. And just 13% of respondents stated that they neither used the application before, nor heard of it (Q15 in Appendix – Survey Results).

73% of the respondents that knew or heard about 9GAG before, declared that they found out about it from a friend. 16% claim that they found the application themselves, 8% found out about 9GAG from Facebook posts, and about 3% from advertisements (Q16 in Appendix – Survey Results).

The next five questions were addressed just to the respondents that stated that they used the application before. The first question from this range asked respondents how often they use the application. 33% browse 9GAG on a daily basis. The second most popular answer was less than once a month, with 27% of respondents (Q17 in Appendix – Survey Results).

69% of the users that participated in the survey stated that they browses\ 9GAG from their Personal Computer or laptop; 63% use the mobile application; and 18% mentioned that they use the application on their tablet. This question allowed users to pick more than one option, in order to find out which is the most used device (Q18 in Appendix – Survey Results).

When asking the respondents about their willingness of referring their friends to 9GAG, the answers were distributed as follows: 29% stated that they referred more than 3 friends, 25% mentioned that they referred less than 3 friends, and the remaining 46% replied that they did not refer any friends to the application. Still, the vast majority (54% of users) referred at least 1 friends to 9GAG. This pattern could be one of the main reasons for 9GAG's growth (Q19 in Appendix – Survey Results).

Respondents had to rank five of the main features of the 9GAG company. They are presented according to the ranking results (Q20 in Appendix – Survey Results):

1. Checking funny pictures.

2. Watching videos on 9GAG.tv.
3. Expressing their opinion about the content through the comment section.
4. Creating their own posts.
5. Using 9CHAT to make new friends.

When asked which other features seem important to users, the following answers were mentioned: free, "stay updated about trends", entertaining, gifs, 9GAG games, and others. In addition, several negative comments were left, stating that 9GAG is "unfunny" and "boring" (Q21 in Appendix – Survey Results).

Main conclusions that can be driven from the survey results, are:

- 87% of respondents heard about 9GAG before, 73% of which heard about it from a friend.
- 54% of users referred at least one friend.
- Features of main interest for users are: the opportunity to check funny content expressed in pictures and videos (which are available on 9GAG.tv).

7. Conclusion

The main purpose of the presented research was to elaborate on the concept of growth hacking, and derive a proper and integral definition. Thus, as already mentioned in the paper, growth hacking is a relatively new marketing strategy that focuses mainly on the growth of the company, no matter what tools are used in order to achieve this goal. It could be considered a strategy that tries to replicate the epidemic of a viral marketing, focusing on the buzz created by early adopters which help the innovation overcome the tipping point and as a result takeoff. Growth hacking manages to summarize the main strategies that a lean startup tries to incorporate, thus it can be stated that growth hacking is of main interest for lean start-ups.

The second purpose of the research was to study real life examples and try to explain which were some of the steps undertaken by the companies that led to their fast growth, and thus, could be considered as growth hacking strategies. Three case studies were presented analyzing the following companies: Snapchat, Spotify, and 9GAG. Both, a qualitative and quantitative research was performed in order to answer the formulated research question. As mentioned earlier, the qualitative research focused on literature

review, whereas the quantitative research focused on a survey. The latter was accessed by 135 individuals. 51% of respondents were male, and 49% female (Q22 in Appendix – Survey Results). Most of the respondents were of Dutch nationality, followed by Germans (Q23 in Appendix – Survey Results). The mean age of respondents was 23,28 years, with the minimum age of 18, and maximum of 62 (Q24 in Appendix – Survey Results). 87% of respondents were students, and about 12% are working. One of the respondents stated that he/she is already retired (Q25 in Appendix – Survey Results). Main conclusions and results related to each of the researched companies will be presented below.

Snapchat

In 2014, Snapchat was recognized as the fastest growing online application. This research tried to find some explanations and reasons for this rapid growth. The survey revealed that respondents had a high level of awareness about the application, as about 93% of the individuals that participated in the survey stated that they at least heard of the application before. 84% of these, found out about Snapchat from their friends, and about 75% of respondents reported that they referred themselves at least one friend. These two numbers signalize that Snapchat has a high degree of referrals ongoing, which could be one of the main reasons that can explain its exponential growth. Survey results also revealed which features of the application users value the most. These features are: send instant photo and video messages that don't take up space – which is the core idea behind the application, thus, it would be safe to say that indeed the unique and outstanding idea behind Snapchat helped attract large number of users, and made it easier for the company to spread the "epidemic". Many respondents also mentioned the "ease of use" of the application, which clearly facilitates the diffusion of innovation and attracts more adopters.

Spotify

At the moment, Spotify is an absolute leader on the market, with a valuation of about $8 billion. Spotify managed to achieve these results by operating on the market for less than a decade, which makes Spotify a company of high interest for researches that focus on company growth. The survey results showed that 98% of the respondents heard about the application before, and it can be concluded that out of all three companies

studied in this paper, Spotify has the highest brand recognition. Around 55% of these individuals heard about Spotify from a friend. 74% of respondents also stated that they referred at least one friend before, which emphasizes the fact that users have a high willingness to refer other potential users to the application. A fraction of 48% of respondents mentioned that they use the application on a daily basis, showing that Spotify's users are very loyal customers. One of the issues related to Spotify's users is that out of 64% of respondents that mentioned that they use Spotify, just 24% use the Premium version, which means that the company found the perfect formula for attracting new users with their free version, however the rate of converting these users into paying customers is quite low. As their paying customers are the main source of revenue for the company, they should find ways of increasing this percentage. The favorite features according to respondents are: music available for free – which is definitely the main driver of Spotify's growth, as it delivers a music discography of about 20 million songs, which is available at no cost for users; second most popular feature is the availability of music offline for Premium users, implementation of this feature was a very smart move by the company, as it directly addresses consumers' needs (users can access the music library without any additional costs of buying songs or albums). Some of the other features mentioned by respondents were: easy to use, available on many devices and interfaces, always up-to-date, which emphasize the user-friendliness of this application – this being an important pillar for Spotify's growth. Another action undertaken by Spotify which facilitates its growth was its integration into Facebook. Users were able to state on Facebook that they are streaming music through Spotify. This way, the latter managed to get a high exposure to a big audience at no costs.

9GAG

9GAG is one of the most popular user generated content websites. Going through a startup program, 9GAG managed to grow steadily over the years, and started expanding into other markets, as smartphone games. From all the respondents, 87% stated that they heard about 9GAG before. 73% from these found out about 9GAG from their friends, and about 54% of the users referred at least one friend to 9GAG before. Thus, the majority of users are willing to refer the application to others. Sometimes, users even refer their contacts to the application unconsciously, by simply sharing the content found on 9GAG to one of the other social media networks such as Facebook or Twitter,

thus similar to Spotify, the integration of 9GAG content to social networks played an important role for the future of the website. The option of "sharing" was definitely one of the main strategies that helped spread 9GAG's content and raise the awareness among internet users about the website. 9GAG's main idea is to provide funny content for their users, and bring more positive moments in their daily routines. Even though there were already some other websites with the same business idea, 9GAG creators found a way to make their application easy and user-friendly for their consumers, which facilitated the adoption process.

8. Limitations and Recommendations for Future Research

The presented research had several limitations that should be considered when performing future research. This paper focused on a combination between qualitative and quantitative research. The qualitative research was primarily based on literature review related to the topic of main interest – growth hacking, and to the three companies researched in the paper: Snapchat, Spotify, and 9GAG. The general conclusions about some of the possible growth hacking strategies implemented by each of these companies, are based on researcher's subjective opinion, which could be biased due to researcher's own valuation of different actions and ideas. Perhaps, future research should perform a qualitative research with the help of interviews, and collect data from individuals non-interested in the final outcomes. Another limitation was the limited literature related directly to the topic, which as mentioned earlier, could be due to the fact that growth hacking is still a relatively new concept, which did not manage to get the full attention of researchers and authors just yet.

The quantitative part of this research, also had several limitations. First of all, the total number of individuals that accessed the survey was 135. Based on this, it can be estimated that the dropout rate throughout the survey was about 24.44%. Just 102 individuals completed the survey until the very end. This also led to different sample sizes between the surveys that focused on the different applications. Future researches should improve the quality of their surveys and make them more engaging for respondents in order to decrease the dropout rate. It could be done by improving the formulation of the questions, keeping just the most important and essential questions

for the research, thus keep the survey short and concise, creating additional incentives, etc. Another limitation could be the presentation and formulation of question number six for each company, which asked respondents to rank the different features of an application based on their own valuation (Q6, Q13, Q20 in Appendix – Survey Results). The responses could be anchored to the already presented order, or perhaps some of the respondents did not want to put in the extra effort of switching the order around. To avoid anchoring the survey responses, a different presentation or layout of the presented options should be used. Besides this, some other biases were present, for example one of the individuals replied that he/she uses Snapchat on his/her Personal Computer, which was one of the standard options in the list of devices, however there is no Snapchat version available for PC. This response obviously leads to some spurious results, which could happen because the respondent was misinformed or confused by the question. Another suggestion for future research regarding the quantitative research on the topic would be to perform some statistical tests on the data. If the available data is complete, a research that checks for causality between the different implemented strategies and the increase in the user database would be very valuable for the topic.

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Appendix

Figure 1 – Representation of an economy with network effects

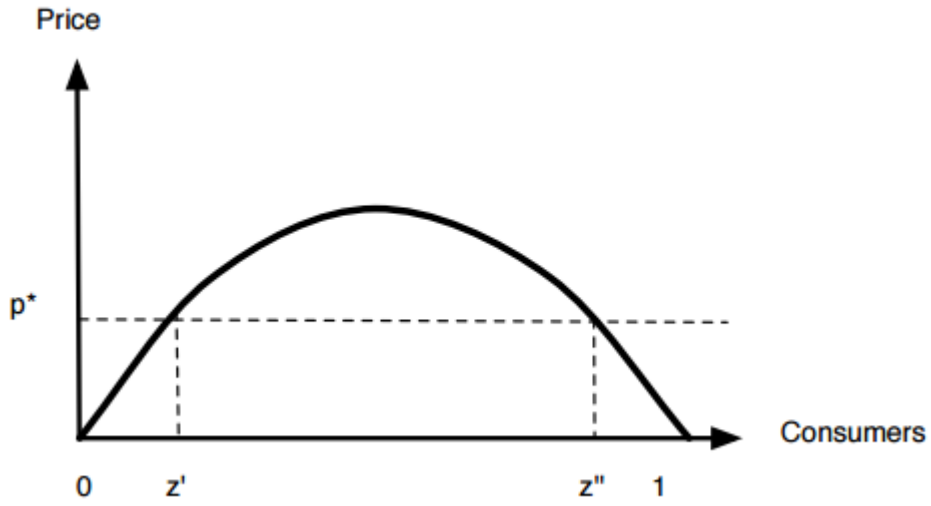
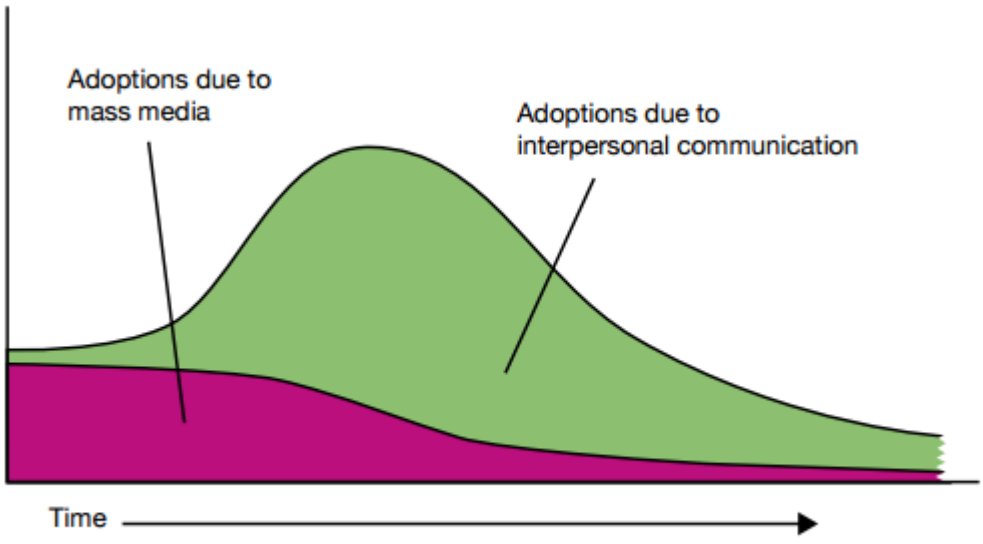


Figure 2 – Bass Forecasting Model representation



The Bass Forecasting Model.
Source: Mahajan, Muller and Bass (1990) as reproduced in Rogers, E.M. (2003) p210.

Figure 3 – Adoption categories

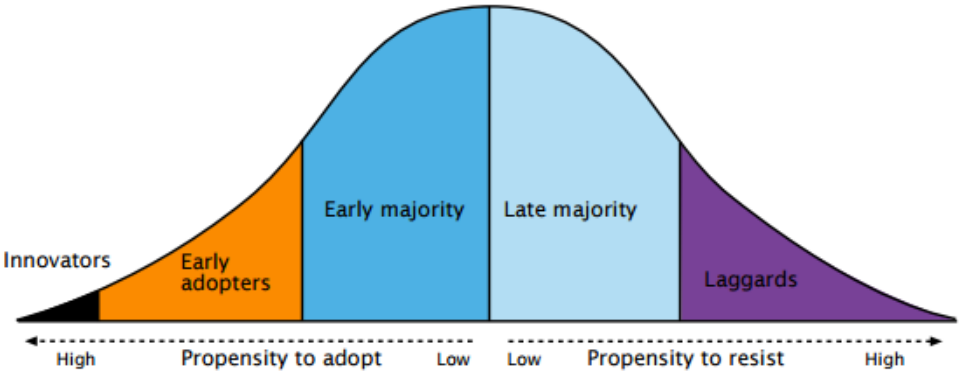
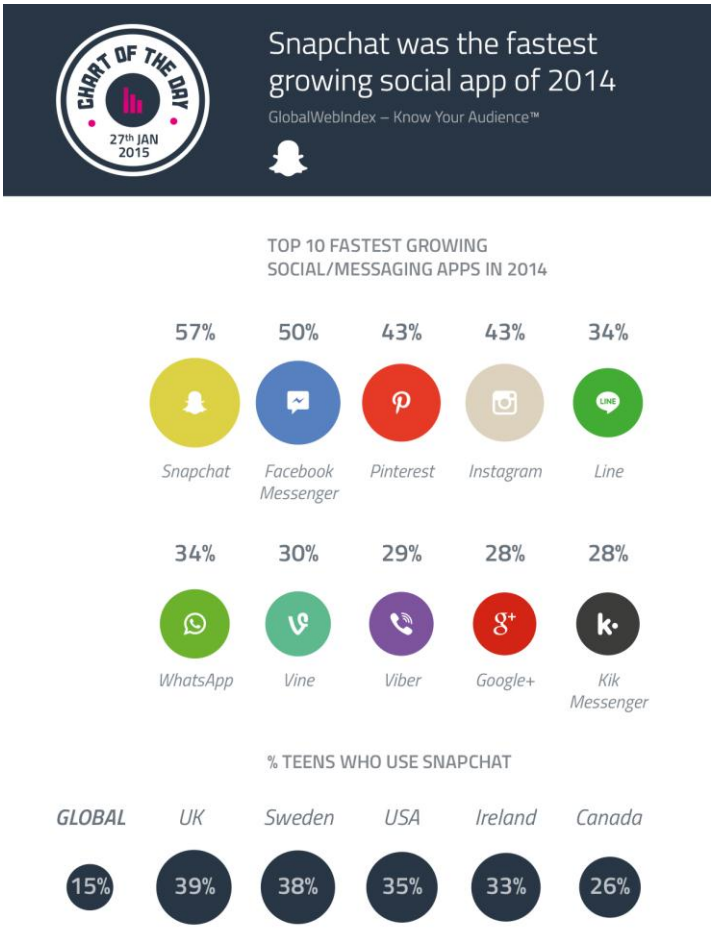


Figure 4 – Top 10 fastest growing applications of 2014



Survey Results

Snapchat

Q1. Have you used Snapchat before?

#	Answer	Bar	Response	%
1	Yes		77	63%
2	No, but I've heard of it		36	30%
3	No, and I've never heard of it before		9	7%
	Total		122	

Q2. How did you find out about Snapchat?

#	Answer	Bar	Response	%
1	From an advertisement		5	4%
2	Found the application myself		7	6%
3	From a friend		95	84%
4	Other (please mention the source):		6	5%
	Total		113	

Other (please mention the source):
through post on social media from tech servers (Mashable, Wired etc.)
youtube
Internet
From a fashion blogger that I follow
from other websites like 9GAG or cheezburger

Q3. How often do you use Snapchat?

#	Answer	Bar	Response	%
1	Never		8	10%
2	Less than Once a Month		10	13%
3	Once a Month		3	4%
4	2-3 Times a Month		7	9%
5	Once a Week		6	8%
6	2-3 Times a Week		14	18%
7	Daily		29	38%
	Total		77	

Q4. Which device do you use it on? (You can choose several answers)

#	Answer	Bar	Response	%
1	Personal Computer		1	1%
2	Phone/Smart-phone		75	99%
3	Tablet		6	8%
4	Other (please mention which device):		0	0%

Q5. How many friends have you referred to Snapchat?

#	Answer	Bar	Response	%
1	0		19	25%
2	Less than 3		27	35%
3	More than 3		31	40%
	Total		77	

Q6. Rank the following Snapchat features based on your preferences (1st – the feature you like the most, 6th – the feature you like the least):

#	Answer	1	2	3	4	5	6	Total Responses
1	Sending instant pictures (that are not using my device's storage space)	48	7	1	2	2	0	60
2	Sending instant videos (that are not using my device's storage space)	4	17	21	15	2	1	60
3	Writing and drawing on my pictures	1	22	17	10	9	1	60
4	Creating "My Story" (Snapchat Stories add Snaps together to create a narrative which can be accessed for 24 hours)	4	10	14	17	8	7	60
5	"Live stories" (Stories contributed by the Snapchat community at all sorts of events)	2	1	5	12	30	10	60
6	"Discover" (snaps for famous media companies like: CNN, MTV, Cosmopolitan, National Geographic, etc.)	1	3	2	4	9	41	60
	Total	60	60	60	60	60	60	-

Q7. List 3 Snapchat features that you like the most (which were not mentioned in the previous question):

1	2	3
Photos only available for a few seconds	Use of filters	Easily select who to send and who not
Seeing stories from others	Receiving Messages from others	Chatting without a picture
Crazy pictures that are not saved	sharing a moment	instant communication
pictures are not saved on the other persons device	you can see all of your friends' stories	you decide who you want in your list
Pics aren't saved	Cool event filters	it's casual
Keeping social contact with friends even if they live far away	Showing what I am doing rather than telling	Being able to also chat with my friends
Pics will diminish after few seconds	Easy to use	More personal than sending text messages

*Due to the extensive size of the original file, just first 7 answers are displayed for this question. However, all of the answers were considered during the research.

Spotify

Q8. Have you used Spotify before?

#	Answer	Bar	Response	%
1	Yes, I use "Premium" version		25	24%
2	Yes, I use the free version		42	40%
3	No, but I've heard of it		35	34%
4	No, and I've never heard of it before		2	2%
	Total		104	

Q9. How did you find out about Spotify?

#	Answer	Bar	Response	%
1	From an advertisement		23	23%
2	Found the application myself		16	16%
3	From a friend		55	54%
4	Other (please mention the source):		7	7%
	Total		101	

Other (please mention the source):
dont remember
news
News
From the installer of the Sonos device
My boss uses it to play music in the office
don't remember

Q10. How often do you use Spotify?

#	Answer	Bar	Response	%
1	Never		2	3%
2	Less than Once a Month		8	12%
3	Once a Month		4	6%
4	2-3 Times a Month		4	6%
5	Once a Week		5	8%
6	2-3 Times a Week		11	17%
7	Daily		32	48%
	Total		66	

Q11. Which device do you use it on? (You can choose several answers)

#	Answer	Bar	Response	%
1	Personal Computer		54	83%
2	Phone/Smart-phone		43	66%
3	Tablet		18	28%
4	Other (please mention which device):		1	2%

Other (please mention which device):
Sonos device

Q12. How many friends have you referred to Spotify?

#	Answer	Bar	Response	%
1	0		17	26%
2	Less than 3		22	34%
3	More than 3		26	40%
	Total		65	

Q13. Rank the following Spotify features based on your preferences (1st – the feature you like the most, 5th – the feature you like the least):

#	Answer	1	2	3	4	5	Total Responses
1	Listening to music for free	37	7	3	5	6	58
2	Having access to the latest hits	6	12	22	12	6	58
3	The option of listening to music offline	10	20	8	16	4	58
4	The option to create my own playlists	5	19	19	13	2	58
5	The option to check my friends' playlists	0	0	6	12	40	58
	Total	58	58	58	58	58	-

Q14. List 3 Spotify features that you like the most (which were not mentioned in the previous question):

1	2	3
Discover new music	Streaming in the car	
Free	Playlists that are offered by Spotify	
Broad variety of music	it adapts to your style	large database
No ads	underground artists are also featured	available on all devices
The option to find so much different music on just one platform	Having the same music on all my devices immediately	
Easy to use	European	Playlists from all over the world
Mood playlists	Email when song is added to playlist	Following playlists

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9GAG

Q15. Have you used 9GAG before?

#	Answer	Bar	Response	%
1	Yes, and I also create memes on 9GAG		6	6%
2	Yes, but I never create my own memes		60	58%
3	No, but I've heard of it		24	23%
4	No, and I've never heard of it before		13	13%
	Total		103	

Q16. How did you find out about 9GAG?

#	Answer	Bar	Response	%
1	From an advertisement		3	3%
2	Found the application myself		14	16%
3	From a friend		65	73%
4	Other (please mention the source):		7	8%
	Total		89	

Other (please mention the source):
facebook
dont remember
facebook
facebook
Facebook feed
Facebook

Q17. How often do you use 9GAG?

#	Answer	Bar	Response	%
1	Never		2	3%
2	Less than Once a Month		17	27%
3	Once a Month		2	3%
4	2-3 Times a Month		9	14%
5	Once a Week		6	9%
6	2-3 Times a Week		7	11%
7	Daily		21	33%
	Total		64	

Q18. Which device do you use it on? (You can choose several answers)

#	Answer	Bar	Response	%
1	Personal Computer		43	69%
2	Phone/Smart-phone		39	63%
3	Tablet		11	18%
4	Other (please mention which device):		0	0%

Q19. How many friends have you referred to 9GAG?

#	Answer	Bar	Response	%
1	0		29	46%
2	Less than 3		16	25%
3	More than 3		18	29%
	Total		63	

Q20. Rank the following 9GAG features based on your preferences (1st – the feature you like the most, 5th – the feature you like the least):

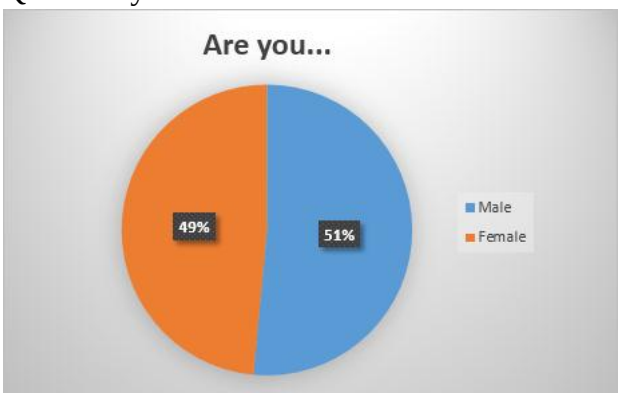
#	Answer	1	2	3	4	5	Total Responses
1	Checking funny pictures	57	2	0	0	0	59
2	Creating my own posts	0	4	20	21	14	59
3	Express my opinion about the content through the comment section	0	12	23	19	5	59
4	Using 9GAG chat to make new friends	0	1	9	13	36	59
5	Watching videos on 9GAG TV	2	40	7	6	4	59
	Total	59	59	59	59	59	-

Q21. List 3 9GAG features that you like the most (which were not mentioned in the previous question):

1	2	3
Free	Funny	On both PC and Mobile phone
finding related funny pictures	finding related videos	
user-generated content	can be hilarious	smooth running app
Stay updated about (global) trends	Stay updated about news worldwide	
Its funny		
Being able to search per category	Its an entertaining app even when you have only 1 minute	
sharing	-	-

*Due to the extensive size of the original file, just first 7 answers are displayed for this question. However, all of the answers were considered during the research.

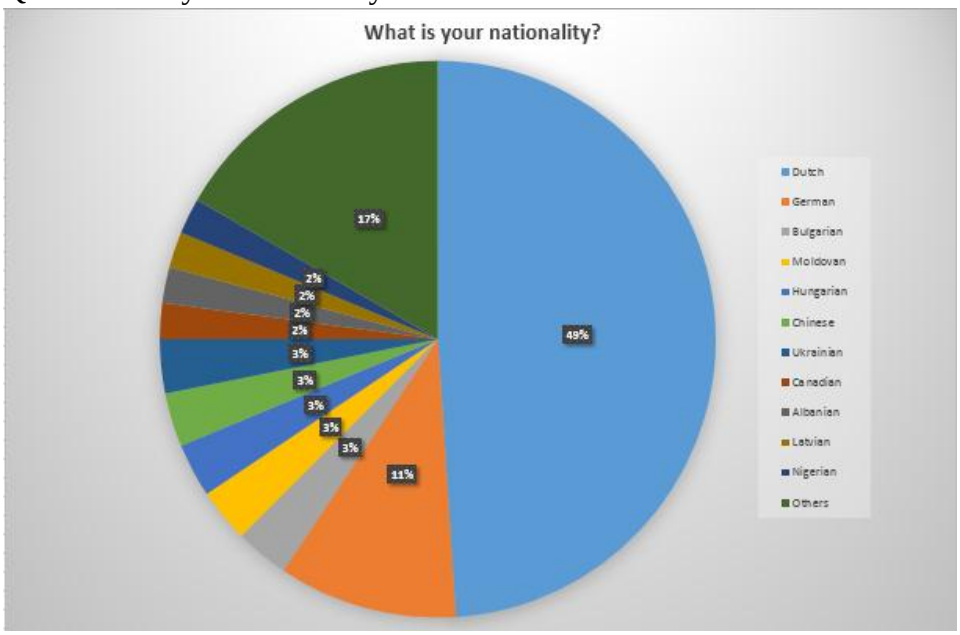
Q.22 Are you...



Q.23 How old are you?

Age	
Mean	23,27723
Min	18
Max	62

Q.24 What is your nationality?



Q.25 What is your occupation?