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Growth Hacking for Start-ups

How Growth Hacking can be utilised for growing start-ups
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ABSTRACT

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In the era of start-ups, many failed to put out their prototypes or products to the market due to lack of funds or experience in marketing. Growth Hacking is a tool that start-ups can benefit from if they learn what Growth Hacking is and how to implement it.

The aim of this thesis is to explore what Growth Hacking is and how to implement it for the commissioner CubiCasa Oy. A couple of Growth Hacking tactics are used for CubiCasa Oy and the process of implementation and findings are recorded. Furthermore, the case study of famous growth hacking used in the past by startups and guidelines for implementation is studied with the intention to provide an insightful knowledge to any startup which wish to employ growth hacking.

The method of research is qualitative. The term Growth Hacking is still relatively new therefore, using online blogs and articles of those who are working as growth hackers in the industry are the best and most reliable source material. A/B testing is used to differentiate which product was more appealing to the market. All the data is collected throughout the A/B testing and they are transferred to funnel to analyse the data to make informed decisions. A/B testing was carried out for Airbnb Project. The A/B testing results were put into funnel analysis and it showed that the Airbnb campaign were not exposed to the right audience on Facebook ad and therefore switched the experiment to finding the right channel to do the Airbnb campaign. The results were much better as the campaign were shown to the right target audience.

The growth hacking tactics are not the same when it comes to different start-ups. Each start-up has its own set of target audience, product and services that are different from one another. Therefore, growth hacking for start-ups is to learn about their target audience and how to hack the traditional marketing system to see a rapid growth through a series of questions such as where and which channels the target audience can be founded, what problems are they facing, what solutions are they after. After answering these set of questions then it is to create innovative growth hacking tactics to carry out and analyse the results. The results are a set of collected data and the data must be analysed scientifically to make factual sense in order to make informed decisions that is right for the start-up to grow.

Keywords:
growth hacking, startup, marketing, prototype, A/B testing, funnel analysis, data, decision-making, social media
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1. INTRODUCTION

Marketing is an essential part of a company as it is a tool to communicate to their target audience in the market. However, the cost of marketing can be costly to many young startups. Most startups begin with their idea creation then create the products to launch their product in the market. In order to spread the news of launching their products and services, marketing is often used. However, when startups face limited funds and resources unlike the standard corporate marketing budget, they need to start thinking about new channels to break into the market with the minimum cost and the maximum effect. The thesis will explore ways to implement growth hacking using the examples and methods used by startups in the past. The aim is to provide a valuable information to young startups to employ growth hacking for their own rapid growth.

1.1. Startups

“A startup is a human institution designed to create a new product or service under conditions of extreme uncertainty” (Ries 2011, 49) and “designed to search for a repeatable and scalable business model.” (Robehmed 2013, cited 10.03.2016) and also “are innovative in a process of development, validation and research for target markets.” (Blank & Dorf 2012, 57).

The sole reason why startups stand out from the any business is that they are operating in an environment of extreme uncertainty. The products and services the startups provide differ from the traditional business models on the basis that they are working in an extreme uncertainty market meaning that the products and services that startups provide is not market proven to foresee how the market will react to the products or services. Startups must follow the process of developing the prototype, and further developing to the product stage by validating the demands from the target market. This process of validating the demands from the target market requires interacting with the target audience in the market. Often it is hard to interact with the target audience with the limited funds and resources for the young startups. This is where Growth Hacking can be a handy tool to give the young startups the channels to communicate to the target audience without spending a massive amount of expenses.
1.2. CubiCasa Oy

The commissioner CubiCasa Oy is a digital floor plan data startup in Oulu, Finland and San Francisco, US. CubiCasa Oy differs itself from the traditional floor plan companies on the basis that they are digitalising the floor plan data and turn them into digital information that can be used in other industries other than Real Estate such as Virtual Reality, Indoor Navigation, Home Automation, and Interior Design. CubiCasa Oy vision is “AI powered computer vision solution to bring all indoor spaces to cloud” (CubiCasa 2016, cited 03.05.2016). As the vision statement shows, CubiCasa Oy utilises the AI (Artificial Intelligence) computer vision technology to improve the traditional floor planning production process and use the big data of floor plans to apply the digitalised floor plan data in the cloud technology. In order to validate their vision in the intended target market with the limited amount of funds and resources, Growth Hacking is needed.
2. BACKGROUND OF GROWTH HACKING

Growth Hacking term first appeared in 2010 by Sean Ellis who has been working with startups to grow them to achieve an IPO (Initial Public Offering) in San Francisco. Only when he started to look for his replacement for the startups, he realised Growth Hacking is not the same as Marketing. (Patel & Taylor 2015, cited 03.05.2016.) While marketing uses the traditional use of advertisement through national media channels such as radio, television and newspaper, growth hacking, due to the nature of startup being limited funds and resources, finds creative ways to reach out to the target audience using readily available online tools such as social media, SEO (Search Engine Optimisation) and blogging. (Biyani 2013, cited 03.05.2016.) Although the term is relatively new, the use of growth hacking is not. For example, using SEO as the hack for growth in a startup means already doing growth hacking.

2.1. Concept

“Growth hacking is experiment-driven marketing - - It’s really about science. It’s about process” (Wilson 2015, cited 05.05.2016). Sean Ellis distinguishes growth hacking from marketing by pointing out that growth hacking involves science, data and process. Whereas traditional marketing promotes the products using main stream media channels in a belief that exposure brings more customers, growth hacking involves trying out different kind of tactics to expand the user base and finding out which channels and which methods outside of traditional marketing route works the best for which product and services that the startup is offering. One of the main factor that differentiates growth hacking from the marketing is their objective. “Growth hacking is a means for accelerated growth, but not the means for continuous growth and improvement (Growth Devil 2015, cited 13.05.2016). If the conventional marketing puts the focus on the general marketing strategy for the whole company, growth hacking puts the focus on the growth. Putting out the product to the right people, obtaining the user base and finding the right channels to communicate to the people is the key for growth.

The reason why growth hacking is not straightforward to many audiences is that it does not have one set guideline that works universally for all types of startups. Growth hacking must be done using creative minds in a scientific process that is scalable, measurable and repeatable. The “hack”
is to look for creative tricks that the startup can uniquely employ. Therefore, the methods for growth hacking differs depending on the target audience and the product of the startup.

A person who conducts growth hacking is called growth hacker and as Sean Ellis defines it “A growth hacker is a person whose true north is growth” because all the decisions that growth hacker makes must be approved by growth. One single goal that every growth hacker should have in mind is to obtain growth in the company and one of the valuable skill is the ability to execute it without permission or assistance. The decision-making is assisted by the results found in the experiments. Each experiment is the one of the growth hacking tactics employed by the growth hacker in a certain span of time for example a week or month and by the end of the experiment, the data collected and logically analysed is the result that provide scientifically valuable information that growth hacker uses to make “true north is growth” decisions. (Wilson 2015, cited 05.05.2016.)

Growth hackers are a hybrid of marketer and coder, one who looks at the traditional question of “How do I get customers for my product?” and answers with A/B tests, landing pages, viral factor, email deliverability, and Open Graph - - If a startup is a pre-product/market fit, growth hackers can make sure virality is embedded at the core of a product. After product/market fit, they can help run up the score on what’s already working. (Chen 2012, cited 13.05.2016.) (see Figure 1)

**FIGURE 1.** Growth hacking as a fusion of two fields (Brody 2013, cited 13.05.2016)
2.2. Examples used by other startups

One of the reasons that growth hacking started to get attention was the result of successful growth hacking tactics used by startups that grew to be an international-sized company. The examples are chosen according to the size and popularity of the company and the creativity used in the growth hacking tactics.

2.2.1. Airbnb

Airbnb was the result of two designers unable to afford their rent and decided to offer their space to people who needed accommodation to the upcoming design conference in 2007. The response from the people was positive and the Airbnb founders, Brian Chesky and Joe Gebbia saw an opportunity to solve the problem in the existing market. In 2008 Airbnb was launched and now the company is valued at 25 billion USA dollars with 2 million listings in 57,000 cities and 192 countries. On average 500,000 stays occurs per night and the user base has grown to 60 million users. (Smith 2016, cited 13.05.2016.)

One main reason for gaining the big number of users in a short period was the integration with the Craigslist in the beginning. Craigslist is a free platform where the users put the advertisements for their business, housings, jobs, for sales and personals. Craigslist was the perfect place to find the pool of people who had already put their places for rent. By e-mailing those people who have already put ads for renting out their places, Airbnb received a huge traffic to their site and converted the visitors into users (see Figure 2). Airbnb saw that their site was more user-friendly designed than Craigslist in terms of user interface and simplicity, however lacked the big user base that Craigslist had. Therefore, going after the users in Craigslist was the right solution for growth. This e-mail hack is simple and straightforward to many people but it is not easy to find the right channel to get the right people who will most likely to take an action and become a user. The important take away from this case is to find the right channel, place, platform where the target people is most concentrated at and find the most effective method to reach out to them. In addition, Airbnb did a reverse engineering where a new user registers they can use a tick-box option to post the listing to Craigslist automatically (see Figure 3). It saves time and efforts of Airbnb users but increase the exposure level to gain more guests to rent out and to bring new users to Airbnb. (Gooden 2011, cited 13.05.2016.)
Airbnb steadily picked up the user base who are on the supply side, hosts that are providing accommodations to guests. However, the demand side, guests who pay for the accommodation service, showed weak numbers. The reason behind the weak demand was unknown so the founders, Gebbia and Chesky, investigated the cause of the problem. It turns out the listings were not visibly appealing to the guests which was the same problem Craigslist had. Without a good
presentation, the product in this case, the listings, were not selling to the guests. The founders tackled the problem by going door to door in New York listings and took professional photographs that would be more appealing to the guests. The result showed that the bookings in New York increased by two to three times. The experiment proved that having a high quality photographs on listings incurred higher bookings. With this learning, free photography service was launched in the summer of 2010 with twenty contracted professional photographers. The growth was not an overnight scene but after a few months the growth was visibly noticeable in 2011 (see Figure 4). (Brown 2014, cited 13.05.2016.)

![Graph showing the number of bookings after Free Photography service was introduced](image)

**FIGURE 4. The number of bookings after Free Photography service was introduced (Brown 2014, cited 13.05.2016)**

### 2.2.2. Hotmail

Hotmail is the first free web-based email service and its growth hack is one of the earliest successful growth hacking method recorded. Hotmail was founded by Sabeer Bhatia and Jack Smithwas in 1996 in order to keep their private messages hidden from the boss. When the internet was introduced to the public, the email was not freely available and only a certain group of people were able to use the internet such as university students using university emails, employees using corporate emails and the last group which are of individuals using email services provided by
Internet Service Provider, ISP. Even to these groups there were limitations and the use of email was not accessible from anywhere. (Gao 2016, cited 15.05.2016.)

Hotmail’s free use of email service accessible from anywhere with the internet was solving the limitation and accessibility problem that the existing email services had. The only obstacle was to put it out to the public so people would sign up to use Hotmail. The idea of using billboards and radio ads was costly to the founders who just started Hotmail. Their investor had advised them to use catchy phrase with links as a signature at the end of every email that a Hotmail user sends (see Figure 5). (Growth Hacking Asia, cited 15.05.2016.)

![Hotmail taglines: A signature example of a growth hack.](image)

**FIGURE 5. Hotmail tagline link in the signature** (Burford 2015, cited 15.05.2016)

When the recipient clicks the link in the signature, it takes the user to the Hotmail landing page where the users are led to do the sign-ups seamlessly (see Figure 6). The simple use of link led to a successful outcome as Hotmail hit its first 1 million user base within 6 months.

When one of the founder, Bhatia sent one email to a friend in India, 100,000 users signed up within 3 weeks of sending the email. The effect of using link in the signature was propounding, people trusted the email signature link as it came from their trusted family or friends and the price of the email service was free. This growth hack turned the emails sent out as advertisements and the Hotmail users into advocates. (TechCrunch 2009, cited 15.05.2016.)
As Figure 7 shows only 1.5 years after its launch of the growth hacking method, Hotmail user base reach to 12 million and was sold to Microsoft for $400 million which is now known as MSN Hotmail. 12 million users are a significant number when the sum of internet users was only 70 million at that time. The growth hack was very simple to implement yet creative in a sense that the use of link in the signature has not been done before but it was extraordinarily successful because the product was solving the problem of using email services freely and the acquisition cost was near to none. The process of acquiring users was fast and seamless.
2.2.3. Dropbox

Dropbox was founded by two university students, Drew Houston and Arash Ferdowsi in 2007 as they often forget USB Flash Drive and the existing services at that time suffered from frequent bugs and internet latency. The founders decided to build Dropbox for easier personal use of online storage place for backups and sharing files between computers and people. (Ying 2009, cited 15.05.2916.)

From 2006 there were already a high number of cloud storage companies which were operating the same purpose as Dropbox however due to their lack of performance, people were not using them. Dropbox founders from their own experience saw the problem and built Dropbox that is performing across different platforms, scalable and easy for the people to use. From the start, the founders did the product-market fit test by launching beta signup waiting list on their landing page and the waiting list soared from 5000 to 75000 in one day in March 2008. The founders knew it is important to get the real feedback before making the final product in order to learn what the market wants so when the product is finally built, it does not become obsolete. They achieved the quality feedback gain by going after where the target audience hangs out and communicated in the genuine manner so the people could speak out their real opinions naturally.

The initial start was looking promising however the public launch was not as promising as anticipated. Dropbox opted for the conventional marketing method with the use of Public Relations, PR, big launch at an international technology conference, TechCrunch50 and Adwords. Despite the big spending to acquire new users, the result was not successful as the cost per acquisition was costlier than the revenue the acquired user brings. The cost per acquisition was around $400 when the price of the product was $99. The bottleneck was the user behaviour that they do not actively seek for the cloud storage and do not search them online therefore the demand was low. In order to create the demand, the growth hacker expert Sean Ellis proposed the “refer a friend” program. It works by an existing user sending out an invite to their friends and family and when any of them join, they both receive incentives such as discounts to the products. An example of referral program is shown in Figure 8. The outcome was a great success with the 4 million number of users growth from only 100,000 users after 15 months of the launch. The referral program sourced 35% of daily signups and the sharing folders and other viral features sourced 20%. The referral program worked by making people try something new they initially otherwise thought was not needed then surprise them with a great product performance that turn them into happy customers who are willing
to share their experience and feelings to their own friends. This process is illustrated in Figure 9 and it forms a viral loop or cycle that brings exponential growth. (Houston 2011, cited 15.05.2016.)

FIGURE 8. Referral program page at Dropbox (McLaughlin 2015, cited 15.05.2016)

FIGURE 9. Dropbox user acquisition process (Houston 2011, cited 15.05.2016)
3. GROWTH HACKING IMPLEMENTATION

Growth hacking is a continual process with the dedication and commitment on constant experimentation, not a one-off trick or solution to get a boost on growth. Not all experiments will work as expected and that is the learning process; at least the company learns what does not work and does not waste time nor money on the same route again in the future. When one experiment has worked out of many, that idea becomes a part of the product or process just like the referral program in Dropbox became a part of the product. (The product hatchery 2015, cited 16.05.2016.)

3.1. Growth Hacking Process

Every scientific experiment requires a thoughtful process in order to be coherent and precious and the same logic applies when it comes to growth hacking experiments. The process steps are taken from “The Definitive Guide to Growth Hacking” 2015 by Patel, N and Taylor, B.

There are 6 steps in total and this is helpful to shape the experiment as there is no set rules that fit for all.

Step 1. Define goals

The most important part of the growth hacking process is defining the goal as it defines the purpose of the experiment. The overall goal is always growth however it is too broad and difficult to see how to achieve the goal therefore it needs to be narrowed down to be more specific and focused. A good way to come up with the easy to achieve goal is to break down the goal into smaller tasks that are quantifiable and actionable. Something that can be easily measured and takes a single action to achieve. Think of the goal as an individual task that can be easily marked off on the to-do list and stays marked off after it is completed.

Step 2. Setting up analytics to measure goals

Once the goal is defined, an appropriate tool such as a set of analytics must be placed in order to track and measure the defined goal. If the goal is not tracked, it is hard to see when the goal is attained and therefore the goal becomes meaningless. In addition, analytics provide valuable information that can be used as a guide to set the experiment into the right direction. For example, when analytics show that the experiment is going nowhere meaning the goal is not successfully
achieved then the experiment should be reset with a redefined goal. Analytics gives a set of eyes to see what is working and what is not working to achieve the goal. Good use of analytics is click through rate, CTR and conversion rate.

**Step 3. Know the strength and leverage it**

When it comes to choosing which method to utilise, it is helpful to know strengths the startup possesses so they can use them as a leverage. In a situation where the resources and funds are limited, this is a great hack to achieve the goal quicker with less resources. For example, when a startup wants to promote a new product to the users, it either could send out emails to the potential users or put the new product post to the social media. If the startup already has a big list of emails at hands, it is more effective to create a promotional email and send it out to the email list. With a little energy spent, it brings a bigger impact.

**Step 4. Run the experiment**

Before running the experiment, the guide says it is important to write down the hypothesis, the best guess of what will likely to happen. For example, what will be the click through rate with the email sent out and how much sales will this e-mail bring. Despite not having all the information to make an accurate guess at hands, the hypothesis must specify the figures as to by how much the click through be or the percentage of sales it will increase over a set period of time, and the reasons behind setting that hypothesis. The reason to state the hypothesis is to see what assumption is made and for what reason. When the result proves the hypothesis wrong, it is imperative to examine why the assumption is proven wrong. For example, when the hypothesis is made to assume that the email will bring low click through rate because an email was sent previously and this may discourage the users to engage with the emails as it could come across as a spam. But if the click through rate comes higher than expected then a valuable information can be learnt that the users may enjoy being in contact with the company and therefore they tend to click the e-mails to read the news about the company.

The crucial take away from this is to learn from the experiment whether the hypothesis was right or wrong, the point of hypothesis is to learn a valuable information that is otherwise not would have known.

Furthermore, a good growth hacking cannot be done via one experiment, it takes a series of experiments to come up with a good growth hacking conclusion. One experiment cannot change for better and even if the experiment fails, there is a lot of learn from.
Step 5. Optimise the experiment

Growth hacking is a repetitive, and constant experimentation. They are not meant to be one off deal then move on, rather they are meant to be optimised, tweaked and re-run to see what results it would show. Having a control group is a smart way to minimise the inaccuracy of the result that could had been affected by variables outside of experiment control.

A/B testing is another way to set up the control group, while everything is set constant, change one variable in the test group for example, the subject line of the e-mail to see what subject line brings more engagement from the users. Nothing is proven until the experiment is set and done and results are analysed.
This is also a good time to decide whether to ditch the experiment or not. If the resources required for the experiment is greater than the growth it brings, it is logical to leave the experiment.

Step 6. Repeat

Repeat the experiment by choosing a new experiment or re-running a tweaked experiment.
(Patel & Taylor 2015, cited 16.05.2016.)

3.2. Methods

Growth hacking requires the use of creative and innovative ways that fits the value of the product and the startup company. They are not the traditional marketing techniques such as television or radio advertisements that used to the traditional marketing channels to promote or market the product. Here are some of the ways that have surfaced to be popular and successful with growth hacking. Not all methods may work for everyone as the techniques are driven by the product and the user base so understanding the product and its customer base is a crucial factor to decide which method to use to grow the user base. (Relander 2015, cited 16.05.2016.)

3.2.1. Virality

Virality is formed when there is a strong “word of mouth” activity about the product or the company in the online space such as e-mail or social media such as Facebook, Twitter or Instagram. There are mainly two ways that causes the word of mouth online virality; one is when the customers really love the product or the company that they would be willing to share about their reviews, or the
experience about it through social media or review platforms. Second is through the form of incentive given to the customers such as getting digital credits, discounts as seen on Figure 10 for sharing the product to their friends or family. This is often called as referrals. The referral technique has been hugely successful for gaining a rapid growth for startups such as Dropbox and Airbnb.

An advertising survey done at Nielsen Global Trust in 2011 shows that the level of trust is the highest, 92% when the recommendation is from the people that the users know as the graph shows in Figure 11. The number of percentage is significantly high when compared to the traditional marketing methods such as “Ads on TV” which only has 47% of trust. The top two advertising categories which have more than 60% of trust each are a form of word of mouth that is not be done via traditional marketing such as TV or radio advertisements. The review or recommendations of individuals are most highly valued and trusted source of marketing. In order to have that word of mouth presence online, the product must give a high value to the customers or the company must offer the customers a reward or incentive to take an action. Even with the incentive, the product

must provide customers value in a sense that they want to recommend it the others. (Hanselman 2012, cited 20.05.2016.)

![Figure 11](image)

**FIGURE 11.** Advertising survey done by Nielsen Global Trust in 2011 (Hanselman 2012, cited 20.05.2016)

### 3.2.2. Paid Acquisition

Paid acquisition is a great tool to use for growing the users or the sales of products when the user typically has to pay for the product or services at the scene of exchange. The tools for this method are Google Adwords, Facebook ads, or any other digital ads where the ads are paid in order to be put into the online space. Therefore, this method requires putting in a certain sum of money to start with. However, this is not a recommended method if the purpose of the growth is getting more signups or visitors to the website. It is important to keep in mind how much it costs to get one user and how much that one user brings to the company. If the cost is higher than the profit or any monetary benefits the acquired user brings, even though it is growing the user base, the company
is losing money so in the end it is not a sensible choice for the company. (Chen 2016, cited 20.05.2016.)

3.2.3. A/B testing & Funnel

A/B testing is a type of website experiment where one control group is compared to one of more test group with one changed variable. This way A/B testing becomes a great tool to compare the data when one variable is changed. For example, when one button shape or colour is changed, can it bring more click through rates, or any type of metrics that user may behave to increase. The core of this testing is to see the different user behaviour and optimise the website according to the preferred user experience. The landing page where the user lands on is the testing place where the user decides to leave or take an action to get engaged. If the user leaves right after landing on a page, then it is the time to put A/B testing to increase their engagement to lead the user to take certain actions such as a signup or buy products on the website.

To explain A/B testing in detail, an example will be used. In order to start A/B testing, the growth hacker must decide what goal to achieve for example, increasing the user signup when they land on the website. The rate of a visitor becoming a registered user can be classified as conversion rate, when the visitor converts into a registered user. The conversion rate is calculated by dividing the total number of visitors to the number of registered user (see Figure 12).

\[
\text{conversion rate} = \frac{\# \text{ of visitors who register}}{\# \text{ of total visitors}}
\]

**FIGURE 12. Conversion rate calculation (Farmer 2009, cited 20.05.2016)**

The control group has website that is already existing, so the existing web page where the visitors will be landed from a link on the social media and the test group will have one changed variable on that existing web page. The most common variable that change conditions are the layouts of the page, heading of the page or the size or the colour of the text on the web page. For example, a control group is chosen to be the existing page where the visitors will land, test group A will have a changed layout and test group B will have a changed heading. There are three different conditions
to where the visitors will land, the way they come will be picked at random so some of the visitors will come to the control group, or test group A or test group B. Then the total number of visitors and its registered users are counted then the conversion rate is calculated. If the goal of A/B testing is to increase the signup by 10%, the conversion rate will be used to compare which gave the conversion rate closest to the increase of 10% or the best conversion rate as seen in Figure 13.

### A/B Testing Example Data for the Foobar Service

<table>
<thead>
<tr>
<th>Treatment</th>
<th>Visitors Treated</th>
<th>Visitors Registered</th>
<th>Conversion Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control</td>
<td>1,406</td>
<td>356</td>
<td>25.32%</td>
</tr>
<tr>
<td>Treatment A</td>
<td>1,488</td>
<td>372</td>
<td>25.67%</td>
</tr>
<tr>
<td>Treatment B</td>
<td>1,392</td>
<td>425</td>
<td>30.53%</td>
</tr>
</tbody>
</table>

*FIGURE 13. The conversion rate of different groups, Control, A or B test groups (Farmer 2009, cited 20.05.2016)*

The conversion rate of test group B was the best meaning the changed heading condition on the web page gave out the best conversion rate. Now the growth hacker has the valuable data to work with further. If the process of visitors coming into the landing page and taking certain actions is to be measured and analysed then funnel is a great tool to use.

The funnel analysis as seen in Figure 14 is the shape of upside down triangle, the reason is because the amount of visitors tends to be filtered out with each step taken in the process to reach to the final step which in this example is the signup. To bring the visitors to the landing page, the digital ads is place either on social media or Google. The digital ads are the attraction point where they draw the visitors into the designated website. If the ads are not attractive enough or are not relevant to the shown viewers even though the amount of audience the ads are shown to, is high, the number of visitors will be low. So the number of people who goes to the site decreases. Normally the number of visitors to the website is lower than the number of people who has viewed the ads. Dividing the total number of views on ads by the total number of visitors to the website shows the conversion rate to the website. If the rate is low, then it shows that the ads needs to be
optimised to attract more viewers into clicking the ads. Then the final step where the visitors take an action to do the sign up is the bottom part of the funnel. The signup conversion rate is calculated by dividing the total number of visitors by the total number of signups. A change in each step is a conversion process and its rate shows where the bottleneck presents. Funnel is a good way to examine where in the process the users are most likely to stop taking an action further and leaves. By focusing on the area where it causes the most amount of leavers, the growth hacker can minimise the amount of resources by tackles one specific area that needs will show the most increase in the conversion rate once it is optimised properly.

*FIGURE 14. The funnel analysis on ads to signup (Optimizely 2016, cited 20.06.2016)*
4. GROWTH HACKING AT CUBICASA OY

Using the resources and methods of growth hacking studied, a real growth hacking case is conducted at a startup company CubiCasa Oy. CubiCasa Oy is looking for a new market place to sell floor plans and Airbnb is decided to be the place to explore and look for new sales opportunities. Airbnb is a platform where individuals can place an ad of their place to rent out their rooms or whole apartment or house to the travelers around the world. Each ad contains a list of amenities and photographs to show what the place looks like. However, the photographs did not tell the whole story of the place and this is where floor plan could be used as a communication tool to show where the bedroom, kitchen and toilets are located in one image. However, without the prior knowledge or experience in selling floor plans to Airbnb hosts and with the limited budget and resources, growth hacking was the most suitable tool to use. Exploring a new market, trying out the market-fit and bringing a new type of customers could be a huge growth to CubiCasa Oy because Airbnb is an international company with a significant number of user base, the number of listings in Airbnb alone is 2 million.

4.1. Planning

The goal of the experiment was to try out the market fit, to see if the product, floor plan, is what the Airbnb hosts needed and valued. There was no definite goal but to test if floor plans product grabs the target audiences, Airbnb hosts attention. A/B testing was used where two different types of Facebook ads were placed at the price of $50 each for the ads for two weeks each at a different period. In testing group A was run first for two weeks charging $20 for floor plan and a week after that group B was run for two weeks with offer of the free floor plan. The target audience was the Airbnb hosts based in the USA, Facebook ads has the filtering feature where the audience can be set according to the preference of the ads.

The content of the ads is to put the price of the floor plan and a catchy phrase that says “How to bring more guests with floor plan” since the objective of any Airbnb hosts is to attract more guests to make more profit with their listing.
4.2. Tools used

Facebook ads were used and they offer a filtering feature where the ads owner is able to set the audience to the interest, geographical location, language spoken, the age, gender and the device used. The audience was set to three variables; the interest in Airbnb, geographical location to the USA and the age of 20 ~ 60 years old. In order to track the ads seen, the number of visitors, the visitors online behaviour on the landing page, Google Analytics, Facebook Ads Manager and VWO (Visual Website Optimization), an online paid software to record the visitor’s behaviour such as the clicks and movement of the mouse. Google Analytics is a great tool to see how many visitors land on the page and how long they stay for and if they exit or go further to another page, Facebook Ads Manager is a tool to see how many times the ads were shown and how many have viewed it and how many were engaged with the ads.

4.3. Analysing Data and results

The data were collected using Google Analytics, Facebook Ads Manager, and VWO and analysed using Funnel to see where is the bottleneck, the lowest conversion rate, in the process.

**TABLE 1. The comparison of two Facebook ads to landing page rate**

<table>
<thead>
<tr>
<th></th>
<th>Impression</th>
<th>Reached</th>
<th>Viewed</th>
<th>Went to /Airbnb</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Type A ($20)</strong> 18.Nov - 25.Nov</td>
<td>6353 (100%)</td>
<td>5498 (86%)</td>
<td>1100 (17%)</td>
<td>52 (0.8%)</td>
</tr>
<tr>
<td><strong>Type B (Free) 2.Dec - 9.Dec</strong></td>
<td>4157 (100%)</td>
<td>4001 (96%)</td>
<td>958 (23%)</td>
<td>12 (0.3%)</td>
</tr>
<tr>
<td><strong>Comparison</strong></td>
<td>34.5% ↓</td>
<td>27% ↓</td>
<td>12% ↓</td>
<td>76.9% ↓</td>
</tr>
</tbody>
</table>

Table 1 shows the data collected from Facebook Ads; how many times the ads were impressed, reached, viewed then how many people click the ads to visit to CubiCasa Airbnb web page. The impression number is the number of times the ad was displayed to the audience. One audience may get multiple displays of the ads. The reached shows the number of people who was shown the ads to. The number of reached is normally lower than the number of impressions because there are multiple impressions to a single audience. The number of viewed is the number of times the ad was actually viewed by the audience. The number of “Went to /Airbnb” is the total number of people
who visited cubicasa/airbnb web page. The percentage figure across the columns shows the starting number at 100% then how much of that 100% went through each step. The vertically compared percentage down the rows in the same column is the comparison of the type A and B test group at the same step. The number vertically compared shows that the number of impression is 34.5% lower in group B than group A and overall, the group B did poorer than group A.

4.4. Results & next step

The result shows low conversion rates and both did not bring any floor plan orders to CubiCasa Oy. The comparison of Group A and B shows out of ordinary user behaviour as the free offer which was group B performed poorer than group A. However normally free product promotion performs better than full price product sales. This showed that the Facebook Ads were not the right choice of place to attract Airbnb hosts.

TABLE 2. The problems with Facebook ads and its reasons analysed

<table>
<thead>
<tr>
<th>Problem</th>
<th>Reasons &amp; Solution</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 In both Type A and B, the number of people landing to our cubicasa/airbnb page is low, that could mean that the post is not persuading the people to go to the page</td>
<td>We could run one campaign that uses different post content to see which one has higher % of landing to cubicasa/airbnb page. For instance, Facebook allow users to have multiple posts for one campaign.</td>
</tr>
<tr>
<td>2 Type A did better overall than Type B.</td>
<td>This could be due to using the same campaign content for both campaigns. So it is repeating campaign for the end users who has already viewed the first campaign.</td>
</tr>
<tr>
<td>3 Facebook audience is not genuine. -see Attachment 1. and 2. for GA stats -see link to see video recording(Fake user) -see link for genuine user</td>
<td>Using Google Analytics and VWO to examine how the users behave on cubicasa/airbnb page, I found out that some users spend very little or some users only refresh the site without interacting with the page. I suspect them to be bots or paid users who click the post to have a better stats number on facebook ad summary.</td>
</tr>
<tr>
<td>4 Communication Channel...?</td>
<td>I am not 100% confident if Facebook ad is the right tool to get genuine users to land to airbnb page. We could post the similar content (FREE floor plan) on forums, blogs, facebook group such as Interior Designers, IoT.</td>
</tr>
</tbody>
</table>
Table 2 shows that one of the reason why the number of visit the web page is low could be due to the lack of appeal to the Airbnb hosts, the ads were not attracting enough to selling to pull the Airbnb hosts to visit the web site. Another reason is due to the lack of genuine audiences who are actually Airbnb hosts in the USA. The Facebook ads audience setting was not guaranteed to show the ads to Airbnb hosts as the filtering feature was limited to choosing people whose interest was Airbnb company. The interest of the Facebook users in Airbnb may not necessarily mean they are Airbnb hosts. To sum up, Facebook ads was not able to find the right target audience to show the ads to.

According to figure 15, the number of users dropped the most considerably between the viewed to landing on the web page, this is where the bottleneck occurs. This funnel analysis shows that between viewing the ads to landing on the web page is where requires the most optimisation to improve the number of visitors to the web page. Since Facebook ads has proven to be an unreliable tool to bring the specific target audience, a different communication channel should be used to put the Airbnb floor plan ads. The summary of the first experiment document is attached in appendix 1.

![Funnel Analysis Diagram](image-url)

**FIGURE 15. Funnel analysis of A and B groups**
4.5. Further action taken

Facebook groups dedicated to Airbnb hosts were chosen as a communication channel to post the Airbnb floor plan ads and the floor plan was decided to be offered for free in exchange for the feedback on the quality floor plan and its ordering process. The goal of this experiment is to see the market-fit and how the Airbnb hosts are satisfied with the quality of the floor plan by getting feedback. The reward for the users was to receive a free floor plan to improve their Airbnb listing. The result was profoundly more successful than the first experiment as the conversion rate of seeing the post at the Facebook groups to ordering the free floor plan was 9% in the span of 6 weeks and received 27 feedbacks in total. Considering the total number of orders was 45 and the total number of feedback received is 27, 60% of people who has made an order gave the feedback. The feedback provided a valuable insight to how Airbnb hosts felt about the floor plan quality and its service. 80% of people were willing to pay for the floor plan at the price range of less than US$10 to $15 as shown in Figure 16.

![Image]

**FIGURE 16.** Responses to “How much are you willing to pay for floor plan service?” in the feedback

In addition, 96% of the respondents said they find floor plan useful for their Airbnb listings and 100% of the respondents said yes to having the floor plan service offered by Airbnb which is a clear
indication that floor plan is a good market-fit to Airbnb hosts. Furthermore, the hosts expressed that they would like to have a furniture shown on the floor plan in order to provide a better description of their place to the guests. As shown in Figure 17, the original floor plans only contain the room label and the relative room size information to the guests. The unique room labels for example, host bedroom, shared kitchen and host toilet gave extra information that they found useful to Airbnb listings. Original floor plans do not show furniture placements to tell the guests what furniture are available and where they can be found. This extra information gave CubiCasa Oy to build a simple web app where the hosts can use to add furniture according to their own furniture placement.

![Floor Plan Diagram]

**FIGURE 17. Airbnb floor plan provided by CubiCasa Oy**

Lastly, CubiCasa Oy was interested in forming a partnership with Airbnb to shift the Business-to-Customer model to Business-to-Business model as it will save CubiCasa Oy’s resources to gain new Airbnb hosts and also having the floor plan product offered by Airbnb is more reliable to the
hosts. Therefore, it was later decided to produce Airbnb floor plan case study to present it to Airbnb in the future, which is added in the appendix 2. Meanwhile in order to grow the number of floor plan sales to the Airbnb host users, referral program could be launched to attract fellow Airbnb hosts. From the feedback received, some Airbnb hosts who have more than one listings on Airbnb wished to order more than more floor plan. So if the invited Airbnb host orders a floor plan, the referee and referrer both could receive a discount.
5. CONCLUSION

The term growth hacking is a relatively new term yet the practice of growth hacking has been around for a long time as its first successful growth hacking dates back to 1997. This is when Hotmail added signature tagline with the link to the signup page to offer free e-mail accounts to the users in the market where e-mail services were only offered to a certain type of groups or paid individuals. With the rise of startups globally, growth hacking has been widely accepted by startups to grow the company by increasing its user base exponentially in a rapid speed. One of the most successful growth hacking method, referrals, has been notably successful with the wide spread use of social media and its strong presence in the online platform.

Growth hacking must not be confused with marketing as growth hacking uses the creative and innovative ways to gain an accelerated growth. This fits the nature of startup on the basis that startup creates a product or service under a condition of uncertainty. The condition of uncertainty means the market-fit is unknown as the product or service has never been tested with the target audience. The uncertain conditions make growth hacking a valuable tool to test out the market-fit against the target audience and only through a series of experiments, conclusions can be drawn to make informed decisions for the startup’s growth. This scientific and data-driven approach distinguishes growth hacking from the traditional marketing method. Traditional marketing employs a tested and proven marketing channels such as ads through TV, radio or newspapers to promote the products or services with a big size of budget and resources.

Growth hackers must make decisions according to what the data has provided and the overall goal is to produce a growth via growing the user base or sales. However, experiments should have a specific and broken down individual task to start with in order to construct an actionable and measurable goal. Through having measurable goals, the goals become meaningful and it is easy to track when the goal is achieved. In order to measure the goals, metrics such as click through rate or conversion rate must be set up so a bundle of data becomes valuable information that provides coherent knowledge that the startup can learn from to decide where to put the focus on which helps to minimise the chances of wasting its limited funds and resources.
The commissioner CubiCasa Oy has employed growth hacking to test a new market-fit with Airbnb hosts and its floor plan. From the first experiment where it used Facebook Ads to promote the floor plan products, a lesson was learnt that Facebook ads was not the suitable channel to find the targeted customers. Although the result seemed to indicate that the experiment was a failure, in growth hacking no experiment is a failure as a new knowledge can be always learnt. In the case of first experiment, Facebook ads was not the right channel to find its target audience, Airbnb hosts. Therefore, CubiCasa Oy made an informed decision to look for other channels to promote its products and this saved their time to focus on what is working and that in turn saves their funds and resources. If the experiment never took place, then CubiCasa Oy would continue to spend their resources on Facebook Ads.

The second experiment took no cost of ads however, it took the time of the growth hacker to manually post the free floor plan offer to different Airbnb host Facebook groups. However, the outcome was far more successful than the first experiment as the floor plan order conversion rate was 9%. The second experiment used a reward hack to gain valuable feedback to learn the market-fit and the price range the Airbnb hosts were willing to pay for the floor plan service. With the feedback, CubiCasa Oy could quickly and reliably conclude the price of floor plan and what features are needed to improve the floor plan service. Furniture placement on the floor plan was requested by many respondents and CubiCasa Oy has decided to build a web app for Airbnb hosts to add furniture. It shows that using the results of second experiment, an idea of Airbnb hosts became a part of the product.
6. DISCUSSION

Through personally conducting growth hacking experiments, I have learnt to endure the uncertainty and the fear of failure aspects as I was working with a project that has never been done before. This also brings the careful use of time allocation as experiments could face unforeseeable events which could delay or slow down the experiments. For example, the first experiment has led to nowhere as only a minuscule number of users landed to CubiCasa Airbnb floor plan web page and with so little number, there was not sufficient data to work with apart from a lesson that Facebook Ads was the right tool to reach out to the target audience. Due to the lack of information and data collected, it took more time than expected to come up with the next experiment with the problem of how to find and reach to the Airbnb hosts. With the regards to the time management, in the second experiment the hosts were willing to try out the free floor plan and quickly placed an order however, it took time receive feedback. Although the feedback rate was somewhat significant as 60% of who has ordered gave feedback, the time took to do the feedback questions was on average a week after they have received the floor plan. Therefore, it took more time than planned to collect the data in order to come up with a valuable information that CubiCasa Oy could use.

On the personal development wise, I learnt to use Google Analytics, Facebook Ads, and an experimental concept A/B testing which I would not normally have had an opportunity to learn. These tools are not normally taught at University as they are relatively new online tools that has recently emerged with the rise of social media and Google search engine. I have also learnt to manage building a product, web app for placing furniture for Airbnb hosts. It required a solid and clear communication skill with a developer. I needed to concisely deliver a set of requirements from the Airbnb host feedbacks such as what furniture to add and also listen to the developer’s technical side on building the web app to what is possible to add and not.

In the future when the web app is near to finish, a new experiment could be set up to see how Airbnb hosts are using web app and how web app is helpful to attract the new customers. A referral program could be placed to promote the Airbnb floor plans by offering a floor plan at discounted price to the referrer when a new signup is registered.
REFERENCES


Chen, A. 2016. There’s only a few ways to scale user growth, and here’s the list. Cited 20.05.2016, http://andrewchen.co/theres-only-a-few-ways-to-scale-user-growth-and-heres-the-list/


AirBnb A/B Testing Summary

The comparison statistics:

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<tr>
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<th>Went to /Airbnb</th>
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<td>2.Dec - 9.Dec</td>
<td></td>
<td></td>
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<td>12% ↓</td>
<td>76.9% ↓</td>
</tr>
</tbody>
</table>

Impression Number: How many times it was displayed in timeline
The Type A was run a week before the Type B. The number of Impression in Type B is considerably lower than Type A by 34.5% even though the both campaign was using the exact same conversion video. This is controlled by Facebook so they displayed the campaign a lower number of impressions to people.

Reached Number: How many people it reached
Type A has reached to 5498 people whereas Type B has reached to 4001 people. The Facebook has shown the campaign to the lower number of audiences. Type B number is lower than Type A by 27%, but all the figures in Type B will be lower since the total number of campaign impressioned is lower in Type B.

Viewed: The number of people who has viewed the conversion video
The number between Type A and Type B is not so big as there is only 12% difference. Considering Type B had a lower number of people Facebook displayed the campaign, the viewed number did better in Type B than Type A. This could be due to the Description written on the campaign post. “We are excited to present you with a FREE floor plan for your lovely Airbnb listings.” The use of word “FREE” attracted people better.

Landed to AirBnB: The number of people who landed on our cubicasa/airbnb page
The difference between Type A and Type B is the biggest as Type B did 76.9% poorer than Type A. Considering Type B had 34.5% lower number of display impressioned, a lower number was expected. But why 76.9% lower is unknown. In the funnel analysis, this is where the number of people drop the most, so this is where we need to work on. Convert to land to Airbnb page but the genuine users not the fake Facebook account users.
Problem findings and Solutions:

<table>
<thead>
<tr>
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</tr>
</thead>
<tbody>
<tr>
<td>1</td>
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<tr>
<td>2</td>
<td>Type A did better overall than Type B. This could be due to using the same campaign content for both campaigns. So it is repeating campaign for the end users who has already viewed the first campaign.</td>
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<td>3</td>
<td>Facebook audience is not genuine. -see Attachment 1. and 2 for GA stats -see link to see video recording (Fake user) -see link for genuine user Using Google Analytics and VWO to examine how the users behave on cubicasa/airbnb page, I found out that some users spend very little or some users only refresh the site without interacting with the page. I suspect them to be bots or paid users who click the post to have a better stats number on facebook ad summary.</td>
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<td>Communication Channel...? I am not 100% confident if Facebook ad is the right tool to get genuine users to land to airbnb page. We could post the similar content (FREE floor plan) on forums, blogs, facebook group such as Interior Designers, IoT.</td>
</tr>
</tbody>
</table>

Summary

The most important finding is that in the Funnel Analysis the number of people drops the biggest in the “Land to Airbnb page” conversion. I came up with some actionable goals to increase the number of people landing to Airbnb page is to create contents that is visually appealing and
persuade the customers to click. Another way is to posting to forum, blogs, Facebook groups to generate a back link to our “Get Free Floor plan” page where it can increase the web traffic.

Attachment 1. The google analytics figure on Type A, the time spent on Airbnb page

<table>
<thead>
<tr>
<th>Source</th>
<th>Acquisition</th>
<th>Behavior</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Sessions</td>
<td>% of New Sessions (%)</td>
</tr>
<tr>
<td>m.facebook.com</td>
<td>28 (9.64%)</td>
<td>98.43%</td>
</tr>
<tr>
<td>facebook.com</td>
<td>24 (14.90%)</td>
<td>100.00%</td>
</tr>
<tr>
<td>.facebook.com</td>
<td>11 (14.47%)</td>
<td>100.00%</td>
</tr>
<tr>
<td>app.vwo.com</td>
<td>9 (16.66%)</td>
<td>0.00%</td>
</tr>
<tr>
<td>(direct)</td>
<td>2 (2.43%)</td>
<td>100.00%</td>
</tr>
<tr>
<td>google.com</td>
<td>2 (2.43%)</td>
<td>0.00%</td>
</tr>
</tbody>
</table>

Attachment 2. The google analytics figure on Type B, the time spent on Airbnb page

<table>
<thead>
<tr>
<th>Source</th>
<th>Acquisition</th>
<th>Behavior</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Sessions</td>
<td>% of New Sessions (%)</td>
</tr>
<tr>
<td>facebook.com</td>
<td>12 (60.00%)</td>
<td>100.00%</td>
</tr>
<tr>
<td>m.facebook.com</td>
<td>8 (28.00%)</td>
<td>80.00%</td>
</tr>
<tr>
<td>app.vwo.com</td>
<td>2 (10.00%)</td>
<td>50.00%</td>
</tr>
<tr>
<td>google.com</td>
<td>1 (5.00%)</td>
<td>0.00%</td>
</tr>
</tbody>
</table>
Presentation of Airbnb Case Study for Airbnb

APPENDIX 2

01
9% conversion
- 45 ordered out of 500 seen the post
- period: 1-Feb - 7-March

02
96% Useful
- 26 out of 27 gave feedback said “Having floor plan is useful for listing”
- 100% replied “YES” to “floor plan service offered by Airbnb”

03
13 countries
- Airbnb hosts from 13 different countries
- Non-english speaking countries wanted to have room labels in English for international guests
- Australia, Canada, Chile, India, Hong Kong, New Zealand, Portugal, South Africa, UAE, UK, US, Vietnam
CubiCasa is a floor plan production company with a focus on digital indoor data. We have done 40,000+ 2D/3D floor plans in 28 different countries.

Digital indoor data can be used for Real Estate, Home Automation UI, VR/AR, Indoor navigation and Interior design industry.

We differentiate ourselves from traditional floor plan companies. As time is a scarce resource, CubiCasa solves the problem by converting any source material to high quality floor plans in 2D and 3D in affordable and quick turnaround process.

Floor plans provide insightful information on indoor space as whole whether it is for private home, or commercial public space.

---

**Airbnb statistics**

- Airbnb has 2 mil. listings with 60 mil. users
- On average 500,000 stays occur per night.
- Airbnb is active in 192 countries with 57,000 cities

Source: DMR digital stats

---

**Airbnb Hosts Feedback**

- 9% conversion = 45/500
- 5 weeks period
- 100% respondents wish to have floor plan service in Airbnb
- 96% find “having floor plan on listing” useful
- 37% = Less than $10
- 40% = $10 - $15
- 96% are happy with “quality of floor plan”

---

**Better Solutions for Airbnb**

Reduce the amount of time spent on browsing airbnb listings.

Information quickly delivered will quicken the “browsing to choosing right listing process” time.

Less burden on guests to research and improve the overall online user experience on Airbnb site

Condense listing data to visual information in one place where guests can quickly scan and absorb useful information such as:

- space placement
- furniture placements
- amenities
- extras such as Tesla charging stations for Tesla car drivers

For private home, university dormitory, office space