

Growth Hacking

A Case Study Identifying and Specifying the Growth Hacking Process

DIPLOMARBEIT

zur Erlangung des akademischen Grades

Diplom-Ingenieur

im Rahmen des Studiums

Business Informatics

eingereicht von

Jakub Zarzycki, BSc

Matrikelnummer 1125705

an der Fakultät für Informatik

der Technischen Universität Wien

Betreuung: Privatdoz. Mag. Dr. Karl-Heinz Leitner

Mitwirkung: Univ. Lektor Mag.rer.soc.oec. Georg Reischauer, M.A. B.A.

Wien, 26. April 2017

Jakub Zarzycki

Karl-Heinz Leitner

Growth Hacking

A Case Study Identifying and Specifying the Growth Hacking Process

DIPLOMA THESIS

submitted in partial fulfillment of the requirements for the degree of

Diplom-Ingenieur

in

Business Informatics

by

Jakub Zarzycki, BSc

Registration Number 1125705

to the Faculty of Informatics

at the TU Wien

Advisor: Privatdoz. Mag. Dr. Karl-Heinz Leitner

Assistance: Univ. Lektor Mag.rer.soc.oec. Georg Reischauer, M.A. B.A.

Vienna, 26th April, 2017

Jakub Zarzycki

Karl-Heinz Leitner

Erklärung zur Verfassung der Arbeit

Jakub Zarzycki, BSc
Karlsplatz 13, 1040 Vienna

Hiermit erkläre ich, dass ich diese Arbeit selbständig verfasst habe, dass ich die verwendeten Quellen und Hilfsmittel vollständig angegeben habe und dass ich die Stellen der Arbeit – einschließlich Tabellen, Karten und Abbildungen –, die anderen Werken oder dem Internet im Wortlaut oder dem Sinn nach entnommen sind, auf jeden Fall unter Angabe der Quelle als Entlehnung kenntlich gemacht habe.

Wien, 26. April 2017

Jakub Zarzycki

Danksagung

An dieser Stelle möchte ich mich bei allen Personen bedanken, die mich während der Erstellung dieser Arbeit unterstützt und mir zur Seite gestanden sind.

Zuerst gebührt mein Dank meinem Betreuer und Assistenten Herrn Prof. Leitner und Prof. Reischauer, die diese Diplomarbeit betreut und beguachtet haben. Für die unermüdliche Unterstützung und konstruktive Kritik möchte ich mich herzlich bedanken.

Einen zweiten großen Dank möchte ich den Teilnehmern meiner Studie aussprechen, ohne die diese Arbeit nicht hätte entstehen können. Vielen Dank für die interessanten Gespräche und Beiträge zur Arbeit.

Ebenfalls bedanken möchte ich mich bei meinen Freunden, Eltern und Großeltern, die immer eine offenes Ohr für mich hatten und mich während des gesamten Studiums motiviert haben. Ohne euch wäre ich nicht hier, wo ich bin!

Jakub Zarzycki
Wien, 26. April 2017

Kurzfassung

Das Ziel der vorliegenden Diplomarbeit ist die Identifizierung und Spezifizierung des Growth Hacking Prozesses im Rahmen einer Untersuchung zweier Startups im anfänglichen Stadium. Growth Hacking ist ein Marketingansatz, bei dem kreative Techniken (sogenannte "Hacks") angewendet werden, um das Wachstum der Kundenbasis anzuregen. Dabei wird besonderer Wert auf die Analyse und die Beobachtung gelegt. Die theoretische Bestandsaufnahme zum Thema Growth Hacking wurde aus der grauen Literatur gewonnen, da akademische Literatur zu diesem Thema nur beschränkt verfügbar ist. Anschließend wurde eine intensive Literaturrecherche betrieben, um die wissenschaftlichen Bereiche rund um Growth Hacking kurz zu beschreiben. Dabei versuchte der Autor einen Bereich zu finden, in dem Growth Hacking angesiedelt werden könnte, deshalb wurde besonderes Augenmerk auf das Thema des Entrepreneurial Marketing gelegt. Da im Rahmen der Arbeit ein Prozess entworfen wurde, wurde auch das Thema Business Process Management angesprochen, und hierbei speziell das Business Process Modelling. Für die Untersuchung wurde die Methode der Fallstudie gewählt, im Rahmen welcher diverse Dokumente analysiert, die Ereignisse direkt beobachtet und qualitative Interviews mit den für Growth Hacking in dem Unternehmen verantwortlichen Personen durchgeführt wurden. Im nächsten Schritt wurden die gesammelten Materialien mittels der Methode der qualitativen Inhaltsanalyse ausgewertet. Aus den Daten wurden induktiv Kategorien gebildet, die in späterer Folge zu Prozessschritten zusammengefasst wurden. Diese Vorgehensweise ergab einen vollständigen Growth Hacking Prozess, der in Business Process Modelling Language dargestellt wurde. Der Prozess betrachtet im Vergleich zu der Theorie, die im Rahmen der grauen Literaturrecherche erarbeitet wurde, zusätzliche Aspekte wie das Lernen aus der Vergangenheit und den Aufbau einer "Wissensbibliothek" mit den vergangenen Messwerten und Hypothesen.

Abstract

This thesis focuses on growth hacking - a marketing approach for startups utilizing creative techniques and analytics to approach and win customers - and the identification and specification of the underlying process depicting the usage of growth hacking in an early stage startup.

As the topic has not yet been a subject of broad academic research, this work discusses and consecutively summarizes the state of research on growth hacking using grey literature found mainly on the internet in form of blogs and articles. Additionally the field of entrepreneurial marketing is being described, as it shows affiliation to the topic and thus offers an area of research where growth hacking could be positioned in. The results of the literature research show flaws in the definition of the growth hacking process, offering mainly the description on how to develop growth hacks (i.e. techniques used for reaching the goals defined during the growth hacking process). This thesis uses the case study research method involving two early stage technology startups with software products to address those flaws. In the scope of the case study the author of this thesis collects documents, makes observations and conducts interviews. The collected data is then interpreted using qualitative content analysis in order to identify and specify the underlying growth hacking process. At first all the data gathered is being used to inductively develop categories, which then are being used for data interpretation.

The resulting process depiction offers a detailed process description considering all the aspects of growth hacking identified during the grey literature research. The description includes aspects not found in the literature like the learning loop or the creation of a knowledge library consolidating previous growth hack runs and hypotheses.

Contents

Kurzfassung	ix
Abstract	xi
Contents	xiii
I Introduction	1
1 Introduction	3
1.1 Problem Definition	3
1.2 Aim of the Research	4
1.2.1 Research Questions	5
1.3 Methodology and Approach	5
1.4 Relation to Business Informatics	6
1.5 Overview and Structure of the Thesis	7
II Theory	9
2 Growth Hacking State of Art	11
2.1 Grey Literature	11
2.1.1 Challenges	11
2.1.2 Advantages	12
2.1.3 Discussion and Conclusion	13
2.2 Author Selection	14
2.2.1 Experts	14
2.3 Growth Hacking	15
2.3.1 Background	15
2.3.2 Definition	16
2.3.3 Prerequisites	20
2.3.4 Process	20
2.3.5 Philosophy	23
2.3.6 Growth Hacking Techniques	24
	xiii

2.4	Summary	25
3	State of Research	27
3.1	Entrepreneur and Entrepreneurship	27
3.1.1	Historical Background	27
3.1.2	Meaning	28
3.1.3	Summary	29
3.2	Start-up	29
3.2.1	Historical Background	29
3.2.2	Meaning	30
3.2.3	Summary	31
3.3	Marketing	32
3.3.1	Historical Background	32
3.3.2	Meaning	33
3.3.3	Summary	34
3.4	Entrepreneurial Marketing	34
3.4.1	Historical Background	34
3.4.2	Meaning	35
3.4.3	Goals and Challenges	35
3.4.4	Summary	36
3.5	Business Process Management	37
3.5.1	Historical Background	37
3.5.2	Process	38
3.5.3	Business Process Management Definition	38
3.5.4	Business Process Modelling Notation	40
3.5.5	Growth Hacking Process in BPMN	40
3.5.6	Summary	41
3.6	Conclusion	42
	III Empirical Part	45
4	Research Design	47
4.1	Why Case Study Research?	47
4.1.1	General	47
4.1.2	Design Types	48
4.1.3	When to Use	48
4.1.4	Applications	50
4.1.5	Conclusion	50
4.2	Designing a Case Study	50
4.2.1	Data Collection	51
4.2.2	Data Analysis	52
4.2.3	Role of Theory	53
4.2.4	Quality	53

4.3	Conducting a Case Study	54
4.3.1	Data Collection Methods	54
4.3.2	Data Analysis Methods	56
4.3.3	Qualitative Content Analysis	57
4.3.4	Case Study Protocol	60
5	Case Description	61
5.1	Cases	61
5.2	Startup 1	62
5.2.1	Background Information	62
5.2.2	Status Quo	62
5.3	Startup 2	63
5.3.1	Background Information	63
5.3.2	Status Quo	63
5.4	Documents	64
5.5	Interviews	64
5.6	Observations	65
5.7	Quality	66
6	Interpretation	69
6.1	Formulation of Categories	69
6.2	Interpretation of the Categories	70
6.2.1	Goals Definition	72
6.2.2	Growth Hack Development	73
6.2.3	Growth Hack Testing	76
6.2.4	Growth Hack Operation	77
6.2.5	Metrics and Analytics	78
6.2.6	Learning Loop	80
6.3	Process Summary	80
IV	Summary	85
7	Summary and Future Work	87
7.1	Summary	87
7.2	Discussion	89
7.3	Limitations	90
7.4	Future Work	90
V	Appendices	93
A	Interview Questions and Protocol	95
A.1	Questions	95

A.2	Protocol	96
A.2.1	Startup 1, Interview - Transcript	96
A.2.2	Startup 2, Interview - Transcript	99
B	Observation Protocol	105
B.1	Startup 1	105
B.2	Startup 2	109
C	Documents Protocol	115
D	Categories	117
	List of Figures	131
	List of Tables	132
	Acronyms	133
	Bibliography	135

Part I

Introduction

Introduction

1.1 Problem Definition

Growth Hacking is a keyword that has first been used in 2010 by Sean Ellis [1] in his blog post about finding the right person to lead the growth of an startup. He referred to such a person as the “growth hacker” – someone who concentrates solely on the scalable, repeatable and sustainable ways to rapidly grow a business, or - in case of online startups – the user base. Thus the first occurrence referred to a position in a startup.

The actual term emerged during the dot-com boom around 2000, when the traditional marketers tried to advertise websites using standard marketing techniques for that time. After some time the dot-com bubble burst, and while the used marketing techniques were not solely to blame, they were a part of it. The costly ads and billboards have been recognized as too expensive for high-tech startups to use and thus the need for a new strategy emerged – possible beginning of growth hacking:

"The term and the philosophy are a reaction to the failed practices of the dot com boom." Andrew Chen [2]

The importance of marketing in the area of entrepreneurship and especially for small to mid-sized enterprises(SME) has already been proven in multiple academic papers over the course of the years. It's crucial to launch and develop a new venture and various surveys show that the biggest problem areas when starting a new company are in fact marketing and finance [3][4]. As the company being found is new, in the perception of the users it doesn't exist till the identity and/or brand has been presented to the public by the means of marketing [5].

So what is growth hacking? Regarding this question only a handful of academic papers can be found and most of them only mention the term briefly. However if the grey

literature will be concerned, one can elaborate a simple ideology behind growth hacking - it is a marketing approach which unites the traditional marketing objectives with creative and analytical thinking in technology startups. It concentrates on quick user acquisition applied by technical strategies and technology. Thus growth hacking is a cross section of marketing and IT, with the growth hacker being a versatile marketer with development skills [6].

The term itself addresses a marketing strategy aiming to achieve as rapid growth as it is possible using existing resources. While this seems especially interesting to the startup community, where the growth (besides marketing as an instrument to establish the brand and identity) is one of the key factors dictating entrepreneurial success and one of the main targets of startups per definition (see 3.2), the benefits of the topic and various aspects surrounding the implementation of growth hacking techniques has been highlighted mainly in blog posts and e-books, and, as mentioned above, only few academic sources can be found.

To once more underline the importance of growth: some of the most prominent new comer startups has been subject of growth studies, where their rapid growth has been analysed thoroughly. Spotify has turned free music streaming software into a 10 billion USD business in 6 years [7], which is very similar to what Airbnb has accomplished – the company needed 7 years to reach the 10 billion USD valuation mark [8].

Since the introduction of the term the techniques has been subject to constant change, as a “hack” describes an effective and *creative* solution to a problem. Thus the term itself describes the underlying mindset and principles by which rapid growth can be reached and is not based on concrete techniques.

Looking deeper into growth hacking, there are a few vaguely described process descriptions to be found. However, those seem to focus mainly on the growth hacks and do not include any information about how the process could be used in an early stage startup. Thus the view offered by those processes could be incomplete [9][Chapter 3].

With the subject being very recent, there has been very few scientific publications, especially in the German-speaking countries, in regard to the topic. While one can elaborate that the term itself describes a marketing approach being all about boosting the growth of startups in a cheap and creative way, there is no academic foundation to base the definition upon.

Entrepreneurial marketing as an area of research seems to show affiliations with growth hacking, which may be a possible topic to base the growth hacking approach in.

1.2 Aim of the Research

The main aspect of growth hacking lies in the hacks used for reaching rapid growth. However, as is being shown in the theory part of this thesis, the growth hacking process is very vaguely described in the literature and thus the implementation of such a process seems to require either an experienced growth hacker or a lot of trial and error runs,

before identifying the crucial steps and developing the needed know-how. Most startups neither have access to such personnel nor have the time for costly trial runs.

Thus this thesis shall focus on the specification of the process in order to ensure the reproducibility of the steps involved. With some feedback from the real life implementation the definition can be further improved. This should help to create a sustainable and scalable process for the usage of growth hacking, resulting in better understanding and easier implementation of such in a real startup environment.

As a result the main objective of this thesis is the specification of growth hacking process depicted in Business Process Modelling Notation (BPMN), which can be used in contemporary cases to implement and use growth hacking. This should help startups accommodate growth hacking in their marketing repertoire from the beginning.

1.2.1 Research Questions

The research addresses the way growth hacking as a process is being implemented in early stage startups and tries to specify it, as far and as best possible. Thus, in addition to the implementation and usage of the growth hacking process, feedback is required resulting in data contributing to the process definition and visualization. At last the resulting process definition should also be evaluated in a qualitative manner.

In conclusion this thesis will focus on answering following questions:

- **How can growth hacking approach be specified as a process using process management techniques?**

The trivial processes presented in the theory part of this thesis are the starting point for this research. As those processes mainly address the development of growth hacks and are described with little details, a specification of a growth hacking process in its entirety is the underlying focus and the desired outcome behind this question. As the growth hacking process definition takes shape during the research, the occurring questions and problems shall lead to suggestions, ideas and potential improvements to the process definition and visualization.

1.3 Methodology and Approach

- *Literature research:* At first growth hacking as an area of knowledge shall be approached to identify its concepts and build theoretical foundation for this thesis. As the topic is a very recent phenomenon the usage of grey literature shall be discussed and when necessary utilized for the research. Special focus lies on the implementation of growth hacking in an early stage startup. When the topic of growth hacking and its underlying principles have been identified, various other topics which show affiliation to growth hacking shall be described

after an extensive research of the scientific literature. Those topics will help to base growth hacking in an academic area of research, thus further increasing the understanding and its goals.

- *Case study:* In the next step early stage startups utilizing growth hacking in their undertakings shall be introduced for the case study. The aim is the identification and design of growth hacking process as used and lived in the real startup environment. The case study will try to answer the research question through:
 - Interviews
 - Direct observations
 - Analysis of the documents
- *Interpretation:* The evaluation of the study outcomes should result in well defined growth hacking process model. It should be possible to identify and specify the growth hacking process in its entirety, including various aspects like inputs, outputs and documents, helping future startups implement and use growth hacking in their undertakings.

1.4 Relation to Business Informatics

With the term growth hacking describing a cross section from IT and marketing, as mentioned multiple times above, the relation to the field of Business Informatics is very obvious, with marketing being a part of business studies and the term IT describing essentially informatics. Moreover the focus on business process and activities involving the identification, design and validation of it show affiliation to the field of business process management - also an area of business informatics studies.

Growth hacking and the research questions involve topics like:

- SEO
- E-commerce
- Business intelligence
- Usability engineering and interface interaction
- Human computer interfaces
- Business Process Management
- Business Process Modelling Language

and many others, all of them being a part of the curriculum of either the master programme “Business Informatics” or the bachelor’s programme “Wirtschaftsinformatik” taught on the Vienna’s University of Technology [10] [11].

1.5 Overview and Structure of the Thesis

This thesis has been divided into 5 parts - introduction, theory, empirical part, summary and appendices. Each of the parts represents different stage of the research, with appendix containing various protocols and documents used in the scope of the case study research method.

Following this chapter the theory part begins with the findings of the broad literature research.

At first, the theoretical knowledge about the main topic of this thesis - growth hacking - is summarized in (see chapter 2). This chapter is heavily based on grey literature and includes a reflection on the usage of such sources (see 2.1), as little to none academic resources could be found on the topic of growth hacking. Afterwards the author selection for grey literature sources follows (see 2.2. Lastly the knowledge accumulated through grey literature is being summarized and described (see 2.3).

The next chapter (chapter 3) tries to allocate growth hacking in the field of academic research. It consists of various research areas descriptions needed to understand the topic and show the state of research. Thus topics like entrepreneurship (see 3.1), startups (see 3.2), marketing (see 3.3) and entrepreneurial marketing (see 3.4) shall be introduced. As this thesis focuses on growth hacking as a process and tries to identify and model it, the topic of business process management (see 3.5) and the underlying areas like business process modelling notation (see 3.5.4) are also described shortly.

The empirical part covers the design and conduction of case study in order to answer the research questions asked in this chapter.

At first the process of research design (see chapter 4) shall be described. It begins with characteristics of and reasons for choosing the case study method (see 4.1) are described broadly and finalize in description on how to design (see 4.2) and conduct (see 4.3) a case study including concerns like data collection and data analysis methods or quality criteria.

Afterwards the implementation of the case study method (see chapter 5) is being described. At first the subjects to the case study (i.e. cases) are being introduced in general (see 5.1), followed by the specific information on both cases (see 5.2 and 5.3). Subsequently the documents used (see 5.4), an introduction to the interview process (see 5.5), the description of in-field observations (see 5.6) and the description of quality criteria concerned throughout the interpretation (see 5.7) follow.

Lastly the process of interpretation of the collected data is described in the chapter 6 including the interpretation of the categories developed and process design resulting in a growth hacking process model (see 6.3).

In the summary part the outcomes from the case study are presented and summarized 7. After a short summary of the work, a discussion of the results follows. Afterwards the limitations of the findings are being described and lastly possible future works are being addressed.

The last part consists of appendices, where various case study data can be found.

1. INTRODUCTION

Appendix A contains interview data (see A), appendix B contains observation data (see B), appendix C contains the list of documents used in the scope of the case study research (see C) and finally appendix D shows the results of the inductive category development used in scope of qualitative content analysis (see D).

Part II

Theory

Growth Hacking State of Art

Concerning growth hacking, the main topic of this master thesis, virtually no academic sources can be found regarding its nature, definition or even application. The main reason probably lies in the currency of the topic, which first occurred in 2010. In this being the case, at first the usage of grey literature for the research on growth hacking's stage of art, current developments and techniques shall be considered. Later on, this kind of literature shall be used to thoroughly analyse growth hacking and identify most popular techniques and the underlying principles.

2.1 Grey Literature

This chapter should clarify the term of grey literature shortly and afterwards reflect the discussion on why to use grey literature in the scope of this thesis, including the reasoning and reflection over the pros and cons of using non-academic materials.

The term grey literature refers to "the diverse and heterogeneous body of material that is made public outside, and not subject to, traditional academic peer-review processes (...)" [12, p. 2]. Thus the term includes all kind of press releases, presentations, dissertations, books but also numerous online resources like blogs, websites, online articles, newsletters and many more.

2.1.1 Challenges

When working with grey literature multiple issues and considerations come to mind. On the one hand such publications rarely have an abstract, forcing the researcher to review the whole document in order to identify its relevance to the research topic [13]. On the other hand even when the relevant (grey) literature can be found, there still exists a big concern about the quality of the work. While academic sources include methodological descriptions, which help to assure quality, such measures are missing in

the grey literature. The focus lays here heavily on the conclusions and not the process by which they are reached. Thus evaluating quality of grey literature requires additional appraising methods and strategies, which necessarily end up being study-specific, making the process of including grey literature into scientific work even further more time and expense consuming.

A special concern pertains to the heterogeneity of grey literature - as it includes various documents and media in most different forms - resulting in even more varying forms of archiving, retrieval and analysis and thus making such literature hard to find.

Adams et al. categorized grey literature into 3 Tiers based on 2 dimensions - *the expertise level of the source* and *the degree of outlet control*. Accordingly the first dimension requires the identification of content creator's authority and the latter the analysis of content creation process and its accordance to knowledge creation criteria (see 2.1) [12, p. 3-4].

This categorization shows further challenges of grey literature. Considering the dimension of expertise the graphic recognizes that experts in a field can produce content of interest for academic purposes. On the other hand it considers the possibility of an author with unknown knowledge working with a prominent outlet. The boundaries are fuzzy and the categorization depends highly on the needs of the research topic.

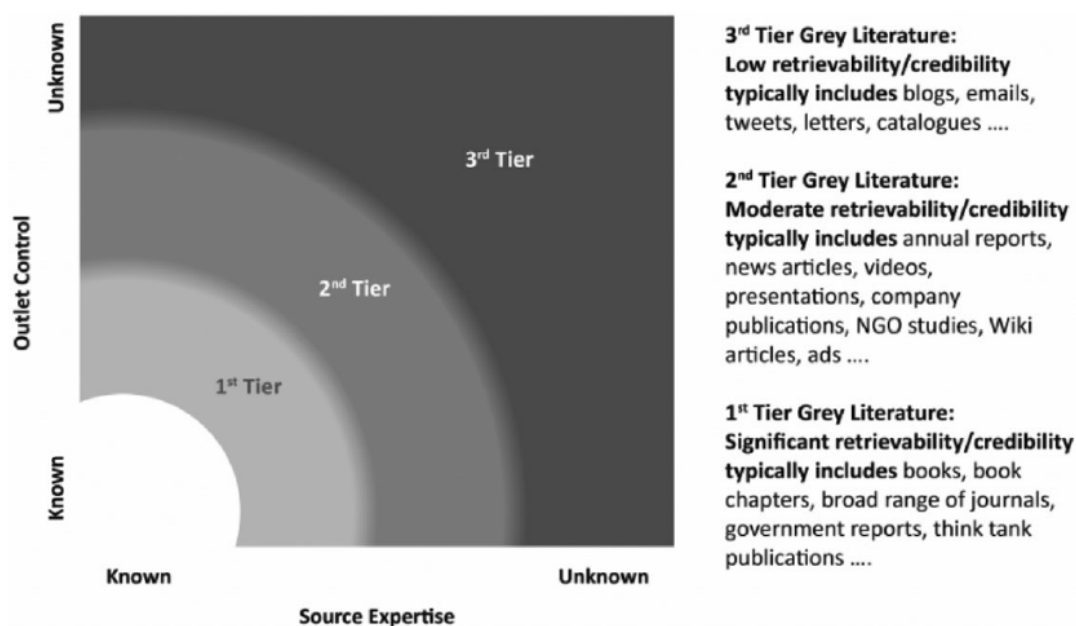


Figure 2.1: Shades of grey literatures [12, p. 4].

2.1.2 Advantages

While analysing the challenges of grey literature, multiple advantages of the inclusion of non-academic sources emerge.

Adams et al. reviewed around 140 systematic reviews in order to identify the usage possibilities of grey literature to increase the relevance and impact of research in the area of management and organization studies. Throughout their research they have identified various advantages of grey literature.

The accumulated evidence lead to the conclusion that literature from any tier of the previously mentioned *shades of the grey literature* (see 2.1) "have the potential to define and contextualize phenomena of research knowledge because it includes potentially relevant knowledge that is sometimes not reported adequately in academic articles." [12, p. 7].

Oftentimes researchers conducted a supplemental search for grey literature in case the original review strategy hasn't delivered satisfactory results. They argue the work becomes even more transparent and rigour thanks to the heterogeneity of grey literature. Another important advantage of grey literature lays in its currency and contemporaneity. As such sources are not subject to peer review, they can be published in accord with new trends and contemporary findings and as such overtake on academic research.

Grey literature has also been used to support or validate research conducted using white literature [12, p. 8-13].

2.1.3 Discussion and Conclusion

Looking at the various challenges and advantages of grey literature in comparison with the relatively new topic of growth hacking many parallels can be seen.

On the one hand the described advantages seem to strongly support the usage of grey literature in the scope of this thesis, as the processed topic of growth hacking not only describes a contemporary trend not found in the academic research but also needs to be defined and contextualized.

On the other hand the challenges obviously point to some additional processes needed to be implemented in order to work efficiently with grey literature. Adams et al. [12, p. 10] point out that while working with non academic sources most of the researches used author's authority and reputation and currency of the source as the most important criteria. Moreover their study results in the formulation of 12 guidelines for working with the grey literature (see [12, p. 17]). As the guidelines focus on different aspects of grey literature (including grey literature, locating studies, selection and evaluation, etc.) only the guidelines relevant for this discussion will be mentioned below - the ones concerning the inclusion and selection and evaluation of grey literature .

Summarizing, assessing grey literature is time and cost expensive and requires trade-off which depend highly on the study context. However, the usage of grey literature adds the voice of industry and real-life experience to pure academic sources increasing its relevance and impact especially concerning contemporary topics like for example growth hacking.

Concluding the usage of grey literature should greatly aid the definition of growth hacking in the following chapter, although some additional aspects shall be considered while working with non-academic resources based on the 12 guidelines (see [12, p. 17]).

The first guideline supports the previous claim on the inclusion of grey literature in the scope of this thesis as it states "Consider all tiers of grey literature to define and contextualize phenomena of research interest when potentially relevant knowledge is not reported adequately in academic articles, clearly stating the rationale for and source of material included in review." [ibid.].

For selection and evaluation of grey literature the guidelines mention the usage of "fit-for purpose quality criteria" and advise to "be guided by field experts in identifying sources for and evaluating grey literature, but retain decision-making independence (...)" [ibid.]. Thus for this thesis only grey literature published on well-known growth hacking outlets and authored by renowned experts in the field of growth hacking will be used.

2.2 Author Selection

In this section number of authors shall be evaluated, as the need for the identification of author's authority and expertise and the quality of outlet have been named as the main concerns for working with grey literature. Thus the evaluation builds the first step of working with various grey literature produced by those authors.

2.2.1 Experts

Sean Ellis

The founder and CEO of GrowthHackers.com, a very popular platform for growth hacking community and growth advisor in plenty of (successfully started) startups Sean Ellis is also the person who first coined the term back in 2010. He has been working in the area ever since [14].

Ryan Holiday

As a former director of marketing for American Apparel - a multi-million dollar company -, author of a few bestselling books in the area of marketing and one of the pioneers in the field of growth hacking, Holiday can be named an expert in his field [15].

Neil Patel

A digital marketer with experience in various companies working with visitor patterns and website analytics, both important aspects of growth hacking environment [16].

Bronson Taylor

Co-founder and CEO at Growth Geeks and Growth Hacker TV, Taylor has been working in the area of growth hacking since the beginning [17].

Andrew Chen

Having a sound experience in product marketing, Andrew got into growth hacking right on time. Currently he is the head of growth at Uber. He has written over 700 essays on growth hacking and online marketing, creating a big community behind him[18].

Brian Balfour

As a serial entrepreneur, growth advisor for multiple startups and the vice president

of growth for a successful startup, Brian Balfour has years of experience in managing growth. [19]

2.3 Growth Hacking

As growth hacking is a very recent phenomenon it also means the historical background is very clear and the emerging of topic can be pinpointed to a certain time point. The researched grey literature and the chosen authors like Ryan Holiday or Andrew Chen agree that the term has been coined by Sean Ellis back in 2010 [20] [2] [9][Chapter 1] in his blog article "Find a Growth Hacker for Your Startup" [1].

2.3.1 Background

Growth hacking as an area of marketing for startups was not the first occurrence of the term. At first came the job description - the growth hacker. Sean Ellis helped a number of internet startups in achieving massive growth through the usage of various systems and processes, but also by changing the mindsets. As his reputation grew he needed replacements to maintain his "growth engine", as he calls the growth hacking process, in the companies, so he could concentrate on building new ones.

On his search for the proper hire, he only received inquiries from traditional marketers, which he knew, wouldn't be able to do the job, as they were lacking the necessary skills, not thought in the school of traditional marketing. Such marketers were excellent at managing and building marketing teams, vendors and establishing plans. However, in his opinion, an early startup needs to concentrate on growth.

In order to find people with proper skillset for acquiring massive growth, he coined the term of growth hacker in his blog post on 26th of July 2010 titled "Find a Growth Hacker for Your Startup" [1] - this was also the moment in which growth hacking as an area was inherently born [9][Chapter 1].

But even before the term has been coined, some of the underlying philosophies were used to sell a product on a worldwide market. The first such product, as Ryan Holiday mentions in his book on growth hacking, was Hotmail webmail back in 1996.

At the time internet was just beginning to become popular, and as such first ideas of using it for marketing of a product occurred. Instead of going with standard billboard or radio ads, which would have been far too expensive for a free product like Hotmail, the marketing team behind this free web mail decided to simply add "Get your free e-mail at Hotmail" to the bottom of all messages sent by their users. The results were astounding - Hotmail went from 0 to 30 Million users in 30 months, when it was bought by Microsoft [21, p. 10ff].

In order to emphasize the popularity of the term, Google Trends can be used to identify potential increase in the number of search queries concerning a given keyword, in this case "growth hacking". In the figure 2.2 the x-axis shows the popularity in percent - the month with most search occurrences marks the peak with 100% being the November of

2016. Unfortunately no absolute data can be shown using Google Trends. Nevertheless starting in 2012 a rapid increase in the popularity of growth hacking can be observed continuing into the present.



Figure 2.2: The popularity of term "growth hacking" since January 2010 until February 2017.

2.3.2 Definition

Reading about how growth hacking emerged, one can easily identify the underlying principles, what growth hacking is and the philosophy behind it. Still a closer definition is needed, in order to be able to narrow down the field.

While the story behind Hotmail sounds amazing, it should be mentioned - the founders resisted the idea at first. They thought it was far too simple to be successful. After implementing it, they saw exponential growth, while similar internet companies tried it the traditional way - costly tv, radio and outdoor advertisement. Those firms quickly failed in what we now call "the burst of the dot-com bubble", which will only be used as a time point and won't be discussed further in this thesis.

To show that Hotmail didn't just get lucky with its marketing, Holiday names Google's Gmail as one product, that has been launched using the very same techniques. At first they created a superior product, which then used similar growth measures - building excitement through invites and steadily increasing the amount [21, p. 10ff].

According to Andrew Chen in his interview with Justin Megahan on the state of growth hacking, those costly measures and the spectacular way they failed during the burst of the dot-com bubble led to the emergence of the needed mindset and first ideas that would today fall into the category of growth hacking [2].

Thus the first important factor of growth hacking can be identified - *low cost* or *cost efficiency* of techniques used.

Growth Hacker and the Startup Pyramid

Before discussing the exact characteristics of growth hacker by Sean Ellis it is important to grasp his concept of marketing a startup, called the "Startup Pyramid", as exactly this process led to the emergence of demand for the exact kind of skill set a growth hacker needs.

According to Ellis, the most important factor of his approach and thus growth hacking in general is a solid product/market fit, which builds the foundation of the pyramid. Above the transition to the growth phase begins leading to a full growth phase, where the rapid increase in products sold and/or users happens [22] (see Figure 2.3).

Product/market fit - this term describes the significance of a product fitting and resonating in the target market and thus creating a demand. While it is a very abstract concept many founders emphasize its importance.

Ellis tries to substantiate the topic by offering specific metrics based on his experiences. One of such metrics is simply asking the users, if they would be disappointed if they could no longer use the product. In his opinion achieving good product/market fit should result in at least 40% positive answers.

If the product/market fit hasn't been reached, the startup should concentrate on the product development instead of marketing and try to improve it until the fit is reached. This can be achieved by surveying target users on what to improve to make the product a must have [22].

Transition to growth and growth phase - Ellis emphasizes multiple times, how important the product/market fit is, before going up the pyramid. After reaching such, the development of an economical way of acquiring users (equals the transition to growth phase in the startup pyramid - see figure 2.3) and optimizing it over time may begin, in order to reach scalable and repeatable user acquisition (equals growth phase in the startup pyramid - see figure 2.3) by testing various approaches, measuring them and improving the process iteratively. This equals going up the startup pyramid beginning at the foundation to the top of it [22].

Reading onwards on Sean Ellis' description of growth hacker. It is a person "whose true north is growth" [1], and thus concentrates solely on reaching scalable growth. Such a position is especially needed in startups that are in or haven't yet reached the early growth phase, so referencing the startup pyramid (see Figure 2.3), they are either in the phase of product/market fit, transition to growth phase or have just began the growth phase.

His skillset should consist of taking full responsibility for growth and the ability to take risks like an entrepreneur would, as taking such responsibility is risky. Another point is creativity and strong desire to connect the product to the target market in order to find techniques for driving growth and continuously test and improve them. Thus he requires

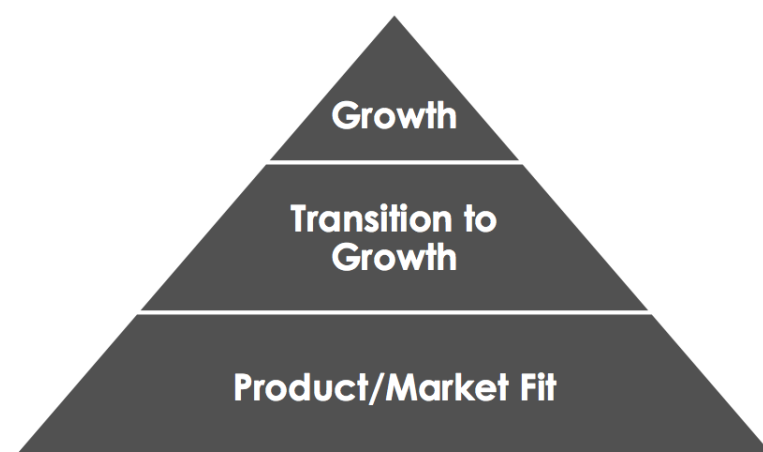


Figure 2.3: The Startup Pyramid by Ellis [22].

discipline as well as analytical thinking to be able to prioritize the valuable techniques and discard the inefficient and not expedient ones [1] [23].

From this description further characteristics of growth hacking can be identified. On the one hand the main purpose, focus and reason for growth hacking is the *growth of user base* itself. To achieve *scalable, repeatable and sustainable* rapid growth, *creative techniques* have to be found and *analysed and tested using metrics*.

Product and Distribution Redefining

Patel and Bronson redefine the terms "product" and "distribution" in growth hacking's scope, as they have very specific characteristic distinguishing them from the general products and thus also traditional distribution channels.

While for a very long time a product use to be a physical good, nowadays products can be simply bytes of code known as software. Apps, social media platforms, dating services to name a few. This new type of product requires rethinking of the old ways. It offers an unique characteristic, as it can play a role in its own adoption - "A product like Facebook allows you to share their product with other friends to make your own experience on their platform better. Shampoo can't do that." [9][Chapter 1].

This characteristic is something used broadly in growth hacking - the products that can spread themselves, offers low cost means to growth - factors already identified as important before [9][Chapter 1].

While the product has been massively redefined by the introduction of internet, also the distribution channels changed. The ability to spread product using startup's own product shouldn't be the only way of distribution say Patel and Bronson.

They mention concerning channels with high user density like search engines or social media to reach a broad audience. Connecting the ways of distribution with self-adoption of the product is the job of a growth hacker, and exactly the point where "hacking" is

being used. Most of the techniques tend to combine those channels with existing user base to create scalable growth opportunities [9][Chapter 1].

Hacker

Besides the growth aspect of growth hacking, there is still the hacking part. In this context hacking describes the clever, creative and original process of overcoming obstacles to reach an objective. In special case of growth hacking it often will mean finding new ways to market the product to the target audience.

As we know that the products we are talking about are mostly software products, a person inventing those hacks should obviously have a vast understanding of various technologies, in order to be able to work out new ideas [9][Chapter 2].

Some most known hacks shall be described in the Chapter 2.3.6. Looking at them, it becomes fairly obvious - a growth hacker needs IT skills. Growth hacking is also repeatedly named as a cross-section of marketing and engineering - "In order to achieve a growth rate above the industry average, a growth-hacking business combines effective marketing with engineering." Neil Patel in [23].

Growth

The noun 'growth' can concern various aspects of a company. Thus it is important to specify what it means in the scope of growth hacking. It hasn't been explicitly mentioned, but regarding the grey literature sources, growth is being used in relation to the user base of a product each time, leading to the conclusion, that 'growth' used in growth hacking tries to increase the number of users consuming the targeted product.

Consolidating the Definition

Summarizing some of the most important growth hacking characteristics have been identified over the course of this chapter.

It is a strategy on how to connect a product to the target audience - it focuses on customer acquisition (i.e. *growth*) using low-cost and creative techniques (i.e. *hacks*). Those techniques should be developed using an iterative process which tries to optimize the outputs using various metrics. Thus the term involves highly creative and analytic tasks.

Concerning the redefinition of product and distribution, it also points to the term being a cross section between marketing and IT. The digital and/or technology products are best suited for the usage with growth hacking and thus the main benefactor of the approach are technology startups developing software product or analogously internet based startups. This fact becomes even more clear when going over the most known and successful techniques in chapter 2.3.6.

Talking about creative solution leads to the definition of what growth hacking is *not*. It is not a simple collection of techniques that can be used in any given startup. Andrew Chen summarizes the process as follows:

“Growth is a magnifying glass. If you have a tiny diamond and you put it under a magnifying glass, then you’ll make something big and great. But if it’s just kind of a tiny piece of shit, then it’s just going to be a big piece of shit, right?” Andrew Chen in Interview with Megahan [2].

Emphasizing that each product is unique and requires its own approach on growth hacking. Thus another important factor emerges in form of prerequisites which should be met in order to even have a chance on using growth hacking successfully. Those will be described in the chapter below.

2.3.3 Prerequisites

The articles mentioned in definition inherently reveal the prerequisites needed for growth hacking. It best fits and is done in online startups, comprising software product. Such companies can make the best use of adoption and the new distribution channels offered by the rise of the internet, both factors being used in various growth hacking techniques.

Another point is the product/market fit, an important prerequisite emphasized by multiple of the mentioned authors. Growth hacking should be used with products which positively show the demand on the market, as many techniques rely on a small but ecstatic about the product user base.

Throughout the research, while it was possible to identify the environmental prerequisites like mentioned above, no mentions of concrete infrastructural or organizational requirements could be found. However, such informations could be crucial for the implementation of growth hacking and it’s techniques in an early startup. Such implementation could be achieved following a process, of which a few descriptions were found in the literature. Such a process shall be presented in the next section below.

2.3.4 Process

In this section the process of growth hacking shall be summarized as viewed by some of the previously mentioned authors. At first the more elaborate process description of Patel and Bronson shall be focused and compared to the process description offered by Balfour.

The interpretation of Patel and Bronson consists of 6 steps creating an iterative process for using growth hacking efficiently in any startup. The process described by them can be seen in the figure 2.4 depicted in the Business Process Modelling Notation (short: BPMN) without any adjustments. For any details on BPMN see section 3.5.4. The process description:

1. It starts with *the definition of actionable goals*, or the goals one can act upon. Thus they emphasize the importance of the tangibility of those goals and describe on how

to decide if a goal is actionable enough. The overall goal is of course the growth of the company, but as it is too broad to address, a more specific goal needs to be specified. As a rule of thumb Patel and Bronson propose to go as far down the "goal hierarchy" until you reach a nest of task that can be completed and "checked off".

2. The next step requires the *implementation of analytics to track the goals* through the definition of metrics and measures to actually be able to measure the outcomes and thus be able to state, if the goal has been reached.
3. Afterwards the aspect of resources is being addressed in the *leverage your existing strengths* step. According to this process description, the existing strengths and thus resources that are available in the given startup, should be concerned when thinking about the goal and how to reach it. This step could be summarized as prioritizing possible ways to reach the goal accordingly to the resources present in the startup.
4. Completing above steps leads to the *execution of the experiment* or simply put, implementing the actions chosen which should lead to reaching the predefined goal chosen concerning given strengths. Before the actual execution, the hypotheses of what will happen should be written down, in order to compare those to the final outcome and learn out of it. Maybe some assumptions about user behaviour can be fundamentally changed, helping the whole process. The failure of the experiments is also an important source of knowledge.
5. Following comes the *optimization of the experiment*. During the execution it is important to work with control groups, in order to be able to distinguish the actual results of the experiment separately from any other possibly influential factors affecting both groups. Another important aspect is A/B Testing, which describes testing of alternatives on a part of the customer base each, in order to identify the better one and use it, thus optimizing the experiment further. An experiment should only be discarded when either the results are far weaker than the initial hypothesis assumed, or when the improvement of the experiment requires excessive amount of resources, making it ineffective (as the goal still hasn't been reached).
6. Last but not least, the most important step is the repetition of all the steps above with either the optimized experiment or a new one depending on the outcomes. This creates a loop and thus an iterative process out of the process steps above.

The decision if an experiment is ready to be used as a growth hack is not described in the process description offered by Patel and Bronson. However such a decision should be made concerning the metrics and the results of the experiment. Effective experiments can be implemented on full scale, even if they don't fulfill the goal entirely, but offer good performance relative to the resources used [9][Chapter 3].

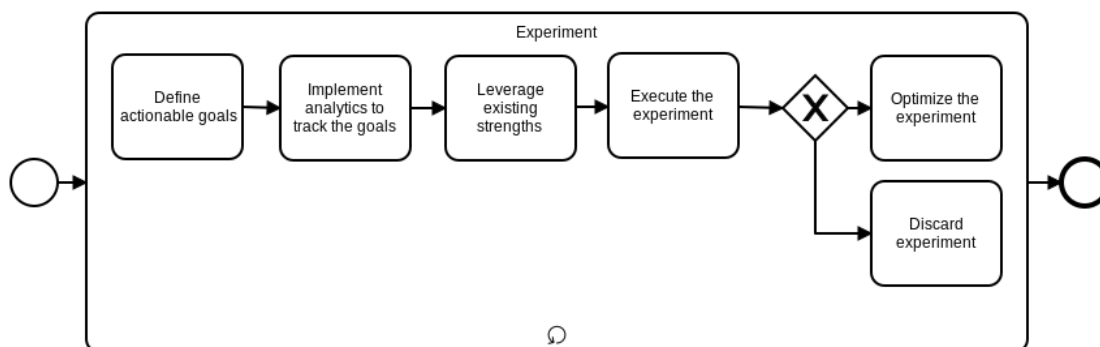


Figure 2.4: Growth hacking process according to Patel and Bronson [9][Chapter 3].

Brian Balfour has a similar vision of the process, depicted in the figure 2.5. Although in his presentation he warns readers about the "growth hacks" that can be found in numerous blog articles. Those are mostly basic marketing tactics that in best case might be worth considering as inputs for the experiments in the growth hacking process. He emphasizes that there's no simple tactic or hack responsible for growth, but a process. In his opinion a process is so much more important - while tactics describe successful techniques, they might not work with every product. Meanwhile working with a process ensures that the output will fit the product offered, available resources and know-how. He talks about "a machine", but means a scalable, predictable and repeatable process focusing on growth.

His process consists of similar steps to those named by Patel and Bronson above. At first measurable goals need to be set, which will be the targeted output for the experiments in the process. Afterwards the process begins[24]:

1. *Brainstorm* on actions / experiments (or how to achieve the goal) - this step results in a backlog, where all the ideas will be stored.
2. *Prioritize* the ideas using factors like probability, impact and resources required and justify the assumptions
3. *Design the test* for the ideas (experiments) using minimum viable test to verify the outcomes
4. *Implement the test*
5. *Analyse the outcomes* - were the results satisfying? Why did those results occur?
6. *Systemize* the approach
7. and repeat all the steps iteratively.

Summarizing both concepts present similar approaches on how to specify growth hacking process in a startup. Both define the process as an iterative practice which aims to

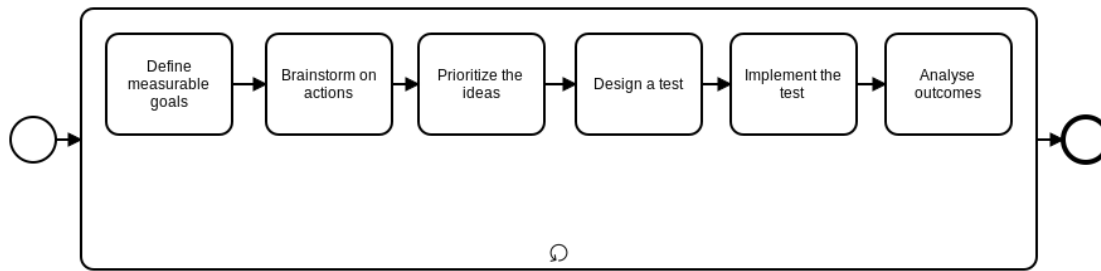


Figure 2.5: Growth hacking process according to Balfour [24].

output growth hacks aiming for the fulfilment of measurable goals, using creative and resource-aware techniques. Those hacks need to be tested and optimized in multiple runs of the process. The emphasis lays on the metrics and analytics, without which a growth hacking process couldn't be implemented and executed. This also shows main distinction to traditional marketing and the necessity of technology savvy growth hacker leading, overlooking and participating in such a process.

However taking a look at the figures representing the processes (see figures 2.4 and 2.5) both sources don't specify when the loop condition is fulfilled and the process may stop. Even if the process should never stop, there should be a condition on when a growth hack can be implemented on a full scale in the business environment and not as an experiment in the growth hacking process. Thus the proposed processes lack information and specific details, making it hard to implement them accordingly.

2.3.5 Philosophy

The result is not only the process summarized in the chapters before. The consolidated research also represents a mindset one should have while leading marketing efforts at a startup with the focus on growth and thinking about implementing growth hacking.

The correct attitude with growth hacking would be to focus on the growth as much as possible and search continuously for best possible techniques to induce that growth. This won't happen overnight and requires creative thinking and sometimes even inventing new ways of integration, which isn't easy (see Airbnb example brought by Andrew Chen [25]).

Thus growth hacking's philosophy is all about creative ways to reach growth with support of analytics - it combines the innovative way of thinking with the slow-paced mind of an analyst. The aim is to create scalable (best: exponential) growth over the years, not months.

This fact also results in no certain techniques proposed in growth hacking process, as the aim of the process is the creation of such techniques, or better said hacks. The way Chen puts it : "If your product is any good, it's unique. And if it's unique, it deserves a novel set of growth solutions." [2].

As last but not least factor of philosophy lies the product, which is also the most important

one in this constellation. All authors agree on the importance of the product. Talking about product/market fit or user base, each author emphasizes the product - without it, no audience will ever stay and thus any growth focused process will fail.

2.3.6 Growth Hacking Techniques

While the techniques vary vastly depending on the product, product type and market environment, and as mentioned before, there is no given set of techniques for growth hacking, there still exist some well known hacks (the name given to those techniques because of their affiliation with growth hacking).

Because of this situation and the fact of individual hacks for each product, the techniques decay over time and new ones are introduced.

In this chapter some of the most popular and successful growth hacks shall be presented.

Airbnb

One of the most prominent examples for a growth hack includes the Airbnb's story of growth. As Airbnb had have troubles reaching a decent user base, they decided to just use the userbase of Craigslist - a platform for public classified ads in varying categories including housing and rentals, which had millions of users at that time.

As the platform didn't offer any kind of public API to easily connect or post to it, the competition was non-existent but also the implementation was a very challenging one. As Chen puts it: "Certainly a traditional marketer would not have come up with this, or known it was even possible – instead it'd take a marketing-minded engineer to dissect the product and build an integration this smooth." [25].

Adding the marketing channel deeply into the product, was what caused Airbnb to grow exponentially over just few years, and thus hugely contributed to its success [25].

Dropbox

A different prominent example of successful growth hacking campaigns include Dropbox. The company started growing rapidly in 2011 thanks to some creative hacks and strategic thinking.

They used a very simple signup driven layout and simplified the process as far as possible. But what caused the explosive growth, was the referral system, which increased Dropbox signups by 60%. Referring a friend resulted in increased storage capacity for both, while sharing Dropbox on social media also granted the user more storage space. Considering the product itself is storage, Dropbox was giving more of it product for free - a strong incentive to refer more friends [26].

Hotmail

The hotmail's story has already been described in section 2.3.1. The technique used here exploited the product itself and its software nature to propagate to all people which received an email from Hotmail.

2.4 Summary

Throughout this chapter growth hacking has been explained using contemporary examples and grey literature found mainly in the internet. Being a very recent phenomenon with a lifespan of roughly 7 years, most of the experts have only a few years of experience, but at the same time they were forming the term of growth hacking from the beginning during those years.

The offered description of the growth hacking process and the prerequisites identified using intensive literature research can help in implementing such a marketing approach in an early startup, but both the explanation and process steps are rather vaguely described and miss the particularization found in mature processes of full-grown companies and thus can be misinterpreted easily.

The topic hasn't been addressed by any kind of research. The implementation of the growth hacking process and the resulting techniques seems to require not only the prerequisites named in this chapter, but also on various organizational or infrastructural factors and depends on multiple variables, creative input being the most crucial one. Thus the necessity of better process definition emerges.

While the topic gained traction in USA very quickly, in german-speaking world only a few sources regarding growth hacking could be found. This arises multiple question regarding whether growth hacking is a process wanted by startups in the german-speaking world and even more questions about the nature and implemenation of a growth hacking process. Concerning the fact that this process builds the foundation of growth hacking implementation in a startup and the very vague description of it in the literature, the specification, visualization and improvement of growth hacking process definition could be of interest for academic research.

In the next chapter multiple fundamental topics will be described in order to allocate the topic of growth hacking in a scientific research area and thus identify important questions on which the research in the growth hacking area could be based.

State of Research

Describing the state of research offers a first overview over the emerging topic of growth hacking and other underlying research areas. In order to be able to precisely specify and identify the underlying idea of growth hacking and its techniques, the definitions of the involved areas shall be needed. In the upcoming chapter the results of extensive literature research will be summarized to provide a broader understanding of entrepreneurship 3.1, startups 3.2, marketing 3.3 and finally entrepreneurial marketing 3.4.

As the field of entrepreneurial marketing seems to have some affiliations with growth hacking, this topic shall be reviewed to base growth hacking in the academic research. Thus the build-up of definitions in order to demonstrate the relationship between those topics.

This chapter will also shortly describe the nature and function of business process management 3.5 and the underlying topics of business processes and business process modelling, which also offer a short introduction to Business Process Modelling Notation. This notation shall be used for the visualization of the final growth hacking process. Those topics shall serve as the foundation for the growth hacking process specification.

3.1 Entrepreneur and Entrepreneurship

3.1.1 Historical Background

The terms of entrepreneurship and entrepreneur (describing the person responsible for the entrepreneurial activity) have been around for some time, with the terms being introduced as soon as 1730 by Richard Cantillon and popularized by John Stuart Mill in his "Principles of Political Economy" and Jean-Baptiste Say in early 1800s.

Afterwards the term hasn't been used in the scientific literature till early twentieth century, the underlying reason being the assumption of perfect information inbetween the

participants of a market and thus there was no room for entrepreneurs in those theories [27].

The topic has been picked up by Joseph Schumpeter and Israel Kirzner in early 1900s. Both authors contributed to the definition and meaning of the term through their work in the area of economics and added various aspects to it, that haven't been concerned before.

The actual popularity of the topic, both in scientific and social way, rapidly increased in the 1990s, when governments in the United States of America changed their strategy of attracting big companies to supporting entrepreneurship [28].

3.1.2 Meaning

The term entrepreneur originates from *entreprendre* which is a french verb used to describe the act of doing or undertaking something.

The initial meaning given by Richard Cantillon concentrated on a person willing to take the financial risk of undertaking a business venture. It is a person who seeks profit opportunities by exchanging goods and using judgement when uncertainties emerge.

In the beginning of nineteenth century Mill firstly added the management of an undertaking to also be a part of the definition [29], thus differentiating the business owners and shareholders from entrepreneurial undertakers. While both take financial risks, only the latter participates in the day-to-day operations of the undertaking [28].

With the general idea of entrepreneur coming from Richard Cantillon we can differ between 3 different intellectual orientations:

- German orientation
- Chicago orientation
- Austrian orientation

each of them adds another aspects to the mix, that haven't been concerned in the previous definition.

The focus while reviewing those works will be laid upon the work of the most renowned economist in each orientation - Joseph Schumpeter (German orientation), T. W. Schultz (Chicago orientation) and Israel Kirzner (Austrian orientation) [30, p. 41].

German Orientation

Schumpeter classified entrepreneurs as innovators, whose main activity is the implementation of changes in economy in form of new goods, new methods of production, discovery of new markets or the creation of new organizational forms. Schumpeter's entrepreneur is a "heroic dreamer".

He introduced the term of creative destruction in association with entrepreneurship, as in his opinion the entrepreneurial activity is a disruptive force, which causes the

obsolescence, substitution or failure of other market participants.

His definition concentrated on innovation in big companies and has left little room for the most common type of entrepreneurship being the small firms [27].

Chicago Orientation

T.W. Schultz addresses the situation of changing circumstances which requires some action of the market participants. To him entrepreneurship describes the ability to adapt to those changing factors or the reallocation of used resources. Thus in his opinion entrepreneurship is a part of behaviour everyone has. The entrepreneur and their number is given by their capability to discover and exploit potential market opportunities [31, p. 347].

Austrian Orientation

Israel Kirzner's work concentrated on the explorative aspects of the entrepreneurial activity. As such he viewed it as an discovery driven process aiming to detect previously omitted or unnoticed profitable business models, which then can be exploited. The process ends with the competition "catching up" and thus eliminating the profitability of the undertaking [30, p. 46].

In many companies the owner tends to delegate some crucial decisions to the (salaried) managers. In such a case, the question arises, if a salaried person can also be an entrepreneur? According to Mark Casson it is possible. His definition sees an entrepreneur as an owner or manager "who exhibits the key trait of entrepreneurship (...): judgement in decision making" [27].

3.1.3 Summary

The listed insights can be summarized to the definition of an entrepreneur:

Entrepreneurs are specialists and managers, who are showing initiative, willing to take risk and using judgement to deal with novel and complex problems.

The term entrepreneurship could be defined as :

The process of creation steered by an entrepreneur, resulting in a new (risky) undertaking.

3.2 Start-up

3.2.1 Historical Background

According to Oxford English Dictionary the term start-up has first occurred in 1976 in a Forbes article in the following context:

"The (...) unfashionable business of investing in startups in the electronic data processing field." [32]

and has been used scarcely every now and then till early 1990s.

Taking a look into the popularity graphs of the term based on the Google Ngram Viewer which measures the frequency of occurrences of a specific keyword within all books scanned and offered by Google Books, one can see that the term "startup" has shown rapid growth since 1980s and peaked in popularity in year 2002. The alternative term "start-up" shows similar results in the popularity, with the slopes being less steep (see 3.1).

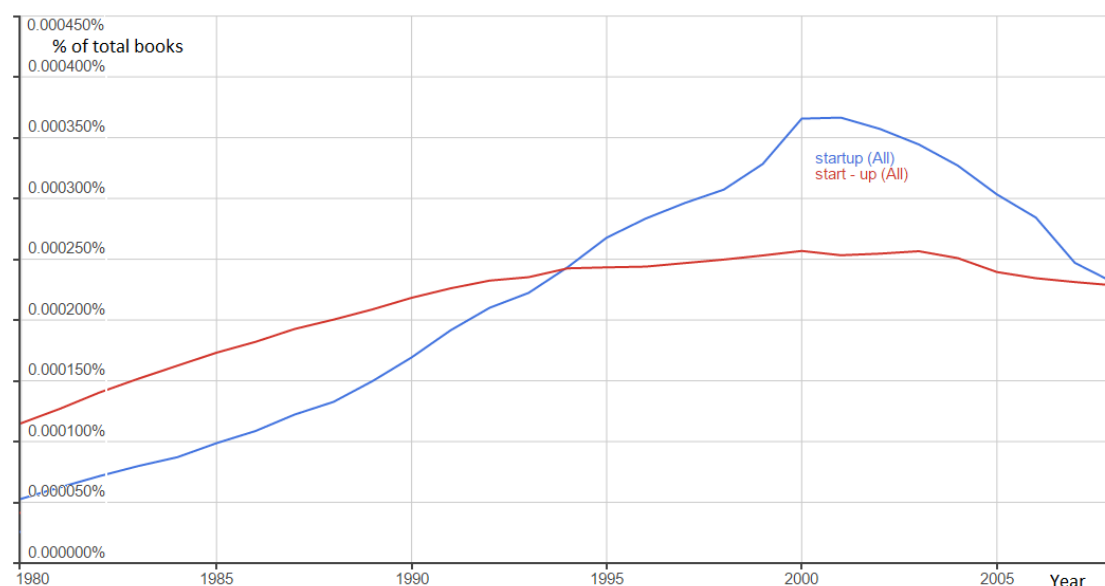


Figure 3.1: Graph representing the popularity of the terms "startup" and "start-up" in the years 1980 - 2008. Created using Google Ngram Viewer.

The global maximum in year 2002 marks a time point shortly after the burst of the so called "dot-com bubble". Since then the term's popularity has been continuously decreasing until 2008. Unfortunately after 2008 there's no data available on Google Ngram.

3.2.2 Meaning

The task of finding a mutual meaning and definition of the term startup has been surprisingly complex. While the academically recognized sources like "The Oxford handbook of entrepreneurship" use "start-up" interchangeably with entrepreneurial undertaking (see [33, p. 4-27] no explicit definition of the term could be found there.

The definitions that were found come from the various experts in the field like Eric Ries (creator of the "Lean Startup methodology" and serial entrepreneur [34]), Steve Blank (serial entrepreneur, teacher of entrepreneurship at U.C. Berkeley, Stanford University, Columbia University, etc. [35] or Paul Graham (founder of Y Combinator - a world-known

startup incubator which funded companies like Dropbox or Airbnb [36]).

Eric Ries describes startups as follows: "The concept of entrepreneurship includes anyone who works within my definition of a startup: a human institution designed to create new products and services under conditions of extreme uncertainty." [37, p. 17]. This definition concentrates on the aspects of delivering a product and the uncertain environment, while omitting factors like size or sector.

Steve Blank thinks "A startup is a temporary organization in search of a scalable, repeatable and profitable business model." [38, p. 17]. Thus his definition focuses on the temporal nature of a startup and the main focus of it - a profitable business model. This coincides with Ries' definition in points of uncertainty, but also emphasizes the factor of growth. Finally Paul Graham's definition concentrates solely on growth: "A startup is a company designed to grow fast. Being newly founded does not in itself make a company a startup. Nor is it necessary for a startup to work on technology, or take venture funding, or have some sort of "exit." The only essential thing is growth. Everything else we associate with startups follows from growth." [39]. His opinion is self-explanatory.

Another important definition comes from Heinrichs N. [40, p. 17ff]. He differentiates between a high-growth company and a startup using a business' lifecycle model. As there are many similar definitions of such models, the focus will lie on the product life cycle proposed by Porter [41, p. 157ff].

Porter's model can be used to classify any company in one of 4 phases: introduction, growth, maturity and decline depending on its current characteristics. According to Heinrichs [40, p. 19] "startups" can mainly be found in the "introduction" phase. With the transition into the growth phase it is no longer a startup, but a high-growth company. However in his works he uses both terms interchangeably in order to address young companies aiming for growth, and as such agrees with the definitions offered above.

Hack reviewed multiple definitions and summarized them in multiple factors, which he found were the most important, relevant and occurred multiple times during his research [42, p. 3ff]:

- short business history and no relevant business data or assessment can be found
- operating on dynamic, constantly changing and rapidly growing markets
- scarcity of the available resources
- negative cash flow
- decision finding mainly done by the founder and co-founders

3.2.3 Summary

Concerning the multiple definitions, one can see that no absolute definition of the term "startup" can be found.

Nevertheless for the scope of the thesis the presented definitions have been consolidated and resulted in the following characteristics:

1. New undertaking (< 5 years)
2. Scarcity of resources (capital, personnel, ...)
3. Negative cash flow
4. Decision making done by the founding team
5. Main target is business growth

Using those characteristics it is possible to precisely select and classify an existing company as a startup (in regard to this thesis).

Moreover the definition of the entrepreneurship and the one above fit together, resulting in a startup being a part of entrepreneurship - an entrepreneurial undertaking. In the scope of this thesis the terms startup and entrepreneurial undertaking shall be used interchangeably.

3.3 Marketing

3.3.1 Historical Background

According to Bartels the emergence of the marketing thought occurred in early 1900s, when the economy students started to conceptualize the idea of marketing through divergent theories that set them apart from other economist at that time. He further classified the history into multiple time periods:

- *1900-1910 - Period of Discovery:*
First thoughts on distribution of products occur. The concept of marketing is being born. Many theories borrowed from traditional economic teachings.
- *1910-1920 - Period of Conceptualization:*
The emergence and development of divergent marketing thoughts - includes the naming and classification of the concepts into classes.
- *1920-1930 - Period of Integration:*
The concept and ideas of marketing are accepted and integrated into the academia.
- *1930-1940 - Period of Development:*
The period of rapid and intensive development of the concept and its specialized areas. Many theories are being verified or quantified, new approaches to the explanation of marketing emerge.

- *1940-1950 - Period of Reappraisal:*
Marks the reappraisal of the term and its concepts in the light of new needs and the shift in thinking.
- *1950-1960 - Period of Reconception:*
The traditional term is being richen by many new concepts from the field of management and other social sciences.
- *1960-1970 - Period of Differentiation:*
The constant supplementation and enrichment of the definition resulted in the identification of divergent components of the total marketing concept.
- *since 1970 - Period of Socialization:*
Marketing gains more significance as the influence of marketing on society gains focus.

The periodization of Bartel ends with socialization. This term fits the developments of the late 20th and early 21st century well, as the internet, globalization and interconnection emerge, enabling even more effective exploitation of social aspects in the terms of marketing [43, p. 2ff].

3.3.2 Meaning

Meffert in his book about marketing synthesized 14 different definitions of marketing into 4 categories of interpretation [44, p. 9ff]:

1. *Instrumental, abbreviated marketing interpretation*
This approach basically reduces marketing to an instrument of distribution, completely neglecting some typical marketing process like for example demand analysis.
2. *Traditional, economic marketing interpretation*
Approach that recognizes the traditional processes of planning, coordinating and controlling of all activities, both in the existing and potential markets as the main concern of marketing.
3. *Modern and extended marketing interpretation*
Defines marketing as any exchange process between 2 or more individuals which are trying to satisfy their underlying needs and/or demands.
4. *Generic marketing interpretation*
The broadest interpretation of all 4, where marketing is seen as a generic manipulation and social concept applicable to any exchange process between 2 or more individuals.

As the general definition for the scope of this thesis, the widely used and popular American Marketing Association (AMA) definition of marketing (which can be classified into modern and extended marketing interpretation) shall be used:

"The activity, set of institutions, and processes for creating, communicating, delivering, and exchanging offerings that have value for customers, clients, partners, and society at large." AMA [45]

3.3.3 Summary

The definition of marketing offered by AMA emphasizes the significance of delivering value and benefits for potential and existing customers. Thus the most important tasks of marketing engage in customer related activities: customer acquisition and customer relationship management.

Using the definition offered by AMA, Meffert identified in his book 4 core tasks of marketing [44, p. 19]:

1. Customer acquisition
2. Customer relationship management
3. Services innovation
4. Services upkeep

This definition of marketing enables better understanding of the upcoming topic of entrepreneurial marketing and the differences between both of those topics, as it leaves the organizational context open, thus making the definition applicable to either big enterprises or SME.

3.4 Entrepreneurial Marketing

3.4.1 Historical Background

Entrepreneurs have long identified the importance of marketing for their success. The results of the very first empirical study about the cross section of marketing and entrepreneurship have helped to guide the development of entrepreneurial marketing over the course of years.

The exploratory study conducted interviews with 14 venture capitalists. While this number seems small, those people have dealt with hundreds of entrepreneurs and successfully financed over 200 of the evaluated ventures. The results have shown that the venture capitalists perceived marketing management and pre-venture market analysis as the crucial success factors. They also agreed about entrepreneurs being biased about their idea, leading to ignorance towards negative market information. Finally the limitations

of entrepreneurs have been identified - inability to spread costs, limited access to high quality suppliers and distributors [46].

Entrepreneurial marketing is a very young field of research with the first official research meeting dating back to 1982, where the crucial research issues in the area of marketing and entrepreneurship have been identified. Nevertheless even then the interest from the academia has been small.

During the early conferences some of the most important marketing and entrepreneurship related variables have been identified. Those were very similar to the results of the study described above including: the lack of economies of scale, severe resource constraints, a limited geographic market presence, a limited market image, little brand loyalty or market share, little specialized management expertise, decision-making under even more imperfect information than in larger firms, a marked scarcity of time per major management task, a scarcity of professional managers and a mixture of business and personal goals [47].

In the following years a period of gradual growth in this area of research has occurred, but the topic is still “insufficiently developed” [48]. Nevertheless multiple frameworks surrounding this topic has been developed, and shall be presented below.

3.4.2 Meaning

Entrepreneurial marketing describes a field of research addressing the cross section of entrepreneurship and marketing and the activities, strategies and characteristics involved within. When founding a new venture marketing is a crucial aspect, as that venture’s market orientation, its product and the communication and interaction with market participants are an enormous factors for its growth and survival and thus its success [49, p. 5]. Thus one could roughly say that entrepreneurial marketing is basically the "marketing of small firms growing through entrepreneurship" [50, p. 15].

When thinking about startups it is obvious that, in the area of entrepreneurship, marketing should have somewhat different goals and processes to address the constantly changing business environment. Moreover due to the characteristics of a startup already mentioned before (see 3.2.3) entrepreneurial marketing bears some restrictions and important details concerning marketing strategy and its implementation. As traditional marketing is not suitable for such a dynamic and specialized environment, specific goals and challenges of entrepreneurial marketing should be identified.

3.4.3 Goals and Challenges

To understand the difference of marketing in entrepreneurial and established corporation context, the most important aspect is the novelty. An entrepreneur has no existing products and/or customers to sell to. Instead he uses marketing to find new products and/or new customers, establish a new brand, build new marketing channels and, because of resource scarcity, leverage his marketing efforts [51, p. 5].

Subsequently entrepreneurial marketing deals with 2 challenges at the same time - the introduction of new product and new venture to the designated market. In contrast to traditional marketing ("Klassisches Marketing") concerning activities around an existing product of an existing brand, corporate marketing concerning the introduction of a new brand around existing products and innovation marketing ("Innovationsmarketing") concerning the introduction of a new product of an existing brand (see 3.2).

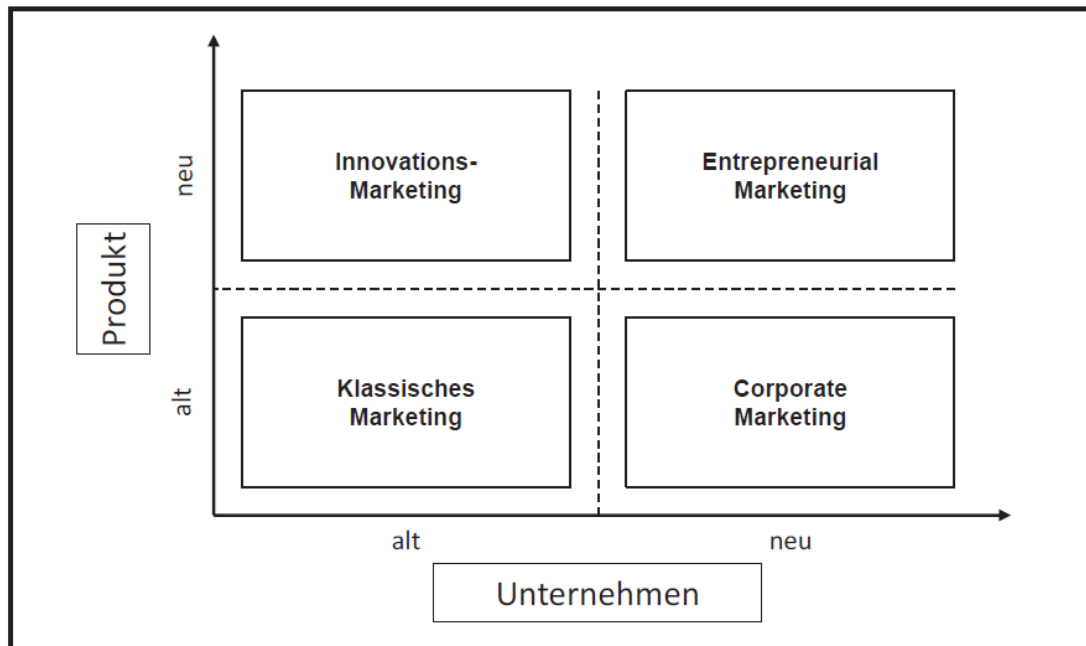


Figure 3.2: Marketing schools depending on the product / brand novelty [49, p. 8]

Summarizing the reflections on the term, the various aspects and challenges described result in the definition of 3 specific goals of entrepreneurial marketing also named by Freiling [49, p. 10]:

1. introduction and diffusion of the brand
2. introduction and diffusion of the product
3. verification of the business model

3.4.4 Summary

All in all the term of entrepreneurial marketing is the aggregation of marketing related topics in the scope of an entrepreneurial undertaking, which can also be seen in the table 3.1. The goals described help to emphasize the distinction of the topic from the traditional marketing and show the crucial challenges in this area. While finding new

customers equals the customer acquisition, entrepreneurial marketing does not focus on keeping customers, as a new undertaking has to acquire them first. Analogously no service upkeep is needed, as the marketing channels have to be established first.

	Goals
Entrepreneurial Marketing	<ul style="list-style-type: none"> • find new products • find new customers • establish a new brand • build new marketing channels
Traditional Marketing	<ul style="list-style-type: none"> • customer acquisition • customer relationship management • services innovation • services upkeep

Table 3.1: Overview over the similarity of the goals of traditional and entrepreneurial marketing.

3.5 Business Process Management

Identifying the growth hacking process leads to the necessity of specifying what a process is and how it can be designed, modelled and displayed in a graphical form. For this purposes the term process, business process and Business Process Management shall be looked into, to identify topics necessary for the growth hacking process definition.

3.5.1 Historical Background

When speaking about process management, one has to consider Adam Smith, a Scottish economist, as one of the first scientist who exercised an early form of processes in his undertaking. His famous description of pins production utilized subdivision of labour, one of preconditions for a business process. This idea has also been emphasized by Henry Fayol, a prominent economist in the field of organization theory, in order to increase productivity.

With Frederick Taylor and Henry Ford the process-related thoughts has been innovated by adding coordination needed between the subtasks resulting from subdivision of labour and optimizing both tasks and the coordination between them. In the years to follow first information systems have been created and first ideas for the automation of office work emerged. At first the focus lied on structural aspects. In the early 1990s with the introduction of workflow management and various other business concepts like business process reengineering the area of business processes started to become more and more IT related.

Thus while the origins of business processes lie in economics and management science with the development of IT the topic became more and more IT focused, using its tools and systems to manage business process across company [52, p. 2-4].

3.5.2 Process

In order to specify the term of process, it is also crucial to understand what a business process is. In their book "Process Management" Becker and Kahn describe a process and following a business process as follows:

"A process is a completely closed, timely and logical sequence of activities which are required to work on a process-oriented business object. Such a process-oriented object can be, for example, an invoice, a purchase order or a specimen. A business process is a special process that is directed by the business objectives of a company and by the business environment. Essential features of a business process are interfaces to the business partners of the company (e.g. customers, suppliers)." [53, p. 4].

Scheer and Rosing also distinguish three types of processes based on their role within an undertaking:

1. *Management processes* focus on the design and implementation aspects of activities and engages in planning, monitoring and control of the other process types.
2. *Main processes* are precisely those processes that deliver an actual output (often found within other process types).
3. *Supporting processes* concentrate on supporting the other process types, in order to deliver all the necessary resources to the main process it needs to achieve its purpose.[54, p. 162-164]

3.5.3 Business Process Management Definition

Business Process Management is a broader topic comprising of a multitude of smaller subtopics. Taking a look at some of the definitions will help to identify those and explain them, in order to understand this topic and identify aspects which could be helpful for the purposes of this master thesis.

Van der Aalst et al. define the topic "Business Process Management includes methods, techniques, and tools to support the design, enactment, management, and analysis of operational business processes. It can be considered as an extension of classical Workflow Management systems and approaches." [55, p. 1]. From this definition follows that the very basis of the topic is built by the process and further business process concept.

As the topic shows affiliation with Workflow Management it is important to understand what workflows are about. While a workflow addresses "The automation of a business process, in whole or part, during which documents, information or tasks are passed from one participant to another for action, according to a set of procedural rules." [56, p. 5], a workflow management system is "a system that defines, creates and manages the execution of workflows through the use of software, running on one or more workflow engines, which is able to interpret the process definition, interact with workflow participants and, where required, invoke the use of IT tools and applications." [56, p. 6]. As can be seen both of the workflow related definitions concentrate on the execution and enactment. As such

focus seemed to be too narrow, Business Process Management emerged.

Figure 3.3 shows the differences between BPM and Workflow Management. While Workflow Management supports process design and system configuration phases (only few of such systems support the simulation - i.e. process enactment), Business Process Management adds process enactment and continuous improvement through diagnosis, which also inputs in the design phase, to the core activities [55].

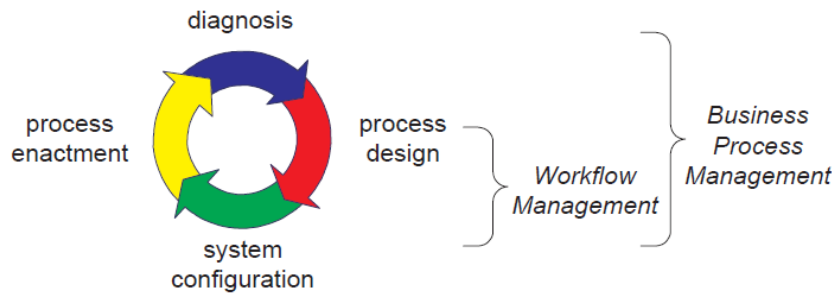


Figure 3.3: Business Process Management lifecycle compared to Workflow Management [55, p. 5]

Thus the aspect of multiple phases covered by Business Process Management emerges. While the figure 3.3 offers a first overview, Damij et al. offers a better description of the phases.

For them Business Process Management comprises of 4 phases:

1. *Design and Analysis* - where the business process is being identified and modelled (design part) based on the information collected about the process from various sources like interviews and documentations. The process is then being validated, simulated and verified (analysis) in various workshops.
2. *Configuration* - addresses the steps of business process management system development, testing and integration into the environment of the given company.
3. *Enactment* - focuses on the operation, monitoring and maintenance of the processes in the scope of a company.
4. *Evaluation* - in this phase the system is evaluated using data gathered in the previous phase, in order to identify any problems or shortcomings.

For the scope of this master thesis especially the concepts of the design phase are needed. As van der Aalst et al. emphasize, a formal foundation regarding business processes and its models is important, as it "does not leave any scope for ambiguity" [55, p. 6]. The need for the models to be understood by all stakeholders the same way can be solved using graphical representations. As the concepts behind such graphic should also be defined, a notation is needed.

For this purpose BPMN has been created and shall be used in the scope of this thesis. Vom Brocke et al. also emphasizes this steps saying that "It (Business Process Management) begins at the bottom ("Design, document and implement process"), with the creation of a formal process. This is not a minor, purely formal step. Many organizations find that certain aspects of their operations are characterized by wild variation, because they lack any well-defined end-to-end process whatsoever. This is particularly true of low-volume, creative processes such as product development or customer relationship management." [57, p. 5].

3.5.4 Business Process Modelling Notation

Concerning working with process, it is necessary to visualize the chain of activities and tasks. To do so multiple tools and notations have been developed over the years. One of them is the BPMN which shall be used in the scope of this master thesis in the latest version (BPMN 2.0)[58].

BPMN is a graphical notation made specially for modelling of business processes within one or between multiple organizations. The notation is being maintained, designed and developed by Object Management Group. The BPMN is widely accepted in the industry as the Figure 3.4 shows. According to the study conducted by Harmon since its existence BPMN has been subject of increasing popularity peaking in 2015 (last year of survey) at 64% of surveyed organizations wanting to adopt this notation in their business.

Since 2013 the BPMN is also an ISO standard ISO/IEC 19510:2013, stating that it creates a "bridge for the gap between the business process design and process implementation" [60]. It contains the best practices of "business modelling community" and its intent is the standardization of process visualization across the industry to provide better understanding between different subjects on the matter of processes [60].

The description of all the elements and concepts included in BPMN can be found on BPMN Website [58] and won't be explained in detail in this thesis, as it's not directly relevant to the topic of growth hacking. Nevertheless the growth hacking process shall be presented in the BPMN and thus all the concepts used in this visualization shall be discussed shortly.

3.5.5 Growth Hacking Process in BPMN

Both growth hacking processes discussed in the growth hacking state of art chapter (see section 2.3.4 and figures 2.4 2.5) depict an iterative process represented by the usage of the loop symbol in the footer of an expanded subprocess (it is expanded, because the activities contained within can be seen, as opposed to collapsed subprocess, which would look like a normal activity with a "+" in the footer). The activities represent simple tasks in the process. Each process starts with a start node depicting the entry point of the process and an end node, where the process ends.

In both figures the expanded subprocesses contain multiple simple tasks (activities) in a sequenced chain. The process depicted using the description from Patel and Bronson 2.4

Which of the following process standards is your organization interested in adopting? (Choose as many as apply)							
	2005	2007	2009	2011	2013	2015	
ARIS EPC (Notation)				14%	22%	18%	19
ISO 9000	49%	40%	36%	39%	30%	23%	24
IDEF (Notation)				5%	7%	4%	4
CMM/CMMI	28%	28%	30%	17%	18%	16%	17
BPEL	23%	26%	20%	12%	10%	8%	8
XPDL		6%	6%	5%	2%	4%	4
BPMN (Notation)	22%	41%	51%	60%	60%	64%	67
UML (Notation)	33%	30%	24%	14%	18%	17%	18
OMG Business Process Metamodel	10%	7%	7%	5%	3%	1%	1
OMG Business Rules Metamodel	4%	4%	6%	4%	4%	4%	4
OMG Decision Management Model					5%	4%	4
OMG Business Process Maturity Model		10%	14%	5%	6%	2%	2
OMG Model Driven Architecture (MDA)		8%	7%	4%	3%	4%	4
ABPMP Body of Knowledge					10%	8%	8
IIBA Body of Knowledge					18%	14%	14
ASQ Lean Six Sigma Body of Knowledge					25%	25%	26
Other, Please Specify	21%	23%	19%	15%	17%	24%	25

Figure 3.4: Standards companies are interested in using for their processes [59, p. 29].

also contains a gateway node - in this case it's an exclusive-or node, meaning the process can only continue on either one of the outgoing branches, but never on both.

3.5.6 Summary

While the Business Process Management topic describes a wholesome approach for managing business processes and their lifecycle in a company, such an approach wouldn't be appropriate for this thesis. However comparing the research questions and aims of this work with some of the concepts, especially the design and analysis phase of Business Process Management shall be used in the scope of this thesis.

It is important to understand that the processes depicted in growth hacking theory are trivially modelled using the vague process descriptions. Taking a longer look at the diagrams reveals their flaws. Why do the goals and metrics to measure them have to

be defined anew in each iteration? The same concern applies to the leveraging of existing strengths, as they shouldn't change a lot in a short iterations, like the ones happening in growth hacking process. Which shows another problem - except for a description of the experiment runs being a "minimum viable tests", there's no information on how long such an experiment should last and very little on when to terminate one.

3.6 Conclusion

The theoretical part of this thesis analysed growth hacking and its underlying mindset, process, prerequisites and techniques using grey literature. Moreover various academic areas both the ones obviously related to (like entrepreneurship and startups) and the ones with which growth hacking could possibly be associated have been researched and shortly described.

Regarding the academic foundation of the growth hacking in conclusion the topic shows obvious affiliation with entrepreneurial marketing. On the one hand it is a marketing approach as its main purpose is the growth of user base, which directly translates to the customer acquisition and customer relationship management. As the techniques used for this purposes are creative "hacks" and require a good product/marketing fit also the remaining core tasks of marketing identified before can be found in the topic (see 3.3.3). On the other hand the very definition and prerequisites of growth hacking show its affiliation with startups and thus entrepreneurs, even when its only a specific fraction of those groups (technology startups developing software product or service). Thus this approach can surely be categorized into entrepreneurial marketing.

The growth hacking process found in the literature refers to the process of finding potential growth hacks and testing them for viability using minimal resources. Regarding the process classification it seems as growth hacking process fits best into "main processes" category, as the developed techniques should result in increased user base, thus having direct output benefiting the business.

However the processes found in the literature are also very vaguely specified, which has been depicted in the summary of section 3.5.4. Here multiple questions regarding the actual process flow and how it can actually be used in a real startup environment emerged.

Summarizing multiple questions have occurred during the analysis. While many aspects of growth hacking have been identified and described, the approach has never been a subject of an academic research. Questions regarding the circumstances of successful growth hacking implementation as a management process including the monitoring of growth hacking process would require more resources than this thesis can offer.

Nevertheless the questions occurring during the growth hacking process definition could be addressed and evaluated, as the process plays a crucial role in growth hacking offering the hacks as its output. For this purpose the design phase from business process modelling could be used. This phase offers tools for the design and modelling of a process. As

the process is being used in a real life environment and the thesis concentrates on its definition, the analysis phase (and thus model verification) is not needed.

Part III

Empirical Part

Research Design

4.1 Why Case Study Research?

The following chapters will be mainly based on the "Case Study Research - Design and Methods" written by Robert K. Yin [61]. This book offers funded and scientifically accepted knowledge on how to design and conduct a successful and scientifically relevant case study in social science research.

4.1.1 General

The case study research method chooses to observe a specific phenomenon based only on a single or few carefully chosen cases (like a single startup implementing growth hacking methods in this master thesis) over time. Thus it concentrates on a "bigger picture" instead of individual events.

It is beside experiments, surveys, histories and the analysis of archival data one of research methods being used in social science research. While many scientists still think case study method is only appropriate for the exploratory research, Yin [61, p. 3] argues that any of those methods can be used for any of the research phases (i.e. exploratory, descriptive or explanatory).

Yin offers following twofold definition of the case study research[61, p. 13–14]:

- "1. A case study is an empirical inquiry that
 - investigates a contemporary phenomenon within its real-life context, especially when
 - the boundaries between phenomenon and context are not clearly evident."

Explaining the nature and scope of a case study and how to distinguish it from other research strategies.

On the other hand because of the unclear boundaries between context and phenomenon the characteristics of data collection and data analysis strategies also need to be the part of the definition:

"2. The case study inquiry

- copes with the technically distinctive situation in which there will be many more variables of interest than data points, and as one result
- relies on multiple sources of evidence, with data needing to converge in a triangulating fashion, and as another result
- benefits from the prior development of theoretical propositions to guide data collection and analysis"

Thus the case study as a research method offers a comprehensive research strategy as it covers the topics of the design logic, data collection and data analysis.

However Yin emphasizes that the case study strategy should never be confused with qualitative research, as case studies may comprise of any mix of either the qualitative or quantitative techniques.

The essential purpose of a case study and the central tendency of the most is the illumination of decisions - the reason for them, how they were implemented and what results did they bear. Case studies are (like experiments) generalizable to theoretical propositions and not populations or universes. When doing a case study the goal should be to generalize theories.

4.1.2 Design Types

In his book Yin names four basic types of designs for case studies, which are shown in the Figure 4.1 and will be described shortly.

The elements shown in the figure 4.1 display the need of analysing the context relating to the case being evaluated "and the dotted lines (...) indicate the boundaries between the case and the context are not likely to be sharp" [61, p.39]. The main message is that the designs differ based on the one hand on the number of cases being evaluated (single / multiple) and on the other hand on the number of units of analysis (unitary / multiple) and thus result in the 4 basic design types. The decision on which design type to choose should be based on the quality of the available cases and the data the researcher wants to collect.

4.1.3 When to Use

Yin names 3 criteria for choosing an appropriate research method[61, p. 5]:

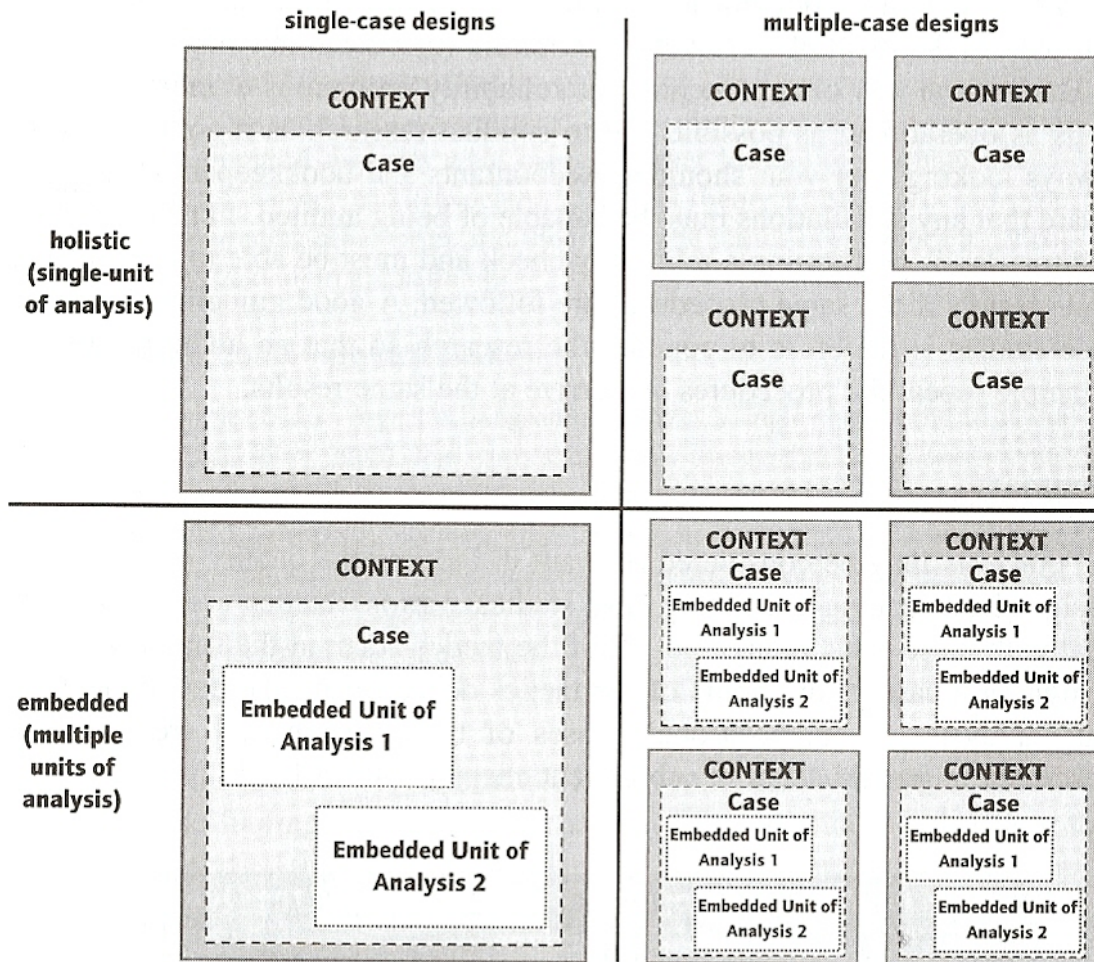


Figure 4.1: Basic case study design types [61, p.40]

1. the type of research question posed
2. the extent of control an investigator has over the actual behavioural events
3. the degree of focus on contemporary (as opposed to historical) events

According to Yin the case study research is to be preferred when analysing "contemporary phenomenon within some real-life context" where the relevant behaviour cannot be controlled. Through the usage of case study research method it is possible to "retain the holistic and meaningful characteristics of real-life events" like life cycles, organizational and managerial processes and many more [61, p. 13–14].

This specific strategy copes exceptionally well with the "how" and "why" research questions (the first criteria - type of research question posed), where no control over the behavioural

events is needed (second criteria) and where the focus lies on contemporary events (third criteria).

Such a composition sets the case study research apart from histories and experiments, where also the "how" and "why" questions can be answered.

As histories deal with past phenomenon the third criteria distinguishes the choice between those two strategies. Even though case studies use almost the same techniques as histories they offer 2 new sources of data: direct observations of the studied events and interviews with involved persons.

On the other hand experiments and case studies differ in the second criteria, as the investigator in an experiment often manipulates behaviour in some way. In the field of case studies such control is not possible.

4.1.4 Applications

For the case studies five most common applications have been named by Yin and include the need to *explain* causal links in contemporary events too complex for other strategies (like histories or experiments), the need to *describe* an event and its real-life context, the need to *illustrate* certain events within evaluation, the need to *explore* events where no single set of outcomes could be identified and at last a case study can be used for *meta-evaluation*, meaning a study of an evaluation study [61, p. 15].

4.1.5 Conclusion

Concerning the 3 criteria for choosing an appropriate research method, growth hacking seems to fit a case study research method best. With the topic being a very recent phenomenon, the third criterion is addressed. The first criterion regards to the research questions which are of the "how?" type. The control over behavioural events can only be reached to a small extend, thus addressing the second criterion. Growth hacking fits also the description of "contemporary phenomenon within some real-life context".

Concluding, the growth hacking related research questions fit the case study research method and thus this method has been chosen for this master thesis.

4.2 Designing a Case Study

Research design aims to link the data to be collected in the scope of the study to its research questions and thus ultimately to the conclusions of the study and in further step of this master thesis. It is a plan for an investigator on how to collect, analyse and interpret the data using scientific research strategies and thus ensuring the quality, reliability and validity of the results.

Yin names 5 components of research design especially important when designing a case study and mentions the lack of guidance in the scientific literature regarding the last 2 of them. The components can be classified into those helping to indicate what kind of data

is to be collected (*data collection*, components 1-3) and those who tell the researcher what to do after the collection has been completed (*data analysis*, components 4 and 5)[61, p. 21]. The components are:

1. a study's questions;
2. its propositions (if any);
3. its unit(s) of analysis;
4. the logic linking the data to the propositions;
5. the criteria for interpreting the findings.

4.2.1 Data Collection

The following components help to guide the researcher in selecting the proper data to collect. While some has already been mentioned before, others need some explanation, as the names are not self-explaining.

Study questions

See section Research Questions 1.2.1.

Study propositions

To each question there should be a proposition guiding the scope of the research and further narrowing it. Such a proposition tries to make some assumptions regarding the answer to the research questions.

Thus concerning the research questions that are the scope of this master thesis following propositions are being made:

1. "How can growth hacking approach be specified as a process using process management techniques"

For this question the growth hacking process shall be analysed in the startups chosen for the case study. During the analysis various prerequisites, factors, steps, requirements for know-how in team and other aspects of a process, which haven't been mentioned in the literature, are expected to occur. The vague description offered by the results of literature research has probably not covered all of the characteristics of the process and thus requires a better look, into how growth hacking can be implemented in a contemporary startup.

The resulting process needs to be validated and verified with the involved startups to ensure it's correctness in the scope of the case study. Small differences in the approaches used by the participants of the study are expected, which will require some level of abstraction and can result in negative feedback for some parts of the resulting process.

Units of analysis

There are twofold units of analysis to concern when doing a case study research:

- defining "the case" of the case study
The choice of the case should be led by the research questions and study propositions. If both of them don't lead to a conclusion, the research questions could be too vague or too numerous.
- defining the boundaries of a case
Once the general definition of the case has been found, its boundaries have to be set, to determine the scope of data collection and distinguish between relevant and irrelevant data.

For the scope of this master thesis:

- "the case" - early stage technology startup wanting to implement growth hacking process.
- boundaries
 - time - the case will be observed during the implementation of the growth hacking techniques. Beginning with the choice of the techniques and ending at the launch of the campaign.
 - individuals - only the people working for the chosen startups are to be concerned part of this study.
 - events and decisions - only the events and decisions that can be connected to the implementation of the growth hacking techniques in the chosen cases will be observed.

4.2.2 Data Analysis

Both components listed below help the research to address the concerns of how to interpret and correctly analyse the collected data. According to Yin for those two components no detailed guidance in the scientific literature can be found.

Linking the data to propositions

This component directly affects the data analysis part of the case study. It is important for the research design to know the analytic techniques mostly used in case studies. This knowledge should be kept in mind when collecting the data, so any of the techniques can be used.

- pattern matching
- explanation building

- time-series analysis
- logic models
- cross-case synthesis

Criteria for interpreting finding

Creating such criteria helps to interpret the data in a scientific way. However as oftentimes the data gathered is of qualitative nature, no statistical tests can be used. A major strategy is to identify alternative (rivalling) explanations of the findings in order to compare them among each other and reaching a conclusion.

4.2.3 Role of Theory

The consideration of the 5 crucial components for conducting a case study will force the researcher to begin forming theories regarding the pursued topic. The theory development part is being emphasized multiple times by Yin and Eisenhardt as the essential aspect of the case study design phase [61, p. 28][62].

Thus a theoretical framework should be developed to aid the definition of proper research design, data collection and analysis methods. Such a framework is the main source for the generalization of the case study results and has already been developed in the previous chapters.

In order to generalize the results the researcher should use the "analytic generalization" over the statistical one, as a case can not be seen as a sampling unit but rather as a new experiment. The "analytic generalization" approach uses previously developed theory as a template and compare it with the case study results[61, p. 31–32].

4.2.4 Quality

A major issue in designing a case study is the maximization of quality criteria. Four design tests shall be used and described shortly [63, p. 26–29]:

Construct validity tests what the researcher is measuring. Have the correct operational measures been chosen to analyse the topic? The chain of evidence has to remain obvious to the reader - choosing what to measure and then justifying the measurements fit the chosen criteria.

Internal validity tests the correctness of causal claims or inferences. Making any assumptions on inferences the researcher should think about all the possibilities that could have caused it. Multiple (rivalling) theories should be taken into account before making a conclusion.

External validity tests the extension to which the case study's findings can be generalized. When the findings are applicable to other, similar cases, the external validity test has been passed.

Reliability tests if the case study and its findings can be repeated using the same method and procedures. The goal is a reduction of errors and biases. To assure reliability can be tested, some documents concerning the procedure and complete data have to be retained.

The quality tests should be kept in mind while conducting the case study research. To help with the implementation of the tests, some tactics have been named and can be seen in the Figure 4.2. The figure also contains the phase of research in which the tactic shall be implemented. Those tactics shall be used in the scope of this master thesis.

Tests	Case Study Tactic	Phase of research in which tactic occurs
Construct validity	● Use multiple sources of evidence	data collection
	● Establish chain of evidence	data collection
	● Have key informants review draft case study report	composition
Internal validity	● Do pattern-matching	data analysis
	● Do explanation-building	data analysis
	● Address rival explanations	data analysis
	● Use logic models	data analysis
External validity	● Use theory in single-case studies	research design
	● Use replication logic in multiple-case studies	research design
Reliability	● Use case study protocol	data collection
	● Develop case study database	data collection

Figure 4.2: Case study tactics for four design tests. [61, p. 34]

4.3 Conducting a Case Study

While conducting a case study the researcher must know how to collect and analyse the data. Thus this chapter will show most common used methods and select the proper ones for the scope of this master thesis.

In another step a so called case study protocol shall be explained and developed to assure the reliability of the research and to guide the researcher through the data collection phase.

4.3.1 Data Collection Methods

Yin names 6 main data sources that can be used in the scope of case study research for collecting the data:

1. direct observations (human actions, physical environment, ...)
2. interviews (e.g., open-ended conversations with key participants)
3. archival records (student records, ...)
4. documents (newspaper articles, letters, e-mails, ...)
5. participant-observation (being incorporated into the organisation with a real-life role)
6. physical artefacts (computer downloads of employees' work)

The methods selected for the research conducted for the purposes of this master thesis are the *direct observations*, *interviews* and *documents*.

Documents

While collecting various *documents* the emphasis will lay on records relevant to the topic of growth hacking and the chain of events that led to the decision to use those techniques in the given case. Thus meeting protocols, marketing documents, emails and chat histories shall be reviewed and analysed for data collection.

The documents used for in the scope of the case study will be listed in the Appendix C. However the inclusion of whole documents is not possible, as some of the startups involved in the case study could request staying anonymous. Thus the documents are listed in the appendix with type and ownership columns.

Direct observations

Direct observations will have the author participating in meetings and being on the company premises during the implementation of the growth hacking techniques to observe the infrastructure being used and the problems that occur. Through such observations it will be easy to identify the various factors that are needed while working with growth hacking.

The conducted observations shall be documented in an observation protocol as recommended by Przyborski et al. in order to comprehend the process of direct observations and to ensure the reproducibility. Such a protocol comprises of multiple columns containing field notes.

First column documents the place and time of the observation, followed by the "observations" column. Here the researcher should note everything that is happening in an chronological sequence. The next column depicts the contextual notes - what contextual information influences the occurrences in the field? The fourth column focuses on the role the researcher assumes in and how the observation influences the field. Last column concerns the theoretical reflection - how can the occurrences in the field be preliminary interpreted or what relationships can be identified?

Przyborski et al. emphasize, that when possible, such notes should not be taken during the observation, as it could disturb the natural flow of the activities [64, p. 63-66]

Interviews

Finally multiple *interviews* shall be conducted. Interviews in the case study research method are "guided conversations rather than structured queries" [61, p. 89]. Thus while following the own line of inquiry multiple open-ended questions shall be asked, including questions about subject's opinions and insights.

The interview shall be structured as proposed by Przyborski et al. They propose an interview process with minimal impact on the interviewee, which ensures less biased interview.

The proposed process starts with a short small talk phase, in order for the interviewee to get comfortable with the new situation, audio recorder and the modus of the interview. Afterwards the first question, a so called input stimulus should be asked. This question aims to stimulate the interviewee to deliver a self-contained depiction of the contemporary event that is being evaluated, without the intervention of the interviewer.

The interviewer should start asking questions only when the interviewee has completed his depiction. First priority concerns the immanent questions regarding the depiction - is it complete, or does the interviewer require some additional information? Only after the first topic has been completed satisfactorily, exmanent questions (questions regarding the research topics, which has not been answered by the interviewee in his own depiction) can be asked. The last step comprises of thanks and positive feedback to the interviewee. While, according to Przyborski et al. the input stimulus is the most important part of the interview and can consist of multiple questions, the immanent questions can't be specified beforehand, as they concern the depiction delivered by the interviewee. For those it is important to know, what is the aim of the research. Concerning the exmanent questions, even though the interviewer should never read questions, they should be prepared beforehand. The formulations should regard the topics of interest for the research and be only asked, if the interviewee's depiction has not delivered answers to them.[64, p. 80-87].

4.3.2 Data Analysis Methods

The analysis phase of case study research offers little structured tools and rigid processes. "Analysing qualitative data is not a simple or quick task". It is a very systematic and time-consuming task highly dependant on the researcher's experience [65].

For the scope of this master thesis the strategies proposed by Yin [61, p. 111-115] shall be used.

On the one hand the analysis will *rely on theoretical propositions* developed in the chapters before, as the strategies and data collection plan have all been based on those. Thus the propositions help to focus the attention on relevant data and guide it towards the research questions.

On the other hand the researcher shall always *think about rival explanations* in order to consider other possible explanations for the data patterns. Those rivalling theories have already been developed in Chapter "Designing a Case Study" making it possible to incorporate them during data collection phase and thus the resulting data should incline to either the propositions or rivalling theories.

4.3.3 Qualitative Content Analysis

For the interpretation of the data qualitative content analysis method has been chosen. This method offers a systematic and qualitative oriented approach for text analysis. The procedure behind this method is not standardized and does not always look the same. It has to be adapted according to the research questions and the materials (data). Thus this method constructs an interpretation process which defines the analysis steps and their sequence. Additionally various rules are being set, which is the main difference to "free" interpretation - each step and each decision during this interpretation process is based on a tested and justified rule [66, p. 48-49].

In case of qualitative content analysis the central aspect lies on the specification of categories for the aims of the interpretation process - a fact being emphasized multiple times by the author. The usage of the categories ensures replicability of the whole procedure, where the construction and justification of categories are the main focus. Mayring also emphasises that each decision in the procedure should consider the state of research on the topic, which in this case means the findings of the theory part of this thesis [66, p. 49-50].

Following the steps of the method as proposed by Mayring first the source material has to be identified. For the scope of this thesis this equals the data collected during the data collection phase. This includes all the observations, as documented in the observation protocol in the appendix, and the transcripts of the interviews. While the observations have been produced by the author if this thesis during various meetings of the case study participants, the interviews have been conducted with the people responsible for growth hacking process in the respective startup.

The next step involves the aims of the analysis. This step has also already been addressed and equals the research questions formulated in the scope of this thesis. Thus the analysis of the data tries to identify and specify the underlying growth hacking process, its steps and characteristics used in the real life environment.

Afterwards the interpretation process can be formulated. Such a process comprises of one or multiple analysis techniques chosen depending on the underlying source material and the aims of the analysis. Mayring names 3 distinct analysis technique forms: *summary*, which focuses on the reduction of the material through the usage of abstraction and generalization, *explication*, which focuses on explaining and clarification of the collected material and finally *structuring*, which is comparable to the "standard" techniques used in classical content analysis. For this step also the specification of the analysis units is necessary. Those are [66, p. 52-62]:

- coding unit - smallest part of data that can be associated with a category
- context unit - biggest part of data that can be associated with a category
- interpretation unit - what part of data should be interpreted at once

For the scope of this thesis the *coding unit* is a content of a sentence, the *context unit* equals all the data acquired for for one case of the case study and the *interpretation unit* is the passage being interpreted. Regarding the techniques the *inductive category development* technique has been chosen for the analysis. [66, p. 63-67].

Inductive Category Development

While Mayring names two distinct techniques within the summary, the aim of the research and thus the study itself is rather of exploratory nature - no previous studies could be found regarding the topic of growth hacking. Thus inductive category development fits the nature of this thesis best, as the category development is based on the material only.

The specific process for the inductive category development can be seen in the figure 4.3. The inductive nature means that the categories are being developed directly from the material collected during the study and generalized, without needing a theoretical concept beforehand. This results in categories being very "material near", not being influenced by the presupposition of the researcher.

The process begins with the definition of the category development topic, which corresponds to the research questions of this thesis - "how can growth hacking process be specified?". This serves as a criterion of selection, which shall be used for the category definition in order to eliminate the meaningless, decorative passages and the ones divergent from the topic. It is also important to define the levels of abstraction, as too high abstraction level will lead to few, way to general, categories.

After those definitions the collected material is being read through step by step. When the criterion of selection is fulfilled (i.e. the passage fits the topic), a category shall be created. Considering the abstraction level agreed upon, the category is a term or a short sentence, derived directly from the passage. The next time the criterion is fulfilled, the researcher has to decide, if the passage fits into one of the previous categories, or a new one should be created (i.e. subsumption).

When a big part of the data has been analysed, and only few new categories are being created with each passage, Mayring suggests to revise the categories. The revision should verify that the categories actually help answering the research aims (i.e. feedback to the first step) and if the criterion of selection and the levels of abstraction has been chosen well (i.e. feedback to the second step). This equals the formative check of reliability in the process depiction. Should some of the definitions be changed here, the material has to be read through from the beginning again. Otherwise the rest of the material is being read through, creating only few new categories.

As a result a category system concerning the selected aim is created, with the according

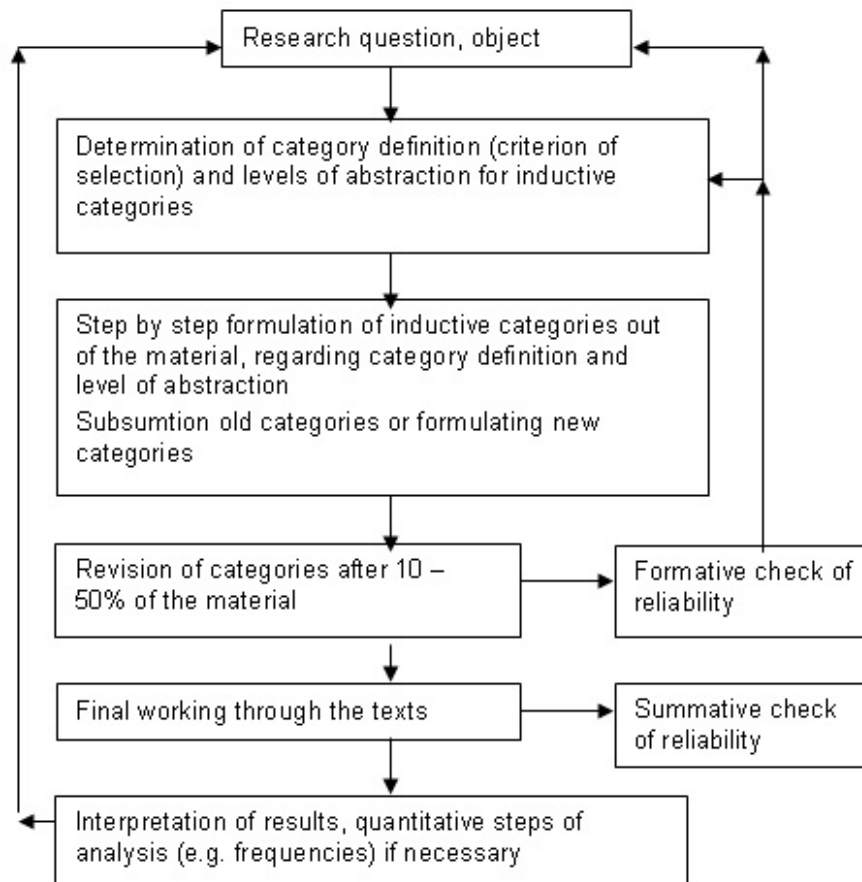


Figure 4.3: Inductive category development as described by Mayring in [66, p. 84], translated image from [67].

text passages. Now the interpretation regarding the research questions can be done [66, p. 83-85].

Quality Criteria

Working with qualitative content analysis during the data analysis phase offers additional quality criteria associated with this method. Both the validity and the reliability can be addressed using those.

For the criterion of validity Mayring names 5 additional criteria: *semantic validity*, *sample validity*, *correlative validity*, *prediction validity* and *construct validity* [66, p. 118-122].

- *Semantic validity* describes the process of analysis of the category development and if the meaning of a passage can be found in the category name.
- *Sample validity* is about the usage of the usual sampling criteria.

- *correlative validity* defines validity through correlation with another study.
- *prediction validity* can only be used, when predictions are being made from the data collected.
- *construct validity* describes the analysis of the research design using experiences.

Thus for the validity of the data analysis phase the *semantic validity* and *construct validity* can additionally be used. However, as the aspect *construct validity* has already been addressed by the quality criteria described in previous section, only *semantic validity* will specifically be used.

4.3.4 Case Study Protocol

Using a case study protocol vastly increases the reliability of the research by offering guidance across the cases. Most of the protocol template elements proposed by various authors like Yin [61, p. 67] or Brereton [68] have already been addressed throughout the chapter. Thus this chapter of the thesis forms a case study protocol that could be followed to address the reliability of the study. However concerning the low amount of cases included in this study, no explicit case study protocol shall be included.

Instead the study design, collection, analysis methods and steps have been described and for each data collection method a protocol can be found in the appendices.

Case Description

5.1 Cases

For the purposes of the case study research method for this thesis, technology based startups willing to implement growth hacking process are needed. Resulting from the theory chapter multiple criteria regarding the cases can be named.

As we are referring to startups, all the characteristics named in the summary section of startup description (see 3.2) have to be fulfilled. Both of cases are new undertakings, as startup 1 has been founded in September 2016 and startup 2 is still in the process of creating a legal company (as per March 2017). Both exhibit scarcity of resources and negative cash flow. Having no employees the decisions are being made by the founding team and both subjects want to grow. Thus all of the named criteria for "startups" are fulfilled.

In regard to growth hacking important factors during the decision about inclusion of those firms in the study were the product type and its development stage. As growth hacking focuses heavily on the usage of IT, the products should be software products or at least internet-based products.

Regarding the development stage of products, startups with only prototypic ones or no product at all, couldn't be used for the analysis of growth hacking process. The product has to either be already present on the market and thus available to the customer or be shortly before the launch, thus focusing on getting the attention of potential customers.

The analysis will focus on two startups offering different software product types. Both of those startups are presented in detail in the sections below. At first the information and situation of the given startup shall be described with table 5.1 offering an overview over the cases. Afterwards the results of the research per startup shall be addressed.

	# of Founders	Roles	founded	location
startup 1	4	CEO lawyer developer1 developer2	yes, September 2016	Vienna
startup 2	4	CEO salesman developer IT-expert	no	Krems, Vienna, Stockholm

Table 5.1: Overview over the cases.

5.2 Startup 1

5.2.1 Background Information

The first subject of the case study is a limited company (Gesellschaft mit beschränkter Haftung, short: GesmbH) founded on September 1st 2016 by a founding team of 4. The team comprises of an marketing and sales expert, who also acts as the CEO, a legal expert, a software developer and an marketing expert / software developer. They will be referred to as *CEO*, *lawyer*, *developer1* and *developer2* of the *startup 1*.

According to the business plan this startup's focus lies in the digitalization of user processes for parking processes through a platform. The platform can be accessed using various channels like web and mobile applications.

Concerning the addressed users startup 1 names business people as their main focus group. This results from the field analysis of the features offered by the platform and which users would be the most interested in those.

Startup 1 has no office as such, the meetings are usually held in various coffee houses or apartments of one of the founding team members. Consecutively there are no formal protocols from the meetings. As all the members live in Vienna the meetings are held weekly, with all the members appearing personally.

The growth hacking is being used as the main marketing approach of this undertaking. They want to find and build a customer base even before the launch and thus as the launch date comes near, also the growth hacking activities intensify. Main concern here is that as a platform, they have to attract both users and businesses to use it. Main focus in the process lays in the development of the growth hacks.

5.2.2 Status Quo

During the creation of this thesis the startup was in the phase of creating a prototype of their product and acquiring user. As per December 2016 the launch date has been set

for April 2017. The upcoming launch date has caused an improved focus on marketing and thus growth hacking has become a topic.

While still working on the first versions of the product, the team started a marketing campaign on Facebook, planned further ones in news papers across the country and started to use growth hacking to attract users.

5.3 Startup 2

5.3.1 Background Information

The startup 2 will be founded in April 2017 as a Offene Gesellschaft, as they decided that the limited form is not necessary until the expansion to other countries. Similar to startup 1 this startup's founding team also comprises of 4 people. They have a marketing and design expert, who also acts as the CEO, a logistics and sales expert, an app developer and an IT and marketing expert, responsible for development, infrastructure and marketing. They will be referred to as *CEO*, *salesman*, *developer* and *IT-expert* of the Startup 2.

A look into the business plan reveals, that startup 2 focuses on an app, which serves as a digital shop for ordering the actual product. However the mobile application is crucial for ordering the product and is the only channel for acquiring it, thus the application can be concerned as the product.

The focus groups vary, as the app addresses private customers as well as firms. However the channel stays constant, as at first only the app will be available.

Startup 2 also has no offices as such. They schedule weekly meetings over internet, as the members of the founding team live in different locations, making weekly meetings in person impossible.

Growth hacking is seen as a big opportunity to address massive growth and thus help in future expansion, as the business model of this undertaking is easily scalable. The process is used to rapidly develop user base over the first few years after the launch. While the startup 1 concentrates on the development of the growth hacks, startup 2 aims for long-term benefits. They emphasize multiple times the importance of building a knowledge base to learn for the future (see interview A.2.2).

5.3.2 Status Quo

Similar to the startup 1 also this startup is still in the process of finishing the prototype and launching the product on the market. However, their launch date is planned for April 2017 and thus, the product is almost done and a small user base already exists. Marketing has been first priority for this startup since the beginning.

While they were already successful advertising the app on Instagram, Facebook and various pitching contests around Austria, they also stumbled upon growth hacking back

in September 2016. Since then the process has been lived to accumulate knowledge and ideas before and after the launch, on how to grow the user base rapidly.

5.4 Documents

For the scope of the case study multiple documents from both of the subject has been collected and reviewed, in order to analyse and identify data that could be relevant for the research. The documents used have been depicted in the appendix (see C).

For the the general information on the startups like their product, desired communication channels, focus groups and growth wishes business plans from both cases have been reviewed. Those documents also offer first estimations on user interests and marketing vision for the undertakings.

However as growth hacking is a marketing approach, also the marketing plans are of interest.

Startup 1 has very vague vision of their marketing, as the document only depicts Facebook as one form of reaching the customers. Growth hacking is mentioned as a generator for additional channels, however no formal definition of the process or any other activities are named in the document.

Startup 2 offers more detailed approach. They have a structured plan for approaching Instagram as a channel, with a small process description on what, how and how often to post pictures to attract new users over this channel. Moreover Facebook is being utilized for blog postings and general display of activity in the startup to the public. Growth hacking is mentioned as another option for creating more channels, but no formal definition of the process could be found in the documents.

Thus both startups have defined their marketing plans rather loosely and concentrate on the development and improvement of their products first, with the decision on using growth hacking as a mean to grow and generate marketing strategies aka growth hacks. The commitment to the method is present, but it lacks any formal form of documentation.

Even though startup 2 has additional documents not only regarding, but also resulting from the growth hacking process directly, they didn't want to disclose it because of high competition issues. Nevertheless for the identification and the definition of growth hacking process, the mere existence of it and the events surrounding its emergence are more important than the content. The discussed document is a "knowledge library", as has been mentioned in the interview with the CEO of startup 2 (see A.2.2 and shall be described more closely in the interpretation chapter, as it was talked about during the interview.

5.5 Interviews

Concerning the interviews the method used has already been specified in the "Research Design" chapter under the data collection methods section (see 4.3.1). This still requires

the specification of the questions that shall be used during the interviews. Those can be found in the appendix A.1.

In order to address the research questions and thus the aim of the research, the questions focus on the growth hacking process: its crucial characteristics like inputs, outputs and prerequisites, the process specifics like problems, documents involved, metrics and time and on the process structure - is the process really used in the iterative way and are the findings being documented and used in the future runs?

As both CEOs of the analysed startup were abroad during the data collection phase of this thesis, both interviews have been conducted over teleconference using the internet. The call has been recorded using audio recording software and later transcribed using f4transkript software.

The first interview has been conducted in German (his first language) according to the preference of the interviewee, while the second was entirely in English - the first language of the second interviewee. Thus both interviewees answered questions posed in their first language.

Before the interviews, both participants have been briefed on the method being used to conduct this data collection method. The interviews have been transcribed and can be found in the appendix (see A.2.1 for the interview with startup 1 and A.2.2 for the interview with startup 2).

The first interviewee took about 10 minutes. The interviewee described his experiences very detailed, maybe even too detailed for the scope of this thesis, as his statements concentrated on the growth hacks, and the process itself could only be observed surrounding the development of the hacks. Still the exmanent questions helped to address the significant topics.

The depiction of growth hacking by the second interviewee of the startup 2 offered much more detailed insight into the growth hacking process used in his undertaking. His description went into details of metrics used and learning from their mistakes. This interview took about 12 minutes.

Thus while both interviews were rather short, all the questions developed for the interview have been addressed and answered.

Participants	circumstances	Duration
Researcher, CEO startup 1	Interview over internet using Google Hangout	10 mins
Researcher, CEO startup 2	Interview over internet using Skype	12 mins

Table 5.2: Overview over the interviews.

5.6 Observations

The observations focused on participation in meetings held by both undertakings. As both of the participating startups don't have any kind of offices, most of the work is done

by each of the founding members at their home, or in any other place of their convenience. This fact resulted in the observations taking place during the weekly meetings (startup 1) or during the frequent online conferences (startup 2).

However as the startup environment is a very dynamic one, the researcher has not been invited to all of the meetings, and was not included in every decision or call regarding the topic of growth hacking. This is a limitation that has to be kept in mind while working with the observation data.

Such approach still is viable for the research questions asked in this thesis, as a process can also be identified using the tasks that are discussed or by interpreting the results reviewed during such meetings. However many of the meetings had no relevance with the aims of this work, as no growth hacking activities have been addressed. Thus the meetings and observations that can be seen in the appendix (see B) disclose only the ones that had some affiliation with either growth hacking or the process that is involved around it.

Another important aspect regarding the observation is that startups participating in the study have not established any formal processes for the work done. Thus they approach growth hacking with results in mind. This fact helps to identify the crucial activities involved in the process and ignore the steps that can be considered as "formality" and have no actual usage in real business environment.

5.7 Quality

During the research design chapter the quality criteria underlying during this thesis have already been mentioned (see 4.2.4). While this chapter listed the possibilities on how to fulfil and include quality criteria while working with a case study research method, not all of the tactics have been used in the scope of this thesis.

On the one hand to ensure *construct validity* multiple sources of evidence have been used, as the documents, observations and interviews ensure data coming from different sources and being prepared with different aims in mind. The documents were created apart from the study for the purposes of the business itself. The observations were authored by the researcher as he participated in the meetings. Finally the interviews are conducted with a responsible person specifically for this thesis.

The aspect of maintaining the chain of evidence is has also been considered during the study - reading through interpretation the evidence is being cited on every step and thus makes it easy to follow the conclusions back to the study questions or vice versa.

Internal validity has been approached through the explanation-building used during the data analysis and addressing rival explanations during the category development. However using the qualitative content analysis for data analysis phase also offers additional criteria for validity and here the criterion of semantic validity has been used, to ensure that the category names and the passages contained had the same semantic meaning.

For the *external validity* while the topic of this thesis is of explorative nature, theory has been used to base the findings of the study on through deductive creation of process steps to base the categories on.

The criteria of *reliability* has been fulfilled through thorough documentation of the data collected (thus using various protocols to document all the findings) and appending that data to this thesis. As no explicit case study protocol has been used, but the chapter of research design describes all the elements contained in an case study protocol and this thesis includes data collected in the appendices, also the first tactic of using a case study protocol was used.

Interpretation

After all the data has been collected, transcribed and prepared, the interpretation can take place. For this step also a methodological approach fitting the aims of the study and data collected has to be chosen. For this thesis the qualitative content analysis has been chosen, which has been shortly described in 4.3.2.

6.1 Formulation of Categories

For the formulation of the categories MAXQDA software has been used with the interview transcripts and the observation data protocols. This software offers computer aided features for the category development and is being used for qualitative content analysis in the academic research [66, p. 112].

The formulation of categories using inductive category development started with the transcript from the interview with the CEO of the startup 1. During the analysis subsumption has been used multiple times to categorize the passages that fit the criterion of selection. Approaching the end of the second transcript with the CEO of startup 2 formative check has been done, and resulted in change of abstraction level, as categories like "Documents" and "Backlog" (i.e. type of document) have been found - "Documents" was too abstract, instead a more specific description of documents has been used (like "Backlog"). A more fine-grained level of abstraction has been used from now on. This helps formulate the process steps and subprocesses easier.

Even though the process of inductive category development is described, the method requires some experience to work efficiently with. As this work has been done by a researcher, who does not have plenty of experience with qualitative content analysis, the categories and the level of abstraction have been changed multiple times during the analysis. This lead to multiple readings of the material, as after each change of the abstraction level, one should begin from the beginning of the material.

The same approach of category development has been continued with the observations as described in the appendix. Although as those are mostly descriptive summaries of meetings they were not as informative as the transcripts. This fact was to be expected, as the interviews were specifically formulated to address the topic of growth hacking process, while the observations could not (and should not) been influenced by the researcher.

The inductive category development resulted in 20 distinct categories with the total of 103 occurrences in the material, which shows that many categories has been used multiple times. The resulting categories can be seen in the table 6.1. The number of occurrences can be interpreted as the importance of the given category in total, as it means, that this category has been repeated multiple times throughout the sources and thus is an important part of the process.

The categories can be seen as the summarized view of the data contained in all the materials gathered throughout the case study. The overview over categories including the passages can be found in the appendix D.

Category	Occurences	Percent
observing user behaviour or other metrics	19	18,45
using observations to identify problems	14	13,59
creating knowledge library including hypothesis and outcomes	10	9,71
considering goals for growth hacking	8	7,77
identifying problems to optimize the desired outcome	8	7,77
testing growth hacks	7	6,80
using growth hack to reach the goal	5	4,85
using analytics with growth hacking	5	4,85
planing future growth hacks	4	3,88
posing hypothesis about growth hack outcome	4	3,88
using observations for other business areas	4	3,88
documenting all the goals	3	2,91
reasoning the goal	3	2,91
referring to knowledge library for growth hack development	3	2,91
considering user preferences for growth hack development	1	0,97
considering costs for growth hacking development	1	0,97
prioritizing the goals	1	0,97
creating plans including growth hack and hypothesis	1	0,97
asking for user feedback when observations won't suffice	1	0,97
growth hack is part of the product	1	0,97

Table 6.1: Overview over the categories resulting from the inductive category building over all of the data collected.

6.2 Interpretation of the Categories

The categories presented in the table 6.1 can be assigned into more general process steps of the growth hacking process we are looking for. A category can fit into one or

more steps and add additional informations regarding documents used or the nature of the activity behind such a step. At first the potentially present process steps shall be deductively developed from the theory and summarized below. Afterwards the categories shall be assigned to the steps, or a new one shall be created to fit the category based on the interpretation of the passages contained in that category.

The categories refer to passages listed in the table D.3 the sources of the passages are listed in the table D.2 both to be found in the appendix D.

Deductive Process Framework

While the categories have been developed inductively from the material collected during the study, the definition of the general process steps and their the sequence can be derived from the theory gathered for this thesis. Such an approach is a deductive one.

The theoretical framework created by the extensive literature research suggests *a good product/market fit* is an important factor, on which all growth efforts should be based. Thus this fact offers a potential prerequisite for the growth hacking process.

Going further, the *goals have to be defined*, on which the growth hacks will be based upon. As the goals fulfilment has to be measurable, the step of the *metrics development* follows.

Having a goal one can act upon and measures to know, when it has been reached, leads to *growth hack development*. The next step suggested by the theoretical framework of this thesis is *growth hack testing* leading to the *growth hack operation*. Throughout the process, while working with growth hacks various *metrics* are being used to monitor and control them.

Note that this deductively evaluated process steps should only serve as a guiding framework for the process definition efforts based on the qualitative content analysis. As such the sequence as well as the steps themselves can be a subject of change.

Thus the following process steps have been identified:

1. Goals definition
2. Growth hack development
3. Growth hack testing
4. Growth hack operation
5. Metrics and analytics
6. Learning loop

The first four elements have a sequence - at first the goals have to be defined, afterwards the growth hacks are being worked on, to address the goals, followed by the testing of the growth hacks and finally the operation of the successfully tested growth hacks. However the elements of metrics and learning are concepts present throughout the process.

Nevertheless those elements should offer a foundation for the formulation of the growth hacking process. The inductively identified categories can be referred to a process step and thus offer additional information on the sequence in the process. The initial classification can be found in the table 6.2. The description and interpretation on why the categories fit the steps proposed follows below.

Process steps	Category	#	Percent
Goals definition	considering goals for growth hacking	8	7,77
	documenting all the goals	3	2,91
	reasoning the goal	3	2,91
	prioritizing the goals	1	0,97
Growth hack	- development		
	using growth hack to reach the goal	5	4,85
	planing future growth hacks	4	3,88
	posing hypothesis about growth hack outcome	4	3,88
	referring to knowledge library for growth hack development	3	2,91
	considering user preferences for growth hack development	1	0,97
	considering costs for growth hack development	1	0,97
	creating plans including growth hack and hypothesis	1	0,97
	- testing		
	using observations to identify problems	14	13,59
	identifying problems to optimize the desired outcome	8	7,77
	testing growth hacks	7	6,80
	- operation		
	using observations for other business areas	4	3,88
	growth hack is part of the product	1	0,97
Metrics and analytics	observing user behaviour or other metrics	19	18,45
	asking for user feedback when observations won't suffice	1	0,97
	using analytics with growth hacking	5	4,85
Learning loop	creating knowledge library including hypothesis and outcomes	10	9,71

Table 6.2: Categories resulting from the inductive category development process used on the data collected.

6.2.1 Goals Definition

The category *considering goals for growth hacking* contains all the passages that indicate the creative considering to come up with goals that can be approached for growth hacking. Words like "brainstorming" and "thinking" occur multiple times, as well as "discussion". A good example is this passage: *"All the members begin to brainstorm ideas, on how to*

best address growth and what to concentrate on first." [S1-obs] where the goals have been reflected on by the whole team. This suggests that goals are being defined through a collective, in this case foundation teams, using creative methods like brainstorming or simply coming up with the ideas. This concerns the topic of how the goals are being developed.

Another important aspect concerns *reasoning the goal* - *"Und da war es eben wichtig, dass der Nutzer gleich von Anfang an ein Guthaben zum Testen hat.(.)"* [S2-trans] or *"He wants to increase the activity in the app, as he thinks this will improve revenue as well as the amount of active users."* [S2-obs] display that the goals are being reasoned about to provide enough context and agree on following one.

When the goals have been developed, the category *documenting all the goals* suggests that all the resulting goals are being documented or at least noted for later use - *"The CEO says to hold on as he writes the ideas down."* [S2-obs] or *"The ideas are being noted by the CEO on a sheet of paper."* [S1-obs]. Those passages also refer to the goals as "ideas" as this steps follows the creative definition of them. This category shows a document used in the scope of the process.

As the founding team can't act on all the goals at once, the category *prioritizing the goals* displays the step of choosing only a few goals, which should be acted upon. During the data collection this has been explicitly mentioned only once - *"but they agree to concentrate on 2 crucial factors for the growth of the user base."* [S1-obs]. Unfortunately no further information on how it is done could be found in the material, just the mere fact, that the focus lies on few goals, and those are being addressed. However looking at the previous categories one can see that after the creative idea generation the reasoning also serves the purpose of convincing the team, that this goal should be pursued above the others.

Summarized those steps depict a process for goal definition containing a creative idea generation step and prioritizing step, while also creating documents for their outcomes. This subprocess can be seen in figure 6.1.

6.2.2 Growth Hack Development

In case of the growth hack development multiple categories were assigned. The first one *using growth hack to reach the goal* displays on the one hand the purpose of the growth hacks being addressing the goals: *"Then the CEO asks developers how to best address those goals."* [S1-obs] or *"The ideas include adding discounts to attract the receivers of the product to also try the service out and thus increase the sells and active users, referring a friend for the same purposes and adding a QR-Code on the back of the product, for increasing the app downloads"* [S2-obs] where "attracting the receivers" displays a goal. On the other hand as the growth hacks obviously act on a goal, those passages helps to place the step in the process - a growth hack is being used to address and thus fulfil a goal set beforehand. This fact fits and confirms the process framework.

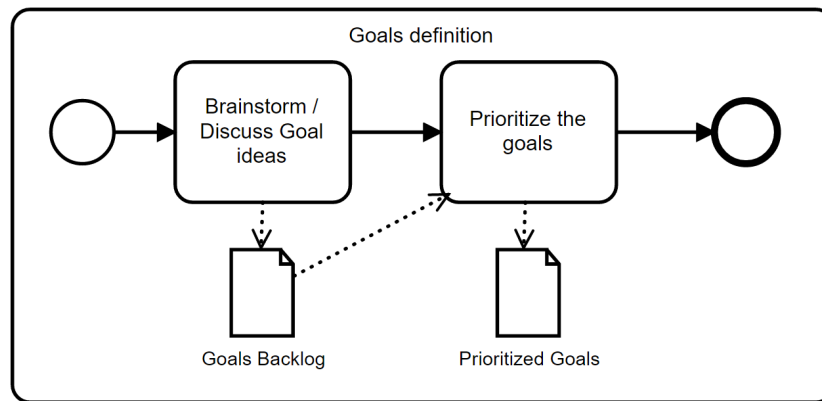


Figure 6.1: Goals definition modelled using BPMN.

An important aspect, when developing and thinking of new growth hacks, is the approach of *posing hypothesis about growth hack outcome*. This category shows that when working with a growth hack, it is important to note what is expected to happen - *"und wir erhoffen uns dadurch, dass wir in den ersten 2 Monaten bis zu 400 Nutzer bekommen dadurch."* [S1-trans]. One of the passages states that the hypotheses are being posed before starting with growth hacks usage or testing - *"Ehm, before we started anything, we wrote down exactly what we expected to happen, you know, our thoughts on what would happen, yeah I think that was a really important tool (.) because it, it showed our expectations, it, you know, it really defined what we expected to happen, what we expected to get out of using this tools and stuff like this, you know, during these things, and you know, it was really, we really defined it quite nicely, you know, what we expected to happen"* [S1-trans]. Thus this adds another step of posing hypothesis to the growth hacks that has been developed and also shows that the step of growth hack development occurs before testing or operation of them.

The development phase also includes the category *creating plans including growth hack and hypothesis*. This category refers to creating a plan including potential growth hacks and the hypothesis mentioned above on what to expect out of them - *"Wir haben Pläne gemacht, ja. Also das definitiv, das heißt wir haben quasi gesagt, okay, (.) wir bieten dieses Gratisguthaben an, und wir erhoffen uns dadurch, dass wir in den ersten 2 Monaten bis zu 400 Nutzer bekommen dadurch. Und dann in weiterer Folge dafür die Freunde-werden-Freunde Aktion einführen, und dass das uns dann durch, durch diese Aktion eben, dass wir noch mehr Gratisguthaben bekommen kann, zu noch mehr Nutzern führt. Da ein Multiplikator von 1,5 angenommen."* [S1-trans]. Thus there are documents containing possible growth hacks and the hypotheses for future runs of the process.

Similarly the category *planing future growth hacks* emphasizes on the one hand the existence of a document with a list of potential growth hacks that have been suggested during the growth hack development. On the other hand it shows that growth hacks are being thought of continuously, as the startups thought about new growth hacks, while the

previous ones were still being tested or implemented - "*Das, also dann haben wir eben weiter noch geplant, dass wir eine 'Freunde-werden-Freunde' Aktion einführen*" [S1-trans] or "*Regarding growth hacking CEO wants also to add the QR-Code on the product*" [S2-obs] while the previous growth hack is still being tested. Thus the implications for the growth hacking development include creative generation of ideas, as those proposed were (similarly to the goals) just a result of a discussion or proposed by one of the members. Also posing hypotheses on the outcome and documenting them for future uses is an aspect. New ideas can be proposed at any given point.

One of the categories suggests *referring to knowledge library for growth hack development* - "*So we build, we are still building quite a big knowledge base, on how things work, how things didn't work and yeah, this is also a really important tool for the future, so we can see what worked, what didn't work, how to compare them, you know, it's like whenever we think we are doing new stuff, we can refer back to this library*" [S2-trans]. This implicates the creation and existence of a document, which shall be described further in learning step below. Startup 2 has shown to utilize and refer to the knowledge gathered by previous runs of the growth hacks. Such knowledge is being used for the growth hack development in order to evaluate if a growth hack will succeed or to revise the hypotheses. Thus during the growth hack development the knowledge library is being referred to, thus building a feedback loop.

Working with growth hack development also various other characteristics should be considered. On the one hand *considering user preferences for growth hack development* is a topic - "*Hätten wir jetzt gesagt 'okay, er muss sich jetzt ein Profil erstellen, und er muss sein eigenes Guthaben aufladen', damit er überhaupt testen kann, dann ist es relativ unwahrscheinlich, dass so viele Nutzer wie möglich quasi auf die Seite kommen, Guthaben aufladen und dann [das Service nutzen]. Vor allem zu Beginn ist das unheimlich schwierig, dass man da nutzer akquiriert. Und da haben wir uns einfach gedacht 'okay, wenn wir diesen Punkt quasi ausmerzen', dann sagen wir einfach 'okay, wir müssen ihm ein quasi Guthaben anbieten'*" [S1-trans] shows the reasoning behind growth hacks, and thus emphasizes the creative nature of the development process, but also displays concerns about user preferences.

On the other hand they are also *considering costs for growth hack development* - "*und das Guthaben kostet uns als Startup im Endeffekt auch nichts, weil wir das quasi gegenrechnen und das war dann der quasi logischste Schritt in diese Richtung.*" displays that the reasoning also concerned costs.

Thus the categories offer information on the creative step of development, the posing of the hypotheses about the outcome and concerning various aspects during the development. Those aspects like user preferences and costs represent some kind of data, which could have been evaluated from previous runs (and thus present in the knowledge library).

Summarizing the steps involved are creative idea generation and posing hypotheses on the ideas about the expected outcome. Both should be documented for later use. Also a kind of knowledge database is being used to refer to while developing new ideas. The resulting subprocess can be seen in the figure 6.2.

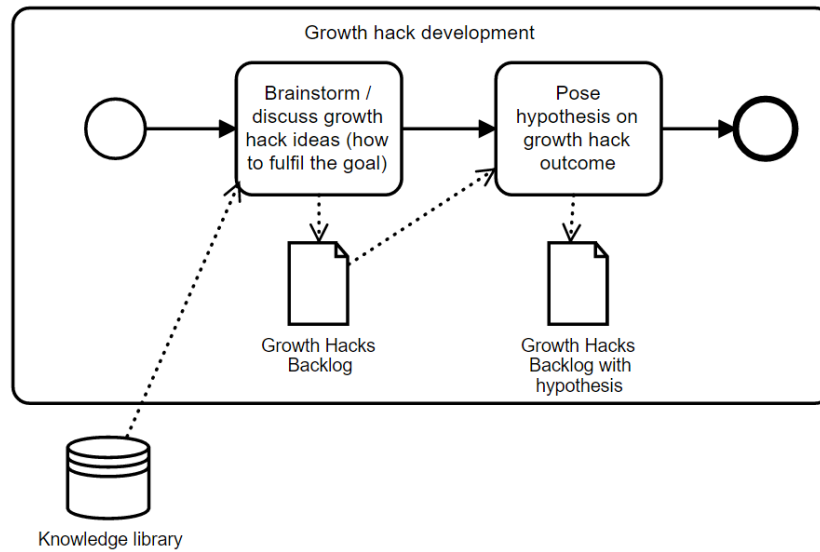


Figure 6.2: Growth hack development modelled using BPMN.

6.2.3 Growth Hack Testing

After the development and the decision, which growth hack to follow up with, the category of *testing growth hacks* finds it place. This category contains all the passages that explicitly refer to growth hacks being tested before they are being used on a full scale - *"So, what we did, as I have said, we put the 50% off - we actually did some A/B testing, so we could see what users reacted better to, ehm, so we tested it with -50% off and free [product]."* [S2-trans]. One of the passages names the process as being pure "trial and error" before the knowledge library could be used to refer to during the development. The usage of A/B testing is mentioned, meaning that a part of the user base sees option A, while the other see option B, in order to test which option yields better results. Both startups were testing their growth hacks during a small beta phase, where only a small amount of users were invited. Thus this category shows the testing happening after the development.

The testing is done *using observations to identify problems*. This category consolidates all passages which mention metrics or characteristics being observed in order to identify problems - *"Das heißt sie haben zwar ein Profil, sie haben das Guthaben, und sie wissen es auch, aber sie [nutzen das Service] nicht, das heißt sie verwenden die App dann dennoch nicht.(...) So das ist das wesentliche Problem, dass wir momentan, quasi, zu beheben versuchen."* As the startup knows about the profile and the credit, those data has to be measured somehow. The measurements are used to identify potential problems.

Such an approach displays the essence of testing - to put something to use, observe what is happening and identify problems. Thus during the testing process the metrics are being measured and collected for further uses also during other phases.

While the problems have been identified, now a decision has to be made, on what happens next with the growth hack. The category *identifying problems to optimize the desired outcome* contains multiple cases. On the one hand there are cases, where the test has failed and the hypothesis or the growth hack alternative (i.e. different values for e.g. discounts) has been revised - *"so we realized that, and we switched back to the -50% discount, so the -50% discount was on the [product]"* [S2-trans] displays the instance, where startup 2 realized that 100% discount led to a problem.

On the other hand there are cases, where the growth hack has been discarded, as the outcome was insufficient - *"So we realized that, and stop doing that and just offered discounts and continued with that"* [S2-trans] regards the discard of QR-Code on the back of the product.

This categories displays an important decision on when to continue testing with revised hypotheses, when the growth hack has to be eliminated and when the test has been successful and the growth hack can now be used.

Summarizing the testing phase tests a growth hack on a small group of people - pre-launch beta testing is possible, but afterwards A/B testing is mentioned as a viable construct. During the test various metrics, that should be specified before are being observed and collected in order to decide on the outcome of the growth hack. A growth hack can either be discarded, applied to the product or being revised and thus leading to another testing run. The model of this subprocess can be seen in the figure 6.3.

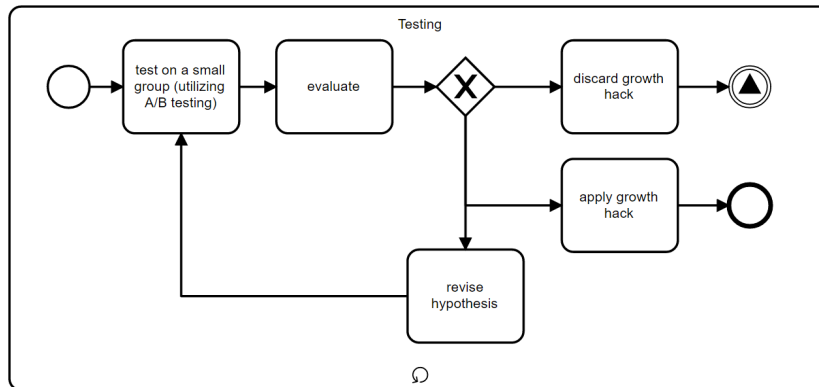


Figure 6.3: Growth hack testing modelled using BPMN.

6.2.4 Growth Hack Operation

About the operation of the growth hack, little has been said, as both startups weren't using growth hacks for a long period of time. Thus the resulting categories show that *growth hack is part of the product* - *"The development of the feature needed for the growth hack is almost ready and the hack including the feature will be embedded into the final product."* [S1-obs]. Meaning that for the growth hacks to work, functionalities have to be

added to the product. And as such some growth hacks are directly being used without testing their hypothesis, as they are inherently part of the product.

During the operation phase all the metrics are being gathered continuously, meaning the *observing user behaviour or other metrics* is being utilized here - *"However CEO adds, that also tracking, where the QR code has been used, contains valuable information."* [S2-obs] shows that the data from QR codes should be tracked continuously during the operation of the hack. The data then can be used in various other phases like learning.

The category *using observations for other business areas* indicates, that the observations are not only relevant for the growth hacking process, but are also being used in various other areas, in this explicit case finance evaluations - *"Also wir haben die Ergebnisse mal rein für das Growth Hacking, für das Marketing quasi, erhoben, aber in weiterer Folge nutze ich sie dann auch noch ganz stark für die ganzen Kennzahlen und Finanzauswertungen. (.)"* [S1-trans].

Thus this phase can be modelled as a continuous loop of the growth hack being used. The observations and thus data collection will be addressed in the metrics phase. The resulting subprocess can be seen in figure 6.4.

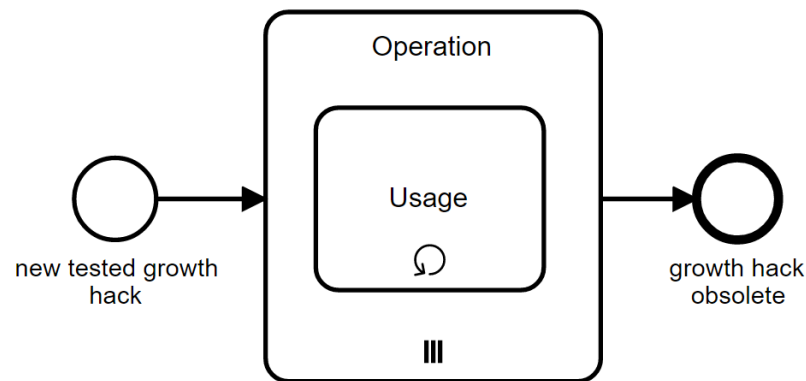


Figure 6.4: Growth hack operation modelled using BPMN.

6.2.5 Metrics and Analytics

Starting the classification with the most popular category - *observing user behaviour or other metrics*. This category contains all the passages which express the usage of various metrics throughout the process. The number of occurrences indicate that the metrics are used quite often and thus are an important part of the whole process. Looking at the 19 passages that fall into this category it is possible to identify the process step this belongs to and when it occurs in the process.

On the one hand passages like *"Das heißt ich, ähm, erstelle dann eben die ganzen Kennzahlen, wie (unv.), Conversion Rate und quasi auch die Umsatzkennzahlen, wie viele Nutzer quasi wirklich [das Service genutzt] haben und das Guthaben von uns genutzt haben."* [S1-trans] show the need for metrics in the scope of growth hacks but also for the

goals - having the users use the service.

While others like *"Developer 2 mentioned some metrics that would be needed for this feature to work"* [S1-obs] display the need for growth hack metrics before the growth hack is being tested.

Thus the growth hack metrics should exist before the tests are being conducted, while there also are some goals metrics present. The goal metrics regard the goal fulfilment and thus probably should be defined when selecting the goal to act upon. In similar manner the metrics for growth hacks could also be defined when choosing a growth hack to test.

On the one hand the same category contains passages pinpointing when the observations are being made - *"However CEO adds, that also tracking, where the QR code has been used, contains valuable information."* shows the observations taking place during the growth hack operation (as mentioned in the previous phase).

On the other hand passages like *"so when the receivers received the [products], they just put in the discount and they worked quite well, because we track the coupon codes specifically and see how it was working, how it was progressing down the line."* [S2-trans] show the usage of observations during the testing phase.

In the categories there's also one *using analytics with growth hacking*, where the passages just say that analytics are used with growth hacking - *"wir mussten quasi die ganzen Analytics einbauen"* [S1-trans] or *"the analytics really helped us to track it and see how it was working, see how it was not working."* [S2-trans]. These passages don't bear any additional information except for the fact that analytics and thus measurement and interpretation of data happens throughout the growth hacking process.

Interesting in this scope is the category *asking for user feedback when observations won't suffice*. It describes the usage of a user survey or user feedback, when the metrics could not explain what is happening (i.e. why the growth hack is not being used) - *"und wenn das quasi noch keinen Aufschluss bietet, dann werden wir mal schauen, dass wir so viele Nutzer wie möglich befragen dazu, das heißt wieso haben sie es nicht benutzt usw."* [S1-trans]. Obviously this works only with growth hacks that are usable. The passage suggests the usage of such a measure during the growth hack operation.

However this has been formulated in a future tense and thus displays the idea of the CEO of startup 1 on how to address a growth hack not being used before any growth hacks were in operation. The CEO has not considered the fact, that growth hack is being tested beforehand and thus the ineffective ones are being discarded. Thus this step is not viable for the process.

Summarizing this phase consolidates the metrics and analytics activities throughout all the phases of the growth hacking process. The definition of metrics for goals and for growth hacks should happen when a goal or a growth hack is being selected. And thus the goal metrics should be addressed before the growth hack development and the growth hack metrics should be addressed before they are being tested. Also the observations and thus data collecting happens during both the operation and testing of growth hacks.

6.2.6 Learning Loop

Even though the phase of learning contains only one category, this category has third most number of occurrences from all. This displays the importance of this phase. The aim here is to use all the data gathered throughout the process - including hypotheses on the growth hack outcome - *"We build a bit of, eh, a knowledge library, so, as things were, you know we predicted how things could work, what we expected, what, you know, we thought would happen, what we thought probably wouldn't happen"* [S2-trans], the observed values and the actual outcome a growth hack has generated - *"The only one we have created is the library we are building up, so basically it is just a word file, eh, with the hypothesis, like what we expected to happen, and then the analytics of what did happen..."* [S2-trans].

This approach results in a document containing consolidated outcomes of previous growth hacks and thus offering knowledge on which hypothesis has been true and which were not as promising as it seemed in the beginning.

As already mentioned in the phases above, knowledge library is being used on multiple occasions. On the one hand it being used to provide insight on the hypotheses posed during the growth hack development.

But it also collects all the observation data - thus the ones described in metrics. This indicates the sources are the testing and operation phases of the process.

Such a document offers a valuable source for future growth hack developments, but also shows affiliation to testing and operation of growth hacks. As such the growth hacking process contains a feedback loop and a "knowledge library" with consolidated measurements from various phases, as can be seen in the figure 6.5.

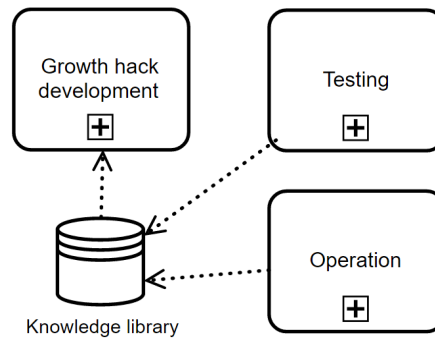


Figure 6.5: Knowledge library data flows modelled using BPMN.

6.3 Process Summary

The findings of the inductive category development and their interpretation resulted in a specification of the underlying growth hacking subprocesses and data flows. This

description can be now formed into the growth hacking process depiction using BPMN and its concepts. The resulting process can be seen in figure 6.6.

The process has been modelled using the 4 subprocesses identified before and the missing data flows for metrics and observations have been added. Additionally also the missing steps in-between the subprocess had to be interpreted to fit the process sequence. The depiction uses various concepts of BPMN which have been described in the table 6.3.

The *goal definition* subprocess is the entry point of the whole growth hacking process, as without the goals, no growth hacks can be developed. This subprocess is being followed by an activity selecting one of the goals to concentrate on for growth hack development. This was done according to the finding of the previous section, where the growth hacks follow a goal and thus require a goal to be selected to follow. When a goal is being selected, also the metrics on how to measure its fulfilment can be defined and stored in a document.

Similar step has been added after *growth hack development*. Here also a growth hack is being selected for testing and metrics for this growth hack are being defined and stored in a document. Both of the documents contain the metrics that should be measured during both *testing* and *operation* phases of the process. As such the data flows from the metric documents to the respective phases have been modelled.

In addition the step of selecting a growth hack for test has a starting node, which is being triggered when a growth hack in the testing loop (depicted by the loop sign on the bottom of the subprocess) has been discarded.

Regarding the operation two characteristics are to be considered. On the one hand the subprocess has the "parallel instances" symbol in the footer, indicating that multiple growth hacks can be running at the same time. On the other hand the usage activity also has the "loop" symbol, which depicts that the usage is happening continuously.

Finally the learning phase has been depicted as discussed in the chapter before - it gathers the data from testing and operation subprocesses and is being referred to in case of growth hack development.

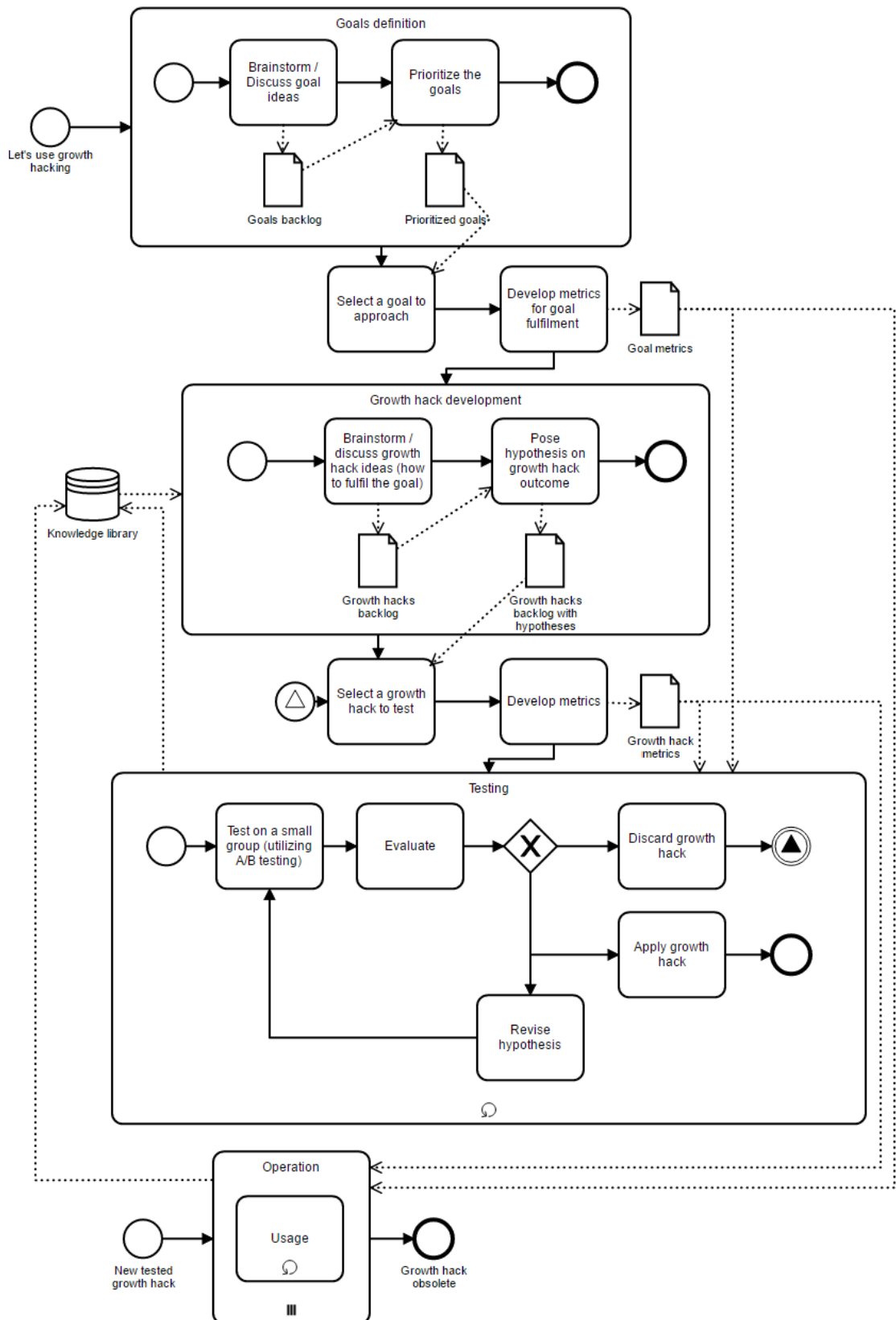


Figure 6.6: The resulting process modelled in BPMN.

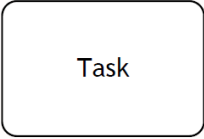










Symbol	Meaning
	A "Task" is a unit of work, the job to be performed. It is also an activity. An activity containing tasks is a subprocess.
 Sub-Process Marker  Loop Marker  Parallel MI Marker	Marker indicate execution behaviour of activities. Sub-Process marker indicates the task is in fact a subprocess. Parallel MI Marker depicts parallel multiple instances running (= MI).
	Standard start and end notes indicating the start and an end of process flow.
	A data object represents data flowing through the process.
	Data store, a place where process can read or write data. Persists beyond the lifetime of the process.
	Defines the execution order of activities.
	Data association depicts the data flow.
	Exclusive gateway depicts a decision, only one activity can be activated thereafter.
	A start and throw nodes using signals. Thus the throw node throws a signal, which is being received by the start node.

Table 6.3: Overview over the BPMN concepts used for the growth hacking process modell as described in the BPMN poster [69].

Part IV

Summary

Summary and Future Work

7.1 Summary

The topic of growth hacking is a very recent and unexplored territory in the academic research. The philosophy around this term seems to have emerged around the dot-com bubble burst around the year 2000, when costly marketing was a part of the problem. Thus a new marketing approach for new undertakings was needed.

That is the point where growth hacking emerged. It describes a marketing approach aiming to achieve as rapid growth as it is possible using only the scarce, existing resources. This can be achieved by the usage of special techniques used for attracting users - the so called "growth hacks".

Taking a look into the theory behind growth hacking not much could be found regarding the academic sources. Thus the focus shifted towards grey literature, as such a novel topic is mainly described in non-academic books and multiple internet sources like articles, blogs and presentations. As the usage of grey literature has been discussed and found to be useful, extensive research begun.

The results have helped to identify and specify the topic of growth hacking more closely and also resulted in multiple questions regarding its nature and usage. The exact process of implementing growth hacking in a startup could not be identified and only vague description containing a fraction of information emerged. Thus the author decided to focus his research on the process identification and modelling using BPMN.

For this purpose in addition to the grey literature research already mentioned, an extensive academical literature research followed. The definitions and short descriptions of areas of research which show affiliations to the field of growth hacking have been summarized in order to find a scientific foundation for the topic. In addition also topics serving the purpose of answering the research questions posed in this work were addressed, including business process management and its tools for business modelling.

The research has been designed around a case study research method. At first the method has been evaluated and described extensively to offer an overview over the decision to use it in the scope of this thesis. Afterwards the study has been designed and the exact methods used for data collection as well as data analysis methods have been described.

The data collection phase focuses on gathering documents related to the topic of growth hacking, conducting interviews with the responsible participants and making direct observations in the field. For the interviews a qualitative approach has been chosen. Regarding the data analysis phase methods suitable for working with qualitative data have been chosen. For the evaluation of data gathered the qualitative content analysis approach has been chosen. In scope of which inductive category development has been applied to the data resulting from the interviews (i.e. transcripts) and the observation protocols.

The case study has been conducted with 2 early stage startups both working with software products. One of the startups has already launched during the creation of this thesis, while the other was still in the pre-launch phase and beta testing its prototype. Both of the subjects have utilized growth hacking and its techniques in their undertaking and as such fitted the requirements for the study participants.

Conducting the case study with the participants started with observations, which have been dispersed over the time span of 4 months. During the observations the researcher took notes, which resulted in the observation protocols that can be found in the appendix. Those protocols contain summarized descriptions of the meetings in which the researcher participated.

During those meetings various documents that could be of interest for the purposes of this thesis have been mentioned and also evaluated and listed in the appendix. However the documents were of little help, as both participants have not formally specified the growth hacking approach in any of them.

Lastly qualitative interviews have been conducted with the people responsible for the growth hacking efforts in both of the participating startups. The questions have been conceptualized around the characteristics of processes like prerequisites, inputs, outputs, documents and steps. Thus the interviews offered the most amount of data, as the density of topic relevant information is the highest here.

For the interpretation of the data first the materials gathered throughout the study have been consolidated into single files, to be able to use them with the MAXQDA software. This software has been used to help with the inductive category development - the method used for the definition of categories, which was used in the scope of the qualitative content analysis.

At first the data had to be revised again and again until the abstraction level of the categories that enabled to interpret the data into process steps has been reached. The process steps have been deductively defined using the theory gathered during the literature research and have only been used as support for the classification of the categories and discovering the correct sequence of the steps.

Such a classification led to creation of multiple subprocesses in the resulting growth hacking process. The process has been modelled in BPMN for the purpose of visualization and better understanding. In the process all the topics identified through the category development found its place: subprocesses for goals generation, growth hack development, testing and operation have been modelled. In addition the model depicts the data flows and important documents identified during the study.

The category of learning and knowledge library is being displayed as a data store, where the observation and metrics used throughout the process are being accumulated. This knowledge can then be used for the generation of new growth hacks ideas and the improved specification of hypotheses regarding the expected outcome of the hacks.

Thus the resulting process presented emphasizes the repeated usage of growth hacks for knowledge building. With every growth hack test the knowledge about the audience and product is being built, resulting in better understanding of both concepts. This can lead to improved outcomes when using future growth hacks and thus more rapid growth, when used correctly.

7.2 Discussion

The identification of the growth hacking state of research and the conducted study resulted in a growth hacking process description and model using BPMN. Thus the research question posed in the scope of this thesis has been answered. While the author is aware of the limitations of the work (which are being described in the section below) the resulting process offers a good overview over growth hacking including all the underlying phases identified during the theoretical research.

Multiple phases identified and included in the findings correspond and extend the phases found in the processes from the grey literature research by Patel/Bronson and Balfour [9][Chapter 3] and [24]. While those vague descriptions contain phases like goal definition and growth hack testing and development, they lack the learning loop and don't offer any description of how to measure and work with analytics.

Those processes show a strong focus on the growth hack development and neglect other phases. Even though aspects like goal definition are included and indicate the existence of those phases, they are only shortly described. Thus the resulting process was expected to be more detailed and offer an overview over the various phases of growth hacking, and this expectation has been fulfilled.

Regarding the results multiple problems described in the introduction have been addressed throughout this thesis. On the one hand in the introduction the author indicates growth hacking being a contemporary phenomenon not being addressed in academic literature. As the extensive literature research yield only few results, grey literature has been used to identify and specify the state of research on growth hacking.

Another problem named in the introduction regards the scientific foundation for the topic of growth hacking. The findings of literature research help to identify the underlying goals of entrepreneurial marketing as described by Freiling. Concerning them the growth

hacking process resulting from this thesis could be used to address both *the diffusion of the product* and *the diffusion of the brand*. The outcomes highly depend on what aspect the growth hacks used for addressing the goals during the process will concentrate. Through the learning part of the process also the third goal of entrepreneurial marketing can be fulfilled - *verification of the business model*. Thus growth hacking surely offers a process that can be used in the scope of entrepreneurial marketing efforts [49, p. 10].

The major conclusions of this study consist mainly of the growth hacking process model and the underlying definition of phases and activities involved within. Theoretical implications include the existence of a learning loop in the growth hacking paradigm. Also the importance of the analytics during the process has been emphasized multiple times throughout the process. Thus the process is being used repeatedly to generate knowledge, which in return helps with future growth hack iterations. This loop should result in undertaking becoming better and better at growth hack development and thus addressing the growth of their undertaking.

7.3 Limitations

Regarding the limitations taking the literature research done beforehand and identifying the underlying principles of growth hacking was solely based on the findings in grey literature. The internet is a big place and as such only a fraction of all available information on the topic was processed during the research. Thus some of the definitions identified could vary across cultures and geographical and linguistic differences.

Another point is that even though the resulting process description and model are far more detailed than the ones found in the literature, it is still a process created from a case study with 2 young startups. As such no generalizations regarding the applicability of the process should be made. The model fits best the approach both of the participating startups are using, but this approach can vary vastly across countries and business environments.

Thus the main limitation of this' study findings is the external validity of the results. The sample size is very limited, as only 2 startups participated. Another factor is the progress of the startups. "Startup" defines undertakings across a broad spectrum beginning from business model forming entities to working companies, which still are looking for investors. As this study concentrated on early stage startups around their launch, the resulting process could only be applied to similar situations.

7.4 Future Work

The resulting process presented in this thesis, emerged out of the data collected during the study, answers the main research questions posed for this work. A process behind growth hacking has been found, described and depicted using BPMN.

While the potential of such a process and the underlying aspects of growth hacking have been named, many opportunities for extending the findings of this thesis remain.

A starting point for further research could be the aspect of growth hacking not being a subject of any academic research so far. As such another opportunity for further research presents itself in the area of finding a scientific foundation for this topic. A first attempt has been made in the scope of this thesis through the analysis of entrepreneurial marketing and its affiliations to growth hacking. As mentioned in the discussion section above, the process and thus the growth hacking topic seem to fit this area of research. The goals and challenges of entrepreneurial marketing named by Crane or Freiling (e.g. finding new customers and building new marketing channels) can be addressed using the growth hacking process. However still more research is needed to assimilate the topics of growth hacking and entrepreneurial marketing [51, p. 5] [49, p. 10].

The state of research for the topic of growth hacking has been analysed using grey literature - a very dynamic medium which can be changed and extended at any given time and "can run ahead of academic research" [12, p. 7]. While the results helped to capture the state of research during the writing of this thesis, such a contemporary phenomenon also can mature and change over time. The data collected during the study indicates that even between two very similar startups there are differences in the understanding of growth hacking. This can be seen in the fact that while one startup highly concentrates on the testing and learning, the other one focuses on the growth hack development.

Thus while this work findings offer a process to address such disputes - considering its limitations still more research is needed for growth hacking process specification. Such research could concentrate on the generalization of such a process and be based on the phases resulting from this study. Expanding the study to contain more startups could help revising and extending the process, which in exchange could not only further improve the understanding of the topic but also identify success factors in using growth hacking with startups.

Part V

Appendices

Interview Questions and Protocol

A.1 Questions

Input Stimulus

What are your experiences with growth hacking? What problems occurred while working with growth hacking in your startup and how did you address those?

Immanent questions

Questions helping to further specify and clarify the depiction of the interviewee after the input stimulus.

Exmanent questions

What *prerequisites* had to be fulfilled in order to use growth hacking?

What kind of *documents* were created in the scope of the process?

Have *metrics* been developed and used throughout the process?

Have you *learned* something throughout the process?

Do you *repeatedly* use the process (is the process really being used *iteratively*)?

How were the *inputs* generated / defined?

What happened with the *output* / the growth hacks?

If some steps from process missing: would you consider step x to be important? Why?

A.2 Protocol

A.2.1 Startup 1, Interview - Transcript

Participants:

- CEO of startup 1 - [CEO]
- Researcher - [R]

R: Hallo [CEO]! 00:00:09-7

CEO: (lachend) Hallo [researcher]. 00:00:14-8

R: Meine erste Frage: was sind deine Erfahrungen mit Growth Hacking und auf welche Probleme seid ihr gestoßen bei der Einsetzung und wie habt ihr diese gelöst? 00:00:24-5

CEO: Meine Erfahrungen mit Growth Hacking sind einerseits eben durch das Startup in dem ich mitarbeite entstanden - durch [Name des Startups] - da haben wir eben, quasi, versucht einerseits wie wir so viele Nutzer wie möglich zu unserem Service locken können, und dann wie wir sie auch noch dazu bewegen können, dass wir, dass sie eben Guthaben aufladen, weil [Name des Startups] ist ja dazu da, dass man Guthaben auflädt, und mit diesem Guthaben dann eben [das Service nutzen] kann.(.) Und da war es eben wichtig, dass der Nutzer gleich von Anfang an ein Guthaben zum Testen hat.(.) Das heißt, das erste, was wir eben gemacht haben, ist, dass wir jeden Nutzer, wenn er sich registriert, 5 Euro gratis Guthaben zur Verfügung stellen, das er dann quasi nutzen kann, um im weiterer Folge gratis [das Service nutzen] kann. 00:01:11-1

R: Mhm (bejahend) 00:01:11-8

CEO: Das, also dann haben wir eben weiter noch geplant, dass wir eine Freunde-werde-Freunde Aktion einführen, das heißt, für jeden Nutzer der dadurch erworben wird, bekommt der eigene Nutzer, der ihn geworben hat, auch wieder noch ein Guthaben aufgeladen. (..) Aber das wesentliche Problem, ähm, bei diesen Methoden, die wir quasi herausgefunden haben bisher, also unser Service existiert seit momentan fast 2 Wochen 00:01:35-1

R: Mhm (bejahend) 00:01:35-1

CEO: Ist, dass die Nutzer nicht so ganz aufspringen, das heißt sie, ähm, erstellen jetzt zwar ein Profil, und (..) sie laden das Guthaben im Endeffekt da rauf in weiterer Folge, aber sie [nutzen das Service] nicht. Das heißt sie haben zwar ein Profil, sie haben das Guthaben, und sie wissen es auch, aber sie [nutzen das Service] nicht, das heißt sie verwenden die App dann dennoch nicht.(...) So das ist das wesentliche Problem, dass wir momentan, quasi, zu beheben versuchen. (...) 00:02:04-5

R: Aha, was heißt [das Service nutzen] (wurde missverstanden)? 00:02:03-7

CEO: Na, also wir bieten, [kurze Beschreibung des Use Cases] 00:02:19-5

R: Verstehe. Also sie melden sich an, aber nutzen das Angebot dann nicht. 00:02:24-2

CEO: Genau. Also sehr viele melden sich an, erstellen ein Profil, geben ihre Daten ein, und ein paar andere laden sogar ihr eigenes Guthaben auf, das heißt zusätzlich zu ihrem Gratisguthaben, laden sie noch mehr Guthaben auf, aber bisher nutzen sie es relativ selten, oder fast gar nicht eigentlich. (...) 00:02:46-1

R: Okay, aber es gibt ja erst seit 2 Wochen. 00:02:47-8

CEO: Genau, ja. 00:02:50-6

R: Es ist ja an sich gut, dass sie es aufladen. Das Guthaben. 00:02:53-8

CEO: Mhm (bejahend) Also ein guter Anfang, aber (..) natürlich müssen wir erst warten, dass es wirklich auch aufgebraucht wird. 00:03:01-0

R: Mhm (bejahend), ähm, gab es irgendwelche Voraussetzungen für das Benutzen von Growth Hacking? (..) Also müsstet ihr irgendwas implementieren, verwenden, bevor ihr mit Growth Hacking angefangen habt? 00:03:19-5

CEO: Naja, natürlich wir müssten, wir mussten quasi die ganzen Analytics einbauen, das heißt ich musste schauen, okay, welche Nutzer laden jetzt auf und welche von diesen Nutzern [nutzen das Service] auch tatsächlich, und dass wir quasi auch abbilden, wie der Weg, quasi ist, wenn er die App aufmacht, was er dann alles drückt, wo er hin geht, auf welche Seite, und auf welche Elemente er auf der Seite quasi klickt. Dass wir eben da schauen können, ob wir vielleicht das Design verbessern müssen, ähm, dass es dann vielleicht dann mehr zu [Servicenutzung] führt, oder halt eben, ob es auf anderen Problemen liegt. (..) Das heißt einerseits mussten wir natürlich die ganzen Analytics einbauen, aber selbstverständlich auch, dass ist glaub ich der Schritt noch davor, dass wir sagen, also jedem Kunden ein Gratisguthaben zur Verfügung zu stellen. Das musst dann natürlich dann auch noch implementiert werden. 00:04:11-3

R: Gut, das ist ja der Kern, also die Voraussetzung - Analytics und als Kern natürlich das Guthaben. Das passt so. Ähm, habt ihr irgendwelche Dokumente erstellt, im Rahmen von diesen Überlegungen? 00:04:29-9

CEO: Wir haben Pläne gemacht, ja. Also das definitiv, das heißt wir haben quasi gesagt, okay, (..) wir bieten dieses Gratisguthaben an, und wir erhoffen uns dadurch, dass wir in den ersten 2 Monaten bis zu 400 Nutzer bekommen dadurch. Und dann in weiterer Folge dafür die Freunde-werden-Freunde Aktion einführen, und dass das uns dann durch, durch diese Aktion eben, dass wir noch mehr Gratisguthaben bekommen kann, zu noch mehr Nutzern führt. Da ein Multiplikator von 1,5 angenommen. 00:05:08-5

R: Multiplikator wofür? 00:05:08-5

CEO: Ähm für die Nutzer, das heißt, wenn wir es quasi (.) wenn wir quasi, sagen wir werden 100 Nutzer und durch diese Freunde-werden-Freunde Aktion haben wir dann quasi ein Multiplikator von 1,5 quasi (unv.), das heißt, das Nutzerwachstum alleine durch diese Funktion ist das 1,5-fache von bisherigen. 00:05:29-9

R: Also habt ihr annahmen getroffen, zum Outcome? 00:05:34-6

CEO: Genau, ja. 00:05:34-8

R: Aha, verstehe ich, okay.(..) Ähm, (..) Werden die Zahlen, die Ergebnisse auch weiter genutzt? 00:05:51-5

CEO: Mhh, ja. Also wir haben die Ergebnisse mal rein für das Growth Hacking, für das Marketing quasi, erhoben, aber in weiterer Folge nutze ich sie dann auch noch ganz stark für die ganzen Kennzahlen und Finanzauswertungen. (.) Das heißt ich, ähm, erstelle dann eben die ganzen Kennzahlen, wie (unv.), Conversion Rate und quasi auch die Umsatzkennzahlen, wie viele Nutzer quasi wirklich [das Service genutzt] haben und das Guthaben von uns genutzt haben. Das heißt einerseits wird sie im Growth Hacking und Marketing selbst verwendet, die ganzen Daten, und die letzte Schnittstelle bin dann ich, der quasi die ganzen Daten dann nochmal aufbereitet und noch mehr in die Tiefe geht.(..) 00:06:35-2

R: Verstehe. (..) Das heißt eigentlich gibt es 2 sozusagen Growth Hacks, weil es gibt einerseits dieses Guthaben, andererseits empfehle einen Freund". 00:06:51-6

CEO: Genau, aber im Moment gibt es empfehle einen Freund"noch nicht, es kommt erst. 00:06:57-3

R: Mhm (bejahend), aber falls ihr merkt, dass es nicht so ganz funktioniert, ähm, werdet ihr das verbessern? 00:07:07-0

CEO: Wir werden dann schauen, woran es hackt, natürlich, wir werden uns einmal die ganzen Daten quasi ansehen, das heißt einerseits "wo sind die ganzen Nutzer ausgestiegen usw., und wenn das quasi noch keinen Aufschluss bietet, dann werden wir mal schauen, dass wir so viele Nutzer wie möglich befragen dazu, das heißt wieso haben sie es nicht benutzt usw. Und es wird dann, eben mit diesem Feedback - entweder mit dem Feedback aus den Zahlen oder mit dem qualitativen Feedback von den Umfragen mit den Kunden, (unv.) unsere Maßnahmen weiter verbessern und auch die Funktionen weiterhin anpassen. 00:07:39-9

R: Mhm (bejahend), (...) wie wurden diese Ideen generiert, die wie zB. jetzt Guthaben aufladen oder Freunde empfehlen? 00:07:56-7

CEO: Naja das kommt hauptsächlich von unserem Head of Marketing, der hat sich einfach Gedanken darüber gemacht, wie man so schnell wie möglich an Nutzer kommen

kann und wie man quasi den, den, die Hemmschwelle des Nutzers minimieren kann. Hätter wir jetzt gesagt okay, er muss sich jetzt ein Profil erstellen, und er muss sein eigenes Guthaben aufladen", damit er überhaupt testen kann, dann ist es relativ unwahrscheinlich, dass so viele Nutzer wie möglich quasi auf die Seite kommen, Guthaben aufladen und dann [das Service nutzen]. Vor allem zu Beginn ist das unheimlich schwierig, dass man da nutzer akquiriert. Und da haben wir uns einfach gedacht okay, wenn wir diesen Punkt quasi ausmerzen", dann sagen wir einfach okay, wir müssen ihm ein quasi Guthaben anbieten und das Guthaben kostet uns als Startup im Endeffekt auch nichts", weil wir das quasi gegenrechnen und das war dann der quasi logischste Schritt in diese Richtung. 00:08:49-0

R: Ja.(...) Gibt es einen Schritt, den du als besonders wichtig nennen würdest oder erheben würdest? 00:09:03-8

CEO: (.) Wo jetzt genau? 00:09:05-4

R: Bei dem, (.) eben, bei diesem (.) Prozess. Von, von entwickeln von diesen Überlegungen, ähm, danach Kunden ansprechen, wie man die Kunden gewinnt, ähm, die Metriken erstellen. 00:09:22-9

CEO: Ich denke, dass wesentliche Punkt da sein wird, dass wir die ganzen Auswertungen dann (.) quasi (.) generiert. Einerseits durch die Daten aber andererseits, falls die Daten nicht ausreichen durch das Feedback, weil nur dadurch kann man dann quasi herausfinden, ob es jetzt funktioniert hat, oder was nicht funktioniert hat im Endeffekt. Weil man kann sich so viele Gedanken darüber machen wie man will, man kann so lange nachdenken wie man will, aber im Endeffekt, wenn es der Kunde nicht quasi bemerkt, oder wenn es nicht funktioniert dann beim Kunden, also kundenseitig, dann hat das relativ wenig Sinn. 00:09:53-2

R: Mhm (bejahend), ja, das macht Sinn, ja.(...) Ja, alles klar, willst du noch etwas hinzufügen? 00:10:03-0

CEO: Nein, meinerseits nicht, nein. Wenn du noch Fragen hast? 00:10:09-0

R: Meinerseits war das auch alles, Vielen Dank für das Gespräch. 00:10:17-0

CEO: Danke Jakob. 00:10:19-1

A.2.2 Startup 2, Interview - Transcript

Participants:

- CEO of startup 2 - [CEO]
- Researcher - [R]

R: Hi [CEO]! 00:00:06-7

CEO: Hey [researcher]! 00:00:08-2

R: Ehm, so let's begin with the interview. Tell me, what are your experiences with growth hacking, what problems occurred while you were working with it and how did you address those. 00:00:23-3

CEO: So over the last few months we've been testing a lot of methods to really get new customers on board, ehm, of course there has been quite a lot of problems with it as well. Some examples that probably spring to mind is, we, when we first started, we offered discounts on the [product], so when the users [used the product], we also offered discount to the [receivers of the product], cause we thought this would be a really important metric to, basically to see, if we could, ehm, essentially kill two birds with one stone - get two people on board, ehm, you know with letting the users do all the work. So, what we did, as I have said, we put the 50% off - we actually did some A/B testing, so we could see what users reacted better to, ehm, so we tested it with -50% off and free [product]. Free [product] - it turned out in the end, it wasn't such a good idea, because it just became that, the chain of free [products], basically users were sending free [products] to other users, who would then (unver.) of the free [product] and it wasn't really working, so we realized that, and we switched back to the -50% discount, so the -50% discount was on the [product], so when the receivers received the [products], they just put in the discount and they worked quite well, because we track the coupon codes specifically and see how it was working, how it was progressing down the line. So, Ehm, another thing we did to drag downloads of the app is, we put a QR code on the back of [products], ehm, this also got a little bit messy, because the QR code, like didn't look so nice on the back of the [products], you know, and also we have a few other things on the back of the [products], so it seemed to get a bit cramped, so we also realized from that, that the users were, it wasn't so effective, the user weren't using the QR code, it was becoming a little bit of, you know, it was just there, taking up space on the [products], like, not looking so great. 00:02:44-0

R: Sure 00:02:44-5

CEO: So we realized that, and stop doing that and just offered discounts and continued with that and that was really good, it really, we saw big difference, we saw big growth in it. Ehm, probably another thing we did was, when we launched, we ehm, we went to all the big cities in Europe, so Europe was specifically sort of our targeted area, so we went to visit all big cities in Europe and basically offering 50% off coupon codes, so we did a big printing order, basically we did some designs for some minor 50% off codes and I think we printed about ten thousand of them and basically we just went around Europe to the big cities, to the tourist hot spots and ehm distributing them, and this was very good as well, because we could use the analytics, we could track it, on the [products] or on the back of the coupon code,

you know, we could really, basically we could track the coupon code, we could see, where people were using it, where people were downloading it, how it was working and how it was progressing. 00:03:52-4

R: Okay. 00:03:52-9

CEO: So it was also a really nice metric to measure and, yeah basically I think the most important thing that we learned, was that it was, we, we learned from our mistakes and identified our successes and this was probably one of the most important things we did, because, like, when something was not working, we figured out that it wasn't working, you know, the analytics really helped us to track it and see how it was working, see how it was not working. We build a bit of, eh, a knowledge library, so, as things were, you know we predicted how things could work, what we expected, what, you know, we thought would happen, what we thought probably wouldn't happen 00:04:41-1

R: Okay. 00:04:41-3

CEO: So we wrote it down, and then, you know, based on the analytics, we wrote down what did happen, and by comparing the two we could decide what was a success, and what was a failure, you know. So we build, we are still building quite a big knowledge base, on how things work, how things didn't work and yeah, this is also a really important tool for the future, so we can see what worked, what didn't work, how to compare them, you know, it's like whenever we think we are doing new stuff, we can refer back to this library, that we are building and, you know, basically get the rundown on how our stuff worked in the past. (...) 00:05:18-1

R: Sounds very nice, did you, cause you said you used metrics for, ehm, for the coupons. So you probably also used some for the [products discount] codes? 00:05:33-2

CEO: Ehm, yeah exactly, so for the [products discount] code we could issue, eh, certain discounts and we could track them, and also at the start we made a little mistake, we didn't restrict the one coupon code each time, so it also spread really quickly like that, but we also identified that mistake, and we just issued, we just made one, one code was basically available for one user to use, and the coupon codes are really easy to track, so we know as soon, as someone puts into our app a coupon code, so we know exactly, how the [product] was sold, which marketing method worked and which didn't so yeah, exactly. 00:06:19-9

R: Mhm (bejahend). And beforehand, before you even started with the, the [products discount] codes, ehm, you created a "hypothesis" on what will the outcome be? (..) 00:06:32-4

CEO: Yeah, exactly. Ehm, before we started anything, we wrote down exactly what we expected to happen, you know, our thoughts on what would happen, yeah I think that was a really important tool (.) because it, it showed our expectations, it, you

know, it really defined what we expected to happen, what we expected to get out of using this tools and stuff like this, you know, during these things, and you know, it was really, we really defined it quite nicely, you know, what we expected to happen, and then afterwards with the analytics we did, we really measured what happened, so by comparing the two we managed to build quite a big library as well, it was, you know, important for the future.(..) 00:07:24-4

R: Very nice. Ehm, (..) have you created any documents while working with growth hacking?(.) 00:07:34-7

CEO: The only one we have created is the library we are building up, so basically it is just a word file, ehm, with the hypothesis, like what we expected to happen, and then the analytics of what did happen... 00:07:51-4

R: Mhm (bejahend). 00:07:51-9

CEO: ...so that's probably the only document we have created and build, it's like 5 or 6 pages now, just a paragraph each comparing the two and also we can refer to that in the future.(...) 00:08:07-5

R: Okay, nice. Have you, maybe, identified some prerequisites for using growth hacking? I mean you mentioned the metrics, so that's obviously one of it, but maybe some other?(...) 00:08:23-7

CEO: Ehm, yeah the metrics and analytics, ehm, maybe you could rephrase the question. 00:08:35-7

R: Ehm, so (.) you know, you were working with growth hacking, so maybe, I don't know, you needed (..) (searching for a word) - so prerequisites are basically requirements or preconditions for using growth hacking. 00:08:57-1

CEO: Oh, perfect, what I think probably the biggest one is metrics, ehm, (..) nothing else comes to the mind at the moment, but yeah it's like, metrics are important, this is like, you know if you can't measure the stuff, then you don't know if it works, or if it doesn't work, you know, it is just aimlessly, like (unver.), with metrics it was really, we could really approach the stuff with laser guided focus, we could find out if it works and if it doesn't work and it was really simple, if it doesn't work, we learn from it and if it works we continue it and make it better, so probably metrics is the biggest one. (..) 00:09:32-6

R: Okay, and last question, ehm, cause you, yeah, you identified some of the steps, that you are using, would you consider any of those steps to be especially important? 00:09:51-0

CEO: Hmm, probably the biggest one, the most important thing we did, was probably building the knowledge base, it was something we could refer to every single time, that we wanted to do, you know, when we came up with a new idea, how to add

more users, how to sell more [of the product], it was like, we could refer to it, we could really see, how stuff worked, how it didn't work and most importantly, why things work and why things didn't work, and you know, it's probably, for anyone doing it, I advise it, it's probably one of the best things you can do, to measure, so write it down, build up a, you know, basically a knowledge base, what worked, what didn't work and you know, you could even include the metrics in that, so you can see, how that worked. Yeah, that was definitely one of the key things, that always helps us, you know built on our previous experiences, learn from our mistakes and push forward with our successes basically. (..) 00:10:52-0

R: Mhm (bejahend), are you using the knowledge base for your future growth hacks? 00:11:02-0

CEO: Yeah, of course every time we come with a new idea, we refer to it, so we see what has happened in the past and then it also helps us, kind of, to get a better idea, so make a better guess, on how the stuff will work in the future, you know, when we started it all, we had a rough idea of how stuff was going to work and was going to work and what wouldn't work, it was a lot of trial and error and now, now we have a much clearer picture, when we come up with an idea, exactly how it will work, if it will work even, you know, if it is worth even trying it so, yeah it is definitely something we are continuing to build up, that is continuing to grow. It is probably one of the most important documents that we have, it is basically our failures and their learnings. So yeah, we continue to use it, and we will definitely use it in the future anyway. 00:11:55-0

R: Okay, thank you, that is all, thank you for your time. 00:11:59-0

CEO: Perfect, thank you. 00:12:02-0

Observation Protocol

Structure with questions to help answer them [64]:

1. Place, Time - where, when

- Observation - How does the field look like? What processes / procedures are occurring? Who does what with whom? Are there routines involved? Any particular events? What constellations are there? Is someone being treated differently than others? How is the communication? Is group building occurring?
- Context Notes - What for exmple financial, familiar, lawyer, political framework or what procedures influence the field?
- Role and Methodical Reflections - What is my role as a researcher in the field? Does my observation have methodical consequences?
- Theoretical Reflection - How can the observed events be interpreted provisionally? What relationships seem to be emerging?

B.1 Startup 1

Founding team consists of: CEO, lawyer, developer1 and developer2.

1. coffee shop in 1200 Vienna, February 22nd, 2017
duration: 90 mins

- Observation

The observations takes place in a coffee shop at a table for 4 people with the researcher in the background, after a short exchange of greetings, the CEO informs about current situation on the field of partner acquisition. He then proceeds to talk about various pitching contests they could participate in. Afterwards the status quo of the development activities is being delivered by developer1, who seems to lead the development, with developer2 only answering his questions.

After the status of development, CEO states, that with the incoming launch date, also marketing activities should take place. Growth hacking has already been proposed in some previous meetings. All the members begin to brainstorm ideas, on how to best address growth and what to concentrate on first. Most of the ideas come from CEO, while lawyer doesn't offer any. All the ideas are being written down, but they agree to concentrate on 2 crucial factors for the growth of the user base.

Then the CEO asks developers how to best address those goals. Short discussion following the questions concentrates on various other goals that come to mind, but does not lead to any results regarding how to address those until the meeting is over, as some of the participants have other plans and have to leave. CEO asks developers to look into the implementation possibilities.

- Context Notes

- Role and Methodical Reflections

- Theoretical Reflection

The team brainstormed on what would be important to grow rapidly and writes everything down. Afterwards they prioritize the ideas without a formal process behind it, they just think, one goal is more important than the other. The team already starts thinking about an experiment to address the chosen goal, however no conclusion can be met during this meeting.

2. coffee shop in 1200 Vienna, March 5th, 2017

duration: 60 mins

- Observation

Similar constellation to last meeting. After short agenda introduction by the CEO and the usual development status discussion, they again arrive at the topic of growth hacking.

CEO asks developer2 about the approach to reach the goal set and chosen to focus on in last conversation (researcher was not present). The development of the feature needed for the growth hack is almost ready and the hack including the feature will be embedded into the final product. The questions emerges, if any other ideas can be found, on how to attract more users. Although the meetings needs to end soon, so this task is given as "homework".

- Context Notes - apparently developer2 has been working on an experiment since last observed meeting.

- Role and Methodical Reflections

- Theoretical Reflection

The works on growth hack have been started. The team seems not to be concerned with measuring the growth hack or even testing it, it goes straight into the prototype. This may correlate to the fact, that the proposed feature does not require a lot of development.

Asking for another input shows the iterative nature of the process, as they created one growth hack and already start thinking about another.

3. restaurant in 1200 Vienna, March 11th, 2017

duration: 35 mins

- Observation

After short development update the meeting comes to the growth hacking, the participants are obviously tired of the meeting, as more and more yawning occurs as the time passes. CEO asks about the ideas, which they tried to generate last week. lawyer proposes friend recommendation system, but the others are not satisfied, developer 2 names a few arguments, on why it is a very common practice and should be given a shot. No other propositions are being made. CEO apologizes to the researcher for the short meeting and "time waste".

- Context Notes - apparently the CEO and both developers have been drinking heavily the night before

- Role and Methodical Reflections - the meeting seems to have taken place, only because of the fact that the researcher has been invited. However this fact shouldn't have any effects on the data collected.

- Theoretical Reflection

It seems the meeting has been held mainly because of the researcher, as the participants were obviously tired from the night before. The meeting was also very short compared to the previous ones.

In the meeting a new growth hack idea is born and almost ignored because of the exhaustion of some of the participants.

4. coffee shop in 1200 Vienna, March 19th, 2017

duration: 90 mins

- Observation

Again various agenda points are discussed, like development status and legal

works status, before the topic of growth hacking.

The CEO says he thought about the friend recommendation system and thinks it is a good idea to follow up with this growth hack. Developer 2 argues that it would be more important to ensure the quality of the product first, and proposes the analysis of the user "funnel". He describes it, as the lifecycle of the user in the app - what is being clicked, observed, used. He wants to identify the steps which aren't being used correctly and measure user's activity. He wants to increase the activity in the app, as he thinks this will improve revenue as well as the amount of active users. He says without a good and usable product, nobody will want to use it. The ideas are being noted by the CEO on a sheet of paper. Developer 1 supports this idea, and the team agrees to follow both approaches.

The CEO asks more about the metrics and what could be measured easily, without much of a development. His idea is to gather all the data possible and use it not only for the growth hacks but also to calculate the conversion rates. As the developers name some factors, the CEO notes them down to think about possible metrics.

- Context Notes - lawyer is sick and not present.

- Role and Methodical Reflections

- Theoretical Reflection

A new growth hack and the improvement of the product are being addressed in this meeting in form of a discussion with input from the participants. Moreover the CEO notes the ideas, suggesting that the documentation of goals / hacks could be important. Also the funnel indicates usage of metrics, as to measure e.g. the activity.

CEO want to use some of the metrics in his financial considerations, however the affiliation to growth hacking seems not to be a factor here for him. Developer 2 is more concerned for product quality and thus measuring and improving user experience. This relates to good product/market fit.

5. coffee shop in 1200 Vienna, April 2nd, 2017

duration: 90 mins

- Observation

The topic of marketing has been discussed as the first one during this meeting. The CEO mentioned the incoming launch and wanted to hear ideas for possible marketing measures. After some has been named, the focus shifted toward growth hacking.

The funnel analysis is still being worked on, but going on well. Some metrics have been identified that could easily be measured without any further development. The CEO notes them down and will consider utilizing possibilities.

As a new measure for improving user activity developer 2 proposed tracking user costs while using the app and count money saved. This numbers could then be posted on social media platforms for user, increasing brand recognition and attracting new customers, while offering a new feature for the existing ones. Developer 2 mentioned some metrics that would be needed for this feature to work, while lawyer strongly approved of this idea. As the CEO was leaving the country for a few weeks no further meetings has been scheduled, the team will be communicating online when necessary.

- Context Notes
- Role and Methodical Reflections
- Theoretical Reflection

During this meeting a new idea for growth hack occurred without any impulse from the CEO, which suggests that inputs for the ideas can come from anywhere at anytime. Again the usage of metrics is emphasized, however not for the purposes of learning out of the results, but for tracking user behaviour and displaying it.

B.2 Startup 2

Founding team consists of CEO, salesman, developer and IT-expert.

1. google hangout, January 4th, 2017
duration: 70 mins

- Observation

The foundation team meets for the first time this year and thus in the beginning there is a lot of socializing and getting up to date, how the Christmas and New Year's Eve were. Everyone is in good mood and also the researches get asked about his Holiday.

First thing on the agenda is the development process. Developer 1 describes his experiences this past few weeks (apparently last meeting has been held some weeks before Christmas). He has been working on the iOS App and it is coming well. IT-expert is in charge of the Android App so he also describes, what he has been up to the last few weeks.

Next topic is the marketing, where the focus lies on the Instagram Account. Here some team from US has took over since November and has been posting photos to build the brand. Now the CEO took over and is posting with them, however when they are done in February, CEO will continue their work.

The topic of growth hacking is being discussed lead by the CEO who already

was thinking about it. He shortly describes the approach as something where creative thinking is needed and the team agrees to think about some ideas on how to gain growth for this exact undertaking. The meeting ends then. New meeting shall be scheduled using Doodle.

- Context Notes - Last meeting happened before Christmas. Apparently some students from USA have been helping set up the Instagram campaign during some of their courses which end in February.
- Role and Methodical Reflections - The team acknowledges the presence of the researcher, but except for the small talk in the beginning and some questions in between ("are you still there?") and reassuring of his presence ("I'm listening and taking notes") the team seems to not be disturbed by it.
- Theoretical Reflection
This startup has a structured plan for approaching marketing channel like Instagram and just started working with the growth hacking. However CEO seems to have an idea on growth hacking and leads the process, asking for input from everyone.

2. google hangout, January 19th, 2017
duration: 90 mins

- Observation
The meeting starts with the CEO and the salesman presenting some new screens for the apps including new onboarding procedure for registering and logging in for the first time. Both developers give their remarks to the design and set a deadline till next week.
The company where this startup applied for subsidiaries seems to be interested, and they have scheduled a meeting with the team in February. If the startup gets accepted, they will receive money for starting the company.
Finally marketing comes around. The ideas include adding discounts to attract the receivers of the product to also try the service out and thus increase the sells and active users, referring a friend for the same purposes and adding a QR-Code on the back of the product, for increasing the app downloads. The CEO says to hold on as he writes the ideas down. The team is happy with the ideas, but IT-expert is concerned to implement everything and once and suggests to try the discount codes on the product first. He also suggest technical solution for it including some tracking algorithm, which he discusses with the developer, while the CEO and salesman are quiet. They want to make the discount amount variable and also track the location from where the code has been used. They agree to implement those features until 2 weeks from now, as the design update also has to be done. Meeting ends.

- Context Notes

- Role and Methodical Reflections

- Theoretical Reflection

The team makes suggestions for growth hacks and adds the goals, which those growth hacks should be addressing. Also there seems to be a kind of a document with the goals or growth hacks, as the CEO writes everything down.

3. google hangout, February 5th, 2017

duration: 90 mins

- Observation

The meeting has been postponed until Saturday due to the request of developer. They start with an update on the development. The code tracking has been implemented in the backend with various properties that can be set, and also including the geographical tracking of the code. Both developers has tested. The team discusses the best place to add it on the product. Here salesman is in charge. Regarding growth hacking CEO wants also to add the QR-Code on the product, which is also included in the discussion. Developer and IT-expert mention that it won't be so hard to add, as it does not require any functionality from the app. However CEO adds, that also tracking, where the QR code has been used, contains valuable information. IT-expert promises to look into it.

After an agreement on the product layout including the discount code and QR code salesman says he will do some test prints and show it to the team as soon as he gets the printed product.

Also another set of updated designs for the app is being shown, as multiple graphics and the layout of the product changes a bit to fit the new onboarding procedure. This is promised to be updated till the end of the week. The meeting ends.

- Context Notes - apparently the CEO and developers were in continuous contact on the state of development, as the features including design have not been addressed. IT-Expert seems to also be developing a backend for the Apps.

- Role and Methodical Reflections

- Theoretical Reflection

Another growth hack is being added to the product.

4. google hangout, February 11th, 2017

duration: 60 mins

- Observation

The meeting starts with the growth hacking approach, as the CEO takes the lead and asks about the QR-code tracking. IT-expert says it's a viable option using the google play store data, which should work similarly with the iOS App Store. First products are being shown, and everyone is pleased with the layout. CEO wants to include the coupons and QR-codes in the incoming beta test in the beginning of March. He mentions A/B testing, as he wants to compare the outcomes of various discount amounts among the customers and see which works better. For that IT-expert is asked, on how the technical side of such a feature could work. IT-expert ensures to look into it, as he has no previous experience with such tests. The codes should already be trackable. For the first test only the coupon code should be used, as the app is not available on the app markets and thus the QR code would be unnecessary. The CEO announces that with using growth hacks also the outcomes should be noted in a document. For learning purposes, he wants to think about what to expect out of the hacks, write it down and compare to the outcomes. This way, they can create a "knowledge library" where they see, what their specific customers like and dislike. Afterwards the apps with new design from last week are being shown, and some minor bug fixes are being announced from the iOS side of the development (i.e. developer). As salesman and CEO have to leave, the meeting ends.

- Context Notes

- Role and Methodical Reflections

- Theoretical Reflection

While on growth hack should be now possible to use, the team already thinks about another one. However they plan to test the first one using A/B testing for different discount values and use that in the beta. A "knowledge library" should be created for the purposes of documenting all the growth hacks and what went wrong or what they learned.

5. google hangout, March 2nd, 2017

duration: 40 mins

- Observation

First meeting after the winter vacation for all of the team, as everyone except for developer are active students. The CEO presents updated icons for the iOS app and some designs for flyers and posters. salesman has been looking for a firm, which could manufacture the product and send it on its way in a kind of all-in-one service, however he has not found one yet, which fulfils all the criteria.

The beta preparations are being finalized, as the team agrees to send the

invitation including the apps install files per email to some of their nearest friends and relatives. For this CEO discusses the A/B testing with IT-expert. They want to test the discount code with -50% and -100% (i.e. for free) for the receiver of the product. While 70% of users get the -50% discount, the other 30% will get it for free, to minimize the cost. The receiver has to be included in beta, but the participants know about that restriction. The start has been set to the 5th of March. Meeting ends.

- Context Notes

- Role and Methodical Reflections

- Theoretical Reflection

Some details on the testing are being made, which show the dedication of the team to testing and getting feedback from real users and not only making hypotheses.

6. google hangout, March 12th, 2017
duration: 40 mins

- Observation

The beta is running since March 5th and all the 24 users are using it, 53 products has been sent and received so far. However some of the users reported a problem in form of a loop, CEO says. As the free code is being printed on every product delivered, it is possible to create a chain of free products, as the receiver sends one and the receiver can also send another one and so on. Thus the interpretation is, that the A/B testing was successful and revealed a problem. The team agrees to eliminate the free option from the discounts. The beta will continue for another week.

As the beta goes so smoothly, the launch plans start for 1st April 2017. A consulting firm is working on an elaborate marketing plan for the startup, as it gets mentioned by salesman. They want the firm to prepare some launch activities, which they will utilize. So far the consulting firm seems capable, although CEO addresses his concerns, as it is a consulting firm consisting of only bachelor students. However they should write possible tasks and send them to the firm, which will then get back to them.

- Context Notes - the team has won 100h from a consulting firm in some kind of pitch contest, which they use for the marketing plan for launching.

- Role and Methodical Reflections

- Theoretical Reflection

Documents Protocol

Owner	Title	Type	Pages
Startup 1	Business Plan	Business Plan	28
Startup 1	Marketing Plan	Marketing Plan	5
Startup 2	Business Plan v2	Business Plan	20
Startup 2	Marketing2017	Marketing Plan	8
Startup 2	Knowledge Library	Knowledge Base	6

Table C.1: Documents used in the scope of the case study.

APPENDIX D

Categories

Category	Occurences	Percent
observing user behaviour or other metrics	19	18,45
using observations to identify problems	14	13,59
creating knowledge library including hypothesis and outcomes	10	9,71
considering goals for growth hacking	8	7,77
identifying problems to optimize the desired outcome	8	7,77
testing growth hacks	7	6,80
using growth hack to reach the goal	5	4,85
using analytics with growth hacking	5	4,85
planing future growth hacks	4	3,88
posing hypothesis about growth hack outcome	4	3,88
using observations for other business areas	4	3,88
documenting all the goals	3	2,91
reasoning the goal	3	2,91
referring to knowledge library for growth hack development	3	2,91
considering user preferences for growth hack development	1	0,97
considering costs for growth hacking development	1	0,97
prioritizing the goals	1	0,97
creating plans including growth hack and hypothesis	1	0,97
asking for user feedback when observations won't suffice	1	0,97
growth hack is part of the product	1	0,97

Table D.1: Overview over the categories.

Title	Description
S1-trans	Transcript from the interview with startup 1
S2-trans	Transcript from the interview with startup 2
S1-obs	Observations protocol from startup 1
S2-obs	Observations protocol from startup 2

Table D.2: Materials used for the category development.

Document	Category	Passage
S1-trans	asking for user feedback when observations won't suffice	und wenn das quasi noch keinen Aufschluss bietet, dann werden wir mal schauen, dass wir so viele Nutzer wie möglich befragen dazu, das heißt wieso haben sie es nicht benutzt usw.
S1-trans	considering costs for growth hacking development	und das Guthaben kostet uns als Startup im Endeffekt auch nichts", weil wir das quasi gegenrechnen und das war dann der quasi logischste Schritt in diese Richtung.
S2-obs	considering goals for growth hacking	The ideas include adding discounts to attract the receivers of the product to also try the service out and thus increase the sells and active users, referring a friend for the same purposes and adding a QR-Code on the back of the product, for increasing the app downloads
S1-obs	considering goals for growth hacking	All the members begin to brainstorm ideas, on how to best address growth and what to concentrate on first.
S1-obs	considering goals for growth hacking	Short discussion following the questions concentrates on various other goals that come to mind
S1-obs	considering goals for growth hacking	He wants to increase the activity in the app
S1-trans	considering goals for growth hacking	da haben wir eben, quasi, versucht einerseits wie wir so viele Nutzer wie möglich zu unserem Service locken können,
S1-trans	considering goals for growth hacking	und dann wie wir sie auch noch dazu bewegen können, dass wir, dass sie eben Guthaben aufladen, weil [Name des Startups] ist ja dazu da, dass man Guthaben auflädt, und mit diesem Guthaben dann eben [das Service nutzen] kann.(.)
S1-trans	considering goals for growth hacking	Naja das kommt hauptsächlich von unserem Head of Marketing, der hat sich einfach Gedanken darüber gemacht, wie man so schnell wie möglich an Nutzer kommen kann und wie man quasi den, den, die Hemmschwelle des Nutzers minimieren kann.
S2-trans	considering goals for growth hacking	So, Ehm, another thing we did to drag downloads of the app is,

S1-trans	considering user preferences for growth hack development	Hätter wir jetzt gesagt "okay, er muss sich jetzt ein Profil erstellen, und er muss sein eigenes Guthaben aufladen", damit er überhaupt testen kann, dann ist es relativ unwahrscheinlich, dass so viele Nutzer wie möglich quasi auf die Seite kommen, Guthaben aufladen und dann [das Service nutzen]. Vor allem zu Beginn ist das unheimlich schwierig, dass man da nutzer akquiriert. Und da haben wir uns einfach gedacht "okay, wenn wir diesen Punkt quasi ausmerzen", dann sagen wir einfach "okay, wir müssen ihm ein quasi Guthaben anbieten
S2-obs	creating knowledge library including hypothesis and outcomes	The CEO announces that with using growth hacks also the outcomes should be noted in a document. For learning purposes, he wants to think about what to expect out of the hacks, write it down and compare to the outcomes. This way, they can create a "knowledge library" where they see, what their specific customers like and dislike.
S2-trans	creating knowledge library including hypothesis and outcomes	We build a bit of, eh, a knowledge library, so, as things were, you know we predicted how things could work, what we expected, what, you know, we thought would happen, what we thought probably wouldn't happen
S2-trans	creating knowledge library including hypothesis and outcomes	So we wrote it down, and then, you know, based on the analytics, we wrote down what did happen, and by comparing the two we could decide what was a success, and what was a failure, you know.
S2-trans	creating knowledge library including hypothesis and outcomes	So we build, we are still building quite a big knowledge base, on how things work, how things didn't work and yeah,
S2-trans	creating knowledge library including hypothesis and outcomes	so by comparing the two we managed to build quite a big library as well, it was, you know, important for the future

S2-trans	creating knowledge library including hypothesis and outcomes	The only one we have created is the library we are building up, so basically it is just a word file, ehm, with the hypothesis, like what we expected to happen, and then the analytics of what did happen...
S2-trans	creating knowledge library including hypothesis and outcomes	...so that's probably the only document we have created and build, it's like 5 or 6 pages now, just a paragraph each comparing the two and also we can refer to that in the future.
S2-trans	creating knowledge library including hypothesis and outcomes	Hmm, probably the biggest one, the most important thing we did, was probably building the knowledge base,
S2-trans	creating knowledge library including hypothesis and outcomes	so write it down, build up a, you know, basically a knowledge base, what worked, what didn't work and you know, you could even include the metrics in that, so you can see, how that worked. Yeah, that was definitely one of the key things, that always helps us, you know built on our previous experiences, learn from our mistakes and push forward with our successes basically.
S2-trans	creating knowledge library including hypothesis and outcomes	It is probably one of the most important documents that we have, it is basically our failures and their learnings. So yeah, we continue to use it, and we will definitely use it in the future anyway.
S1-trans	creating plans including growth hack and hypothesis	Wir haben Pläne gemacht, ja. Also das definitiv, das heißt wir haben quasi gesagt, okay, (.) wir bieten dieses Gratisguthaben an, und wir erhoffen uns dadurch, dass wir in den ersten 2 Monaten bis zu 400 Nutzer bekommen dadurch. Und dann in weiterer Folge dafür die Freunde-werden-Freunde Aktion einführen, und dass das uns dann durch, durch diese Aktion eben, dass wir noch mehr Gratisguthaben bekommen kann, zu noch mehr Nutzern führt. Da ein Multiplikator von 1,5 angenommen.
S2-obs	documenting all the goals	The CEO says to hold on as he writes the ideas down.
S1-obs	documenting all the goals	All the ideas are being written down,
S1-obs	documenting all the goals	The ideas are being noted by the CEO on a sheet of paper.

S1-obs	growth hack is part of the product	The development of the feature needed for the growth hack is almost ready and the hack including the feature will be embedded into the final product.
S2-obs	identifying problems to optimize the desired outcome	as he wants to compare the outcomes of various discount amounts among the customers and see which works better.
S1-trans	identifying problems to optimize the desired outcome	Dass wir eben da schauen können, ob wir vielleicht das Design verbessern müssen, ähm, dass es dann vielleicht dann mehr zu [Servicenutzung] führt, oder halt eben, ob es auf anderen Problemen liegt. (..)
S1-trans	identifying problems to optimize the desired outcome	Und es wird dann, eben mit diesem Feedback - entweder mit dem Feedback aus den Zahlen oder mit dem qualitativen Feedback von den Umfragen mit den Kunden, (unv.) unsere Maßnahmen weiter verbessern und auch die Funktionen weiterhin anpassen.
S2-trans	identifying problems to optimize the desired outcome	so we realized that, and we switched back to the -50% discount, so the -50% discount was on the [product],
S2-trans	identifying problems to optimize the desired outcome	So we realized that, and stop doing that and just offered discounts and continued with that
S2-trans	identifying problems to optimize the desired outcome	but we also identified that mistake, and we just issued, we just made one, one code was basically available for one user to use,
S2-trans	identifying problems to optimize the desired outcome	if it doesn't work, we learn from it and if it works we continue it and make it better,
S2-obs	observing user behaviour or other metrics	and also including the geographical tracking of the code.
S2-obs	observing user behaviour or other metrics	However CEO adds, that also tracking, where the QR code has been used, contains valuable information.
S1-obs	observing user behaviour or other metrics	The funnel analysis is still being worked on, but going on well. Some metrics have been identified that could easily be measured without any further development.

S1-obs	observing user behaviour or other metrics	Developer 2 mentioned some metrics that would be needed for this feature to work,
S1-trans	observing user behaviour or other metrics	(Das Problem) Ist, dass die Nutzer nicht so ganz aufspringen, das heißt sie, ähm, erstellen jetzt zwar ein Profil, und (..) sie laden das Guthaben im Endeffekt da rauf in weiterer Folge
S1-trans	observing user behaviour or other metrics	Das heißt sie haben zwar ein Profil, sie haben das Guthaben, und sie wissen es auch,
S1-trans	observing user behaviour or other metrics	Also sehr viele melden sich an, erstellen ein Profil, geben ihre Daten ein, und ein paar andere laden sogar ihr eigenes Guthaben auf, das heißt zusätzlich zu ihrem Gratisguthaben, laden sie noch mehr Guthaben auf,
S1-trans	observing user behaviour or other metrics	ich musste schauen, okay, welche Nutzer laden jetzt auf
S1-trans	observing user behaviour or other metrics	und dass wir quasi auch abbilden, wie der Weg, quasi ist, wenn er die App aufmacht, was er dann alles drückt, wo er hin geht, auf welche Seite, und auf welche Elemente er auf der Seite quasi klickt.
S1-trans	observing user behaviour or other metrics	Also wir haben die Ergebnisse mal rein für das Growth Hacking, für das Marketing quasi, erhoben
S1-trans	observing user behaviour or other metrics	Das heißt ich, ähm, erstelle dann eben die ganzen Kennzahlen, wie (unv.), Conversion Rate und quasi auch die Umsatzkennzahlen, wie viele Nutzer quasi wirklich [das Service genutzt] haben und das Guthaben von uns genutzt haben.
S2-trans	observing user behaviour or other metrics	so when the receivers received the [products], they just put in the discount and they worked quite well, because we track the coupon codes specifically and see how it was working, how it was progressing down the line.
S2-trans	observing user behaviour or other metrics	the user weren't using the QR code

S2-trans	observing user behaviour or other metrics	we saw big difference, we saw big growth in it.
S2-trans	observing user behaviour or other metrics	we could track it, on the [products] or on the back of the coupon code, you know, we could really, basically we could track the coupon code, we could see, where people were using it, where people were downloading it, how it was working and how it was progressing.
S2-trans	observing user behaviour or other metrics	Ehm, yeah exactly, so for the [products discount] code we could issue, eh, certain discounts and we could track them,
S2-trans	observing user behaviour or other metrics	as someone puts into our app a coupon code, so we know exactly, how the [product] was sold, which marketing method worked and which didn't so yeah, exactly
S2-trans	observing user behaviour or other metrics	and then afterwards with the analytics we did, we really measured what happened,
S2-trans	observing user behaviour or other metrics	what I think probably the biggest one is metrics
S2-obs	planing future growth hacks	Regarding growth hacking CEO wants also to add the QR-Code on the product,
S1-obs	planing future growth hacks	as they created one growth hack and already start thinking about another.
S1-trans	planing future growth hacks	Das, also dann haben wir eben weiter noch geplant, dass wir eine Freunde-werde-Freunde Aktion einführen,
S1-trans	planing future growth hacks	Genau, aber im Moment gibt es "empfehle einen Freund" noch nicht, es kommt erst.
S1-trans	posing hypothesis about growth hack outcome	und wir erhoffen uns dadurch, dass wir in den ersten 2 Monaten bis zu 400 Nutzer bekommen dadurch.
S1-trans	posing hypothesis about growth hack outcome	Und dann in weiterer Folge dafür die Freunde-werden-Freunde Aktion einführen, und dass das uns dann durch, durch diese Aktion eben, dass wir noch mehr Gratisguthaben bekommen kann, zu noch mehr Nutzern führt.

S1-trans	posing hypothesis about growth hack outcome	Ähm für die Nutzer, das heißt, wenn wir es quasi (.) wenn wir quasi, sagen wir werden 100 Nutzer und durch diese Freunde-werden-Freunde Aktion haben wir dann quasi ein Multiplikator von 1,5 quasi (unv.), das heißt, das Nutzerwachstum alleine durch diese Funktion ist das 1,5-fache von bisherigen.
S2-trans	posing hypothesis about growth hack outcome	Ehm, before we started anything, we wrote down exactly what we expected to happen, you know, our thoughts on what would happen, yeah I think that was a really important tool (.) because it, it showed our expectations, it, you know, it really defined what we expected to happen, what we expected to get out of using this tools and stuff like this, you know, during these things, and you know, it was really, we really defined it quite nicely, you know, what we expected to happen,
S1-obs	prioritizing the goals	but they agree to concentrate on 2 crucial factors for the growth of the user base.
S1-obs	reasoning the goal	. He wants to increase the activity in the app, as he thinks this will improve revenue as well as the amount of active users.
S1-obs	reasoning the goal	He says without a good and usable product, nobody will want to use it.
S1-trans	reasoning the goal	Und da war es eben wichtig, dass der Nutzer gleich von Anfang an ein Guthaben zum Testen hat.(.)
S2-trans	referring to knowledge library for growth hack development	So we build, we are still building quite a big knowledge base, on how things work, how things didn't work and yeah, this is also a really important tool for the future, so we can see what worked, what didn't work, how to compare them, you know, it's like whenever we think we are doing new stuff, we can refer back to this library,

S2-trans	referring to knowledge library for growth hack development	building the knowledge base, it was something we could refer to every single time, that we wanted to do, you know, when we came up with a new idea, how to add more users, how to sell more [of the product],
S2-trans	referring to knowledge library for growth hack development	Yeah, of course every time we come with a new idea, we refer to it, so we see what has happened in the past and then it also helps us, kind of, to get a better idea, so make a better guess, on how the stuff will work in the future, you know,
S2-obs	testing growth hacks	product layout including the discount code and QR code salesman says he will do some test prints and show it to the team as soon as he gets the printed product.
S2-obs	testing growth hacks	CEO wants to include the coupons and QR-codes in the incoming beta test in the beginning of March.
S2-obs	testing growth hacks	He mentions A/B testing,
S2-obs	testing growth hacks	For this CEO discusses the A/B testing with IT-expert. They want to test the discount code with -50% and -100% (i.e. for free) for the receiver of the product.
S2-trans	testing growth hacks	So over the last few months we've been testing a lot of methods to really get new customers on board
S2-trans	testing growth hacks	So, what we did, as I have said, we put the 50% off - we actually did some A/B testing, so we could see what users reacted better to, eh, so we tested it with -50% off and free [product].
S2-trans	testing growth hacks	when we started it all, we had a rough idea of how stuff was going to work and was going to work and what wouldn't work, it was a lot of trial and error and now, now we have a much clearer picture,
S1-trans	using analytics with growth hacking	wir mussten quasi die ganzen Analytics einbauen,
S1-trans	using analytics with growth hacking	Das heißt einerseits mussten wir natürlich die ganzen Analytics einbauen
S2-trans	using analytics with growth hacking	because we could use the analytics

S2-trans	using analytics with growth hacking	the analytics really helped us to track it and see how it was working, see how it was not working.
S2-trans	using analytics with growth hacking	and then afterwards with the analytics we did, we really measured what happened,
S2-obs	using growth hack to reach the goal	The ideas include adding discounts to attract the receivers of the product to also try the service out and thus increase the sells and active users, referring a friend for the same purposes and adding a QR-Code on the back of the product, for increasing the app downloads
S1-obs	using growth hack to reach the goal	Then the CEO asks developers how to best address those goals.
S1-trans	using growth hack to reach the goal	Das heißt, das erste, was wir eben gemacht haben, ist, dass wir jeden Nutzer, wenn er sich registriert, 5 Euro gratis Guthaben zur Verfügung stellen, das er dann quasi nutzen kann, um im weiterer Folge gratis [das Service nutzen] kann.
S1-trans	using growth hack to reach the goal	dass wir sagen, also jedem Kunden ein Gratisguthaben zur Verfügung zu stellen.
S2-trans	using growth hack to reach the goal	we put a QR code on the back of [products]
S1-obs	using observations for other business areas	The CEO asks more about the metrics and what could be measured easily, without much of a development. His idea is to gather all the data possible and use it not only for the growth hacks but also to calculate the conversion rates
S1-obs	using observations for other business areas	The CEO notes them down and will consider utilizing possibilities.
&		
S1-trans	using observations for other business areas	Also wir haben die Ergebnisse mal rein für das Growth Hacking, für das Marketing quasi, erhoben, aber in weiterer Folge nutze ich sie dann auch noch ganz stark für die ganzen Kennzahlen und Finanzauswertungen. (.)

S1-trans	using observations for other business areas	Das heißt einerseits wird sie im Growth Hacking und Marketing selbst verwendet, die ganzen Daten, und die letzte Schnittstelle bin dann ich, der quasi die ganzen Daten dann nochmal aufbereitet und noch mehr in die Tiefe geht.(..)
S2-obs	identifying problems to optimize the desired outcome	Thus the interpretation is, that the A/B testing was successful and revealed a problem. The team agrees to eliminate the free option from the discounts.
S2-obs	using observations to identify problems	He also suggest technical solution for it including some tracking algorithm, which he discusses with the developer, while the CEO and salesman are quiet. They want to make the discount amount variable and also track the location from where the code has been used.
S1-obs	using observations to identify problems	and proposes the analysis of the user "funnel". He describes it, as the lifecycle of the user in the app - what is being clicked, observed, used. He wants to identify the steps which aren't being used correctly and measure user's activity.
S1-trans	using observations to identify problems	Ist, dass die Nutzer nicht so ganz aufspringen, das heißt sie, ähm, erstellen jetzt zwar ein Profil, und (..) sie laden das Guthaben im Endeffekt da rauf in weiterer Folge, aber sie [nutzen das Service] nicht.
S1-trans	using observations to identify problems	Das heißt sie haben zwar ein Profil, sie haben das Guthaben, und sie wissen es auch, aber sie [nutzen das Service] nicht, das heißt sie verwenden die App dann dennoch nicht.(...) So das ist das wesentliche Problem, dass wir momentan, quasi, zu beheben versuchen.

S1-trans	using observations to identify problems	Also sehr viele melden sich an, erstellen ein Profil, geben ihre Daten ein, und ein paar andere laden sogar ihr eigenes Guthaben auf, das heißt zusätzlich zu ihrem Gratisguthaben, laden sie noch mehr Guthaben auf, aber bisher nutzen sie es relativ selten, oder fast gar nicht eigentlich.
S1-trans	using observations to identify problems	das heißt ich musste schauen, okay, welche Nutzer laden jetzt auf und welche von diesen Nutzern [nutzen das Service] auch tatsächlich,
S1-trans	using observations to identify problems	Wir werden dann schauen, woran es hackt, natürlich, wir werden uns einmal die ganzen Daten quasi ansehen, das heißt einerseits "wo sind die ganzen Nutzer ausgestiegen" usw.,
S1-trans	using observations to identify problems	dass wir die ganzen Auswertungen dann (.) quasi (.) generiert. Einerseits durch die Daten aber andererseits, falls die Daten nicht ausreichen durch das Feedback, weil nur dadurch kann man dann quasi herausfinden, ob es jetzt funktioniert hat, oder was nicht funktioniert hat im Endeffekt.
S1-trans	using observations to identify problems	Weil man kann sich so viele Gedanken darüber machen wie man will, man kann so lange nachdenken wie man will, aber im Endeffekt, wenn es der Kunde nicht quasi bemerkt, oder wenn es nicht funktioniert dann beim Kunden, also kundenseitig, dann hat das relativ wenig Sinn.
S2-trans	using observations to identify problems	of course there has been quite a lot of problems with it as well.
S2-trans	using observations to identify problems	Free [product] - it turned out in the end, it wasn't such a good idea, because it just became that, the chain of free [products],
S2-trans	using observations to identify problems	when something was not working, we figured out that it wasn't working, you know, the analytics really helped us to track it and see how it was working, see how it was not working.

S2-trans	using observations to identify problems	we made a little mistake, we didn't restrict the one coupon code each time, so it also spread really quickly like that,
S2-trans	using observations to identify problems	we could find out if it works and if it doesn't work and it was really simple

Table D.3: Overview over categories and passages.

List of Figures

2.1	Shades of grey literatures [12, p. 4].	12
2.2	The popularity of term "growth hacking" since January 2010 until February 2017.	16
2.3	The Startup Pyramid by Ellis [22].	18
2.4	Growth hacking process according to Patel and Bronson [9][Chapter 3]. . . .	22
2.5	Growth hacking process according to Balfour [24].	23
3.1	Graph representing the popularity of the terms "startup" and "start-up" in the years 1980 - 2008. Created using Google Ngram Viewer.	30
3.2	Marketing schools depending on the product / brand novelty [49, p. 8]	36
3.3	Business Process Management lifecycle compared to Workflow Management [55, p. 5]	39
3.4	Standards companies are interested in using for their processes [59, p. 29]. . .	41
4.1	Basic case study design types [61, p.40]	49
4.2	Case study tactics for four design tests. [61, p. 34]	54
4.3	Inductive category development as described by Mayring in [66, p. 84], translated image from [67].	59
6.1	Goals definition modelled using BPMN.	74
6.2	Growth hack development modelled using BPMN.	76
6.3	Growth hack testing modelled using BPMN.	77
6.4	Growth hack operation modelled using BPMN.	78
6.5	Knowledge library data flows modelled using BPMN.	80
6.6	The resulting process modelled in BPMN.	82

List of Tables

3.1	Overview over the similarity of the goals of traditional and entrepreneurial marketing.	37
5.1	Overview over the cases.	62
5.2	Overview over the interviews.	65
6.1	Overview over the categories resulting from the inductive category building over all of the data collected.	70
6.2	Categories resulting from the inductive category development process used on the data collected.	72
6.3	Overview over the BPMN concepts used for the growth hacking process modell as described in the BPMN poster [69].	83
C.1	Documents used in the scope of the case study.	115
D.1	Overview over the categories.	117
D.2	Materials used for the category development.	118
D.3	Overview over categories and passages.	130

Acronyms

AMA American Marketing Association. 34

BPMN Business Process Modelling Notation. 5, 40, 74, 76–78, 80–83, 87, 89, 90, 131, 132

SME small to mid-sized enterprises. 3, 34

Bibliography

- [1] S. Ellis, “Find a Growth Hacker for Your Startup,” 2010. [Online]. Available: <http://www.startup-marketing.com/where-are-all-the-growth-hackers/>
- [2] J. Megahan, “Andrew Chen on the State of Growth Hacking,” 2016. [Online]. Available: <http://blog.mixpanel.com/2016/03/16/andrew-chen-and-the-state-of-growth-hacking/>
- [3] R. D. Hisrich, “The Need for Marketing in Entrepreneurship,” *The Journal of Consumer Marketing*, vol. 9, no. 3, p. 43, 1992.
- [4] R. C. Becherer, M. M. Helms, and J. P. McDonald, “The Effect of Entrepreneurial Marketing on Outcome Goals in SMEs,” *New England Journal of Entrepreneurship*, vol. 15, no. 1, pp. 7–18, 2012.
- [5] M. Gruber, “Marketing in New Ventures: Theory and Empirical Evidence,” *Schmalenbach Business Review : ZFBF*, vol. 56, no. 2, pp. 164–199, 2004.
- [6] K. von Brocke, “Growth Hacking: What It Is and What It Is Not!” 2014. [Online]. Available: <https://vonbrocke.wordpress.com/2014/12/13/growth-hacking-what-it-is-and-what-it-is-not/>
- [7] M. Brown, “Spotify - How Spotify Turned Free Music into A \$10+ Billion Valuation,” 2015. [Online]. Available: <https://growthhackers.com/growth-studies/spotify>
- [8] —, “Airbnb – The Growth Story You Didn’t Know,” 2015. [Online]. Available: <https://growthhackers.com/growth-studies/airbnb>
- [9] N. Patel and B. Taylor, “The Definitive Guide to Growth Hacking,” 2016. [Online]. Available: <https://www.quicksprout.com/the-definitive-guide-to-growth-hacking-chapter-1/>
- [10] T. U. Wien, “Studienplan für das Masterstudium Business Informatics,” 2013. [Online]. Available: <http://www.informatik.tuwien.ac.at/studium/angebot/studienplaene/wirtschaftsinformatik/MasterstudienplanWinfOktober2013.pdf>

- [11] —, “Studienplan für das Bachelorstudium Wirtschaftsinformatik,” 2015. [Online]. Available: http://www.informatik.tuwien.ac.at/studium/angebot/studienplaene/wirtschaftsinformatik/033526-SP-2011-Fassung2015-Bac{__}Wirtschaftsinformatik.pdf
- [12] R. J. Adams, P. Smart, and A. Sigismund Huff, “Shades of Grey: Guidelines for Working with the Grey Literature in Systematic Reviews for Management and Organizational Studies,” *International Journal of Management Reviews*, vol. 00, pp. 1–23, 2016.
- [13] K. Benzie, S. Premji, K. Hayden, and K. Serrett, “State-of-the-Evidence Reviews: Advantages and Challenges of Including Grey Literature.” *Worldviews Evid Based Nurs.*, vol. 3, no. 2, pp. 55–61, 2006.
- [14] S. Ellis, “Sean Ellis LinkedIn,” 2016. [Online]. Available: <https://www.linkedin.com/in/seanellis>
- [15] R. Holiday, “Ryan Holiday LinkedIn,” 2016. [Online]. Available: <https://www.linkedin.com/in/ryanholiday>
- [16] N. Patel, “Neil Patel LinkedIn,” 2016. [Online]. Available: <https://www.linkedin.com/in/neilpatel>
- [17] B. Taylor, “Bronson Taylor LinkedIn,” 2016. [Online]. Available: <https://www.linkedin.com/in/bronson-taylor-69937b34>
- [18] A. Chen, “Andrew Chen LinkedIn,” 2016. [Online]. Available: <https://www.linkedin.com/in/andrewchen/de>
- [19] B. Balfour, “Brian Balfour LinkedIn,” 2016. [Online]. Available: <https://www.linkedin.com/in/bbalfour/de>
- [20] R. Holiday, “The Secret That Defines Marketing Now,” 2013. [Online]. Available: <https://www.fastcompany.com/3013859/the-secret-that-defines-marketing-now>
- [21] —, *Growth Hacker Marketing*, 1st ed. Penguin Group, 2013.
- [22] S. Ellis, “The Startup Pyramid,” 2009. [Online]. Available: <http://www.startup-marketing.com/the-startup-pyramid/>
- [23] N. Patel, “How to Use Growth Hacking to Attract and Retain Customers,” 2015. [Online]. Available: <http://neilpatel.com/blog/how-to-use-growth-hacking-to-attract-and-retain-customers/>
- [24] B. Balfour, “Building a Growth Machine - The Method Behind the Machine,” 2014. [Online]. Available: <http://www.slideshare.net/500startups/02-brian-balfour-hub-spot-final>

- [25] A. Chen, “Growth Hacker is the New VP Marketing,” 2012. [Online]. Available: <http://andrewchen.co/how-to-be-a-growth-hacker-an-airbnb-craigslist-case-study/>
- [26] Z. Bulygo, “The 7 Ways Dropbox Hacked Growth to Become a \$4 Billion Company,” 2012. [Online]. Available: <https://blog.kissmetrics.com/dropbox-hacked-growth/>
- [27] M. Casson, “Entrepreneurship,” *The Concise Encyclopedia of Economics.*, 1993. [Online]. Available: <http://www.econlib.org/library/Enc1/Entrepreneurship.html>
- [28] R. S. Sobel, “Entrepreneurship,” *The Concise Encyclopedia of Economics.*, 2008. [Online]. Available: <http://www.econlib.org/library/Enc/Entrepreneurship.html>
- [29] J. S. Mill, “Principles of Political Economy with some of their Applications to Social Philosophy,” 1909.
- [30] R. F. Hébert and A. N. Link, “In Search of the Meaning of Entrepreneurship,” *Small Business Economics*, vol. 1, no. 1, pp. 39–49, 1989.
- [31] P. G. Klein and M. L. Cook, “T.W. Schultz and the Human-Capital Approach to Entrepreneurship,” *Review of Agricultural Economics*, vol. 28, no. 3, pp. 344–350, 2006.
- [32] O. E. Dictionary, “start-up, adj. and n.2.” 2016. [Online]. Available: <http://www.oed.com/view/Entry/189206?rskey=hNG8eQ&result=4&isAdvanced=false>
- [33] A. Basu, M. Casson, N. Wadeson, and B. Yeung, “The Oxford Handbook of Entrepreneurship.” [Online]. Available: <http://www.oxfordhandbooks.com/10.1093/oxfordhb/9780199546992.001.0001/oxfordhb-9780199546992>
- [34] E. Ries, “Eric Ries Biography,” 2011. [Online]. Available: <http://www.startuplessonslearned.com/2008/10/about-author.html>
- [35] S. Blank, “Steve Blank Biography,” 2016. [Online]. Available: <https://steveblank.com/about/>
- [36] P. Graham, “Paul Graham Biography,” 2006. [Online]. Available: <http://www.paulgraham.com/bio.html>
- [37] E. Ries, *The Lean Startup: How Today’s Entrepreneurs Use Continuous Innovation to Create Radically Successful Businesses.* Crown Business, 2011.
- [38] S. Blank and B. Dorf, *The Startup Owner’s Manual: The Step-By-Step Guide for Building a Great Company.* K & S Ranch, 2012.
- [39] P. Graham, “Startup = Growth,” 2012. [Online]. Available: <http://www.paulgraham.com/growth.html>

- [40] N. Heinrichs, “Bewertung von Wachstums- und Startup-Unternehmen : Analyse traditioneller Bewertungsverfahren und des stochastischen Modells von Schwartz und Moon,” 2008.
- [41] M. E. Porter, *Competitive Strategy: Techniques for Analyzing Industries and Competitors*. Simon and Schuster, 1980.
- [42] A. Hack, “Startuperfolg und die Wahl von Risikokapitalgebern : oekonomische Analyse mit empirischer Validierung fuer den deutschen Markt,” 2005.
- [43] R. Bartels, *The History of Marketing Thought*, 1976.
- [44] H. Meffert, C. Burmann, and M. Kirchgeorg, *Marketing: Grundlagen marktorientierter Unternehmensführung. Konzepte - Instrumente - Praxisbeispiele*, ser. Meffert-Marketing-Edition. Springer Fachmedien Wiesbaden, 2014.
- [45] AMA, “Marketing Definition,” 2013. [Online]. Available: <https://www.ama.org/AboutAMA/Pages/Definition-of-Marketing.aspx>
- [46] G. E. Hills, “Market Analysis and Marketing in New Ventures: Venture Capitalists’ Perceptions,” in *Frontiers of Entrepreneurship Research*, 1984, pp. 167–182.
- [47] G. E. Hills, C. M. Hultman, and M. P. Miles, “The Evolution and Development of Entrepreneurial Marketing,” *Journal of Small Business Management*, vol. 46, no. 1, pp. 99–112, 2008.
- [48] D. Ioniță, “Entrepreneurial Marketing: a New Approach for Challenging Times,” *Management & Marketing*, vol. 7, no. 1, pp. 131–150, 2012.
- [49] J. Freiling and T. Kollmann, *Entrepreneurial Marketing: Besonderheiten, Aufgaben und Lösungsansätze für Gründungsunternehmen*. Springer Fachmedien Wiesbaden, 2015.
- [50] B. Bjerke and C. Hultman, *Entrepreneurial Marketing: The Growth of Small Firms in the New Economic Era*. Edward Elgar, 2002.
- [51] F. G. Crane, *Marketing for Entrepreneurs: Concepts and Applications for New Ventures*. SAGE Publications, 2012.
- [52] J. Mendling, *Metrics for Process Models: Empirical Foundations of Verification, Error Prediction, and Guidelines for Correctness*, ser. Lecture Notes in Business Information Processing. Springer Berlin Heidelberg, 2008.
- [53] J. Becker and D. Kahn, *The Process in Focus*. Berlin, Heidelberg: Springer Berlin Heidelberg, 2003, pp. 1–12.
- [54] M. von Rosing, H. von Scheel, and A.-W. Scheer, *The Complete Business Process Handbook: Body of Knowledge from Process Modeling to BPM*, 1st ed. Morgan Kaufmann, 2014.

- [55] W. M. P. Van Der Aalst, A. H. M. Ter Hofstede, and M. Weske, "Business Process Management: A Survey," in *International conference on business process management*. Springer, 2003, pp. 1–12.
- [56] P. Lawrence, *Workflow Handbook*. John Wiley & Sons, Inc., 1997.
- [57] J. Vom Brocke and M. Rosemann, *Handbook on Business Process Management*. Springer, 2015.
- [58] OMG, "Business Process Model and Notation," 2017. [Online]. Available: <http://www.bpmn.org/>
- [59] P. Harmon, "The State of the BPM Market - 2016," Tech. Rep., 2016. [Online]. Available: <http://www.bptrends.com/bpt/wp-content/uploads/2015-BPT-Survey-Report.pdf>
- [60] ISO, "ISO/IEC 19510:2013," 2013. [Online]. Available: <https://www.iso.org/standard/62652.html>
- [61] R. K. Yin, *Case Study Research: Design and Methods*, 3rd ed. Thousand Oaks, Calif. [u.a.]: Sage Publ., 2002.
- [62] K. M. Eisenhardt, "Building Theories from Case Study Research," *Academy of management review*, vol. 14, no. 4, pp. 532–550, 1989.
- [63] L. H. Kidder, C. M. Judd, and E. R. Smith, *Research Methods in Social Relations*. Holt, Rinehart and Winston, 1986.
- [64] A. Przyborski and M. Wohlrab-Sahr, *Qualitative Sozialforschung: Ein Arbeitsbuch*, ser. Lehr- und Handbücher der Soziologie. Oldenbourg Wissenschaftsverlag, 2010.
- [65] C. Pope, S. Ziebland, and N. Mays, "Analysing Qualitative Data," *Bmj*, vol. 320, no. 7227, pp. 114–116, 2000.
- [66] P. Mayring, *Qualitative Inhaltsanalyse: Grundlagen und Techniken*, ser. UTB für Wissenschaft : Uni-Taschenbücher. Beltz, 2010.
- [67] F. Kohlbacher, "The Use of Qualitative Content Analysis in Case Study Research," *Forum Qualitative Sozialforschung / Forum: Qualitative Social Research*, vol. 7, no. 1, 2006. [Online]. Available: <http://www.qualitative-research.net/index.php/fqs/article/view/75>
- [68] P. Brereton, B. Kitchenham, D. Budgen, and Z. Li, "Using a Protocol Template for Case Study Planning," in *Proceedings of the 12th International Conference on Evaluation and Assessment in Software Engineering. University of Bari, Italy*. Citeseer, 2008.
- [69] OMG, "BPMN Poster," 2017. [Online]. Available: http://www.bpmb.de/images/BPMN2_0_Poster_EN.pdf