A User Centered Approach to increase Conversion Rate in the Freemium Business Model

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Abstract

Within the software industry it is now common to use the freemium business model; giving away the core product for free while charging for additional premium features. A risk for companies adopting the freemium business model is that the percentage of paying customers is not high enough to both subsidize all the free users and make profit for the company.

This thesis investigates how the design of the user experience can increase the conversion rate from free users to paying customers. The research was made with a user centered approach and involved four case studies (Dropbox, Skype, Evernote and Unity) to conclude how already successful products have implemented the freemium business model. Additionally, since the freemium business model has high predictability, an elicitation of important user metrics to track was made. The metrics can be used to make design decisions based on insight about actual user behavior.

The case studies resulted in a summary of 11 guidelines that explain how to design the user experience in order to address the challenges with the freemium business model. To concretize the guidelines and to make it easier to understand how the guidelines could be used, example designs were created.

Keywords: Freemium, conversion rate, user experience, metrics, design guidelines

Sammanfattning

Det har blivit allt vanligare att i mjukvarubranschen använda sig av affärsmodellen freemium. Denna affärsmodell grundar sig på att leverera en fullt fungerande gratisprodukt och sedan ta betalt för extra premium funktionalitet. En risk med att använda freemium-modellen är att andelen betalande kunder inte är tillräckligt stor för att subventionera alla gratisanvändare och samtidigt generera en finansiell framgång för företaget.

I detta examensarbete undersöks det hur designen av user experience kan öka andelen gratisanvändare som konverterar till premiumanvändare. Arbetet hade en användarcentrerad inriktning och genom en fallstudie undersöktes det hur fyra framgångsrika produkter (Dropbox, Skype, Evernote och Unity) lyckats implementera freemium. Freemium-modellen leder till en hög grad av förutsägbarhet vilket innebär att det är viktigt med spårning av användardata. Därför togs det fram relevanta mätpunkter som kan spåras och användas för att ta designbeslut som baseras på insikt om användarbeteenden, istället för intuition.

Fallstudien resulterade i 11 designriktlinjer som beskriver hur user experience ska designas för att ta hänsyn till de utmaningar som freemium medför. För att underlätta förståelsen för hur designriktlinjerna ska tillämpas har det även tagits fram konkreta design förslag som applicerar dessa riktlinjer.

Nyckelord: Freemium, conversion rate, user experience, användardata, designriktlinjer

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Lund, June 2016

Petter Henriksson & Mergim Rama

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List of acronyms and abbreviations

API	Application Programming Interface
B2B	Business to Business
CRM	Customer Relationship Management
DAU	Daily Active Users
DNU	Daily New Users
HD	High Definition
Hi-Fi	High Fidelity
Lo-Fi	Low Fidelity
OS	Operating System
SAAS	Software As A Service
SME	Small Medium Enterprises
SoHo	Small Office/ Home Office
SVG	Scalable Vector Graphics
UCD	User Centered Design
UX	User Experience
UI	User Interface
VoIP	Voice-over-IP

1 Introduction

1.1 Introduction

"Give your service away for free, possibly ad supported but maybe not, acquire a lot of customers very efficiently through word of mouth, referral networks, organic search marketing, etc., then offer premium priced value added services or an enhanced version of your service to your customer base."

This is the original definition of freemium from the venture capitalist Fred Wilson [1]. The basic idea behind the freemium business model is that the price tag of zero will attract a large user-base and then a small fraction of the accumulated users pays for premium services, subsidizes the free users and generates profit. What counts as premium services can be different depending on how the freemium model is implemented. To avoid confusion *premium* is, in this thesis, defined as anything that is purchased to add value to the free version of the product, regardless if it is a subscription or a one-time payment.

The business model is used by many successful enterprises, e.g. Spotify[1] and Dropbox[2]. There are many challenges for successfully implementing the freemium business model, see *3.3.1.1 Requirements for freemium success*. In this thesis the main focus is on how the human computer interaction can be optimized in the model. The human computer interaction includes the understanding of how the interaction design and the user experience (UX) of products should be implemented. It is also of great importance to understand how users interpret the product and what makes them return to it. The behavior of the end user is with other words key to understand for delivering a successful product with this business model.

[1] Spotify, [Online]. Available: https://www.spotify.com/ . [Accessed 3 June 2016].

[2] Dropbox, [Online]. Available: https://www.dropbox.com/ . [Accessed 3 June 2016].

1.2 Background

The company for which this thesis has been written for is called Telavox AB. They are a Malmö, Sweden based software and service company operating in the large company to the Small Medium Enterprise (SME) and the Small office/ Home office (SoHo) market. They also have offices across the Scandinavian countries, Sweden, Denmark and Norway. Telavox delivers a fully cloud based communication platform for companies. The product is called Flow[3] and it includes functionalities as:

- *Telephony*
- *Switching services*
- *Fully functional chat service for internal use*
- *Teleconference*
- *Voicemail*
- *Interactive voice response (IVR)*

Flow has, until the last year been a product that was only delivered as a product for paying customers. The new version of Flow is soft launched and under continuous development. Telavox has changed their approach for Flow and are now developing a fully functional free version of the product, which is based on a free company number provided to the customers. The free version is mainly targeting the SoHo and SME market. The free company number will link existing mobile telephony with Flow. They also have a premium version of Flow, which is intended for more advanced users. Telavox goal is however, to deliver a standalone free product that will always stay free. The users have the opportunity to buy premium features such as a more desirable company number by paying a one time. Additionally, premium features can be acquired by signing up for a subscription, e.g. for getting a phone subscription plan. The different subscription plans have different features depending on what functionality the customers require.

Telavox has a goal of delivering a product that will engage the users in the extent that they will convert to a subscription of Flow. To be able to deliver a product with this type of business model successfully, demands a great knowledge of what the customers want. To get this kind of insight, metrics of the users' behavior when using the product are vital. These metrics are essential to identify user behavior patterns that can be used for further development of the product.

This thesis is aimed to explore how a user centered and data driven approach of the freemium business model can increase the conversion rate of the free users. The conversion rate is referred to as the percentage paying users from the whole user-base. This will be investigated by research of successful freemium implementations

[3] Flow, [online]. Available: https://addflow.com/ . [accessed 3 June 2016]

by other companies and what kind of metrics that are essential to track for analyzing the users' behavior. These metrics are necessary for Telavox since they will deliver data on how users use the product and how the health of the product currently is.

The case study will together with the metrics research lay the foundation for increasing the conversion rate in the business model by delivering design propositions and guidelines for Telavox. These deliverables are supposed to follow a user centered design approach with user experience (UX) and interaction design in mind.

1.3 Purpose & goals

The goals of this thesis is to investigate how the freemium business model can be implemented in Flow and to investigate how product UX designs that can potentially increase the conversion rate from free users to paying customers. The following research questions have been defined for this thesis:

RQ1. How do companies that are implementing the freemium business model present premium offers?
RQ2. How can the premium version of a product be presented to gain more subscribers?
RQ3. How should the design of the user interface (UI) and UX be implemented to encourage free users to convert to paying customers?

Based on the research questions, the following goals for this thesis have been defined:

- Investigate how other companies achieved to convert free users to paying customers.
- Present relevant metrics about the users' behavior that need to be tracked in order to optimize the freemium business model.
- Deliver design guidelines based on theory, research and the metrics for the users' behavior.
- Deliver design propositions for Flow that include the guidelines, the research and the metrics for the users' behavior.

1.4 Scope

The focus of the thesis is to have a user centered mindset when investigating the research questions. Since this is an interaction and UI/ UX analysis, the thesis is limited to only analyze these aspects of the freemium business model and not the financial and business/marketing aspects.

Freemium products in the business to business (B2B) market are investigated and when businesses are referred to as customers, mainly companies in the SoHo and SME markets are intended. This limitation is made since the free version of Flow targets these markets.

The studied conversion rate refers to the percentage of existing subscribers converting to paying customers and does not involve the acquisition of new free users. The result of the thesis is presented as design guidelines for increasing the conversion rate of the product. The design guidelines include the relevant metrics needed for tracking the users' behavior and prototypes of layouts that present different concepts for achieving higher conversion rate.

1.5 Approach

The approach applied for this thesis consist of a phase method where every phase is completed before the next phase is started, see figure *1.1*. Since main phases are depending each other, the process for the thesis can be found following a type of waterfall model. The thesis is divided into five phases with three main processes, which are as follows:

- *Investigation phase*
    - *Literature study* – The literature study phase intends to give the authors the possibility to research about the freemium business model and the user behavior through a data driven design.
    - *Case studies* – The case studies phase focuses on investigating how different companies approaches the freemium business model and how they successfully have implemented it.
    - *Elicitation of metrics* – The elicitation of metrics phase focuses on researching about user metrics that involve the users in a way that improves the freemium business model.
- *Design process*
    - *Design of guidelines* – The design phase focuses on to deliver design guidelines and design propositions for Telavox. The deliverables focus on how to increase the retention rate for freemium products and how Telavox should implement the business model for Flow. This phase is based on the results from the investigation phase.
- *Conclusions*
    - *Discussion & conclusions* – The last phase delivers a discussion about the result and summarizes the thesis with a conclusion of how the goals introduced in *1.3 Purpose & goals* were met.

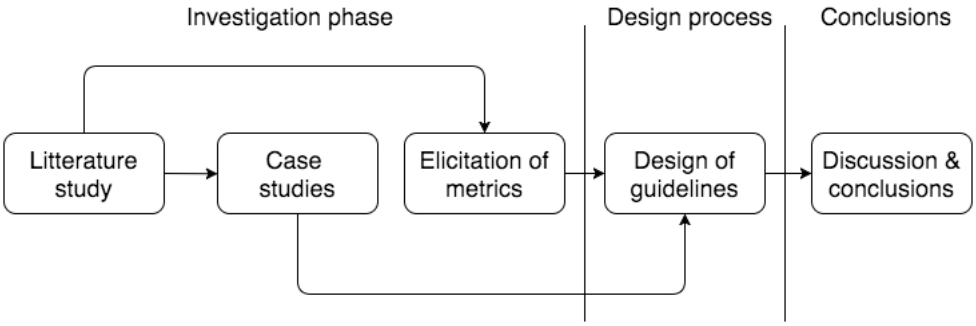

Figure 1.1: Work process of the thesis

2 Theory

2.1 Purpose

To help understand the general approach of this thesis, a theoretical framework of human-computer interaction is presented in this chapter.

2.2 Human-Computer Interaction

2.2.1 **User Centered Design**

The User Centered Design (UCD) approach is used when designing with the user in mind. The focus of the design should be on the needs and goals a user has. Applying this approach can create the best possible experience for the end-user [2].

UCD is defined by three main principles that should continuously be followed to increase the potential of developing a user friendly product. The principles are as follows:

- *Early focus in users and tasks* – The first approach is to identify who the users are and understanding their behavior by observing their characteristics. After the observation, the users should be involved throughout the design process.
- *Empirical measurement* – Make measurements by analyzing the users' reactions on empirical studies such as scenarios, research and experiments. This data will later be used for interactions with prototypes and simulations, which are recorded and analyzed.
- *Iterative design* – An ongoing process that has the goal of improving prototypes after user testing. Every problem occurred under the user test must be annotated and corrected. The follow up after the corrections are more tests. This iterative cycle consists of a design phase, test phase and evaluation phase, see figure *2.1*.

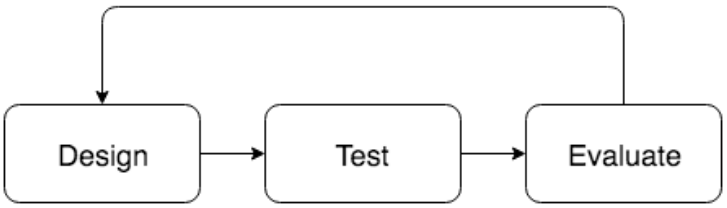

Figure 2.1: Iterative design

The UCD was in this thesis implemented in a way that only takes into account the first principles, *Early focus in users and their tasks* since the main focus was on the users of the freemium business model.

2.2.2 **Usability**

One way of ensuring that the product meets the requirements of user centered design is to use usability goals [2]. The usability goals ensure that the product developed is easy to use, easy to learn how to use, effective to use and if it is encouraging the users to an enjoyable interaction. The book Interaction Design, beyond human-computer interaction [2], defines a way of measuring the usability. The way to measure the usability, Rogers et al. [2] tries to answer the following questions:

- *Is it effective to use? (Effectiveness)*
- *Is it efficient to use? (Efficiency)*
- *Is it safe to use? (Safety)*
- *Does it have good utility? (Utility)*
- *Is it easy to learn how to use the product? (Learnability)*
- *Is it easy to remember how to use it? (Memorability)*

Another definition that is used often is the ISO 9241-11 standard for usability. This standard defines the usability of an interactive screen as strongly dependent on the tasks that are chosen to be done, what kind of users are going to use the product and what type of equipment is necessary [3]. The ISO 9241-11 ISO standard defines usability with these words:

Extent to which a system, product or service can be used by specified users to achieve specified goals with effectiveness, efficiency and satisfaction in a specified context of use. [3]

- *Effectiveness* – When users achieve specified goals with accuracy, lack of negative consequences and completeness.

- *Efficiency* – Recourses needed relative to the results achieved.
- *Satisfaction* – A positive attitude to the interaction of the system in use.

Jonas Löwgren, an associate professor of human-computer interaction at Linköping University has set up rules for testing the usability of a system. He states that usability should be a part of the early stages in the development cycle, in the requirement specification [4]. Since it is hard to know how to measure the usability for a system before it has been developed and installed, he defines an approach that will help testing the system in terms of usability. This approach is called REAL [4]:

- *Relevance* – The relevance of the system in terms of how well it will serve the user's needs. In a system that covers relevance, the system will provide the user with the necessary functions for executing the predicted tasks.
- *Efficiency* – How efficiently can the user perform the tasks that they are supposed to do. In an efficient system the user does not have to put any effort in understanding the UI.
- *Attitude* – It is the attitude against the product. It includes feelings of the user during the interaction with the product. To make a product with high attitude values the end users should be a part of the development of the product.
- *Learnability* – How easy it is to learn how the system works and how easy it is for the user to remember how to use it. By having high learnability values, the users' mental load will decrease.

All the different approaches have many common principles for the definition of usability and how to include usability in the development process of products. These principles are:

- *Efficiency*
- *Effectiveness*
- *Attitude*

By using these principles when developing a product, it will cover the most important parts of the usability goals which will result in a product that will take the users into account and increase the likelihood of producing a consumer oriented and profitable product.

2.2.3 **UX**

UX, which includes many principles of different character, has the mission to make people understand the product and make the experience pleasurable. It also

interprets the ease of use without having to tell what the user should do [5]. This approach takes into account many different principles that define a good interaction between the user and the product. These principles are:

- *Psychology*
- *Design*
- *Emotion*
- *Cognition*

These are vital for creating an enjoyable experience of the product and ensuring that the end-user will continue using it. When failing to make good interaction design, the products will be considered less enjoyable to use and maybe even unusable, which will result in users with high frustration and irritation [5]. Having a bad interactive product that users despite will directly result in less usage of it, which will result in reduced revenue for the company.

The psychological aspects behind user actions and emotions that are significant when understanding how a product works and what it does can be divided into the following six concepts:

- *Affordance*
- *Signifiers*
- *Constraints*
- *Mapping*
- *Feedback*
- *Conceptual model*

Another definition that is often used for defining what UX is, is the ISO 9241-210:2010 standard [6]. The ISO standard defines UX as an experience given from a person's perception and the response from interacting with a product. Further, ISO have set up goals that need to be fulfilled for having a product with good UX. The goals are:

- *Emotions*
- *Beliefs*
- *Preferences*
- *Perceptions*
- *Physical and physiological response*
- *Behavior*
- *Accomplishments*

2.2.4 **Focus groups**

Focus group is a method used to gather qualitative data by using six- to twelve people that together discuss around the issues provided as discussion material. The

discussion material can be identifying needs, test solutions or to explore how the group perceives different problems [7]. By allowing the group to have open discussions it will encourage the participants to have an open mind to the questions, which can result in point of views that would never get expressed on other survey methods [8].

The moderator is the person who decides the topics of the discussions and to provide an effective focus group it is heavily depending on the act of the moderator. *Focus Groups, When and Why to Use* [7] presents a list of personal features of the moderator that are central for having a successful session with the group:

- *Prepared on the nature of the questions asked in the session.*
- *Analyze the groups' answers and comments to identify reasons for the specific answers such as experience, belief etc.*
- *Be a part of the discussion and do not supervise the group.*
- *React dynamically to the answers and nurture the group to always focus on the topic.*
- *Compatible with the group members that are being interviewed.*
- *Impartial.*

Focus groups exist in different forms. These types can exist in their core essence but hybrids do co-exist with them. The types are exploratory, confirmatory and hybrids of them both.

Exploratory Focus Groups

The exploratory type of a focus group is often used when a new problem is presented and therefore need the feedback and discussions from people that have not interacted with this problem before. This type will give the group the power of contribution by letting the session be in a controlled form of brainstorming for potential solutions. Having a brainstorm approach will provide the moderator with possible solutions to the problem [7].

Confirmatory Focus Groups

Confirmatory focus groups are created to evaluate already existing solutions and, if necessary, propose other solutions for the same problem. The group should also discuss opinions on the effort made on the solutions. This type of focus group is more closed than the exploratory which promotes brainstorming [7].

Hybrid Focus Group

In some projects, the need of both exploratory and confirmatory is necessary. Some projects, which have different phases, might need to evaluate the current deliverables and to get an idea of how the next part of the project should be approached. The thesis will therefore use a combination of both techniques in a hybrid form. The hybrid focus group will meet the requirements for assessing the

current project deliverables and give the group the opportunity to brainstorm future solutions for the next implementation phase of the project.

2.2.5 **Prototyping**

Using prototypes encourages development of different solutions to a problem. When letting testers test the different prototypes it will become clear what is good and what is counterproductive for the users. There are two kind of prototypes and they are as follows [2]:

- *Horizontal prototype* – Horizontal prototypes are defined as prototypes with a wide range of functionality but with little depth, e.g. very basic functions of a product.
- *Vertical prototype* – Vertical prototypes are the opposite to horizontal prototypes and are defined by the depth of the few functions they offer.

Prototypes of different quality also exist and the subclasses of the quality are Low-Fidelity (Lo-Fi) and High-Fidelity (Hi-Fi) prototypes.

Lo-Fi prototypes

Lo-Fi prototypes are prototypes of very low quality and they do not represent the final product. These type of prototypes are often made of paper and cardboard instead of electronic products. As a result of the choice of material, the prototypes are very affordable and easy to create which gives the developers the possibility to explore different types of designs and ideas. Lo-Fi prototypes are intendent for exploration use only and are not considered to be integrated to the final product [2].

The book Interaction Design, beyond human-computer interaction [2], presents a table of advantages and disadvantages when using Lo-Fi prototypes. A representation of the table is presented in two bullet lists below.

Advantages

- *Useful communication device.*
- *Proof-of-concept.*
- *Useful for identifying market requirements.*
- *Lower development cost.*
- *Multiple design concepts.*

Disadvantages

- *Limited error checking.*
- *Poor detailed specification.*
- *Limited for usability tests.*
- *Navigational and flow limitations.*

Hi-Fi prototypes

Hi-Fi are considered to be of higher build quality than Lo-Fi. They can of different quality but are often developed to a degree that gives testers the ability to interact with the product without supervision. The Hi-Fi prototypes are often used to solve issues with the functionality that is implemented or to pitch an idea to stakeholders [2]. Even though the concept of having prototypes of high quality is convenient, the cost in terms of money and man hours for implementing the prototype are high [9].

A more general summation of the advantages and disadvantages of the usage of Hi-Fi prototypes is presented in Interaction Design, beyond human-computer interaction [2]. The summation is presented in bullet lists which are presented below.

Advantages

- *Complete functionality.*
- *Interactive.*
- *User-driven.*
- *Used for testing.*
- *Serves as a specification.*

Disadvantages

- *Expensive.*
- *Time consuming.*
- *Inefficient for proof of concept.*
- *Not effective for requirements gathering.*

3 Literature study

3.1 Purpose

To get an understanding of how the freemium business model works, a literature study was conducted. The literature study aimed to give the authors the relevant theory about the freemium business model and how the user behavior can be measured through a data driven design approach.

3.2 Research

The thesis started with an in-depth review of relevant literature on the topic, in this case the freemium business model and the data driven design. The main approach was to use the universities library search for relevant books but other sources for the pre-study were articles and books from IEEE Xplore, which is considered to contain highly acclaimed technical and scientific documents and Google scholar, Google's platform for scientific publications. The IEEE Xplore database only publishes documents from either IEEE or partners that are considered trustworthy. Google scholar gathers all scientific publications from different journals which results in a wider overview of the science behind the different topics in question.

3.2.1 **Search string for freemium business model**

The first key word used for gathering articles was *freemium*. When using this word, the results from the databases was narrowed down to articles that were relevant for freemium. The next approach was to narrow down the search result even more so the documents left contained the requested information. This was done by adding more keywords to the search word. The words added to the search word were *Business;* or *Model.* Besides using the keyword with these added search words, there were other phrases that could be generated from all the words together. Those phrases were:

- *Freemium Business Model*
- *Freemium Model*
- *Freemium Business*

3.2.2 Search string for data driven design

One of the main goals, see section *1.3 Purpose and goals* of this thesis was to understand the user behavior to be able to optimize the implementation of the freemium business model. The search strings used for this area of the thesis were:

- *Freemium Conversion*
- *Freemium Web Analytics*
- *Web Analytics*

3.2.3 Relevance of the documents

To ensure that all the papers and articles used in the thesis contained relevant information, the results were filtered and sorted by relevance to ensure that as many as possible of the keywords from the different search strings were involved.

3.2.4 Snowballing research method

To be able to find literature that never was found with the search strings but could be of relevance for the thesis, the snowballing research method was used. When using this method, every article found is searched through for relevant references that will be used for further research [10]. This approach has value for the thesis since the primary method, search strings, could not cover all the articles that were of interest.

3.2.5 Evaluation of literature

The literature from the research method used was not adequate for gathering information about the freemium business model. The freemium business model is a relatively new concept and there is not sufficiently enough of research on the area. It was therefore necessary to use online sources such as blogs, websites and forums for a deeper knowledge. These sources were casually approached since the validity of them can be questioned.

3.3 Results

In the following sections, relevant theory from the literature study is compiled.

3.3.1 **Freemium business model**

The definition of the freemium business model is not completely clear and some promoters have different views of what counts as a freemium approach. The original definition of the freemium model was posted on a blog by venture capitalist Fred Wilson in 2006, see section *1.1 Introduction.* The basic idea behind the freemium business model is that the price tag of zero will attract a large user-base and then a small fraction of the accumulated users pays for premium services, subsidizes the free users and generates profit.

The freemium model is a fairly recent development but its roots can be traced back to the *feature-limited* software development, which started off in the 1980s [11]. In the feature-limited model, the most fundamental core components of the software product were released for free and the remaining functionality, e.g. saving progress or printing, only kept available upon purchase. The biggest difference between the feature-limited model and the freemium model is the way the product is distributed. Feature-limited products were generally sold on physical discs, while freemium products almost without exception are distributed through the internet [11]. The way that freemium products are distributed is a major advantage and also a fundamental requirement for the model to work. Freemium products can reach many users fast and the distribution is not limited by the production and shipping of physical objects, as opposed to the distribution of feature-limited products which had this limitation. Another difference between the two models is the packaging of the free and premium features [11]. The feature-limited products could often not be used for its main purpose without the premium features because the free version was mainly a way of displaying the product and the functionality was heavily stripped. A freemium product on the other hand usually has full basic functionality at the free tier and for a fee, more advanced features can be accessed [11]. Chris Anderson, author of the book *Free: The Future of a Radical Price* has a slightly different opinion on how the functionality can be divided between the free version and premium version. His definition of freemium has room for four types of models [12]:

1. *Time limited* – based on trials, e.g. 30 days are for free then you have to pay to continue using the product. The advantage of this model is that it is easy to implement and the risk of the free version to decrease the demand for the premium version, i.e. *cannibalization*, is low. The drawback is that potential customers might not put enough effort in trying the software out (which is the main purpose of a trial) because they know they will have to pay for the functionality after the trial period ends.
2. *Feature limited* – The basic version is always free but the more advanced version is only available at a fee. The advantage is that the product will reach many users and Anderson states that the users who convert to paying customers understand the value of what they are paying for and that they are more likely to be loyal and less price sensitive. The disadvantage is that

you need two versions of the product and it is challenging to balance what should be included in the different versions. The free version has to be appealing enough for users to stay but at the same time not give too much away and thus eliminating the motivation for premium upgrade.

3. *Seat limited* – The product can be used by up to a number of people for free, then more people can use it at a fee. The upside is that the model is easy to implement and that the users clearly can see the difference between the free- and the premium version. The downside is that it might cannibalize the premium version of the product on the low end of the market.
4. *Customer type limited* – small and young enterprises get it for free while bigger and established companies pay. Advantages of this model are that companies are charged according to their ability to pay and that fast-growing companies are acquired early. The drawback is that it is complicated to control verification of the user.

There are many ways to limit the freemium version and Anderson's four models can be considered a bit too simplistic. For instance, a product that provides cloud storage, e.g. Dropbox, and restricts its free users by only allowing storage up to a certain limit does not fit in any of Anderson's models. Rather there is need for a model that applies a *capacity-limit* to hold such a product. Furthermore, the products applying the *seat limited* model could actually fit within the scope of a *capacity-limited* model along with products that limits downloads, uploads, bandwidth etc.

It can be argued that the *time limited* model fits within the definition of the freemium business model. Both Wilson and Peter Froberg, who is the creator of the website *freemium.org*, state that the free version has to remain free and not be time limited otherwise it is comparable with a free sample model [1] [13]. According to Froberg a freemium product or service is always free and then the premium part is the additional products or services that are offered to the user base which can improve or expand their experience [13].

3.3.1.1 Requirements for freemium success

A few fundamental views have to be understood in order to be able to adopt the freemium business model in a successful way. The following paragraphs present the core components of the freemium model.

3.3.1.1.1 Free products are accessible to the largest number of people

If consumers are confronted with a price they immediately hesitate and ask themselves if it is worth it. If a product is offered for free this hesitation is often bypassed since the consumer has nothing to lose [12]. This effect of free is very useful to reach a large number of customers. Many of these customers are satisfied since they have a fully functional product and are not paying for it. Satisfied customers are very good referrers and the product has the potential to go viral, which refers to when the product is distributed through word of mouth or by the network effects of the internet.

3.3.1.1.2 Low marginal cost

To be able to give a product away for free it must have low marginal production- and distribution-costs. A product's marginal costs are the costs suffered for producing and delivering an additional purchased unit to a customer. For physical products these costs can be realized through e.g. material-, labor-, storage- and shipping-costs. Digital products do not have the same per-unit production- and distribution-costs, but there can be costs related to maintaining a large user base, e.g. server- and support-costs.

3.3.1.1.3 Low conversion rate is acceptable

In the freemium business model it is expected that the conversion rate is very low. A low percentage of paying users within a large total user base might represent a respectable number of people. Depending on factors such as the size of market, a successful conversion rate can differ from one freemium product to another [14]. However, it is important to find a balance. A low conversion rate might indicate that too much is offered for free and the users do not see the reason to upgrade or that the users do not understand the value of the premium features. A very high conversion rate is not necessarily good and can indicate that the free version of the product is not compelling enough – converting 5% of 2 million users is better than converting 50% of 100,000 users. Seufert, who is the author of the book *Freemium Economics, Leveraging Analytics and User Segmentation to Drive Revenue*, states that that no more than 5% of a freemium product's user base can be expected to convert at product launch [11].

3.3.2 **Data driven design**

Freemium businesses are more predictable than regular software as a service (SAAS) businesses and this is why it is important to analyze the huge trail of data that the users leave behind [15]. In freemium businesses the users sign up and start using the product and a potential premium purchase is rarely instant. It is not unusual that the time from sign up to purchase can be several months or even years [16]. This means that during the time the user is a free user it is possible to track the users' behavior and see exactly how the product is used before a purchase is made. To have this insight about their customers is valuable for any business and compared to SAAS, where the purchase is made immediately, the freemium model has a huge advantage.

Even though the freemium business model enables the possibility to reach a vast number of users, the model is considered to operate under "high margin, low volume" conditions [11]. This is because only a very small minority of the total users will eventually pay for the product. The large user base of a freemium product merely increases the odds that users matching the profile of those most likely to buy the product are exposed to it. In terms of increasing the conversion rate, it would be

valuable to be able to identify the users who are most likely to pay for the premium version. Seufert states how important it is to identify and cater for the premium users in *Freemium Economics, Leveraging Analytics and User Segmentation to Drive Revenue:*

"*Because not every user of a freemium product can be expected to directly contribute revenue to the product, the needs of the users who will—the users for whom the product's core use case holds the most appeal—must be identified and catered to with the highest degree of expediency and zeal. Doing this requires understanding what those users pay for and some knowledge of when they pay for things and why. Insight is not mere record collection; it is the process of erecting a model of users' needs from user interaction histories in order to better meet those needs through further product development."* [11]

Seufert also states that the user-behavior of a premium user in a freemium product is best identified by mining and analyzing the user-data, i.e. the stored interactions a user has with a product. By follow up on key behavioral metrics and link them to conversion-metrics on an individual level it is possible to create a behavioral profile of the converting users. Such a profile could potentially be used to help segmenting all the users by their probability of becoming a paying customer.

Seufert describes four categories of metrics that should be tracked in order to understand how well the freemium model is doing – *retention*, *engagement*, *virality* and *monetization*. Virality is a measure of how much the user base of the product grows through referrals from existing users and since this relates to the acquisition process of new users, it is not within the scope of this thesis. The economics of a freemium model is not a part of the scope either and thus monetization-metrics, which are used to track the revenue contributed by users, are not investigated further. In the following paragraphs, retention- and engagement-metrics are explained.

3.3.2.1 Retention-metrics

Retention is a time-based measure of product use. High retention rate is reached when users are staying with the product and frequently coming back to use it. The retention metrics are used to track the frequency and longlivity of product use and by analyzing the metrics, information about the product usage over time can be attained. This can provide insight into how users interact with the product and possibly help estimate how long specific segments of users will use the product [11]. Retention metrics communicate how well the product meets the users' needs, since it is possible to see the share of users who drop out, i.e. churn rate, and at what time they do so. To have a product that meets the users' needs is a fundamental requirement to keep users and collect revenue. Retention is the most important category of metrics to track since the lack of usefulness in a product would translate in poor performance across both engagement and monetization [11].

Common retention metrics are *daily new users* (DNU) and *daily active users* (DAU) [11]. A user who interacts with the product for the first time is defined as a DNU and thus a first step to be able to track this metric is to define what level of activity that represents a first interaction, which can vary depending on product and platform. The same is true for defining an interaction which should count as daily activity in order to be able to track DAU. By being able to track all significant interactions a user has with the product, starting with the very first one and continuing tracking beyond that, then it is possible to get a graph of the retention curve, see figure *3.1*. From the retention curve it is possible to tell the probability of a user returning after a number of days from the first interaction. Combining this information with relevant segmentation of the users can provide strong arguments when making product development decisions. For example, if there is a new feature integrated in the product, it is possible to see how this change reflects on the retention rate of different user segments.

Figure 3.1: Example of a retention curve

3.3.2.2 Engagement-metrics

Engagement metrics measures behaviors related to users' interactions with a product. High engagement is characterized as recurring, preferably daily, deeper interactions from users. Highly engaged users are preferable since they are more likely to be appreciative of the product and see the value of buying the premium version [11]. By having clearly defined interactions to indicate different levels of engagement it is possible to track how engaged a user is. Additionally, weaknesses in the product design can be identified since it is possible to see at what engagement level users churn. This is particularly useful in the evaluation of the onboarding process. If the onboarding funnel is divided up into defined steps that a user has to

complete in order to be considered onboard, it is possible to track which users engage on every step and at which steps users churn. With this information, further development of the onboarding process can be based on insight and it is easy to see the effects of new optimization measures by comparing the new data with older results.

What metrics to track in order to measure engagement is product specific but common engagement metrics are; session length, session frequency and event counts [11]. Engagement can also be assessed by quantities such as volumes and scores, e.g. how many files a user has on their cloud storage service.

4 Case studies

4.1 Purpose

The purpose of the case study is to investigate how users of market leading freemium products are encouraged to become paying customers. To stay within the scope of this thesis, the case study is limited to investigate areas relevant to the user experience of the product. The findings will be the basis for the creation of design guidelines, see section *6 Design of guidelines.*

The outcome of a case study can be qualitative and quantitative based on observations [17]. These factors are necessary when applying the research method since this thesis has a user centered approach. With the user in mind, this case study aims to give answers, based on qualitative and quantitative data, to RQ1, see section *1.3 Purpose and Goals*.

4.2 Method

The case studies were performed while keeping the theory and the knowledge gained from the literature study in mind, see section *2 Theory* and *3 Literature study*.

The work was divided into two parts – the first part included the performing of the case studies and the second part involved the development of a survey that was sent out to companies to complement the case studies.

1. In the first part, the cases to investigate were chosen based on the criteria in section, *4.2.1 Cases to investigate*. After the cases were chosen, a design evaluation was made on each of them separately.
2. In the second part, the companies to be part of the survey were found by the methods in section *4.2.2 Survey*. As the authors are only representing the consumer segment, the survey was made to get better insight in how businesses are using freemium products.

4.2.1 **Cases to investigate**

Different companies where chosen to get valid data in the research. The companies chosen for the case study were based on the freemium products they offer. Their product should have the possibility of delivering B2B solutions and that they have a relatively high user base. The requirements and limitations adopted to the search were:

- ***Productivity applications*** –The limitation productivity applications filtered out many products with the reason to find products in the same category as Flow. Another reason for this limitations was that Flow has a similar target group as the products in this category.
- ***Business-to-business*** – The products chosen had to have a product with a business-to-business approach to be included in the same category as Flow.
- ***Leading products in the market*** – To ensure that the case studies were done on relevant products, the products chosen where market leading. The definition of market leading products is in this case the amount of users the different products have.

The companies chosen where from different markets since it is necessary to get a distributed research, which takes into account many markets that embraces the freemium business model.

4.2.1.1 Result

With the requirements in mind, the eliciting process resulted in the following companies and their products:

- *Dropbox.*[4]
- *Skype.*[5]
- *Evernote.*[6]
- *Unity 3D.*[7]

4.2.2 **Survey**

The survey conducted for gathering potential data about the B2B approach was made mainly for external participants from other SoHo and SME companies. The

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[4] Dropbox, [Online]. Available: https://www.dropbox.com/ . [Accessed 3 June 2016].

[5] Skype, [Online]. Available: https://www.skype.com/sv/ . [Accessed 3 June 2016].

[6] Evernote, [Online]. Available: https://evernote.com/intl/sv/ . [Accessed 3 June 2016].

[7] Unity, [Online]. Available: http://unity3d.com/ . [Accessed 3 June 2016].

gathering of the different companies that were supposed to answer the survey was done by researching about start-ups in Sweden and where they could be found. Search strings for gathering information about SoHo, SME and startups in Sweden were created. The search strings were:

- *Startups Sverige*
- *Inkubatorer Sverige*

The search strings were applied on Google search engine and resulted in a list of ten incubators in Sweden that are homes for many successful startups. The article presenting these incubators is written by one of Sweden's largest start up papers [18]. The companies approached for further mail contact where found on these incubators and it resulted in a mail list of 102 different companies.

4.2.2.1 Survey questions

The questionnaire that the companies answered is based on Googles' Google Forms platform [19]. The platform was chosen based on the ability to make it reachable to everyone on different type of devices.

The questionnaire includes general questions about the companies and more detailed questions about what kind of freemium tools are used and how the decision making of premium version purchases are divided in the companies. The whole questionnaire can be found in Appendix A - *Survey* and the questions used specifically for *4.4 Part 2 - Survey* are presented below.

- *How many employees has the company?*
  - *1-5*
  - *5-10*
  - *10-50*
  - *More than 50*
- *Do you use a free version of a tool in your work?*
  - *Yes*
  - *No*
  - *Do not know*
- *Do you use a paid version of a freemium tool in your work?*
  - *Yes*
  - *No*
  - *Do not know*
- *Who decides what tools you pay for?*
  - *CEO/ founder*
  - *Other chief positions*
  - *IT-department*
  - *Mutual decision*
  - *Anyone in the company*
  - *Others*
  - *Do not know*

- *Reasons to pay for the tools*
    - *Only one extra features was needed*
    - *Several extra features were needed*
    - *You get many features for the money*
    - *Because the free version of the tool was decent*
    - *Because the free version was bad*
    - *Because the amount of users exceeded the free versions seat limitation*
    - *To contribute for further development of the product*
    - *Do not know*
    - *Other*
- *Do the tools you pay for have excessive functionality?*
    - *Yes*
    - *No*
    - *Do not know*

4.3 Part 1 – Cases

Every example is separately presented with an introduction that is followed by a section for the design evaluation.

4.3.1 **Dropbox**

Dropbox is a cloud based service which was founded in 2007 and launched in 2008. The solution Dropbox provides gives their customers the possibility to share and retrieve photos, documents and videos [20]. By offering this kind of solution, the customers will always be able to access their files, whenever and wherever they are.

Dropbox service is considered to be used by anyone that has the need of online storage and always has the need of accessing files on the go and by people that want to share documents with others. Since the usage is different between individuals, Dropbox has several storage plans for the users. The users can choose from the following plans [21]:

Dropbox	*Plan*
	Dropbox Basic
Description:	The user will get 2 GB of free storage. The basic version of the service will work as a safe and reliable backup for files with simple sharing possibilities. As long as the user has enough storage and are satisfied with the plan, there will never be any costs for Dropbox Basic.
Individual plan:	√
Team plan:	
	Dropbox Pro
Description:	The pro version of the service will give the user 1 TB (1000 GB) of storage, better file management than the free plan and more advanced sharing possibilities.
Individual plan:	√
Team plan:	
	Dropbox Business
Description:	When teaming up and working on the same files in larger projects, this plan is better than the Pro version. With business the team will get unlimited amount of storage, store as much as the team needs. Administrators even have the possibility to recover files that are deleted, changed etc. In other words, the Business plan will give the team a versioning tool.
Individual plan:	
Team plan:	√
	Dropbox Enterprise

Description:	When the teams are getting bigger and company starts to grow in size, the solution Dropbox offers is Dropbox Enterprise. The Enterprise plan gives companies full access to Application Programming Interface (API) which allows them to build powerful applications with Dropbox integrated [22]. Enterprise will also provide companies with domain management tools.
Individual plan:	
Team plan:	√

All the plans Dropbox provides can be summarized with a table which presents what type of customers the plans are targeting; the table is presented below:

Plan	*Individual plan*	*Team plan*
Basic	√	
Pro	√	
Business		√
Enterprise		√

As a freemium based company, Dropbox is implementing two types of limitations for their product. The limitations based on the freemium model are as follows:

- ***Capacity Limited*** – The solution Dropbox provides is divided into two different capacity limitations, storage limited and seat limited. Dropbox has a limit for the free usage of storage and prompts the user to buy a different plan if the storage is not sufficient. Considering the enterprise solution, which has unlimited usage of storage, the limitations is the number of users of the product.
- ***Functionality Limited*** – Depending on what kind of plan the user chooses the functionality is different. Using this approach when delivering the functionality of the product the users are limited in the free and the cheaper plan's.

All the different plans are considered to have about 400 million users that upload 1,2 billion files every day. The Enterprise plan is considered to be a successful solution by Dropbox when 97 % of all the Fortune 500 companies use Dropbox as the primary storage plan [20].

4.3.1.1 Design evaluation of Dropbox

Dropbox users go through different stages before signing up for subscription. After becoming a free user, the conversion funnel includes the following stages:

1. Get the user to understand the product and help the user to get familiarized with the features and how the product is value adding. In the freemium model it is important that the user understands the different tiers and how the premium plan can add value [14].
2. Get the user engaged with the product. A customer who is not using the product will not pay for it.
3. Get the user hooked. The user sees the value of having files stored online and always having access to them. The user adds more files and for every file uploaded, the user gets more dependent on the product. Eventually there is not anymore free storage space left and the user has to upgrade.
4. Buy premium.

Dropbox has an innovative way of getting the user through the different stages of the conversion funnel. At every stage the user gets rewarded with additional storage space, see figure *4.1*. Every user has the possibility to earn 250 MB by completing a simple "getting-started-program". The program includes a simple tutorial which helps the users understand the product and the different features. If the users do not understand, or are not aware of the features that provide value they will not upgrade. This kind of information is usually available in most services through infographics, tutorials, FAQ pages etc. but there is no assurance that people actually pay attention to this material. Dropbox approach to reward users to learn more about the product is a smart way to assure that the users go through the first step in the conversion funnel.

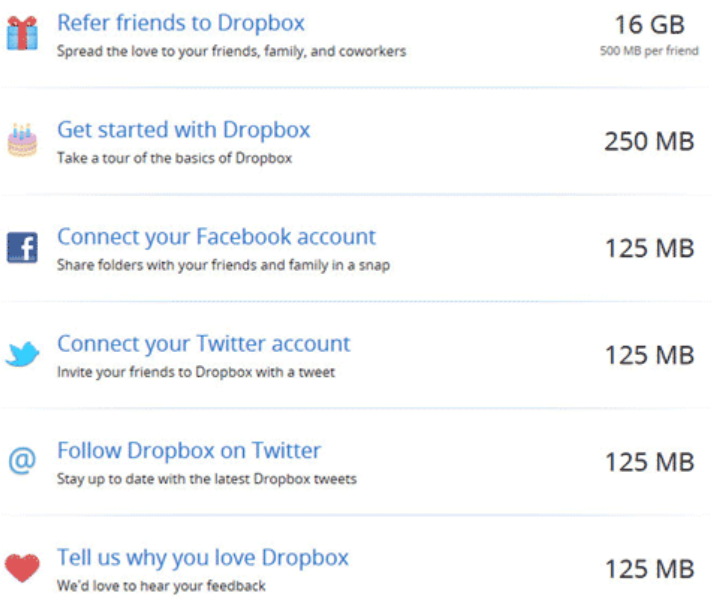

Figure 4.1: Dropbox reward program.

The "getting-started-program" also makes the users reach the second step in the funnel since it requires the users to complete engaging tasks such as *upload files to a folder, share a folder with a friend, install Dropbox on a computer* etc. Dropbox referral scheme is a way of increasing the virality of the product but at the same time it is another example of increasing users' engagement with the product. Users are rewarded with free storage space for every friend they invite who downloads the software. The user who sends out referrals must spend time and explore the product in order to decide whether it is good enough to refer friends to.

The third step in the funnel is reached when the users are dependent on the product and they build up enough needs that it becomes hard to go without the Dropbox service. A way that Dropbox hooks its users is to introduce different promotions to the users which binds them closer to the product. An example is that Dropbox rewards the users with extra storage space for connecting their phone to their account and enable automatic backup of photos. This is a way of introducing more use cases and generate more advanced users who will continually use the service and upload files to their accounts. Dropbox also drives advanced users and adding channels to get hooked by having the product integrated in many other applications (e.g. Microsoft Office, Adobe Acrobat, Vimeo). The idea is that by encouraging the continues usage, either through the reward scheme or the relevant features, the users will eventually reach the capacity limit of their account and by then they understand the product and can see the value of subscribing to the service. The ideal scenario is

when it is time for the users to upgrade it should be harder for them to pull out than it is to keep going and buy subscription [23].

The last step in the funnel is the process of acquiring the subscription. It involves the user clicking on a link that brings forth additional information about the different plans and from this view it is easy for the user to find the way to complete the purchase. It is possible to upgrade at any time and there are two links visible in the interface which brings the user straight to the upgrade-page, see figure *4.2*. The users are more responsive to upsells of the premium version when they are in true need of the premium version and when they understand the value that this version has [23]. Dropbox uses this knowledge when the premium version is more heavily advertised in the user interface when the user is in need for the upgrade, i.e. when a user is close to reaching the storage limit or when the limit is breached. The premium version is promoted with an additional banner which states that the user should upgrade to get more storage space, see figure *4.2*.

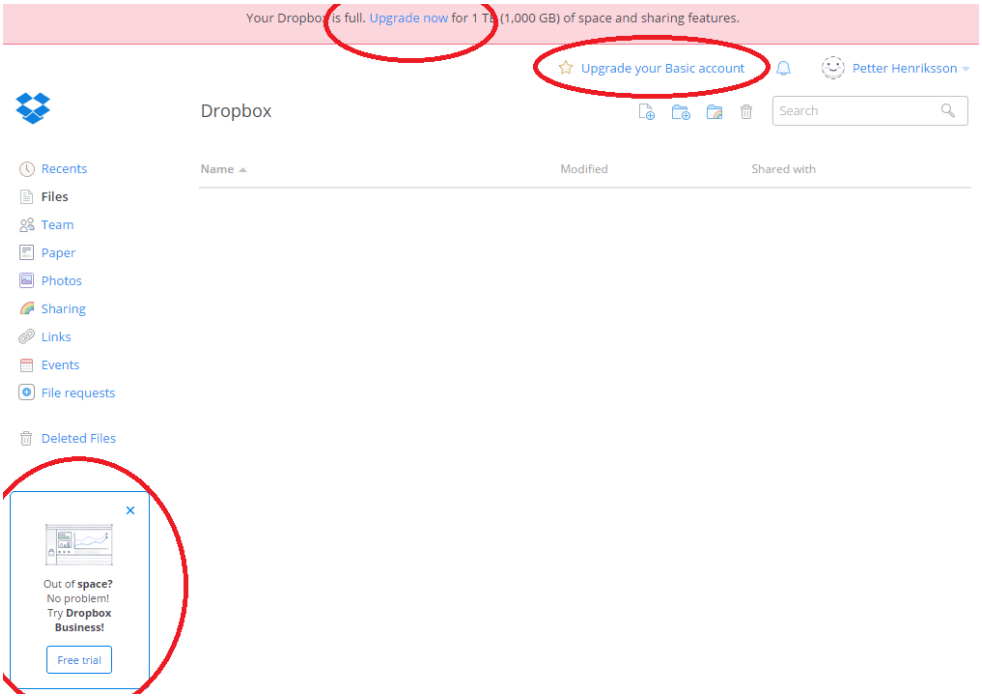

Figure 4.2: Links to upgrade account and banner that promotes the premium version since the upload limit is reachd.

To be able to sell the subscriptions a first step is to inform the users that there is a premium version available. In the Dropbox interface the users are informed about the premium version in the "getting started program" and on the webpages that explains the different tiers. Also by utilizing constraints and introduce the premium

features as *greyed out* and inactive functionality, the users are reminded of the premium version and what it has to offer. An example is when free users are sharing a file they are only allowed the basic functionality while the premium features, such as setting permissions, are greyed out, see figure *4.3*. In the same area as the greyed out features is a link to get more information and buy premium. To show the users how a specific task can be improved by premium features while they are performing the task is an effective way of making them aware of the premium value. However, it is important that the presentation is not disrupting the users' workflow as it can have a negative effect on the user experience.

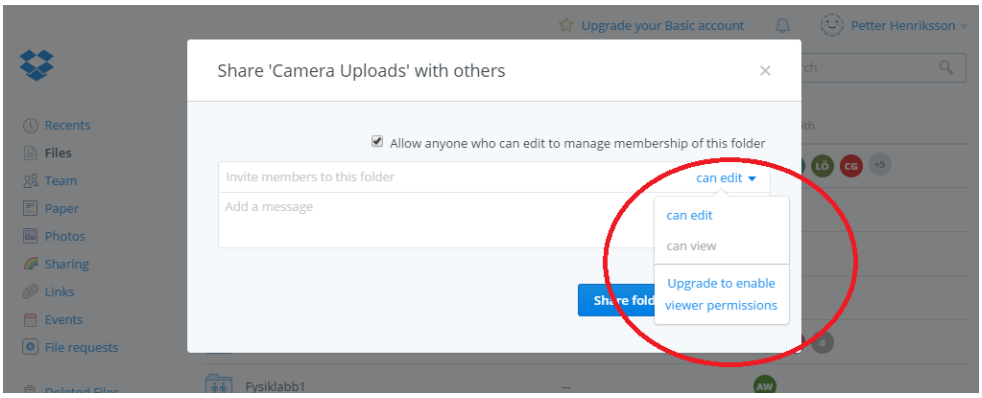

Figure 4.3: Greyed out feature for permissions

When it is time for the payment it is important that the process is smooth and frictionless. A user who enjoyed the product for free for a long time might be disappointed to be prompted to pay for it. Then it is important to make the transition to the premium version smooth and get rid of any barriers that might offset the user to complete the purchase [24]. Dropbox message to its users is honest and it is clearly stated what is included in the different tiers and the payment page is easy to understand.

4.3.2 **Skype**

The online communication platform Skype is a software application that provides Voice-over-IP (VoIP) and was introduced in August, 2003 by two Scandinavians, Niklas Zennström, Sweden and Janus Friis, Denmark. The application had the intention to be used as a simple communication platform between two users but was further developed to support file sharing, chat functionality, video conversations and the ability to make calls to physical phones. Skype has now gone from the simple communication between two people to a more multi user platform that reminds of a conference functionality. With all the functions Skype provides, they have managed

to be one of the largest communication platforms on the market with about 600 million users and 100 million active users each month [11].

Skypes' services are considered to be accessible by everyone, simple users to corporate users. The private usage of Skype is free with the exception of making phone calls to physical phones. With the free version of Skype, users are able to make conference calls with up to 25 people [25]. Skype has developed more functionality which are included in the corporate plans and are presented below [26]:

Skype	*Plan*
	Online plan 1
Description:	This plan is the basic plan for corporate users. It provides the users with the basic functionality that reminds of the free version but with the exception of high definition (HD) voice and video conversations with up to 250 people. With the basic functionality of online plan 1 Skype offers companies a cloud based service for presence, instant messaging, online meetings and conference calls.
Individual plan:	
Team plan:	√
	Online plan 2
Description:	The online plan 2 extends the features provided by the basic enterprise solution, online plan 1. This plan provides the users with group HD conversations, share desktops to fellow associates in conference calls and the ability to remotely control others desktop environments.
Individual plan:	
Team plan:	√

Office 365 bundle – Microsoft has integrated Skype into their office suite which might appeal some companies with the functionality of Skype and the power of the Office suite. Their Office bundle comes in three different packages with different kind of functionality and price. All the plans have a limitation of 300 users per subscription plan, which is important to consider when subscription is done for larger enterprises.

	Office 365 Business Essentials
Description:	The basic Office 365 bundle includes Skype for enterprises with HD conference and the online package of office. The subscription will also include mail with 50 GB of storage and 1 TB in file storage and file sharing.
Individual plan:	
Team plan:	√

	Office 365 Business
Description:	With the *Office 365 Business* bundle the companies that make a subscription for this solution will get all the features of Business Essential except the mail support with 50 GB of storage. The extra features this plan provides are local versions of the Office suite for Mac/ PC and smart devices.
Individual plan:	
Team plan:	√

	Office 365 Business Premium
Description:	This subscription gives the users all the functionality of Office and Skype. It combines *Business Essentials* and *Business* in one package.
Individual plan:	
Team plan:	√

All the plans Skype provides can be summarized with a table which presents what type of customers the plans are targeting; the table is presented below:

Plan	*Individual plan*	*Team plan*
Online Plan 1		√
Online Plan 2		√

Office 365 Business Essentials	√
Office 365 Business	√
Office 365 Business Premium	√

Skype uses an freemium business approach proven to be successful with a user base of 600 million users [11]. The limitations they have on their product is based on features, which ports Skype to the feature limited freemium business model. They have four core premium features they charge for when it comes to the free version of the application. The features are as follows [25]:

- ***Skype–number*** – This feature will provide the users' family and friends with a local number that will be connected to the specific Skype account. This makes it affordable for family and friend to contact the user when the user is abroad.
- ***Skype to go*** – When wanting to call friend and family when the user is abroad, Skype-to-go will generate a local number the user calls instead of making expensive calls to foreign numbers. It does not use data at all which will provide the user with a better quality.
- ***Forward calls*** – This feature will provide the user with the ability to forward Skype calls to regular landlines or mobile phones. By doing this, the user will never miss a call and the caller will not be charged when the call is forwarded.
- ***Send texts*** – Skype has also the ability to send regular text messages from the application to mobile phones. This allows the user to always be in touch even when they sit in front of the computer

All these features will cost for the user to use. They are integrated in the free version of Skype but since these functions cost money, skype uses *Skype credits*. These credits can be bought with real currency, like in app purchases. The credits will give the user the possibility to use these functions and to do regular calls to landlines or mobile phones.

4.3.2.1 Design evaluation of Skype

The consumer version of Skype is straightforward and it is clear what functionality is available for free and what is charged for. In the dropdown menu in the Windows desktop version it is possible to buy *Skype credits* and there is also a link which directs the user to a webpage displaying the account settings. On this page it is possible to add the additional premium features; *Skype-number, Skype to go* and *call-forwarding*, see figure *4.4*. The user has the opportunity to choose which features to activate or how much *Skype credits* to buy. This way of offering the premium functionality does not force any unwanted functionality on the user which

can sometimes be the case in different freemium models. In some cases, the user might be interested in only one feature from the premium version but many more are included and thereby the user might feel that the money is spent on functionality that is never used. However, at the same time some users might perceive the extra features as a bonus and think of it as they get more value for the money. It can also be argued that bundling many features in the premium version drives user-engagement and -retention since some users might discover new possibilities with the "bonus" features and become closer tied to the product. The upside of being able to pick and choose features, what Skype is offering, is the possibility for a user to custom make a software that fits a specific need. The customization opportunity increases the usability and the user can clearly see the value of each relevant feature.

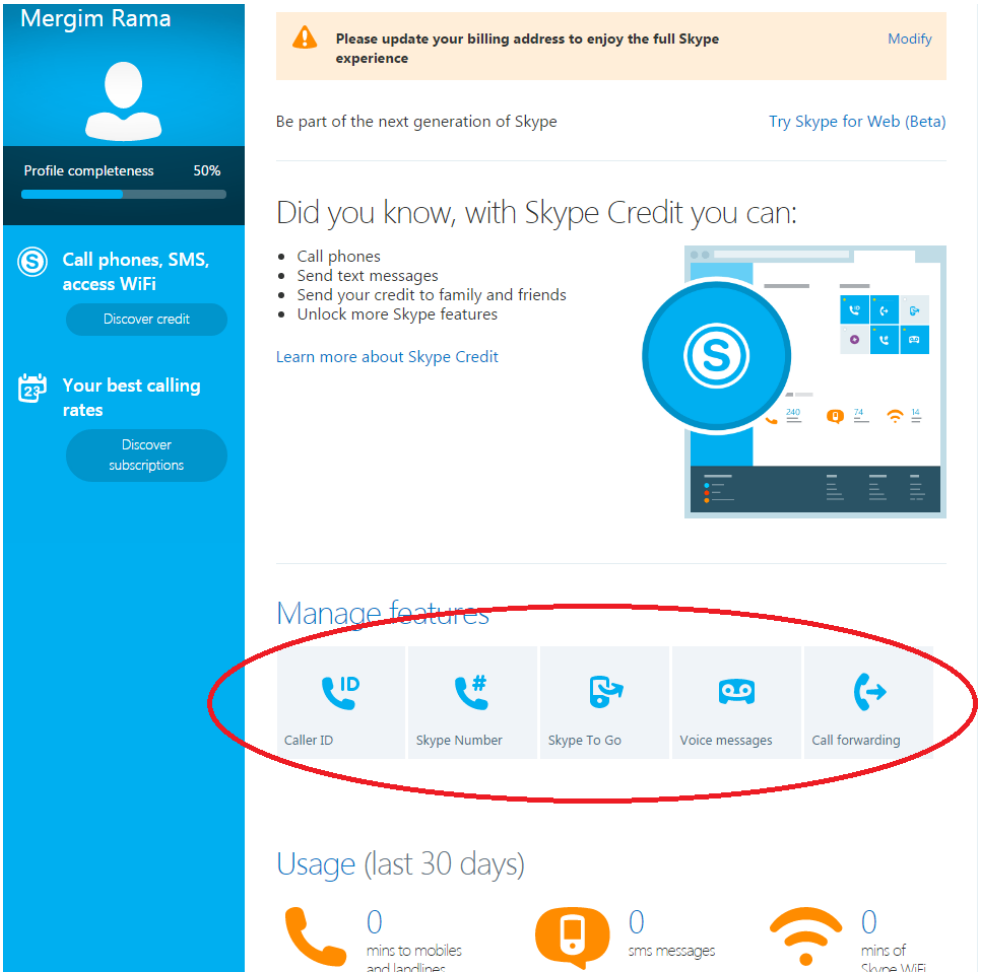

Figure 4.4: Feature overview in Skype.

In the consumer desktop version, the main attention is focused on the core functionality and the premium features are not advertised in the user interface. The product is user centered, since a lot of functionality is available for free and the user experience is not obstructed by any forceful measures to make the user pay. The free version of Skype has a high level of usability since it provides relevant features which helps the user to effectively and efficiently keep in touch with friends and family. Usability drives user engagement and to have engaged and loyal users is important since it is this user group that are most likely to pay for premium features [11]. But before users start using the premium features they have to be aware of their existence. Skype's way of funneling the users to pay for the premium features starts with engaging the users but since this involves lifting the core functionality and keep less focus on the premium, it is hard to find the premium features and

understand the value. One way to find the features is through the dropdown menu but there is not any guarantee that people actually see this or understand the value.

When using Skype as a small business, it is not necessary for the company to start a subscription. It all depends on the number of users that intend to use the application. When it comes to small companies in the SME or SoHo clusters, Skype presents their free solution as sufficient enough if the companies are satisfied to the amount of features that are offered [25]. Even though the solution is free, the companies will not get everything for free. The need of *Skype credits* to make physical calls to landlines and mobile phones remains.

If the businesses however have the need of other features that are not included in the free version of the application, Skype presents their subscriptions very clearly, which are intended to make it easy for the subscriber to select precisely the subscription plan that fits their business. This approach gives the company the power to choose free or a certain subscription without visually influence the subscription of choice. Having this approach gives the companies, when choosing Skype, the influence of a trustworthy and reliable service that will not use advertising as a tool to hook the users. This also applies for the private usage of Skype, even though the enterprise subscriptions do not exist for them. When using the application, the users themselves will notice if a feature is missing and after that consider purchasing it.

4.3.3 **Evernote**

Evernote a cloud based workspace for instant access to notes, documents and photos. With the online based service, Evernote can provide their customers access from different platforms which makes the product always accessible.

Evernote was introduced in 2007 and has since then become a globally acknowledged service with more than 100 million users [27]. The service Evernote provides for their private customers is also available for companies with an enterprise solution that is used by 20 000 companies [28].

Evernote bases their service on documents and note which does not take to account the amount of memory used per account. This is regulated by limiting the users to upload different amount of data, depending on the plan they are subscribing on. Evernote provides their customers with the following plans [28] [29]:

Evernote	*Plan*
	Basic

Description:	With the *Basic* subscription plan, Evernote provides the most essential but basic functions that are free to use for everyone. The user gets access to sharing functionality, synchronization between devices and the ability to do cut outs from web pages. Even though this features might be enough for many users, they only get 60 MB of data upload to the account every month.
Individual plan:	√
Team plan:	

Plus

Description:	The *Plus* plan takes the functionality from the *Basic* plan and adds three features for extra security, mail support and offline use. The limitations on 60 MB upload data per month is upgraded to 1 GB.
Individual plan:	√
Team plan:	

Premium

Description:	All functionality Evernote provides is available on their flagship subscription, *Premium*. The *Premium* plan will provide the users of features that are considered for users that use the product every day e.g. comment PDF files, search features and versioning of the notes in the workspace. The plan gives the users 10 GB of upload data every month.
Individual plan:	√
Team plan:	

Business

Description:	Since the regular subscriptions are for private users, Evernote has a separate plan for companies only. The *Business* plan provides the companies team cooperation on single workspaces with the ability to comment and share feedback to all the team members. With *Business* will also the ability to administrate the users come. With these functions the administrator can revoke users and edit the team set ups for the different projects. Since this plan is a

	premium plan with the extension of more users, all the functionality from the *Premium* plan are available. The *Business* subscription plan has a limit of 25 users. Having more than 25 users needs a personal contact with Evernote.
Individual plan:	
Team plan:	√

All the plans Evernote provides can be summarized with a table which presents what type of customers the plans are targeting; the table is presented below:

Plan	*Individual plan*	*Team plan*
Basic	√	
Plus	√	
Premium	√	
Business		√

Evernotes freemium approach is similar to the one Dropbox uses. They have two different approaches to make user engaged to their product. The limitations Evernote has introduced to their product are as follows:

- ***Capacity limited*** – Evernote introduces a limitation in the amount of data the users can upload per month to their workspaces. By setting this limitation to the product, the users are able to use all the basic features for free and if Evernote manages to make them engaged in the product the upload limit will prevent them from using it fully. This will increase the probability of free users becoming subscribing customers. For the enterprise solution, Evernote introduces a seat limitation which is 25. Having more than 25 users as a company will force the company to contact Evernote and design a new subscription plan.
- ***Functionality limited*** – Every plan provided by Evernote is limited by their functionality. This is another approach to engage their users by letting them have full access to the basic features and create a demand of the product. When users understand the meaning of the product and its powerful features the probability of converting users from free to premium increases.

4.3.3.1 Design evaluation of Evernote

One reason to Evernote's success with the freemium business model is that the users' perceived value of the service is increasing over time. Usually when a

customer purchases a product the value decreases or remain constant over time. Before new users see the benefits of the Evernote service, the perceived value is very low, and this is ok for the users since it was free to sign up and they have not committed anything to the product. However, as the users keep using the product by adding notes, and discover new advantages of having a "second brain", as CEO Phil Lipin puts it, the perceived value increases. For some users, Evernote increasingly becomes a bigger part of the everyday lives or work habits and eventually both the features and the users' content on their accounts have a value. The higher the perceived value, the more willing users are to pay [16].This is reflected in Evernote's sales statistics, which show that the conversion rate increases linearly with the time being a user [16].

In order to keep the users long enough to convert them to premium users, Evernote relies on the core functionality of the product to work as the retention mechanism. The reason people continue to use the product is that they get so deeply engaged in the product that it is hard to opt out. According to Lipin the premium version is specifically built for the advanced users and many of the premium features are not needed by most users. Eventually as the users over time use the product they become more advanced and the premium features will make more sense to them as they will understand the value. When a user is satisfied and understands the value they are more likely to spread the word and thereby boost the virality of the product. To give good incentives for users to invite friends, there is also a reward program where the users can earn premium trials for inviting friends.

When starting the program for the first time, Evernote presents a screen to select what use-cases that the user is interested in, see figure *4.5*. Based on the selections the first run experience includes comprehensive documents (generated as notes in the users' account) about the different features relevant to the user, see figure *4.6*. By presenting the features and use cases, the users get a sense of what is included in the free tier and what has to be paid for, and this an important early step in the user conversion funnel [14].

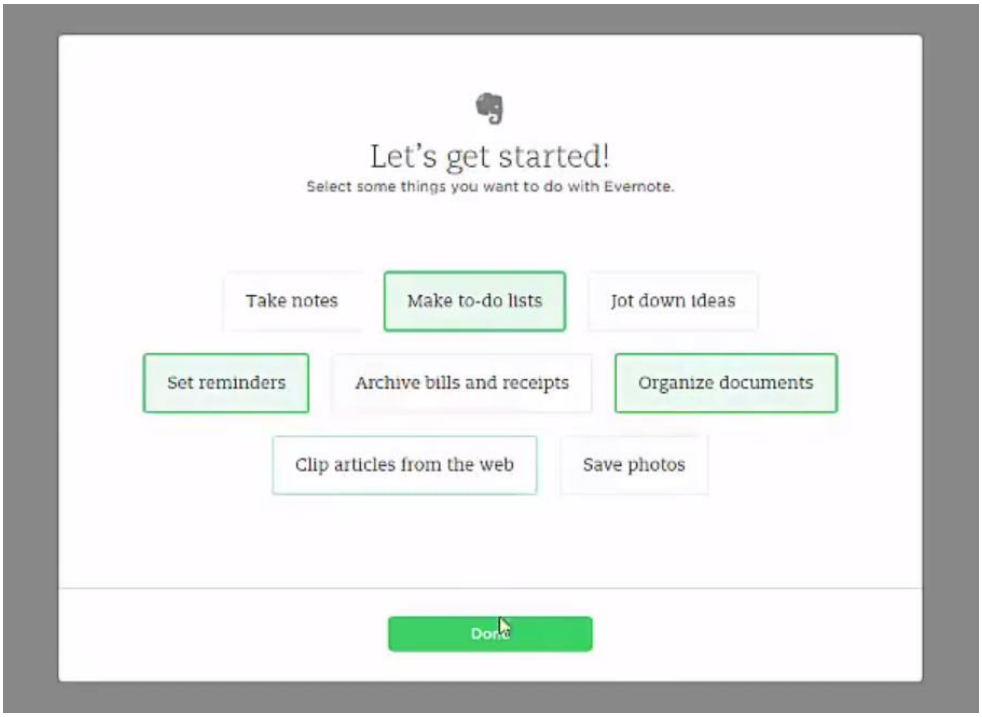

Figure 4.5: Self-select view in Evernote

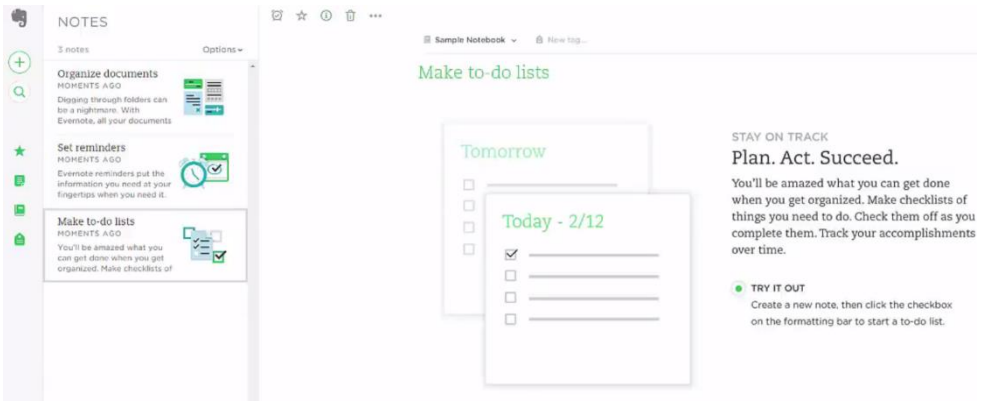

Figure 4.6: Notes describing the features in the first-run experience

Evernote is accessible cross platform, which include the mobile platforms iOS, Android and Windows Mobile. By having the product available through many different operating systems (OS) and as a web service, the users will always have instant access to their content. All the features that are available on the desktop version are also available on the mobile OS. This increases the availability and users who use one platform more than another will not be locked out. With the possibility

to start a project and write down notes from one platform and continue on another will make it easier for the users to return to the product, which results in increasing retention rates. Having the product available cross platform allows the users to engage more often with the product, which sets them on a path to understand the value of the product and its premium features.

Evernote has a slightly different approach to the data-storage-limitations compared to Dropbox. The free version of Evernote does not have a limit on the amount of data stored on the account; instead, the users are limited by the amount of data that it is possible to upload every month. This approach is comparable to how many freemium mobile games implements a waiting time, for which the game cannot be played unless the player pays a fee to skip ahead in time. When Evernote users reach the uploading-limit they can buy a premium subscription for a month to once again be able to upload content and when the subscription ends they can still upload within the free-upload-limit. Evernote has a notification system which presents premium offers to the users when the upload-limit is about to be reached or when the users are trying to do something which needs premium subscription, see figure *4.7*. As the premium features are presented at a time when the users are in need of them, increases the chance that the users understand the value of the features.

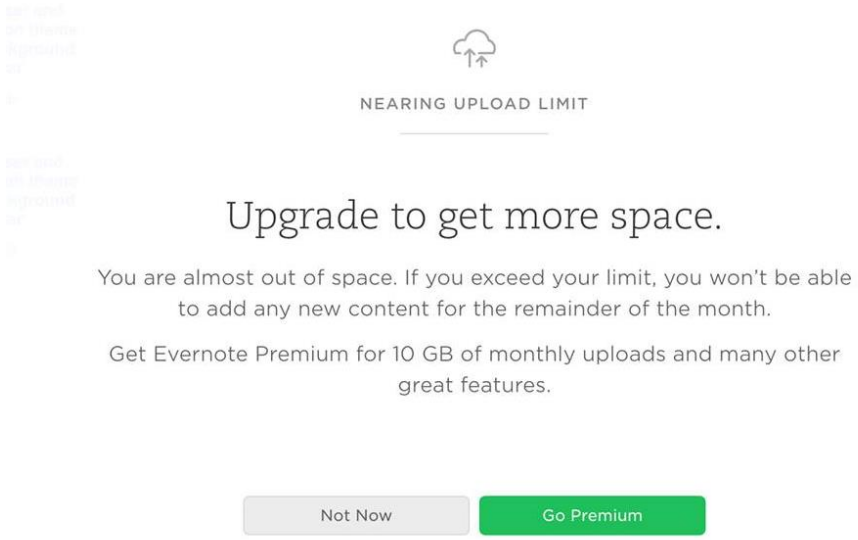

Figure 4.7: Notification when upload limit has been reached.

Evernote takes some time to get the hang of and there is not a correct and defined way to use it. The users have to find their own way of organizing their content and figure out how to make use of the features. Evernote is flexible, it is possible for users to adapt it to serve their different needs, and thereby the product has the possibility to satisfy many users, which is a key trait for a freemium product. The users have to invest some effort in order to get the most out of it and this is a strength as well as a weakness. Some users will not engage enough to see the potential and they are more likely to churn, but users who invest time to make it work tend to be more loyal [16]. *"The more users invest time and effort into a product or service, the more they value it"* – Nir Eyal [30]. Phil Lipin is aware of the dilemma of balancing the amount of effort required from the users and states that the effort it takes to master Evernote is a likely explanation for the impressive conversion rate with the long-term users but also a reason why many users churn at an early stage [16]. The desired effort should be divided up and portioned out in a successive manner where the tasks increase in difficulty in order to not ask for too much right away which could overwhelm the users [30]. The getting started guide, where the users are asked to complete certain tasks to learn about the different features, is a good example of how to get the users to start investing in the product. The reward is a sense of mastery, the users can see their progress and achievements through a progress bar that gradually fills up as the users are stepping through the guide. The getting started guide is one example of how effort investment is encouraged, but there has to be continued investments until the effort invested is substantial enough for the users to see an increased value in the product. As the perceived value is increasing the user retention will improve and it will also become harder for users to switch to a different product [30].

4.3.4 **Unity**

Unity 3D engine is a graphic engine used for creating and simulating virtual environments for games, educational purpose and simulations for real world scenarios. Unity 3D is one of the largest competitors in the market and is used by small indie studios to big enterprises. The engine has a market share of 45 % and with 4,5 million developers registered, Unity 3D reaches about 600 million gamers through all the products delivered from their platform. The games developed with Unity 3D have over the last years dominated the mobile market in many markets, especially the 3D mobile games [31].

Unity 3D uses a free base plan that includes all the technology developed by the company. This gives the most basic users the power of the whole engine without any restrictions. Since the company has released the whole engine for free, they have set up subscription plans that include features that are needed for more professional use. Those subscription plans are as follows [32]:

Unity *Plan*

	Personal Edition
Description:	The personal edition is the free version of the product. It includes the engine with all its features and all the platforms that are available for development. iOS and Android are platforms that are partially free. They are free as long as the developer does not exceed the limit of 100 000 $ revenue/ funding in the previous fiscal year.
Individual plan:	√
Team plan:	

	Professional Edition
Description:	If the usage has a more commercial purpose, the professional edition is suggested. It provides the developers with team licenses and the possibility for advanced data analysis. Usage of the professional edition removes the restriction of having custom made splash screens. But when it comes to iOS and Android, the customer must pay an additional fee for having this feature available. If the revenue for the last fiscal year is below 100 000 $ the developers can use the personal edition of iOS and Android combined with the professional edition of the engine.
Individual plan:	√
Team plan:	√

	Enterprise Edition
Description:	The enterprise solution Unity Technologies provides gives the subscribers a more personal feeling when using the graphic engine. This is done by offering the subscribers on-demand support and possibilities for source code licensing. This edition is specific for enterprises and to start a subsection of this plan requires personal contact with Unity Technologies.
Individual plan:	√

Team plan:	√

All the plans Unity provides can be summarized with a table which presents what type of customers the plans are targeting; the table is presented below:

Plan	*Individual plan*	*Team plan*
Personal Edition	√	
Professional Edition	√	√
Enterprise Edition	√	√

Unity Technologies have released their whole graphic engine for free for users that make less than 100 000 $ on the products they release. Users that make more than 100 000 $ have to purchase the premium version of the graphic engine. Limiting the product in such a way is considered to be customer specific. The customer limitation is based on the fact that Unity divides free users from paying customers simply by measuring the revenue their customers gain from their developments.

Unity also uses an asset store where users can purchase and download add-ons to their environments for different occasions. This store provides a big part of the engagement where users are provided with a discount system. The discount system is only available for the subscribers that have the professional or the enterprise plan.

4.3.4.1 Design evaluation of Unity

Unity is a niche-product and users who download and install it probably have a clear motive and know what to expect of the software. Depending on prior skills, the software takes time to master but for a game development tool, nothing else is expected. To learn the tool, the users need to engage and invest effort. This is setting the users on a path to more deeply understand the value of the product and eventually also see the value of the premium version. If the product would not have been free or if there would have been a trial period followed by a paywall, many users would not have the opportunity to engage enough with the product to understand its value.

Unity does not have a scheme of how to make users invest time and effort in the product. Most users have a goal of what they want to accomplish with Unity and as they work towards their goals they invest time and effort which increases their perceived value of the product [30]. As a goal is reached, the user is rewarded with a sense of accomplishment and they are more likely to stay with the product. On the contrary, when a user stumbles on a problem and cannot reach a goal, there is a risk that the user loses loyalty – and this is true in many freemium software. But in Unity, the users already invested a lot of time and effort in installing, learning and setting up the software and if they run into a problem they are more likely to seek a solution or a workaround.

Unity has a very strong user community built with forums where users can reach out for help. The forums and support pages hold a lot of information and every time users seek help or information they are exposed to ideas, solutions and user stories from thousands of users. Regardless if users commit or consume information on the forums, their engagement with the product increases at the same time as the attachment is getting stronger. All of this increases the understanding of the value of the product, which is mandatory for the user to be able to decide if it is worth buying the premium subscription [14]. An additional aspect of the forums is that they work as platforms for where the premium features are advertised to the users. In the forums, the free users can be exposed to premium features in a context that is relevant. If a user seeks for a solution for a specific problem on the forum and finds an explanation of how a premium feature solves the problem, the free user is more likely to understand the value of the premium feature since it is presented in a context that the user can relate to.

The asset store Unity provides for their users is a market place for developers and users who are interested in buying and selling items. These items, which are made for simplifying the development of new products are a part of the system Unity uses to increase the probability of user retention. The users will find assets solving issues in their development and by doing a first purchase of these items, the user directly invest more time and money in the game engine. If these users are able to progress their development as a result of the purchases made, they will have higher probability of returning to the market for other assets. Making them return to the asset store will directly impact the time and money investment the users make and affect the retention rate in a positive way.

4.4 Part 2 – Survey

The goal of the survey was to complement the case studies in areas where the authors did not have insight. The case studies in section *4.3 Part 1 – Cases* were made from a consumer point of view and thereby could not give answers to important aspects of how companies approach freemium products. The result of the survey shows a summary of relevant questions, see section *4.2.2.1 Survey Questions,* which are then discussed in section *4.4.2 Discussion*.

4.4.1 **Result**

The conducted survey resulted in 48 answers from different startups, SoHo and SME companies from different parts of Sweden. The result focused mainly on the decision making of premium purchases, how it was related to the size of the company and what types of product they are paying for.

Figure *4.8* confirms that the target group was reached with the majority of the people who answered the survey was working in smaller companies which can be considered to be startups, SoHos or SMEs. These companies use free tools when working which is seen in figure *4.9*.

Figure *4.10* shows that the majority of the companies that use a free version of a tool also use paid versions of the tools in their work environment. The persons whom are making the decisions of what tools they pay for are in the survey divided into *CEO, other chief positions, IT-department, mutual decision, anyone in the company, others* and *do not know*. The survey result in figure *4.11* shows however that the CEO and other chief positions stand for 66,7 % of the 48 companies decisions.

Figure *4.12* shows how the companies' motivations for buying premium is divided. The figure shows that even many companies buy premium for the amount of features and figure *4.13* confirms that they are aware of the excessive functionality.

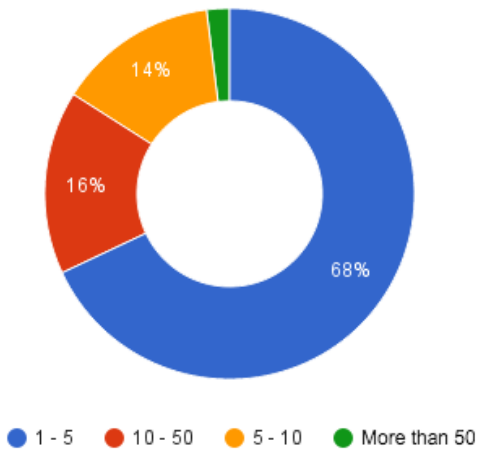

Figure 4.8: How many employees has the company?

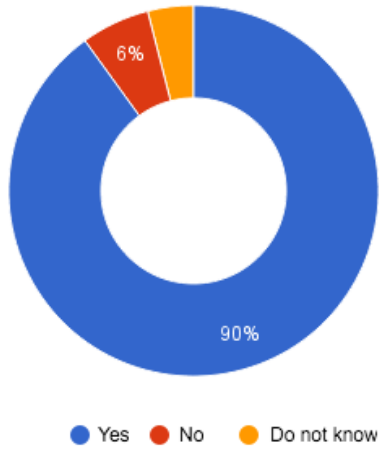

Figure 4.9: Do you use a free version of a tool in your work?

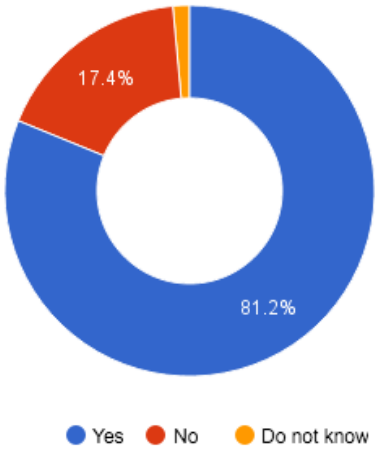

Figure 4.10: Do you use a paid version of a freemium tool in your work? (If you use a free version of a tool).

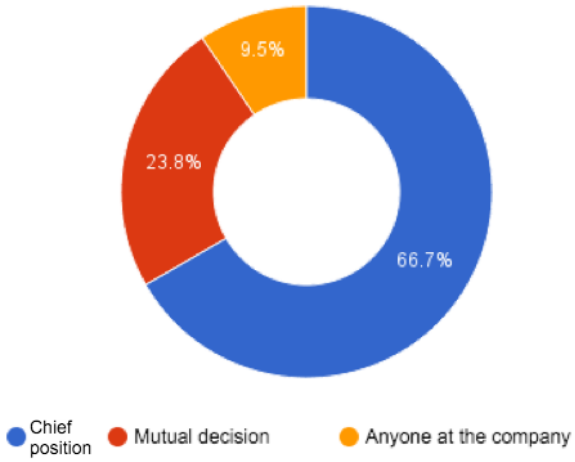

Figure 4.11: Who decides what tools you pay for?

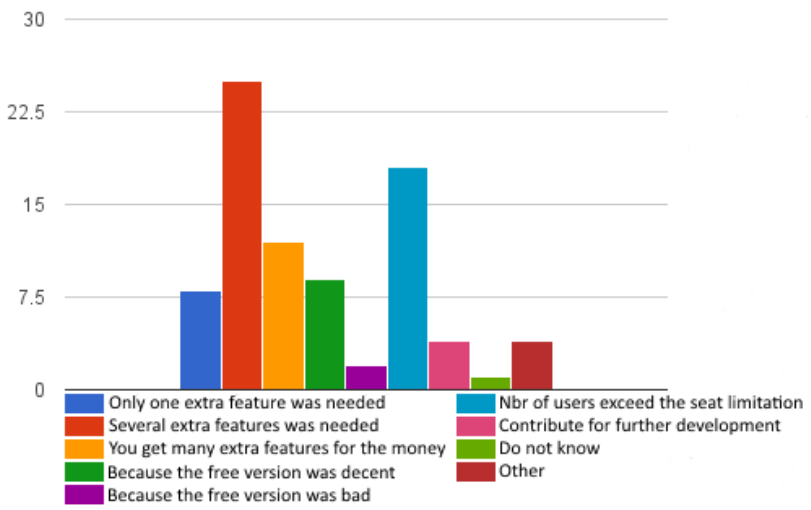

Figure 4.12: Reasons for paying for the tools.

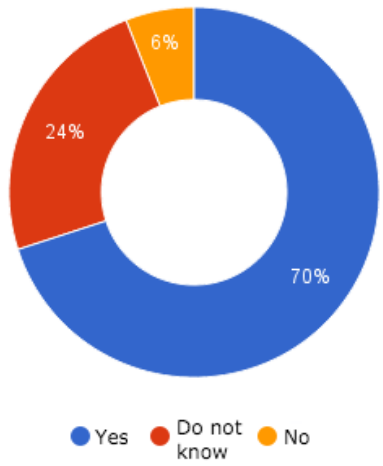

Figure 4.13: Do the tools you pay for have excessive functionality?

4.4.2 **Discussion**

The companies that were approached were of a smaller size since the survey focused mainly on how the decision-making process is handled by startups, SoHos and SMEs. The result of the survey confirmed how smaller companies actually make their purchase decisions.

All the purchases made in terms of tools used in the daily work are often made by someone in a chief position at the company. For better readability someone in a chief position will from here on be referred to as *manager*. Figure *4.11 Who decides what tools you pay for?* shows that 66,7 % of all the companies who answered the survey have a manager as responsible purchaser. Since the companies who took part in the survey are small, it is natural to have the manager as one of the people who is responsible for purchases. It might also be the manager that has the technical background needed for administrating the tools needed for the company.

It may simplify the purchase process by differentiate the manager and the employees (users of the tools). Users and managers might have different goals, and needs when using the product and this has to be considered when designing the purchase process.

Figure *4.12* shows the reasons for upgrading from free to a subscription. This question was open and gave the answering companies the ability to mark more than one answer. By letting them have multiple marks, the total amount of companies exceeds 48. The figure shows that many companies upgraded due to the limited amount of free user licenses (18 companies) and the need of features (25 companies). This shows that the freemium products used by the companies are effectively using the *seat limitation* and *feature limitation* properties of the freemium business model.

However, it is important to also highlight that many companies buy premium for the great amount of features they acquire. Figure *4.12 Reasons for paying for the tools?* shows that 12 companies bought premium solely for the amount of features they received. This give the purchase a sense of a great deal which makes the customers feel as they have received a great value, by getting many extra features for a small fee. Libin presents the same approach and confirms that customers buy premium even if many of the features are not necessary for finishing the work and never used [33]**.** One can discuss that the perceived value of the product being purchased increases with all the features added.

The result presented that companies buy premium for the amount of features that are included, 70 % of the companies, see figure *4.13 Do the tools you pay for have excessive functionality?* agree that they get excessive functionality with the premium purchase/ subscription. This shows that companies are well informed of the excessive functionality but still decides to make a purchase.

4.4.2.1 Differences between consumers and businesses

As flow targets the B2B market it is needed to investigate how businesses relate to consumers and what differences there are to consider to have a B2B product instead of a consumer product. This thesis investigates how the conversion rate can be increased and thus it is of interest to know who the one that has to be converted is. As the customer to be converted is the business in B2B and not an individual, it becomes hard to know who to address when promoting the premium version. In consumer products it is easy to promote premium functionality since the user of the product often also is the buyer. In B2B applications, where there are many users, it can be hard to understand who is responsible for the purchase from an external perspective. The result of the survey shows that the decision about making a purchase is usually made by a person with higher authority. In SoHo and SME it can probably be assumed that the structure of the company is rather simple and that communication within the company is easy. If a user would like a premium version of a product, it would probably be easy to communicate this to the person who is deciding. This could mean that there is not a big difference between converting a user in a consumer product and a business in B2B product since it probably does not matter who to address when promoting premium in SoHo/SME.

5 Elicitation of metrics

5.1 Purpose

The design of a freemium product, or any product, should be based on insight and not on intuition. Thus, it is important to involve actual users in the development process. This can be done by explicitly reaching out to the users and collect useful feedback for further product development. While this approach is helpful and should be used as a complementary method there is a lot to gain from a more data driven approach. Valuable Information about the users can be attained from their interactions with the product. By storing, maintaining and analyzing these interactions, insight about the users and their behaviors can be accelerated and drive further product development, read more in *3.3.2 Data driven design*. A first step in this data driven approach is to decide which of the retention and engagement key metrics to track. Telavox is investigating how data tracking can be integrated as a step in their development work and this chapter is aimed at deciding what metrics to track in their application Flow.

Flow is an application for businesses and to reduce confusion a *customer* will from here on relate to the business and a *user* to the employees of the business using Flow.

5.2 Method

To be able to find relevant metrics to track in Flow a first step was to define the goals of a data-analysis. The goals were defined during a focus group with the employees of Telavox. To stay within the scope of this thesis the goals were discussed from a design perspective, meaning that goals related to increasing the conversion rate by the means of design were prioritized. After the goals were stated, the next step was to engage the focus group to define what metrics should be tracked in Flow.

5.2.1 **Focus Group**

The first steps of conducting the focus group was to gather employees with relevant but different backgrounds, meaning Telavox-employees from different company

divisions. The employees chosen for the focus group came from the following divisions:

- *Development*
- *Product Owner*
- *UX*
- *Business Development/ Sales/ Marketing*
- *Support*

The number of employees gathered was 7 and the form of the focus group was a hybrid version. The focus group was a hybrid version since Flow is under development and needed first to be evaluated in its current configuration for finding metrics. Second, since the product is under development it was necessary to find future metrics as well.

The authors created a script to use under the focus group. This was needed to give all the members of the group the same conditions and information. By giving them the same conditions, the members were able to drive the discussions without encountering problems regarding the purpose and result of the focus group. The script used under the focus group can be found in Appendix B – *Focus group script*.

During the focus group, one of the authors was the administrator, which is needed if the group starts to discuss irrelevant topics. The other author had the assignment to write down important opinions and to do an audio recording of the meeting.

The author who recorded the meeting transcribed the audio recording to pinpoint all the significant metrics that were mentioned and that were considered essential to be tracked in Flow.

5.3 Results

5.3.1 **Goals of a data-analysis**

The overall goal of a data-analysis is for it to be a valuable tool for increasing the conversion rate in Flow. In order to be able to increase the conversion rate it has to be possible to measure crucial steps in a user's life-cycle. The following questions should be possible to answer with a data-analysis so that relevant issues can be addressed:

- What is the retention-rate?
- How engaged is a user?
- Who is most likely to become premium customer?
- Where do customers churn?
- What paths can a customer take to become a premium customer?

5.3.2 **Metrics to track in Flow**

To be able to meet the objectives of a data-analysis and answer the questions stated, the correct metrics have to be tracked. The following paragraphs give examples of relevant metrics connected to the questions.

5.3.2.1 What is the retention-rate?

The following metric can be used to track daily new customer, read more about daily new customers in section *3.3.2.1, Retention-metrics*:

- Flag when sign-up-process is done

The following metric can be used to track daily active customer, read more about daily active customers in section *3.3.2.1, Retention-metrics*:

- Number of unique calls per day

5.3.2.2 How engaged is a customer/user?

The engagement can be measured at a customer or a user level. The following metrics can be used to track engagement at a customer-level:

Table 5.1: Metrics to track engagement at a customer-level

Communication	
Calls	Total number per day, average number, mean number, number of unique, number of missed, number of conference calls, average length, mean length
Messages	Total number per day, average number, mean number, number of group-messages
Settings	
Queue	Name, number of members, call strategy, welcome message, welcome sound, configurations for opening/closing hour
Contacts	Number of shared contacts

The following metrics can be used to track engagement at a user-level:

Table 5.2: Metrics to track engagement at a user-level

Communication	
Calls	Total number answered calls per day, average number, mean number, number of conference calls, average length, mean length

Messages	Total number per day, average number, mean number, number of group-messages
Settings	
User-profile	Profile-picture, personal information
Status-profile	Customized status-profile, scheduling of status-profile
Usage	
Session	Frequency, average length, mean length
Page views	Frequency, average length, mean length
Status-profile	Frequency of use, type
Tutorial	Number of steps completed
Platform	Type, number of platforms, number of sessions

5.3.2.3 Who is most likely to become a premium customer?

The engagement- and retention-metrics can be analyzed for patterns leading to premium upgrade. By combining this information with additional segmentation-metrics it could be possible to define the customers who are most likely to become a premium customer. The following metrics can be used to segment the users:

Table 5.3: Metrics to segment the customers

Segmentation	
Business	Revenue, geographic location, business type, number of employees, number of users in Flow, number of admins in Flow, average age of employees
Other	Acquisition channel, Campaigns, number of customer service cases

5.3.2.4 Where do customers churn?

A churned customer is a customer who has abandoned the service and is no longer using it. This can be measured with the retention-metric. To understand where the customer churn, the customer's engagement leading up to the churn-event can be analyzed with the engagement-metrics.

5.3.2.5 What paths can a customer take to become a premium customer?

A user can engage with the product in numerous ways and with every interaction with the product the user leaves a trail of data. At first it may seem that every user is different and leaves an individual trail. But with time it becomes clear that some

types of engagement or interaction may be more usual than others and that some interactions or combinations of interactions are more likely to lead to conversion in the future. The trails of data forms paths and on the paths there can be key steps that has to be performed in a certain order.

The engagement-metrics can be analyzed to see what different steps a customer takes before becoming a premium subscriber.

5.4 Discussion

The goal of a data analysis is to provide answers to the questions in the result. In the following paragraphs, the chosen questions and related metrics are motivated. How to act on the results of a data analysis is covered in section *6 Design of guidelines*.

5.4.1 **Retention**

Information about the retention rate can give indications to the development team about how the product is performing, see section *3.3.2.1 Retention-metrics*. But without the correct analysis the numbers are not too much use. If the retention rate is low, the natural follow-up question is; *why is it low?* One reason for low retention can be that the users do not have use for the product and therefore is not returning. This could mean that the product is attracting the wrong users and a relevant countermeasure to this issue is to evaluate and change the acquisition-process of new users. More information can be gathered by combining metrics. In the case of attracting the wrong users, the retention-rate of a user could be combined with the information about which acquisition channel the user came from, thereby narrow down the scope of the problem.

A low retention-rate does not necessarily indicate that the wrong users are acquired. Another explanation is that the users are in fact from the correct target group, but they do not understand the use-cases of the product or how the product adds value. In this case there has to be measures taken to lift the value proposition, e.g. creating a strong onboarding process where the product is explained.

In most freemium products, the retention-metric is connected to a user interaction, e.g. a user playing a song in a music-playing-application could be considered as a sign of the user returning to the product. Telavox is offering a company-number with an attached queue and a customer can very well be only using the core feature of receiving calls and not interact with the application after the initial setup. Thus, the retention metric must be connected to calls made to the company number rather than a user interaction.

5.4.2 **Engagement**

The engagement-metrics can give insight about problems user's might have or if there are ways that the product can be improved. As stated in *3.3.2 Data driven design* it is important to identify the users who are most likely to become premium subscribers. The user-engagement is a key metric to investigate to be able to find the behavioral profiles of premium subscribers. When these profiles are identified, they can be used to better understand the premium subscribers and their needs and how to cater for them. With the behavioral profiles available, more users can be lead into the desired behaviors, which results in an increase of the conversion rate. The engagement of a customer/user can tell what steps a customer takes before becoming a premium subscriber. These steps create paths and there can be many paths leading to conversion. Not every user who starts on a path converts and some paths have better conversion-rate than others do. It becomes clear what paths are most important and where resources should be allocated. With the help of the engagement-metrics it is possible to see if a user is stuck on a step and then measures can be taken to help the user reach the next step on the path.

Some paths are more prone to lead to customers abandoning the product. By analyzing a customer's engagement leading up to a churn-event it is possible to see where customers churn and then the correct countermeasures can be taken.

The specific engagement-metrics for Flow are divided in two groups – one for customers and one for users. As it is the customers who are converting and providing revenue, it can be argued that only metrics related to the customers are relevant. But the users' (employees') engagement is strongly tied to the result of the overall engagement of the customer (company). In the list below, the different metrics for engagement and segmentation are briefly explained. The metrics that are explained can be found in table *5.1*, *5.2* and *5.3*.

- *Calls* – As with retention the calls are an important metric. With a high number of incoming calls to the company number, the customer is more likely to find the product useful. But the number of received calls can vary a lot depending on a range of factors and it is important that customers can be segmented with the help of *segmentation-metrics*. A small hairdressing salon with a few calls received per day should not be compared with a multi-million-dollar company receiving hundreds of calls per day.
  On a user-level, the number of answered calls can be a measure of how engaged and active the user is. Advanced users are preferable and the metric *conference call* can indicate if this advanced feature is used.
- *Messages* – The messaging feature is not the primary feature of the product and if this feature is used, it can indicate that the customer/user is of the advanced type. Messaging is also important in the aspect of engaging more users. A user is driven to respond (engage) upon a received message.

- *Queue settings* – It is possible to change the queue settings beyond the initial setup. Time and effort are invested in the product when the customer personalizes the queue and this is an important step to make the customer hooked [30].
- *Contacts* – Flow has a feature for keeping shared contacts and when a customer adds contacts, effort is invested. The contact feature is not a core feature and usage could indicate that it is an advanced customer.
- User-profile – Each user has profile card with profile-picture and personal information. Every time users edits their profile they engage and invest effort in the product.
- *Status-profile* – A user can by changing the status-profile tell their collegues if they are "available", "on lunch", "in a meeting", "left for the day" etc. If the user is a member of a queue, the stauts-profile can be used to change whether the user can take a call or not. For example, if the status-profile is set to "on lunch", the user will not get any incoming calls from the queue. The status-profile can be scheduled, e.g. the status could automatically be set to "on lunch" between 12pm and 1pm. The user can also make customized status-profiles.
  The use of status-profiles indicates that the user has a deep understanding of the product and can see the usefulness of the products feature.
- *Session* – A user-session is a period of time that the user interacts with the product. In a mobile application a session is usually the time from the application start to the application close. A high number of sessions could indicate that the user is highly engaged.
- *Page views* – The number of times a page in the user interface is shown to the user can give indications of how the user is interacting with the product or what information the user is looking for. This metric can also be used to see if a user has a problem or gets stuck on a step in a process.
- *Tutorial* – The onboarding is important and if the user is tracked during the tutorial it is possible to later on evaluate the success of the tutorial.
- *Platform* – A user who is using the product on many platforms can be considered an engaged user.
- *Business-metrics* – These are metrics that are used to segment the different customers and they can be used to find important patterns.

5.4.3 How to use the metrics

The listed metrics in the result, see section *5.3.2 Metrics to track in Flow*, should work as a suggestion of what metrics that could be tracked in Flow. The idea of what metrics is of importance becomes clearer as the data-tracking progresses, and the list of metrics can be revised thereafter. Additionally, the thresholds for when users are considered likely to achieve a desired later result are evolving over time and are not set beforehand. Exactly how many calls a customer should receive to be

more likely to retain or convert are examples of thresholds that will emerge after a data analysis.

All the data that is tracked can be presented in a dashboard to get a good overview. The dashboard only presents the data and it is up to the product team to interpret what is presented. Not all engagement is a sign of satisfied customers and this have to be considered to not be fooled when tracking the metrics. A user who is often changing the settings could indicate that the user does not know how to set up the product properly and instead of being satisfied the user might feel frustration.

A challenge with the data-driven design approach is that it might be easy to see that users behave in certain way but it is harder to understand why they do so. To register a churned customer can be fairly easy once the definition for a churned customer is set. To understand why a customer churns by analyzing the data can be a more difficult task. The team must have an investigating approach when looking at the data and try to narrow down the possible reasons. The reasons fora user churning can be many but by addressing the retention metrics it is possible to see at what stage the user churns. The reasons for churning can be different depending on if it happens the first day, week, month or after several years. Then by addressing the engagement metrics to see how the user behaved before the user churned can give clues of the actual reason for opting out. To be able to have this approach it is important that there is enough obtained data about the customers/users and that it is easy to combine and compare different metrics in the dashboard. The information gathered from a data analysis could also work as an indicator of what should be further investigated by more qualitative approaches.

A useful method of comparing different versions or layouts of a product is A/B-testing. In its simplest form an A/B-test exposes one control group to one variant (A), which usually is the current version, and another group of users to different variant (B), which is usually a new version being evaluated [34]. By collecting metrics and perform statistical test to see if there is significant difference in the performance of the two groups it is possible to tell which of the variants give the desired outcome. The metrics of interest are varying depending on what is tested and they can range from conversion-rate to specific user-behaviors. To dig deeper in the analysis, further metrics can be evaluated to find which segments of users from the subgroups that show significant difference. This provides insight that can drive understanding and improvement of how to progress forward with the tested variant.

6 Design of guidelines

6.1 Purpose

The purpose of this phase is to create relevant guidelines of what to keep in mind when designing freemium products. The guidelines intend to address the challenges with freemium products and give answers to RQ2 and RQ3, see section *1.3 Purpose and Goals*. The guidelines are closely tied to the case studies, see section *4 Case studies* and the metrics, see section *5 Elicitation of Metrics*. The guidelines are produced from investigating the results from the case studies. The metrics are referred to where they help motivate the correct design decision.

To concretize the guidelines a few user-scenarios from the Flow application are designed with the guidelines in mind and presented as print screens.

6.2 Method

The work was divided in two parts – the first part consisted of the creation of the guidelines and the second part involved using the guidelines to give example designs based on Flow.

1. In the first part, the results from the case studies, see section *4.3 Part 1 - Cases*, were summarized to find what the cases had in common regarding design. The summarized findings were reworked and presented as a list of guidelines.
2. The second part consisted of creating scenarios, see section *6.2.1 Scenarios*, that the example designs should be based on. The designs were created with Sketch, see section *6.2.2 Sketch* and lastly the designs were reviewed by an UX-expert, see section *6.2.3 Expert Review*.

6.2.1 **Scenarios**

The result from the design guideline presented in section *6.3 Part 1 – Design guidelines* was used as a baseline for concretizing the design guidelines into design propositions. To be able to generate these design propositions it is necessary to have

user scenarios with explaining use cases that implement the guidelines. Every scenario created takes into account the type of feature they are presenting, the primary actors who are the ones affected by the scenario and the use case which is described by a basic flow of events.

All the scenarios created for the design propositions can be found in Appendix C – *User scenarios*.

6.2.2 **Sketch**

All the design propositions were generated with the design tool Sketch for Mac [35]. The tool had a 30-day trial with full functionality. The 30-day trial was considered sufficient enough for the limited design propositions generated. Sketch provided the authors with video tutorials on how to create prototypes.

All the assets used in the example designs were either created from the authors them self or from Google Material Design icons [36], Flaticon [37] or from the Flow application on appstore [38]. The two sources for icons provided the prototypes with free Scalable Vector Graphics (SVG) which were possible to modify to fit the design language Telavox uses. Most of the SVG files used were profile icons and a set of buttons which were self-explanatory from a design perspective.

6.2.3 **Expert review**

The prototypes and the scenarios were sent to UX experts for evaluation to provide the thesis with feedback on the design propositions presented. The UX experts were in this case the UX team at Telavox. The motivation for the chosen UX experts for the expert review were that the team has been involved in the focus group and have some knowledge about the freemium business model, which the prototypes are based on.

The UX team had to answer some question of a more qualitative approach to provide the thesis with empiricism and support the user centered design approach. The question asked were as follows:

- *Is the gamification/ competitive elements clear enough in the application design?*
- *Do you think internal competitive elements are good for the company?*
    - *If not, why?*
- **Feature discovery**
    - *Pros and cons with the concepts/ prototypes.*
    - *Motivate which one of the concepts do you think is best suited for Flow.*
- **Open question**

- *Without focusing on the design try to evaluate the concepts and the future work with potential candidates for Flow and Telavox.*

The UX team should keep an open discussion when answering the questions and provide the authors with all observations and comments from the evaluation.

6.3 Part 1 – Design guidelines

This part includes the resulting list of guidelines and a section with motivation for every guideline. Example designs will be presented in section *6.4 Part 2 – Design proposition.*

6.3.1 **Result**

The following list of guidelines, Table *6.1,* shows important aspects to consider when designing a successful freemium product. The list is gathered from the result of the case studies and is not in a prioritized order. The origin of every guideline is briefly explained and further details can be found in section *4 Case studies.*

Table 6.1: Design guidelines. The *read further* section refers to where the guideline is further motivated

§ 1	**Explain the value proposition and help the user understand the features.**
Origin:	Dropbox explains the value in their "getting-started-program", see section *4.3.1.1*
	Evernote has a guide during the users first run experience that explains the value and features, see section *4.3.3.1*
Read Further:	6.3.2.1
§ 2	**Make the user invest in the product in a balanced way.**
Origin:	Dropbox make the users invest by prompting the user to upload data to their account, see section *4.3.1.1*
	Evernote is designed that it takes some investment in time and effort to master. Evernote's service is also built around investing by uploading data, see section *4.3.3.1*.
	In Unity the user has to invest time and effort to learn the product, see section *4.3.4.1*.

Read Further:	6.3.2.2
§ 3	**Clearly explain what differentiates the different tiers and what is included in each of them.**
Origin:	Dropbox explains the different tiers in the "getting-started-program", see section *4.3.1.1*
	Evernote has a guide during the users first run experience that explains what is included in the different tiers, see section *4.3.3.1*
Read Further:	6.3.2.3
§ 4	**Utilize reward mechanisms.**
Origin:	Dropbox uses rewards in terms of free storage space for performing tasks, see section *4.3.1.1*
	Evernote has a reward program for inviting friends and additionally there are game-like rewards for completing the onboarding process, see section *4.3.3.1*
	Unity makes use of intrinsic rewards when a user completes a goal, see section *4.3.4.1*
Read Further:	6.3.2.4
§ 5	**Have the product available cross-platform.**
Origin:	Dropbox, Evernote and Skype have their products available cross-platform, see section *4.3.1.1*, *4.3.3.1*, *4.3.2.1*
	Unity is available cross-platform in terms of computer OS, see section *4.3.4.1*
Read Further:	6.3.2.5
§ 6	**Integrate with third-party services.**
Origin:	Dropbox is integrated with third-party services, see section *4.3.1.1*
Read Further:	6.3.2.6
§ 7	**Make the user dependent on the product**

Origin:	Dropbox and Evernote make the user dependent by making the perceived value increase over time, see section *4.3.1.1 , 4.3.3.1* When Unity users invest a lot in the product they are less likely to churn, see section *4.3.4.1*
Read Further:	6.3.2.7

§ 8	**Turn users into advanced users.**
Origin:	Dropbox introduces users to features leading to advanced use, see section *4.3.1.1* Evernote engage some users enough to turn them to advanced users, see section *4.3.3.1*
Read Further:	6.3.2.8

§ 9	**Introduce premium features in a setting where the user can relate to them.**
Origin:	Dropbox use greyed out feature in the correct setting to introduce premium features, see section *4.3.1.1* Evernote presents the premium version when a user reaches the upload limit, see section *4.3.3.1*
Read Further:	6.3.2.9

§ 10	**Make the purchase process frictionless.**
Origin:	Dropbox has an honest message and the payment page is easy to understand, see section *4.3.1.1*
Read Further:	6.3.2.10

§ 11	**Include features in the premium version that increases the user's perceived value of the product.**
Origin:	In section *4.4 Part 2 – Survey*, it is shown that the value of the premium version increased when adding additional features even if the users' do not use the extra features.
Read Further:	6.3.2.11

6.3.2 **Further motivation of guidelines**

The design guidelines are further explained in the following paragraphs.

6.3.2.1 Explain the value proposition and help the user understand the features

Free is the best marketing and enables for massive potential reach as it lowers the risk for consumers to try the product, see section *3.3.1 Freemium business model*. A negative implication of the lowered risk for the consumer is that it makes them less committed to the product [12]. A consumer that is presented with a free product can make a fast decision to try it out, but they can make an equally fast decision to abandon the product since they have not paid for it. As the freemium business model is based on the notions of free, it has to be accepted that users easily churn and that a large portion of the users are expected to abandon the product in the early stage of product use. To increase the chances of users staying, it is important to give them the best welcome when they are signing up and boarding.

The purpose of the onboarding process is to give the new user an understanding of the product and the use cases. A free user is not committed to look this up by themselves and by serving the user with the correct guidance, the risk of the user churning is reduced. The guidance in the onboarding can lead the users on a desired path (path is defined in section 5.3.2.5) in an early stage. From the very beginning the users can be set on a path that has the best chances for the user to retain and convert in the future. What the first interactions with the product should be and what path that the user should be started on can be gathered from analyzing the metrics, see section *5 Elicitation of metrics*. When Facebook did their data-analysis, it showed that the most engaged cohort of users had at least 7 friends within the 10 first days [39] and with this in mind, it is logical that Facebook is trying to make users to add friends during the onboarding process.

Google's material design guidelines proposes three different onboarding techniques [40]:

- *Self-select model* – Allows the user to customize their first-run experience by making a series of choices, see figure *4.5*. This gives the user a sense of control and an idea of what the application can do.
- *Top user benefits model* – Gives the user an understanding of the primary benefits from using the application. The top user benefits could for example be presented in a short video or animated storyboard, see figure *6.1*.
- *Quickstart model* – Makes the user quickly get started with the core functionality of the application. The user lands directly in the UI and subtle hints that are layered on the original UI are shown to familiarize with the functionality or to nudge the user to perform a key action to set them on the right path, see figure *6.2*.

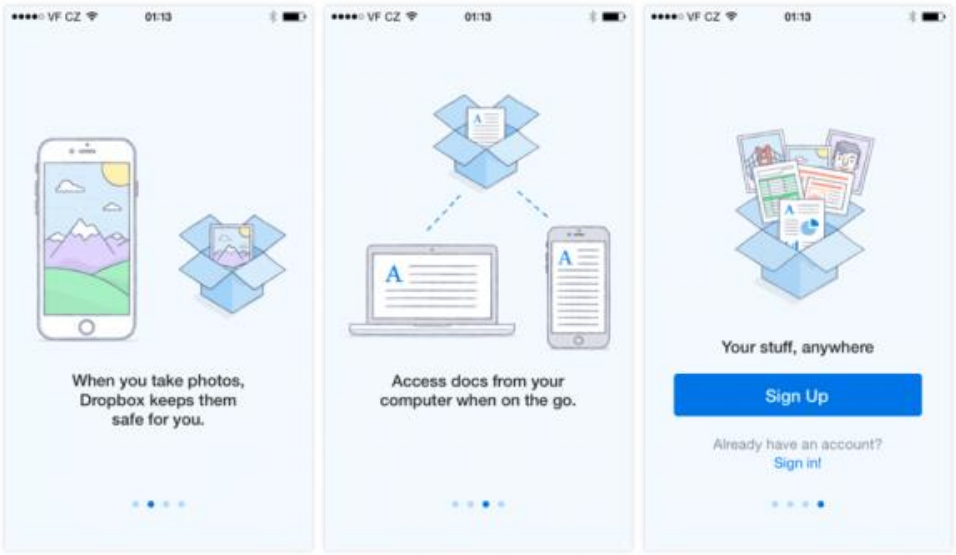

Figure 6.1: Dropbox onboarding with top user benefits

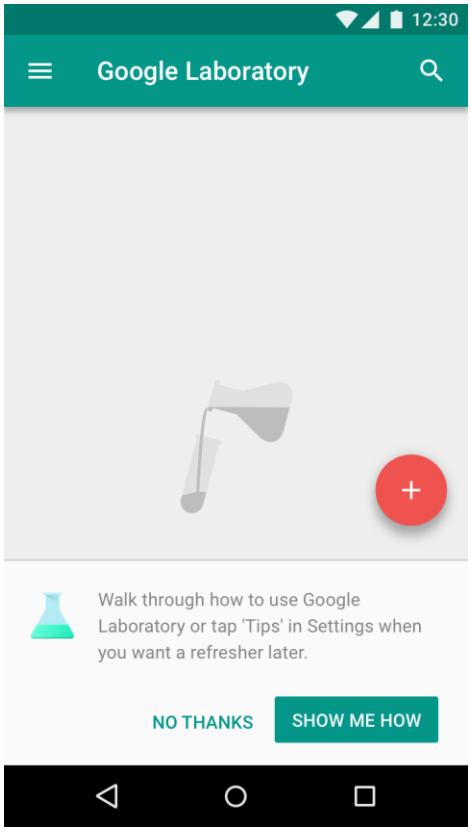

Figure 6.2: Example of onboarding using quickstart model

The onboarding techniques from the material design guidelines are examples of how the onboarding could be designed, but the onboarding process cannot be generic and should be designed for what suits the specific product. For Flow, it is probably best to use an onboarding that shows the primary benefits that the user gets from using the product in combination with a quickstart guide. As Flow has functionality that is abstract for the average user, it is important to present the benefits instead of only presenting a quickstart guide. As an example, a customer is most likely not familiar with the workings and setting up of a switching service. If a customer is only presented with a quickstart for setting up the switching service, they might not understand the advantages of using the feature, which increases the risk of churning.

In freemium products it is important to clearly make the user understand the value proposition and how the user can benefit from the product. If a user do not know how to use the product or do not understand how it is adding value there is no chance that they will pay for it [14].

A data analysis can help decide whether the onboarding is working as desired. A percentage of new users will churn in their first sessions and this is normal but efforts should be taken to keep this percentage as low as possible. By measuring at what different steps in the onboarding process that users churn, it is possible to understand where the process can be improved. With the help of data-analysis, different onboarding procedures can be evaluated with A/B-testing to get insight of what methods works best.

There has to be level of compatibility between the user's needs and the product's fundamental use case [11]. An aggressive onboarding process will in an early stage give users who will not have their needs satisfied by the fundamental use case a heads up. These users will most likely churn during the onboarding process. Keeping users engaged when the product cannot possibly meet their needs is not desirable. However, having a too aggressive onboarding might scare the wrong users away, which could inflict loses in potential virality and revenue.

6.3.2.2 Make the user invest in the product in a balanced way

As free users have not invested any money in the product, they need to invest in other means in order to be closer attached to the product. To get a user to invest in a product is a balancing act, where asking for too much can bore or tire the user and significantly worsen the user experience. The best way to make users invest in the product is to ask the users to do a bit of work at the right moment. If it is clear for the user what the benefits of investing are it is more likely that they will agree on putting in some effort. For example, if it is correctly communicated to the user how they will benefit from adding a colleague to their Flow account, they will be more likely to do so. Then after a while when the user has experienced the benefit or reward gained from the investment, they are more susceptible to make an investment again. Eyal and Hoover explains in the book *Hooked: How to Build Habit-Forming*

Products how users are more likely to invest after receiving a reward than before receiving one [30]. This means that the user invests as a favor in return after getting something rewarding. In the onboarding process something simple as the rewarding feeling of completing a step and see the progress-bar filling up is enough to be able to ask the user to invest a little bit of effort in the next step in the process. The kinds of investments that are possible depends on the service and can be anything from adding a friend to spending time/effort to uploading data. Relevant investments increase the perceived value of the product and makes the user closer tied to the product, which both increases engagement and retention and ultimately increases the chances for conversion.

6.3.2.3 Clearly explain what differentiates the different tiers and what is included in each of them

A freemium product is as good as features delivered for the masses. A product that implements this business model must present all the features of the product and differentiate what is included in the free and the paid versions. It is also of great importance to assure that the free version of the product has all the vital features to be able to deliver a free product that attracts costumers. Kumar discusses this in *Making "Freemium" Work* [14] and highlights the fact that too many free features will never make user convert or that too few feature will make the users churn early. This shows that it should always be a continuous work with the freemium model adapted in the company when deciding what features should be free and what should be premium.

Even though the free version is the one that attracts customers it is necessary to present what limitations the free version has. By also presenting the premium versions of the product in a good way, it will be clear how to surpass the limitations met in the free version. As a company, it is of great importance to be sincere and inform users of limitations and possibilities with the different tiers before they start using the product. If this is not done as described, users might feel deceived and will churn right away. To not be able to attract user will directly affect the financial condition of the company since the free version of the product is the main advertisement used to reach a wide user base.

Another way of differentiating functionality in tiers is to use a pick and choose approach. This type of way of choosing premium functionality can be compared to á la carte menu and is based on letting the user choose features instead of a set tier. Skype is an example of a product that implement this approach, see *4.3.2.1 Design evaluation of Skype*. Letting the user have this possibility makes it easier for them to buy the features they need instead of paying for a whole tier with excessive functionality. It is however just as important as with the tiers to explain differences but in this case, the different features and their functionality.

6.3.2.4 Utilize reward mechanisms

In the case with Dropbox the reward scheme is a prominent feature in the product, where the user can earn more storage space for performing different tasks, see section *4.3.1.1 Design evaluation of Dropbox*. Also in Evernote there is a reward program where the user can earn premium trials for inviting friends, see section *4.3.3.1 Design evaluation of Evernote*. Using rewards for enticing a specific behavior are recognized from behavioral psychology and can be effective if used correctly. The rewards can be used to make the user engage more with the product and if implemented correctly, the design of the reward system can lead the user on a desired path (path is defined in section 5.3.2.5).

Making use of rewards in the UX is an example of gamification, i.e. the use of game-design elements in non-game contexts [41]. Common examples of gamification are the use of scores, points and badges that can be earned for completing tasks in the program, see figure *6.14*. Many gamification implementations make use of extrinsic rewards to drive a behavior. Extrinsic motivation is successful in the short term. However, only attaching a numeric score to an activity will confuse the user and the user might question the motives behind the scores [42]. If the activity does not follow the user's goals and needs, the user will have a low desire to perform the activity. If this is combined with external rewards, the user's perception will be that someone else is trying to control the behavior and this will have a negative impact on the internal motivation [42].

A meaningful gamification must make use of the intrinsic motivation of the users to achieve ongoing deep engagement. For example a student who is driven by the intrinsic motivation to learn, reaches a deeper level of engagement and will better understand the learning content than students who only rely on the external rewards such as grades and verbal feedback [43]. How to make use of the intrinsic reward in gamification is hard and it requires a deep understanding in what motivates the users. Additionally, it is hard since not all users have the same goals and needs. Nicholson concludes in their paper: *A User-Centered Theoretical Framework for Meaningful Gamification*, that a meaningful gamification implementation lets the user create their own "game" and allow the user to be creative and set their own goals [42]. A common mistake is that the company developing the product put their needs before the users' needs. By instead cater for the users' needs and make use of their intrinsic motivation, their level of engagement will be deep and in the long run this will benefit the company. As opposed to when only using extrinsic rewards, the engagement created from intrinsic motivation will continue and not wear off when the extrinsic rewards stop or get fatigued.

A gamification implementation in Flow could potentially increase the engagement. There has to be an extensive evaluation of the users' goals and needs when they are using Flow to be able to gamify the correct activities. If gamification is implemented, there has to be a differentiation between the customer and the users in Flow. Even though the customers and the users' goals should in some degree

overlap, there can be differentiations. For example, one of the customer's goal could be to increase the number of incoming calls to the company-number while the user is more interested in answering a high percentage of the incoming calls. The gamified activity for the customer could then potentially be about increasing the number of incoming calls and they will be internally motivated by the progress. For the users, the gamified activity could be answering calls and they will be internally rewarded when they answering a high percentage of incoming calls. As explained above, one of the challenges of a gamification implementation is to cater for all the different goals. A solution to cater for the different goals that customers and users have in Flow, is to provide all the necessary information for the customer/user to create their own "game". By presenting relevant statistics about all the calls made to the company number as well as individual user call statistics, the customer/user is provided with a "playground" where they can set their own goals and rules.

6.3.2.5 Have the product available cross-platform

Users tend to use more than one platform in their work environment, e.g. smartphones, computers and tablets. Since the users have a tendency to use many platforms it is of great importance to deliver a product that is usable on as many devices as possible. By having a product that is runnable on many platforms, the probability of reaching out to a broader customer base is higher.

The cross-platform concept will make the work much easier for the end user. They will have the possibility to seamlessly move from one device to another, which enables for increased retention. Having all their content available from different devices will give the users more possibilities to engage in the product.

Even though the cross-platform concept is ideal for companies with the goal of reaching out to many users, it demands a high level of maintenance of the product. Delivering a product cross-platform will require a universal design pattern and product packaging regardless of OS used. If this is not met, the users might feel lost when switching between devices. These users will not understand the product and there will be a risk that they churn.

All of the examples from the case studies, see section *4.3 Part 1 – Cases*, are available cross-platform. Dropbox, Skype and Evernote are available on many different platforms. Unity is not available on handheld devices since it would not make sense, considering the use cases, see section *4.3.4 Unity*. However, Unity can be considered to be available cross-platform since it is possible to use on Mac OS X and Windows when developing applications. Having freemium products available cross-platform will result in utilization of the freemium business model's full potential for reaching as many users as possible.

6.3.2.6 Integrate with third-party services

A way of increasing the value of a product is to integrate third-party services. These services must be of the type a customer generally uses alongside with the product

delivered. Having a product that has an integration with services needed by the customer will hook the users and is likely to increase the level of engagement. Having customers with a higher engagement will potentially result in higher levels of retention as the user gets more dependent on the product, see section *6.3.2.7 Make the user dependent on the product*. All this states higher probabilities for an increased conversion rate. A higher engagement of the users will result in more frequent usage of the product and introduce advanced users. More about advanced users, see *6.3.2.8 Turn users into advanced users.*

Third-party services that might be of interest for the type of customer discussed in the thesis (SoHo, SME and startups) can be customer relationship management (CRM) systems. A CRM system is a system used by many businesses since it handles all information about external customers. Many companies use CRM systems for gathering information about their customers and is considered an important factor in their everyday work. Aircall[8], a phone system company, has for instance many third-party integrations with CRM systems [44].

6.3.2.7 Make the user dependent on the product

As free users are not committed to the product it is important to design an effective onboarding process in order to retain them, as explained in *6.3.2.1 Explain the value proposition and help the user understand the features*. The onboarding process is however only covering a user's initial time with the product. During the rest of the user's life-cycle with the product there has to be incentives for the user to stay. By designing the product in a way that makes the users dependent, the retention can be increased. How dependent a user is can be measured with the retention metrics, see section *5 Elicitation of metrics*. The essential for creating a product which users depend upon is to aim for high usability – then the users get dependent on the mere functionality of the product. But to make truly loyal users it is important that the users' perceived value increases over time so that it becomes harder to opt out. In the Dropbox case the storing of users' files can be directly translated to storing value. In the beginning of a Dropbox user's journey there is not a lot of information stored on their account, but as the user continually uses the product and adds files the perceived value of their account increases, see section *4.3.1.1 Design evaluation of Dropbox*. The same goes for Evernote, where the user's account will be more valuable to the user when there is a considerable amount of notes stored, see section *4.3.3.1 Design evaluation of Evernote*. Even Skype can be thought to have an account where the value increases. A skype user invests in the product by adding contacts to their account and the more contacts that are added the harder it becomes to switch to a different service.

[8] Aircall, [Online]. Available: https://aircall.io/. [Accessed 3 June 2016].

The increasing perceived value is important in a freemium product since there is not any initial value tied to the product when the user gets the product for free. The increased value does not only reduce the risk of the user churning but also the user will be more willing to pay [16]. If the perceived value of the free version already is high when the user is deciding whether the premium version is worth buying or not, then it is more likely that the added value from the premium version is enough to nudge the user to a purchase.

Flow has very good potential to make the customers dependent on the product. Apart from the fundamental requirement of providing a usable product that the user has a need for, Flow has additional dependent forming factors. As soon as the customer launches and advertises the provided free company number and starts receiving calls, the customer will get more and more dependent on the company number. When the company number is established, the customer will see an increase in the value of the product and it will be harder to opt out. Additionally, as the customer adds users to their flow account, the customer will become closer tied to the product and before long, enough effort is invested to reduce the risk of churning.

6.3.2.8 Turn users into advanced users

A way of increasing the probability to become a premium user is to make the average users advanced, since they are more engaged in the product. An engaged user has a deeper understanding of the advanced features available since they have been using the product more frequently. The user will therefore understand the value premium offers.

A way of turning users into advanced users is to introduce new use-cases that open up for future deeper interactions. These types of use-cases act like a gateway to more advanced features. The users will then understand the actual features and their benefits, since their insight in the product has matured. An example of a feature that has this approach is the automatic uploading of pictures from your gallery to Dropbox, see section *4.3.1.1 Design evaluation of Dropbox*. This will make the user understand the benefits of backing up photos to the cloud and in some sense get a deeper knowledge about the product than the average user.

Another way of turning average users into advanced users is to introduce features when they have been utilized in the wrong way or not utilized at all. To introduce features, the product will notify the users of their existence and awakens an attention that increases the user's engagement in the product. The introduction is done simply by letting the user interact with the product and try out the features in a way that benefits the individual user. More about introducing features and premium functionality, see section *6.3.2.9 Introduce premium features in a setting where the user can relate to them.*

The ways of introducing features for the users is highly depending on what path the user takes in the product. The path is a way of measuring how the users interact with the product and can give indications of how mature they are for introducing new

features. Depending on what path they are on, different features can be presented. This is done since users may utilize the product in different ways and for different purposes. A feature that is relevant to one particular user, can be irrelevant to another user who has taken a different path. To be able to have a clear picture of what path the users are on, it is important to analyze the metrics, see section *5 Elicitation of metrics*. The metrics are essential to understand the users' interaction and behavior to be able to present the features at the right time when the user is most amenable.

6.3.2.9 Introduce premium features in a setting where the user can relate to them

When a user is deciding whether to buy the premium version or not, the decision should be as easy as possible for the user. By explaining the value proposition, features and the different tiers, the user gets a clearer picture, see section *6.3.2.1 Explain the value proposition and help the user understand the features* and *6.3.2.3 Clearly explain what differentiates the different tiers and what is included in each of them.* To further make the user aware of the premium value it is important to introduce the premium feature in the right setting where the user can better understand the functionality. An example is where Dropbox uses greyed out feature in a setting where the user better can relate to it, see section *4.3.1.1 Design evaluation of Dropbox*. Also the timing of the presentation of a feature is important; both Dropbox and Evernote present the premium version when the upload-limit is about to be reached to better promote the premium value, see section *4.3.1.1 Design evaluation of Dropbox* and *4.3.3.1 Design evaluation of Evernote.*

The aim of feature discovery is to help the user understand the full potential of the service and explain how different features can add value. A feature might be of different relevance to the user depending on where in the user lifecycle that they are. As an example, a freshly new user in Flow might not understand the value of a voice mail feature (premium) until they have missed a few calls. Thus, if the voice mail feature is promoted to the user when they have experienced a few missed calls instead of earlier in the user life-cycle, there might be a better chance for the user to understand the value and convert to premium. A way to measure when a user is most likely to understand and buy the premium value is to analyze the metrics. The engagement metrics, see section *5.3.2.2 How engaged is a customer/user?* can tell a lot about what the user is doing. From experiences from how other users behaved it can be possible to determine when the user is mature enough to be introduced for a specific feature.

When the correct time for introducing a feature is clear it is time to decide in what way to actually introduce the feature. How to visually design the presentation of the feature can be different depending on e.g. platform, product, and what type of feature that is introduced. In the browser version of Dropbox, a greyed out feature was used to introduce the user for sharing permissions. To warn the user that the upload limit is reached and at the same time introduce premium, a banner was used, see section *4.3.1.1 Design evaluation of Dropbox*. A way to implement feature

discovery on mobile platform is by following the Google material design guidelines [45] that has a section for how to visually give hints about features, see figure *6.3*.

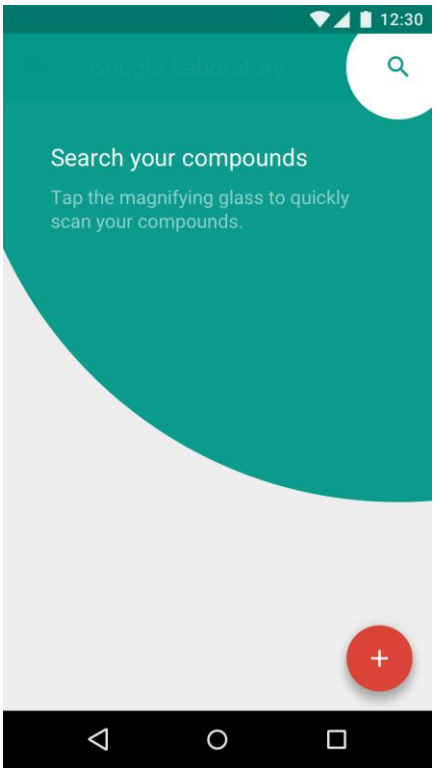

Figure 6.3: Example of feature discovery from Google material design.

6.3.2.10 Make the purchase process frictionless

If the purchase process is too complicated the users might ignore the actual benefits of the premium functionality and exit the process. A way of retrieving the necessary data for knowing how the users perceive the purchase process and if they churn at specific events, is to use metrics. These metrics will provide the product development with the required data needed for statistically validate the actual missteps done in the purchase process. The type of metrics needed are user centered and examples of these are presented in section *5 Elicitation of metrics.*

It makes most sense to address the one responsible for a purchase decision when promoting the premium version and in B2B in can be hard to know who is responsible, see section *4.4.2.1 Differences between consumers and businesses.* The

result of the survey shows that the decision about making a purchase is usually made by a person with higher authority, see section *4.4 Part 2 - Survey*.

Even if the purchase is decided by one person in the company, it is vital to involve the employees (users) in the decision process. The users are the ones that actually use the tools and they are the ones most affected if features are excluded. Having the employees involved in the purchase decision can result in a higher engagement and give the employees a sense of commitment. A way of engaging the employees could be to provide them with the possibility to up-vote features. When a user is in need of a premium feature, they are presented to a layout with an up-voting prompt. The up-voting process should be implemented in a way that notifies the one responsible for the purchase when a feature has a reasonable amount of up-votes. Basing the decision of a purchase with this approach will ensure that the right purchase is made based on actual need. This concept of up-voting premium functionality is more applicable on larger companies with bigger hierarchies than the smaller SoHo, SME and startups discussed in the thesis. The smaller companies would probably in a more informal way communicate what they want to purchase, while in larger companies the ability to talk to the one responsible for purchases may be much harder.

6.3.2.11 Include features in the premium version that increases the user's perceived value of the product

The perceived value of a product is very subjective and it is the customers' opinion on how substantial a product is valued. To take into account all these different opinions from the customers when designing a premium version makes it hard to satisfy everyone. A possible solution to address this problem could be to give the customers the ability to pick and choose the desired features to be included in the premium version. This type of method is used by Skype and is further discussed in section *4.3.2 Skype.*

Another way of packaging features that increase the perceived value is a method that actually goes against the norm of always addressing the needs of the customers. The survey from *chapter 4 Case studies* confirmed that companies tend to buy premium when extra features are added to the premium package of the product, even if they do not need it. This suggests that it is possible to not address the customers' actual needs and instead take advantage of the fact that the customers sense an increased value when receiving a lot of bundled features with the premium purchase.

When adding new features to the product it is essential to start tracking the purchase process with user metrics and analyze if the new product packaging has increased the perceived value of the product. The tracking will result in data that presents if the new features has any impact on the conversion rate. Using metrics in such a way will facilitate the product development and result in a product that takes into account the majority of the users when making decisions on how the product packaging should be employed.

6.4 Part 2 – Design propositions

The goal of the design propositions is to concretize the design guideline presented above in section 6.*3 Part 1 – Design guidelines*. The design propositions are based on the scenarios found in Appendix C. The design propositions are presented in the following section and are followed up with motivations about how they implement the guidelines.

6.4.1 **Step-by-step**

The step-by-step scenario can be found in Appendix C – *User scenarios* and the prototypes/ concepts associated with the scenario are presented below. The Lo-Fi prototypes are divided into three different presentation techniques for new features.

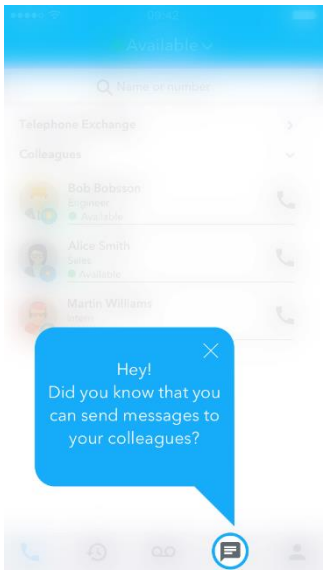

Figure 6.4: Blurred feature notification.

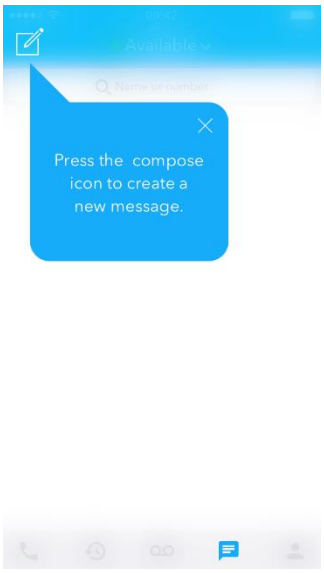

Figure 6.5: Blurred feature, compose message.

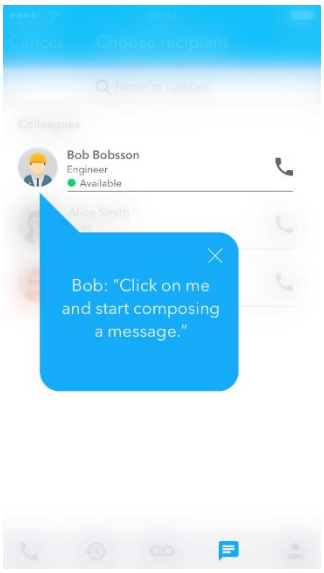

Figure 6.6: Blurred feature, final step.

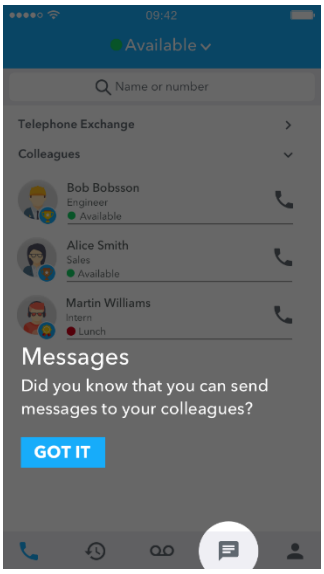

Figure 6.7: Overlay walkthrough feature notification.

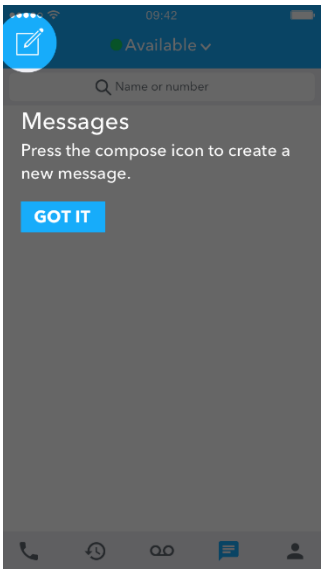

Figure 6.8: Overlay walkthrough, compose message.

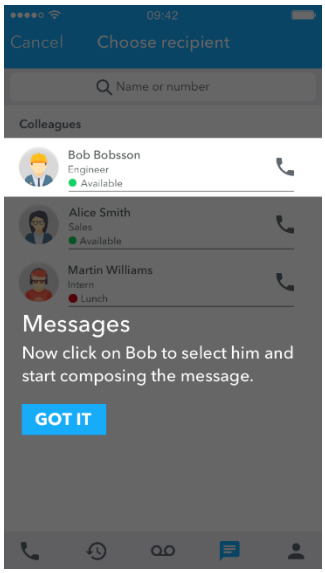

Figure 6.9: Overlay walkthrough, final step.

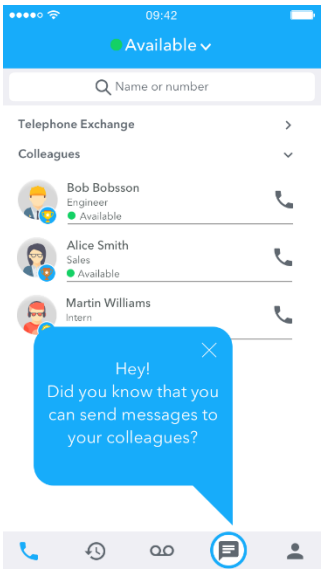

Figure 6.10: Simple hinting, feature notification.

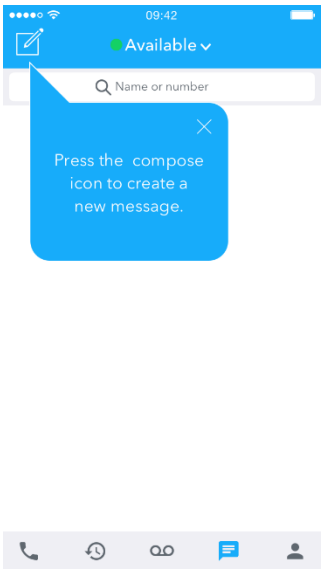

Figure 6.11: Simple hinting, compose message.

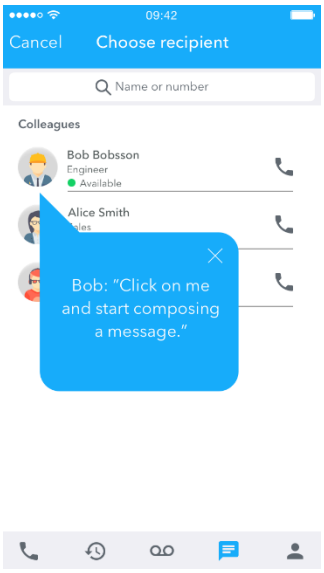

Figure 6.12: Simple hinting, final step.

6.4.2 **Gamification 1 & 2**

The scenario for gamification resulted in three Lo-Fi prototypes, see figure *6.13*, *6.14* and *6.15*, which presents an intuitive demonstration of a competitive situation for the users. Another gamification process is when the user is presented notifications when different results are achieved which is presented in figure *6.16*.

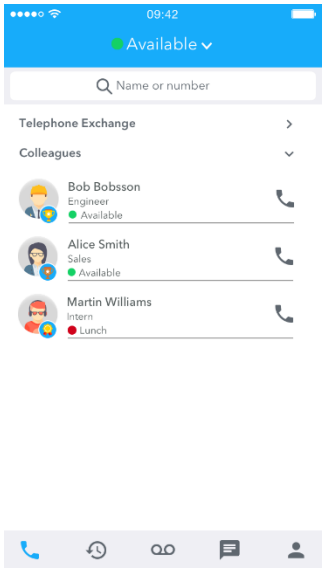

Figure 6.13: Phone overview of Flow with badges on profile.

Figure 6.14: Profile view of Flow with achievements view.

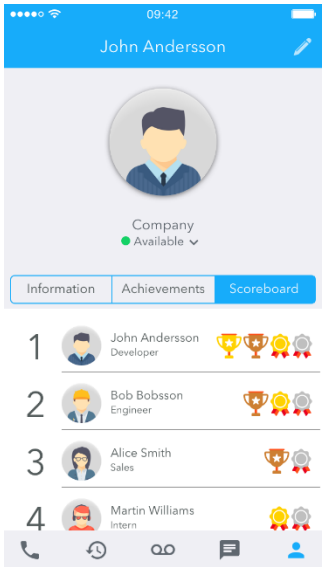

Figure 6.15: Profile view of Flow with scoreboard view.

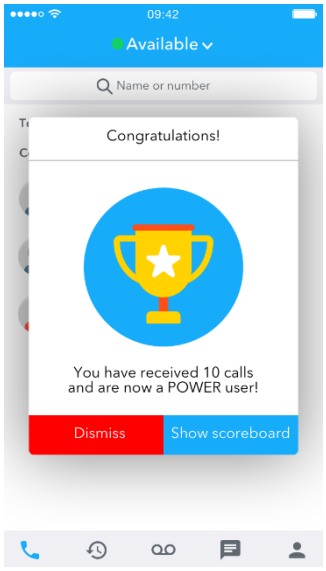

Figure 6.16: Gamification notification when achieving results.

6.4.3 **Up-voting & right moment**

The up-voting concept is presented as a new way of assuring that notifications reach the administrators of a system. Figure *6.17* and *6.18* presents Lo-Fi prototypes on the concept and how it could be visualized in Flow.

The same figures also present the *right moment* scenario which can be found in Appendix C – *User scenarios.*

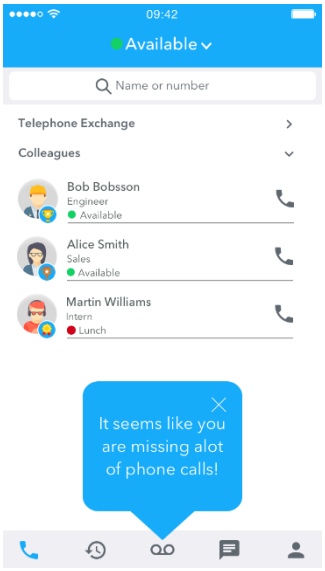

Figure 6.17: Introducing a missing premium feature.

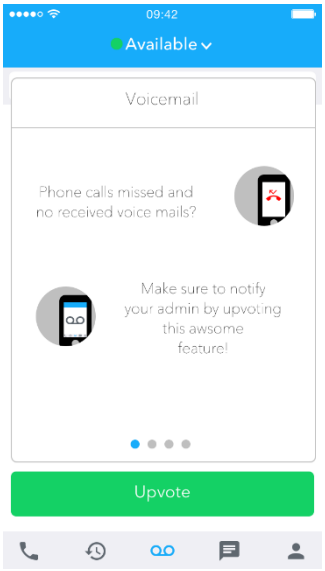

Figure 6.18: Presenting the premium feature and the ability to up vote it.

6.4.4 **Motivation for design proposition**

The design propositions presented in the result will be evaluated on how they implement the design guidelines composed in the thesis, see section *6.3 Part 1 - Design guidelines*. They will also be evaluated in a UCD approach with comparisons to the live version of Flow. The expert review conducted from the UX team will also be presented.

6.4.4.1 Step-by-step

The step-by-step process, see section *6.4.1 Step-by-step,* for walking through new features in Flow is mainly developed to present features that a user has never interacted with or when a new feature is added to the product. The step-by-step

process focuses on helping the user notice the new feature and to, in a simple intuitive way, provide the user with the first actual interaction. By introducing a step-by-step tutorial, the user should have a higher probability for interacting with the features introduced. Invoking an interaction with a new feature or an overlooked feature may lead to deeper engagement and a higher probability for further feature discovery. A deeper engagement leads to more advanced users and by discovering more features and more possibilities with the product, the hooks for becoming dependent are increasing. The step-by-step design is in other words able to deliver an implementation of two of the design guidelines presented above, § 7 *Make the user dependent on the product* and § 8 *Turn users into advanced users.*

When the user starts investing time and effort in trying to understand the features through the step-by-step tutorial it is important to consider how much effort the user should put into the product for understanding the feature. The design is simple and intuitive which can be considered as a suitable approach for making a user invest in the product in a balanced way, which helps the user to understand the value of the feature. The optimal way of having the user understand the feature introduced is to present the step-by-step tutorial where a user can relate to the functionality.

With all of this in mind, the step-by-step design propositions also implement the following guidelines: § 1 *Explain the value proposition and help the user to understand the features,* § 2 *Make the user invest in the product in a balanced way.*

The propositions created are three different ways of introducing a step-by-step tutorial for the user. All the propositions have the goal to facilitate the process of learning new features and as a result make the usage of the feature efficient. The propositions differ in terms of the grade of usability which the expert review conducted could validate.

6.4.4.1.1 Expert review

The expert review conducted gave the authors the opportunity to include Telavox in the process of evaluating the different proposals for the step-by-step tutorial. Together, the authors and the UX team at Telavox made the following evaluation:

- Figure *6.10, 6.11* and *6.12* shows too much on the screen which can make it hard for the user to focus on the right graphical elements for the step-by-step tutorial.
- All of the concepts have the possibility to be aborted by the user with the close window cross in figure *6.4, 6.5, 6.6, 6.10, 6.11* and *6.12*. The same possibility is also available on figure *6.7, 6.8* and *6.9* but with a *Got it* button. To have this possibility, the users will never feel obligated to follow the whole process. Forcing a user to do a tutorial can result in a user with no interest of continuing using the product since they feel forced to interact in a certain way. Forcing the user to a specific path will lower the engagement level of the user and the risk for losing the users will increase.

- The blurred out step-by-step tutorial presented in figure *6.4*, *6.5* and *6.6* solves the problem with too much information presented for the user during the tutorial. However, the blurred concept is not conventional and disturbs the esthetical theme of Flow.
- All the concepts point at the end of the tutorial that a conversation with a fellow employee should be invoked. The concept of invoking a conversation encourages the user to complete the whole tutorial but it can be unconventional to try to write a message to a specific user which in a way can be found as forcing the user to interact in a certain way which as presented earlier can lower the engagement in the product. A way of avoiding this problem is to make it possible for the user to compose a message to anyone on the contact list.

With the feedback from the UX team at Telavox and an evaluation of the concepts for presenting features with a step-by-step tutorial, the best alternative for Telavox is the overlay walkthrough presented in figure *6.7*, *6.8* and *6.9*. This concept is the most conventional since the design is recognized from other applications [45].The user can clearly see what they need to interact with to invoke the walkthrough. It is also clearly visible how the user can abort the walkthrough hence not feeling forced to complete the whole process.

6.4.4.2 Gamification 1 & 2

Gamification in Flow is a mechanism that has not yet been implemented and need to be evaluated to understand how it can affect the user engagement and retention. The goal of having gamification in an application is to improve the UX for the users and as a result increase engagement and thereby have a greater chance of retaining them.

The scenarios for gamification, see Appendix C – *User scenarios*, are developed in a way that makes use of both the intrinsic and extrinsic rewards to drive the user's behavior in a certain way. As §4 *Utilize reward mechanism* presents, the intrinsic rewards are considered more valuable for retaining the users but it is relevant to also include the extrinsic rewards. The intrinsic rewards will reward the user in a more personal level which, if done right, can increase the interest for Flow and thereby have the possibility of increasing the engagement. The extrinsic however, are needed to visualize the rewards with other employees and as a result increase the possibility for a competition.

As seen in figure *6.14* and *6.16* concepts of achievements are presented. The figures show partly how statistics can be presented to engage the user e.g. when receiving calls or when a number of calls have been received and the user is given a trophy. This is part intrinsic part extrinsic since it encourages the user to be more involved with statistics of the usage of the application and an extrinsic part where the user is presented trophies which acknowledges the amount e.g. calls received. Figure *7.11* is a part of the profile view where the user can access all from personal information,

achievements and scoreboard from the whole company. The concept presented focuses on simple but clear features of the design to give the user the best UX considering both features and the emotions. Having this approach will encourage the user to interact more with Flow e.g. answering calls. This can be compared to the design Flow has now, see Appendix D - figure *D4*.

The other part of the design, figure *6.16*, presents a way of notifying the user when they reach an achievement. The reach of achievement, receiving calls, usage of features that motivates the user etc. is dependent on the engagement of the user and is based on how motivated the user is. However, when pressing the *Show scoreboard* button, the user will be redirected to a view, see figure *6.15*, where every user of Flow in the company will have trophies added to their profiles. This part is for a more extrinsic reward which can engage the users in a more competition approached context. The same approach is implemented in the start view of Flow, the phone view, see figure *6.15*. The elements are bigger and more encouraging in a graphical approach to engage the users in using the application. The standard view in Flow, see Appendix D - figure *D1*, has at the moment a subtler presentation of the contact information from the employees in the company.

The profile accessibility is also moved from the icon in the top of the right corner, see Appendix D - figure *D2*, to a more eminent position in the static information bar in the bottom. This was done since the information in the *Settings* menu on the static bar is information about the user's profile. The position of the information, all together, was natural in the static bar since the profile information should be accessible regardless of where the interaction of Flow is done.

6.4.4.2.1 Expert review

The expert review, together with the authors' evaluation of the design concepts can be summarized in the following bullets:

- Gamification is something that could be relevant for Flow but it is important to consider how much information should be presented for the user. It is essential to have a balanced approach of presenting information for the user since too much information could overload the user with data and disturb the UX of the product. Having this in mind, Telavox should carefully consider what information a user is in need of the most and which does not affect the usability of the product.
- It is also important to investigate what type of information should be given a permanent place in the interface since many of the elements will be dynamic e.g. when the completion rate of different tasks is completed.
- The gamification concept should be implemented carefully and take into account events that are relevant for the user which in a sense will encourage the usage of the product. Delivering the wrong type of competition events can deliver the opposite of the purpose with gamification, unengaged users. An example of this is when using gamification on Flow. It is relevant to

utilize the right events for reward mechanisms which can be the user who answers the most phone calls to the company and not whom has sent the most messages (which has no purpose expect misjudgment of the usage of the application).

- It is vital to approach the rewards given to the users in a motivating way. Having rewards for the least beneficial users could be demotivating and result in low retention. However, the users whom are able to deliver great results should in a way be presented and encouraged to keep the good work up.

6.4.4.3 Up-voting & right moment

A way of engaging users is the concepts of up-voting and presenting feature at the right moment. These two concepts are a way of letting the users to be involved in the process of buying premium or different features in a pick and choose approach. Having the users involved in the purchase process will encourage them to use the product more than, if premium is bought and introduced to the users without any input from them. The purchase process must be frictionless which includes all necessary steps for making a purchase easy and intuitive for the buyer. More about the actual purchase process and how it should be implemented in a product, can be found in § 10 *Make the purchase process frictionless.*

Figure *6.17* and *6.18* present the concept in a way that notifies the users when e.g. many calls have been missed due the missing functionality of voicemail. The user will notice the popup and interact with the following popups on the voicemail view in Flow. Here the user will be able to read about the feature and have the possibility to up-vote it so an administrator can, based on actual data on the number of up-voting's, purchase premium or the separate premium feature. The up-voting concept will always be available since a user might not need a popup message to be interested in the premium feature. The user can interact with the view and, if interested, up-vote the feature. Having this approach will let the users relate to the actual functionality and result in well-informed users whom are sufficiently engaged to become advanced users. Here the concepts are covering § 8 *Turn users into advanced users*, § 9 *Introduce premium features in a setting where the user can relate to them* and § 11 *Include features in the premium version that increases the user's perceived value of the product.*

6.4.4.3.1 Expert review

Since the concepts are considered to work in a manner where there is an administrator and users of a product it will require a company with a bigger size. The smaller companies in the SME, SoHo and startup market are not in the range of the bigger companies and the purchase processes could be done by simple discussions between the employees in the company. Flow as a free product is considered to reach out mainly to the companies in the segments the thesis discusses

and therefore not suitable as a purchase process. However, the ability to present the premium features in a manner that increases the rate of discoverability is considered positive since it can encourage the users to learn more about features they do not access to. Having users whom are interested in new features can result in users that are more engaged in the product and the possibilities the product can offer them. All this can at the end, potentially increase the overall engagement and retention rate in the product.

7 Discussion & conclusions

7.1 General discussion of the result

The results of this thesis are a design guideline for increasing the conversion rate in freemium products and a list of metrics for measuring the user behavior in Flow. The guidelines provide Telavox with a new design perspective in terms of essential areas to consider when designing. The list of metrics provides a basis for telavox future data driven design approach.

To our knowledge there is no prior research on how the freemium business model can be optimized with a UCD approach. During the course of the project, Google updated their material design guidelines with a section for improving engagement, retention and feature discovery [40] [45]. However, even if there is a resemblance to Google's guidelines, the results of this thesis target challenges concerning the design in the fermium business model instead of the more general approach Google provides.

7.2 Limitations

The research targeted how freemium business model works in B2B products and trying evaluate the products from a business perspective was hard, since the authors only had consumer insight. Additionally, it was hard to investigate the products' different tiers since the premium version required a registered company with a subscription or a onetime fee. However, it can be argued that this was beneficial for the result since real customers do not have insight in the premium version before a purchase decision is made.

The number of products evaluated was limited to only four and this may have resulted in less substantial guidelines compared to if the guidelines were based on a higher number of case studies. Another limitation with the case studies was the inability to evaluate competitors to Telavox since the authors were presented with a paywall even as regular users. The ability to evaluate Flow as a freemium product was limited since it was under development and continuously revised. The agile development process made it hard to present relevant design propositions as new designs were continuously delivered on Flow.

As Telavox was not tracking metrics during the time of the thesis, the metrics were developed for future use. However, since Telavox did not have any methods for data analysis, the developed metrics could not be tested for their relevance to Flow.

The Lo-Fi designs of the scenarios are a first draft of how the design guidelines could potentially be implemented. The design propositions were however, a first draft of how it could potentially be visualized but they were not tested with users to find design flaws. The limitation here is that the result is not iteratively tested and revised, which needs to be done to be able to provide Telavox with Lo-Fi:s that are valid enough for further Hi-Fi implementation.

7.3 Project process evaluation

From the beginning, the project was aimed to have more focus on the design of a prototype for Flow. Since the development team iteratively revised the design of Flow it would be hard to develop a prototype based on a stable baseline. Additionally, the envisioned prototype was intended to be based on user data provided by Telavox. However, since Telavox did not have a data driven development process there was no gathered user data available to make it possible to involve actual user-data in a prototype design. The goal of the thesis developed and shifted from making a prototype to instead create design guidelines. Furthermore, instead of analyzing (none) existing user data, the project shifted to elicitation of metrics to be tracked in the future.

The whole process in the thesis was based on having the user in mind all the time, a UCD. This approach however, could not be implemented fully since having the UCD implicates testing and revising the result iteratively to improve the concepts, see *2.2.1 User Centered Design*. The way this project has involved the users is by having the users' needs in mind when creating metrics and guidelines. A future work is to fulfill the user centered approach by creating prototypes and iteratively test them, see next section.

7.4 Future work

The result of the thesis is a foundation for a new implementation of the freemium business model with a design and user perspective. The user guidelines should be tested on real products that are launched for real users. The guidelines are presented from a theoretical point of view and need to be concretized with actual testing on Flow to understand them and if they are able to deliver any differences for Telavox. By implementing the user guidelines and then perform A/ B testing, can give indication of how well the guidelines turned out.

The developed metrics has to be tested on a live version of Flow to better get a sense of what metrics are of the greatest importance. As the metrics are tested, more insight will be gained regarding the threshold values, e.g. what should define a churned user, an engaged user and a retained user. Additionally, an investigation has to be done regarding what kind of tools that are available for visualization of the metrics. Using a dashboard to visualize the metrics can improve the overview and facilitate design decisions.

7.5 Conclusions

The thesis had four goals stated in section *1.3 Purpose and Goals* and they are summarized in the following paragraphs.

7.5.1 **Investigate how other companies achieved to convert users to paying customers.**

The investigation of how other companies achieved to convert users to paying customers has resulted in detailed descriptions of the design of Dropbox, Skype, Evernote and Unity. They have all succeeded with the freemium business model and a detailed description of their implementations and the authors' design evaluations can be found in section *4.3 Part 1 – Cases.*

7.5.2 **Present relevant metrics about the users' behavior that need to be tracked in order to optimize the freemium business model.**

The metrics phase in the thesis has, based on theory and what Telavox considers important, generated metrics that should be measured for future investigation. The metrics should provide Telavox with the statistical strength needed for decision making. The metrics phase is considered to have fulfilled this goal. More about the metrics, see section *5 Elicitation of metrics.*

7.5.3 **Deliver design guidelines based on theory, research and the metrics for the users' behavior.**

The guidelines are based around theory, the case studies and the metrics. Table *7.1* below presents the user guidelines in its simplest way. A more detailed description of the guidelines and their motivation can be found in section *6.3 Part 1 – Design guidelines*.

Table 7.1: User guidelines

Section	Guideline
§ 1	Explain the value proposition and help the user understand the features.
§ 2	Make the user invest in the product in a balanced way.
§ 3	Clearly explain what differentiates the different tiers and what is included in
§ 4	Utilize reward mechanisms.
§ 5	Have the product available cross-platform.
§ 6	Integrate with third-party services.
§ 7	Make the user dependent on the product.
§ 8	Turn users into advanced users.
§ 9	Introduce premium features in a setting where the user can relate to them.
§ 10	Make the purchase process frictionless.
§ 11	Include features in the premium version that increases the user's perceived value of the product.

7.5.4 **Deliver design propositions for Flow that include the guidelines, the research and the metrics for the users' behavior.**

The result of the thesis presents different design propositions of different scenarios that are based on the user guidelines. The design propositions are presented in section *6.4 Part 2 – Design propositions*. These designs can be compared to the current version of Flow, see Appendix D – figures *D1, D2, D3* and *D4*. The designs are based on the guidelines and the metrics, which are properly motivated in section *6.3.2 Further motivation of guidelines*. The design propositions are therefore considered to meet the requirements of this goal.

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Appendix A – Survey

Användning av freemiumprodukter i företag

Ett verktyg inom freemiumsegmentet är en mjukvaruprodukt som finns i både gratis- och betalversioner. Gratisversionen är ett fullt fungerande verktyg medan betalversionen erbjuder mer avancerad funktionalitet, exempelvis: Spotify, Dropbox och Skype.

Vi undersöker hur företag använder sig av freemiumprodukter som en del i vårt examensarbete. Enkäten är helt anonym och tar bara ett par minuter att slutföra.

*Required

Bakgrundsfrågor

Kortare frågor om företaget

1. **Vilken position har du på företaget?**

2. **Hur länge har företaget funnits?** *
   Mark only one oval.
   - 0 - 1 år
   - 1 - 2 år
   - 2 - 3 år
   - Mer än 3 år

3. **Hur många anställda finns på företaget?** *
   Mark only one oval.
   - 1 - 5
   - 5 - 10
   - 10 - 50
   - Fler än 50

Gratisversioner av verktyg

Ett verktyg inom freemiumsegmentet är en mjukvaruprodukt som finns i både gratis- och betalversioner. Gratisversionen är ett full fungerande verktyg medan betalversionen erbjuder mer avancerad funktionalitet, exempelvis: Spotify, Dropbox och Evernote.

4. **Använder du någon gratisversion av ett verktyg i ditt arbete?** *
   Mark only one oval.
   - Ja *Skip to question 6.*
   - Nej
   - Vet ej

Betalversioner av verktyg

Ett verktyg inom freemiumsegmentet är en mjukvaruprodukt som finns i både gratis- och betalversioner. Gratisversionen är ett full fungerande verktyg medan betalversionen erbjuder mer avancerad funktionalitet, exempelvis: Spotify, Dropbox och Evernote.

5. **Använder du någon betalversion av ett verktyg i ditt arbete?** *
   Mark only one oval.

   - ◯ Ja *Skip to question 10.*
   - ◯ Nej *Stop filling out this form.*
   - ◯ Vet ej *Stop filling out this form.*

Gratisversionen av ett verktyg

6. **Namnge vilka verktyg ni enbart har gratisversion för (Exempelvis Dropbox)** *

   .....

   .....

   .....

   .....

   .....

7. **Vem på företaget tar beslut om vilka verktyg ni använder?** *
   Mark only one oval.

   - ◯ VD:n
   - ◯ Annan chef
   - ◯ IT - avdelning
   - ◯ Gemensamt
   - ◯ Vem som helst på företaget
   - ◯ Vet ej
   - ◯ Other: .....

8. **Hur ofta använder ni verktygen?** *
   Markera flera alternativ om flera verktyg används olika ofta
   Tick all that apply.

   - ☐ Dagligen
   - ☐ 2 - 3 gånger i veckan
   - ☐ 1 gång i veckan
   - ☐ Mindre än 1 gång i veckan
   - ☐ Vet ej
   - ☐ Other: .....

9. **Varför betalar ni inte för verktygen?** *
Tick all that apply.

- [ ] Pris
- [ ] För att gratisversionen är tillräcklig
- [ ] För att vi endast ville testa verktyget
- [ ] För mycket onödig funktionalitet i betalversionen
- [ ] För lite funktionalitet i betalversionen
- [ ] Ingen passande betalplan
- [ ] Vet ej
- [ ] Other: .....

Skip to question 5.

Betalversionen av ett verktyg

10. **Namnge vilka verktyg ni betalar för (Exempelvis Dropbox)** *

.....

.....

.....

.....

.....

11. **Vem på företaget tar beslut om vilka verktyg ni använder?** *
Mark only one oval.

- ◯ VD:n
- ◯ Annan chef
- ◯ IT - avdelning
- ◯ Gemensamt beslut
- ◯ Vem som helst på företaget
- ◯ Vet ej
- ◯ Other: .....

12. **Hur ofta använder ni verktygen?** *
Markera flera alternativ om flera verktyg används olika ofta
Tick all that apply.

- [ ] Dagligen
- [ ] 2 - 3 gånger i veckan
- [ ] 1 gång i veckan
- [ ] Mindre än 1 gång i veckan
- [ ] Vet ej
- [ ] Other: .....

13. **Varför betalar ni för verktygen?** *
Tick all that apply.

- [ ] Enbart för en extra funktion som behövdes
- [ ] För flera extra funktioner som behövdes
- [ ] För man får många extra funktioner för pengarna
- [ ] För att gratisversionen var bra
- [ ] För att gratisversionen var dålig
- [ ] För att mängden användare översteg gratisversionens maxantal
- [ ] För att bidra till vidareutveckling av produkten
- [ ] Vet ej
- [ ] Other: .....

14. **Finns det överflödiga funktioner i betalversionen som ni inte använder?** *
Mark only one oval.

- ◯ Ja
- ◯ Nej
- ◯ Vet ej

15. **Hur blev ni informerade om funktionaliteten i betalversionen?** *
Tick all that apply.

- [ ] Reklam (t.ex. email, annonser)
- [ ] Presenterat i användargränssnittet i gratisversionen
- [ ] Presenterat på produkthemsidan
- [ ] Sociala medier
- [ ] Tips från kollegor och bekanta
- [ ] Vet ej
- [ ] Other: .....

16. **Använde ni er av gratisversionen av produkten innan ett köp av verktygen genomfördes?** *
Mark only one oval.

- Ja
- Nej
- Other: .....

Appendix B – Focus group script

Hello!

Thank you for being a part of our thesis by attending at this focus group. The thesis work is for Telavox and the main question needed to be answered is how the conversion rate of the free users to paying customers can be increased. This will be done by having a user centered approach with UX and interaction design in mind.

A way of confirming the design decisions made is to use user metrics. These metrics are measurement points linked to the users and are necessary to be able to provide the needed data for delivering a higher conversion rate of the free users. It is therefore of great importance to investigate what kind of metrics could be of relevance to Telavox. These metrics should provide Telavox with the necessary data for analyzing the users' behavior

Goal

The goal with this focus group is letting you discuss what could be of relevance to Telavox and help us deliver metrics which the company should implement and track for future use.

Process

1. Let all the attending persons introduce them self and what they work with.
2. Motivate why they are the ones being invited to the focus group – *they have better product knowledge than us.*
3. Present the main metrics that are considered generic for all companies to track.
    a. ***Retention*** – *Recurrent customers. Measure different activities and check if the customers actually are recurrent. This is considered important since the company relies on their customers.*
        i. *It is hard to understand what to measure in Flow considering retention.*
        ii. ***Daily new users*** – *After onboarding, when is a user considered to be a new user? What should be tracked?*
        iii. ***Daily active users*** – *What kind of interaction with Flow should reveal that a user has been active. What should be tracked?*

iv. ***When has a user left Flow?*** *How should this process be tracked and what kind of data should be observed to confirm that a user is inactive.*

b. ***Engagement*** *– Engagement increases the probability of turning free users to paying customers.*
   i. *Show all the participants what kind of engagement levels there could be in Flow.*
   ii. *What kind of interactions/ activities measure engagement?*
   iii. *What should be considered an investment (Time, effort, etc.)*

c. ***Segmentation*** *– Separate customers by demography, geography etc. to get a clearer picture of specific target groups.*

4. Show with examples how the result of tracking could be presented for delivering a simpler decision making.
5. Let the focus group members discuss one category at a time.
6. Present metrics from the discussions with all the members.

Appendix C – User scenarios

1. **Step – by – step**
   Primary actors: User
   Application
   Smartphone

   Basic flow of events:
   1. The user opens the application for the 10th time.
   2. The user has not used all the features available.
   3. The application introduces the user for the features.
   4. A step – by – step introduction is presented for the user.

2. **Gamification**
   Primary actors: User
   Application
   Smartphone

   Basic flow of events:
   1. The user opens the application.
   2. The user steps into the profile section.
   3. The user edits the profile.
   4. The application presents this by an increased progress bar.
   5. The application rewards the user by earning trophies when the progress bar is full.

3. **Gamification 2**
   Primary actors: User
   Application
   Smartphone

   Basic flow of events:
   1. The user opens the application.
   2. The user receives the 10th phone call.
   3. The user accepts the phone call.
   4. The application notifies the user that a trophy has been rewarded for many calls received.
   5. The application presents the reward for the whole company.

4. Up voting

Primary actors: User
Application
Smartphone

Basic flow of events:

1. The user has used the application for one month.
2. The user has noticed the lack of voicemail service.
3. The user navigates to the voicemail feature in the application.
4. The feature is not activated.
5. The application presents the feature and the ability to *up vote* it.
6. The user up votes the feature.
7. The administrator will be notified if many co-workers have up voted the feature.
8. The administrator decides if the feature is purchased.

5. Right moment

Primary actors: User
Application
Smartphone

Basic flow of events:

1. The user has been notified for missing 20 phone calls.
2. The application present features that will minimize the quantity of missed calls.
3. The application presents the voice mail feature.

Appendix D – Screenshots of Flow

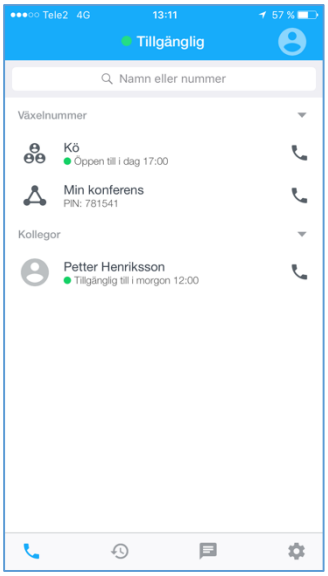

Figure D1: Main view of Flow

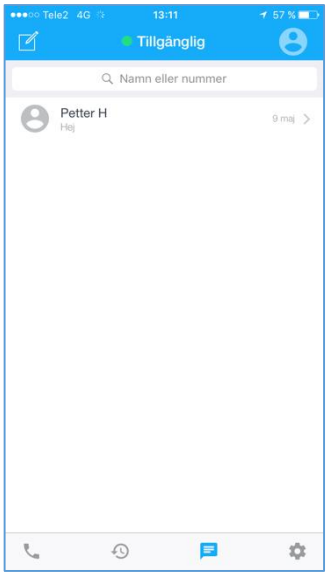

Figure D2: Message view of Flow

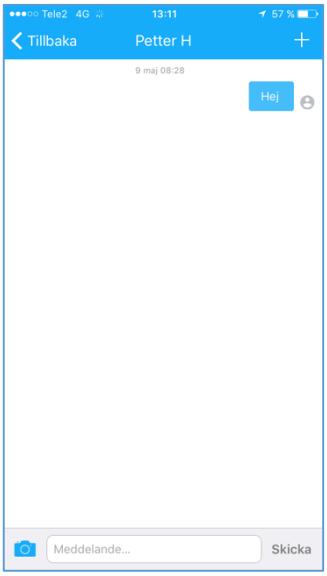

Figure D3: Conversation view in Flow

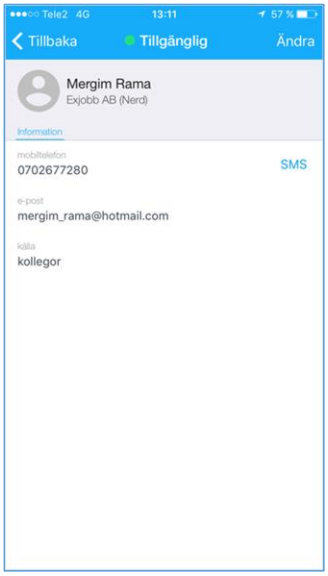

Figure D4: Profile view in Flow