



Business Innovation Observatory



New Business Models

Freemium: zero marginal cost

Case study 49

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Business Innovation Observatory
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1. Executive summary

“Freemium” is a combination of the words free and premium, a pricing strategy where goods or services are offered for free and where a minor share of the users go for the premium alternative. The rationale behind freemium is that adding one more user or unit does not increase costs, due to close to zero marginal cost.

The “freemium” model is a trend which has seen companies give away products for free, attracting a large number of users who sign up for free, but where a small share will pay for the premium alternative. The main business advantage comes from major users' growth as well as a dramatic reduction in the marginal costs, both for goods and services.

Usually a successful freemium company requires large amounts of users to be able to make profit. The more the companies give out for free, the easier it will be to grow. The objective is to reach critical mass as fast as possible, often creating a de-facto monopoly.

The freemium pricing strategy is today a common pricing model for ICT start-ups in Europe. By increasing technical development they often try to reduce the operating costs to run the model – with very few strategic differences between different sectors. They also tend to try to market themselves through word-of-mouth, making a bigger impact compared to traditional B2C-marketing; with existing users driving the recruiting of new ones.

The companies mentioned in this paper are active in a wide range of industries: housing/accommodation, games, books/reading, online shopping, cloud storage and online legal services. They either offer an innovative solution to a bigger problem/challenge (Blinkist, Fits.me, Trampolinn, Lawline) or provide modern, nuanced products relating to existing demand (Play Magnus, CloudMe).

Despite being young, they have become successful in a short time. That is partly because of their emphasis on mobile and

web access. For example eCommerce is estimated to grow by 10-20% per year until 2018. Achieving high user engagement and commitment to the services is also crucial to be able to grow and keep the users. Therefore they focus on increasing the social collaboration of the services provided.

Generating sufficient revenues, particularly in the first years, is the main challenge faced by the European freemium companies. That is of course the effect of the main idea behind the freemium based model itself. This means that the freemium start-ups need risk-averse investors to finance their early stage. The need for monetary support in early stages is high, to allow the founders to control the company in greater extent during the first years. That also poses a question whether to focus on monetization or user growth. In general, European investors are more conservative and aim to make profits earlier than in the U.S, where investors are more patient and focused on user growth.

There is also an ongoing debate on the lock-in effect and potential addiction related to freemium games, especially among the youth.

Many developers are trying to develop sustainable freemium models that can evolve over time. Policy makers should consider support mechanisms for freemium models that are important for innovation in identified and important sectors. The EU could also consider creating a freemium community where companies, investors, individuals and others could meet to network and discuss best practices.

In addition, safeguards could be put in place to protect users from overspending due to addiction, for instance by capping daily or monthly in-game spending, or ensuring that the user is notified whenever a monetary spending limit is reached.



2. Freemium model: zero marginal cost

2.1. Trend presentation

Freemium is a pricing strategy used by businesses, typically in relation to digital offerings. The product is given away for free with users being given the option to pay for additional or premium features/versions.¹ The conversion rate of free users to premium ones typically ranges from 1-2%.²

Among the types of freemium models the following can be mentioned: the traditional/classical model where the free product is a “feature-limited-but-usable-version” of the premium product (e.g. DropBox); freeware 2.0 where the product is free with monetisation through add-ons (e.g. Evernote, Skype); and the “land and expand” model, which targets monetisation at organisational level with the expectation that the more users are involved, the more likely the agent will pay to continue using the product (e.g. Yammer, Whatsapp).³

The last example particularly builds on the application of the lock-in effect, which refers to a situation where consumers are dependent on a single manufacturer or supplier and cannot move to another without substantial costs or inconvenience. This is typically regarded as positive and desirable by the business, as it increases both customer loyalty, cross-selling opportunities and in the end even revenues from the same pool of customers.⁴

The stronger the connection between free and premium services, the more attractive the premium services become as an upgrade. In addition, by using the service, the customer becomes part of a network in which he/she wishes to remain. The combination of the two leads to an increased level of cost if the customer wishes to change to a competitive service. This is an example of how the lock-in effect works - the higher the network, the higher the lock-in effect.⁵

The idea of giving away something for free to be able to charge the user later has been around as early as the 1980s. Back then, giving away a diskette or CD-ROM with a trial version to advertise and later on sell the full version of the game was a common strategy for game developers. The freemium model has however gained some important traction in recent years, with several new multinational companies such as Spotify, LinkedIn, Skype and Evernote using the model to better reach the market.⁶ In today's digital era, where the marginal costs, i.e. the increase in

costs for each additional unit, of many products are dropping, businesses will increasingly turn to the freemium model, which has a low marginal cost for each new user.

Freemium models with ‘zero’ marginal cost usually involve the sharing of underused assets. The marginal cost for sharing the underused asset is low regardless of whether it is a physical asset or a digital product. Thus, the principles that apply in the collaborative economy are the same as those applied in freemium models, with the difference being the pricing strategy. In the tangible assets a higher proportion of users pay for themselves, whereas in freemium models, only a minor proportion of users bear the cost of the assets being shared.

Freemium business models are widely used in several industries. Free features are an important marketing tool, and the products are easy accessed through social media and smartphones. The main users to attract are the free ones, who end up being subscribers themselves or draw in others who become subscribers. Indeed, research shows that a free user is worth 15-25% more than a premium subscriber, with the additional value primarily coming from referrals.⁷ Accordingly, a freemium model has to be appealing enough to attract free users, without removing the incentive for users to pay for the premium version.

There are two essential parts in successful freemium models:

1. The marginal cost for producing an additional unit of the product is significantly lower than in traditional businesses.
2. The model is marketed through the word-of-mouth method, where users (rather than producers) are key drivers. Marketing by word-of-mouth is a key driver in the collaborative economy – 91% of sharers would recommend the last sharing service they used to a friend or a colleague.⁸

Furthermore, the concept of sharing is present in several stages of the freemium model. In addition to the producers sharing their assets (e.g. artists sharing songs on Spotify), the success of the freemium model is dependent on consumers sharing their own assets and knowledge.



2.2. Overview of the companies

Table 1: Overview of the company cases referred to in this case study

Company	Location	Business innovation	Signals of success
Blinkist	Germany	Blinkist offers audio or text summaries of nonfiction books' key insights in a made for mobile format. Premium features include unlimited books and sound based summaries.	- Blinkist was founded in late 2012 and to date has 300,000 registered users worldwide, of which a significant share comprises of paying users.
CloudMe	Sweden	CloudMe offers secure file storage, file synchronization and client software to individuals and companies. Premium features include additional server space.	- CloudMe has 1.3 million users from more than 220 countries, aiming for 20-30 million users in the coming years. In 2012, 2013 and 2014 they won the Bully Award by White Bull in Barcelona, being awarded among the top 30 tech start-ups in Europe.
Play Magnus	Norway	Chess training app with world chess champion Magnus Carlsen. The game caters to 19 different age groups of various abilities, starting out with age 5. The chess engine is designed to play like Magnus Carlsen. Premium features include extra training and more levels.	- Play Magnus was launched in spring 2014 and now has around 500,000 users playing and training chess from all around the world.
Fits.me	Estonia	Fits.me is an Estonian founded company, headquartered in UK, which delivers virtually fitting rooms where the consumer shares their measurements to see how the garment fits. Fits.me gained their initial market footprint by offering free trials to attract different retailers.	- Fits.me has raised around EUR 15 million from several investors, aiming to grow by 2-3 times when reaching the American market. Fits.me today cooperates with well-known customers such as Hugo Boss, Henri Lloyd and QVC.
Trapolinn	France	Trapolinn is a home swapping community where members exchange accommodations. The first 3 nights are given free at sign up.	- Trapolinn has been running since the summer of 2014 and today has 30,000 users from 150 countries and 3,800 cities. In the next 3 years they expect 500,000 registered users.
Lawline	Sweden	Lawline offers free legal advice provided by top law students. Premium features at fixed prices include unlimited support, private phone calls, legal documents and guaranteed answers within 3 days.	- Lawline was founded 2005 as a non-profit organization giving talented students the possibility to practice law pro-bono. Today the service receives 1,500 requests each month and is visited by 270,000 monthly, growing by 40% annually. In the middle of 2014, Lawline launched paying alternatives (provided by law students and lawyers) attracting individuals and SMEs using Lawline as their professional legal advisor.

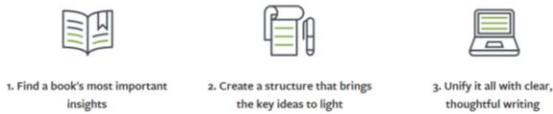
Problem 1 – Blinkist founders were experiencing the lack of time and energy to read a book while having fulltime jobs even though they would have wanted to read more.

Innovative solution 1 – Blinkist founders created a platform where professional book reviewers would review bestselling books. The user will be able to read or listen to a professional summary of a book on their smartphone or tablet. Blinkist offers one free book per day to the user. If the user wants to read more and choose specific books, then they pay EUR 50-80 for a 12-month premium subscription.

As a result, people who did not have energy or time to read in a conventional way now have the possibility to read books in a way that fits their schedule.



Blinkist reads 1,000 books a year for you and distils their key insights into powerful, actionable 15-minute summaries.



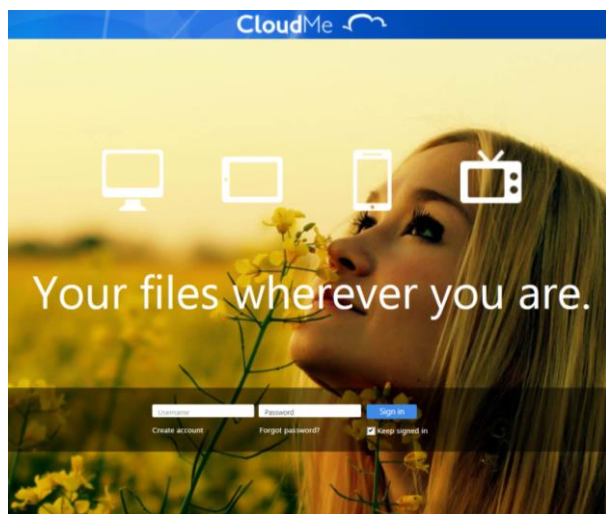
Source: Blinkist⁹

Problem 2 – Individuals and companies are afraid that their personal data may be shared illegally with third parties.

Innovative solution 2 – CloudMe was created with the aim of becoming a global cloud storage company that would allow individuals and companies to store their personal data in a secure way.

By storing their data via a 'cloud solution', users do not have to worry about viruses or where their hard drive is. Furthermore, since the company is situated in Europe and CloudMe is subject to European legislation, the users do not have to worry about third parties accessing their data as is the case in U.S. as under U.S. legislation companies can be requested at any time to hand out user data to U.S. authorities.

CloudMe is the number one cloud / sync storage service in Europe and is used throughout most countries in the world.



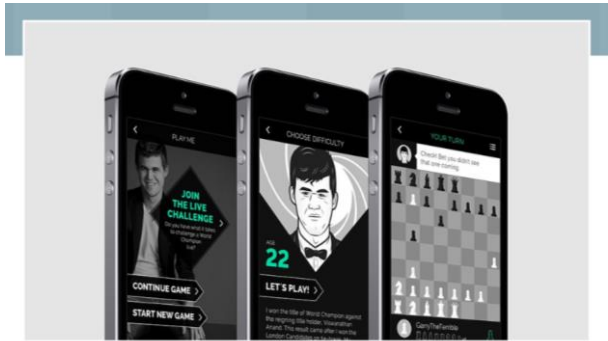
Source: CloudMe¹⁰

Problem 3 – World chess champion Magnus Carlsen wanted to make this game more popular.

Innovative solution 3 – Magnus Carlsen, together with entrepreneurs and investors, used the Magnus brand to create an app where the user gets the chance to play (a computer playing like) Magnus Carlsen in different ages.

The users will now be able to practice chess in a way they were not able before. They also can follow the development of Magnus Carlsen's skills over time.

"Whether you are an aspiring chess World Champion or just an amateur player, you've probably dreamt of beating reigning Chess king Magnus Carlsen... Now's your chance." (The Wall Street Journal)



DOWNLOAD & CHALLENGE THE WORLD CHAMP!

Source: Play Magnus¹¹

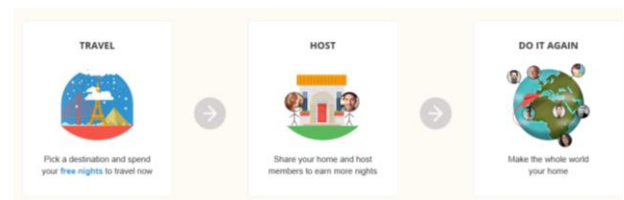
Problem 4 – While travelling around the world, the founder of Trampolinn, Hugo Allary, realised that there were no dedicated websites to bring together and allow collaboration across the community of travellers.

Innovative solution 4 – During Hugo's excursions, he developed a taste for budget travel in combination with the collaborative economy. In 2014, he became the co-founder of Trampolinn. Trampolinn combines a freemium based pricing system with social and collaborative ideas to increase the international mobility of accommodation.

Trampolinn's concept helps people to travel cheaply and meet other people. Whereas companies like AirBnB are based on rental ideas, Trampolinn is based on the sharing ideas, where you collect nights by sharing, not by paying.

Comparison between Trampolinn and its main competitors

	Low price	Free registration	No reciprocal	Comfortable	No legal issue	Room at local's	Social network
Furnished rentals (ex: AIRBNB)	✗	✓	✓	✓	✗	✓	✗
Home exchange (ex: Homeexchange)	✓	✗	✗	✓	✓	✗	✗
Couchsurfing (ex: Couchsurfing)	✓	✓	✓	✗	✓	✓	✗
Trampolinn	✓	✓	✓	✓	✓	✓	✓



Source: Trampolinn¹²



Problem 5 – Law students from Stockholm University realised that individuals and small companies had limited access to legal knowledge. The legal industry is conservative and protected with high prices and low innovation in technology and low information sharing. As modern society becomes more complex and regulated, there is a growing gap between legal supply and demand. At the same time law students have lots of legal knowledge to share, but few opportunities to practice their skills during law school.

Innovative solution 5 - Law student Joel Wickman together with his classmates, created lawline.se where anyone can ask legal issues and receive answers, delivered by over 150 law students. All legal advice was published on the web, free for anyone to read. The user can free of charge be able to receive a legal analysis of their problem and help with identifying their needs. By giving the initial analysis for free, more and more people also became aware of their needs of more qualified legal services. When Lawline's premium services were launched, they started to convert large numbers of free users to paying customers with very low marketing costs.

Thanks to Lawline's solution, a vast majority of individuals and companies have easy access to legal information, free individual legal analyses, and will be able to make informed decisions prior to purchase legal services. By using web-based low cost services combined with self-service, e.g. cloud-based customized legal documents, customers are provided more affordable legal resources at fixed prices.

Lawline was created as a platform to bring students and employers together and at the same time meet the demand for web-based legal services.



Source: Lawline¹³

Problem 6 – The biggest challenge in shopping for clothes online is that the shoppers are not able to try the garments before buying. As a result, potential customers either do not buy at all, or they buy five different sizes of the same garment just to send back four of them.

Innovative solution 6 – Fits.me created virtual fitting rooms with a shape shifting robot on which they could put clothes on. The user simply types his or her height, weight, age, neck, chest and waist and in turn is recommended the correct size of the garment.

Thanks to Fits.me's solutions, people can now try the garments from home in a virtual setting, increasing freedom and reducing insecurity in online shopping for clothes.

Fits.me gained their initial market footprint by offering free trials to attract different retailers.

According to Fits.me, the key for online retailers is to provide a more personal experience for the shopper.



Source: Fits.me¹⁴



3. Impact of the trend

3.1. The market potential of the trend

Today, thanks to the digital economy, freemium is used in a wide range of industries.

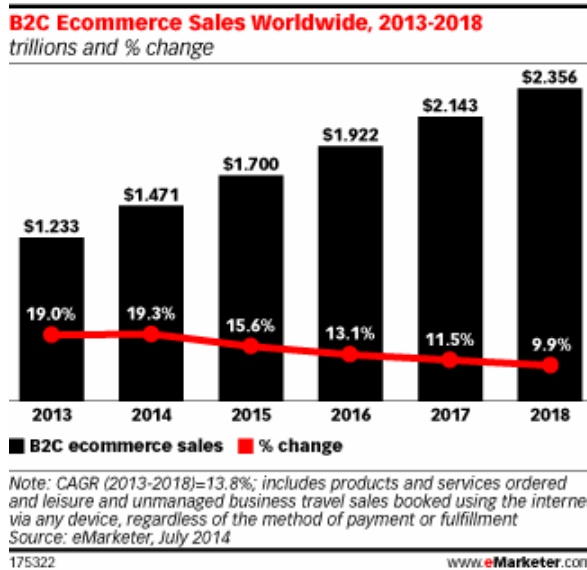
E-commerce is a growing market. eMarketer projected by the beginning of 2014 the e-commerce to hit \$1.5 trillion (EUR

"This idea of zero marginal cost is going to dramatically affect every single person in the world in the coming years - in any aspect of their life."
 –Jeremy Rifkin¹⁵

1.35 trillion) in 2014 and \$2.35 trillion (EUR 2.12 trillion) in 2018, growing by 10-20% per year. Growth will come primarily from the rapidly expanding online and mobile user bases in emerging

markets, an increase in mobile commerce sales, better shipping and payment options and the push to new international markets by major brands.¹⁶

Figure 1: E-Commerce sales 2013-2018

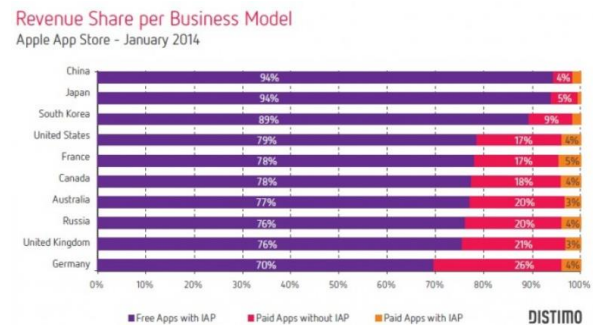


Source: eMarketer

Free games with in-app-purchases (also known as “free-to-play” games) account for 95-98% of the revenue in the Google Play and iTunes’ app stores.¹⁷ 84.9% of the 700 top grossing apps were games, and 81% of the top grossing apps originate from 50 companies¹⁸,

In France, the UK, Germany and Russia the freemium model (free apps with in app purchases, IAP) stands at 70-78% of the revenue share of total app revenues. Paid apps (with and without IAP) account for the remaining 22-30%. In China and Japan, free apps with IAP represent for 94% of the app revenues¹⁹

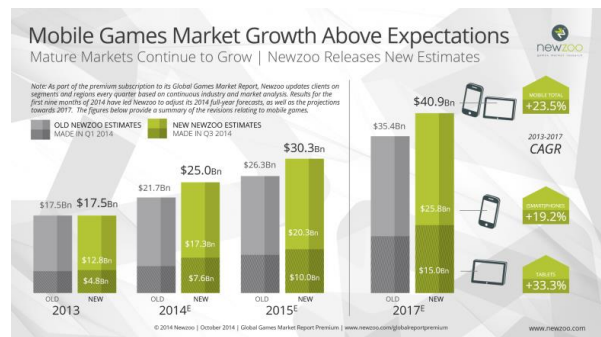
Figure 2: Revenue share per business model for mobile applications



Source: Distimo

One area where the freemium business model has been pushing the development last years is the mobile gaming industry, now as big as the area for console games. The mobile games are expected to surpass console games in revenue 2015, projected to exceed EUR 35 billion by 2017 from EUR 22 billion in 2014, an increase by 60%.²⁰

Figure 3: The mobile games market is growing



Source: Newzoo²¹

However, as showcased by the companies mentioned in this paper, freemium business models are used in variety of sectors, regardless of industry or technical intensity. For example, **Lawline modernized the traditional and non-technical law industry** by making online legal advice available at a low cost for the user, or no cost at all.



3.2. The socioeconomic relevance of the trend

The freemium-based model is the dominant business model among internet start-ups and smartphone app developers. It

"Freemium will stimulate more people's appetite to want premium." – Jeremy Rifkin²²

is not only applied to the obvious business-to-consumer-relations (B2C) but also to companies doing businesses with each other through a B2B-relationship (e.g. Box, Splunk or Yammer).²³

Some freemium models are lowering the barriers for individuals and independent contractors. Blinkist – which hires and trains professional book reviewers, is a good example of a freemium model generating employment. Lawline is another good example where law students are

given the chance to interact directly with potential clients, and in return, they can better position themselves in the job market by gaining relevant legal experience.

From the consumer perspective, while free features remain attractive to users, users are increasingly discerning and trusting of community control features (e.g. app ratings, online reviews) which in turn influence whether and how they engage in a freemium-based solution. These features further quality assure the services offered, for example with customer reviews or rating mechanisms highlighting contractors with a proven track record and excluding those producing inferior work. Such community control systems can also serve as feedback into helping companies continually improve on their offered solutions, as well as identify the features which users consider valuable and willing to pay a premium for.

4. Drivers and obstacles

4.1. The increasing digitalisation of everything fuels freemium models

The rising importance of the Internet of Things

Economists often state that there is a barrier for the zero marginal cost phenomenon in impacting the exchange and sale of physical goods and services. James Rifkin, an American economic and social theorist, believes that this is no longer the case, due to a new technological revolution – the Internet of Things (IoT).²⁴

Broadband Internet is becoming more widely available, the cost of connecting is decreasing, more devices have Wi-Fi capabilities and sensors built into them, technology costs are decreasing, and smart phone penetration is increasing.

Rifkin argues that the 21st century will be dominated more by social capital than finance capital, access will triumph ownership, sustainability supersedes consumerism, cooperation will be more important than competition and sharable value will replace exchange value, thus paving the way for the freemium model to be increasingly adopted by companies.

Hardware costs continue to decline making it even cheaper to maintain and add users. More people are using smartphones, also with a faster connection, which will increase the experience of using apps and thereby the number of customers.²⁵

"In 10 years from now, the majority of people will not own their hard drive" – CloudMe

With these changes in the use of the Internet, the freemium model is highly associated with

either technical intense industries/companies, for example CloudMe (hard drive), Fits.me (online shopping), Trampolinn (home swapping) or it is used in the modernization of industries where technology still is underused or underestimated, as in the case of Blinkist (reading), Lawline (law), Play Magnus (chess).

Mobile and web access, cloud solutions, and online payments are forming the basis of freemium solutions

The market uptake for many freemium business models is linked to ever increasing access to web and mobile platforms and increasing willingness for online payments, which is expected to have a steady growth the coming years.

CloudMe is providing an online and secure alternative to traditional data storage via hard drives, while Fits.me is extending the online shopping value proposition by addressing the existing challenge of finding the right fit for clothing online with their virtual "fitting room" solution.

Blinkist is not only offering qualitative summaries of books to people – which is nothing new. The innovation is based on the fact that the users are able to read these summaries from their smartphones (since the solution is optimised for mobile use). Lawline is leveraging web platforms to provide legal advice at low cost via digital solutions, with interaction and design of its platform adapted to a wide range of devices.



4.2. High marketing efforts to reach critical mass

The freemium business model is appreciated by many parties involved – developers, users and investors. Hardware costs continue to decline making it even cheaper to maintain and add users. Successful and established services like Spotify and Candy Crush Saga have raised awareness and interest in how freemium business models work, particularly the idea of significant user growth combined with zero marginal cost.

Free features to lure customers

Free features are a potent marketing tool which allows new ventures to expand their user base without overspending resources on costly ad campaigns or traditional sales force.²⁶ Founders of Trampolinn underline that the freemium model, which gives the user the advantage to try the product before buying, is a good approach to get customers on board. In turn, according to CloudMe, the freemium model empowers users since the growth for the model depends on customer satisfaction and successful word-of-mouth-marketing.

However, apart from social networks and word-of-mouth marketing, some companies opt also for paid campaigns.

“We want to change the conversation between the customers and the retailers.”

– **Fits.me**

Trampolinn will conduct a new round of fundraising, investing in paid marketing to increase their activity in the U.S, both in terms of user growth as well as in attracting

American investors. The main reason behind this strategy is that they believe that France is not suited for growing a business due to high taxes and improper labour legislation. According to Trampolinn’s CMO Clément Schmitt, the current French system is not designed to support nomadic and flexible working structures typical of the digital economy.

User engagement and extending social networks are a key focus

Social networks are a powerful driver when it comes to marketing of the freemium business model irrespective of the sector. Social networks and collaborative aspects play key roles in both the starting and the maintaining of a freemium business model. All of the companies featured in the case study stress the importance of engaging more users and making their businesses more social and collaborative.

PlayMagnus is currently focusing on social components and encouraging users to link up with friends. Blinkist is considering developing functionality that allows the user to share with friends the books that they have read, while Trampolinn has an “invite-a-friend” system.

Given that users of free-to-play apps tend to remain active on average for only three months, companies using freemium models (in or outside the app world) are trying to drive user engagement by rewarding not only cash but also skills, and progress points. For instance, Play Magnus rewards users with in-app currency when they win or draw in a chess game, which they can then use for transactions within the app.

“The customer will not pay for standardized information anymore. All transactions today are made as informed transactions. The consumer starts by collecting relevant information and then – if needed – hires a supplier.”

– **Lawline**

4.3. Challenge in finding a financially sustainable model

While the freemium model is often used in smartphone apps, research shows that most mobile applications are not profit-generating. In fact, 90% of paid applications are downloaded less than 500 times per day, making on average less than EUR 1,120 a day. In addition the competition tends to put even more pressure on prices.²⁷

Many mobile apps are not designed to earn a profit, but their main goal is to build brand recognition, product awareness or just provide users with fun. Fits.me, which started out with free trials to reach out to users, now doesn’t want to give away their services for free. This may indicate that Fits.me mainly saw their free trials as a marketing tool, rather than a tool to be used for pricing. PlayMagnus is considering other monetization mechanisms (for example a subscription model) for their future products, which would better suit the type of content generated by PlayMagnus.

What is striking is that even Spotify, one of the biggest success stories of the freemium model, is not profitable at the moment. According to Manhattan Venture Research, while Spotify is valued at EUR 5,14 billion, a profit is not predicted until 2019.²⁸ At the same time, Spotify’s example shows the confidence that investors have in the potential of digital subscription services.

Freemium market is on the rise: the number of subscription services of various media types is growing, consumer behaviour shifts from ownership to access, and the global market is still unexplored.²⁹

However, CEO of CloudMe, Daniel Arthursson, underlines the risk related to freemium models. What happens if the investors lack willingness (or money) to invest one more time? This would result in two scenarios:

1. The company goes bankrupt
2. The company is listed on the public stock market



According to Mr. Arthursson it is easy to attract new users to free services in general. The ongoing fight between competitors is mostly about offering more free services. Furthermore, investors and developers may have different views on how the company should evolve. American investors are usually more interested in the user growth in contrast to the European investors who are more conservative and interested in the profitability of the company.

"People are starting to realize that there is no such thing as a free lunch." – CloudMe

Some of the featured companies state that they need to focus on user growth before monetizing, at least as start-ups. Others believe that a higher share of premium users is more desirable than the total number of users and overall user growth. CloudMe believes that the number of premium users should increase to 10-20% to make freemium a sustainable business model. Others however focus on increasing the revenues from a small percentage of the paying users. It is yet unclear which approach, and at which phase of the company's development, would best enable the business to be financially sustainable.

"The way of travelling depends on the purpose of the journey. The customer needs different choices"
– Trampolinn

4.4. Criticism for lack of real consumer choice and the creation of addictive behaviour

Freemium models have been criticized for making the premium alternative a "non-alternative", by more or less forcing the user to pay for premium features in order to continue using the product, i.e. creating a lock-in effect. In fact, freemium models may create platform monopolies that lock-in users so that they can monetise user data.³⁰

Another criticism of freemium models is the potential misleading of consumers about the actual cost of using freemium services, as well as the possibility of vulnerable groups of consumers such as children becoming addicted and forced into spending money, particularly when it comes to gamified products and games themselves.³¹ This creates a regulatory risk for freemium-based companies.

For instance, in 2012, a group of parents sued Apple for having "too addictive" children's' games. According to the U.S court the games are "highly addictive, designed deliberately to be so, and tend to compel children playing them to purchase large quantities of game currency, amounting to as much as EUR 110 per purchase or more." Accordingly, in January 2014, Apple agreed to refund EUR 36 million to consumers whose children made in-game purchases without their permission.³²

This creates distrust and worries long-time players and game developers, who see video games becoming more like slot machines. There is an ongoing debate on how to create sustainable free games for both users and developers, while keeping in mind that gamification is often used as a tool for sustained user engagement, the latter being the main challenge that these companies face.³³

As such, continuous in-game purchases may become a problem for some users. The problem is not necessarily a freemium problem specifically, but rather a combination of a freemium business model applied to easy accessed games that creates a highly addictive product.

Interestingly, one of the featured companies is focusing on increasing expenditure and transactions per user, particularly among loyal users known as "whales", as opposed to increasing the overall percentage of paying users. While the intent is not to take advantage of addictive behaviour, it may become an unintended consequence of the drive to find a sustainable approach to monetisation.



5. Policy recommendations

Since the freemium model is the most common pricing model for internet start-ups and smartphone app developers in Europe (as mentioned in 3.2), it is crucial to create a favourable business environment for freemium based companies.

When considering policy recommendations to companies using a freemium business model, one should be reminded once again that the freemium business model is a pricing system and not a new goods or service itself. The companies have in some way chosen to apply this pricing model for a service or product that could have several other pricing systems. So, it is important when public organisations support freemium companies, to distinguish the revenue system from the innovation, to make sure the **goal is to facilitate the innovation, not the revenues**.

5.1. Support in early stages to help companies grow their user base

Companies using freemium show a different market approach than companies using a conventional pricing system. Freemium based companies faces the big challenge to create a service that attracts free users but also that makes a sufficient share to go premium.

One big advantage of the freemium model is the potential to achieve huge user growth. The disadvantage is that it generally takes long time to make significant revenues. This affects the investors and the entrepreneurs. In general, there is a big challenge in attracting the right investor and to attract them early on. It is not unusual for investors and founders to have different views on how the company should evolve the first years and how early they should be monetizing.

Since even successful companies using a freemium business model do not create significant revenues for several years, venture capital may be hard to attract, leading to unrealized business ideas or to sub-optimal relations between the investors and the entrepreneurs. The **EU could consider a public investment platform, where both individuals and venture capitalists can invest small or big amounts in interesting freemium start-ups**.

One way to let the founders control the company for a longer period than what is usually seen today, could be for policy makers to encourage support measures for freemium models that create innovation in identified and important sectors, still in line with state aid regulations. This would keep the founders as shareholders having bigger control of the company, as well as finance the efforts of the

companies in the early stages when they are focusing on growing their user base. This could be complemented with a step-wise approach to financing, with initial milestones being more focused on user growth, and subsequent milestones being linked to revenue and profitability targets to ensure that start-ups are directed towards a sustainable business model.

Another way of dealing with this could be to subsidize freemium companies' interests' expenses and to let the creditors such as banks exclude the companies from amortization requirements, if this happens to be a financial guideline for a specific country.

National tax reliefs and lowered employer contributions could also be an instrument to support the development stage through the use of appropriate tax credits for hiring employees or using consultants, for example.

Support schemes could also be created to help start-ups navigate through EU programs and other public support as well as to submit applications for aid.

5.2. The EU should consider creating a community for freemium companies

The companies interviewed for this case study are willing to collaborate with other start-ups using freemium models on local, national and global/European level. This could mean sharing workforce, or even offices. The **EU could create a community for freemium models as a place for discussion and exchange for companies, investors, individuals and researchers**. The companies would gain new experience and meet new investors in a completely new area. This idea could be implemented by either a private entrepreneur or by public organisation.

Freemium models that require a large number of users to create revenues and jobs usually need to be launched at an international market. Since there are few freemium models that succeed by only acting in their country of origin, another critical line is to facilitate the growth of freemium models within the whole of Europe. This requires harmonised EU framework, plus easier access to information on how to expand within EU.



5.3. Proper safeguards to protect consumers

To address the potential for consumer addiction in freemium-based games, policy makers could consider limiting in-game purchases for free-to-play games to a fixed amount over a specified period of time (e.g. daily or monthly). This may prevent excessive and unplanned spending in games marketed as “free”. Another approach is to ensure that the user is clearly informed about all the possible fees and is notified when spending reaches a certain limit to avoid unconscious expenditure.

Regarding vulnerable groups of consumers such as children, the EU could pursue policies on: promoting awareness-raising in young web and mobile users (and parents); ensure effective monitoring and evaluation of industry compliance with codes of practice and national regulation; and to expand digital skills training with close attention to digital divides based on inequalities of access, usage and knowledge. From a self-regulation approach, industry should provide and implement security and privacy by default (or privacy by design) for children and other vulnerable groups.

Regarding the lock-in effect, the EU could encourage the development of solid reputation and trust systems that are transferable from one service to another. With the increase of more and more different types of jobs in a variety of platforms, the consumers or users need ownership of their data, which include transactions and reviews, under a mixed model (for instance, rules need to apply for users not to delete negative opinions). More research is needed on decentralised structures such as Blockchain as the basis for a number of existing companies and platforms (e.g. Traity) for finance, online payments and reputation systems.

To further counter lock-in effects into specific cloud-based solutions, the EU could support alternative solutions that are open-source, decentralised, trusted personal clouds (e.g. Cozy Cloud or Sandstorm) which give full control of personal data to users. These can offer: storage of data in one place, rather than fragmented across the internet; continuous existence of apps, even when developers stop supporting them; no data mining or use of data for advertising purposes; and possibility for users to develop their own apps or maintain their own servers.



6. Appendix

6.1. Interviews

Company	Interviewee	Position
Blinkist	Holger Seim	CEO/Founder
CloudMe	Daniel Arthursson	CEO/Founder
Play Magnus	Kate Murphy	CEO
Fits.me	Jim Rudall	VP, Enterprise
Trapolinn	Clément Schmitt	CMO
Lawline	Joel Wickman	CEO/Founder

6.2. Websites

Company	Web address
Blinkist	https://www.blinkist.com/
CloudMe	https://www.cloudme.com/
Play Magnus	http://magnuscarlsen.com/playmagnus
Fits.me	http://fits.me/
Trapolinn	https://trapolinn.com/
Lawline	http://lawline.se/

6.3. References

- 1 Freemium Definition | Investopedia. Freemium Definition | Investopedia. Available at: <http://www.investopedia.com/terms/f/freemium.asp>
- 2 Freemium Is The New Shareware, As In-App Purchasing Matches Traditional Conversion Rates - Forbes. Available at: <http://www.forbes.com/sites/ewanspence/2014/03/01/freemium-is-the-new-shareware-as-in-app-purchasing-matches-traditional-conversion-rates/>
- 3 There are 7 Types of Freemium and Why That Matters. Available at: <http://sixteenventures.com/seven-types-of-freemium>.
- 4 Eurich and Burtscher, University of Cambridge. The Business-to-Consumer Lock in Effect. Available at: <http://www.cambridgeservicealliance.org/news/158/65/The-Business-to-Consumer-Lock-in-Effect---August-Paper.html>
- 5 Eurich and Burtscher, University of Cambridge. The Business-to-Consumer Lock in Effect. Available at: <http://www.cambridgeservicealliance.org/news/158/65/The-Business-to-Consumer-Lock-in-Effect---August-Paper.html>
- 6 Freemium.org | Lean more about freemium business models. Available at : <http://www.freemium.org/>
- 7 Making "Freemium" Work - HBR. Available at: <https://hbr.org/2014/05/making-freemium-work>
- 8 Infographic: Word of mouth drives growth of the collaborative economy - Vision Critical Blog. Available at: <https://www.visioncritical.com/infographic-word-mouth-drives-growth-collaborative-economy/>
- 9 Blinkist, www.blinkist.com
- 10 CloudMe, www.cloudme.com/en
- 11 Play Magnus, <http://magnuscarlsen.com/playmagnus>
- 12 Trapolinn, www.trapolinn.com
- 13 Lawline, Corporate presentation



- 14 Fits.me, <http://fits.me/try-it-now/>
- 15 Jeremy Rifkin on the Fall of Capitalism and the Internet of Things. Available at: <https://www.youtube.com/watch?v=3xOK2aJ-OJs>
- 16 Global B2C Ecommerce Sales to Hit \$1.5 Trillion This Year Driven by Growth in Emerging Markets - eMarketer- Available at: <http://www.emarketer.com/Article/Global-B2C-Ecommerce-Sales-Hit-1.5-Trillion-This-Year-Driven-by-Growth-Emerging-Markets/1010575>
- 17 Freemium.org | Lean more about freemium business models. Available at: <http://www.freemium.org/>
- 18 Smartphone App Revenue Dominated By A Handful Of Games And Developers. Available at: <http://www.forbes.com/sites/ewanspence/2014/07/08/smartphone-app-revenue-dominated-by-a-handful-of-games-and-developers/>
- 19 App Localisation: How to Unlock Revenue Overseas. Available at: <http://www.applift.com/blog/app-localisation-unlock-revenue.html>
- 20 Mobile games to overtake console revenues in 2015 -- and Apple's revenue could double Nintendo's | GamesBeat | Games | by Dean Takahashi. Available at: <http://venturebeat.com/2014/10/22/mobile-games-will-overtake-console-revenues-in-2015/>
- 21 Global Mobile Games Revenues to Reach \$25 Billion in 2014. Available at: <http://www.newzoo.com/insights/global-mobile-games-revenues-top-25-billion-2014/>
- 22 Jeremy Rifkin on the Fall of Capitalism and the Internet of Things. Available at: <https://www.youtube.com/watch?v=3xOK2aJ-OJs>
- 23 Making "Freemium" Work - HBR. Available at: <https://hbr.org/2014/05/making-freemium-work>
- 24 Jeremy Rifkin on the Fall of Capitalism and the Internet of Things. Available at: <https://www.youtube.com/watch?v=3xOK2aJ-OJs>
- 25 6 Trends Shaping the Games Industry in 2015 | Vungle: the way developers put video ads in their apps. Available at: <https://vungle.com/blog/2015/03/12/6-trends-shaping-the-games-industry-in-2015/>
- 26 Making "Freemium" Work - HBR. Available at: <https://hbr.org/2014/05/making-freemium-work>
- 27 Gartner Says Less Than 0.01 Percent of Consumer Mobile Apps Will Be Considered a Financial Success by Their Developers Through 2018. Available at: <http://www.gartner.com/newsroom/id/2648515>
- 28 Spotify Valued at \$5.7 Billion in New Report, Amidst Rumors of a Massive Money Search | Billboard Available at: <http://www.billboard.com/articles/6458093/spotify-5-billion-valuation>
- 29 Spotify Valued at \$5.7 Billion in New Report, Amidst Rumors of a Massive Money Search | Billboard Available at: <http://www.billboard.com/articles/6458093/spotify-5-billion-valuation>
- 30 Izabella Kaminska. 2015. The sharing economy will go medieval on you. Available at: <http://ftalphaville.ft.com/2015/05/21/2130111/the-sharing-economy-will-go-medieval-on-you/>.
- 31 Free video games say pay up or wait testing players' patience. Available at: http://www.nytimes.com/2014/07/06/technology/free-video-games-say-pay-up-or-wait-testing-players-patience.html?_r=0
- 32 iPhone apps: Parents sue Apple over children's costly and highly addictive games | Daily Mail Online. Available at: <http://www.dailymail.co.uk/sciencetech/article-2131826/iPhone-apps-Parents-sue-Apple-childrens-costly-highly-addictive-games.html>.
- 33 Free video games say pay up or wait testing players' patience. Available at: http://www.nytimes.com/2014/07/06/technology/free-video-games-say-pay-up-or-wait-testing-players-patience.html?_r=0