



Growth plan 'Sticky exercises'

Helping patients with NFC chips

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1. Introduction

1.1 Context

REshape is established to nurture and implement innovations within the Radboud UMC. An interdisciplinary team of medical practitioners, technicians, innovators and people from outside the center is working together on project basis. The innovations are aimed at facilitating or supporting the transition towards a patient-centered health system.

Students of the Nijmegen School of Management in the master specialization in Innovation and Entrepreneurship and Corporate Finance and Control were asked to provide advice on one of the projects from Reshape from a managerial point of view. The case which is investigated is called Sticky Exercises. In short, this project will help people doing their exercises in a different area than at their physiotherapist at any time they want by using their smartphone. This report will be about a growth plan for one of the possible future scenario's which is applicable for the project Sticky exercises. We use a scenario way of working because Sticky exercises has not entered the market yet.

1.2 About Sticky exercises

Unfortunately, a lot of patients are not doing their exercises due to different reasons. We will elaborate more on these different reasons in the later chapters. To us it is very important that patients are doing their exercises in a right way and whenever they want. Therefore a new application is brought to life. This application Sticky Exercises is hopefully going to be a solution for the aforementioned patients. In short, Sticky Exercises is able to fulfil the personal needs of the patients by showing the patients videos on their smartphones. One of the focus points of the application is that exercises can be done in a couple of minutes spread over the week instead of regular sessions which could take a couple of hours consecutively. In this way, it is just something you can do in between and not something you have to plan days in advance. As a second focus point, Sticky Exercises is an application which will help patients doing their regular exercises in a different area than at their physiotherapist by using NFC technology. In short, their physiotherapist will not be obliged to be physically present. For example, the patients can do their required exercises at home or at work when there is access to an NFC chip. In the end the flexibility of the patient will be much higher because of this application.

1.3 The scenarios

In the beginning, four scenarios were made to bring the tool to market.

The four scenarios are:

- 1) The physiotherapist or health care institution buys the tool, provides it to the clients and takes care of the whole service.
- 2) Setting up professional physiotherapist centers run by people who are hired by us as Sticky Exercises.
- 3) The patients who have to buy the tool while the physiotherapist provides professional help.
- 4) Everybody and every institution is able to buy the tool. In this case, there is an open market.

To conduct a proper growth plan, we decided to choose one scenario to base the growth plan on. After examining the four scenarios, we chose scenario 1 and 2. This is because we think this way of implementing the tool is most promising for Sticky Exercises. Scenario 2 is really promising, but it also faces very high startup costs. Therefore, we want to start with scenario 1, build up our reputation and cash flows, before scenario 2 is implemented. Scenario 1 faces much lower startup costs; the application needs to be developed and the chips need to be produced but there will be no need to hire many employees just yet. This will cut the costs compared to scenario 2 by a large amount. With the implementation of scenario 1, Sticky Exercises can build up its reputation and brand. Customers will experience the innovative functionalities the application facilitates. People will get familiar with Sticky Exercises and start getting confident with the application. This is a huge advantage when Sticky Exercises implements scenario 2: Sticky Exercises will already have a customer base. Also, scenario 1 has the advantage of experimenting with the needs of customers. In scenario 2, physiotherapists are educated to work with Sticky Exercises and the functionalities of the applications cannot be changed that easily, because there physiotherapists are already recruited. Scenario 1 gives us the flexibility we need in the starting phase, while scenario 2 gives up the growing opportunities we will need later on. Lastly, scenario 1 will already generate us some cash flows, which makes it easier to provide the funds for the implementation of scenario 2.

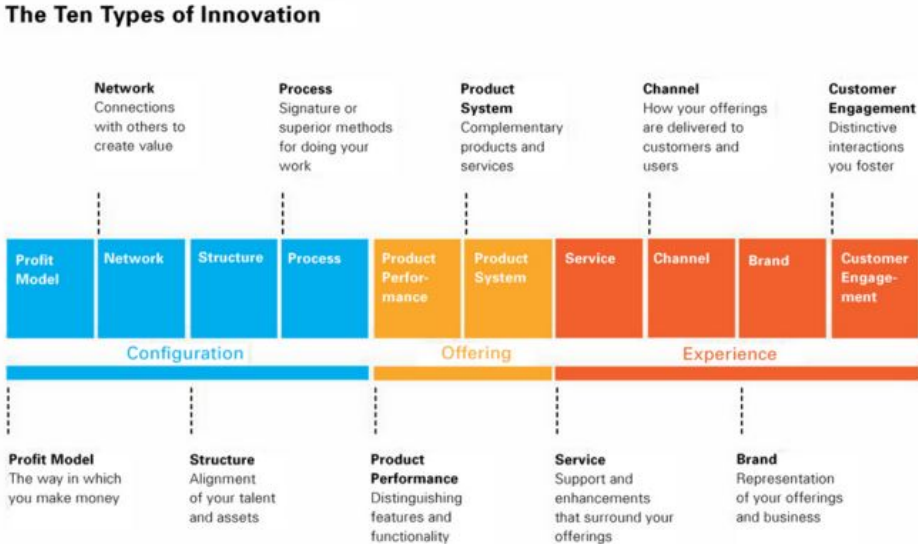
Scenario 3 is refuted because when clients buy the application themselves, this might not be in line with the way of working of their physiotherapist. The client has to have some contact with a physiotherapist, and if these physiotherapists are not involved, they might not want to work with Sticky Exercises or do not know how to work with Sticky Exercises. In this situation, the application does not guarantee a proper treatment for the customer.

In scenario 4 everything comes together, everyone who is willing is able to buy the application. While this might increase the sales of Sticky Exercises, it also faces serious problems. The client still has the risk of facing difficulties in finding a physiotherapists who knows how to work with Sticky Exercises. On top of that, the physiotherapists might have already bought the application for the use of his clients which makes the purchase of 1 of the two 2 parties unnecessary. These are possible negative experiences with our brand that we rather avoid. The combination of all participants into one service brings out loss of focus and creates confusion.

1.4 Framework

The framework which is used in this research is the framework of ten types of innovation. We will describe a growth plan of marketing and implementing the tool into the actual market. Rule of thumb for this chosen framework is to combine some of the ten types of innovation which will be useful for implementing a new innovation. For Sticky Exercises, we discussed that at least five of the ten types are different from competitors for the chosen scenario. These differences comparing to competitors are preferably advantages over these existing competitors.

In short, the ten types of innovation are:



Source: Ten types of innovation, *the discipline of building breakthroughs*
 The types on the left are most internally focused and distant from the customers; as you move toward the right side, the types become increasingly apparent and obvious to end users. Note: this is not a process timeline. Any combination of types can be present in an innovation and innovators can start by focusing on any type in the framework.

2. The scenario and the ten types of innovation

We decided to use the ten types of innovation model as mentioned above. Another rule of thumb of this model is that we need at least five different types of innovation to be different from other tools, e.g. competitors. In this chapter we will investigate in five types of innovation which will differ the tool Sticky Exercises from competitors.

2.1 Network

Sticky Exercises differs from other tools regarding to the network it uses. Comparing to others, Sticky Exercises is using the knowledge and skills of academic hospitals from all over the Netherlands. To begin with the Radboud UMC where the initiator and designer of the app are located. Through the knowledge they have in this academic hospital and the network they have to connect to other academic hospitals, the medical part of the application will be developed and perfected as much as possible. In total there are eight academic hospitals all over the Netherlands so the source of information is spread all over the country. In this way, there is a lot of information and especially knowledge available to implement into the medical part of the application Sticky Exercises. The application Sticky Exercises will already get attention by its usefulness due to the technical specifications it provides. But, this does not differ enough from competitors like Physitrack, Physiotec, Fytek and Fysiotools. The way the application Sticky Exercises really excels, is by using the aforementioned knowledge of academic hospitals to provide a lot of useful information to the patient. This way of working is not used by the other competitors and is a way of being an unique selling point. Additional information will be given at the Brand type of innovation.

2.2 Service

Also the service is a type of innovation in which Sticky Exercises differs from other ways of doing physiotherapy and also from other competitive tools. It differs a lot from current physical way of visiting your physiotherapist and doing exercises at their place because that is not necessary anymore. With Sticky Exercises, a patient is able to do the exercises at home any time they want to do their exercises. But again, this differs not much from other competitive applications such as Physitrack. The service of Sticky Exercises differs from these technological competitors by having at least one physical encounter with the physiotherapist. In this way, the patient should feel more bonding with the physiotherapist from whom he gets the exercises. Another advantage for the service is that at this first encounter, the patient is filmed by the physiotherapist to provide the best videos possible for

the patients. In these videos, the patient is doing the exercises all by him- or herself with professionals recommendations and tips. These recommendations and tips during the video remind the patients of executing the exercises in a good way when doing these exercises at home in their own time. Additional information about the recorded videos will be given at the customer engagement type of innovation. The third advantage Sticky Exercises has regarding to the service level, is that a patient is always able to schedule a physical appointment at their physiotherapist or an academic hospital to conduct an interim check of their body and for example to record a new video. These advantages let Sticky Exercises excel comparing to their competitors because they are not providing these services.

2.3 Product performance

With all the competition in the market, it is important to develop a product/service that has distinguished features and functionality from the competition. You need to offer value, distinguishing features and a certain quality to your customers. Sticky Exercises is flexible and available 24/7; you can do the exercises whenever you want and you are not stuck with the limited availability of the physiotherapist. Furthermore, since the patient watches a video of him/herself performing the exercise, including the instructions of the physiotherapists, it is very easy to use. The patient does not have the burden of having to face the physiotherapists every time (in real life or online) but he/she just scans the NFC chip and all instructions are there. One major advantage of the NFC chips is that you can put them wherever you want as a patient. In this way, the change of forgetting the exercises becomes very low because a patient can put them somewhere very visible as a reminder to do the exercises. Unfortunately, it can always happen that the patient still has questions regarding treatment. Sticky Exercises will therefore implement a chatbot into the application. The chatbot can answer your questions 24/7. This service will be provided by an academic medical team, which has a lot of expertise. Additional feature of the Sticky Exercises tool is that after your treatment program has ended, you can still use the videos which you have recorded. A lot of treatment programs only lasts for a certain amount of visits at the physiotherapist. With Sticky Exercises it is possible to keep using the videos for a patient by a subscription model after a patient passed his or her amount of visits regarding to their treatment program. This subscription model is free for patients who used Sticky Exercises already at their physiotherapist. In this way, patients do not have to pay for using the videos longer than their treatment program.

2.4 Brand

This is all about how you represent your offerings and business. It helps to ensure that customers and users recognize, remember and prefer your offerings to those of competitors or substitutes. Sticky Exercises stands out in this respect by means of its credibility and expertise. Sticky Exercises will operate from academic hospitals. As already mentioned the methods and procedures used are approved by these academic hospitals. Sticky Exercises will only work with physiotherapists who adhere to this standard. The physiotherapists and academic hospitals know how to operate Sticky Exercises and professionally do so. We will provide a certificate to these physiotherapists which signals to the customers that they will be taken care of very well. We could improve the branding by contacting doctors which will promote or have a positive attitude towards Sticky Exercises. Another advantage of this certificate is that for example when a patient moves away from his or her current city, they can always join a certified physiotherapist in another city. The standard of quality is guaranteed by the medical team behind Sticky Exercises at the other physiotherapist and the information and progress of a patient will not be lost but transferred between the two certified physiotherapists. In this way, it is easy to switch physiotherapists when moving away because the same way of working is also guaranteed.

2.5 Customer engagement

It is important to keep your customers engaged, if you understand the needs of customers you can make sure that you foster compelling interactions. Patients need to be physically present for a first meeting, they build on the relationship with their physiotherapists but also take the first steps to self-engagement. At this meeting, the patient needs to do the exercises and this, including the instructions of the physiotherapist will be recorded. The patients will later watch him or herself do the exercises instead of some unknown person. This is not only more fun for the customer, it is also more effective because every body is different and the patient is able to better carry out the exercises. The customer will occasionally go back to the physiotherapist to carry his/her progress and to record new exercises. In this way, the customer *stays* engaged. Nowadays people are busy all the time, it might be difficult to plan and remind yourself to do the exercises. But with Sticky Exercises the patient will the NFC stickers in his/her own house and it gives the patient a reminder and keeps him/her engaged in the process of recovery.

3. Identify opportunities

In the previous chapter, we already elaborated on the chosen scenario and its types of innovation. In a sense, these types of innovation also are implicating some different ways of

opportunities for Sticky Exercises. This is because these types of innovation are showing why the application should be brought to market because it excels when comparing to other applications. In this chapter, we will highlight these opportunities in short and also have a closer look to more general opportunities which the market is facing.

The network which Sticky Exercises uses is a type of innovation but could also be seen as an opportunity for the future of the application. Because the application is working together very narrowly with academic hospitals Sticky Exercises has a lot of specific and professional knowledge regarding to the human body which can be used in the application. This will also help with the innovation and also opportunity of branding. The aforementioned certificate is a good way to make the application stand out. The service which Sticky Exercises uses is also different from the current market so can be considered as an opportunity as well. The bond between the patient and the physiotherapists will be stronger when the patient personally knows the treating physiotherapist. Nowadays, personal care is considered to be more and more important (Ministerie van volksgezondheid, welzijn en sport, 2014) and the level of personal care can be improved by a personal physiotherapist who is always supervising the patient. In this way, the service is an opportunity when comparing to other applications where there is no personal physiotherapist involved but only the application. This argument and the fact that the patient is watching him or herself on the videos will also be effective for the customer engagement which is one of the types of innovation and which can be translated to another opportunity in the future. Patients can relate very easily to the videos because they are watching themselves doing the exercises.

Another more general opportunity is the fact that the use of smartphones is still growing. In 2017 about 89% of the individuals in the Netherlands (> 12 years) has access to a mobile- or smartphone. In 2016 this was 84,6% and in 2015 this was 78,8% (CBS, 2017). This is an opportunity for Sticky Exercises since this application uses mobile- or smartphones as a platform. Out of these numbers can be concluded that the great majority of the targeting group has access to this platform. CBS also states that the 89% will become certainly higher in the near future. This is again promising for the application Sticky Exercises. Another promising fact we found is that the percentage of NFC included mobile phones increased very rapidly over the past few years. In 2012, only 18,2% of all mobile phones had NFC technology in it. Nowadays, the expectation for 2018 is that about 64% of all mobile phones includes NFC technology. Major reason for this exponential growth is that Apple included NFC technology in their newer models (from the iPhone 6). This means that in the future all

mobile platforms are supporting NFC and according to NFC-world (2014) the growth will continue even more exponentially.

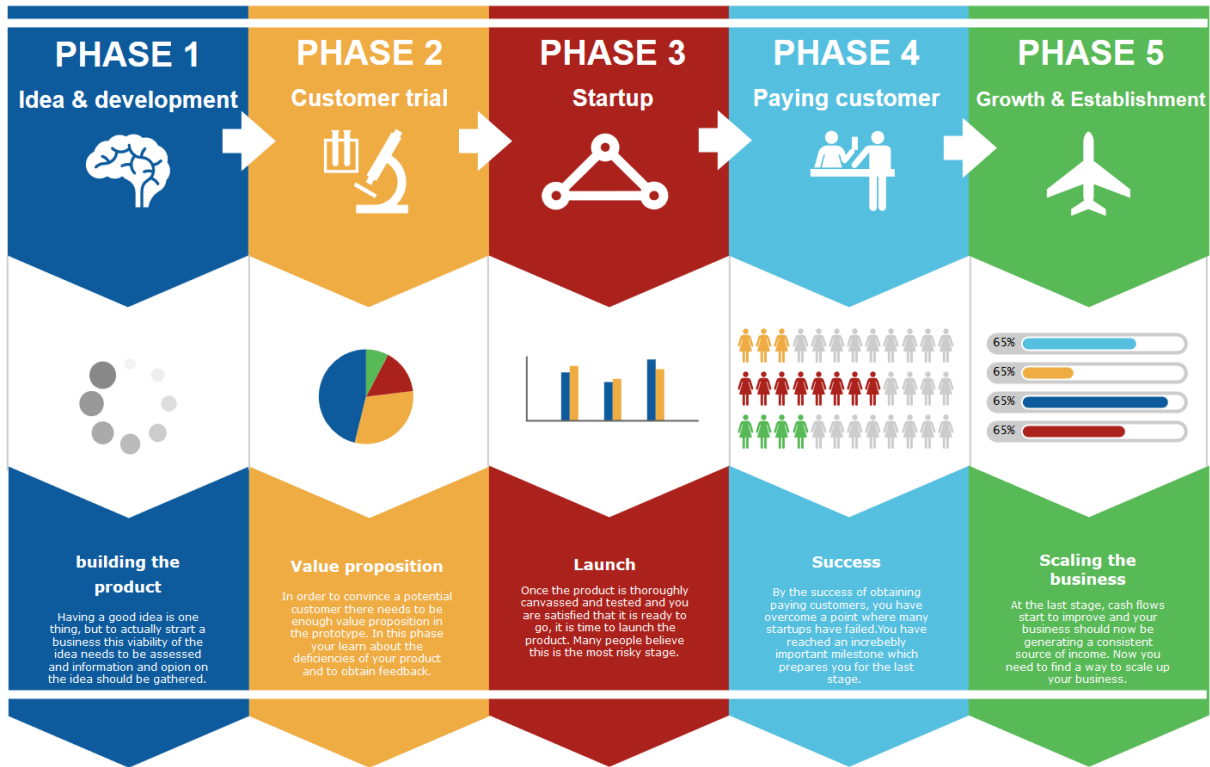
In our current 24/7 economy, it is beyond dispute that individuals are busy. A lot of articles and researches (Volkskrant 2016, NRC 2015, CBS 2017) are proving this thought. This means that for a person or a patient, time can be very scarce. In this way a patient needs more and more flexibility when it comes to personal care. That is where Sticky Exercises can help. With Sticky Exercises, there is no need anymore to schedule an appointment with a physiotherapist which can take a couple of hours. Now a patient is able to just conduct the exercises within a couple of minutes wherever they want. And by reminding the patient of doing exercises by using the NFC chips, it will help the patient to do the exercises on a frequent base.

Another opportunity is the aforementioned chatbot. This device will be implemented into the application to provide the patient knowledge and feedback any time of the day. This is very convenient for the patient, but the chatbot is also an opportunity because no other application has got a chatbot implemented. In this way, Sticky Exercises will distinguish itself from other application by being always accessible for any questions or remarks. Behind this chatbot there is a medical team with a lot of expertise. Together with an ICT-team they are optimizing the chatbot to guarantee the best possible answers to patients who have questions.

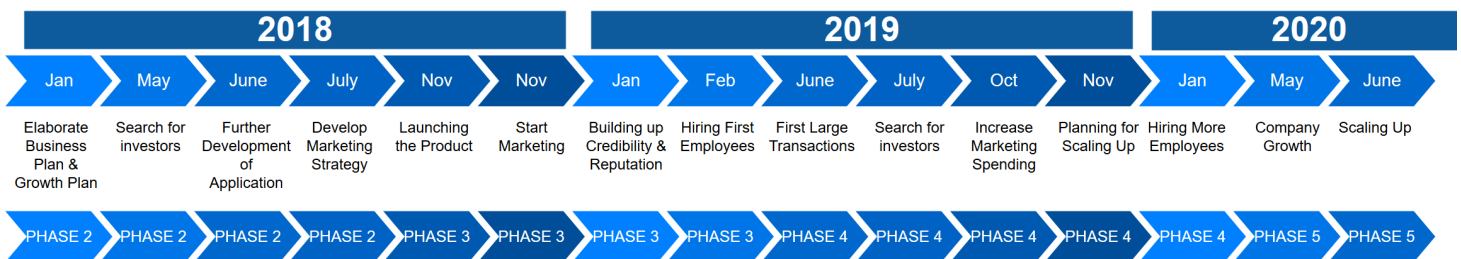
4. Review needs

To be able to map our needs, it is first important to know in what phase the company is at the moment. From that, we can plan where we want to go and what resources we will need to get there. In (starting) business cycle literature, roughly 5 types of phases are ascribed to the startups life cycle. We captured the common 5 phases in the illustration below. Sticky Exercises is currently in phase 2: customer trial. There is a prototype of the application Sticky Exercises which is being tested. The prototype is working, but it will need further development to be able to function for a larger customer base.

Startup business cycle



Now, it is every company's ambition to end up in phase 5. But to achieve this we need to have a plan. The timeline of the actions we have to take is captured below.



First, the business plan and growth plan is thought through very well. In these plans it is captured what Sticky Exercises is going to sell, how it positions itself in the market and how we are expecting to grow.

To develop the application further, we expect that we will be needing €250.000.-. We will not be able to come up with this much money ourselves. Therefore, we need to look for ways of obtaining more funding to be able to launch the application. Also, there is additional

spending like marketing, the NFC chips, application maintenance and server costs. Parties that might be interested in investing in Sticky Exercises are health insurance companies. If these health insurance companies have customers that use Sticky Exercises, the customer invoices less from the insurer. Potential investors are SGS from Zilveren Kruis. SGS is a part of the health insurer Zilveren Kruis and invests in healthcare related projects that are in need of cash and they feel have a lot of potential. Another health insurer that might be invest is Aegon.

When investors have funded Sticky Exercises, we will be ready to develop the application further for commercial use. After the application has been developed, the application will be launched. The product will not sell itself, so before launching we will have to come up with an appropriate marketing strategy. When the product is launched, this market strategy will be put in motion. In this period, Sticky Exercises does not have many customers yet. But for the customers that are using the application we are building up our reputation. We will need to hire employees at this stage because the application has real time support and if users are experiencing any problems, we need to facilitate support. With the marketing and the experiences of customers, the product will attract a larger client base. At this stage we will be generating some positive cash flows. However, these are not sufficient for helping the company grow further. We will need to attract even more investors at this stage. Since the product is already on the market and generating positive cash flows, the expectation is that Sticky Exercises is likely to receive quite large amounts of funding. The exact amount of funding relies among other things on the marketing strategy developed in July 2018. When the funds have been raised, the marketing spending can increase. From this point on, Sticky Exercises expects high growth. More employees are needed to be able to keep the application and helpbot up and running. In anticipating increasing growth not before long, the company needs to work on a plan for scaling up the business. When the growth is there, the company can really take off and survive on its own.

The company will start with launching the application for use of existing physiotherapists. The ambition is for Sticky Exercises to hire our own physiotherapists which are specialized in the use of the application. In the start, these physiotherapists will operate from the academic hospitals. But when we have reached sufficient growth, Sticky Exercises can expand to other hospitals as well. This is one way to scale up the business, which will be relatively cheap: the costs do not increase as much as the revenue. If Sticky Exercises has acquired a sufficient amount of market share, the business can expand by means of offering other medical service like general practitioners.

5. Affordability assessment

In order to assess the affordability of Sticky Exercises, insight into the fixed and variable costs and the product price is provided. After that insight is provided into our ability to raise the capital needed to cover these costs. Lastly, it is explained how financial independence is reached and how the company will grow from that point on.

5.1 Fixed costs

To startup the company the most important fixed cost is the cost to develop the application. The prototype of the application is finished, but this prototype is not functional for the sale of the product and the use of the product by a larger sales group. Two types of the application need to be developed. On the one hand a web-based dashboard for the physiotherapist to manage the data, exercises and other assistance to the client. On the other hand, the application for the client needs development. The client should be able to easily use the application, to have a clear overview of the exercises that he or she has been assigned and should be stimulated to perform the assigned exercises. The expected costs for the development of the application with these functionalities is €400.000,-. The investment in the production of the application will only be a single investment. After this first investment, there will be development and maintaining costs each year.

After the production of the application, additional costs come into play for supporting and maintaining the application. These costs consist of updates, app store and app hosting. These are expected to consist of 25% of total cost of the application development. This means that the maintenance costs are expected to be €100.000,- each year.

Another cost that is not directly dependent on the volume of sales is marketing. This includes the costs of advertising, but also to the building up of a good reputation and the plans developed to attract and retain customers. Marketing is a huge expense, especially for a startup company like Sticky Exercises. For at least the first year, we conducted our marketing budget of €250.000 as follows:

Commercials television:	120.000	(1 commercial every day)
Commercials radio:	100.000	(1 commercial every day)
SEO Google:	12.000	(1.000 a month)
Facebook marketing:	10.000	
Instagram marketing:	3.000	
Posters + flyers:	5.000	

Total marketing costs: 250.000

The choice for marketing channels such as commercials on television and commercials on radio are consciously made. Weekly millions of people are watching television or listening to the radio. Most of the targeting group of Sticky Exercises is watching television and listening to radio once a day (CBS, 2007). The CBS states that persons who are aged 65+ are watching television about 21 hours per week. Therefore, it is most interesting to invest most of the budget in these types of marketing. Other online channels which are going to be used for marketing are Facebook, Instagram and Google. Besides that, there are also going to be offline ways of marketing such as posters and flyers campaigns.

The online part of the marketing is becoming more and more important. In general, online marketing is growing exponentially over the past 10 years (IAB, 2016). Because it will grow further in the future, it is important for Sticky Exercises to compete into this online market from the very beginning.

Besides that, the offline market is also very important to Sticky Exercises. Because the targeting group of patients who are aged 65+ is not always able or capable to find Sticky Exercises online by themselves. In this way, the offline campaign containing posters and flyers will be of help. In this way, Sticky Exercises promotes itself also in an offline way and this will certainly gain more brand awareness amongst the elder majority.

5.2 Variable costs

Clients that use Sticky Exercises need NFC chips, which they can scan in order to request their exercises. A client is expected to, on average, need 7 NFC chips per person. This is a typical variable cost, that very clearly increases when the volume of sales increases. The costs per NFC chip at this moment is €0,50. However, increasing purchase levels will decrease the costs per chip. The costs of NFC chips per patient are €3,50.

The video exercises that pop up when scanning the NFC chips are not saved on the phones of the clients. This video pops up from a central storage where all videos are stored. Storing these videos and the information of the clients, physiotherapists and their accounts on a server can be very costly. With a quality of 720p, a person with 7 videos needs a capacity of 95MB. For other data, like the name of the client, the physiotherapist, health insurance, etc. 5Mb will be sufficient. So in total, server storage of 100MB per person is required. 1000GB of storage is available for €400,-, this is sufficient for 10.000 people. The costs per year for a

client base up to 10.000 will be €4.800,-. Additional server space can be bought for an additional €400,- per month for 10.000 patients.

5.3 Product price

The key to set the product price is to be cheaper than the competition, but earn enough profit to continue operation. Since Sticky Exercises is a startup company, the price must stay relatively low. People are not familiar with our brand and service so there must be enough incentive for customers to buy Sticky Exercises. Sticky Exercises distinguishes itself from the competition on the basis of the 5 types of innovation: network, service, product performance, brand and customer engagement. Hence, there is some pricing power there. However, pricing are best to stay relatively low especially in the startup phase of the company. The profit margin on the NFC chips is therefore 10%.

Our largest competitor is Physitrack, who charges its clients €9,95 per month.

HWO/physiotec charges €8,26 per month and one-time connection costs of €120,-. Fytec charges €5,95 per month and PhysioTools charges €9,95 per month. These are all prices for small customers. For big buyers, a custom price is made.

To be competitive, a price of €4,95 per month per patient is suitable. With the first purchase of our service, the customer will receive 20 NFC chips for free. Additional stickers can be bought for €0,55 each.

5.4 Capital needs

The NFC chips costs per patient are about €3,50,-. A paper folder including presswork is more expensive. Because patients constantly change exercises, it takes a lot of time to keep this administrative work. These are all hidden costs that can be saved when using Sticky Exercises. Physiotherapists get a compensation per treatment program, when physiotherapist can save on this program, cutting these costs is very appealing. On top of this, the first parties to participate in our project will share out profits. The first 20 physiotherapists to step will earn 1% of the profit Sticky Exercises is making for the rest of the company's life. This will encourage investors to step in the investment in our company early on.

In order to start-up the Sticky Exercises, capital is needed. In the next paragraph the budget and break-even point are elaborated. We expect to have a capital need of roughly €1.000.000,-. There are multiple ways to attract this capital. Since Sticky Exercises reduces the costs of physiotherapists, institutions or persons that have an interest in the healthcare

sector are potential investors. Capital could be attracted from a single party or from a combination of institutions/persons. We distinguish two possible types of investors:

- *Health insurers* might be interested in investing in Sticky Exercises since it can reduce their costs significantly. 1 out of 5 people in the Netherlands go to the physiotherapists, so this is a large expense for health insurers. Also, the competition is supported by or is working together with health insurers too, which proves it to be a promising option.

Health insurers we believe are willing to invest are Zilveren Kruis, Interpolis and Innovatiefonds zorgverzekeraars.

Zilveren Kruis has a foundation called Stichting Gezondheidszorg Spaarneland (SGS). SGS supports innovative ideas that have potential to strengthen healthcare. SGS has already invested in similar startups such as E-patiënt and Ontwikkeling Smiley (Zilveren kruis, 2017).

Interpolis has an initiative which is called Interpolis LAB. Interpolis LAB is looking for smart solutions to improve their services. Interpolis LAB has already invested in innovative projects and has provided guidance to these entrepreneurs (Interpolis, 2017).

Innovatiefonds zorgverzekeraars is a fund that continues the work of Stichting Centraal Fonds RVVZ which was founded in 1999. After the voluntary health insurance has been lifted, the fund manages and spends the reserves that were released. The fund contributes to finding solutions for problems in the healthcare sector by means of supporting projects (financially) that contribute to better, simpler and smarter healthcare (Innovatiefonds zorgverzekeraars, 2017).

- *Other Investors*: other persons/institutions that are willing to invest in startup companies like Sticky Exercises have a large amount of capital available and are constantly looking for promising startups. Examples of these investors are business angels, venture capital funds and banks.

Business Angels are wealthy individuals who are interested in a minority interest in startup companies and offer knowledge and contacts. *Business Angels Connect* is a business angel network that focuses on Food, IT, chemical, Med-tech and Life Science companies. Business Angels Connect has a special focus on companies linked to academic hospitals, universities and business accelerators (Business Angels Connect, 2018). Another way of finding angel investor is through the website <https://angel.co/netherlands/investors>. More than 3.000 Dutch angel investors are

registered to this platform. *Holland Venture* is a venture capital company that invests in SME companies in the healthcare and technology sector with growth ambition (Holland Venture, 2018). This venture capital company might provide funding to startup the company, but might be more interesting to consult in a later phase.

5.5 Budget and Break-even

The budget is prepared in the graph below. The expected costs and revenues as explained earlier are taken into account.

	2018	2019	2020	2021	2022	2023
Patients	1500	3000	6000	12000	20000	25000
App development costs	€ 400.000					
App Maintenance costs	€ 100.000	€ 100.000	€ 100.000	€ 100.000	€ 100.000	€ 100.000
Marketing costs	€ 250.000	€ 250.000	€ 250.000	€ 250.000	€ 250.000	€ 250.000
NFC chips costs per chip	€ 0,50	€ 0,50	€ 0,50	€ 0,50	€ 0,50	€ 0,50
7 chips per person	7	7	7	7	7	7
Total chip costs	€ 5.250	€ 5.250	€ 10.500	€ 21.000	€ 28.000	€ 17.500
Server costs	€ 36.000	€ 36.000	€ 72.000	€ 72.000	€ 72.000	€ 98.000
Unforeseen costs	€ 10.000	€ 10.000	€ 15.000	€ 15.000	€ 20.000	€ 20.000
Total costs	€ 791.250	€ 391.250	€ 432.500	€ 443.000	€ 450.000	€ 465.500
Product price: 4,95 per month	€ 89.100	€ 178.200	€ 356.400	€ 712.800	€ 1.188.000	€ 1.485.000
NFC chips (7 per patient) revenue	€ 5.775	€ 5.775	€ 11.550	€ 23.100	€ 30.800	€ 19.250
Revenue	€ 94.875	€ 183.975	€ 367.950	€ 735.900	€ 1.218.800	€ 1.504.250
Profit	€ -696.375	€ -207.275	€ -64.550	€ 292.900	€ 768.800	€ 1.038.750
Profit after taxes 20%-25%				€ 234.320	€ 594.100	€ 776.530
% profit to physiotherapist				20%	20%	20%
Net profit				€ 187.456	€ 475.280	€ 621.224

In the year 2023 we will have reached our break-even point. The investors will have received their return on the investment, and Sticky Exercises is will be making enough money to move on on its own. The first 20 physiotherapists that started using Sticky Exercises will already have received the first part of their compensation.

Appendix 1

Angel, (2018). *Netherlands Angel Investors*. Retrieved from: <https://angel.co/netherlands/investors>

Business Angels Connect, (2018). *Onze Missie*. Retrieved from: http://www.businessangelsconnect.nl/nl_NL/onze-missie/

CBS, (13 June, 2007). *65-plussers kijken het meest tv*. Retrieved from: <https://www.cbs.nl/nl-nl/nieuws/2007/24/65-plussers-kijken-het-meest-tv>

CBS, (10 November, 2017). *Internet: toegang, gebruik en faciliteiten*. Retrieved from: <http://statline.cbs.nl/Statweb/publication/?DM=SLNL&PA=83429NED&D1=0,2-5&D2=0,3-6&D3=0&D4=a&HDR=T&STB=G1,G2,G3&VW=T>

Holland Venture (2018). *Holland Venture: growth and buy-out capital*. Retrieved from: <https://www.hollandventure.com/>

IAB, (21 September, 2016). *Digitale advertentiemarkt groeit verder door met indrukwekkende cijfers*. Retrieved from: <https://iab.nl/nieuws/digitale-advertentiemarkt-groeit-indrukwekkende-cijfers/>

Innovatiefonds zorgverzekeraars, (2017). *About us*. Retrieved from: <http://www.innovatiefondszorgverzekeraars.nl/innovatiefonds-zorgverzekeraars-organisatie>

Interpolis, (2017). *Interpolis LAB*. Retrieved from: <https://www.interpolis.nl/lab>

Keeley, L., Walters, H., Pikkell, R., Quinn, B., (15 July 2013). *Ten types of innovation: the discipline of building breakthroughs*. New Jersey, United states: John Wiley & Sons publishing

Kervezee, L., (10 October 2015). *We hebben het druk druk druk. Maar het is oke om nee te zeggen*. Retrieved from: <https://www.nrc.nl/nieuws/2015/10/10/we-hebben-het-druk-druk-druk-maar-het-is-oke-om-n-1543234-a1147657>

Ministerie van volksgezondheid, welzijn en sport (June, 2014). *De maatschappij verandert. Verandert de zorg mee?* Retrieved from: <http://vwshuisstijl.nl/uploads/2014/07/vws-veranderingzorg-web.pdf>

Petch, N., (29 February, 2016). *The five stages of your business lifecycle: which phase are you in?* Retrieved from: <https://www.entrepreneur.com/article/271290>

Redactie, (7 January 2016). *Sinds 1980 zijn we steeds drukker met werken en zorgen*. Retrieved from: <https://www.volkskrant.nl/binnenland/sinds-1980-zijn-we-steeds-drukker-met-werken-en-zorgen~a4219948/>

Yasuda, J., (9 March 2016). *The 6 stages of a startup*. Retrieved from: <https://www.inc.com/jeff-yasuda/the-6-stages-of-a-startup.html>

Zilveren kruis (2017). *Stichting gezondheidszorg Spaarneland*. Retrieved from:

<https://www.zilverenkruis.nl/zorgaanbieders/innovatie/stichtingen/Paginas/Stichting-Gezondheidszorg-Spaarneland.aspx>