

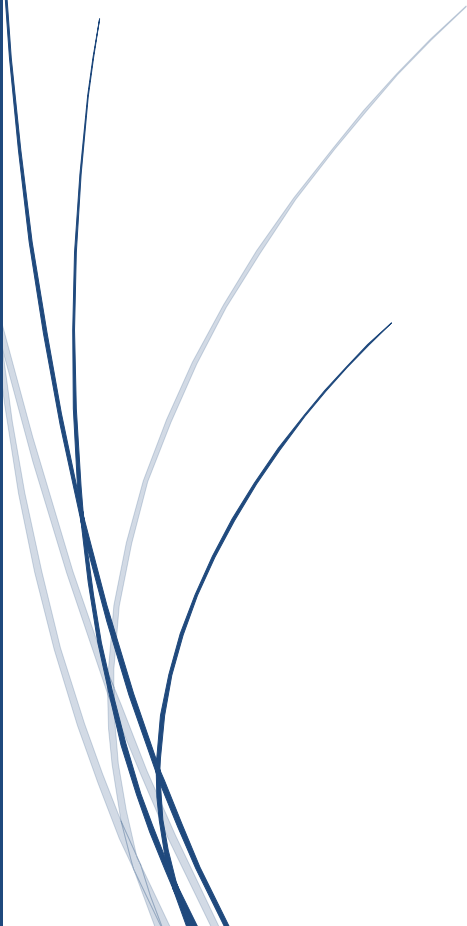


7.12.2015

# TimeTravel Amsterdam Dam

Bachelor thesis Financial  
Accounting and Finance

Carmen Martensen



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## **Bachelor thesis Financial Accounting and Finance**

Carmen Martensen

Saxion University of Applied Sciences, Maarten Harpertsz. Tromplaan 28, 7513

AB Enschede, Netherlands

Finance, Economy and Management,

Supervisor Stefan Schenke

Assessor Mike-Jarno Vaanholt

Company coach Boudewijn Goudswaard

The Missing Link, Pelmolenlaan 12-14, 3447 GW Woerden

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## Management Summary

The research and the advisory report is made for the final stage of the studies International Finance and Accounting. The Academy of Finance, Economy and Management part of the Saxion University of Applied Sciences, requires that the student has to do applied research report for their final stage. Furthermore, they are required to do the report based on a real management problem that influence an explicit company. To assist the student in their work the university and the company will support the student with a coach. The company, the Missing Link, had a management problem that should be analysed by a student in where after the student can give advice for further procedure. As a support from the university and as a first assessor Stefan Schenke, Senior Lecturer is assigned to the report. The student worked in the company as an intern to get access to all necessary information and to write the dissertation. That took place in the time between the 15th of March 2015 and 15th of August 2015. The management problem describes the issues of the Missing Link with the app TimeTravel, Amsterdam Dam. The company use The Lean Canvas Business Model, but they did not follow the described steps by the author of the model. Therefore, some problems occur, and they might be a part of the research result. Furthermore, they have no Cash Flow analysis of the project, and they do not know how to start. The final research question “What is the cash flow for the app “TimeTravel streetview of the past” Amsterdam Dam version for the main paths of the customer risks?” was figured out to be most important for the Missing Link.

Four subquestion support the main research question to get a result with a clear advice in the end. Firstly, the Lean Canvas Business Model will be analyzed, and the previous issues of the model are problematic. To get a more in-depth view of the customer group the Missing Link wanted to use users as their customers because it is important to analyze them more specifically. However, maybe the customers do not wish to pay for the app that is a prerequisite. That makes the outcome very variable. The following part of the Google AdWords tool description already detect the problem with the price of the app and the expenses per click with pay per click system. Three different Google AdWords advertising methods are used. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] At the moment, it is not possible to detect which format was more successful because to do that a code needs to be implemented in the app that does not happen so far. As a conclusion and advice for the Missing Link that the tool Google Adwords is too expensive to use it as app advertisement and another way needs to be considered. Furthermore, it seems to be a good idea to come up with a new Lean Canvas Business model or to use another tool for an accurate result.

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## 1. Part I

### 1.1. Introduction

The report is set up in three chapters to distinguish between academic work, the sub-questions and the overall conclusion of the report. The report starts with the basic information that the reader needs to know about the company. Then the Problem analysis follows to describe the management problem and narrows down to the final research question including sub-questions. Some additional information about what the research will be used and how the research is designed follows afterwards. The Methodology describes keywords and literature used in the report. That part is followed by two analysis technics to get an in-depth understanding of the problems and ideas of the product. The last part of chapter one explains several terms that are important to know to understand the report. In chapter two each sub-question is answered and includes a sub-conclusion for a better overview. The calculation that are made and other documents that provide necessary information are enclosed in the appendix. Then the final chapter follows in which the main research question is answered in the conclusion. To follow up a reflection part is included to describe the necessary limitations and the process of the report. Additionally, to the conclusion an advice part describes which step the company should consider. The report ends with the references list that is set up in APA style.

### 1.2. Company Description

The Missing Link and Delight Interactive work as a partnership for the product development of the TimeTravel app. The Missing Link is a heritage consultancy. They started their business in 2000 and were located in Woerden, Utrecht. At the moment, eight employees, four interns and several independent partners for specific projects working at and for the Missing Link. Their main operations are specialist on achieving social, cultural and economic objectives in which the heritage is not the self-purpose but the public usage of heritage. The Missing Link offers not only actual advisement and independent coaching for archaeological fieldwork but also advice to minimize the risks for a return of investment of archaeology. The partner, DelightInteractive Solutions is a small company in Delft. Founded in 2009 by Frans van Duinen and Renè Elstgeest. They are specialized in Augmented Reality. For the TimeTravel app development, they handle the app construction and support.

The Missing Link has a typical structure for the size and kind of company. Boudewijn is the founder and also responsible for every decision that is made. However, the base is a flat hierarchy which means that everyone works independently and can make suggestions. The employees are separated in senior executive managers, senior manager and junior managers. The cooperation with DelightInteractive came through a partnership for a different project. The companies discovered that they need support to find new ways to their idea. Therefore, the problem analysis will explain in depth the management problem and what research question comes up.

### 1.3. Problem analysis

The Problem analysis is one of the main factors to understand why a problem exist in what kind of a problem it is in particular. Several successful business man gave of what to expect by the kind of work which needs to be done for a successful business. As Kawasaki (2010) said "Ideas are easy. Implementation is hard". According to Thomas (1932-2002) "What do you need to start a business? Three simple things: know your product better than anyone, know your customer, and have a burning desire to succeed". Galligan (2011) explained "In my opinion, the future of mobile is the future of everything". Ahonen (2013) described "Mobile is the enabling centerpiece of digital convergence. Mobile is the glue for all other digital industries to use when approaching convergence, but mobile is also the digital gateway for the real world to join in this global metamorphosis of human behavior. Hoffmann, phrased (2012) "If you are not embarrassed by the first version of your product, you've launched too late". Mehta said (2008) "The mobile device has become our communications hub, our diary, our entertainment portal, our primary source of media consumption, our wallet, and our get-away to real-time information tailored to our needs. The revolution is now!". Jobs (2011) supposed "Your work is going to fill a large part of your life, and the only way to be truly satisfied is to do what you believe is great work. Moreover, the only way to do great work is to love what you do". Kalin (2010) said "The last 10% it takes to launch something takes as much energy to the first 90%".

#### 1.3.1. The management problem

The Missing Link grew fast in the first couple of years to a company with 22 employees. In 2010, the company's revenues decreased due to the financial crisis from which they still suffer. Three years of declining revenues resulted in a reduction of employees to 6 in 2012. Now the number of workers only slightly increased to 8 employees who will probably increase further due to the growing market and the step into a new market with partners. Moreover, several management companies were hired to improve the business performance and to enhance the management and team skills inside the enterprise.

During a consulting assignment in Boxmeer was the idea of an app developed. The app should be able to show the historical environment of Boxmeer and users should be able to learn something at the same time. The idea was born, and the app TimeTravel was developed. However, the app development was done by another company and paid by the municipal of Boxmeer. The app was fruitful and interesting with several games and an overview of the historical part of Boxmeer.

After that, the Missing Link found in DelightInteractive the partner for developing other TimeTravel apps. First some other projects were developed for example Ooster Dalfsen. Therefore, the Missing Link designed together with DelightInteractive the app TimeTravel Dalfsen in which it is possible to explore the stone age of the region of Ooster Dalfsen. Involved were also the Saxion University of Applied Sciences the Geemente Dalfsen and Historische Kring Dalfsen. It was a very successful work partnership.

The new business idea to developing apps without a direct customer is a high risk but also offers many possibilities. The idea is to show users how interesting the past was and to educate them how the past looked. To realise the TimeTravel apps the Missing Link and DelightInteractive started a partnership for that project. Both partners seem to have equal rights, and every company is doing what their profession is. However, to have two equal partners can cause problems. The main disadvantage is the distance between their locations and the lack of communication. That sometimes results in miscommunication and a time-consuming decision-making process. Another problem is the fact that the



information of both companies is not accessible for the other company. That increases the communication problems and causes confusion because of the different information knowledge.

Another issue is that both companies have their profession in either history or design/ app development, but no one is specialized in business development, finance and marketing. That issue is not necessary a problem, but it could lead to misinterpretation of numbers and to possibly misunderstand the market size. The TimeTravel app could be part of the tourism, education or another sector. However, all markets have their specification, and it is not easy to compete with other companies who have more experience in the industry. It would be in favour for the company to hire a person with experience in the particular segment they would like to enter with knowledge of finance, business and marketing. The companies agreed on the Lean Canvas Business Model as a guideline to develop the TimeTravel app. The Lean Canvas Business Model by Ash Maurya (2012) has the concept to develop a solution to a problem customers have. The Missing Link, though, developed the solution and started to look out for the problems they could solve with that. They used the model and changed some parts of it to adapt it to their purpose. The problematic could be that the problem their customer has do not need the TimeTravel app as a solution.

To find out if the TimeTravel Amsterdam Dam app is a solution for users. The companies decided to launch the app at the Amsterdam Dam. It was very successful because 3000 users downloaded the app. Due to the media and possibilities at this time it is to expect that mainly Amsterdam citizens downloaded the app. Nevertheless, the app was offered for free which means there is no proof of how successful it would be under other circumstances. The Lean Canvas Business Model includes risks as a part of their Model, and the above-described part is a possible risk for the TimeTravel app.

Other potential problems occur with “which channel or combination of channels is more appropriate than others?” “when does the app will reach the break-even point?”.

Moreover, how is this related to the app development and customers? The app has several customer groups from citizens who are interested in the city’s history, tourists (Dutch and foreigners), schools and also heritage organizations. Which influence do the different risks have on the investment and how profitable could be the investment be? To be more accurate, it is only possible to do research on a small part of the whole management problem. Broken down the report will show the outcome on the risks and the influence on the investment. As a result, the following research question appears.

### 1.3.2. Research question

What is the cash flow for the app “TimeTravel streetview of the past” Amsterdam Dam version for the main paths of the customer risks?

*Ash Maury defines (2012) customer risk in the frame of building a path to the customers that includes the Channels, Customer segment and Early adopters of the business model Canvas.*

*The main research question considers a fundamental financial knowledge of terms Cash Flow and Net Profit Value (NPV). It is important to understand the business model by the Missing Link and an in-depth knowledge of the different customer groups to answer the question. Afterwards, it has to be clear which paths exists and which are necessary for the company. These steps allow the researcher to analysis the cash flow of the paths and to answer the main research question.*

How is the lean canvas business model designed for the Time Travel app?

What attracts customer to interact with the TimeTravel app?

Which main paths (customer risks) exist for the Missing Link?

What is the influence of the cash flow per path?

The following paragraph start with the intended use of the research and the research design.

### **1.3.3. Intended use of research results**

The external usage of the research result is to show the company what option they have or might not have. Furthermore, the Missing Link wants to improve and adjust their business model related to the results. It will help to make future predictions and to make decisions that will lead in the most appropriate direction. Moreover, it is the first time that the TimeTravel app is analysed in combination with a research and advisory report. The company hopes to achieve clear results that could also be used for the company in total. The internal use of the research result is to analyse and to calculate the cash flow of the TimeTravel app. Additionally, it should outline analysing opportunities that could help other researchers in the app market. The research design outlines key information to understand the research topic.

### **1.3.4. The research design**

The research problem is to collect data to different analysis scenarios for the profitability of the TimeTravel app. As a base, the lean canvas business model is used, and the tests related to the customer risks and how the Missing Link will reach his target group. Moreover, a pricing analysis is included to evaluate the importance of the price, and what affects it has on the sales of the TimeTravel app. Furthermore, the research is concentrating on users as customers which means tourists and citizens. That predefined the channel opportunities to online and offline channels. However, the research focuses only on online advertising of Google AdWords. A closer description to why and how is given later in each chapter. For the first sub-question, it is essential to know the concept of the lean canvas business model that will be described in books and articles. For the second question, it is also necessary to get a good knowledge of the lean canvas business model and the design made by the company. Furthermore, an understanding of the tourism branch is an advantage to answer the question. To access this information discussion with the company, books and articles and also statistics about tourism are the most appropriate way to find answers. To find the data for the third question, the previous two one has to be answered as well as a discussion with the Missing Link to detect their main uncertainties. For an overall overview, it is essential to analyse the paths and options and to get to know the tool. Therefore, books and articles will provide the basic understanding. For additional information, the next subquestion needs to be answered because the collected information would help for an in depth description. The last sub-question is a result of the previous information and tests, or experiments could provide the numbers for an accurate calculation. The information gathered from all sub-question are then able to answer the main research question. The following part will give an in-depth background of the research that will cover the product description as well as the competitors in the market.

#### **1.3.4.1. Topic background**

The business of app development is quite new to the enterprise world, but it gets more and more important for our world. It will furthermore, change the world and the numbers of smartphone users and tablet users are growing significantly each year. It is one of the

most growing businesses. Therefore, the importance of Apps is increasing as well and is an excellent chance for innovations. A smartphone with apps can nowadays not only communicate with other people. Moreover, it is a payment method, to access; movies, play games, “call” a car, doing work and so much more. The list of possibilities is endless, and therefore, it is evident that more entrepreneurs and companies are trying to enter the market that leads us to high competitiveness and at the same time many possibilities. The great ideas of an app is not an assurance of success because the business is continually changing which means it is necessary to launch the product. The business model of Ash Maury “the lean canvas business model” is, therefore, a good solution for app development. It says to should launch a minimum viable product to get early adopters. Afterwards, there is always the chance for improvement.

The Missing Link and Delight Interactive launched the app “TimeTravel, streetview of the past” several months ago with a presentation at the Amsterdam Dam.



The app was offered for free for some weeks as a special launch to test if people are interested in the app. With over 3000 downloads and several positive feedback implies a general interest in the app. However, it does not prove if users are willing to pay for the app. Therefore, it is necessary to test if and how much users would pay for the app. That is an essential key to the strategy of TimeTravel not only for the current project of the Amsterdam Dam but also for other places. Users as the primary customers are risky on the one side but, on the other hand, there is potential for higher earnings. The success of the product entirely relies on the users who are probably too risky. Therefore, a risk management strategy in spreading the risks is a useful tool for some backup. The question is, are the other customers willing to pay. For example, customers as an advertisement platform or Cultural heritage organizations because of the learning effect of the app. The research is necessary to identify possibilities and different scenarios to evaluate the app TimeTravel to outline the next steps.

#### 1.3.4.2. Product Description

The app “TimeTravel, streetview of the past” is a cooperated development between Delight Interactive and The Missing Link. The idea of the product is to spread history in an interactive and, therefore, more entertaining way. Through the cooperation between The Missing Link, a company for cultural heritage and Delight Interactive as a corporation for 3D modeling augmented reality and software development is for that kind of product an excellent combination. With their combined expertise, they can create a close historical picture of the past.

TimeTravel is a new idea of travelling to other cities because the tourists can see not only the present of an impressive place they are also able to explore the past. Moreover, they get additional information about the buildings, culture and occurrences. It is an enormous database of precise information that are much easier to access through the app. The interactive possibilities are an interesting way of exploring the past.



figure 1

The picture shows a part of the Amsterdam Dam and how it looked like 1609. It is interesting to see that buildings that look quite old have not even been built at this time. That makes history more feasible not only for tourists also schools can benefit from it as a history lecture with much more possibilities and visual information. Also, citizens of Amsterdam, as well as companies who located in that area, could have an interest in this information. The short video introduction shows it even more precise [https://www.youtube.com/watch?feature=player\\_detailpage&v=nO0WZeMJkiQ](https://www.youtube.com/watch?feature=player_detailpage&v=nO0WZeMJkiQ).

The TimeTravel app developed for tablets and Smartphone's and had, therefore, an enormous possible target group. The business Insider published at the end of 2013 the statistical data that 22% of the global population at the end of 2013 will own a Smartphone and 6% a tablet. Whereas the tablets are quite often shared which means much more users have access to a tablet than devices sold. The smartphone and tablet market is a fast growing market which means possible customers for the app. The app now designed for the Amsterdam Dam and with successful project management other places will follow. However, the app is available in the iOS (Apple) store, an Android and Microsoft version will follow.

#### 1.3.4.3. Competitors

The Missing Link is not the only company who is doing an app for history. Several cities and enterprises are trying the same.

One of the biggest competitors is Google Street view that announced to launch a program (app) for the past with pictures. So far they are only planning to start a program where the user can look back several years from the date Google started making photos of the streets.

A similar app launched from the City Adelaide, Australia (2014). The app is free of charge and includes several pictures and stories of Adelaide. It shows attractive walking

paths through Adelaide and their most interesting historic places and buildings. The main part of the buildings still exists, and the places did not change that much which makes it probably not as necessary to have a virtual reality as at the Amsterdam Dam. The app provides excellent and useful information from historical places, but the designer of the app are not direct competitors to the TimeTravel app.

Another competitor is the chronicle of the Berlin Wall, a free of charge app that shows the history of the Berlin Wall. The app displays the route of the wall, movies, pictures and secondary literature for additional information. Moreover, the app offers different routes to explore the Berlin Wall and with some fixed routes the user can follow particular points of interests. However, the app does not reconstruct the reality of that time because the app is mainly designed for educational purposes.

A fourth competitor Barcino 3D is an app that shows the past of Barcelona during the Roman empire. It is the only competitor who is using a virtual reality and provides the user with additional information. The initiator and publisher of the app are the city of Barcelona (Ajuntament de Barcelona). Additional information about who was involved and closer information are not available in English, Dutch or German. The release date was October 2014 in the app store. The app itself is very complicated, and the user has many possibilities to explore the past of Barcelona.



The app guides the user through different places and shows how the city looked like during the Roman Empire. Furthermore, it is possible to overlap the past with the present to virtualize the differences. The main disadvantage is the complexity of the app and the flute of information that's hard to handle. The app itself will be only a competitor if the Missing Link decides to do an app of TimeTravel Barcelona. The publisher is the city itself which means they are not interested in designing other apps for different cities.



## **1.4. Methodology**

The methodology part includes some information about keywords used to find the right articles and to make more clear what topics will be part of the research. Furthermore, a literature review overview with more specific information from where articles, books and so on came from.

### **1.4.1. Keyword specification**

Keywords are one of the main factors for an efficient and qualitative research results because they can influence the background information a researcher can find. That means the researcher needs a detailed knowledge about the topic, intended use of the research, what goal the report should achieve and what are known terms for that specifications. The main keywords for that research are tourists, Amsterdam, Google, Google AdWords, online marketing, analyzing tools, scenario analysis and profitability analysis.

### **1.4.2. Literature review**

The selected literature varies from topic through keywords. For high quality, the report is based on several articles, books, statics and self-collected data. Furthermore, all results of the report are analysed and interpreted in using financial modelling for financial advice at the end. Besides that, also non-monetary information will be given through the models utilized in the theoretical framework and observations.

#### **1.4.2.1. Article selection**

For some internet articles, the report includes search results from Google Scholar, but the main items previewed from the Library website at the Saxion University of Applied Science. The main advantage of the online Library search is the higher quality of articles and the fewer restrictions on access them from specified magazines. Furthermore, these articles are easier to access after the report is finished. Whereas, online articles could be taken out by the website owner, or even the whole website is not online anymore.

#### **1.4.2.2. Book selection**

The right book selection requires intensive research through the library and internet. To find a book that could add value to the report is difficult to find, and it takes a long time to figure out what is important. The evaluation of books also changes in a process of writing the report. However, sometimes it is quite clear which book is important. Regarding the TimeTravel app, the Missing Link decided to use the lean canvas business model by Ash Maurya. That means it is useful to read his book to use it as background information and to get a more detailed understanding of the business model. Other topics are Google, online marketing and also financial modelling and research. Except for the lean canvas book, all books are from the Saxion library or previous used as teaching material in the International Finance and Accounting studies.

#### **1.4.2.3. Webpages**

Another way to find appropriate literature are web pages especially updated information from books and articles. The advantage is that it is easy to update web pages. At the same time, it is also the main disadvantage because it is hard to decide how trustworthy the source is and how long will the web page last. Therefore, it is critical to choose what is a good source. For the financial analysis, the report used exclusively investopedia.com, which is a very famous and official web page. As the teaching material of the Saxion is only useful for a starting point, investopedia.com is a real possibility for further research and helpful for the decision-making process.

## 1.5 Analysing models

This part will show two different models. Firstly, the SWOT analysis to understand the market and the product. The second one is the e-marketing mix a developed model of the marketing mix for a nowadays complete overview. The outcome will support to analyse the Lean Canvas Business model and which possible issues will occur but also gives a first understanding of what are important facts about the product and market.

### 1.4.3. SWOT analysis

The SWOT analysis is a tool that identifies the strength, weaknesses, opportunities, and threats of a company or product. Therefore, it is more than appropriate to do the analysis for the TimeTravel Amsterdam app because to implement a new product it is significant to see all advantages and drawbacks of a product. The strengths and weaknesses are an analysis of the product itself whereas the opportunities and threats analysing the market. The tool is a standard technic and may outline what the company has to do to accomplish their goals and what difficulties they could face in implementing the product into the market. Another advantage of the SWOT analysis is that the results can be used to adjust the lean canvas business model. It would increase the transparency of the product with its assets and problems. That analysis is a possibility for the reader to get a better understanding of the market and the company with their issues and benefits. Furthermore, it is easy to understand and therefore, also non-business related professions can work with it. Moreover, it helps the researcher as well because it outlines problems that can be included in an updated version of the Lean Canvas Business Model. Furthermore, it could affect the evaluation of the different risks and therefore which customer risks will be tested.

#### SWOT Analysis

<b>Strengths</b>	<b>Weaknesses</b>
<b>Opportunities</b>	<b>Threats</b>

One of the major strength of the TimeTravel app is the 3D application of the past. No other competitor has the same kind of virtual reality as far as the research showed. The specialized partner, DelightInteractive, made this to one of the main features. Furthermore, the details and accuracy of the virtual reality were only possible because of the background information. The Missing Link is as a heritage consultancy an expert for history and heritage. The high expertise of the employees made it possible to represent an accurate past of the Amsterdam Dam. The details and the illustrated way makes the app a fantastic tool to experience the history of the Amsterdam Dam of 1605. Through their past projects as Boxmeer, they gained knowledge that is now one of their strength but more important the company can use the app as a blueprint for other apps or extended version. Possibilities would be gaming, education or even app guided tours through Amsterdam. However, the main weaknesses may be the fact that the app is still a bit boring. The lean canvas business model says that the app only needs to be a minimal viable product and has, therefore, no extras so far. That implies that the product needs maybe few more

features to be market-ready. As this could be a huge drawback for potential customers because they can go through the app in a few minutes and no excitement will come up. The app is informative, and a good start but the product right now maybe not exciting enough to survive on the market as a paid app. Another weakness is clearly that the Missing Link would not be able to compete against a huge company such as Google. Also when they miss the competence and expertise in the first row, they can buy these skills and push their product with capital into the market. Furthermore, the app is a product of several companies in which the Missing Link and DelightInteractive are the responsible and leading shareholders. That kind of work combination can cause difficulties such as disagreements in design, procedure, and others. That may influence the future of the product and could be a high risk for the lifetime of the app.

The market otherwise has its rules and a product has the solid strength it does not mean that the market likes the product. The market opportunities for TimeTravel vary primarily regarding customer groups has the app many possibilities. Nevertheless, the current app has its targets in the tourists and citizens who are interested in the history of the city of Amsterdam. The app hotspot is located at the Amsterdam Dam, which is in the city center of Amsterdam. The place is a good starting point to attract users to download the app because many tourists walk by the Dam. TimeTravel has significant market opportunities because more than 6.4 million visits the city for leisure Amsterdam in 2013 (expected increase in the following years). At the moment statistically 22% own a smartphone that results in a potential target group of 1.4 million visitors who could download the app. Almost 95% of the Amsterdam visitors walking through the city and 85% visiting a museum that implies that the tourists are interested in culture. That concludes for a target group of 1.2 million potential customers.

Unfortunately, the market has also its threats that could prevent the app to be successful. The tourists are flashed by all the opportunities in Amsterdam which mean the product competes with any other attraction around Amsterdam, which includes museums, Amsterdam Dungeon, Madame Tussauds, Canal tours and so on. It is a competitive market, and every attraction tries to attract the customers. It will not be easy to convince the client that TimeTravel is a unique experience that worth it to buy and to spend time with the app. Furthermore, the willingness to pay for an app as a user is by ca. 33% the users need to be convinced that it worth it to pay for the download.

Overall the app TimeTravel has a chance to be successful and that people are willing to pay for it. The main obstacle is to convince the people that the app is a “must have” when they travel and that they want to be a part of the experience. It can be done through different technics that may need an overwork of the app to bring it to a real exciting experience than just a mere app with no real features.

#### **1.4.4. E-Marketing Mix**

The e-Marketing Mix has its basics from the 4P's Product, Place, Price and Promotion. The tool is also known as marketing mix and was first expressed by E J McCarthy in 1960. “Marketing Mix” itself is a general phrase for different choices a company has to make to implement a new product into the market. The e-Marketing Mix uses the known 4P's but extends these on three more P's to adjust them to the more complex business world nowadays. The analysing tool will help to analyse the current situation of the company. Many other tools also as the Lean Canvas Model is used by start-ups. Whereas the Missing Link exists since 2000, and only the commercial app development of TimeTravel is quite new to the business. Therefore, it makes sense to review the structure of the company based on the future products.





**Product:** How can the Missing Link develop TimeTravel?

There are different options to develop the app. One group can be defined as an online development in which the company can use a website, social media like Facebook, blogging, e-mail. On the other side, there is the conventional offline development as tourist operator, iAmsterdam as the local tourist's information.

**Price:** How can the Missing Link create their pricing model?

The pricing model is probably the primary factor for a successful implementation of the market. The Missing Link has several options for an app. First the user fully pays for the app. Another option is advertising inside the app from other businesses. Furthermore, they are options for the educational purpose of buying a license. For example, the local high school is using the app for the lectures and the schools paying a specific amount of money each year for the allowance of using the app.

**Place:** Which channel can the Missing Link use for TimeTravel?

The channels vary from offline to online, and both could be an added value. Offline channels would be tourist's guides that are doing tours with the TimeTravel app, Billboards with a QR code to link to the download page that also works for magazines and other print media. The other way is online through the website or cooperation. However, as an app all sales are going to the iOS store for Apple devices and Play store for Android devices. That means TimeTravel is bounded to the provided channels.

**Promotion:** Which promotion possibilities does the TimeTravel app have?

The app TimeTravel already used public relations as a promotion tool. Due to the launch of the Amsterdam Dam radio channels and newspapers reported about the new app and 3000 citizens downloaded the app. The app was furthermore, provided for free for 1 week during the launch. The other option that is going to be the primary factor in the report is advertising. There are possibilities of using online and offline advertising tools like Google AdWords, Facebook, iAmsterdam, and others.

People: How does the staff from the Missing Link interact with stakeholders and customers of the TimeTravel app?

That part still needs many improvements. So far, there is no communication between the users/customers and the company at all. For that, the company needs to design more feedback options via Facebook, website and also through the channels. Regarding stakeholders, the company still has to define who are their stakeholders and how to contact them. Good starting points are fairs or conferences. However, the Missing Link is in contact with several stakeholders that would be interested in buying the product. Still the connection to the users is necessary to gain a higher quality.

Process: Which process adjustments are necessary for the TimeTravel app?

The process structure for the TimeTravel app is not clear because of the cooperation between the Missing Link and Delight Interactive the tasks are not clearly divided. Particularly regarding administration and operating business the business owner has to decide which way they want to take and who is responsible. Furthermore, it is important to provide every employee with his tasks and responsibilities and also provide them with all access they need for their work.

Physical evidence: How does the TimeTravel app provide their physical evidence to their customer?

The TimeTravel app has its web page that is a great start point, but it needs continuous improvements to have real physical evidence for customers. Furthermore, the Missing Link cannot say if the customers like the web page and the navigation of it because of the lack of communication between the customers/users and the Missing Link.

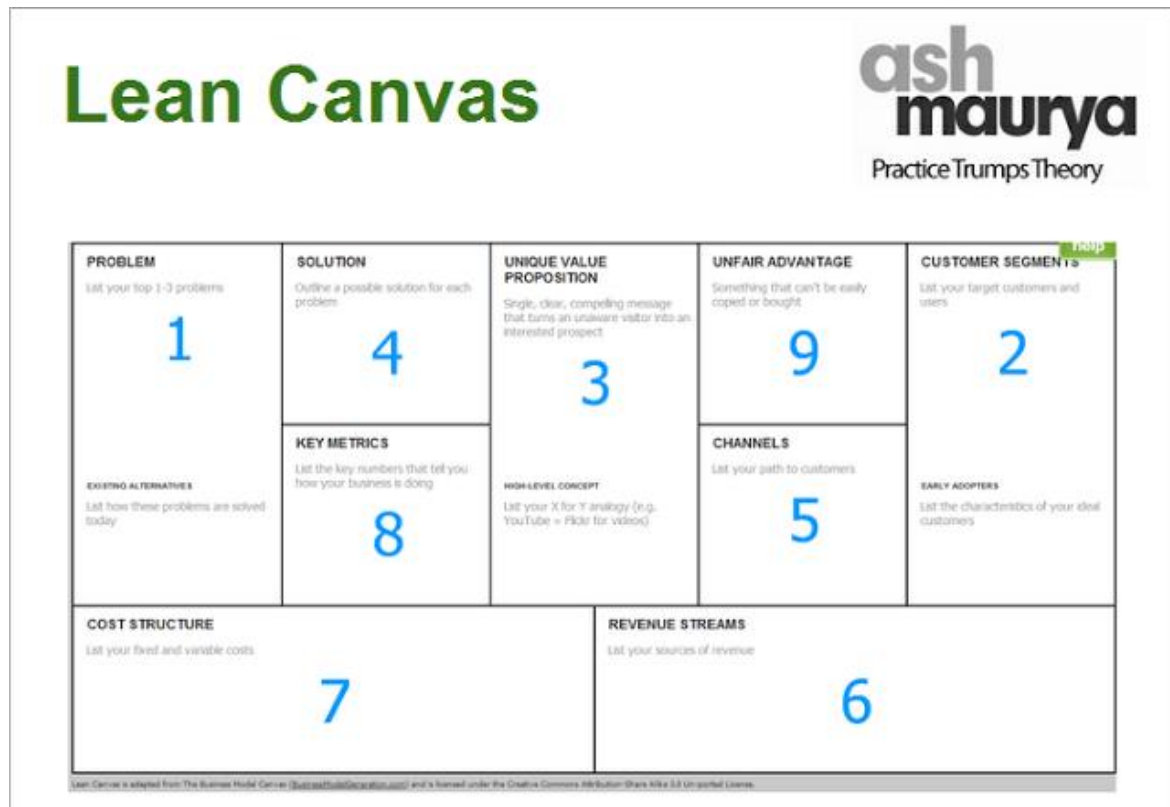
Both models showed inside information of the whole situation of the TimeTravel app. The SWOT analysis compared the TimeTravel app with other products on the market and what kind of problems as is the product market-ready as it is. The e-marketing mix outlined that the Missing Link has no real contact to possible customers of the TimeTravel app. As in combination of is the product market-ready is the part of customer feedback extremely important. Therefore, the two models gave a great first impression of problems and also of positive development of the app.

## **1.5. Theoretical Framework**

The theoretical frameworks will explain the general expression that are important for the whole report. Other unknown, new or unusual expressions will be described in the specific section where it is used. As a base for all quotations and referencing the whole report uses the APA style which is a prerequisite by the university.

### **1.5.1. What is the Lean Canvas Business Model?**

Designed by Ash Maurya and influenced by Steve Blank's book *The Four Steps to the Epiphany* and Eric Ries's early works on the Lean start-up methodology. The lean canvas business model is a tool to help entrepreneurs to organize their organisation/product. In comparison to a business plan, a business model is sketched on one page and includes all necessary information as keywords. The model divides into nine areas in which every area is supposed to develop a product further. Ash Maurya designed a 9 Steps particular process to stay on track with the product development. Starting with Problems in which the entrepreneur thinks about problems people could have and adds possible existing alternatives. The next step is the customer segment, who are the target users and clients for the entrepreneur. That can be added now or later by potential early adopters. Is there a select group of users or customers who would use the problem solution before the key target group do so? The third phase is the Unique Value Proposition which Ash Maurya outlines as a "single, clear, compelling message that turns an unsuspecting visitor into an interested prospect". In other words a statement of how the company transform visitors into potential customers. Furthermore, it is also useful to think about related systems and add them to the High-Value Concept. It is an elevator pitch that describes the project in a few words and for a better understanding compared with a known system (Time Travel: "Google street view of the past"). The fourth step is the solution of (each) problem related to the potential target group. The next part are the channels which mean which channels does the company use to reach their customers. The sixth step is the Revenue Stream that does not only mean monetary streams but also information of consumers or any else which has added value to the entrepreneur. In that section, the company has to write down the sources of the revenues. After the income sources are set, the Cost structure is the next phase to complete. The company should list all their fixed and variable costs for a comprehensive overview and as a reminder to take it into consideration for further procedures. The key metrics has to be filled out next, and it tells the entrepreneur in a small view how the business is doing. However, through Ash Maurya the company can also use it to declare their long-term key metrics especially at the beginning of the development. The ninth step outlines the Unfair advantage the company has in comparison to competitors. This is supposed to be one of the most challenging parts of the business model and many companies filing that out later.



### 1.5.2. What are risks?

Douglas Hubbard (2014), defines risks as “A state of uncertainty where some of the possibilities involve a loss. Catastrophe, or another undesirable outcome” (p.84). Then the following question appears what are uncertainties? Douglas Hubbard defines it as “The lack of complete certainty, that is, the existence of more than one possibility”. The lean canvas model includes those uncertainties in their consideration of risks which mean the user of his model do not have to worry about the distinction and can follow the procedure without hesitation. The more important question here is the quantity of the risk and how it reflects the development of the product and the company.

### 1.5.3. What are Customer risks?

The customer risks in this report are related to Ash Maurya's procedure of to prioritize risks. There are three categories in which the lean canvas model distinguish between the stages of the risks. “Product risks: Getting the product right, customer risks: Building a Path to clients and Market Risks: Building a viable business.” The report is concentrating only on the customer risks which means the other two categories are not closer evaluate. The customer risks include two steps of the model: Customer segment with its target group with early adopters and channels. Only these two stages are involved in the particular research question and tested.

### 1.5.4. What is an App?

The BBC and Anita Campbell explains the word app, the short form of application, is associated with software that runs on smartphones, as iPhone, or tablets. There are sometimes described as a mobile app to differentiate them from “web apps” or “online apps”. The report is specified on mobile apps in which the use of the short form app is used. A “mobile app” will open by clicking on the icon on the smartphone or tablet. An app is still a software program, but a specific one that displays the smartphone and tablet nowadays.

## 2. Part II

This chapter will answer each subquestion. For a better overview each section is made up differently to cover all essential information for the reader. However, each section includes a sub-conclusion to pin out the main parts of each answer. It starts with the design of the business model, followed by the customer attraction and goes on with existing paths and last but not least the cash flow analysis. The information the report will provide are collected data and analysed data. The analysed data are mainly summarized by the Google Adwords tool. However, the report will only show a small part of the available data. The selection of the used data are made by the importance to the report and the validity of the data.

### 2.1. Design of the Lean Canvas Business Model

The business plan adopted from the Lean Canvas Model is divided into eight segments. The whole model starts with the question that problem customers have. Many enterprises have already a product idea/ solution as the Missing Link had with TimeTravel, but the Lean Canvas says it is important to start with the problem the company wants to solve. It can happen that the product idea is not the right solution for the problem they outlined. The lean canvas business model was made up by the Missing Link, and only a few adjustments were made during the research., The report will use the set order by Ash Maurya to display the results to explain the business model of the Missing Link. A copy of the business plan is attached in the appendix.

#### 2.1.1. Lean Canvas Business Model

##### 2.1.1.1. Problems

The first important part of a business model, especially for the lean canvas model are the problems. That are normally issues that people have, but they do not need to be aware that the problem exist. The solution shows then that the users had a problem beforehand, and now a company provide them with a solution. However, the fact that the Missing Link used the Lean Canvas model different to the guidance of Ash Murray made the company some adjustments. The problems of the existing model describe possible issues in connection with the solution. The problems are separate in two parts first customer problems and second user problems. In total, it is a short description of the anterior part of the customer attraction and the related issues. The main part here is the part if they are willing to pay for the app? For further development? Moreover, does the app offers me new knowledge? Another more for users related question is where can I download the app, regarding a lack of Wifi connections and also the availability of other languages next to Dutch. At the moment, the app is also available in English which means a broader target group is possible. Additional to the Problems the segment also displays existing alternatives to the app idea. That are clearly museums and books. Although, history is an interesting topic man people may be not interested enough to buy such an app.

##### 2.1.1.2. Customers Segment

The next segment is the customer segment. In other words, who is the target group of the Missing Link and TimeTravel? That segment has the same separation as the problem part. Under customer, there are users. Resellers and site owners. Users, in term of citizens of Amsterdam and tourists. Resellers in term of local shops like for example Bijenkorf, who has a huge shop direct at the Amsterdam Dam. It would be possible to include the history of their building in the app. Site owners of historical websites who wish to sell their books, paintings or want to provide information about the past.

As a special part, early adopters are here included as well which are tourists of the Amsterdam Dam. Another idea and maybe more correct would be the Amsterdam citizens because they already proved the interest in the app. There were approximately 3000 downloads after the launch in Amsterdam, and these downloads are supposed to be mainly for the citizens. Furthermore, the app was offered for free which means that it may have not enough validity.

#### **2.1.1.3. Unique value proposition**

One of the toughest part of the report because it is challenging to decide what are the main features of the product and why is it unique. For the TimeTravel Amsterdam Dam product is this visual experience of the past via tablet or smartphone. The idea is to provide a new idea of travelling. Do not travel just to another place instead travel to the past. However, what makes it outstanding to other apps and alternatives? In the additional High-Level Concept in the business model is it described as to see pictures and books in an augmented reality and explore the past without opening a book. This section is important for a company because it outlines first impressions for marketing and what are the catching main features.

#### **2.1.1.4. Solution**

The solution is clear here because the TimeTravel app is the main factor for that research. Therefore, this part makes only clear what features the app has. As the visually and collected information about the past of a place or area. Although, this part is meant to find the solution of problems it still has its value if the company already found the solution. It is possible to recheck if it is valuable what the business developed.

#### **2.1.1.5. Channels**

The channel is a significant part of the marketing of the TimeTravel app. The question where is the best place to advertise that has an influence on the success of a product. For the app, the tourist guide seems to be a good idea. Especially, iAmsterdam the main platform in Amsterdam for marketing and tourist affairs. However, they are not only responsible for the tourist guide in Amsterdam also for the Billboards. That are two channel options that rely on a specific company. However, this is limited to offline options. Online tourists guides are still independent, and many option exist. Other ideas are museums and Flyers because customers might be interested in both the TimeTravel app and museums. Last but not least social media as Facebook. However, the internet is an important channel for the TimeTravel because tourists get their information about Amsterdam from the internet before they go there. The research of iAmsterdam in 2012 shows that approximately three-quarters of visitors check online before they visit Amsterdam including business visitors. However, the channel is one of the main factors of the research and will be more analysed later.

#### **2.1.1.6. Revenue Stream**

What is a revenue stream? Alexander Osterwalder and Yves Pigneur 2010 describe the revenue stream as a block that represent the cash or also called income. It does not mean the profit of a company. There different ways of how a company can earn money by their customers. The probably most traditional way is the sales income. For the TimeTravel app, it simply means selling the app to users. Another method that varies famous for app business is the freemium model. That means a customer can download the app for free but to get access to extras or complete access they have to pay. According to AppAnnie (registration required) in 2014 a freemium model has higher gross earnings than other pay methods. Another method is free through advertising model in which the user can



download and use the app for free, and the third party as resellers pay for the advertisement that is implemented in the app that is described in detail by Anderson (2009). Nonetheless, there are more opportunities for an app business to generate money but for that report the Missing Link decided to concentrate on the paid method because for a freemium model and advertising model several adjustments need to be made in the app program.

#### **2.1.1.7. Cost structure**

The cost structure is in fixed and variable costs divided. That seems on the first few simple and for the fixed prices they exist an overview. The costs of the production, hosting costs per year, development, distribution is available. Although it is necessary to have a detailed description the Missing Link missed the assignment for a breakdown. The expenses per employee and how many hours they were working on the project were not noticed. As the working hours are variable costs, it is necessary to provide an overview that they have to do in the future. For the current model, they made some estimations. Another cost is the marketing budget that can be fixed as well as a variable because it depends on the marketing tool the company will take. Still, it is possible to set up a specific budget for it to have limitation. Furthermore, the company has to break down the expenses for electricity rent and other maintenance for a real estimation of the overall cost.

#### **2.1.1.8. Key Metrics**

The key metrics means what long term goals does the company follow. That was always clear for the Missing Link because they want to develop a worldwide stamp book from different ages and places of history. Another important point for the business was to provide accurate information about the past and history. Thirdly, the company delightInteractive had the idea to use the app as a basis for other products as games. The augmented reality is a perfect basis to build up online games that are placed in the past.

#### **2.1.1.9. Unfair Advantage**

Last but not least is the unfair advantage the most difficult part of the lean canvas business model. What is the advantage the Missing Link and delightInteractive has in comparison to other companies? They were the first movers to set up a historical app for Amsterdam but to be the first mover is normally not enough. Murray (2012) describes in his book that it does not mean to be successful only because a company were first. Other advantages are more important for a successful business. The main advantage is the combination of the professions that are combined in the two companies. The Missing Link with their knowledge in archaeology and history and DelightInteractive in media design and programming.

### **2.1.2. Difficulties**

The lean canvas business model needs to be adjusted continually because the external and internal occurrence are changing. The main problem was that the Missing Link started with the solution and not with the problems they wanted to solve. It is now difficult to decide if the TimeTravel app is the real solution or product and does the customers will be thrilled enough to pay for it. Furthermore, the costs structure has to be clear and at the moment is more guessing than knowing which will lead to unfavourable decisions for the app.

### **2.1.3. Sub-Conclusion**

As a result of the analysis of the business model the model has still several lacks and it is a challenge to decide if it will work in the future. The problems with the costs, problems and solutions might influence the chances of success. Although, the lean canvas model is not perfectly worked out there is still a possibility for a successful product development and distribution. The main outcome from here is the channel, customer segment. The next part will explain the customer segment more in depth.

## **2.2. Customer attraction of the TimeTravel app**

It is a challenge to provide a product that fulfil the needs and wishes of customers. Especially when a company comes up with a new product idea as the TimeTravel app because customers have to know that they want it. Furthermore, as an app it is tough to stand out and compete with millions of other apps. Customers do not search so far in particular for the TimeTravel app, and that makes it problematic. The TimeTravel app has different kind of potential clients that could be interested in the app for financing and using purposes. The report itself is concentrated on the individual user market that is one of the primary customer groups.

### **2.2.1. Individual Users**

The users are the key to a successful product because they are going actually to use the product. The individual user needs to be convinced that the product worth it to have and as a topic to pay for it. The users are separated into different user groups. The first group are the citizens of Amsterdam. They are close to the spot of the app, and many citizens were interested in the TimeTravel app. A launch event at the 16th of February and some articles in the local press convinced approximately 3000 citizens to download the app. The TimeTravel app was offered for free as advertisement. That shows that citizens are willing to download the app, and it also offers the Missing Link the information that there is a general interest in the history of Amsterdam. Therefore, it is a useful lead for future development. It has to point out that the app was offered for free which does not show the willingness of the citizens paying for the app. Another user group are Dutch and foreigners' tourists. The app is offered in Dutch in the Dutch iOS store since February, data for foreign visitors do not exist. Since mid-June, the app is also available worldwide in the English language, and now it is possible to reach a broader range of visitors. Overall the interest of tourist in Amsterdam of history is quite high. The marketing team from iAmsterdam has done some research and published statistics on tourism in Amsterdam. Over 66% of the tourist have a primary reason to visit the culture and history of the city and canals of Amsterdam. Furthermore, more than 85% are visiting a museum that is accompanied by 95% walking through the city. That is a great indicator for the TimeTravel app because it combines the activities to walk around the city and experience the past of Amsterdam. However, so far it is only possible to experience the history via a museum or attraction in the inside as the Amsterdam Dungeon. These indications are still only assumptions but it does indicate a general interest in an app as TimeTravel. There are several open questions as are tourists and citizens are willing to pay for the app. Does the app offer the experience users are looking for, and one of the main issue is how to reach potential customers that they get to know the product and possibilities of the app?

### **2.2.2. Business customers**

Businesses are another kind of clients because not only users are potential customers for the TimeTravel app. There exist different possibilities for B2B business. Firsts, the app, could be used as an advertising platform for companies that are located at the hot spot of



the app or also for businesses that are providing complementary products for history interested users. The central issue for the TimeTravel app to be a sought after advertising platform needs a high popularity or potential popularity of the product. To achieve the goal, it is necessary to convince potential companies about the app possibilities and to gain greater popularity of TimeTravel. The use of the application as an advertising platform has several opportunities. Once, it is possible to make a free app with advertisement and users have to pay to not see that commercial. Another method would be an in the app implemented tactic in which advertising is part of the story. A good example would be Bijenkorf at the Amsterdam Dam hotspot. The story of the building could be a part of the app, and the commercial would be not as obvious as the other method. Users would read about the building and the history of the company and would be attracted to take a look inside and maybe buy something there. Another B2B opportunity is the idea of offer that platform for businesses to illustrate their history and their closer environment. Therefore, they could support the municipal regarding tourism and has at the same time a platform for their story. However, to be demanded needs also more branding work for the TimeTravel brand itself and not only promote the Amsterdam Dam version.

### **2.2.3. Organisations**

Organisations are an important part of our society they take care of protecting nature as well as culture and history. Several organisations exist who are supporting and protect museums and heritage. Therefore, organisations could be another partner for the Missing Link and the TimeTravel Amsterdam Dam product because it shows the past and brings history closer to the users of the app. It can teach and educate what happen in the past and gain recognition about the importance and that the history needs protection. However, organisation is difficult to convince in supporting an app and would take time and effort to get even recognized by them. It is necessary to stay in public and develop contacts with the people who have an influence on supporting organisations. Nevertheless, to say that also nonfinancial support helps for further development. Another type of organisations are schools and the government. Particularly for schools, it would be an excellent tool for the history classes. Students might be more interested and pay more attention to the topic than otherwise. Schools could with a yearly fee the access to all TimeTravel products and use them as a basic for school lessons. The last organisation part is the government that is at the moment the primary customer of the TimeTravel products, but they are not involved with the TimeTravel Amsterdam Dam app. As a governmental institution, they could order it for their city and could attract more tourists to their region. However, the municipal of Amsterdam was not interested in supporting the app for the Amsterdam Dam.

### **2.2.4. Sub-Conclusion**

It is impossible to test all customer groups if there are willing to pay for the TimeTravel app. Therefore, the decision was made to test the users as customers because it is possible to measure a direct influence on the sales and if they like it. Users are the demanding clients who are also an added value for the app development. Furthermore, for much another testing a higher popularity is necessary to get even a start point and to promote with more success.

## **2.3. Which paths exist and how much did they cost?**

### **2.3.1. Description**

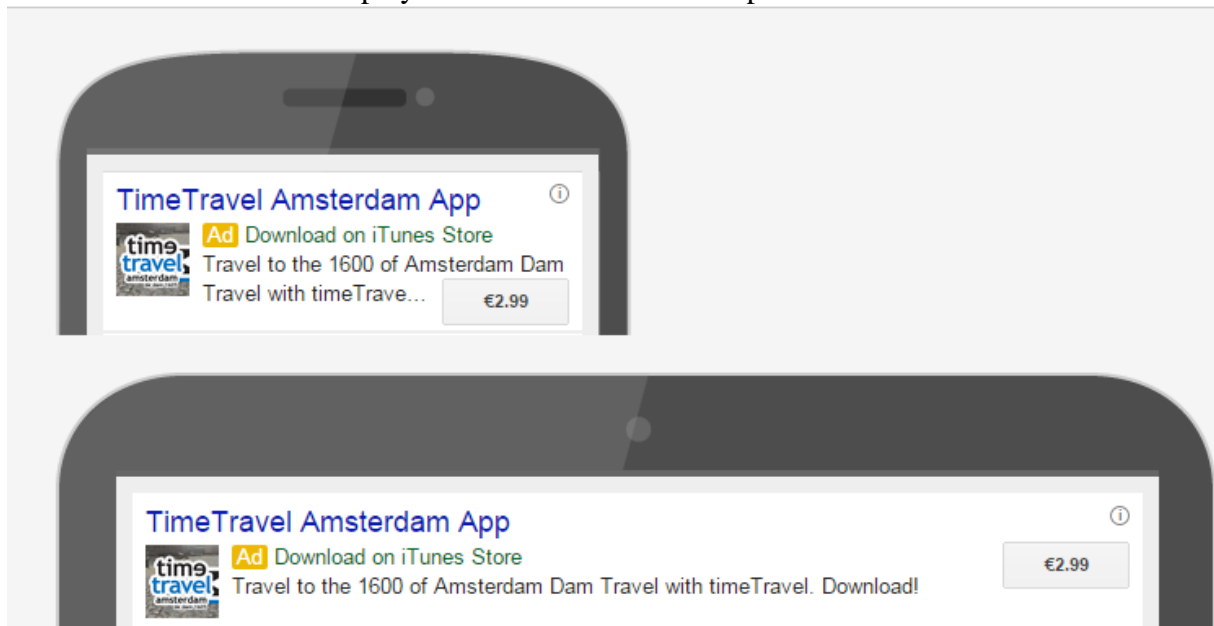
Three paths were tested through the research, and all of them were placed in Google AdWords (described below). It was important to discuss the possibilities and their results to find the most significant paths. Therefore, the Missing Link decided to concentrate on Google AdWords because the tool offers a broad variety of opportunities. Furthermore, the complexity made it impossible for the research to go on other areas without losing track and time. The most important question was which opportunities will fit into the requirements and how can the Missing Link design successful advertising. First, an overall framework is necessary to develop the requirements. The product for the advertisement is an app that is paid by the users. Furthermore, a testing with different pricing option was a request of the enterprise that need to be considered later. The prices varied between 0.99€ and 9.99€ since 15.07.2015 is the price 1,99€. The company decided to come up with a budget of 2,520€ to run a four weeks' advertisement campaign in English and Dutch. Additionally, the app is only available on Apple devices which means it is essential to limit the advertisement of the specific devices. Otherwise, clients would be unsatisfied if there were unable to download the app after they have seen the advertisement. Another limitation was the fact that the app is only useful for tourists who are visiting Amsterdam. Therefore, it was convenient that Google AdWords program can specify the area where the advertisement will be shown. The next task was to think about the keywords that describe the product the best and what is related to the app. Afterwards, the registration and prototype of a campaign were built Google offered to help with the settings. They help new companies to specify their advertisement for a half year. Although, it might be critical for research to let a company assist, the whole decision-making process was still made by the Missing Link. Furthermore, the help was a great introduction and learning period for Google AdWords. They also gave advice to the three paths the company took for their research. The traditional search campaign together with the YouTube campaign was set up first. Sometime later the display campaign was added because of the different possibilities for mobile phones and tablets and the low costs.

#### **2.3.1.1. What is Google AdWords?**

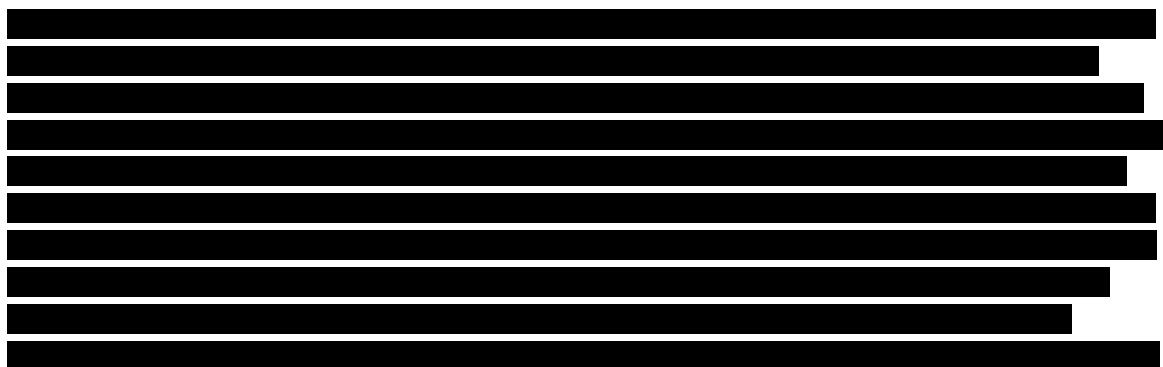
Google AdWord is an online advertising tool based on the search engine Google. It allows a company to promote their company or product. AdWords was launched in 2000 and is now Google's main revenue source. To set up a campaign; it is useful to outline several keywords that will describe the product. Google offers the service to help companies to optimize their campaigns because the tool is very complex with hundreds of possibilities. Google AdWords works with the pay-per-click/view method. That means the company only has to pay when a customer clicks on the advertisement. In a Google search campaign, the advertisement will be shown before the organic search result. However, only two or three will be displayed on the first page of the result. Furthermore, the article "The evolution of Google search results in pages & their effects on user behaviour" shows that, for paid advertising, only the first two are recognized by the majority of users. Furthermore, it is necessary to achieve a high rating for your advertisement because only a high rating will push your campaign in the front. The calculation is 50% of max bid price + 50% of the relevance of the advertisement to the keywords. This calculation is made automatically by Google and essential for an effective campaign. For a more detailed description of Google AdWords the book "Marketing in the Age of Google: your online strategy is your business strategy" by Vanessa Fox offers an excellent explanation of Google in general and for other Google products as AdWords.

### 2.3.2. Search campaign

The search campaign is the traditional advertisement possibility offered by Google AdWords. The start date for the first three search campaign was the 10th of June 2015. A Dutch and an English advertisement was launched. The Dutch campaign was published all over in the Netherlands whereas one English version was only launched in North Holland and the other one worldwide. The decision was made because the business expected that Dutch citizens might download the app where they live because the Netherlands are not that big so citizens could easily reach Amsterdam. For the English speaking tourists, the company thought that more people would download the app directly in Amsterdam when they search for other events, museums and amusements. However, for a more international advertisement a worldwide was published as well but the campaign had totally different keywords. To get an impression of a search campaign the pic below shows how the advert is displayed on a tablet and mobile phone.



At the first day, 51 people clicked on the link but due to an inconvenient keyword the people were mainly not interested in the app. Due to the low click rate of 2 clicks of the Worldwide campaign until the 13th of July the decision was made to stop that advertisement.



Furthermore, only a few keywords were fruitful as Amsterdam app, tourists Amsterdam and I Amsterdam. All other keywords were not effective. Not only the fact that no clicks appeared the main problem was that nobody was searching for the keywords. It is interesting to see which influence words can have and how important they are to catch customers.

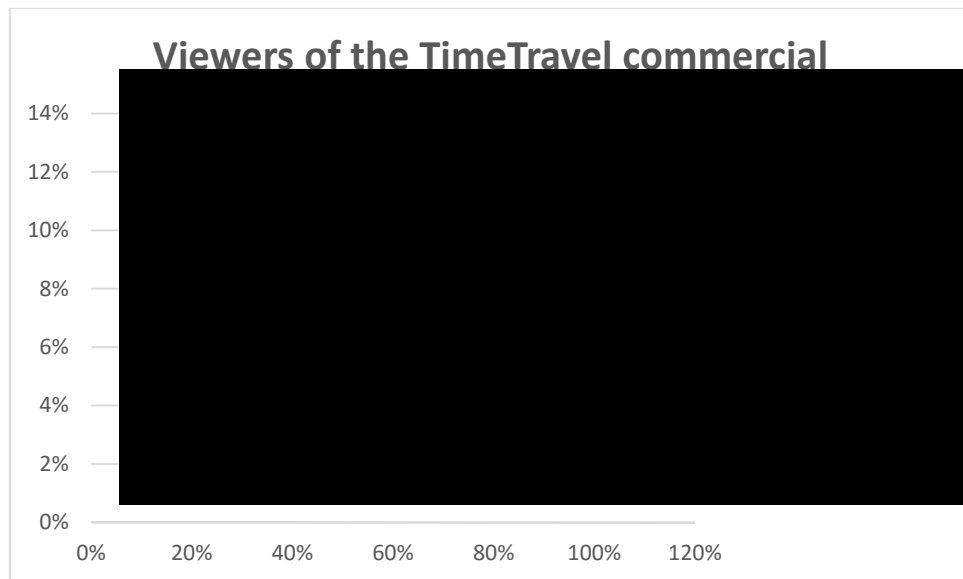
After the first campaigns had failed, further readings and discussions with the Google advisor detected the main reason. Although the keywords were one factor, the landing page of the URL link was the other reason. The advertisement was connected to the ios store to download the app. The issue there was the text to promote the app. The description in the Apple store was not correlated to the campaign. Therefore, the rating for the relevance of the app was too small to be shown. Once the changes were made the click rate grew for the Dutch and English campaign. [REDACTED]

Although, the last two campaigns were more successful than the ones before it is almost impossible for the Missing Link to spent that amount of money per customer and to make a long-term profit.

### 2.3.3. YouTube campaign

The Video campaign was designed at the same time as the search advertisement. Due to some delays in making the video accessible for all was it launched at the 18th of June. Again, a Dutch, English and Worldwide campaign was built to reach every customer. The advantage of the YouTube video is that it was possible to select different options to get through the target group. Firstly, the location was specified for each cluster and also under which search word the video should be displayed. Moreover, it is also possible to use subjects as history and travel to reach interested customers. Furthermore, a direct selection of devices was possible to select only Apple products. Moreover, the video was available on YouTube Search, YouTube Videos and also on Videos on Google partner sites, apps and Display networks. These campaigns used the location of North Holland for English and Dutch version whereas no location settings were made for the Worldwide campaign. The following link leads to the published video in English:

<https://www.youtube.com/watch?v=nO0WZeMJkiQ>. In general, the video is qualitative a good playback of the product TimeTravel. However, the Google advisor believed that the beginning would be too long, and many people would lose interest in the first seconds.



the English film through the English advertisement and only two viewers through the Worldwide campaign. That was also the reason the company decided to stop the worldwide campaign at the end of June.

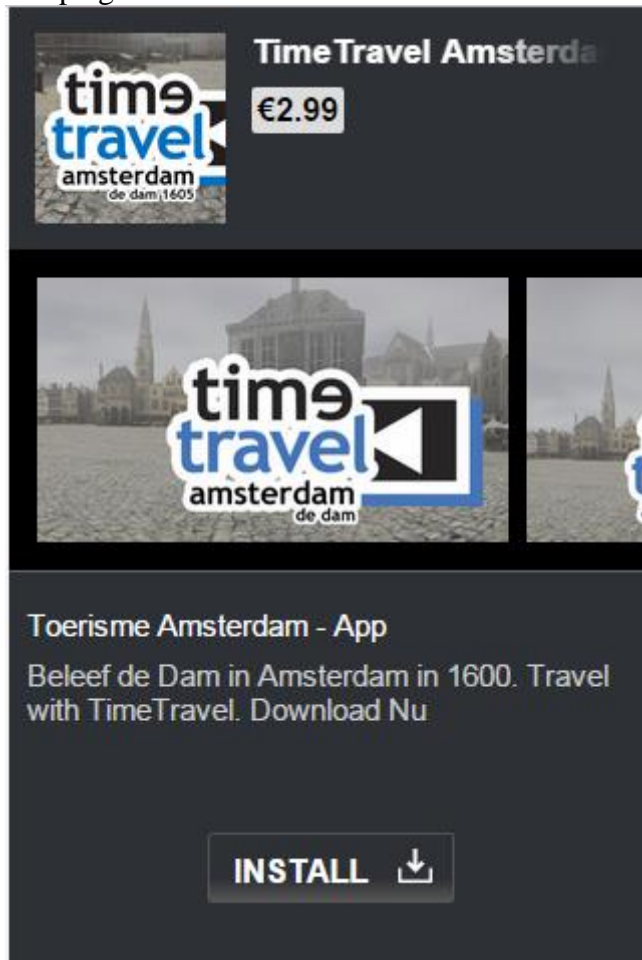
The subject part was mainly responsible for the high view rate. Whereas the search word segmentation was inefficient, wherefore it was cancelled after few weeks without impressions. That leads to the conclusion for the YouTube campaign that the segmentation in subjects is more effective than in search words for the TimeTravel app.

Overall the YouTube campaign possibility is a tool to reach thousands of potential customers with a small budget. Still, it is important to distinguish between real potential customers and only passive viewers. The costs can exceed the revenue that would make the path not efficient for the TimeTravel app. Therefore, a closer analysing option has to be developed to get deeper into the data to understand the potential customer.

#### 2.3.4. Display campaign

The display campaign was the latest advertisement tool that was added to the paths. After a discussion and review with the Missing Link and Google advisor of the other commercials, it was decided to add the display option. The special feature here is to show the video or advert on millions of websites and apps. Furthermore, the settings are similar to the YouTube campaign with Topics, demographic groups and keywords it is possible to

make up an advert that will reach the target group. The same settings were used to specify the outcome. A Dutch and English campaign located in North Holland for iOS devices. Furthermore, the adverts were separated in interests and placements that were the most notable distinction for the TimeTravel app. The picture below shows the design of the campaign.



The display opportunity has several advantages in comparison to the YouTube and search campaigns. First, the costs per click are in between of the search and YouTube advertisement. Furthermore, the user has to click actively on the advert to watch the movie that means that the cost per movie did not automatically arise after 10 seconds of watching. The result is a more interested audience and a higher revenue chance for the app.

The two display campaign was added at the 17th of June average [REDACTED]



[REDACTED] The graph below shows the clicks and the click through rate development through the campaign time.



The diagram indicates the steady increase over the time and also the rise in the CTR.

There is a possibility to relate the results with for example the weather or that day of the week the peak appeared. Due to the schedule and topic related issues would that be another research to check on which days an advertisement would be more fruitful.

However, it can be said that there is no identifiable relationship with the school holidays in Netherlands because the vacations started in the time between the 4th and 18th of July and no notable changes happened.

Overall the display advert was a strong tool to do customized advertisement. Especially, the interests' area was important to show the campaign to the target group. Furthermore, to limit the location viewers might have a higher interest in download the app and to explore the past of the Amsterdam Dam. However, the capital budget was used for that

[REDACTED]

### 2.3.5. Sub-Conclusion

Each campaign had its drawbacks and advantages. The search campaign had the highest cost per click, but the people were probably really interested in the app and were probably downloading the app. [REDACTED]

[REDACTED]

[REDACTED] How successful the paths are will be described in the next chapter of the research.

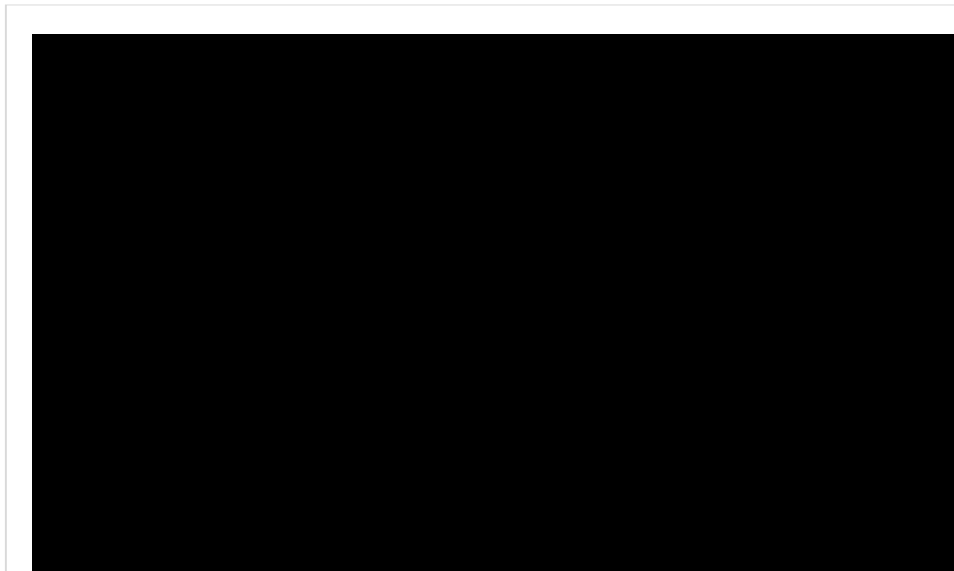
### 2.4. Cash flow analysis

The cash flow for the paths considers first three scenarios of how the marketing expenses and identified costs and the return of views. That means Best case 50% of the viewers will

download the app, Base case 25% will download TimeTravel and Worst case 5% will buy the app. The scenario analysis will be done for each campaign type and also display an average result. Afterwards, an actual analysis will show how the cash flow developed throughout the testing period and if there is a possibility to use the tool profitable under the current situation. [REDACTED] for a project to be profitable. Therefore, to come up with a useful and easy to understand cash flow analysis for the company is the Net Profit Value model the most appropriate one. The advantages are that includes the time value of the money and takes the required return of the Missing Link into account. Furthermore, an excel table will make it easy for the Missing Link to use the calculation further for a new calculation. The idea of using the NPV consist of the information of the teaching material Corporate Finance Essential by Jordan, Westerfield and Ross (2011). Moreover, the website Investopedia.com (accessed 17.11.2015) describes also the advantages that make that model to the best option for the company. The detailed calculation can be found in the appendix in an excel sheet.

To come up with a realistic project lifetime in which the project needs to be paid back several discussions with the Missing Link leads to a lifetime of 5 years to get back the total investment. An issue will be the completeness of the identified costs which means that only the costs that are known will be considered. However, the company will be able to use the cash flow analysis later to update the information for a new calculation if necessary. Besides the missing costs, the calculation also does not consider possible depreciation because no closer information is available. Still, the taxes are included with 20% that is the corporation tax standard for Dutch companies.

The actual download shows how many apps the Missing Link sold before the campaign started, during and afterwards. The downloads during the campaign were much higher than before. Still, afterwards the download rate decreased extremely in particular for the English version. It is to keep in mind that the English version was not available before the Google AdWords campaign were started. Therefore, it is impossible that there would be downloads beforehand.



To start with a comprehensive overview, the analysis starts first with the combined analysis and then discusses each campaign separately. In the end, an explanation of the previously mentioned pricing test will be given followed by a sub-conclusion of the topic.

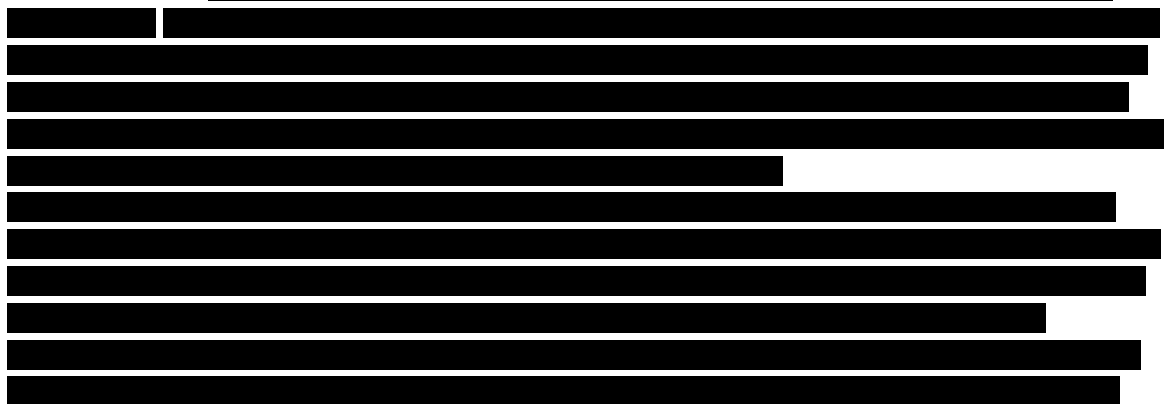


### 2.4.1. Combined campaigns

The Missing Link decided to do all advertising tools at the same time. Therefore, it is not possible to distinguish between the downloads from which campaign they originate. The issue was that the app needed a recording to include such an analysis tool that would help to decide which campaign was more successful regarding downloads. The following diagram shows the result of the average scenario analysis. [REDACTED]



The chart displays the outcome of the Cash flow and the Net Present Value. The clear message here is [REDACTED]



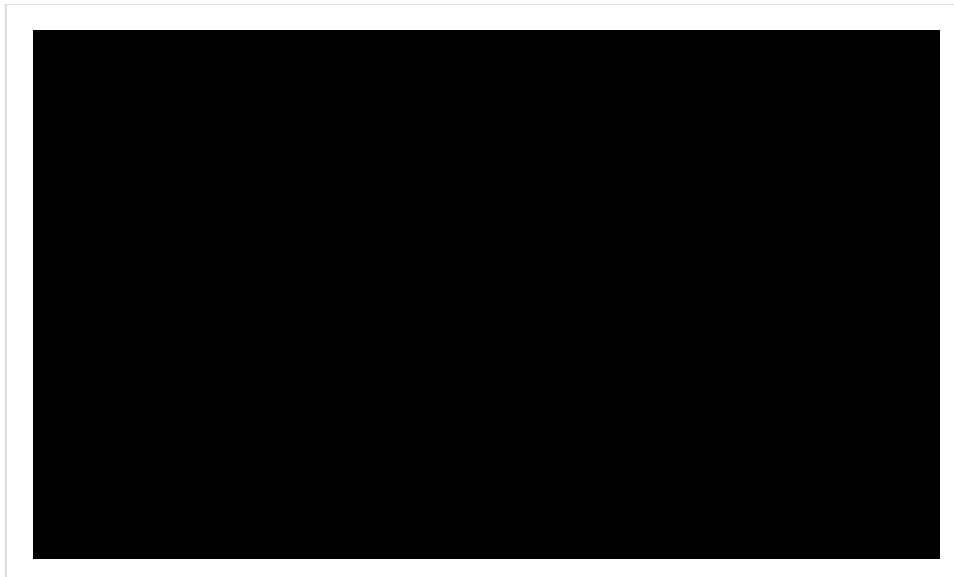
[REDACTED] As the result is the same for each campaign because the expenses are the same. With the costs of the advertisement plus the additional fixed costs is the Cash Flow the same. It is not possible to come up with a separate analysis for each campaign. That would be different if there would be the possibility to identify the source of the cost regarding the campaign type.

### 2.4.2. Search campaign

The search campaign is the most expensive advertisement tool that the Missing Link used. With an average cost [REDACTED]



[REDACTED] The diagram shows how difficult it is with that campaign type.



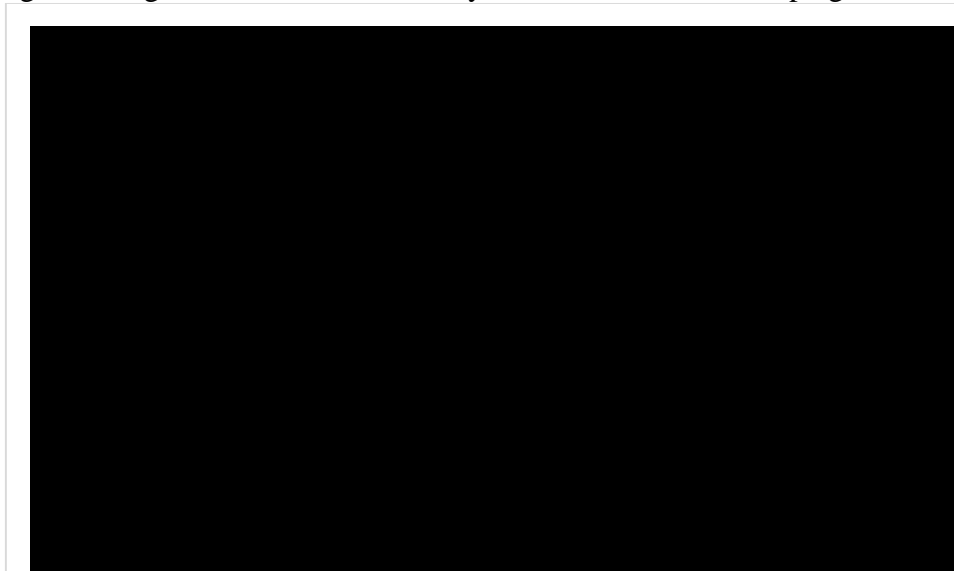
The result displays an inappropriate advertising tool for the Missing Link and maybe also for other apps that have a [REDACTED]

[REDACTED] A closer description is not necessary because the chart is a clear feedback of the possibilities.

### 2.4.3. YouTube campaign

The YouTube video advertising is the cheapest way of doing commercials with an average cost of [REDACTED]

[REDACTED] is again a diagram of the scenario analysis of the YouTube campaign.

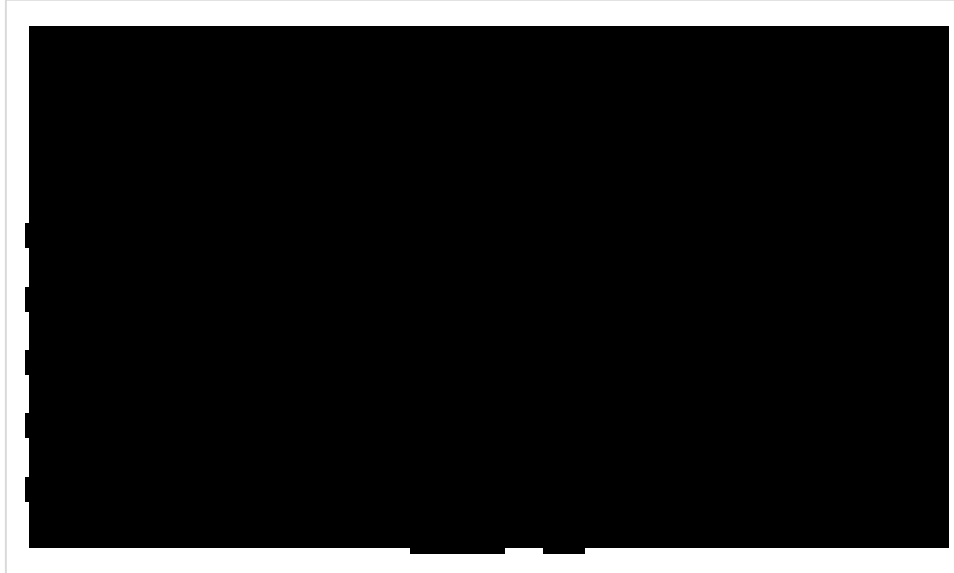


The outcome is similar to the average result because the project costs are too high to cover them with the download rate. [REDACTED]

[REDACTED] that means the risk of loss in the project is high and shows that another tool might be more fruitful for an app advertising than GoogleAdwords.

#### 2.4.4. Display campaign

[REDACTED]  
[REDACTED]  
[REDACTED] only fruitful in the Best Case the chances for a useful result with advertising tool are very low. The chart below agrees with the previous doubts.



With this method, there is no realistic option for a positive NPV. [REDACTED]

[REDACTED] Therefore, the companies have reevaluated their plan to earn revenues with the app.

#### 2.4.5. Pricing Test problem

There exist some limitations for the Cash flow analysis. As mentioned before the MissingLink and DelightInteractive wanted to include a pricing test. The idea was to test 4 different pricing models. [REDACTED]

[REDACTED]  
[REDACTED]  
[REDACTED]

[REDACTED], the idea appeared to test different prices. The problem was that the price test was set up to shortly, and the downloads do not show any correlation with the price.

[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]

The real income in the end if the different pricing would be considered is not that different to the previous calculations because the other prices were only active for a very short period. Furthermore, the other prices were different at the beginning in which the campaign were still tested and adjusted. Therefore, the small difference will not change the result of the whole analysis as the sub-conclusion will point it out as well.

#### 2.4.6. Sub-Conclusion

[REDACTED]  
[REDACTED]  
[REDACTED]

[REDACTED]

### 3. Part III

#### 3.1. Conclusion

The answer to the question: "What is the cash flow for the app "TimeTravel streetview of the past" Amsterdam Dam version for the main paths of the customer risks?" was answered through several subquestions. The first subquestion indicated that the Lean Canvas Business Model has still several improvement possibilities, but it was the basis for the following steps in the report. However, that part described the business model of the Missing Link which was necessary to understand the base of the whole concept. Therefore, the next part an in-depth analysis of the customer segment was not as important for the result in the end but due to the different possibilities of the customer segments it was necessary to pin out the options. As the Missing Link decided to test users as customers, the result of the in-depth view showed that it is not possible to identify how the customers will react. Users downloaded the app in the beginning because the app was

[REDACTED]

[REDACTED] hat does not mean that there is never an option to promote with Google AdWords, but first other problems need to be solved and maybe to a different time it would be more successful. The following reflection and advice for the company are the final steps of the report and the most important part of the company.

#### 3.2. Advice

The advice part is build up in circles. The first one is directly related to the outcome of the research, the second one is on the product in total and last, but not least the third circle will give advice to the whole company. Still, only the first circle is based on results the other two circles are based on impressions, experience and assumptions that are made during the internship and knowledge gained from different articles and literature.

The most important advice due to the research is to think about other distribution channels and to add a tracking code to detect from where the customers come from. Furthermore, it would be significant to think about the whole pricing structure. As the research showed the pricing test was useless and another test or a freemium model that is more successful than paid apps should be considered. Additionally, it would be a good way to start with a new Lean Canvas Business Model or to use a model that is more suitable for an existing product. The problem here was the fact that the product idea existed already, and

afterwards the model was filled out. That is not the usage the model suggests and therefore, it might be better to use another model. Then, the Missing Link should think about other customer options a special with a freemium model it is possible to earn revenues to have a viable business. Another problem that need to be solved is an accurate cost overview. That should be one of the first steps the company should do because it is necessary to come up with a reliable calculation of the Net Present Value.

The second circle advice is specialized on the product TimeTravel, Amsterdam. The main issue that might appear is that the product is not as exciting as it should be. After several minutes of using the app, the user saw everything. There are no special features or interactions this makes the app very short living. Therefore, some additional extras would probably increase the value of the app. Another problem for the app is the confusing business idea. TimeTravel has itself nothing to do with the other work of the Missing Link. Moreover, the company has no idea how much money and time they spent on the project. For that reason, it should be researched if it would be more useful to make TimeTravel as a separate company. Not only the costs would be better considered and separated business form the other business also clear management decision and who is responsible for TimeTravel development would increase the chances of success. The last circle is based on the broadest part the company Missing Link itself. The problem of who is responsible is here clear but better-divided responsibilities would enhance the business development. However, the main issue is sometimes the lack of structure in tools that will be used and project development. That are both characteristics that could be improved. Still, only the first circle is researched the other two parts not. The Missing Link has to make the decision what parts they want to change or to take a closer look at some problems.

### **3.3. Reflection**

A reflection of the report is necessary to outline the limitations that are made due to time, specialisation or to get clear facts. It is possible to consider all different aspects, but it might lead to a report that will never be finished or will not answer the question of the company. Besides the limitations and controlling part about the choices are made and if they are wrong or would they be other options that possibly are more suitable than the ones used in the report.

#### **3.3.1. Limitations**

It is important to notice that several limitations have been made. Firstly, the choice of what tool should be used. First of all, the Lean Canvas Model was set by the company, and it was not possible due to a point in time because the product already existed. Additionally, no analysing time was spent in exploring the impact of the weather and days on the app. The issue here is clearly the time factor and the duration of the test. Furthermore, it was impossible to consider all small possibilities for app price models because the prices were discussed during meetings and the managers of both companies decided to set the price as they are. However, they did not strictly take them into account that result in a pricing overview that is not valuable nor leading the way for the best price. Another limitation is the fact that it was not possible to break down the downloads to the different Google AdWords advertising tools. The consequence is that the analysis made in the report is only an assumption. Nevertheless, there is a possibility to do so but Delight Interactive was not able to update the app version with a tracking code to get to know which tool was more successful.

### 3.3.2. Controlling

That part points to the wrong choices that were made during the report. Firstly, the research should have start with a Lean Canvas analysis. It was a mistake to try to promote a product that has no real construction in the back. Especially, the missing cost overview, the need of an updated Lean Canvas Business Model was drawback. The possibility that this fact influenced the outcome of these research is most probably. Another huge impact had the pricing options during the test time. The four different prices should not be a part of that research because to test the price another research tool should be taken into account. However, the pricing was dispensable and did not bring any additional information to the research. Additionally, the Google AdWords campaign might be a wrong choice as well. [REDACTED]

[REDACTED] Other options would be the VVV in Amsterdam or for social networking Facebook.

The next section will explain what steps the Missing Link can take to prevent to make the same mistakes and to make better choices in the future.

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