

The Pragmatic Explorer Model & Diaspera

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The Pragmatic Explorer & Diaspera

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Abstract:

The country needs more entrepreneurs. For Denmark to stay a competitive country we need to support and encourage people with an entrepreneurial mindset. Living in a digital age, software projects are becoming more and more important, meaning we need to focus more on supporting them. This master thesis project presents a proposal of a model an entrepreneur can use to explore and experiment an idea with. Framing the model with the base of pragmatic philosophy together with other theories, tools and concepts connected with pragmatism. Diaspera is a platform for Asian diaspora living in a Western country. Through applying the model with Diaspera this project will discover new and alternative ideas and perspectives.

Preface

This report presents the master thesis made by the group is1014f16. The master thesis is created for the 10th semester project following the track: Software Entrepreneurship. The research has been conducted under Systems Development (SD) research group, which is a part of the Information System (IS) research unit at Department of Computer Science at Aalborg University.

A special thanks to Ivan Aaen, Associate Professor at Aalborg University for opening my mind up to pragmatic thinking and always challenging me.

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Part I

Introduction

1 INTRODUCTION

Denmark needs a stronger culture for entrepreneurs. According to GEDI, entrepreneurs are the key drivers for an economic development. (Åcs, Szerb et al. 2015)

Living in an industrialized country it is important that we acknowledge that in the future, we need to live off our creativity and our ability to innovate. These are some of the reasons that make it important that entrepreneurship is supported more in the society via the educational system, the job market and other institutions.

There is nothing new to the fact that entrepreneurship creates jobs and growth both nationally and regionally. (Erhvervsstyrelsen 2012) and while the government are trying to create better financial circumstances for entrepreneurial activities it does not guarantee a successful business.

Many people may have a dream of becoming an entrepreneur, but where do you even begin? How do you realize you have crossed an idea with potential? How do you explore it? Is there a magic recipe to follow to create a business?

These are questions the government and the Danish society cannot help answer, and this might explain why approximately 30.000 new companies are created annually, but only around half are still active three years after the launch. (Vækstfonden 2014)

There are different ways of approaching an entrepreneurial adventure, some more analytical and some more hands-on. There is no correct approach for a startup, but one thing all startups have in common is the idea. When understanding your idea, you also understand your business and you are able to face the different challenges and problems an idea brings. One way to understand an idea is to explore and experiment with it, which leads to the aim of this project.

This project will propose a model that a software entrepreneur can use to explore and experiment with an idea. The model will emphasize reflection as a way for the entrepreneur to be able to view the idea from different perspectives in hopes of gaining new knowledge and discover alternative ways not thought of beforehand.

Reflection will be understood by pragmatic philosophy. Pragmatism will be a main theme during the entire project, and is the core of the underlying thought process of the proposed model.

The model will take the entrepreneur from the first step of acknowledging a problem, exploring it and experimenting with it and discover if a possible solution can be launched as a business.

The model is intended for entrepreneurs with a problem that software will be able to solve and explores not only the technical side but also the business side.

1.1 MOTIVATION

During the 9th semester project, software entrepreneurship was also explored. In that project the focus was on the different paradigms within entrepreneurship that existed, Causation and Effectuation respectively. This project will continue down the road of entrepreneurship, but with more focus on the underlying reflection processes that Effectuation possesses.

The research I will conduct for this report will utilize a practical project called Diaspera to illustrate the proposed model and to learn more about the underlying processes behind idea exploration and problem solving via reflection.

Therefore, this report will investigate how an entrepreneur can view a problem from different perspectives in the pursuit of a meaningful solution. A solution is in this project defined as the technical and business side of an idea. Hence, I propose the following problem statement.

How can I develop a model to assist me in exploring and experimenting with the software- and business side of the idea, Diaspera?

In order to answer the problem statement the following structure is provided.

1.2 THE STRUCTURE

The first part of the report is the presentation of the problem that will become a project. It is called Diaspera and it is a software solution for strengthening, exploring and building up a community for Southeast Asian diasporas who are living in a Western country. Diaspera will act as the example throughout the project to illustrate and demonstrate the model.

The second part of the report is the Foundation, which will outline the philosophical foundation of the project and the model that will be the outcome. Deweyan Pragmatism will be the philosophical foundation for the project and different theories and concepts will be related to Pragmatism and explained.

The third part of the report will be the contribution of this thesis. It will present the model that is the outcome and present the selected theories and tools used for the model and the argumentation of why.

The fourth part of the report will demonstrate the model with the case Diaspera and utilize all the steps and tools with the real life case and problem.

The fifth part is the evaluation. Here the developed model and the demonstration of the case using the model will be evaluated and discussed together with looking at future work or how the development could have been done differently.

Part II

Diaspora

2 DIASPORA

This part introduces the Diaspera project and looks at ways to use technology to connect Southeast Asian diaspora that are living in a Western country. The Diaspera project is a real project, but is mainly used in this report to demonstrate the developed software entrepreneurship model in a realistic way. The following is a description of how the initial idea was discovered.

2.1 HUNCH

Reading the latest news about Cambodian politician Aung San Suu Kyi, made me wonder one afternoon how news from Asia is angled in Western media. I get all my news from either Danish or at least a Western media.

Being half Danish and half Thai, I have had an interest in Southeast Asia for quite some time. Subjects like politics, culture, fashion and movies have intrigued me, but wondering about the different news sources, it made me search online for news sources that were not entirely a Western media, but would be more of a media that would look more objective on the news and would more consider people not living in that particular Asian country, but would have an interest in news from. A platform that would consider this particular twist me and other fellow half-Asians half-Westerner. To begin with I was sure that this media must exist and I continued to search online. To my surprise, this did not exist, but instead I found sections of e.g. The New York Times, that would some section with pieces that considered Asian voices. This section mostly had articles regarding race and discrimination issues, but I wanted more and something more elaborated. Not necessarily serious race related articles, but also short and funny pieces

Several themes with different types of people were considered relevant for this idea:

- Cultural identity

The exploration and discovery of the culture you have 'lost' because you either no longer or never have been part of. But instead you have some affiliation to the 'old' culture.

These will throughout the project be referred to as the 2nd Generations Asians and can either be descendents from 1st Generation parents or mixed-race

- Social Relations

How we use the internet today to connect

- Distance

People who moved away from their country of origin and now lives in a Western country. This group will be referred to as the 1st Generation Asians.

2.2 CULTURAL IDENTITY

According to Hall, culture identity is context based and everyone writes and speaks from a particular place and time, their own context and reality. Hall defines two ways to think about 'cultural identity'. (Hall 1990)

- Cultural identity is a shared culture - A culture consisting of a group of people that share the same history and ancestry. (Hall 1990)
- Cultural identity is about becoming and is always enduring constant transformation. (Hall 1990)

The target group is a mix of the two ways cultural identity can be identified. The 1st generation and the 2nd generation diasporas each have a shared culture. The 1st generation in a sense that they have travelled to a different country then their country of origin, and therefore have their original culture with them in the new country. The 2nd generation because they have the same ancestry, but live in a different country and identifies more with their living country then the country of their country.(Stroink, Lalonde 2009)

2.3 SOCIAL RELATIONS

The Pew Research Center's Internet and American Life Project are initiatives and publications that capture the expectations for the future of the internet evaluated by people. Various surveys were conducted by experts and the conclusion of the publication was that the "social benefits of internet use will outweigh the negatives during the next decade. " The reason why is that online tools makes a difference in people's lives and open information brings people together. (Anderson, Rainie 2010)

They also conclude that geography is not an obstacle any longer for maintaining your connections, since it is now easier to be in contact with people from the homeland and means that people do not have to give up their relations with people just because they are moving away. (Anderson, Rainie 2010)

2.4 DISTANCE

According to Roger Baker the word “diaspora” has changed over the decades. His paper investigates the meaning of the word and how it has changed e.g. from the Jewish reference to considering other cases.

Diasporas have been the result from the migration of borders over people, and not only from that of people over borders. (Brubaker 2005)

The paper investigates three criteria

- Dispersion in space – “that segment of people living outside the homeland” (Brubaker 2005)
- Orientation to a ‘homeland’ - constitutive criterion is the orientation to a real or imagined ‘homeland’ as an authoritative source of value, identity and loyalty (Brubaker 2005)
- Boundary maintenance - involving the preservation of a distinctive identity vis-à-vis a host society (Brubaker 2005)

When identifying the target group for the news platform it leads to the consideration of the possible target group for the news platform. The target group will be referred to as the *diasporas* and is illustrated in the figure below

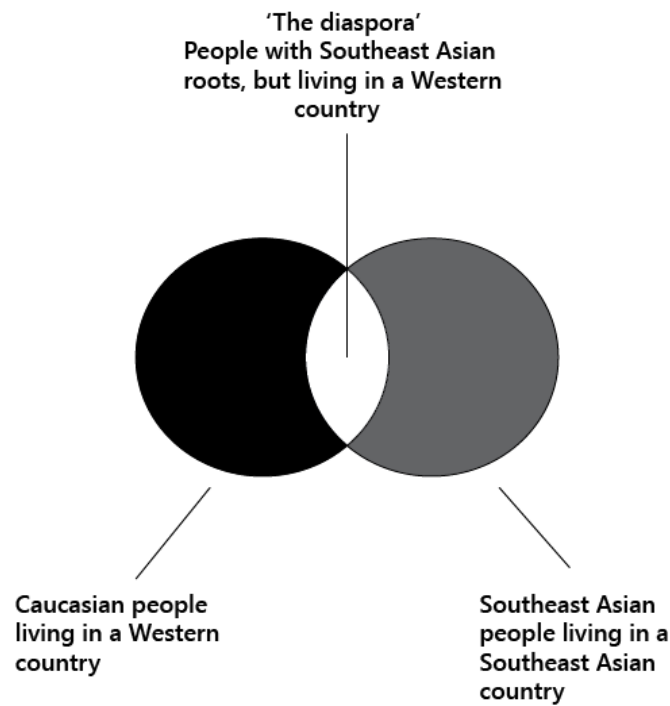


Figure 1: The people this project will focus on

Figure 1 shows the diasporas, which can be divided into:

- 1st Generation Southeast Asian people who moved to live in a Western country
- 2nd Generation Southeast Asian people who are children of the 1st Generation living in a Western country
- 2nd Generation mixed race. People with a mixed race with Southeast Asian roots.

With the establishment of the diasporas it is now possible to look for similar platforms that can act as inspiration. The news selected on these platforms can be an initial inspiration for and narrowing down which news are relevant to bring to the Diaspora news platform.

2.5 RELATED PLATFORMS

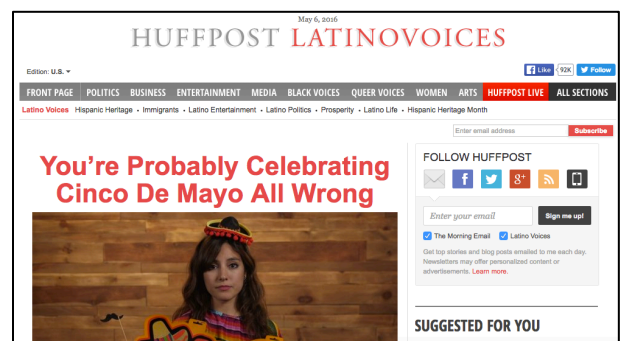
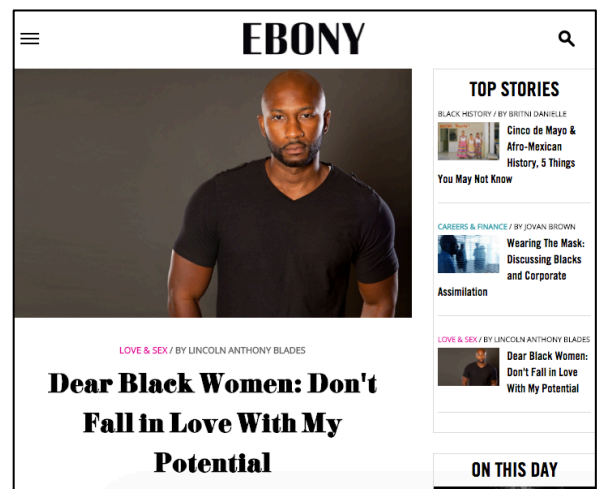
The related platforms are selected by looking at similar patterns and shared attributes. The platforms included are platforms that are targeting black diasporas, Latino diasporas and Indian diasporas. The last platform is included as a design inspiration.

Ebony Magazine

Ebony Magazine is the no. 1 source focussed on African-American cultural insights, news and perspectives. The site is community-powered for trends, advice and entertainment for Black life in America. They reflect diversity and have a broad spectrum of daily thoughts and opinion within the African-American community.

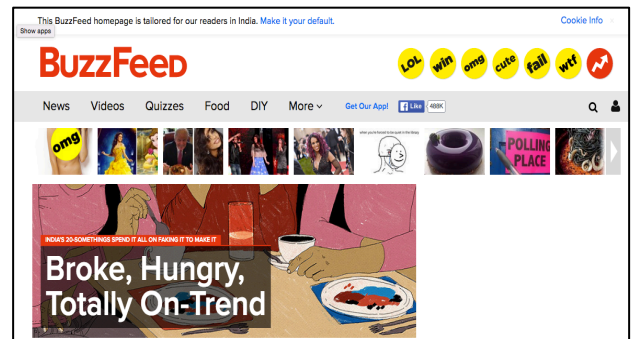
Huffington Post – Latino Voices

Latino Voices is section of the regular Huffington Post. An online-based newspaper. They have Black Voices and a Womens section, and are a progressive newspaper that definitely tries to stand out and represent minorities.



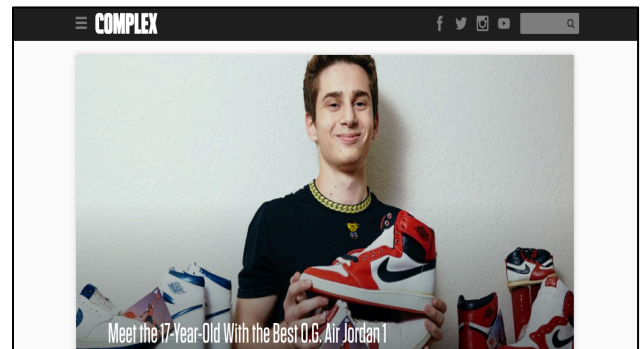
Buzzfeed – India Edition

Buzzfeed has taken a different approach. They are not focussing on minorities but they have different geographically-based sections they bring news to. And the India Edition is tailor made for Indian readers. Bringing news relevant to the Indian population.



Complex Magazine

Complex Magazine is chosen as this media represents something modern. They have a mix of short and easily digestible pieces as well as long more elaborated pieces. The visuals and videos takes up a large amount of space. The reason why Complex is also an inspiration is because it is modern and takes the traditional way of making a newspaper in a different way.



The similarities that are possible to derive from the related platforms are the following categories and focus on articles:

- Politics
- Life style
- Entertainment
- Style

These categories will act as the starter categories for the Diaspera platform. All the platforms have in common that they are online newspaper supported via a Content Management System, all of them are cross-platform and responsive. Only some of them can be bought in physical print. The starting system of this project will therefore be to develop a basic responsive Content Management System to support the articles.

2.6 SUMMARY

With the establishment of who the target group will start out with and an idea of related platforms that exist, this project now has a starting point and an initial plan of what to begin with.

The starting point of this project will therefore be to develop a Content Management System that can hold this information.

The Diaspera case and background of it has now been described. The next part will present the foundation of the entire project. This foundation will focus on pragmatic philosophy that will later be employed in the project.

Part II

Foundation

3 Foundation

This part will form the foundation of the project with the use of pragmatism as the overall philosophy. Theories and tools from different fields will all be linked to pragmatism and will be applied in the final model. The choice of viewing the project with pragmatic philosophy is to understand how reflection is connected to problem solving. The pragmatic way of reflecting will be the core of the model. The main concepts presented will later be illustrated when applied to the model.

To begin with pragmatism as a philosophy will be presented and after that pragmatism will be related with design, software innovation and entrepreneurship.

3.1 PRAGMATISM

One of the main contributors to pragmatic philosophy was the American, John Dewey (1859-1952). He lived in an era where innovative technological advances were made, and the thoughts he formulated during these times are the thoughts presented in the following.

One of Dewey's core ideas is the way we produce artifacts. An artifact can be physical or mental, but is according to Dewey the result of the same creative process of problem solving. (Aaen, 2016)

To understand this creative process, it is important to first understand Dewey's view on problems and how a problem can be solved. This will be presented as well as Dewey's process of inquiry as a reflective thought process used when facing a problem.

3.1.1 Problems

Dewey's understanding of problems is that a problem is an analytical instrument. Problems give thought to a *problematic situation*. When facing a problem, the purpose is to transform a problematic situation into one where the elements of the situation are in harmony, making the situation unproblematic. (Aaen, 2016)

As soon as we are aware of a problem we also become aware of the elements that are attached to the situation that is considered problematic. When realizing and understanding these elements, the problem is open for inquiry. (Aaen, 2016)

Realizing and understanding a problem is therefore a step in a transformation process that aims to unify the elements of the situation. (Aaen, 2016)

3.1.2 Indeterminate Situation

A situation is a whole that consist of objects and events seen in a context. An *indeterminate situation* is then a situation where the objects and events are not well defined, and according to Dewey this is the situation that occurs right before the process of inquiry can take place. Instead the objects and events are more sensed, but cannot be fully explained. (Aaen, 2016)

In relation to the Diaspera case, the chapter, Hunch in 2.1 is an example of an indeterminate situation. A mixmatch discovered and that forces you to stop and reflect on a solution.

After an indeterminate situation is discovered or realized the next situation according to Dewey is the problematic situation.

3.1.3 Problematic Situation

With the realization of an indeterminate situation the situation is now ready to be inquired. When the process of inquiry can take place, the situation is now classified as a *problematic situation*. (Aaen, 2016)

When you face a problematic situation, the aim is to solve it by transforming this problematic situation into a situation where the different elements have become one, making it unproblematic. (Aaen, 2016)

Every time we are aware and acknowledge a problem we also realize the associated element belonging to the problem. Understanding and realizing these elements is the first step in being able to transform the problematic situation into a *determinate situation*. (Aaen, 2016)

From Dewey's perspective of pragmatism, he points out that all human actions are *situated*. This situation is determined by everything that is present and that has an influence or affect on the situation. The situation is thereby context based. When acting on a situation we are placed in the current context. We become part of the context.

A *problematic situation* will interrupt us when we experience a mismatch tied to a situation. This mismatch will make us reflect and evaluate possible solutions that would remove this mismatch.

To understand a problem we must be aware of possible mismatches between what we were expecting and what the actual outcome was. With this revelation we will try and solve this mismatch to create a unity between our anticipation and outcome. (Aaen, 2016)

3.1.4 Determinate Situation

After the inquiry of the problematic situation, the result is then the *determinate situation*. Here the mismatches that were experienced in the problematic situation is gone and replaced by a unified whole. The problem can now be considered solved. (Aaen, 2016)

3.1.5 Inquiry

The process of inquiry is the core of transforming the problematic situation into a determinate situation. The inquiry begins when we realize that the indeterminate situation is also a problematic situation. As mentioned, this is when the different object and events are identified.

From here we will reflect and go through possible solutions to obtain the transformation. The process of inquiry is iterative and alternative and new knowledge may occur when experimenting with different solutions. When we start the process of inquiry we interact and become a part of the problematic situation. (Aaen, 2016)

This was a basic outline of Deweyan pragmatism that will be used as the underlying philosophy of the final model. Pragmatic philosophy has influenced many different research fields and some of the fields that could be relevant for the development of this project could be design, software innovation and entrepreneurship. Hence, the following will look at these specific fields and link them to pragmatism with the intention of building a solid theoretical foundation for the final model.

3.2 PRAGMATISM AND DESIGN

When observing an idea, an important aspect can be the design process. During a project it is essential to consider design. Examples of design situations could be; designing the business model, the architecture of the software or the user interface. All these design aspects are challenges a software entrepreneur has to face.

The paper “Kinds of Seeing” written by Schön and Wiggins, is strongly influenced by pragmatism and in their paper there are several connections that can be made between pragmatism and the proposed design process in the paper.

The core of Schön and Wiggins contribution is the *conversation* that occurs between the designer and the present materials in the current design situation. The design process consists according to Schön and Wiggins of three steps referred to as *seeing-moving-seeing*. (Schon, Wiggins 1992)

To begin with, the designer *sees* meaning observes and reflect on the current design situation and the materials. The designer then *moves* meaning morphing the situation in order to solve a current design problem and then *sees* the new design situation to once again evaluate if any changes should be done. (Schon, Wiggins 1992)

This continues to happen in iterations where the designer will evaluate an action – a move. This continues until the material does not engage in a conversation anymore, thereby making the problem solved. (Schon, Wiggins 1992)

Schön was inspired by the Deweyan inquiry, described earlier, and can be seen in the description of the designer that inquires a problematic situation and then reflects and acts for a solution to make the situation determinate.

When a designer is *seeing* a design, the designer will start evaluating and judge the design. While observing and appreciating the design the designer may become aware of some sort of mismatch and leads to the *moving* step, which is the action with unknown consequences. The outcome will appear after the action has occurred. This means that the action can lead to new and alternative situations that were not clear before the move step. (Schon, Wiggins 1992)

To make a direct comparison to Dewey's Inquiry it is possible to look at the design situation described in the paper. This situation revolves around an architect student that is drawing and designing a building for a school. She then becomes aware of a feeling of mismatch in her own drawing feeling there should be a change in the design situation, making it a problematic situation. The situation is now open to a process of inquiry and she then makes a move – a transformation, until she ends up with a determinate situation.

3.3 PRAGMATISM AND SOFTWARE INNOVATION

Essence is a software innovation methodology influenced by Deweyan pragmatism. Essence deals with how you can create innovative ideas while struggling with a problem. "Essence is meant to offer ways of seeing things in software innovation projects, strategies for selecting facts, and interpretations of tasks and responsibilities for team members. The structures in Essence are intended to facilitate seeing a problem from more perspectives, allowing for new ideas to emerge while at the same time constructively moving developments towards a valuable solution." (Aaen, 2016)

Essence is meant for software innovation, but also projects that focus on looking at the project from different perspectives can utilize the tools and techniques proposed in Essence. (Aaen, 2016)

Since the problem proposed in this project, Essence is relevant to look at, since the project and case involves uncertainties and it is desired to look at the problem from different perspectives in order to explore and discover solutions.

One of the tools that can do that proposed in Essence is the configuration tables. The configuration tables are used to give an overview of the project and the state of the project at any given time. (Aaen, 2016)

The configurations tables from Essence will be implemented in the final model as a tool to facilitate the problem faced in this project.

The configuration tables constructed of two header rows, Views and Values respectively.

Views are Paradigm, Product, Project and Process.

- Paradigm is the understanding of the challenge and how it can be answered. This view includes system ecology, definition of the users, their values and behavior
- Product is the understanding and coming up with a solution. This view focuses on the technologies, components and features that are key to the problem established in the Paradigm view
- Project is the understanding of the goal and the reflection about the overall idea. This view focuses on the overall vision of the project.
- Process is the understanding of coming up with new ideas and alternative directions for the project. This view focuses on evaluating in order to make a new design.

From the Process view a new iteration of development can occur. The Process view focuses on weak spots in the current configuraton table and can by acquiring new knowledge initiate a new configuration table. (Aaen, 2016)

Values are Reflection, Transaction, Reasoning and Appreciation. Each Value is dedicated to a View in the same order, meaning Paradigm with Reflection, Product with Transaction, Project with Reasoning and Process with Appreciation. (Aaen, 2016)

The Values are principles used to steer in the configuration tables and they are based from a combination of the Agile Manifesto and pragmatic philosophy. (Aaen, 2016)

- Reflection is the importance of *reflection over requirements*.
- Transaction is the importance of *transaction over solution*.
- Reasoning is the importance of *reasoning over assignments*.
- Appreciation is the importance of *appreciation over structuration*.

Following the two header rows comes three levels of abstraction: Rationale, strategy and tactics.

- Rationale is the why we are doing the configuration and has the overall Challenge that drives the project and specifying the current problem being worked on. This row also has the key technologies that can solve the problem and depending on the problem and the key technologies the vision is there to suggest a solution. The vision is supported by a warrant. This row ends with a Rationale review. The review explains exactly how the solution is solving the problem. Findings are discovered in the review and creates the baseline for a new configuration.
- Strategy is the row that focuses on *what* to do. The key elements from the problem domain of the project is listed, also the key components of the technical solution is listed here.
- Tactics is the row that concerns with *how* it is possible to solve the problem. This means, scenarios that describe important use situations and which features that are required in the use situations described.

There is a clear connection between Pragmatism and Essence. Looking at Schön's *seeing-moving-seeing* there is connection between this design process and the first three Values, Reflection that corresponds to *seeing*, Transaction that corresponds to *moving* and Reasoning that corresponds to the second *seeing*.

Looking at pragmatism as a whole and a practical tool such as the configurations tables that can be used for a software project covers one of the focuses of this project. The focus that this project is dealing with software startups, hence, there is need for a tool that can push the project in new perspectives.

The next step is to look at is how pragmatism can be related to entrepreneurship, which is another focus of this project.

3.4 PRAGMATISM AND ENTREPRENEURSHIP

Entrepreneurship is rooted in disciplines such as management and economics and is basically the art of developing a business idea into a business plan. (Rose 2012)

Within the entrepreneurship disciplines there are two leading paradigms to approach a startup.

The first one is the traditional plan-driven approach commonly taught in business school around the world. This approach focuses on measuring and analyzing before acting. (Rose 2012)

The other one is a more action-based paradigm, called *Effectuation*. A leading advocate for this paradigm is Saras D. Sarasvathy. According to the paper: "Causation and Effectuation: Toward a theoretical shift from economic inevitability to entrepreneurial contingency", Sarasvathy promotes Effectuation as a way of creating artifacts, in her definition, firms/organizations and markets. (Sarasvathy 2001) Her paper is a promotion of Effectuation but also a critique of the traditional mainstream way of viewing entrepreneurship, mainly the fact that the traditional approach sees the artifacts as already existing.

Figure 2 on the following page illustrates Sarasvathy's theory of Effectuation. The column on the left side is the given set of resources the entrepreneur has and the column on the right side is the aims or expectations that the effects in the middle column can lead to. (Sarasvathy 2001).

The main point of this paradigm is that the entrepreneur creates its own future by taking action. This action can be taken evaluating which resources are available to you and then control the future. (Sarasvathy 2001)

She argues that this approach is useful when the future is unknown and full of uncertainties. It is central for the Effectuation paradigm to first reflect over what resources you have available to you, then take action to shape the future and again reflect in order to adapt to the new changes that the action caused. (Sarasvathy 2001)

This way of thinking is again strongly connected to pragmatic philosophy. Sarasvathy never mentions Dewey in the paper, but it is possible to argue that Sarasvathy's theory of Effectuation has pragmatic philosophy underlying. This can be seen by making a comparison of the Theory of Effectuation and Dewey's Inquiry process.

The theory of Effectuation is constructed in the same way as Dewey's process of inquiry. In Effectuation the entrepreneur considers the current situation, takes action according to what available resources are given. This action causes an unknown effect, but where the

entrepreneur has an expectation of the outcome. Finally the entrepreneur reevaluates the new situation that has been created after the action and effect has taken place.

To compare with Dewey's process of inquiry, this is completely the same. According to the process of inquiry the inquirer is first facing an indeterminate situation that opens up to the inquiry process and become a problematic situation. In the problematic situation the inquirer realizes and acknowledges what elements the problematic situation consists of, for then to transform it, by action, into a determinate situation.

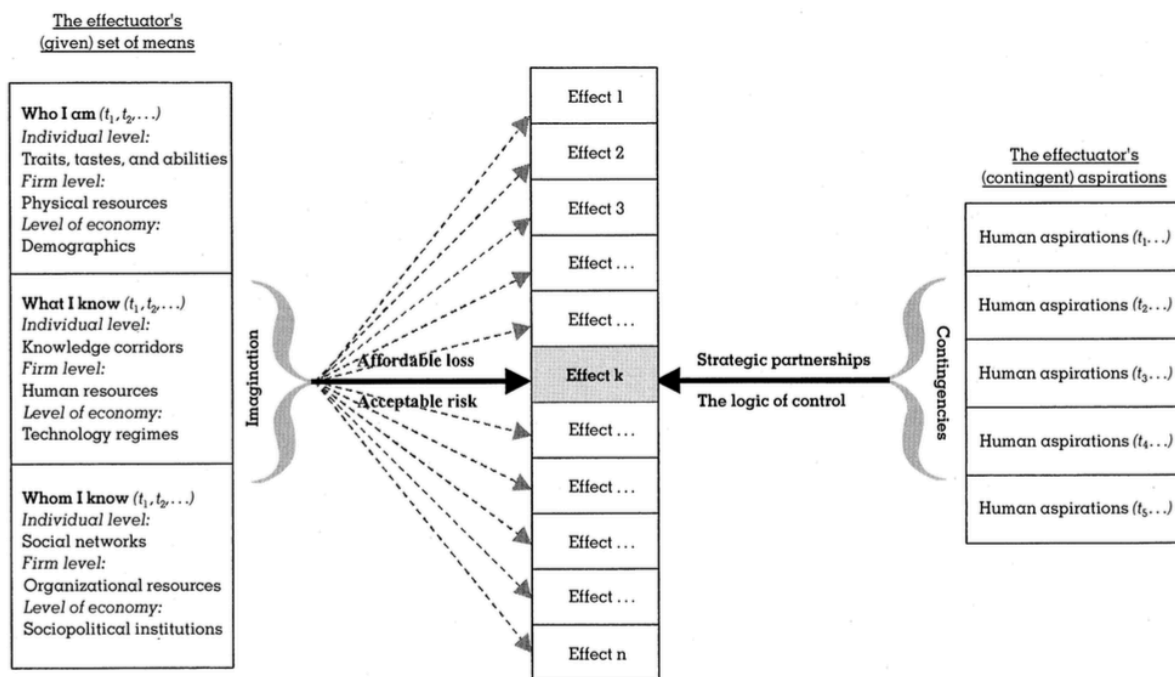


Figure 2: Theory of Effectuation (Sarasvathy 2001)

3.5 SUMMARY

This part had the purpose of making a short introduction and presenting the relevant core concepts of Deweyan pragmatism. There was made a link between the pragmatic philosophy to design via Schön and Wiggins, software innovation via Essence and Entrepreneurship via Sarasvathy.

Schön and Wiggins outlined the importance of reflecting as a designer in order to explore, discover and experiment with the design situation.

Essence has provided a practical tool via the configuration table and an approach to push the software development project forward and assist in seeing the project from different perspectives and discover new problems not thought about beforehand.

Sarasvathy has been linked to pragmatism, via her Theory of Effectuation and her theory will be relevant for this project when trying to develop a model for software entrepreneurs.

This project will try and bring the design process, configuration table and the theory of Effectuation into an software entrepreneurship model that will allow the entrepreneur to explore the software development and at the same time explore the business side.

As presented in the introduction, the main focus of this project will be the exploration and experimentation of an idea in order to understand it. Pragmatic philosophy offers this via the thought of continuously reflecting and acting.

The next part will present the contribution of this project.

Part III

Contribution

4 CONTRIBUTION

The aim with this contribution was to develop a model that will allow a software entrepreneur to view an idea from different perspectives to reach a meaningful solution. Perspectives such as the technical side and the business side are considered in the model in order to allow the software entrepreneur a starting solution with the possibility of launching it to a market.

To develop this model, this project will transform theoretical concepts and tools into a new model that a software entrepreneur can use in a startup process.

This part presents the proposal of a generic model called the Pragmatic Explorer Model. It allows a software entrepreneur to practically explore and view the technological side and push the project as well as developing a business model that can transform the software project into a sustainable business.

This model and the different activities it consist of is the following:

- The model will assist the software entrepreneur to realize and acknowledge an idea – an indeterminate situation.
- The model will make the software entrepreneur reflect over different problems and solutions that the idea might raise. This will assist in looking at the software project from different angles and perspectives.
- The model will make the software entrepreneur reflect over different business model types in order to reflect over det business model.
- The model will bring suggestions to a launch strategy.

The Pragmatic Explorer model has been made as simple as possible in order for it to be easily understood by the software entrepreneur.

Before presenting Pragmatic Explorer model, additional research were done in order to explore if there were any existing models or frameworks that would allow the software entrepreneur to reach the points listed above.

4.1 RELATED WORK

As introduced above, the objective of Pragmatic Explorer model is basically four purposes. First, to realize an idea. Second, to facilitate and explore and experiment with the technical side and business side. Third, to reach a possible solution and fourth is suggestions to a launch strategy.

Many institutions already provide activities that will guide and support a software entrepreneur. Initiatives such as AAU's incubator programme, Venture Cup, Wofie, different accelerator programme all wish to help people with an idea into developing it and launching it. These initiatives often include workshops, sparring with a mentor and networking, e.g. the entrepreneurship initiative at Copenhagen Business School offers free office space, mentors and workshops among other things.(CSE CBS 2015)

The Pragmatic Explorer model though is aimed to take part in the software entrepreneurs everyday activity and could take place before approaching incubators or potential investors. The model though will allow for a solid foundation before e.g. pitching an idea for an investor, as both prototypes and a revised business model will have been evaluated. This is not to say that the model cannot be used as soon as you have an investor, the model is meant to always be relevant as it makes the software entrepreneur continuously reflect about the idea and solution.

To develop a new model it could be fruitful to look at an existing model for software entrepreneurs. The model presented in the paper "Early Stage Software Development Mode: A Framework for Operationalizing Lean Principles in Software Startup" by Bosch et al. is a model specifically developed for software entrepreneurs. (Bosch, Olsson et al. 2013)

The following will go through the steps of this model and then give a reflective critique of the model, to end up with a proposal of a new model developed for this project.

3.1.1 The ESSSDM

Bosch et al. developed the model presented in Figure 3, as a result of interviews they made with nine founders, CTOs and early employees of different software startups in the Gothenburg region of Sweden. (Bosch, Olsson et al. 2013).

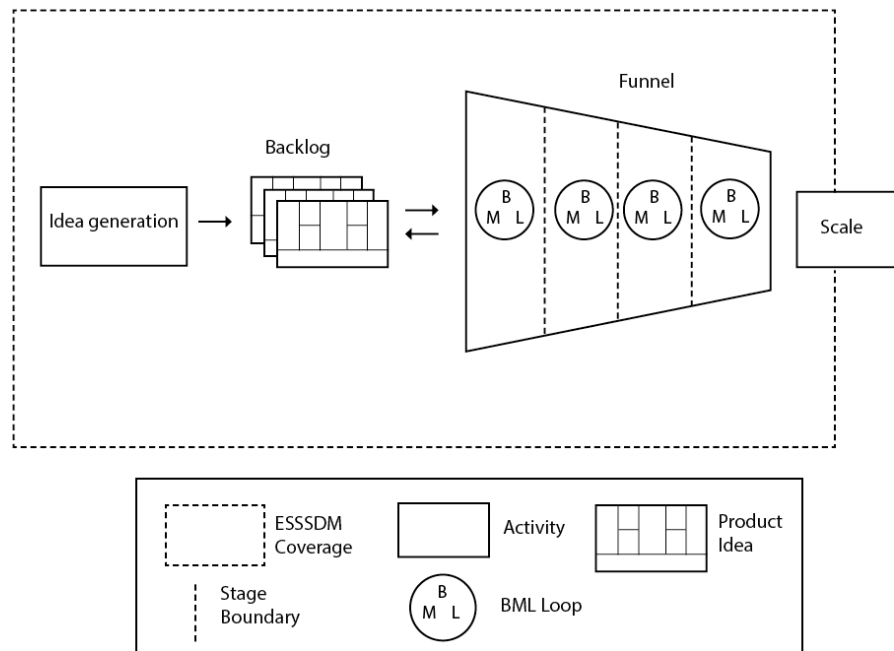


Figure 3: The Early Stage Startup Software Development Model (Bosch et al., 2013)

The aim of the model is to select one product idea out of many with a potential of scaling it up and introducing it to a commercial market. The model is designed to handle the exploration of multiple product ideas at the same time and provides a step-by-step process with criteria for when to exit the different activities. The steps consist of three parts, i.e. (1) Idea Generation, (2) Backlog with the purpose of prioritizing the product ideas and (3) Funnel designed to validate and refine the product idea with the assistance of the Build-Measure-Learn (BML) loop (Bosch, Olsson et al. 2013).

4.1.1 Part 1: Idea Generation

Bosch et al. take into regard that an Idea Generation phase is part of any startup process and propose three techniques to develop ideas. Table 1 presented below summarises the techniques.

<i>Exploratory Interviews</i>	Talking to the customers. Recommended in order to explore one customer segment at a time
<i>Follow-me-home</i>	Spend a day at the office of a potential customer to understand their needs
<i>SCAMPER</i>	Brainstorming technique made to systemize and develop new ideas by changing existing product concepts. Each letter stands for a way of thinking, i.e. Substitute, Combine, Adapt, Magnify/modify, Put to other use, Eliminate and Rearrange/reverse

Table 1: Idea Generation techniques (Bosch, Olsson et al. 2013)

Idea generating comes in many forms, in Bosch et al.'s case they have proposed three different techniques to develop ideas. The *Exploratory Interview* and the *Follow-me-home* both require that the business idea already has a customer. These can be useful techniques, but what if your customer do not know what they want? e.g. the invention of the Ford automobile and the first iPhone.

The third technique, SCAMPER, which is basically a brainstorming technique is highly praised within creative and innovative thinking. (Elmansy 2015)

In the ESSSDM the SCAMPER is within the Idea Generation step which is the first step in the model. The SCAMPER technique require the entrepreneur to already have a problem that then can be explored and investigated via each of the seven techniques lying behind each letter. But what about the initial situation where the entrepreneur acknowledges a problem? The conclusion is that the step Idea Generation requires an already well defined problem in order to conduct these techniques proposed by Bosch et al. and does not consider the initial stage of realizing the idea.

4.1.2 Part 2: The Backlog

All the product ideas that has potential are added in a Backlog and described in a comparable form. These forms are illustrated as a set of business models (Bosch, Olsson et al. 2013).

Table 2: *Criteria to prioritize product ideas.* (Bosch, Olsson et al. 2013) Table 2 lists the criteria to prioritize the product ideas and in this step Bosch et al. provide a set of questions that the entrepreneur have to answer in order to prioritize the product ideas (Bosch, Olsson et al. 2013).

<i>How much do customers care about the problem?</i>
<i>How much does the team care about the problem?</i>
<i>How large is the market potential?</i>
<i>How much domain knowledge exists within the team?</i>
<i>Has the team experienced the problem themselves?</i>
<i>Are customers easy to reach?</i>

Table 2: Criteria to prioritize product ideas. (Bosch, Olsson et al. 2013)

The criteria proposed by Bosch et al. are too generic and does not necessarily allow radical innovative ideas, e.g. if the customer does not know what they want or if the market does not exist.

4.1.3 Part 3: The Funnel

The ideas from the Backlog are then exposed to the Funnel to validate the ideas with the use of the Build-Measure-Learn (BML) loop based on the book “Lean Startup” (Bosch, Olsson et al. 2013).

The Funnel can hold multiple ideas concurrently and the team can validate an idea while working on another idea. The Funnel consists of four stages and each stage possesses its own exit criteria. The four stages are the following: Validate problem, Validate solution, Validate Minimum Viable Product (MVP) small-scale, and Validate Minimum Viable Product (MVP) large-scale (Bosch, Olsson et al. 2013).

After each BML iteration the team must make a decision if they want to pivot, persevere or put the idea on hold. This also applies for ideas that are not ready to move on to the next stage (Bosch, Olsson et al. 2013).

The Funnel requires the use of the BML, which require that the software entrepreneur already has a customer and the faith that the customer knows what they want and presumes that the market already exists.

4.1.4 Part 4: Scale

Bosch et al. does not provide any information on how to do the Scale step. Instead they point out that a Scale stage exist and is the final step of the model. When an idea has reached this stage it indicates that the idea is ready to be introduced to a commercial market (Bosch, Olsson et al. 2013).

4.2 SUMMARY

This part tried to look at existing models that could act as inspiration for a development of a model for this project. The research lead to the ESSSDM by Bosch et al. that promised to discover one product idea that would be worth scaling. The ESSSDM allows the software entrepreneur with many product ideas to rank them and make a decision about which one to focus on. The requirements to these product ideas are that they are ideas that can be measured via the target customer and the product idea is for an existing market. It is presumed that the problem is well defined, thereby not allowing an exploration of the problem to take place.

The following will present the proposal of a model that was developed during this project and it is a model that starts in an earlier stage then the Idea Generation step from the ESSSDM.

4.3 THE PRAGMATIC EXPLORER MODEL

Following is a presentation of the new model proposed in this project.

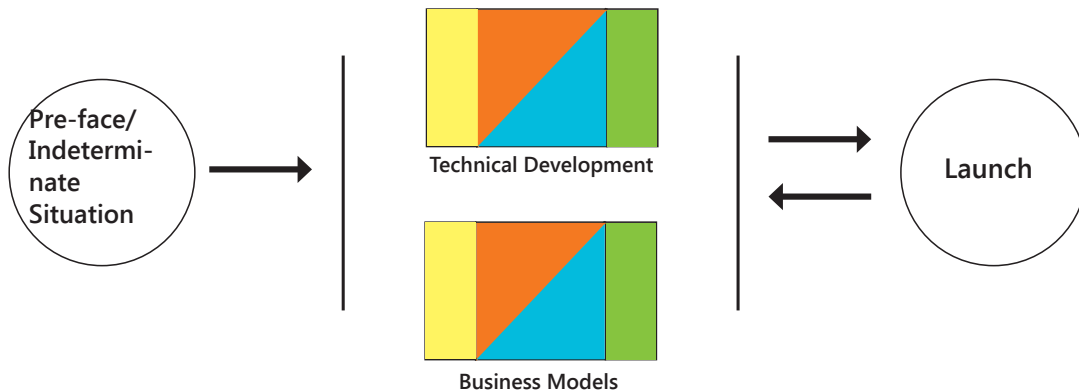


Figure 4: Overview of the Pragmatic Explorer model

4.4 INDETERMINATE SITUATION

As explained in 3.1.2 an indeterminate situation is something that is uncertain and not well defined. Something bothering the individual and might turn into a problematic situation that makes us think and continuously search for a solution to fix the problematic situation, making the situation a determinate situation. Meaning, there is a match between what bothered us before and the outcome of the action we have chosen to perform.

This way of looking at problems can also be transferred in the way we explore and discover new ideas, which is why the indeterminate situation is the first step in the model.

This aspect is what initially happens to every individual when discovering an idea for a business. Whether it was Travis Kalanick being annoyed with the taxis of San Francisco and came up with Uber or Elon Musk trying to explore alternative ways of transportation. They probably both had an epiphany with an indeterminate situation where they stopped for a minute and acknowledged: "There must be something else than this".

The acknowledgment of an indeterminate situation is the first step in the model and after this reflection and understanding of the situation the model brings the entrepreneur to the process of ETVX.

4.5 ETVX

The model has two illustrations utilizing the ETVX model, one for the technical side and one for the business side. The ETVX model was chosen to illustrate the process of the project and can be linked to pragmatic philosophy.

Radice and Phillips developed the ETVX-model that describes the software process as different activities that contains entry criteria, tasks, validations and exit criteria these activities are illustrated in the model. (Aaen, 2016)

For the model of this project ETVX will be used as an overall process and within lies the Configurations Tables from Essence and the Business Model Canvas by Osterwalder and Pigneur respectively.

4.5.1 ETVX and Essence

Essence focuses on the decision making of what problem you want to solve, why you want to solve it and how you should solve it. These decisions are a part of the development. (Aaen, 2016)

Essence can be used as a supplement for any software process model or be combined. A general model is suggested for software processes and the Values presented in the Foundation part i.e. Reflection, Transaction, Appreciation and Vision from the Configurations Tables are linked with the general ETVX model. (Aaen, 2016)

The combined model is shown below in Figure 5, and this unified model will be incorporated into the model for Diaspera to illustrate how software entrepreneurs can work continuously on the technical side as well as the business side.

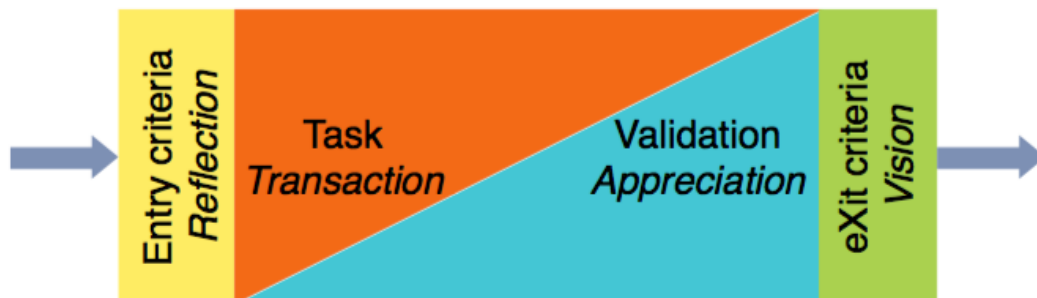


Figure 5: Essence ETVX Model (Aaen, 2016)

The ETVX model consists of four phases with different criteria that needs to be fulfilled in order to advance to the next phase. The phases are:

Entry Criteria – *Reflection*

These are the criterion that needs to be fulfilled prior starting a task. This stage corresponds to Essence's *Reflection* and creates a fundamental understanding of the problem. This is a state (Aaen, 2016)

Task – *Transaction*

The description of what the problem is. This stage corresponds to Essence's *Transaction* where the software entrepreneur digs deeper into the problem and finds technical ways to solve the problem. (Aaen, 2016) The entrepreneur must act, making it an activity.

Validation – *Appreciation*

Ensuring that the quality of the task is fulfilled. This stage corresponds to Essence's *Appreciation* and is an objective evaluation to see if the task stage matches the Problem, Vision and Warrant stated in the Configuration Table. (Aaen, 2016) This is also an activity.

eXit criteria – *Vision*

These are the criterias that need to be fulfilled in order to end the activity. This stage corresponds to Essence's *Vision*, and makes sure the Vision matches the Problem and solution and the software entrepreneur will know if the Vision is still a Vision that should be followed. (Aaen, 2016)

To make the link between the pragmatism and the ETVX model it is possible to look at the phases of Schön and Wiggins' *seeing-moving-seeing* and the three of the phases of the ETVX model. Making this connection, the *seeing* would be the Entry Criteria, *moving* the Task and the second *seeing* is eXit Criteria.

4.5.2 ETVX and Osterwalder & Pigneur

The other focus of a software startup that the proposed model wishes to address is the business side. The model is built with the use of the previously mentioned ETVX model to show the process, but when looking at the business side of your project a great tool for getting an overview and making a strategy is to make a business model.

A known business model tool is the Business Model Canvas by Osterwalder & Pigneur. (Amarsy 2015) The Business Model Canvas will be the activity that takes place in parallel with the technical development.

Osterwalder & Pigneur promise to give an overview of the business idea and present examples of traditional and innovative business models. Making a business model is a way to understand the business, e.i. Asking what do the business offer, to whom, how do we offer it and which partners do the business have. Another way of saying that the business model provides an overview of the value the business brings. (Osterwalder, Pigneur 2013)

A short explanation of the components that the Business Model Canvas consists of will be described next.

4.5.3 The Business Model Canvas

The Business Model Canvas consists of nine components that cover, according to Osterwalder & Pigneur, the main areas of a business. These are customers, offer, infrastructure and financial viability. Figure 6 illustrates how the Business Model Canvas looks like with the nine components. (Osterwalder, Pigneur 2013)

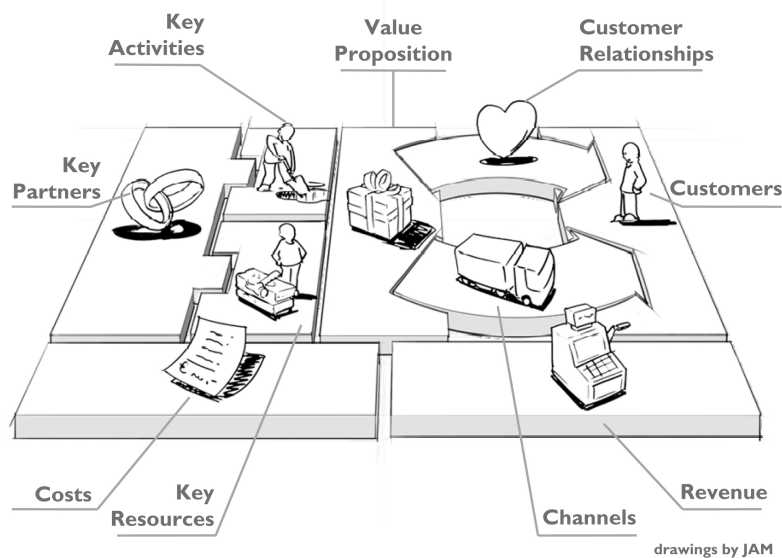


Figure 6: The Business Model Canvas (Osterwalder, Pigneur 2013)

- Customers - describes the different groups of people and organizations to which the company sells a product or service
- Value Proposition - describes the various product and services that the company offers which creates value for the Customers.
- Channels - describes the ways in which the company reaches their customers in the categories: communication, distribution and sales.
- Customer Relationships - describes the relationship that the company has/aims to have with each Customer.
- Revenue - describes the income that the company have from each Customer
- Key Resources - describes the most important assets that the company possess
- Key Activities - describes the most important operations and procedures a company carries out
- Key Partners - describes the various suppliers and partners that a company has
- Costs - describes all costs that a company may have

The purpose of the Business Model Canvas is to provide an easy and understandable language to make and describe a business mode. (Osterwalder, Pigneur 2013)

When entering the model and the software entrepreneur has completed the Configuration Table, the software entrepreneur can isolate the *Warrant* in the Rationale-Reasoning block and directly insert it into the Value Proposition in the Business Model Canvas. The reason why is that the Value Proposition describes what the business offers, hence creating value for the customer. The *Warrant* is likewise a statement that expresses the value of solving a problem.

With this given starting point the software entrepreneur can start completing the remaining components.

A critique of the Business Model Canvas is that there is no component for other business goals than to generate a profit. It is expected that the aim of making a business is to earn money, but what if the business has a more idealistic character?

4.6 LAUNCH

The following present the suggestions to a launch strategy for when the software has explored and experimented with an idea and developed a solution that matches the expectations. The launch phase is inspired by the process suggestions of implementation and managing by Osterwalder & Pigneur.

The launch phase looks at how it is possible to implement a finished business model prototype by transforming it into an implementation plan. (Osterwalder, Pigneur 2010).

According to Osterwalder & Pigneur, this phase can include the following activities:

- Defining related projects
- Specifying milestones
- Organize legal structures
- Prepare budget
- Project roadmap

When managing the business model, the software entrepreneur investigates how the market is responding to the business model. According to the response, the business model will be adapted and modified. (Osterwalder, Pigneur 2010)

Osterwalder & Pigneur stresses how important it is to always be willing and open to change the business model when noticing changes in market and new demands. (Osterwalder, Pigneur 2013)

Osterwalder & Pigneur has different activities the software entrepreneur can do to continuously asses the business model and manage it:

- Scan environment
- Assess business model continuously
- Rethink the model
- Align business models
- Manage conflicts between models

This attitude can be linked to pragmatic thinking. The software entrepreneur must always reflect about the current situation, i.e. the business, and welcome mismatches in order to transform a situation.

4.7 SUMMARY

In this chapter, the Pragmatic Explorer model that will assist software entrepreneurs in exploring and experimenting an idea has been presented. The model is inspired by pragmatic philosophy and emphasizes continuously reflection and action. This has been illustrated by the selected theories and tools.

In the Pre-face/Indeterminate Situation phase, the software entrepreneur realizes and acknowledges a problem, but cannot completely define the associated objects and events.

In the two ETVX models, the development of the software and the business model takes place respectively. This is done in iterations and the software entrepreneur can not progress to the Launch phase until there is a match between the problem and solution.

The Launch phase offers suggestions to how idea can be launched. In this phase it is always possible to re-enter the ETVX models, if more exploration and experimentation is needed.

The next part will demonstrate the presented Pragmatic Explorer model by testing it with the case Diaspera.

Part IV

Testing

5 TESTING

In this part the case presented in 2 will be fully elaborated and tested on the proposed Pragmatic Explorer model for software entrepreneurs. The focus is to see how the software development and the business side will be developed in parallel. The case is used to illustrate each step proposed in the model, starting with the indeterminate situation.

5.1 INDETERMINATE SITUATION FOR DIASPERA

The indeterminate situation for the Diaspera case is the Hunch chapter described in 2.1. This situation described, was the first encounter with a mismatch between expectations and outcome. The feeling of something was missing and made me consider what the problem consisted lays the groundwork for first step in the model and opens up to be inquired.

The following will describe the four iterations in order to describe the process and to get an overview of the process. After the description of the process, main points of the four configuration tables and four business models will be presented and described in detail.

5.2 THE SPRINTS

After determining the case and deciding upon the initial business idea, a main focus ended up being the admin of the system. The admin was myself and I also represented the writers and users of the system.

The first thing to start with ended up being the technical side of the platform and using myself as a representative for the target group together with 1st generation diasporas.

The solution was that the system should be able to handle articles and have some kind of protection so not every user would be able to login a make changes. With that in mind, different structures were researched such as if the news platform should be a blog format or more online newspaper styles. The decision fell on online newspaper and now different Content Management Systems (CMS) were explored, such as Wordpress and Composite C1. In the end the decision fell on developing the CMS in PHP and using free Microsoft BizSpark programme for entrepreneurs to host it. In that way there was no costs and the site would be ad-free.

The basic CMS was then developed and a screen shot of the outcome is shown in Figure 7

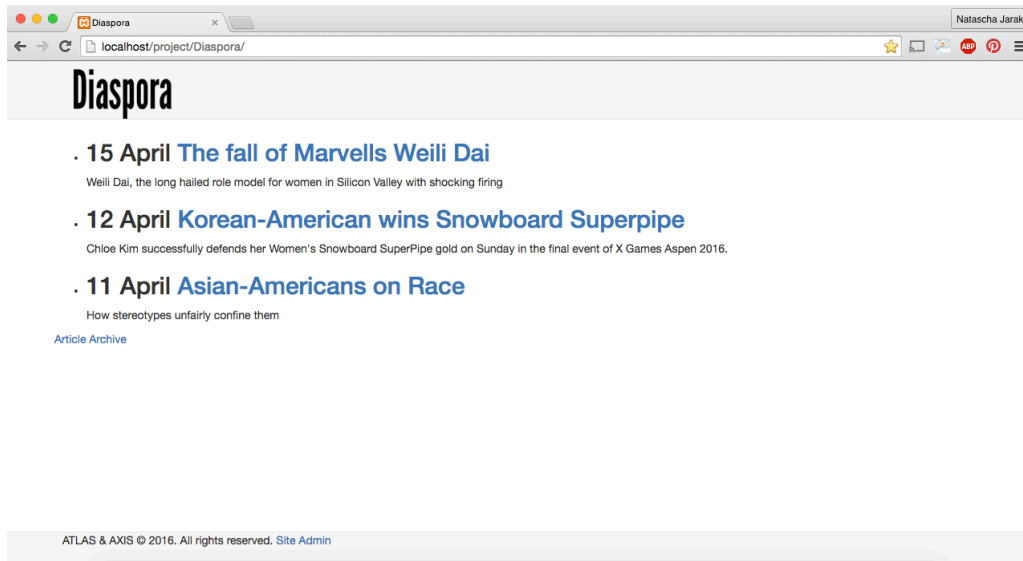


Figure 7: Screen shot of 1st Sprint

The findings were found again using myself and my own judgement and deciding that this CMS lacked a modern design and appearance, so images and video functionality were implemented.

The CMS now looked like Figure 8.

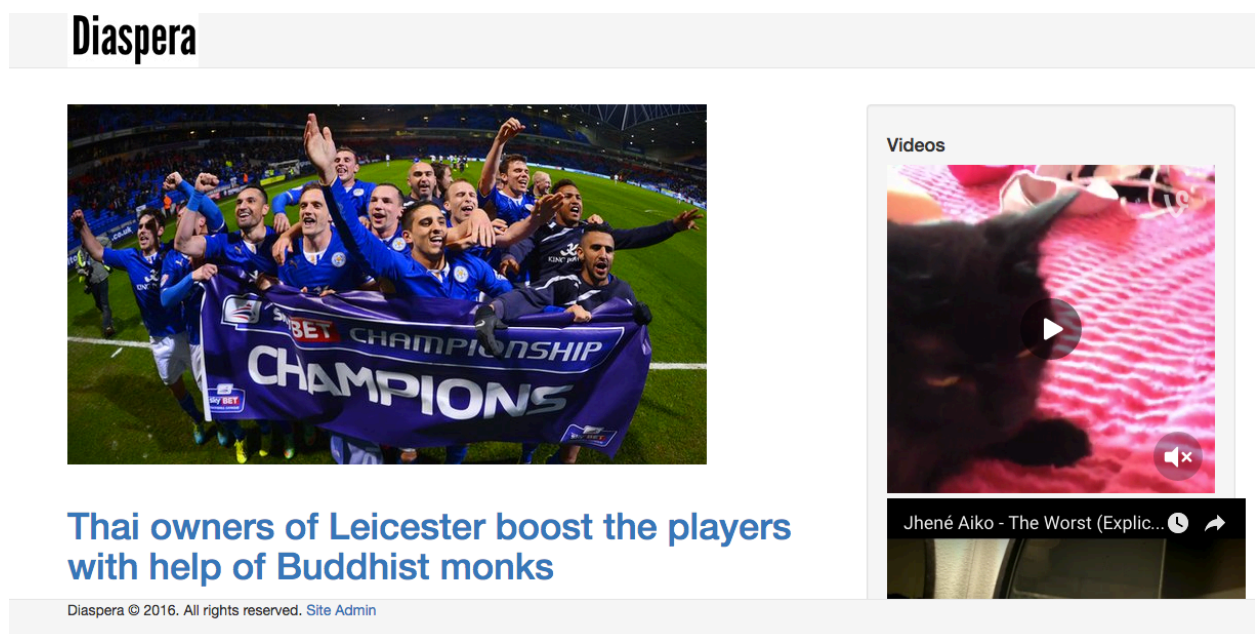


Figure 8: Screen shot of 2nd Sprint

The name Diaspora was now changed to Diaspera, as there was already an existing site name Diaspora. Diaspera is a contraction of the word “Diaspora” presented earlier in the project and “aspera” from the Latin phrase “per aspera ad astra” meaning “Through hardships to the stars”.

With more or less a CMS established the third configuration started with the focus on exploring the users. The six interview subjects were found in my own network and were all an expected user. A more detailed description of the interviews and the main findings will be presented in the following.

5.2.1 The Interviews

The purpose of the interviews was to explore and discover how the potential users experience and feels about media, cultural identity and what kind of news they are interested in, not about functionality or design. The purpose was to get an understanding of the users. Hence, the interviews were *exploratory interviews*.(Lazar, Feng et al. 2010)

The interviews were conducted over the phone, as none of the interviewees were nearby. The interview questions were very broad and open, which allowed any relevant elaboration that would be interesting to know more about.

Figure 9 on the next page illustrates the identified user scenarios that define the expected users of the system. The figure is a quadrant system containing four quadrants with two axes. These axes are defined as follows:

- Culture/Clan – The values of the user are either cultural or clan based
- Internal/’Home’ – The relation of the user are either to the ‘out’ country or to the ‘home’ country

The understanding of *Culture* is that the Asian diaspora user considers cultural values as important, whereas the Asian diaspora on the *Clan* side consider values such as family and religion more important.

Internal means the relation the Asian diasporas has with other Asian diasporas in the ‘out’ country, while ‘*Home*’ is the relation Asian diasporas has with people in their rooted country or their ‘home’ country.

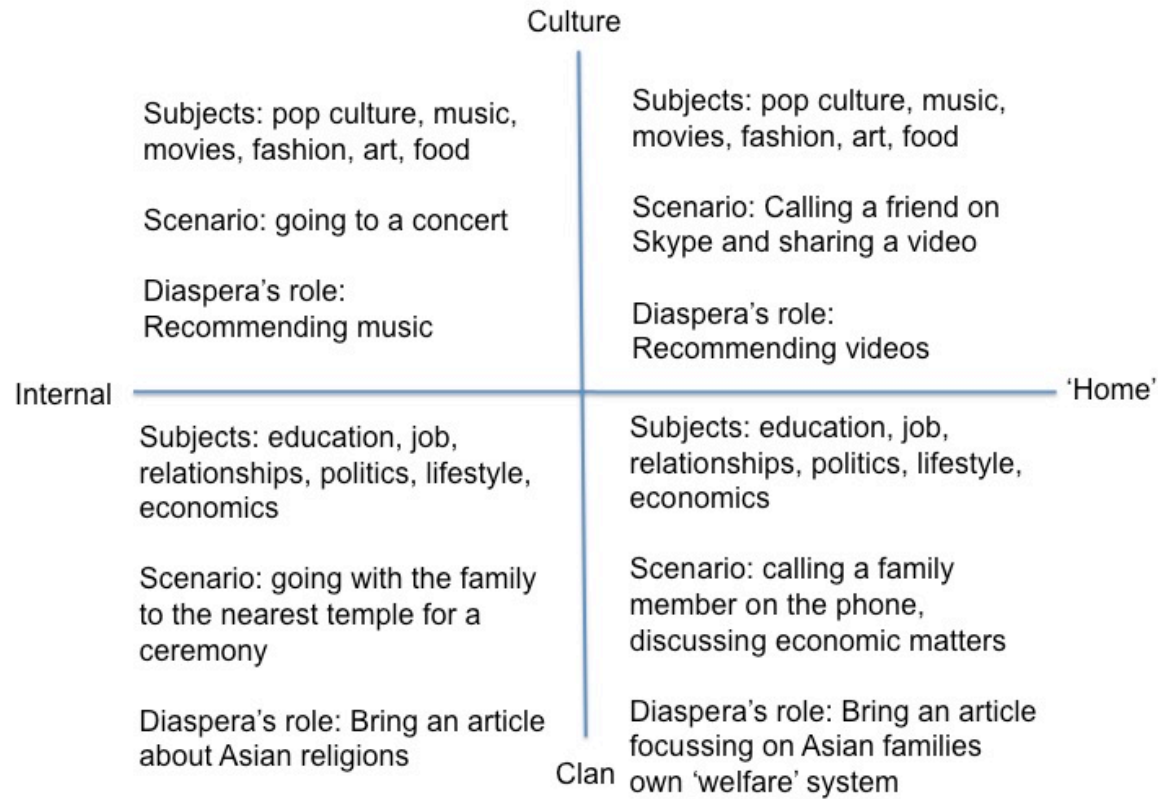


Figure 9: User Scenarios

The interviewees are listed in Table 3 and are divided into the categories; gender, age, nationality, current country they are living in and which generation they belong to.

	Gender	Age	Nationality	Living in	Generation
Nguyet	F	30	Vietnamese	Sweden	2 nd
Daniel	M	26	Danish-Thai	Denmark	2 nd
Michelle	F	27	Danish-Thai	Denmark	2 nd
Srisuda	F	56	Thai	Denmark	1 st
Virasak	M	62	Thai	Sweden	1 st
Mon	M	35	Thai	Denmark	1 st

Table 3: List of Interviewees

Nguyet

Nguyet is Vietnamese and lives in Sweden. Her parents and husband are Vietnamese. When asked which media she often uses she referred to Facebook, Instagram news media such as TV2, BT, Ekstra Bladet and Woman as her main sources of news.

News she was mostly interested in are movies, fashion and cooking and she feels mostly danish (she used to live in Denmark) and a little vietnamese. She feels represented in the media.

Daniel

Daniel is half Danish half Thai living in Denmark. He uses mostly Danish media and mentioned Politiken.dk and Facebook. He used foreign media if they were linked to on Facebook, media such as Washington Post, New York Times and The Guardian. He does not actively go search for them him self. News that interests him the most is politics, science, technology, innovation and culture. He feels represented in the media, and does not have an interest in news from Asia. He could not explain exactly which culture he feels more affiliated to, it depended on the situation. He would feel more Thai if the context were suited for it, but overall considered himself as a citizen of the world.

Michelle

Michelle is half Danish half Thai living in Denmark. She uses Politiken, Berlingske, JP, MSN.dk and BBC. She feels Danish but would like to follow political news from Southeast Asia.

Srisuda

Srisuda is Thai, but living in Denmark. She uses a mix of Danish and Thai media. Danish media to mention are Berlingske, BT and DR. She uses different Thai online newspaper and BBC Thai. She connects with old classmates iva Lime and Facebook . and have a great interest in political news. She does not feel Danish and does not feel she has the same opinions as Danish people. When speaking to relatives still living in Thailand she uses Skype. They discuss economic matters, family matters and local news. Depending on which relative she is talking to she avoids talking about politics. Emphasizes that politics closely tied with religion is a sensitive subject.

Virasak

Virasak is a Buddhist Thai monk living in Sweden. He does not speak Swedish or English. He speaks Thai and follows different Thai media and gets news from other Thais in the area. He tries to read Swedish newspapers by looking at the pictures. He is interested in politics and local news from his hometown. He feels Thai.

Mon

Mon is Thai and living in Denmark. He is married to a Thai. He follows a lot of Thai media and Danish such as Politiken and Berlingske. He has a great interest in what is going on in Thailand, especially politically. He feels Thai.

5.2.2 Findings

A common interest that can be derived is politics. Almost all the interviewees mention they are interested in politics. The findings also showed that none of the 2nd generation interviewees felt underrepresented or showed an interest for a media solution like Diaspera, as they did not feel there was even a problem. This finding was not expected and a change of focus and problem in the configuration tables and business models must be considered.

Findings also uncovered that there was more interest from the 1st generation diasporas than the 2nd generation. The 1st generation utilized a high variety of different media. It should be considered to change the user to focus only on the 1st generation.

There was a vast majority of the interviewees with Thai affiliation and the findings could look differently if there was a wider representation of people from the remaining Southeast Asian countries. Despite of this, it is still possible to argue that the findings are highly relevant as the purpose of the interviews were to explore and understand user needs.

Following the new findings of the lack of interest from the 2nd generation the project changes focus in the last configuration. The focus is now 1st generation diaspora and with a main focus on bringing political news. With these iterations, the project is now deemed ready for an initial launch with the first strategy being Search Engine Optimization. Due to time restriction the project testing ends with this strategy.

This was a short overview of how the process with testing the model occurred. The following will illustrate how this process was facilitated by the Configuration Tables and the Business Model Canvases, important blocks and changes are highlighted and commented

5.3 1ST SPRINT: DEVELOPER 1

This sprint focused on the technical side of the project and the development of the CMS. The main concerns were creating the database and also handling security for the admin user in order to protect the writing rights.

On the business side Figure 10 presents the first business model for this project. The financial structure was not a main consideration from the beginning, and a lack of being able to express idealistic motivations of making the Diaspera platform forced a revenue stream of advertising.

View	Paradigm	Product	Project	Process
<i>Value</i>	<i>Reflection</i>	<i>Transaction</i>	<i>Reasoning</i>	<i>Appreciation</i>
<i>Ratio nale:</i> <i>Why?</i>	<i>Challenge</i> Strengthen or explore cultural identity for Asian diasporas in a Western country. <i>Problem</i> The lack of cultural identity can create a feeling of despair.	<i>Key Technologies</i> - Web based publishing - Cross platform - Responsive Web Design - <i>Text input, images, videos</i>	<i>Vision</i> Diaspora (Developer 1) Create a tool that facilitates news that strengthen and explore the cultural identity to the country of origin. <i>Warrant</i> Having a platform that represents the voice of the diasporas will create a new community for Asian Diasporas	<i>Rationale review</i> Expectations: Facilitation of text-based articles is possible <i>Findings:</i> <i>Unused platform potential – need of visuals</i>
<i>Strate gy:</i> <i>What ?</i>	<i>Key elements</i> - Generic platform - Articles - Readers - Writers	<i>Key components</i> - Digital newspaper with articles - <i>Comment module</i>	<i>Justification</i> <i>Backing:</i> Inexpensive and easy access <i>Qualifier:</i> Only in English text <i>Rebuttal:</i> Can still bring value to Asian diasporas that understand English.	<i>Strategy review</i> Expectations: The key components are the foundation <i>Findings:</i> Text based not sufficient
<i>Tactic s:</i> <i>How?</i>	<i>Key scenarios</i> - Reader viewing an article - Writer creating an article	<i>Key features</i> - View articles - Create article - <i>Co-create article</i>	<i>Key mapping</i> - The feeling of cultural identity rely on the “right” articles.	<i>Tactics review</i> Expectations: Creating and reading articles works as intended <i>Findings:</i> <i>Text-based articles not sufficient</i>

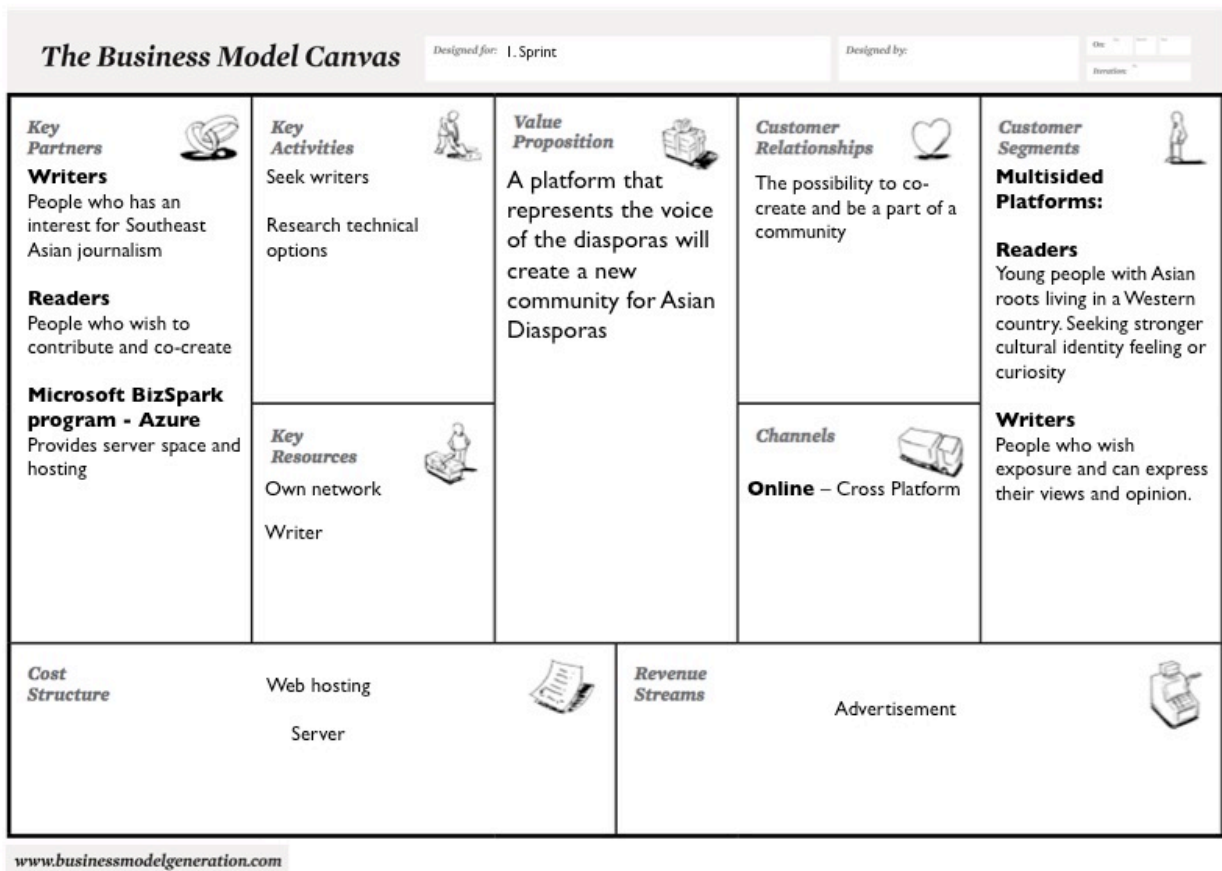


Figure 10: Business Model 1

There was only focus on technical findings from the 1st Sprint to the 2nd, which lead to the beginning of the new sprint.

5.4 2ND SPRINT: DEVELOPER 2

This sprint focused on fixing and developing the findings from the previous sprint and new findings showed a need to explore the news interest, the customers and case of sensitive article subjects. It was evaluated that interviews needed to be conducted to progress the project.

The business model shown in Figure 11 only changed in the key activity again focussing on the technical side of the project.

<i>View</i>	Paradigm	Product	Project	Process
<i>Value</i>	<i>Reflection</i>	<i>Transaction</i>	<i>Reasoning</i>	<i>Appreciation</i>
<i>Ratio nale:</i> <i>Why?</i>	Challenge Strengthen or explore cultural identity for Asian diasporas in a Western country. Problem The lack of cultural identity can create a feeling of despair.	Key Technologies - Web based publishing - Cross platform - Responsive Web Design - <i>Text input, images, videos</i>	Vision Diaspora (Developer 2) Create a tool that facilitates news that strengthen and explore the cultural identity to the country of origin. Warrant Having a platform that represents the voice of the diasporas will create a new community for Asian Diasporas	Rationale review Expectations: Facilitation of articles is possible Findings: Unused platform potential
<i>Strate gy:</i> <i>What ?</i>	Key elements - Generic platform - Articles - Readers - Writers	Key components - Digital newspaper with articles - <i>Comment module</i>	Justification <i>Backing:</i> Inexpensive and easy access <i>Qualifier:</i> Only subjects that are not politically sensitive. Only in English <i>Rebuttal:</i> Must be controlled and validated to live up to national laws and political sensitivity.	Strategy review Expectations: The key components are the foundation Findings: There is no control of articles.
<i>Tactic s:</i> <i>How?</i>	Key scenarios - Reader viewing an article - Writer creating an article	Key features - View articles - Create article - <i>Co-create article</i>	Key mapping - The feeling of cultural identity rely on the "right" articles.	Tactics review Expectations: Creating and reading articles works as intended Findings: Article selection is too broad.

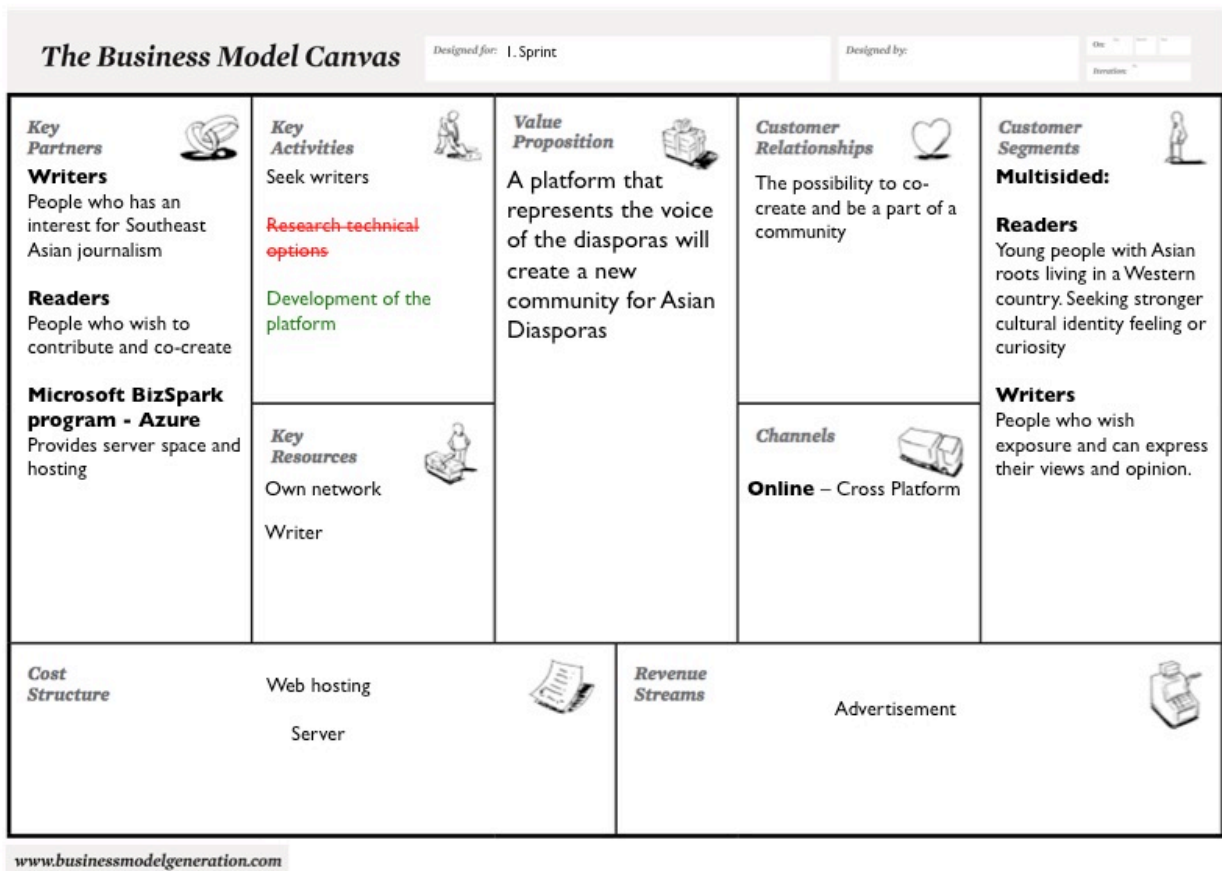


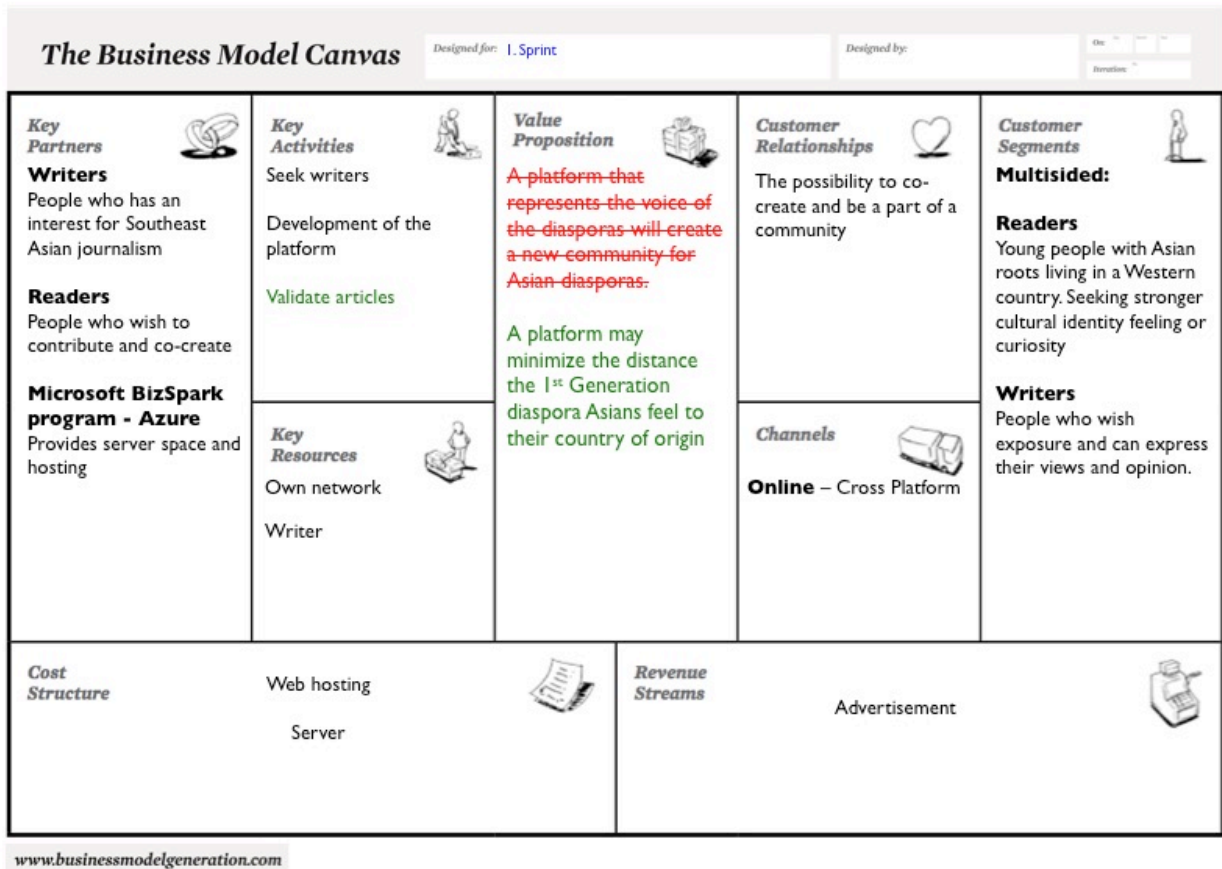
Figure 11: Business Model 2

5.5 3RD SPRINT: THE INTERVIEWER

The interviews described earlier in 5.2.1 were conducted in this sprint, and as mentioned, the main findings were that lack of interest from the 2nd generation. Technically, this sprint added more and more functionality to the CMS.

On the business side, Figur 12 shows the developed business model not changing the Value Proposition to focus on the 1st generation.

<i>View</i>	Paradigm	Product	Project	Process
<i>Value</i>	<i>Reflection</i>	<i>Transaction</i>	<i>Reasoning</i>	<i>Appreciation</i>
<i>Rationale:</i> <i>Why?</i>	<i>Challenge</i> Replacing the physical distance with a digital presence <i>Problem</i> Physical distance makes diaspora Asians lose their cultural identity for their country of origin	<i>Key Technologies</i> - Commentary section - Social media connection	<i>Vision</i> Diaspera (The Interviewer) Diaspera platform brings political news from country of origin <i>Warrant</i> The platform may minimise the distance the 1 st Generation Diaspora Asians feel to their country of origin.	<i>Rationale review:</i> <i>Expectations:</i> The platform will minimise the feeling of being far from home <i>Findings:</i> 2 nd Generation lacks interest
<i>Strategy:</i> <i>What?</i>	<i>Key elements</i> - Articles - Readers - Editor - Writers	<i>Key components</i> - User Interface - Database	<i>Justification</i> <i>Backing:</i> Inexpensive and easy access <i>Qualifier:</i> Only subjects that are not politically sensitive. Only in English <i>Rebuttal:</i> Article selection must be curated	<i>Strategy review</i> <i>Expectations:</i> Platform works as intended <i>Findings: Need interaction and advertisement</i>
<i>Tactics:</i> <i>How?</i>	<i>Key scenarios</i> - Reader viewing an article - Reader writing comment - Writer creating an article - Editor validating an article - Reader co-create and contribute	<i>Key features</i> - View articles - Create article - View videos - Create comment - Co-create	<i>Key mapping</i> - The feeling of cultural identity rely on the "right" articles.	<i>Tactics review</i> <i>Expectations:</i> Creating and reading articles works as intended <i>Findings: Articles not being read</i>



Figur 12: Business Model 3

5.6 4TH SPRINT: THE FACILITATOR

The last sprint has taken the findings from the 3rd sprint into consideration and with a focus on solely 1st generation diaspora and political news, the platform is ready to start a first launch.

The business model shown in Figure 13 shows how the key activity now has changed to focus on a potential strategy for Search Engine Optimization.

<i>View</i>	Paradigm	Product	Project	Process
<i>Value</i>	<i>Reflection</i>	<i>Transaction</i>	<i>Reasoning</i>	<i>Appreciation</i>
<i>Rationale:</i> <i>Why?</i>	Challenge Replacing the physical distance with a digital presence for 1 st generation diaspora Problem Physical distance makes diaspora Asians lose their cultural identity for their country of origin	Key Technologies - Commentary section - Social media connection - Community section	Vision Diaspera (The Facilitator) Diaspera platform brings political news from country of origin. Warrant The platform may minimise the distance the 1 st Generation Diaspora Asians feel to their country of origin.	Rationale review The platform will minimise the feeling of being far from home Findings: ?
<i>Strategy:</i> <i>What?</i>	Key elements - Articles - Readers - Editor - Writers - Curator	Key components - User Interface - Database	Justification Backing: Inexpensive and easy access Qualifier: Only subjects that are not politically sensitive. Only in English Rebuttal: Articles must be curated	Strategy review Expectations: Creating and reading articles works as intended Findings: ?
<i>Tactics:</i> <i>How?</i>	Key scenarios - Reader viewing an article - Reader writing comment - Writer creating an article - Editor validating an article - Reader co-create and contribute	Key features - View articles - Create article - View videos - Create comment - Co-create - Connect with others	Key mapping - The feeling of cultural identity rely on the “right” articles.	Tactics review Expectations: Focusing on politics works as intended Findings: ?

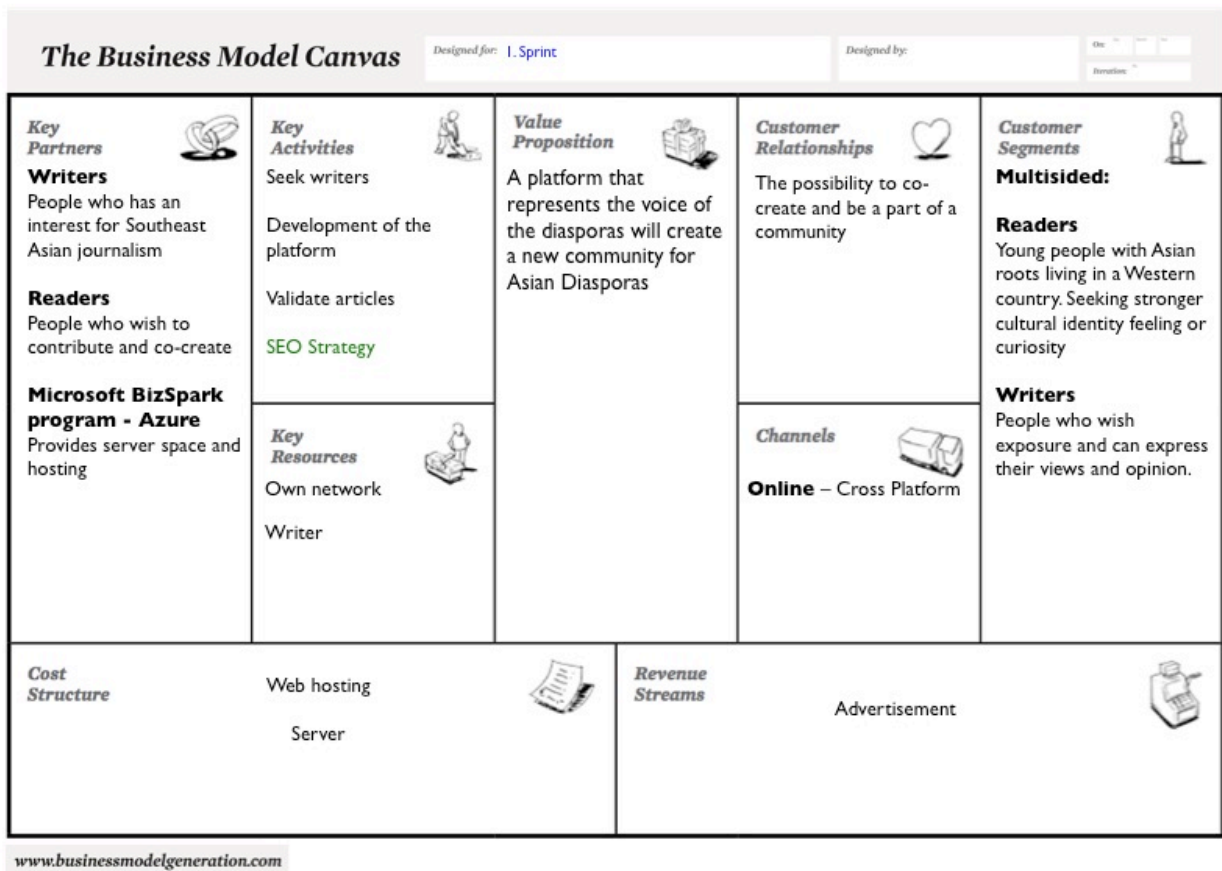


Figure 13: Business Model 4

5.7 LAUNCH

This stage was not reached due to time pressure, but the strategy the findings from the sprints leads up to is focussing on Search Engine Optimization, Facebook advertisement, Google Adwords, contacting all possible people in my network that could have an interest and potential in becoming a contributor.

After completing some of these strategies it would be necessary to evaluate and measure and then according to those measurements adapt and modify the system and the business model.

5.8 SUMMARY

Testing the model with the case, Diaspera has shown several issues.

The problem of the case was discovered to be too artificial. The problem did not change enough to push the project in new alternative direction and thereby not benefitting from the potential the Configuration Tables have.

The 1st and 2nd configuration should have been merged, as it only focused on the developing features and not creating and pushing for real changes.

The most beneficial sprint was the 3rd where the interviews were conducted, these new findings pivoted the project in a new and interesting way. Unfortunately, because of the time restrictions, have these findings not been explored enough.

Lastly, the CMS has not been changed or re-developed since the beginning. There has only been added more and more features, meaning that the Strategy part of the configurations tables were reusable.

The next part will present the evaluation, further works and the conclusion of this project.

Part III

Evaluation

6 EVALUATION AND FURTHER WORKS

This part will present the learning outcome of the master thesis project. This outcome consists of two sections. The first section is how the theoretical foundation helped create the contribution of this project – the model for software entrepreneurs, and the second section is an evaluation of how the testing of the model went about.

6.1 PRAGMATISM

The overall aim of this project is to support and assist software entrepreneurs in exploring and experimenting an idea. The model developed during the project allowed the software entrepreneur in realizing the problem, to explore and experiment with the problem for in the end to find a solution to the problem. This kind of problem solving has been based in the pragmatic philosophy. By employing Deweyan pragmatism as an underlying philosophy to the entire project, the project has opened up to related theories and tools related to pragmatic philosophy, for in the end to gain more knowledge about the pragmatic approach in different disciplines.

By having the pragmatic view on design, software innovation and entrepreneurship covered, it gave the model a better threshold and understanding of how the entrepreneur is to think when starting up a business. Not only during this startup phase is the linkage relevant, but the pragmatic way of thinking is relevant for everytime the entrepreneur faces a problem in the business, as a startup as well as when the business has been scaled.

The following will go through the related disciplines, starting with design.

6.2 DESIGN

By employing the design process by Schön and Wiggins has created a meaningful way of approaching a design situation when facing a design challenge in a software startup project. The software entrepreneur will constantly be faced with design challenges, whether is it designing a user interface, designing software architecture or designing a layout. Schön and Wiggins contributed with *seeing-moving-seeing* in a meaningful way to understand how the software entrepreneur can think when placed in a design situation.

6.3 SOFTWARE INNOVATION

The Configuration Tables adopted from Essence have played a major part in the developed model. The Configuration Tables have allowed the software entrepreneur to view the software

project from different perspectives and caused reflection and continuously pushed the project in a new beneficial way.

Also the ETVX model has been vital to illustrate and explain the process the software entrepreneur is suppose to follow. The link between the ETVX and the Configuration Tables has supported the practical understanding of how to utilize the Configuration Tables and in which logic.

Issues that occurred when testing the case with the Configuration Tables were the realisation, of having a too artificial problem. Hence, the problem and solution could not be properly explored. This became apparent especially between the 1st and 2nd sprint where the challenge and the problem were not strong enough, and only concerned the technological side of the project, not demanding enough to fully utilize the purpose of the configuration tables.

6.4 ENTREPRENEURSHIP

The relation between Sarasvathy's Theory of Effectuation and Deweyan pragmatism gives a meaningful approach to not only how the software entrepreneur should think when considering the technological side of software startup but also how the software entrepreneur should think and approach the business side of a software startup. This has created a bridge between a software developer and an entrepreneur creating a foundation to become a software entrepreneur – one that can develop on the software side and in parallel consider the business side.

After looking at the theoretical foundation the following will make an evaluation of the model that was developed during this project. The model was tested on the case Diaspera, which will be evaluated subsequently.

6.5 THE PRAGMATIC EXPLORER MODEL

The model developed, supports and assists the software entrepreneur in exploring and experimenting an idea by developing a software solution and concurrently developing business models and continuously reflecting about the consequences.

The model has pragmatic philosophy as an underlying thought process and practical tools and strategies such as the Configuration Tables from Essence, the Business Model Canvas and a launch strategy from Osterwalder and Pigneur.

Further work for the model and what would create a better relation would be to further develop the relation between the Configuration Table and the Business Model Canvas. Investigating a potential bridge between the two tools could create a meaningful dependency between the two, i.e. if the software entrepreneur has filled out a Configuration Table the Business Model Canvas would be given as the building blocks in the Business Model Canvas would correspond to the Views, Values and the abstraction levels in the configuration tables and vice versa.

6.6 DIASPERA

The developed model was on the real life case, Diaspera. This case caused several issues and is the weakest part of this project.

The case was discovered to be too weak and the problem too artificial. The huntch started out with good intentions, where I used myself as a representative for the customer segment only to be completely undermined by my own generation and expectations when conducting the interviews.

There are several innovation gurus that could argue that the customer does not always know what they want and the interview findings does not necessarily express the truth, but the findings must still be considered and in this case, were found too late in the process. Instead the interviews should have been conducted in the 1st sprint and incorporated the findings in the 2nd in order to push and explore the project as much as possible. This could have created an interesting new angle, as the findings did show potential interest from the 1st generation diasporas.

With the interview findings undermining the problem it became more and more obvious that the problem did not exist and therefore became irrelevant. This caused the use of Configuration Tables not to be as beneficial as they could have been, as the problem had to be distorted in order to go through the configuration tables. This could indicate that the problem needed to be matured more before being exposed to the Configuration Tables.

Other problems with the process were from the 1st sprint to the 2nd. This progress turned out to be a technological investigation and an accurate account of the process, but when utilizing the configuration tables the problem at this stage of the case would have to be distorted, in order to be used in a meaningful way. Instead the two configurations are now almost identical. To be more meaningful an alternative could have been to merge them into one configuration.

On the other hand, the configuration tables discovered that through out the project the Strategy row, meaning the *what*, was completely reusable, and there was no need to radically change the software.

A solution to the weak case, could have been to make either a completely conceptual case, used only to illustrate and support the model developed, or been able to make a much stronger case from the beginning, e.g. there could have been a pre-investigation settling on a case in order to have a stronger case from the beginning.

Also a case where the software entrepreneur has aprior knowledge about the customer segment could be interesting to look at in order to validate the model as being a generic model for software startups and not only for projects that require that the software entrepreneur or team has aprior knowledge.

Regarding teamwork, it could also be interesting to test the model with a software startup team and investigate what the outcome would have been when working in a team. Further work in that case could be to look at possibilities to implement software development approaches.

6.7 CONCLUSION

The aim of this project was to propose a model that a software entrepreneur could use to explore and experiment an idea. The model emphasized reflection as a way for the entrepreneur to be able to view the idea from different perspectives in hopes of gaining new knowledge and discover alternative ways not thought of beforehand.

Different theories and tools all related to pragmatic philosophy were implemented to support this emphasis on reflection, making pragmatic philosophy the underlying thought process for the entire project.

The core of the developed model is the iterative development of the technical side of an idea and parallel the development of the business side, with the intention of exploring and experimenting as much as possible with the idea before releasing and launching it to a market.

The case, Diaspera, utilized to illustrate and demonstrate the model turned out to cause severe issues as an effect of not having a clear and matured enough problem to begin with. This was unfortunately discovered too late in the process, not giving as strong a test part as hoped.

Nevertheless, Diaspera was still explored and experimented enough, that a possible launch strategy can be planned.

Due to the issues caused by the test part, it is difficult to completely validate the model. Further work as proposed in the previous section can be done in order to strengthen the testing. With these facts in mind it is still possible to argue that the model can create meaningful understanding for the software entrepreneur. This argument is based in the fact that the model is built on a foundation of pragmatic philosophy and this way of problem-solving can be beneficial not only when it comes to startups, but to every aspect of life. Being able to reflect and act on our reflections is a priceless ability that all human beings can benefit from no matter what challenges faced in life.

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