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EXECUTIVE SUMMARY

Nowadays, incubators are considered as one of the tools that can support entrepreneurs and its business creation, development and growth. Following this statement, the paper explores the challenges that AAU Inkubator faces and the ways it could improve its performance and the services provided.

The writers of this project decided to work on this project, mainly because of the increased interest about the topic in the recent years. Another inspiration came from the challenges that AAU Inkubator has, its ambition to grow and be a successful incubator, to inspire more and more people to become entrepreneurs and develop successful companies.

It was conducted a case study research with the cooperation of AAU Inkubator. In the literature review chapter of the project, the main focus is on incubators and best practices among incubators, but also in the area of entrepreneurship and more specifically the challenges they face. In addition, it was conducted a semi-structured interview with the manager of AAU Inkubator, Morten Dahlgaard, who revealed more details about the incubator itself and the future plans for the incubator. Furthermore, two cases of Scandinavian incubators were selected and used as examples of how they apply the best practices for incubators. Moreover, the collected empirical data allowed the researchers to get more insights and thereby allowed the writers to design solutions particularly for AAU Inkubator.

After an extended literature review, several practices were identified according to what various authors have suggested and agreed through time. AAU Inkubator applies several of them, others are not considered or are in process of appliance. However, after the final analysis the team of researchers confirmed the need of change in the way AAU Inkubator works and in some of the services provided. Thus, after defining the best and most important practices and services, suggestions regarding a possible future strategy of the incubator are proposed.

This research not only proposes future implications regarding AAU Inkubator, but also summarises the best practices and services provided by top performance incubators. Even though, the scope of the project is limited, in the way that the findings of the research here presented could certainly be applied by AAU Inkubator, but other already established

incubators, or people engaged in the creation of new incubators should first evaluate if there is an adequate level of similarities with the proposed case.

Keywords: *entrepreneurship, incubators, challenges, best practices, top performing incubators, start-ups.*

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ABBREVIATIONS

AAU: Aalborg University

AAU Inkubator: Aalborg University Inkubator

ATDC: Advanced Technology Development Center

ATI: Austin Technology Incubator

CBS: Copenhagen Business School

CSE: Copenhagen Business School of Entrepreneurship

CSE LAB: Copenhagen Business School of Entrepreneurship Lab

UBI: University technology business incubator

UIC: Uppsala Innovation Centre

1. INTRODUCTION

The first chapter of this paper is intended to let the reader understand the reasons which brought the researchers to write the particular matter and the research question behind the whole project, together with the aim and the desired recipients of the paper.

1.1. Background

Entrepreneurs create new companies all over the world, every day. Each entrepreneur attempts to enter the market with some innovative products or services. He or she might come up with a unique product, a new service or an idea of how to change one particular way of doing business. Some entrepreneurs, especially the new and inexperienced ones, might lack the skills and the knowledge about specific areas of business. For instance, an engineer who has an innovative idea and would like to take the path of entrepreneurship might lack the knowledge about how to start a company, or how to manage it, who to recruit, how to get access to finance or simply how to make a business plan. Thus, he has the opportunity to be supported somehow in these processes. Support can come from many different sources, like venture capitalists, business angels, consultancy agencies or incubators.

In the last decades, incubators have been a useful tool for supporting and nurturing new startups. Since the first incubator was created, back in Batavia (New York) in 1959, the aim has been to help the creation and growth of new companies, creating an added value to the overall economy and society.

Even though the discussion upon the matter of whether an incubated business is more likely to perform better compared to an unincubated business has not yet brought to a definitive conclusion, the previous literature mainly focus on how the incubators can help new startups in the the best way possible during the business development process.

Opinion of the researchers of this paper is that incubated business would benefit from the help of a well performing incubator. Therefore, it is interest of the paper to understand and explain what practices enhance the performance of an incubator, which in this case appears to be AAU Inkubator, located in Aalborg, Denmark.

1.2. AAU Inkubator

The researchers will now present the general context in which AAU Inkubator has been growing, together with an overall description of the Danish incubator itself.

1.2.1. Context

Aalborg is the fourth biggest Danish city, located in the Northern part of the country, called Nordjylland. The city has an important industrial history, with many technological poles and companies located in the area, like Siemens Wind Power, Aalborg Industries and Aalborg Portland. Other incubators and accelerators, like Byens Rum, together with some technological clusters like Novi Science Park, have helped and still facilitate the growth of the area. The city is on a growing path, also due to the recent implementation of its university (AAU), founded in 1974. The number of students attending AAU has been increasing in the last years (Number of ordinary students, 2016), attracting many foreign students and giving new and innovative perspectives to this area.

AAU has implemented its innovation strategy throughout the years thanks to many tools and new services. One of them could definitely be considered AAU Inkubator, which is supposed to help AAU contributing to the cultural, economic and social innovation.

1.2.2. Case study

AAU started to develop its own incubator in 2005, in order to facilitate entrepreneurship among its students and the alumni, and also promote the growth of the area. However, it did not entirely develop during the first decade of activity. It is only in the last period, mainly during the last year, that it started becoming more of an incubator in the traditional sense of the term, offering many of the main services offered by “proper” incubators, and it is still in the process of finding a way to become a well or even top performing incubator. It is considered nonprofit, since it does not include any financial income in its business model so far. Its main offices are located in the Novi Science Park, next to the university main campus, facilitating the networking activities both for the incubator itself and the related startups. Since it started its activities, with only one person employed part-time, the incubator has been growing constantly. Currently five people are

employed by AAU Inkubator, although there will be three new employees from January 2017.

The office manager is Morten Dahlgaard, supported in his job by other four project managers. Access to the program is granted to students attending AAU or alumni (graduated within 3 years from AAU), generally based on the innovative level of their idea and the commitment to it. The incubatee can stop at any point of the process, whereas the project management from the incubators can expel the incubatee if the level of commitment is not adequate due to the requirements set at the beginning of the cooperation.

The incubatees are granted access to the program based on commitment to the idea and the level of innovation, and to a milestones plan agreed with the project management.

The incubatees are evaluated and monitored through regular meetings with project managers and coordinators. Among the services provided at the moment by AAU Inkubator it is possible to identify: the access to certain infrastructures, like space office in the Novi Science Park, the support offered by administrative staff, the management coaching, the access to consultancy services regarding legal and financial aspects, as well as networking within the university, other startups and companies outside the incubator. The growth of the incubator itself will most likely increase starting from 2017, when the organisation will receive substantial funds from private institutions, as confirmed by the office manager (Morten Dahlgaard).

1.3. Motivation

Being students at Aalborg University and having a particular focus on innovation and entrepreneurship drove the attention of the writers of this paper to the case of AAU Inkubator.

Many activities and events were held by the Danish incubator in the Aalborg area, suggesting a presence on the territory and the will to grow and reach new entrepreneurs coming from the related university.

Having an interest in the case, the opportunity of reaching the office manager of the organisation itself, the related material the writers came across during the lectures and the opportunity of giving practical suggestions to the incubator due to the new investment coming in 2017, combined with the desire of the manager himself to know more about the

possible improvements for the incubator, are many of the reasons that pushed the researchers to investigate this specific matter.

1.4. Problem formulation

Assuming that most of the business organisations, and in this case incubators as well, have among their aims growing and improving their performances, one of the initial propositions of the research could be represented as the will of AAU Inkubator to grow and improve its overall efficiency, as confirmed by Morten Dahlgaard. The researchers here focus on AAU Inkubator, trying to understand the current situation of the organisation and the possible further developments that could lead it to become (or get closer to become) a better performing incubator.

Therefore, establishing the challenges that AAU Inkubator faces when supporting entrepreneurs during the incubation program, and what are their practices at the moment in order to face those challenges is the first issue the researchers want to focus on. That would also involve the description of the entrepreneurial needs when starting a business, in order to better explain the challenges of incubators when helping entrepreneurs. The previous literature provided many indications that some practices may enhance the performance of incubators, resulting in better services for incubated entrepreneurs.

The second goal, and also the main objective, consists of researching how the current practices of AAU Inkubator could be improved, after identifying the best practices for incubators in the literature. Other two similar cases, regarding two older and top-performing incubators from Scandinavia, were chosen to get a fresh and different view on the matter of best practices for incubators.

A collection of these practices and factors, which could have an impact on the performance of incubators, will then make possible to give practical suggestions for AAU Inkubator.

This leads the writers to the following research question:

- What are the main challenges that AAU Inkubator faces during the process of incubation and how could its support for entrepreneurs be improved, according to the best practices identified in the theory?

1.5. Delimitations

Delimitations represent the choices made by the researchers that describe the boundaries set for the study. Delimitations for this particular paper can be identified as:

- The study analyses and focuses only on the practices which AAU Inkubator can apply for improving its performance, without considering any different business model or any other models for the incubator.
- The paper, considering the current situation of AAU Inkubator, attempts to find possible suggestions for the immediate future, regarding its stage of development at the moment.
- The study is based mainly on the manager's point of view, without any direct investigation about the viewpoint of other staff members or the entrepreneurs incubated at the moment.

1.6. Structure of the Project

The structure of the project is as follows:

Chapter 1 - Introduction: the researchers explain the general overview and objective of the project and AAU Inkubator case.

Chapter 2 – Methodology, defines and discuss the used research method. It also presents the used techniques for collecting data and how data was analysed. At the end of the chapter are discussed the limitations of the chosen research strategy and methods.

Chapter 3 – Literature review, contains a look at the literature about entrepreneurship and entrepreneurial challenges and goes on with description, classification and design of incubators. In addition, key factors to business incubator's success are deepened.

Following those three chapters, *Chapter 4* presents the description of two top-performing incubators in Scandinavia, in order to understand how they apply the best practices proposed in the literature review.

Chapter 5 – Analysis and propositions, comprises the data analysis of the qualitative interview with the office manager, leading to identify the challenges faced by AAU Inkubator, the current practices applied and the expected goals for the future. Furthermore, a discussion of the possible improvements of the practices of the incubator is presented, in order to propose suggestions for AAU Inkubator. The research question will be answered throughout the whole analysis part.

Chapter 6 – Conclusion, summarises the results of the conducted study and provides information about further research and implications. In the end are outlined the limitations of the project.

2. METHODOLOGY

The second chapter of this paper is intended to describe the methodological choices that were taken in relation to the research here presented.

Firstly, the research philosophy which is behind our investigation will be introduced and explained, followed by the research design, the research methods and the qualitative data analysis. Concluding, the researchers will present the methodological limitations proper of this study.

The chapter was modelled on the “four levels of discussion of methodology” from John Kuada (2012, pp. 58-60):

- Level 1: philosophical viewpoints (regarding issues of ontology);
- Level 2: epistemological choices (how knowledge is intended to be understood).
- Level 3: methodological decisions (discussing the general approach to the paper).
- Level 4: choice of methods and techniques (description of data collection tools and reason behind their choice).

In the first part of the methodology chapter, the first and second levels of discussion of methodology by Kuada (2012) are presented, going across the research philosophy behind the whole paper.

2.1. Research philosophy

In every academic paper is important to define the philosophy which lies behind the research itself, since it provides a deeper explanation of the view and the understanding of reality followed by the researchers. At every step, the researchers make assumptions. Therefore, is it relevant to explain the underlying philosophy behind those assumptions (Saunders, Lewis, and Thornhill, 2015).

The way researchers see reality and understand it leads to the concept of paradigm. As referred by Kuada (2012, p. 71), this can be explained thanks to Kuhn (1970), who argued that “every field of research is characterised by a set of common understandings of what kind of phenomenon is being studied, the kinds of questions that are useful to ask about the phenomenon, how researchers should structure their approach to answering their research questions, and how the results should be interpreted”.

To better understand the research philosophy concept, it is relevant to define the two related notions of ontology and epistemology.

Ontology is referred to the nature of reality: “how things really are” and “how things really work” (Denzin and Lincoln, 1998; p. 201). The two main aspects in this sense defined by the literature are objectivism and subjectivism. Whereas the first implies that social entities exist independent of social actors, the second one asserts that social phenomena are constantly changing due to the actions of social actors (Saunders, Lewis, and Thornhill, 2015).

The debate carried on by the literature about these two opposite dimensions has brought to define different approaches to these paradigms: exclusive and complementary approaches. For this project, a complementary approach is preferred by the researchers. Pragmatism would therefore be the choice. This approach implies that the nature of research issues and the aims of an investigation should determine a different paradigm, according to the specific case: pragmatists neither accept nor refuse the notion that subjectivism and objectivism can be combined or used separately (Kuada, 2012). They just simply choose what view to use and how to use it, based on the nature of the research task. “To a pragmatist, the mandate of science is not to find truth or reality, the existence of which are perpetually in dispute, but to facilitate human problem-solving” (Powell, 2001, p. 884). Ontology regarding this research philosophy would therefore consist of a view of

the nature external and multiple (Saunders, Lewis, and Thornhill, 2015). In the particular case of this research, the writers are mainly subjective during the whole project.

Epistemology, on the other hand, is mainly concerned about what constitutes acceptable knowledge in a particular field. Epistemology can also be intended as a term describing “the nature of knowledge and the means of knowing” (Kuada, 2012). It usually answers the question “How do we know what we know?”. Given the chosen philosophy, the connected epistemology would therefore assert that acceptable knowledge can be provided by either or both observable phenomena and subjective meanings, according to the research question.

The aim of the researchers is to focus on practical applied research, possibly integrating different perspectives to help the reader understanding the data here presented.

2.2. Research Approach

As suggested by Saunders, Lewis and Thornhill, (2015), defining the underlying approach to the researcher's way of reasoning could facilitate the explanation and understanding of the final findings and conclusions.

Among the three main approaches - deductive, inductive and abductive - the last one is preferred by the researchers. The abductive approach facilitates the generation of testable conclusions, given some known premises. Data collection related to abductive method is intended to explore a phenomenon and identify key themes.

Where deduction moves from theory to data, and induction from data to theory, the abductive approach moves back and forth, combining the first two approaches (Suddaby, 2006). Therefore, the research method here presented will be mainly abductive.

“Abduction is the process of facing an unexpected fact, applying some rule (known already or created for the occasion), and, as a result, positing a case that may be”, as suggested in the paper “Case Study Methodology” (Johansson, 2003, p. 9).

Firstly, the literature review gave the opportunity to know several theories about the functioning and management of incubators, followed by the search for theories for best practices within other similar cases or from other relevant studies. The interview provided a deeper insight in the management and the functioning of AAU Inkubator, and made possible to establish the common practices proper of this particular case.

Moving from theory to data, and then again from data (the interview) to theory (more precisely a micro-theory about the functioning of AAU Inkubator itself), confirms the use of the abductive method.

2.3. Research Design

For the purpose of this paper, a qualitative method research design has been chosen. More precisely, based on the description of the matter from Saunders, Lewis, and Thornhill (2015), it is possible to say that the paper follows a multimethod qualitative study. This is due to the fact that more than one data collection technique has been used, with associated analysis procedures. More precisely, a semi-structured qualitative interview was chosen, together with a qualitative review of the literature, a second e-mail interview with the manager of AAU Inkubator and secondary data about similar cases or AAU Inkubator itself. Quantitative research methods have not been used.

2.3.1. Case Study Strategy

As suggested by Yin (2009), the case study is one of the several strategies that can be used for the particular purpose of the paper. When the research question starts with “why” or “how”, case study is suggested as one of the preferred strategies.

“A case study explores a research topic or phenomenon within its context”, as said by Saunders, Lewis, and Thornhill (2015), provides a general definition of the concept.

Moreover, the case study strategy is considered to be relevant when the aim is to gain a deeper understanding of the context of the research and the processes there enacted (Eisanhardt and Graebner, 2007).

Yin (2009) highlights the importance of five main components when considering case studies:

- *The research question*, should start with “why” or “how”. The main objective of this project is to answer a research question that starts with “how” in order to explain how AAU Inkubator can improve its performance according to the key factors identified in the literature review . However, before achieving the main purpose of this project, it must be answered a question that starts with “what”, aimed to identify the challenges for AAU Inkubator when supporting startups. To

answer these questions it is also useful to explore previous theories about incubators in order to give to the reader an overview of the main themes that are used to support the case study.

- *The study propositions*: every proposition should aim at driving attention to something related to the purpose of the research. These propositions could point at relevant directions in order to find correlated theoretical issues. The main proposition of this paper suggests that applying certain practices could bring an incubator to improve its performance level.
- *The unit of analysis*: according to Yin (2009, p. 29), this refers to the focus of the research within the chosen context. A clear definition of the unit of analysis is important in order to identify the relevant information for the study (Yin 2009, p. 29), therefore, AAU Inkubator is the unit of analysis chosen by the researchers.
- *Linking data to propositions* is the fourth dimension proposed by Yin (2009, p. 29). In this part, the research should decide how to match the data in order to reflect the initial propositions. For this project, a semi structured interview allowed to have a list of prepared questions and the data collected by the interview will be analysed by using coding.
- *Criteria for interpreting the findings*: coming from the coding after the semi-structured interview, the findings will be compared to other best practices found in the literature and in two other relevant cases.

Furthermore, four important criteria for judging the quality of case study validity were pointed out by Yin (2009): construct validity, internal validity and external validity, as well as reliability. The researchers, during the development of the paper, tried to keep in consideration at their best the given criteria, using for example multiple sources of evidence, doing pattern matching, using theory in this single-case study and looking at the case study protocol.

More in particular, construct validity was reached through the use of multiple source of evidence, like several articles from different authors pointing at the same services and practices for incubators, as well as online data about AAU Inkubator combined with the interview with Morten. A chain of evidence was also established, meaning that all the

sources and the data collected was carefully selected and the writers tried to report this according to their best possibilities. A key informant, which is the third strategy for gaining construct validity, was found in the figure of the office manager, who could give us a deeper and better perspective on the practices within AAU Inkubator.

Regarding internal validity, a particular attention was given when making inferences, trying to evaluate all the other possibilities and to verify the credibility of the inference itself in the best way possible according to the situation.

Concerning external validity, it has to be pointed out that this specific research paper addresses an issue regarding AAU Inkubator at this particular stage of its development, analysing its current situation and giving suggestions for the immediate future. The researchers cannot guarantee that the suggestions for AAU Inkubator would work as well for other different cases. However, it is possible to say that if the similarities would be enough, there is the chance that the findings and the suggestions for best practices made by this paper could work as well to improve the situation of a different incubator.

Finally, regarding reliability, the researchers decide to follow the case study protocol, consisting of four main points:

- Introduction to the case study and purpose of protocol;
- Data collection procedures;
- Outline of case study report;
- Case study questions.

2.3.2. Single case study

Two different kinds of case studies can be chosen, according to Yin (2009): single case or multiple case studies. These can be furthermore divided into embedded or holistic, depending on the number of units of analysis chosen. For the purpose of this paper, the researchers have chosen a single case study strategy.

According to Yin (2009), there are five rationales for choosing single-case design: *critical*, *unique*, *representative* or *typical*, *revelatory* and *longitudinal case*. In the particular case of this research, the rationale has been identified in the representative or typical case: the objective is to capture the circumstances of an everyday situation. The aim of this particular paper is to understand the dynamics of the everyday practices of AAU

Inkubator, trying to realise how they could improve their performances based on the change of some practices.

The researchers decided to use and present a single holistic case study strategy. This means that the unit of analysis is only one, and can be identified with AAU Inkubator.

2.4. Research Method

In the literature, two types of research methods can be distinguished, quantitative and qualitative research. Dabbs (1982) specifies that the notion of “quality” is “essential to the nature of things and it refers to the what, how, when and there of a thing its essence and ambience”, while the notion of “quantity” is “elementally an amount of something” (Berg 1995, p. 3). Quantitative research in broad terms is the collection of numerical data and a deductive view of the relationship theory and research (Bryman, 2016, p. 149). It refers to the meanings, concepts, definitions, characteristics, metaphors, symbols and descriptions of things (Berg 1995, p. 3). Qualitative researchers are most interested in how humans arrange themselves and their settings and how inhabitants of these settings “make sense of their surroundings through symbols, rituals, social structures, social roles” (Berg 1995, p. 7). Due to this reason, for this project, it was chosen the qualitative research method as more appropriate.

2.4.1. Data collection

The data collection’s part explains the methods used to collect relevant data for the purpose of this paper. Definitions of qualitative research methods and a narrative literature review are deepened in order to provide a better overview of the methods used.

Strauss and Corbin (1998) offer a clear definition of what qualitative research is. Accordingly, “qualitative research provides findings, not arrived at by statistical procedures or other means of quantification”. Qualitative research emphasis in general on the interviewee’s own perspectives, and there is a greater interest in the interviewee’s point of view on specific questions. Moreover, qualitative interviewing is “the most objective methods of inquiry when one is interested in qualitative features of human experience, talk and interaction” (Brinkmann 2013, p. 4).

There is a distinction between structured, semi-structured and unstructured interviews.

Structured interviews are typically based “on the same research logic as questionnaires”. Interviewers read the questions exactly how they are structured and never “provide information beyond what is scripted in the questionnaire”. Their position remains passive and “they do not interfere with people’s opinions and attitude” (Brinkmann 2013, p. 20).

On the one hand, *unstructured interviews* are non-scheduled, relaxed conversations based on the memory of the interviewer which is used as a prompt. The *semi-structured interviews*, compared to structured interviews, can “make better of the knowledge-producing participant in the process itself”. Furthermore, compared to unstructured interviews the interviewer has a greater saying in participate into the conversation and to ask specific questions, in order to gain the information needed (Bryman, 2016, p. 471).

The flexibility of the semi-structured interview makes this approach appropriate for this project. In order to prepare the questions for the interview guide (Appendix A), some basic elements, proposed by Bryman (2016), were taken in consideration: at first, an order of the questions is proposed, in order to ensure that the questions flow reasonably, but the interviewer has to be prepared to change the questions during the interview. Another advice that was followed, is to formulate the interview questions in a way that will help in answering the research questions. The next step is very important, because different people use different terminology, and a misunderstanding may appear during the interview. That is the reason why Bryman (2016), proposed to use a comprehensible and relevant language to the people that participate in the interview. Moreover, Scott Clifford’s (from DISM Research Associate) advices were followed. According to him, “the planning researcher put into their interviews will determine how useful the interviews will be for answering their research question”. The interview was structured around crucial questions designed to cover the main aspect of the research question. The questions were designed to elicit the AAU Inkubator’s manager experiences and understanding. Additionally, they were developed to be broad and open-ended, rather than “tailored for a specific type of answer”. Moreover, questions that can be answered with “yes” and “no” and biases responses have been avoided.

After the first qualitative semi-structured interview, some clarifications were needed and a short email interview (Appendix B) was sent to the manager. Even though this could be considered a structured interview from a technical point of view, the researchers followed the same principles of the previous semi-structured interview.

The literature review is a crucial step in conducting research. The existing literature gives the opportunity to know the area of interest. According to Bryman (2016) the literature review is “where you demonstrate that you are able to engage in scholarly review based on your reading and understanding of the work of others in the same field as you”. There are two types of literature review approach: narrative reviews and systematic reviews (Bryman, 2016, p. 90). The systematic review is recommended for “improving the quality of literature review in management research which tends to lack thoroughness and reflects the bias of the research” (Bryman 2007, p. 99), while, narrative review then acts as a background of what is investigated and is able to provide an information about the contribution of this research (Bryman, 2016, p. 91).

For this project a narrative review approach was chosen. As suggested by Kuada (2012), recent literature in Entrepreneurship and Incubators were picked in order to reflect the most recent knowledge on the topic (Kuada 2012, p. 68). Textbooks and published studies in journals were founded by using keywords (Bryman, 2016, p. 110). The next step was the “snowballing technique” described by Vogt (1999) as “one subject gives the researcher the name of another subject, and so on”.

To sum up, for this project, primary and secondary data sources were used. The primary sources such as interviews and case studies provided direct evidence about the observed phenomena. The interview was conducted on the 7th of December 2016 face to face with the AAU Inkubator’s manager in the AAU Inkubator office located in the main campus of AAU. The interview lasted approximately one hour. It was recorded and the recording was divided, between the members of the project, in four parts, 12 minutes each, and transcribed in Appendix A. The email interview is reported as it was sent and answered and can be found in Appendix B. The secondary sources, such as previous research and web information allowed to interpret, comment, analyze and evaluate the primary sources.

2.5. Qualitative Data Analysis

In line with Yin (2003, p. 109), the data analysis consists of “examining, categorizing, tabulating, testing, or otherwise recombining both quantitative and qualitative evidence to address the initial propositions of a study”. Accordingly, there are three general analytical strategies for analysing case study evidence: relying on theoretical propositions, thinking about rival explanations and developing a case description. For this project it was preferred the first strategy which consists in following the theoretical propositions to come up with the case study. The original objective and design of the case study reflects the research question and the review of the literature.

In addition, to analyse the interview it is used *open coding*, recommended by Strauss and Corbin to create “a habit of describing what it is seen while stay close to the data” (Rich 2012, pp. 2-3). It involves reviewing transcripts and giving names to elements that seem to be of important significance for the studied phenomena. It also includes separating and organizing the data. As mentioned above, the interview was recorded. The data collected was carefully analysed by identifying key words in order to form meaning units and classified into categories. Open coding was conducted line by line, through identifying any relevant statements and sections.

2.6. Methodological Limitations

Despite the fact that many goals have been achieved, some limitations occurred. The first one is related to the sample size. As only one manager was investigated, the findings are limited to his point of view on the phenomena.

One more limitation concerns the lack of similar research studies on the topic of AAU Inkubator, which has limited the understanding of the research problem that was being investigated. However, this was taken as an important opportunity to identify new gaps in the literature and to describe the need for future research.

Moreover, another problem is associated with the lack of quantitative data which adds more rigor to the research. In addition, some “problems of meaning” occurred and different understanding of key terms between the researchers and participants in the interview have transpired. Another problem that may occur is the “problem of memory”,

which means that, the respondent may misremember some important facts which will then reflect on the findings of the project (Bryman 2016, p. 267).

3. LITERATURE REVIEW

The purpose of this chapter is to review the existing literature on entrepreneurship and mainly on incubators. Also, we use the literature as basis and guideline for our data collection. This part is also intended to frame the research question of the project. The following chapter covers the literature about entrepreneurship and more specifically, what is it, why it is important for the economy and what challenges entrepreneurs face when they want to start a new business. In the next part of the literature review, the focus moves to incubators. Themes such as what incubators are, their classification and design, and also fundamental services and best practices of incubators are described.

3.1. Entrepreneurship

The interest in the field of entrepreneurship has grown dramatically among individuals, university professors, students and governments. It's a very discussed topic including a lot of research and debates (Hisrich, 2014, p. 5). However, the definition of entrepreneurs and entrepreneurship is still very broad and depends on the perspective of which it is observed. When we talk about entrepreneurship we cannot neglect one of the pioneers of the innovation and entrepreneurship theory Joseph Schumpeter. According to Schumpeter "an entrepreneur in an advanced economy is an individual who introduces something new in the economy a method of production not yet tested by experience in the branch of manufacture concerned, a product with which consumers are not yet familiar, a new source of raw material or of new markets" (Kumar et al., 2003, p. 2). Another point of view, gives us the opportunity to see entrepreneurs from different perspectives. For instance, for economists an entrepreneur is someone who brings resources, labor and other materials together and makes their value greater than before, but also introduces changes, innovations and a new order. Yet to a psychologist, such a person is typically driven by certain forces, like to obtain something, to experiment or to escape the authorities of others. In addition, to a businessman, entrepreneurs can be a threat, a big competitors or someone with whom they can cooperate and work together for good of the society (Hisrich, 2014,

p. 8). Another definition provided by Cuervo et al. (2007, p. 1) describes the entrepreneur as someone who detects or creates business opportunities that he or she exploits through small and medium-sized firms.

After defining who are entrepreneurs, several definitions of entrepreneurship and why it is important for the economy are provided. Schumpeter's definition on entrepreneurship states that, the purpose of it is to introduce new products, new methods of production, develop new markets and find new sources of raw materials and lastly to make changes (Kumar et al., 2003, p. 2). Moreover, entrepreneurship is the process of identifying opportunities in the marketplace, arranging the resources required to pursue these opportunities and investing the resources to exploit the opportunities for long term gains (Kumar et al., 2003, p. 7). Entrepreneurship also can be defined as the "dynamic process of creating incremental wealth" (Hisrich, 2014, p. 8). Linking entrepreneurship to economic growth is certainly not new (Audretsch et al., 2006, p. 1), and therefore, we can say they both complement each other (Kumar et al., 2003, p. 9). Entrepreneurship is very important in the process of generating, disseminating and applying innovations in technology and organisations, as innovation is the essential for sustainable growth. Another important aspect of entrepreneurship is the employment creation, in which it has a significant impact (OECD, 2003, p. 38). Fast-growing regions are affected by the creation of new firms. In the study of Birch 1987 (OECD, 2003, p. 40 & 41), he identified that the major factor differentiating growing from declining regions is the formation of new companies and stimulating entrepreneurship. The literature identifies several channels through which entrepreneurship can help in the growth of local economies. The first one is through employment and income growth. The investments made start and enlarging new firms, create jobs for owner-managers and employees. The second channel is through increasing tax revenue. Growth in the tax base can stem from increases in personal incomes, corporate profits, consumption, property values and payroll payments. The next way through which entrepreneurship helps to the local economy to grow is by improved service provision and local income retention. And the last channel is by demonstration and motivational effects. The creation of new companies can influence the motivation of people within a town, region and even a whole country. In addition, the stimulation of entrepreneurship is playing an important role in productivity growth of regions (OECD,

2003, p. 43-45). In the study by Daniel Smith (2010, p. 13), he argues that policy makers, should devote some resource to promote entrepreneurship directly, instead of focusing on traditional factors of economic growth.

As previously mentioned the definitions about entrepreneurs and entrepreneurship are very broad and depends on people's own perspective. However, the above definitions and other definitions in the literature has several things in common and highlight innovation, risk taking, resource organizing aspects and individual or group of people that are trying to achieve their goal through production and distribution of products or services. In conclusion, "entrepreneurship is set of activities performed by an entrepreneur thus, entrepreneur proceeds entrepreneurship" (Kumar et al., 2003, p. 8).

3.2. What obstacles do entrepreneurs confront?

In the business creation process the initial phase can be particularly challenging for many entrepreneurs. In the early stages of business development several challenges must be faced, such as the access to the right social, physical and human capital, for example (Lougui et al., 2014, p. 276). The barriers the entrepreneurs may encounter in the new venture creation process can be different between industries, regions and the type of firm they are starting (European Entrepreneurship Cooperation, 2004, p. 19).

Lorrain and Laferté (2006, in Lougui et al., 2014, p. 278) state that, in general, the main problems faced by entrepreneurs in their first years are regarding to three aspects: (1) acquiring enough financial, human, informational and technological resources, (2) executing effective and appropriate resource management processes and (3) adapting to their new work condition as an entrepreneur and deal with the financial situation, work overload and conflicts between their personal and entrepreneur life. In Lorrain and Laferté's (2006) work it is exposed that, when entrepreneurs seek out for assistance, the majority of the questions and issues are regarding to "general management and obtaining funds", followed by other topics such as "learn how to start or manage a new business", "networking or referral assistance", "to learn more about product, production and market", "general training or information" and a small number reported to have questions about "legal, political or administrative issues".

Gorji et al. (2011, p. 32) suggest several the factors that limit entrepreneurs summarised in three categories:

I. *Individual Entrepreneurship* (Jodyanne, 2009 in Gorji et al., 2011, p. 32)

a. Education and Entrepreneurship: education has been considered important in entrepreneurship. Well-trained and experienced entrepreneurs are believed to have the potential to lead productive and profitable business. The process of transforming problems into business opportunities is a challenge faced by entrepreneurs: “creating value out of nothing” (Kanchana, 2013, p.73).

II. *Organisational barriers*

a. Financing: as we mentioned earlier, the capacity to acquire enough resources is key to start up a business (Kanchana, 2013. P.73-74). There are several sources for acquire capital and there must exist an evaluation process of all the possibilities before making any decision. The European Entrepreneurship Cooperation (2004, p.20) indicates that finance is important for all organisations in order to reach their business goals, mainly for small start-ups and new businesses that are looking forward to invest and grow. Small firms often depend on external sources of funding and the main problem is the perceived risk of start-ups, which makes difficult for entrepreneurs to get a loan from the bank or another source of financing. In order to face this challenge, an entrepreneur must develop its skills of selling its idea to potential investors (Kanchana, 2013, p.74).

b. Physical resources: this refers to all the tangible assets that the organisation use and need in order to produce goods and services and also to manage the organisation. These assets normally are the equipment, machineries, facilities and land. Also, there are some organisations that own natural resources such as land, minerals and energy resources. The quality of these natural resources may influence in the raw material and outputs’ quality. It is important to find a good and efficient business location which is growing in terms of population, have a good road network and other facilities (Kanchana, 2013, p.74).

c. Marketing (lack of customers and competition): competition and lack of demand are considered barriers for the business to flourish (Robison et al., 2010, p.50). The lack of enough customers is a problem that may lead companies to bankruptcy, even more than goods scarcity. Many companies are not capable of sell their goods regularly, and as a result, they go to bankrupt. Good customers are hard to find. This customers are loyal to the company and probably forgive any mistake made by the company. A good customer looks forward to benefit both himself and the company (Kanchana, 2013, p.74).

III. Environmental barriers:

a. Socio-cultural factors: the entrepreneurial culture of a society involve the attitudes, beliefs and values that that particular society has towards entrepreneurship. The specific characteristics of the entrepreneurial culture may promote or prevent the development, progress and innovations of that society. According to the European Entrepreneurship Cooperation (2004, p. 20), across the European Union, the knowledge of the language where the entrepreneur wants to establish its company, the lack of information about the institutions that provide support to new venture creation, and the limited access to business and social networks as well as institutions, represent barriers to start-up a business. Moreover, important tools such as information, resources and communication can be acquired through networks, the lack of these it is considered as a significant barrier.

b. Rules and regulations: law and regulations may represent a constraint for the development of entrepreneurship (Jodyanne, 2009, p.32). The specific policies applied in a society regarding several subjects such as tax design, competition, labour markets, financial markets, etc. shape and determine the overall economic framework and, also its entrepreneurial culture. For example, in terms of creating a company, in some countries the entrepreneurs need only one day to register a firm, in others, it may take 20 weeks (European Entrepreneurship Cooperation, 2004, p. 19).

In addition, Lougui et al. (2014, p. 286; 288) demonstrated that the needs and challenges of potential and current entrepreneurs may differ according the industry where the new venture fits. The entrepreneurs in the service industries revealed to have more issues with taxes, the type of business they should pursue and the elaboration of a business

plan. On the other hand, entrepreneurs in the manufacturing industry demonstrated to have more concerns about financing and grants, due to the high capital level that must be reached in order to start a business in this sector. Also, permits and laws proved to be a subject of matter for entrepreneurs in the manufacturing sector.

Table 1: *Challenges of Entrepreneurs*

Challenges	Authors
Education and Entrepreneurship	Gorji et al. (2011); Jodyanne (2009); Kanchana (2013); Laferté's (2006)
Financing	Gorji et al. (2011); European Entrepreneurship Cooperation (2004); Kanchana (2013); Laferté's (2006)
Physical resources	Gorji et al. (2011); Kanchana (2013); Laferté's (2006)
Marketing (lack of customers and competition)	Gorji et al. (2011); Robison et al. (2010); Kanchana (2013); Laferté's (2006)
Socio-cultural factors	Gorji et al. (2011); European Entrepreneurship Cooperation (2004)
Rules and regulations	Jodyanne (2009); Gorji et al. (2011); European Entrepreneurship Cooperation (2004); Laferté's (2006)

Source: developed by authors

3.3. Business Incubators

According to a study of the OECD (2002) one out of three European enterprises fails before the second year of its existence. 50-50% does not survive the second the seventh year (Aerts et al. 2007, p. 254). To struggle this problem and to respond to this high start-up failure rate, the support of business incubators become crucial designed to reduce the obstacles that cause new business to fail (Reed 1991, p. 61). They are interested in the “identification of the factors, characteristics, and conditions which foster entrepreneurial processes, new venture creation and that contribute to their success”. Incubators assist emerging business by providing a variety of support services, from developing business and marketing plans to obtaining capital and access to a range of more specialized professional services (Grimaldi and Grandi 2005, p. 111).

Nowadays, the figure of incubators viewed as mechanisms for enhancing the economic and technological development of countries has assumed an increasingly importance (Grimaldi and Grandi 2005, p. 112).

3.3.1. Definition and Classification

Before explaining what an incubator is and the difference between it and business incubation, it can be useful to go back to the 1959 in Batavia, New York in the United States, where the first incubator was established. Charles Mancuso rented space in his Batavia Industrial Centre to small and “starting companies and guided them through their growth process”. After the 1970s the focus of incubator, which so far was unique (either on the technological or on the management aspect), changed and combined both. According to Albert and Gaynor (2001) from the 1970s onward, business incubators have spread out all over the world (Hackett and Dilts 2004, p. 57).

3.3.1.1. Definition of Business Incubator

The incubator literature provides a large number of detailed and in many ways similar definitions of “incubator” (Bergek & Norrman 2008, p. 4). According to Hackett and Dilts (2004) a business incubator is “a shared office-space facility that seeks to provide its incubatees (‘portfolio’ or ‘client’ or ‘tenant-companies’) with a strategic, value-adding intervention system (i.e. business incubation) of monitoring and business assistance”. This system controls and links resources with two main objectives. First it facilitates new venture development of the incubatees. Second it contains the cost of their potential failure (Hackett and Dilts 2004, p. 57).

Moreover, business incubator represents the environment designed to hatch enterprises. They provide their tenant companies with several facilities, from office space and capital to management support and knowledge (Aerts et al. 2007, p. 255).

When discussing the incubator, it is important to keep in mind the totality of the incubator. Along with Hackett and Dilts (2004) the incubator is not simply a shared-space facility, infrastructure and mission statement, but it is also a network of individuals and organizations including the incubator manager and staff, incubator advisory board, incubatee companies and employees, local universities and university community

members, industry contacts, and professional services providers such as lawyers, accountants, consultants, marketing specialists, venture capitalists, angel investors and volunteers. (Hackett and Dilts 2004, p. 57).

The benefits that incubators extend to their incubatees are manifold. Smilor (1987) categorizes them among four dimensions: development of credibility, shortening of the entrepreneurial learning curve, quicker solution of problems and access to entrepreneurial network. (Hackett and Dilts 2004, p. 64). It is important here to distinguish business incubator from business incubation. While the first refers to the social organizational environment of the firm, the latter refers to the programs, activities and events that identify and evaluate new and emerging opportunities. Both are imperative for firms, require a strategic, ideological and pragmatic shift in organizational policies and routines (Joseph and Eshun 2009, p. 156-157).

3.3.1.2. Classification of Incubators

The term of incubators is becoming more and more of an “umbrella world”, covering a heterogeneous reality. According to Aernoudt (2004) incubators can be categorized either to their sponsors/stakeholders or to their objectives (Aernoudt 2004, p. 128). In the first classification can be distinguished *public/institutional operators*, which use mainly public resources in order to reduce the costs of doing business by offering a set of services (e.g., provision of space, infrastructures, facilities, etc.). An important example of public incubators is represented by University Business Incubators (UBIs) which make substantial contributions to local economies through researching leading to patentable inventions, faculty spin-offs ventures and technology transfers. UBIs will be further described in a deeper way, since our case study is particularly about a University Incubator.

The IT revolution of the second half of the 1990s has changed some of the rules of incubation industry. The market changes have developed new concept of incubation, leading the growth of *private incubators*. Private incubators earn money in different ways (charging service fee and taking a percentage of revenue from incubated companies). Their aim is based on helping entrepreneurs by providing investments that have been traditionally offered by angels and early-stage venture capitalists. They offer business guidance and different kind of services, such as completion, validation of the entrepreneur’s business

models, provision of experienced operation staff, recruiting mechanisms, access to network, etc. According to Piccaluga (2000) private incubators can be distinguished in two main categories: Corporate Business Incubators (CBI), owned and set up by large companies aimed at supporting the emergence of new independent business units and Independent Business Incubators (IBI), which are set up by single individuals or groups of individuals aimed at helping rising entrepreneurs (Grimaldi and Grandi 2005, p. 113).

As mentioned before, incubators can be also categorized according to their objectives. As stated by Aernoudt (2004) this approach as criteria is closer to economic reality (Aernoudt 2004, p. 128).

Table 2: *Typologies of business incubators according to their objectives*

	Main philosophy: dealing with	Main Objective	Secondary	Sectors involved
Mixed incubators	Business gap	Create start-up	Employment creation	All sectors
Economic development incubators	Regional or local disparity gap	Regional development	Business creation	All sectors
Technology incubators	Entrepreneurial Gap	Create entrepreneurship	Stimulate innovation, technology startups and graduates	Focus on technology, recently targeted
Social incubators	Social gap	Integration of social categories	Employment creation	Non-profit sector
Basic research incubators	Discovery gap	Bleu-Sky research	Spin-offs	High tech

Source: Aernoudt 2004, p. 128

The different types of incubators, presented by the table, reflect the history of the concept. Initially incubators offered mixed services to different kind of enterprises. In Europe, when the first incubators were created, they became an instrument to promote

diversified base for regional economies and then for “improving regional competitiveness by fostering the emergence of technology-based firms” (Aernoudt 2004, p. 128-129). Other two types of incubators are also very recent. The first is social incubators aimed at stimulating and supporting the development, growth and continuity of companies. Their function is to bridge the social gap by increasing employment possibilities for people with low employment capacities. The second type is a basic research incubator aimed at bridging the discovery gap by linking the incubation principle to fundamental research (Aernoudt 2004, p. 129).

3.3.2. University Business Incubators (UBIs)

Business incubators can be related to universities at various levels. University technology business incubators (UTBIs), for example, are a type of university-related incubators which focus mainly on companies that deal with technological products or services (Mian, 1994). However, since the case analysed in this paper concerns mainly about AAU Inkubator, which does not focus on companies that deal only with technological services or products, the researchers decided to consider UBIs in general. As pointed out by the paper “Best practices at university business incubators”, published by the UBI Index (Bhatli, 2014), there are three different categories of UBIs:

- Business incubator managed by a university;
- Business incubator affiliated to a university;
- Business incubator informally affiliated to a university.

UBIs are generally non-profit organisations, which mainly aim at developing the region, supporting students or alumni in developing their business ideas and creating value from them.

According to Grimaldi and Grandi (2005), there are two main categories of services offered by UBIs:

- Typical incubator services (shared office services, business assistance, access to capital, business network and rent breaks)
- University related services (faculty consultants, student employees, university image conveyance, library services, lab/workshops and equipment, mainframe

computers, related R&D activity, education and training and other social activities (Grimaldi and Grandi 2005, p. 112).

3.3.3. Incubator Models

According to Bergek & Norrman (2008) the main incubator models components are *selection*, which refers to the evaluation of which ventures to accept for entry and which to reject, *infrastructure*, which consists of localities, office facilities and administrative service, *business support* is associated with coaching/training activities undertaken to develop the incubates, *mediation* refers to how the incubator connects the incubatees to each other and to the outside world and *graduation* is related to exit policies (Bergek & Norrman 2008, p. 10).

According to the authors not of these are equally important when separating different incubator models from each other. Most incubators seem to supply more or less the same set of general administrative services and most incubators have formal exit rules requiring incubatees to leave the incubator after 3-5 years. Therefore, they suggest that selection, business support and mediation are the main distinguishing components of incubator models (Bergek & Norrman 2008, p. 10-11).

Table 3: *Incubator model components*

Incubator Model		
Selection	Business Support	Mediation

Source: Bergek & Norrman 2008, p. 28

I. *Selection:*

Selection is the process through an incubator evaluates, recommends and selects tenant firms (Smilor 1987 p. 153). Lumpkin and Ireland (1998) consider this project as an important incubator management task since it is based on financial ratios with respect both to individual incubator and to the general economy (Lumpkin and Ireland 1998, p. 67).

Moreover, it seems there is no a unique and an appropriate selection criteria, but different incubators apply different criteria (Bergek&Norrman 2008, p. 11). Cooper (1994)

observed that some incubators exclude retail firms, while other prefer service firms to the exclusion of manufacturing. Some incubators have requirements with respect to firm size and type. Others seek a mix of new and experienced firm. According to Lumpkin and Ireland (1998) this happens for two reasons:

1. The more established firms pay a higher rent, which may be used to subsidize losses incurred from the below-market rents typically offered to start-up firms,
2. Managers of the larger firms are able to assist their counterparts in the smaller, new ventures (Lumpkin and Ireland 1998, p. 67).

To summarize, there are two overall approaches: selection focused primarily on the idea and selection focused primarily on the entrepreneur or the team. In order to pursue an idea-focus approach, incubator managers must have access to deep knowledge in relevant technological fields in order to evaluate the viability of ideas, i.e. the product, the market and the profit potential related to the combination of these. The entrepreneur- focus approach, in contrast, requires the ability to judge personality as well as the knowledge of more general business development requirements in relation to which the experience, skills, characteristics and driving forces of entrepreneurs may be evaluated (Bergek&Norrman 2008, p. 12).

II. Business support

The business support services generally include entrepreneurial training and business development advice, as well as services concerning general business matters such as accounting, legal matters, advertising and financial assistance (Bergek&Norrman 2008, p. 12). According to Allen and McCluskey (1990) the incubator's functions are different and depend on the type of incubator. On one end an incubator functions more like a "real estate development operation", where its goal is to support and add economic value to local economy. On the other end, and incubator functions more like an "enterprise-development program", where its goal is to assist his incubatees with different kind of programs and services (Allen and McCluskey 1990, p. 64).

III. Mediation

Peters et al. (2004) state that an important role of incubator is to act as an intermediary or mediator between incubatees and relevant innovation systems. The incubator thereby provides a “bridge between the incubatee and its environment with the purpose of leveraging entrepreneurial talent and/or resources” (Bergek & Norrman 2008, p. 15).

Bergek and Norrman (2008) use the concept of network mediation to outline the intermediary role of incubator in building network from it “can source expertise for its business support activities”. According to Collinson and Gregson (2003), mediation networks provide information, knowledge and expertise that help the survival of new venture.

Moreover, incubators may also engage in institutional mediation through which incubators, as Scott (1995) states, may help incubatees to “understand, interpret and perhaps even influence the institutional demands introduced by regulations, laws, traditions, values, norms and cognitive rules” (Bergek & Norrman 2008, p. 16).

3.4. Fundamental Incubator Services

Since the first incubators started to exist in the last century, literature has tried to define the varieties of services that these facilities could offer to entrepreneurs, as well as the way they would facilitate start-up companies. According to Allen and Rahman (1985) an incubator “had to provide more than just logistical services” (Allen&Rahman 1985, p.14). Von Zedtwitz (2003) groups thus main services in five categories. In line with Peters et al. (2004), by providing a variety of services and support to startups the incubator seeks to “effectively link talent, technology, capital, know-how to accelerate the commercialization of technology” (Peters et al. 2004, p. 85)

1. *Access to physical resources:* according to Allen and McCluskey (1990 in Bruneel et al. 2012, p. 111) infrastructure is the basic function common to all kinds of business incubators and the core of their value proposition. They are usually facilities that provide space for offices and other kind of activities (even sport ones), as well as computer-network and security. With support services located in the facility, entrepreneurs can avoid the purchase or lease of office equipment (Allen&Rahman 1985, p.14).

2. *Office support*: According to the empirical study proposed by Allen and Rahman (1985), the most frequent service provided by incubators was a copier (Allen&Rahman 1985, p.15). Moreover, incubators offer many other types of office support, such as reception, clerical services, meeting rooms, conference rooms or car parking (Bruneel et al. 2012, p. 111). With these services entrepreneur can save time and effort and can start working on their core activities (Allen&Rahman 1985, p.15). Any lack of these basic but essential services can cause a severe damage to the performance of the companies.
3. *Access to financial resources*: Incubator financing depends on the nature of the facility, if it is privately or publicly sponsored (Allen&Rahman 1985, p.14). In general, it can be stated that the incubator's capital, to support the early stage of startups, is usually a mix of private funds and outside capital, partially invested by business angels or local organisations.
4. *Business support*: incubators often try to compensate for the lack of entrepreneurs when it comes about organisational, legal and management abilities. Having the knowledge from previous experiences about the first steps that start-ups have to take in their early stages, incubators can facilitate this process by providing, for example, accounting or legal advices, human resources management guidance, or even management coaching support, developing leadership and motivational skills in the entrepreneurs. Moreover, incubators provide tenants with training programs/sessions (workshops, seminars and access to complementary information) (Bruneel et al. 2012, p. 115).
5. *Access to networks*: during their existences, incubators have had the chance to create a wide network around them that could definitely be useful to the new entrepreneurs, who most likely would lack that possibility.

Usually an agreement between the entrepreneur and the incubator would define which kind of service mix should be provided, as well as the price for it. If an incubator appears to offer all five services, Von Zedtwitz (2003) call it an “incubator in the strong sense of the term”. On the other hand, incubators offering only four services are named “incubators in the weak sense of the term”. If less than four services are provided, the considered organisation should no longer be called an incubator and could rather be defined

as “business accelerator”, “technology-transfer office”, “entrepreneur-in-residence program of consulting and accounting firms”.

Figure 1: *Business Incubator Services*



Source: Developed by authors

3.5 Business Incubator Best Practices for Successful New Ventures

The combination of multiple helpful policies, practices and services is what matters the most for incubators in order to produce optimal outcomes. There is no “magic bullet” regarding specific practices, policies or services that can guarantee the success of the business incubator (Lewis et al., 2011, p.7). This may be explained by the fact that the communities supported by the incubator are different in terms of capacities, the needs of the incubated companies depend on their management skills, industry sector and stage of development and, business incubators are diverse in terms of mission, requirements and resources (Lewis et al., 2011, p.7). However, among the key findings of Lewis et al.’s (2011, p.7) work, it is stated that high-achievable business incubators programs often share

common practices that are highly correlated with the start-up's success. This practices are going to be deepen in the next section.

Key Factors for Business Incubators

Lumpkin and Ireland's (1988, in Theodorakopoulos, 2014, p.607) definition of key success factors is "those dimensions of a firm's operation that are vital to its success". This definition includes the different components that shape the business incubator's design and its support activities (Autio and Klofsten, 1998 in Theodorakopoulos, 2014, p.608). The main key-factors that incubators should consider to be successful have been identified by the literature in the last few years, including several aspects such as the clarity of mission and goals, the monitoring process of performance of the business incubation, the selection process of new incubates and also the graduation/exit criteria, the proximity to a university, the level and quality of management support, the access of potential internal and external networks and a skilled incubator manager to align several elements of the business incubation environment (Udell, 1990; Lichtenstein, 1992; Goldberg and Lavi-Steiner, 1996; Lalkaka and Bishop, 1996; Autio and Klofsten, 1998; Rice, 2002; Hackett and Dilts, 2004, 2008; Lewis et al., 2011; UKBI, 2012 in Theodorakopoulos, 2014, p. 608). However, according to Pals (2006, p. 27), it is difficult to define what "success" is in the business incubators setting or when a business incubator is considered successful. Incubators starting points may be different and, therefore, their mission, visions or goals could not be the same among them. This may imply the fact that their definition of success is probably not the same.

In Pals' (2006, p.27-34) work are stated and briefly explained the following seven key factors that may lead business incubators in a successful path.

I. Clear mission statement

The business incubator mission must be clear and well-known by all the people that it is involved in the business incubator. The mission statement of the business incubator states its purpose and, moreover, the long-term, middle-term and overall goals of the organisation.. Indeed, according to Mubarak AL-Mubarak (2014, p. 50) clear goals in the business incubator can increase the rate of start-ups graduation Also, a clear mission makes

easier the admission process of tenant companies that will fit into the general purpose of the incubator. Lewis et al. (2011, p.8) states that the most important goals pursued by top-performing incubators are related to create jobs and promote and support entrepreneurship in the community. Also, the diversification of the local economy, development and acceleration of new businesses and industries and the attraction or retention of business in the host region are important goals. The top-performing incubators do not conceive profits as their main goal (not-for-profit models).

Later on, once the mission is established, Pals states that this one must be “developed into logic”, this means that others can feel related to it. This supports and promotes the acceptance of the incubator in the community and also, may be a valuable tool for raising funds. The Finland Business Incubators that are located in Helsinki, Finland are an example of this. Their proclaimed themselves as employment source and also technology transfer facilitators and exports. This helped them to receive funding directly from the government and the European Union, which represented the fifty percent of their budget (Abetti, 2004 in Pals, 2006, p.27).

II. Ties with Universities

Establishing networks with universities may be extremely beneficial for business incubators for several reasons. First, these connections allow business incubators to get in touch with potential new entrepreneurs and recruit talented student workers, who at the end of their careers may end up being part of the incubator’s staff.. Second, being related with a university –preferably local– increases the level of credibility of the business incubator. And finally, being associated with a university can represent a financial support for the incubator. First, universities can help to decrease the overall costs faced by the business incubator. The presence of laboratories and infrastructure that the university has, allows business incubator to save money because they do not have to build or acquire its own laboratories, for example. Second, being part or linked to a university it is one of the forms of having some sort of public sector support, in the form of investments that contributes to superior outcomes regarding to job creation, graduation rates, etc. (Lewis et al., 2011, p.8).

Pals states two examples of this networks between incubators and universities in the United States. The first one is The Advanced Technology Development Center (ATDC) in

Georgia, whom is connected to The Georgia Institute of Technology, and the second case is The Austin Technology Incubator (ATI) located in Austin, Texas, who works in conjunction with the University of Texas, located in Austin.

III. Tenant Entry Selection and Exit

In order to be in a successful path, it is recommended that the business incubator performs an appropriate entry selection process for the new startups (Gibson and Wiggins 2003; Bergek and Norrman 2008; Lumpkin and Ireland 1988 in Clarysse, 2014, p. 3).

The decision generally should be done by a selection committee and also be based on several criteria or characteristics of the new venture, such as previous experience of the founders or the technical expertise of the team members, market and financial characteristics, the offered product, etc. The focus on certain characteristics in the process of admission of new startups may contribute to the incubator's success (Hackett and Dilts 2004; Lumpkin and Ireland 1988 in Clarysse, 2014, p. 3). Also, the selection is important for the resource allocation regarding the incubator and the overall economy (Hackett and Dilts 2004 in Clarysse, 2014, p. 3). If the incubator is unable to build a selection committee, the admission decision should be based on the already agreed selection criteria. Pals suggests that during the admission process, the new companies who want to enter to the incubator must expose in an orally and written manner their company to the selection committee or the responsible for making the admission decision in the business incubator.

On the other hand, also establishing the exit deadline for the startup firms is considered important. Indeed, according to Lewis et al. (2011, p. 7), loose or not exit policies often may prevent the incubator to achieve the optimal performance. The exit deadline may differ among incubators, but Pals (2006) suggests an average period of 2 or 3 years.

For example, The Advanced Technology Development Center (ATDC) have a defined entry selection criteria. The admission process is as it follows: the first part of the process consists of a staff reviewing different aspects from the applicants such as growth potential, product marketing, team management quality and the use of new technologies or processes. Then, the start-up must expose through presentation its development plan to the selection committee (Culp & Shapira, 1997 in Pals 2006, p. 30). Regarding to the exit deadline, in

the ATDC in Georgia case, the expected time of graduation of startup companies is 3 years. It can be sooner if the tenants meet several criteria.

IV. Networking

Building relationships can represent a key factor for new venture creation. Networks allow startups to build up strategic partnerships and relationships with potential customers, financiers and experts in the field where they perform (Soetanto and Jack 2013 in Clarysse, 2014, p.4). Moreover, networks promote and support the knowledge and expertise acquisition process of the incubated companies (Soetanto and Jack 2013; Bøllingtoft and Ulhoi 2005; Rice 2002; Chesbrough et al. 2000 in Clarysse, 2014, p.4).

According to Pals (2006, p. 30) networking is a key factor to success in a business incubator for several reasons. First, networking increases the chances of finding investors and also donors. Keeping a database of potential donors can help in the matching-up process between donors and entrepreneurs. The Finland Business Incubators, for example, keep a database called KORE. This makes the process of identification of donors and experts easier and also facilitates contacting them (Abetti, 2004 in Pals, 2006, p.30). Second, networks can help attracting new entrepreneurs to the incubator. Networking through seminars and workshops for the community where the business incubator belongs is an important activity that should be carried out by the incubators. The seminars and workshops bring together potential entrepreneurs by providing a “safe” setting where new ideas can be discussed. Also, the “safe” environment this activities deliver can have the potential to change the mindset of the communities who are averse to risk through the interaction with people that is working in the incubator. Pals (2006, p. 30) states that public seminars and workshops can support the acceptance of the business incubator in the community.

V. Monitoring and keeping records

Keeping records and doing the monitoring process allows the incubator to review and receive feedback regarding the incubator performance in its different areas of work. Institutions such as the ATDC in Georgia perform annually reviews from their records. It is important to monitor all the activities performed inside the incubator. Also, top-

performing incubators collect data regarding their client's outcomes often and for long periods of time, compared with their peers (Lewis et al., 2011, p.8). The process and effort from the incubator of collecting data from the outcomes may be beneficial for the incubator in several areas, such as ensuring continuous funding and also supporting the implementation of best practices and services that may lead the clients to success (Lewis et al., 2011, p.8). The data collected should include: revenues and employment of clients and graduated startups, firms graduation and companies survival rates and information about the success of a specific program and services provided by the incubator (Lewis et al., 2011, p.8).

VI. Strong Manager

In the literature, Pals founded that the "strong" manager idea was raised several times. However, the consensus on the definition of a "strong" manager was hard to find. However, several key aspects could be highlighted in the literature, such as business experience, highly motivated, visionary who wants the startups to succeed, willingness to work hard and be able to network and make these networks available in order to support the incubated companies, monitor performance and able to evaluate performance.

The presence of a capable and skilled manager that can help to attract new ventures and can be part of the selection process is one of the critical factors for a successful operation in a business incubator (Clarysse, 2014, p.3). In fact, several studies have suggested that the incubator manager, as a key success factor in the business incubator, may impact other success factors (Allen and Bazan, 1990; Lichtenstein, 1992; Duff, 2000; Lalkaka, 2002; Hackett and Dilts, 2004, 2008 in Theodorakopoulos 2014, p. 610).

VII. Focus on services as opposed to infrastructure

Business incubators have been focused on the evolution of startups and their needs and requirements. This is why incubators have been working in order to diversify and improve their services (Clarysse, 2014, p.4). According to Theodorakopoulos (2014, p. 608-609), the literature has point the shift in the focus from providing physical facilities and tangible aspects to provide business development process support and less tangible features (Dee et al., 2011; Bøllingtoft, 2012; Ebbers, 2013 in Theodorakopoulos 2014, p. 608-609). Even

though entrepreneurs tend to use the infrastructure the most, office services are easily imitated meanwhile, business support services and networks are inimitable and unique (Bøllingtoft and Ulhøi, 2005, p. 280 in Theodorakopoulos 2014, p. 609). This expose the key fact that there is a different performance on incubators which provide to its entrepreneurs business management skills and access to networks (i.e. relevant people, information and resources) (Karatas-Ozkan et al., 2005; Hackett and Dilts, 2004, 2008 in Theodorakopoulos 2014, p. 609).

The appropriate infrastructure is an important element for a business incubator. But, as it was mentioned before, the incubator's capability to offer services can be crucial. Indeed, the business support services offered by the incubator may be considered more important than the infrastructure itself. This can be explained by the fact that it is likely that the entrepreneurs coming to the incubator have no experience in business and therefore, they lack business skills (Bruneel et al 2012; Allen and Rahman 1985 in Clarysse, 2014, p.4). New entrepreneurs may face problems with the responsibilities associated of being small and new (Soetanto and Jack 2013 in Clarysse, 2014, p.4). Then, entrepreneurs need tools and advice in order to succeed and incubators may play a crucial role in this aspect (Clarysse, 2014, p.4).

According to Lewis et al. (2011, p.7), the incubator's advisory board it is related to several measures of success. It is important to include a specialist in technology transfer. Also, help with accounting, patent assistance and legal advice. Moreover, the presence of the local government and economic development agencies play a key role in improving the incubator's client performance, because they guarantee that the incubator is part of the community.

The Lewis et al. (2011) study made also possible to list the services that all of the top-performing programs provided:

1. Help with business basic activities;
2. Shared administration or equipment;
3. Accounting services;
4. Access to high-speed internet connection;
5. Networking activities among the companies within the incubator;
6. Marketing assistance;

7. HR, general business and presentation skills training;
8. Assistance regarding e-commerce strategies;
9. Help with business etiquette.

4. DATA GATHERING: UIC AND CSE LAB

In this section are exposed two cases of good-performing incubators. Also, in this section are identified the activities and strategies performed in both incubators, according to the best practices for good performing incubators identified in the literature review: mission statement, ties with university, entry selection and exit criteria, monitoring and keeping records, strong manager, focus on services and networking. At the end of this section, the best practices of the two incubators are summarised in Table 4.

4.1 Uppsala Innovation Centre (UIC): “Knowledge and network – for speeding up growth and success”

Uppsala Innovation Centre (UIC) is a top Swedish business incubator located in Uppsala, Östhammar and Södertälje (south of Stockholm). According to the theory UIC is a public/institutional operator which is equally owned by STUNS (the Foundation for Collaboration between the Universities in Uppsala, Business, and the Public Sector), Uppsala’s municipality, SLU Holding, and Uppsala University Holding Company. Also, UIC is member of the Swedish Incubators and Science Parks (SISP).

Uppsala Innovation Centre has been ranked by UBI Global 2015 as the world’s 10th and Europe 5th best business incubator with a university association (e.g. Uppsala University). Regarding the UIC’s objectives, it can be categorized as a technology incubator, which according to the Aernoudt (2004), it aim at “improving regional competitiveness by fostering the emergence of technology-based firms”. In line with with statement UIC offers business development support, tools and the necessary knowledge for innovative projects and companies who are growing looking forward to scale-up and reach the international market. UIC supports projects within all industries (e.g. life science, ICT and technology) and help entrepreneurs, researchers, innovators and management to commercialise their ideas. UIC has a high company survival rate. Indeed, according to the UIC’s official website, nine out of ten UIC alumni companies continue its operation in the

market today. UIC has a clear mission statement: support businesses to achieve sustainable growth. Every year, UIC incorporates about 80 new companies and projects to its business development programs. The UIC applies an entry selection criteria in order to admit new companies are: if the company is a person or a team with great commitment drive, if the company has an idea with innovation height, commercial interest, international potential and/or growth potential and, finally, if the company wants to patent or use another possible protection for a product. As it was explained in the literature chapter, a clear mission statement leads and define the direction of the incubator. Therefore the activities taking place inside the business incubator should be designed in order to be aligned with the incubator's main purpose, in terms of entry selection and exit criteria, offered services, goals, etc.

The UIC's amount of money during 2015 for the companies within the incubator was USD 43.9 million. Also, in this year 586 people were involved in UIC companies. Moreover, the Uppsala Innovation Centre's public return on investment (ROI) was 11 in 2015. This means that the funding that UIC received from public sources was re-gained 11 times the original amount through the taxes that the UIC companies paid to society. Moreover, the present of an incubator within the community helps to spread and support entrepreneurial activities.

The UIC model was formed in 2004 and it has proven to be a successful model that creates successful businesses and its commercialisation process. UIC offers support in finding funds and gives access to technology and commercial networks. Also, UIC puts an important emphasis in the monitoring and keeping process as one of the best practices stated in our literature review. This incubator has performed an excellent job in terms of tracking their records. Indeed, every year they publish an annual review of the incubator. The Uppsala Innovation Centre model can be described briefly as:

1. Five business development programs, which according to UIC the expected result from completing them is being faster in terms of time to market and being a competitive company with a higher survival rate. The five development programs are: UIC Business startup, UIC Business Lab, UIC Business Prep, UIC Business Accelerator and UIC Alumni.

2. One of the most important parts of the UIC model is the business coaching model. In this system, 70 cautiously specialists from leading positions within all the sectors of industry and commerce are selected as business coaches, in order to support and guide the companies in its business development to achieve their goals. Business coaches contribute with their experience, knowledge and networks. Moreover, they support recently established corporate management and boards. The broad range of coaching allows UIC to be “industry-independent” and to offer to the companies the professional support and guidance from their specific sector in the industry.
3. Its main focus is develop businesses, not renting physical facilities such as offices. The companies incubated are encouraged to sit where they feel they do their business in the best possible way.
4. UIC does not take ownership in its companies. This way, UIC represent and act as a neutral partner.
5. UIC’s network consists of of approx. 20 business partners (e.g. experts in industrialization with experience in the evolution from the prototype to the production phase) who support the development of the companies through individual coaching, financial contributions and seminars.

It can be noticed that the UIC Model follows one of the best practices suggested in the literature review regarding to the fact that it is focused on providing useful services for business development instead of providing infrastructure and physical facilities. A specific and experienced coaching service is one of the key services provided by this incubator, also the networks with experts in the field of how to progress from the idea to the product.

UIC’s activities and services provided are aimed to fulfill the entrepreneur’s needs. UIC specific business development programs and the business coaching model are aimed to cover the lack of business skills of the entrepreneur and also, they lack of knowledge regarding rules and regulations in the industry. On the other hand, physical facilities are provided so entrepreneurs can sit wherever they work at best, but still, it is not the focus of UIC. Moreover, UIC provide networks so entrepreneurs can have access to funds to develop its business and also access to seminars which contributes to its education.

4.2 Copenhagen Business School of Entrepreneurship Lab (CSE Lab):

“Action matters!”

Copenhagen Business School of Entrepreneurship (CSE) is part of Copenhagen Business School (CBS), both located in Copenhagen, Denmark. Copenhagen School of Entrepreneurship Lab (CSE Lab) is one of the focus areas of CES. Its profile is, indeed, aligned with the literature review in the sense that is a business incubator who brings the environment designed to hatch new enterprises. This fully reflects the CSE lab’s activities. It is an incubator for talented students, graduates, and postdocs to develop and test their ideas and further, turn their ideas into aspiring businesses. Following Aernoudt (2004) incubators’ classification, CSE Lab corresponds to a public/institutional operator, which makes substantial contributions to local economies creating tools, teaching methods and practice-based knowledge that can be applied in the society. Furthermore, CBE Lab can be also categorized regarding its objectives, which according to Aernoudt (2004) this approach as criteria is closer to economic reality. It corresponds to economic development incubator. Accordingly CSE Lab’s mission statement is, first, helping student entrepreneurs from both Denmark and abroad, from all the Danish universities and several international universities, to transform their ideas into potential businesses solutions for business, customers and society. CSE Lab is currently the largest incubator in Denmark, with about 80 startups companies from a wide range of universities and sectors. CSE Lab supports the development and commercialization of ideas into business. Among the companies, the 50% are cross-disciplinary and approx. 70% have an international profile. CSE Lab is constantly growing with 3 to 5 companies each month through the initial proof program. One of the key lines in CSE Lab is that action matters. This incubator encourages people to go and test their idea in real life, instead of spend too much time writing about it.

CSE Lab is focused on offering three business development programs, depending on the stage where the entrepreneur is with its ideas and businesses. The programs are: Proof of Idea (POI), Proof of Concept (POC) and Proof of Business (POB). The tools through which CSE Lab help entrepreneurs come in the form of workshops, legal and accounting aid, venture aid and press aid. Moreover, monthly CSE Lab hosts two events: Friday Networking Bar and Copenhagen Wednesday. Both events provide the opportunity to entrepreneurs to make networks and get to hear interesting speakers talking about certain

topics which are important for entrepreneurship such as: How to Create a \$-Making Business in 2 hours! Get Online Success With Your Start-Up!, How to get investment!?, From Idea to Business plan. Also, CSE Lab provides free workspaces and desks for the entrepreneurs, who can come and go as they like and they also have the possibility of booking rooms for meetings. In general, all offers and events aimed to startups and entrepreneurs are free. Moreover, CSE Lab offers business developers, proof program, experts, coaches, workshops, seminars, match-up, an international growth program and more. CSE Lab is a business incubator focused on providing services and not on providing physical spaces. The focus of CSE Lab is to provide opportunities to make networks among entrepreneurs and with experienced people. Moreover, offers different programs that can fit to the client's necessity.

Incubators are designed to meet entrepreneurs' needs and help them to develop their business. This is the reason why the services provided by incubators are so important. In that sense, CSE Lab offers business developers, proof program, experts, coaches and workshop, which aim to educate the entrepreneurs and to give them more insights about how to run a business. As well as these, other services like seminars, workshops and match-up events promote and support entrepreneurial activities within the community. Moreover, accounting and legal advice help is provided, in order to overcome regulatory issues, and press aid which goal is to provide more insights about the marketing activities of startups and thus reach more clients. Even though, the goal of CSE Lab is to provide services rather than physical space, it is offered and this is another big plus for the entrepreneurs and their companies.

Table 4. *Incubators cases analysis*

Best practices	Uppsala Innovation Centre	Copenhagen School of Entrepreneurship Lab
Mission statement	Support businesses to achieve sustainable growth.	Helping student entrepreneurs to transform their ideas into potential businesses solutions for business, customers and society. Create tools, teaching methods and practice-based knowledge that can be applied in the society.

		Test of the idea
Ties with Uni	Uppsala University	Copenhagen School of Entrepreneurship
Entry and Exit Criteria	A person or a team with great commitment drive, An idea with innovation height, commercial interest, international potential and/or growth potential and, finally if the company wants to patent or use another possible protection for a product.	Data was not available
Networking	Twenty experts in industrialization Access to technology, funding and commercial networks	Friday Networking Bar Copenhagen Wednesday.
Monitoring and keeping records	Every year UIC publish an annual review of the incubator	Data was not available
Strong Manager	Data was not available	Data was not available
Services	Five business development programs Business coaching model Infrastructure (still, it is not the main focus) Access to networks	Three business development programs, depending on the stage where the entrepreneur is with its ideas and businesses. Workshops, legal and accounting aid, venture aid and press aid. Free workspaces and desks for the entrepreneurs. Business developers, proof program, experts, coaches, workshops, seminars, match-up, an international growth program Infrastructure (still, it is not the main focus)

Source: developed by authors

5. DATA GATHERING AND ANALYSIS

In this chapter, the data gathered in both the literature review and the interview is analysed.

The analysis section of the project is based on the best practices identified in the literature and among the two other incubators described, UPPSALA and CSE Lab. The analysis was conducted after coding the interview with Morten Dahlgard. The results were then compared with the best practices of successful incubators identified in the literature. The findings exposed in this section answer the first part of the research question of the project, and refer mainly to the current situation of AAU Inkubator, partially mentioning some past events that lead to it.

Coding the interview considering the best practices previously identified in the literature brought the researchers to observe what follows:

5.1 Challenges of AAU Inkubator

I. *Clear Mission Statement*

At the moment AAU Inkubator has two main mission statements. First, as the main university of Aalborg city, the goal is to create and build value in a lot of ways for the society and the economy of the area. Moreover, creating value is, indeed, the return on investment of the projects supported by the incubator.

“We are not a corporation which has a bottom line, only one bottom line which is financing. We have a lot of bottom lines. We need to build value in a lot of ways”

(Appendix A, p.68)

Secondly, to support, promote and spread the message of entrepreneurship as a usual activity inside the university environment that all student should consider. The interviewed manager expressed that AAU Inkubator wants to be considered a normal part of the university where any student can go, like the canteen, the career center office or the library.

“What is extremely important for us is to get the message across, that entrepreneurship is just a normal part of the university. Just as we have a career

center, that you can take a job in industry, that you can get to the canteen and get something to eat, that you go to the library” (Appendix A, p. 67)

The incubator firmly believes that every person may have the skills to become an entrepreneur, as soon as the idea is innovative enough and the commitment level is adequate to the task.

“Everyone has the skills to become an entrepreneur, not necessarily the same type of entrepreneur but somehow work with entrepreneurship” (Appendix A, p. 68)

At the beginning, the main activity and goal of Aalborg University Inkubator was to help entrepreneurs to raise funds, providing them networks for financial support. Now, eleven years later, AAU Inkubator is evolving from being a network provider to be a real incubator with housing, financing opportunities and several employees working in order to accelerate new companies.

Currently, AAU Inkubator still has as its main purpose to help startups to acquire funding in its early stage, so the idea can be tested and find out if it is a good opportunity or not. This testing process allows entrepreneurs to increase the chance to get greater funding sources later. The incubator bases its partnerships and relationship with entrepreneurs on honesty and trust. Furthermore, it has been revealed to be a technology focused incubator at the moment. Still, the manager exposed that it is considered an issue and they would like to diversify the fields where entrepreneurs come from such as humanities, economics and social science.

II. Ties with University

At the moment, AAU Inkubator has applied several strategies in order to get the benefits of being part of Aalborg University. First, according to the literature review, being connected with a university increases the credibility of the incubator. AAU Inkubator has networks with all the Danish universities and it is part of NordTech too, which is a network of 27 Nordic universities. Moreover, AAU Inkubator has links to several European and American universities.

On the other hand, part of the benefits of having ties with a local university, is the opportunity of connecting and recruiting talented students as part of the incubator's staff, performing the role of interns and probably become an employee later. AAU Inkubator offers the opportunity for students to work in the incubator as interns, which is actually a way of testing the performance of them and later, if it is good, offer them a job position.

Finally, establishing linkages with universities also may decrease the overall costs of the incubator. In the case of AAU Inkubator, it provides to entrepreneurs the access to the laboratories of the university as long as they are careful using them. Being AAU Inkubator a technology focused incubator, providing this type of facilities may be really important and beneficial for the incubated companies.

Nevertheless, the fact that AAU Inkubator is not really well known inside the campus is preventing the incubator from recruiting potential new entrepreneurs and/or talented people for the staff. This is already recognised as an important challenge by the manager of the incubator and they have the urgency of solving this dilemma.

“We are still pretty well kept in secret at the university, but that will change after New Year. There is a plan and we have just secured funding for a huge program, so that will change a lot” (Appendix A, p. 67)

AAU Inkubator at the present, organises a big recruitment event every year called WOFIE, but it is focused on recruiting entrepreneurs and new startups.

III. Tenant Entry Selection and Exit

Several authors in the literature highlight the importance of applying a selection criteria for startups' admission in incubators. Indeed, top-performing incubators such as Uppsala Innovation Centre have a selection criteria that is based basically in the entrepreneur and idea's profile (i.e entrepreneur and team's commitment, innovative idea with commercial interest, growth and/or international potential, the need for a patent). As was stated in the literature review section, if incubators focus on specific characteristics for admission of entrepreneurs, this may contribute to the success of an incubator. At first AAU Inkubator does not have any selection criteria and startups that apply have been accepted to join the program. Over the years, things changed a little bit, but not completely.

Nowadays, selection criteria for the AAU Inkubator as Morten Dahlgaard mentioned in the interview are that the startups must be based on an innovative idea and also the motivation of the entrepreneurs, as his team dedicates time to people who are motivated and want to grow as professionals.

Another important aspect is the exit criteria, which is also highlighted as important for the successful performance of the incubator. The AAU Inkubator has very well established criteria for the exit of companies from the incubator, but not a definite period. One of the few criteria regarding the exit of start-ups in AAU Inkubator are that when a company becomes commercial, they have to find a new place (Interview transcript, p. 10). The next one that Morten mentioned during the interview was that a company have to leave the incubator when it does not develop and/or stops its development and the cooperation with the incubator is meaningless.

IV. Networking

According to Soetanto and Jack (2014) statement “network allows new venture to build strategic partnerships and relationships”. From the point of view of the AAU Inkubator’s manager, networking is extremely important success factor in business incubator. It allows tenants to share knowledge and find mutual collaborations. For this reason, the AAU’s Inkubator has strong networks with venture cups and with researchers:

“We have partners with venture cups and their platform and promote it some of the other initiatives. We have a strong network with researchers to work with and promote it as well” (Appendix A, p. 70)

Such a statement fully reflects with Pals’ (2006) reflection, which consider networking an important key factor in order to increase the chance of finding investors and also donors.

In addition, it is important to emphasize, that in line with the interview, the trust is the base of AAU Inkubator’s partnerships. Such value is considered by the manager essential in order to maintain the credibility and quality of networks:

“Partnerships are built on trust and the trust we build through doing something together...we do not lie to people and tell them if we cannot help”

(Appendix A, p. 71)

A further analysis of the interview helped us to identify some limitations regarding its operational networks. A first identified barrier to networking is that all integrant of the team can make networking, and there is not a dedicated department specialized or focused on that.

An in-depth analysis of the networking processes has highlighted the fact that AAU Inkubator organizes continuous events throughout the year, but it has not established a specific date that can be related to an incubator’s main events.

Additionally, the AAU Inkubator’s manager stated that international students are 20% of the student body in the Aalborg University and for this reason most of the events (conferences, seminars, workshops) are held in English, but this create a non-comfortable atmosphere for Danish people. Accordingly:

“When we have stuff in English we know that will scare a lot of the Danes away that are now comfortable speaking English for some reasons... There is something in the mix between Danish and international students so we have not figured out yet” (Appendix A, p. 78)

V. *Monitoring and keeping records*

The success definition of AAU Incubator is still not certain.

“Our success criteria are sort of blowing in the wind right now” (Appendix A, p. 69)

The AAU Inkubator’s manager stated that they are in the exploratory phase regarding this subject. The performance review and feedback of the incubator it is currently based in “gut feeling” and not on indicators or statistics. Even though they developed some statistics in 2012, they don’t have a regular monitoring process along the year.

“We know when we are doing good, but that’s more a gut feeling” (Appendix A, p. 69)

VI. Strong manager

Managing an incubator is not an easy task, however the strong manager for incubator's success is definitely a must, if the goal is to develop and help startups to grow and thus enhancing the performance of the incubator. Morten Dahlgaard as was already mentioned, is the manager of AAU Inkubator. He studied law at Aalborg University, then worked as a legal consultant and also in a patent agency. His main tasks as the manager of AAU Inkubator include management of the incubator and fund raising.

VII. Focus on Services

The services that incubators provide are one of the most important factors related to the performance of the startups and the incubator itself. Moreover, it is a key factor that attracts new entrepreneurs to join. At the beginning, AAU Inkubator provided only few services, mostly related to networking for financial support and education through a small workshop program including topics like, how to find a company, legal and accounting topics. During the years there were improvements in the services provided and from a program for people that are interested in entrepreneurship it grew up to a real physical incubator. Services like housing, financing opportunities and staff to support the acceleration of companies were introduced (Interview transcript, p. 6). Entrepreneurs have not only access to free infrastructure, but also access to all laboratories within the university (Interview transcript, p. 11 & 18). In addition, AAU Inkubator has a foundation to create a strong ecosystem in Aalborg and the region, because of the increasing interest and the constantly promotion of entrepreneurship.

VIII. Funding

Even though funds it is not considered among the factors stated in the literature review, it was mentioned several times in the interview with the AAU Inkubator's manager as a key element inside the incubator in several aspects. According to the entrepreneur's obstacles section in the literature chapter, one of the challenges faced by new entrepreneurs is raising funds for its project and this is why it is considered as a key aspect to describe in this chapter. AAU Inkubator at the present is a non-profit organisation who receives funding for research and education, but no specifically for entrepreneurship.

“The university works in a way that we get funding for education and we get funding for research. And we are not working within none of these categories and we have to secure the funding for entrepreneurship” (Appendix A, p. 68)

The manager explained that there is only one Investor Company in AAU that gives funds for only ten projects per year. Therefore, the lack of investment becomes an issue because it leads entrepreneurs to leave Aalborg and it is probable that they do not come back and remain then in the city.

“When you then come to the bigger financing rounds that’s a tendency that you will try to go to Copenhagen because that’s where the investors are so they wanna have you close and you don’t really come back. And I think that’s an issue” (Appendix A, p. 69)

Currently, AAU Inkubator is working on getting funds specifically for entrepreneurship and also, they recently established several partnerships with external agents to receive even more funds.

“We raise it (the funds) externally. Good friends!” (Appendix A, p. 79)

5.1 Recommendations for AAU Inkubator

Based on the challenges previously identified, the researchers were able, linking the best practices found in the literature review with the two similar cases, to propose the following:

I. Clear Mission Statement

As was mentioned in the literature chapter, the mission statement of the incubator is crucial because it defines the general goal of the organisation and support several processes such as start-ups graduation, resources allocation and the admission process of new incubated companies. On the one hand, AAU Inkubator revealed to have a partial mission statement and goal. However, on the other hand, how AAU Inkubator is going to create and deliver value for the society and support and promote entrepreneurship is still not clear. The AAU Inkubator manager expressed that, at the present, there is a debate

taking place at the incubator whether the incubator is going to be a place for learning where students can apply what they learn in the programs, or the incubator is going to be aimed mainly at creating companies, jobs and revenue growth or a combination of both. For example, the two top-performing incubators cases mentioned in the literature review reflect that both of them have a clear profile. In the case of UIC, the incubator is aimed to support new businesses so they can achieve a sustainable growth. In the case of CSE Lab, the main key purpose is to not only to support entrepreneurs to create business solutions for the society, but serving as a laboratory for entrepreneurs and encouraging the action and the testing process of the entrepreneur's idea in the real life, is also a key purpose.

For example, AAU Inkubator's approach for choosing new companies is not only picking the winners, however this criteria may be different depending on the incubator's profile. This means that if the incubator is considered a place where companies are developed in order to have revenues, maybe the selection criteria would be sharper regarding the startups they choose to support and give funds. This being said, it can be observed that defining the incubator's profile is important and it can help to design, improve and facilitate several processes and factors inside the incubator that, indeed, are still not defined. These activities may include resources allocation, selection criteria for new companies so they can fit into the purpose of the incubator, the exit deadline of the incubator, type of networks, hired staff, etc.

II. Ties with University

Since AAU Inkubator has already established ties with universities, there are only a few recommendations that can be made about this matter. Besides advertisement through social media and the access to the resources of the different departments also located in the university campus, AAU Inkubator could consider the possibility of organise a similar type of event as WOFIE but aimed at recruiting talented interns and test their performance before possibly hiring them.

If we consider the wide pool of students who could be reached by the incubator among all the several departments of AAU, given their different backgrounds and educations, it seems definitely like an advantage compared to incubators that do not have strong ties with universities. The suggestion is to exploit this feature even more, trying to

organise more events within the university and to advertise the incubator more among students and teachers as well. Teachers might redirect their students who have a brilliant innovative idea to AAU Inkubator, if they are properly informed about this organisation.

III. Tenant Entry Selection and Exit Criteria

As stated previously, proper entry selection criteria are not really performed at the moment. The appearance of selection criteria would not bring benefits only for the incubator itself, but also for the entrepreneurs' businesses. On the one hand, regarding the benefits for incubators, the introduction of criteria would allow a better allocation of time and resources. Moreover, supporting entrepreneurs that in turn agree and support the mission of the incubator, could definitely help to establish a track record, a fundamental element for marketing the program and attracting more ventures to join the program and guarantee its financial stability and longevity. On the other hand, entrepreneurs would also benefit from the selection criteria, because the ones that are accepted would have access to more resources and bigger support from the staff, who will dedicate all their knowledge and competences to prospective entrepreneurs (Babwah & Mc David, 2014, p. 17).

The manager of the incubator is aware of the problems with selection and exit criteria, and soon proper criteria will be introduced, in order to choose in which business opportunity the incubator will invest time and resources (Interview transcript, p. 10).

Based on Babwah and McDavid (2014), suggestions for choosing the best selection criteria that will influence the future development of the incubator are proposed in four phases.

Phase 1.

In this first step it should be established a committee that will assess the start-ups and their potential. The committee should:

1. Have the concept of the AAU Inkubator work
2. Include experts with different background and working experience

Phase 2.

The committee, in this phase should approve selection criteria on the basis of the objectives of the AAU Inkubator. In addition, the new venture must not compete with any of the already accepted companies within the incubator.

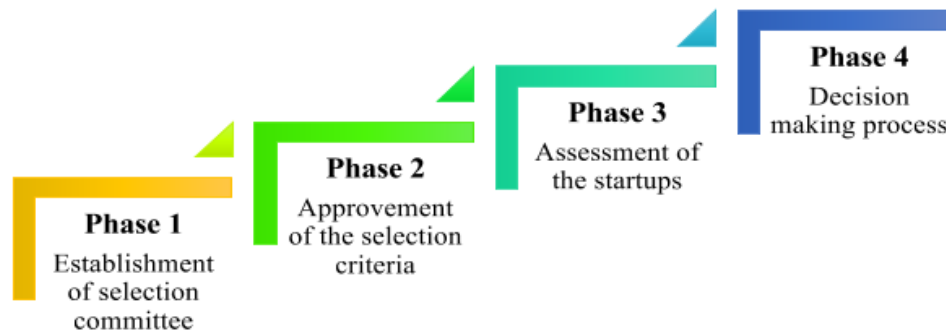
Phase 3.

In this phase, after the committee assess the startups, and these that are approved, should send their business plan to the committee. Afterwards, the applicants that meet the minimum requirements, should be invited to an interview where, they will present their idea, needs and expectations.

Phase 4.

The final step should be the assessment of the committee and decide if the incubator can meet the needs and expectations of the entrepreneurs.

Figure 2: *Phases of selection criteria*



Source: Developed by the authors

Regarding the exit criteria, as suggested and previously explained in the literature review, Pals (2006) suggests that an average period of 2-3 years could be an optimal exit deadline. If incubated companies do not produce a consistent revenue after this period of time, AAU Inkubator should consider stopping or reducing the support for these startups,

in the attempt of avoiding helping projects which have not showed an adequate level of growth during the incubation period.

IV. Networking

It is suggested to have professional and experienced people in charge of the networking activities. Then, the department can improve the way they build and maintain the integrity of the networks and also react to the changes among and between networks.

Furthermore, as it was mentioned in the literature review, the CSE Lab, weekly host two events: Friday Networking Bar and Copenhagen Wednesday. AAU Inkubator can organise informal monthly or annual events (e.g. talks) where pertinent knowledge is provided to entrepreneurs besides giving the opportunity to make networking.

Organizing integration activities, where Danish and foreigners can interact and get to know each other culture, could provide fresh and different viewpoints on certain matters.

V. Monitoring and keeping records

In the literature review was emphasized how important is to monitor all the activities performed inside the incubators. The main purpose of doing it is to be able to review all the incubator's aspects and give feedback regarding the incubator's performance. Moreover, collecting data of the new companies' outcomes is a practice of top-performing incubators, such as UIC. Uppsala Innovation Centre publishes an annual review from the incubator's performance. This type of tools may have several benefits for the incubator. First, can be valuable at the moment of raising funds. Investors, donors and stakeholders can have access more easily from the incubator's performance through this publications. Second, collecting data allows to have all the necessary information to apply new practices and services inside the incubator or improve existing ones in order to lead the clients in a successful path.

According to Lewis et al.'s (2011, p.8) work regarding best practices for incubators, the data collected should include the following topics: revenues and employment of clients and graduated startups, firms graduation and companies survival rates and information about the success of a specific program and services provided by the incubator.

VI. Strong manager

As was mentioned in the literature a definition is hard to find, however there are several key aspects which can be highlighted. The aspects that several authors agree on include business experience, highly motivated, visionary that want entrepreneurs to succeed, willingness to work hard and ability to create networks, which will support the startups and the entrepreneurs, to monitor and evaluate their performance as well. Morten Dahlgaard has a business experience and a great willingness to work hard for the better performance of the incubator. He has already established a wide range of networks through which they not only support the current companies in the incubator, but also attract new entrepreneurs to join. Morten is not included in the development of companies, which may influence the general support of startups in the incubator, because of his background and working experience.

The manager of AAU Inkubator has all qualities and perform most of the activities identified in the literature. Yet, there are thing that can be improved. For example, Morten has a background in law and working experience in this sphere, so he can participate in the legal consulting and development of companies in a deeper way.

The office manager should be also able, then the measuring of the performance and evaluation of the startups will be implemented, to use it properly and in the best way, also to make the process of fundraising easier, as the manager will be able to show and proof the successful performance of the incubator.

In this fast changing world, new knowledge, practices and techniques for management are established every day. Therefore, it is also suggested, in order to stay up to date with all new trends and practices for managing incubators, that manager and employees of AAU Inkubator could attend some training programs like the “Business Incubation Management Training Program” or similar ones.

VII. Focus on Services

As was noted in the literature, even though entrepreneurs use mainly the infrastructure, office support services are easily imitated and everyone can provide this type of service. One of the main aspects that may distinguish successful from unsuccessful incubators is that some of them provide services that are very difficult to imitate. For

instance, business support, business training and networks are inimitable and unique services for every incubator. AAU Inkubator provides business support and networks to its entrepreneurs, but in order to become more and more successful and to attract more entrepreneurs the incubator have to focus more on these aspects and to enhance this type of support.

In order to enhance the performance of the incubator and improve the services offered, the following suggestions are proposed. The first recommendation is to be established incubator advisory board, which should include between 8 and 20 individuals with different background and working experience, thus allowing the entrepreneurs to get advices and support in different parts of the business management. As a must between these individuals, an experienced entrepreneur has to be involved and his expertise can give a lot of insights for the young and inexperienced entrepreneurs. The second recommendation regards the services provided within the incubator. At first the board and the manager should assess the effectiveness of these services periodically. Next, in order to enhance the performance of the incubator and the incubated companies an entrepreneurial training program should be introduced. Another service that can make a significant difference is to provide production assistance like R&D and prototyping activities. In addition, developing strong mentor programs with the assistance of experienced entrepreneurs and business owners would add more value to the incubator's performance. The third recommendation is to include in the management practices is to provide pre- and post- incubation services.

Good performance incubators such as UIC and CSE Lab, offer several services that may highly contribute to the client's success and may be worth to consider them within the AAU Inkubator's services. The first one, is focusing on the coaching process and support by specialists, always considering the specific aspects of the incubated startup (i.e. industry, development phase, etc). For example, in the UIC case, the incubator offers support for raising funds but, one of the main parts of the UIC model is the Business Coaching Model. This model consists of 70 industry specialists from leading positions in several industries and commerce selected as business coaches, in order to support and guide the business development process, giving specific advices according to the industry where the startup belongs. Moreover, they have a network of approx. 20 business partners who are experts in industrialisation with experience in the evolution process from the prototype

to the production phase. Second, offer differentiated business development programs. Both UIC and CSE Lab offer several business development programs aimed to assist different purposes. CSE Lab is focused on offering three business development programs, each one of them is aimed to assist and test the businesses ideas in the specific phase where they are at the moment: idea, concept or business. Uppsala Innovation Centre offers five business development programs aimed to accelerate the new companies so they can get into the market faster.

Finally, it is recommended by Lewis et al. (2011, p.12) to review and evaluate the incubation program periodically using two different approaches:

1. Client firm performance (outcome analysis); this analysis should be based in several proxies such as survival rates, jobs created, revenues, taxes paid, intellectual property created, etc. This analysis is recommended to be performed every three to five years.
2. Analysis of incubator's processes: should be carried out frequently and cover several systems such as services provided, advisory board composition, budgets, selection of entry and exit criteria and program effectiveness.

VIII. Funding

According to Lewis et al. (2011, p.9), incubators with large budgets tend to outperform incubators with budget limitations. The author states that more financial resources allow the possibility to deliver better services to the clients and are more stable. Incubators that receive revenues from rent and services fees in a larger proportion tend to have a better performance compared to others. Also, those incubators who spend more and invest in staff and services increase the probability of improvement and success of their clients.

As confirmed by the office manager, a massive funding will be available to the incubator from 2017. Therefore, the need of keeping these funds also for the years to come is relevant. AAU Inkubator should try to adopt several of the key suggestions provided before, in order to be able to show results and improved performances to the private investors, improving the chances to retail the current investors also in the future and to attract new ones.

Often it is hard to see, when being inside the organisation, the possible changes that the organisation itself may or may not face. The researchers, coming from an outside perspective, after a wide literature review about best practices for incubators, together with other similar cases and the analysis of the interview with the office manager Morten, have been able to make a list of the challenges that AAU Inkubator is facing, answering the first part of the research question:

“What are the main challenges that AAU Inkubator faces during the process of incubation?”

The challenges are therefore listed as:

- Recruiting and attracting entrepreneurs.
- Defining the AAU Inkubator mission.
- Attracting possible investors (fundings).
- Selection criteria and exit criteria.
- Monitoring and keeping records.

Firstly, AAU Inkubator at the moment has not been able to develop in a definite way several of the key factors for good performance stated in the literature, such as monitoring activities, keeping records, tenant selection criteria and exit deadline of the incubator. As it is stated in the analysis and the literature review, developing an entry criteria and a limit for the incubation period supports and enhance the process of resources allocation of AAU Inkubator, also it helps to assure its longevity as an incubator. On the other hand, monitoring the activities performed inside the incubator (including networks and services) and keeping data from the inside and outside of the incubator and its clients may enhance its processes in terms of policies, strategies applied and offered services inside the incubator (which increases the probability of success of the startups). Moreover, it is a useful tool to raise funds.

Secondly, various factors have been established already inside the incubator but, according to the literature, the incubator is still missing several elements that may improve and complete the necessary conditions that enhance the incubator's performance. This is the case for mission statement and services. AAU Inkubator, as it is exposed in the data gathering chapter, has already established a clear mission and purpose as an organisation, but still, choosing the way that its mission is going to be delivered to the society may enhance, support and facilitate numerous processes that has to be performed inside the incubator. Furthermore, the AAU Inkubator's services are still focused on finding networks for funding.

Finally, three factors already exist in the incubator and have been functioning along the time: networking, strong manager and ties with universities. Two of these factors, networking and ties with university, have been the foundation of the incubator (e.g. a university office in charge of providing financial networks for new ventures) since the beginning and possibly this is why the interview did not reveal any particular challenges regarding them inside the incubator.

According to Morten Dahlgaard one of the main challenges the incubator is facing at the moment is getting in contact with the entrepreneurs inside the university environment. The relationship with the university is already established in various ways and for various tasks (i.e. laboratories, funding, credibility, etc). However, attracting people that want to start a company inside the incubator and make use of all this organisation has to offer has been a difficult job. Nevertheless, the manager of the incubator recognises this situation as an issue and the incubator is already working on it.

6. CONCLUSION

6.1 Discussion

As observed in the analysis and data gathering chapter, it is possible to make several considerations about possible improvements of the practices of AAU Inkubator. The researchers believe that the future massive fundings coming in 2017, as confirmed by the office manager, could mark a significant change in the path of the incubator. It is essential now, after the first initial period of "incubation" of the incubator itself that certain

decisions are taken in order to allow the organisation to grow in the right direction. It is possible to observe, also considering other similar cases, that incubators may take several years from their creation to become a top-performing incubator. Therefore, it might come easier to understand why especially now AAU Inkubator is on the verge of a possible turning point. A decade of experience, together with a stronger network, an improved and larger team, as well as new funds coming in the picture, may definitely bring new perspectives to the situation of the incubator.

While answering the second part of the research question, “...*how could its support for entrepreneurs be improved, according to the best practices identified in the theory?*” the focus of the writers have been on the many practices that could enhance the performance of the incubator, which will be here summarised.

Indeed, before focusing on developing the other mentioned factors, it is suggested to first solve the issue of the goal mission, in order to align the rest of the factors with the incubator’s selected profile. This could be done in different ways, but it is opinion of the researchers that the way the incubator should define its mission should be found within the incubator itself. Therefore a particular direction is not here suggested, but the writers want to highlight the urgency of solving this issue.

Going further across the composition of the advisory board, it should be considered the option of hiring an experienced entrepreneur, who would bring new knowledge and different perspectives, adding value to the overall incubation process.

Several fundamental services such as specific coaching programs (i.e. Business Coaching Model from UIC or the three different programs provided by CES Lab), pre and post incubation services or legal and accounting aid are still not offered inside the incubator or not offered at all. Including this type of services (and others) may enhance the AAU Inkubator’s performance and also the experience and help provided to entrepreneurs. These services must be revised regularly, in order to certify that are the indicated ones in terms of supporting the startups.

Monitoring the services provided, together with keeping track of the incubated companies is definitely one of the first practice the researchers suggest to implement. It is opinion of the writers that the monitoring phase should also continue after the incubation

process, in order to evaluate the average life expectancy of the startups when without the help of the incubator.

The networking activities, indeed, may need some implementations. Setting a specific date of the year to make networking and also, recruiting, allows AAU Inkubator to be present and connected in a consistent manner to all the students and entrepreneurs every year.

Introducing an entrepreneurial training program is also suggested, together with production assistance (R&D and prototyping activities).

Regarding the management practices, post-incubation services should be implemented, in order to allow a higher degree of help to companies even after their incubation period has extinguished. The nature of the services should be decided by the incubator's manager, together with the project manager who followed the case, accordingly to the specific needs. This should not be applied for the companies that did not grow enough in the previously suggested incubation period of two-three years, but only for the companies which successfully completed their incubation process.

6.2 Limitations and Future Implications

This project increases the knowledge on the subject of AAU Inkubator and its development. However, this research is to be considered as preliminary and can be further improved. The interview has been considered an interesting and useful tool to collect data which has allowed the comparison between the AAU Inkubator's manager viewpoint and the one of the researchers. However, during the writing of the project, some limitations have been faced. More interviews, with several employees from different departments of AAU Inkubator, could have been an important additional source for getting a wider overview on the incubator itself. Additionally, at the beginning it was thought, that having only one empirical case study would be an advantage. This was confirmed by the Yin's statement (2003, p. 2) "retain the holistic and meaningful characteristics of real-life events in an organization". However, having more cases could have allowed the researchers to test the identified theory to higher extend.

For further research it is highly recommended to work together with the office manager of AAU Inkubator, trying to define the path that is intended to be taken.

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APPENDIX A

Interview with AAU Inkubator's Manager (Morten Dahlgaard)

Manuel: Could you shortly introduce yourself and tell us a little bit about your background?

Morten: My name is Morten Dahlgaard, I am head of entrepreneurship at Aalborg University and AAU Innovation, where I run the office which is known as Supporting Entrepreneurship. We run the AAU Incubator. My background before heading out the office is that I have a legal background, studied law at Aalborg University. Then I came to Aalborg University to work as a legal consultant for a few years, getting more and more into the commercialization of research. Then, I was headhunted to a patent agency with the objective of starting up a division of that patent agency here in Jutland, otherwise it was only in Copenhagen. I was there for a year before coming back to the university and more or less from day one I was head of Entrepreneurship, so that is my background.

Manuel: When did you started working with the AAU Incubator?

Morten: In 2008.

Manuel: How was the incubator founded?

Morten: It was founded in 2005, so this was before me. It was founded as a network basically of I think about 5 researchers, who had interest in entrepreneurship and who had basically a group room where students that were interested in entrepreneurship could sit and work. We at the office here, we had a few services, but mainly in the sense of money to be able to buy consultancy for the incubated companies. So, there was no collaboration between the start-up and Aalborg University. It was a network, it was basically a program that bought consultancy and then a bit of a learning program as well. There was small workshop program, where students could learn about entrepreneurship, in the sense of how do you found a company, legal stuff, accounting and stuff like that.

Manuel: Who were the founders?

Morten: My previous director was the founder of it. Niels (inaudible name).

Manuel: So, as you said the main goal at the beginning was just to provide a network for a financial support?

Morten: Yes, basically. It was to get things going and it still is. We don't have a formula to run an incubator, I don't think anyone has. If you look at the innovation perspective, we are still in the open funnel, so we are still figuring out what is the best part here. Because, what is extremely important for us it to get the message across, that entrepreneurship is just

a normal part of university. Just as we have a career services center, that you can take a job in industry, that you can get to the canteen and get something to eat, that you go to the library. We also have an entrepreneurship center, we have an incubator, that is a normal part of a university, so we are trying to get that message across. It is nothing fancy, but it has other mechanisms than other places have. We have a lot of discussions on what is the primary goal of an incubator at the university, so it is one of two or a combination. Either is to create a platform, where students can test their academic skills in a setting that is somehow comfortable for them, so it is a place for learning. They learn how to utilize the knowledge they gain. Or it is a place where we create companies, jobs and revenue growth, but what is our role in it, that is an existential discussion that we are having right now. We are one of either or we are mix of it.

Manuel: Back at the beginning if you know, what was the selection criteria for the first start-ups, how did you select them?

Morten: They were selected on their ability to find the right place where the application form was. Fill it out and then, they are on board. That is basically still the case, if people are interested in entrepreneurship, we bring them in. We work with them, and then it is their job to show us that, they are professional and that they want to become professional.

Romina: So it was some kind of an issue of information, not advertisement, but students to get to know the incubator?

Morten: Yes, that is still one of our biggest challenges. We are still pretty well kept in secret at the university, but, that will change after new year. There is a plan and we have just secured funding for a huge program, so that will change a lot.

Manuel: Do you know how many employees did you have in the beginning?

Morten: At the very beginning only one person working part-time.

Manuel: And what about now?

Morten: Dedicated to that task, we have 3 excluding me. Now we are team of 5, but we are hiring 3 more people. At the beginning of the year we will have 4 people dedicated to that job. I am head of the incubator, meaning that I do all the administrative stuff, making sure that the finances are there, to run the incubator I am less and less involved in actually developing companies.

Manuel: In the very beginning, what were the main challenges?

Morten: In the beginning, it was basically getting into contact with the right projects at the university, getting the message that entrepreneurship is on the one hand totally normal thing to do, that does not require you to have a particular profile. That is something that every student should be considering, because everyone has the skills to become an

entrepreneur, not necessarily the same type of entrepreneur, but somehow work with entrepreneurship, getting the sort of approval of faculty, so that they see that it is a value creating platform and funding. The university works in that way that we get funding for education and we get funding for research. And we are not working within none of these categories and we have to secure the funding for entrepreneurship.

Manuel: Is there a return on investment for the university?

Morten: Yes, there is definitely a return on investment. There is branding perspective of it, there is recruiting new student perspective, there is perspective of creating value as a university into society. We are not a corporation, which has a bottom line, only one bottom line which is financing, we have a lot of bottom lines. We need to build value in a lot of ways.

Manuel: You mentioned the Aalborg region, are focusing only on companies that want to develop here?

Morten: No, this region has one university, it is not a big city, but a bigger city, so and 80 % of our activities go on here, 19 % go on in Copenhagen and 1% go on in Esbjerg. We are a national university and we have a national focus, but our resources are limited and we cannot work with too many companies that are not around us. Our main focus is on our staff, our alumni and our researchers. Students, alumni and researchers. So, if a company approaches us from Aarhus, who wants to work with Aalborg University, then they are not going to work with AAU Incubator, unless they are students or alumni. But they can work with Aalborg University in other ways, so they can do a joint research, they can have a group like you guys to work with them, so there are a lot of different tools.

Manuel: and in your opinion what are the main advantages of the Aalborg area and its surroundings (Nordjylland), if there are any.

Morten: A definitely advantage is being the only one university, so we have a strong position here. And there are interesting industries around us. There's an interesting city which together with the university and maybe also the university college have been able to attract a lot of students here both Danish and international and I think that's really good. I think international community here should play a bigger role, which is why we do all our communications in English. So I think there are a lot of things going for Aalborg. There are also some things that are not going so good for Aalborg. We need more financing in the very early stages, we need more high tech scalable companies, and we need more qualified entrepreneurs who have taken that business all the way. Maybe they have been in Copenhagen or Silicon Valley or Munich or Israel and come back. That mechanism is not open running yet I think it will come. The city is strong on the sense that it is a full city every opportunity is here. There is a cultural life, there are a lots of restaurants, and we have an airport that takes you from Amsterdam to all over the world in a day. So we have

all of sort of the infrastructures here, there is a lot of interesting companies here. I think that's really strong. We have relatively cheap rents, we have good housing opportunities, we have a sort of growing entrepreneurship community with a lot of hubs popping up with rocket labs, with start-up works, with Byens Rum. Some of them are more private initiatives. We have the start-up cafe which I think place it all somewhere, we have a municipality which has a strong focus on start-ups, we have a university very dedicated to start-ups. So I think we have a lot of foundation to create a really strong ecosystem here.

Manuel: what did you mean before when you mentioned like financing early stages? How is that a problem?

Morten: That's a problem in the sense that we have, there is only one institution investor here. Which is within this building as well. They can do about 10 projects a year for 2 million apiece. And it is either 2 million or 0. It's nothing in between and it's nothing above. So their investments are limited to basically two million. A lot of the projects that we see need 50 to 100 thousand Danish (Danish Krone) to walk the companies, to get it up and running, to start it up to validated it as a business model which is scalable. So we need that very early stage and that influences. And we also need investments going further from 2 million but those we can normally find it nationally. But that means that when you come to a certain stage or before you come to that stage you even know you need to go somewhere else or sort of quick your ambitions. You cannot really dedicate yourself to find that potential in your path after that earlier stage money. When you then come to the bigger financing rounds that's a tendency that you will try to go to Copenhagen because that's where the investors are so they wanna have you close and you don't really come back. And I think that's an issue. We need to bring more of our good entrepreneurs back. We have a lot of alumni entrepreneurs that are seasoned and that have created good companies and now they are in Copenhagen, Silicon Valley and other places around the world. We need some them to come back. Create new companies and help our students to create new companies.

Manuel: So you mentioned before the general goals of the incubator. Is it this the long term, the middle term... are they the same? Like you said before. You're trying to figure out your identity right now

Morten: all the next month we will be figuring out our key performance indicators. Because, I think if you're researching incubators you will found out that there is no a common definition of how to performance rate incubators. Because incubators have different goals so there is no a common language for us. The success criteria are very much different. And our success criteria are sort of blowing in the wind right now. We know when we are doing good, but that's more a gut feeling with working with the entrepreneurs that we are working with. We can see that a lot of students are being attracted to our programs and especially to our events. We see a growing number of entrepreneurs coming

in with increasingly interesting projects. But what we are discussing now is there it should be a success criteria for us, that companies are created? Maybe, maybe not. Is it something else? Then how do we then evaluate that? So if we sort of take the learning path, how do we evaluate if a person that attended to our program has learned more or become more attractive employee? We don't know that yet. So, we still in the exploratory phase. Even though the incubator is eleven years old is evolved heavily over the last eleven years. From bringing a network to being a real incubator with housing and financing opportunities, and people working there to sort of accelerate companies.

Manuel: How do you promote yourself among the entrepreneurs? Maybe entrepreneurs that talk to each other within the university, you mentioned events...

Morten: We have events that our marketer send to, once or twice a year, we send out to all students in AAU. But we don't have a good (...)? For that, because most students when they get something in the student mail they push delete. If they first three words are not something they exactly need is deleted. So we can see from Google...(letics?) that most of them don't read the stuff we send to them. And those who read don't do an action on it. So it's something that we have to work as well. We have a newsletter which goes to about 2000 people, we are in social media, there's a lot of word of mouth. So the promotion is going that way. We are partners with venture cups and their platform and promote it some of the others initiatives, in the city we promote some of our events, we have a strong network with researchers to work with and promote it as well. So there are a lot of different tools for promotion.

Manuel: has the incubator worked with other Danish universities?

Morten: yes. With all the Danish universities

Manuel: all the Danish... but not Scandinavian?

Morten: Yes we are in a network called NordTech where we have 27 nordic universities. We have links to a lot of European universities as well as the American ones

Manuel: You've been already working with them?

Morten: Yes. We have worked with some of them. But we need to work about specific stuff. We don't wanna have partnerships to a sort of paper partnerships so we can say we are partners. If we don't have something to work together with. We don't pursue it. If we have an entrepreneur where we can see that this would make really good sense that you go to Berlin, to Munich or to Southern France then we will approach the university in a city in that region and we will set something up, it's never an issue. If we are approached by universities saying "we have this student group, they are all entrepreneurs. They wanna come and pursue something In the Danish market, could you sort of provide them with a desk? No problem. We will happy to do that"

Manuel: So this is also how you maintain the credibility of the AAU incubator among other universities incubators? Regarding the high level

Morten: Yes. I think partnerships are built on trust and the trust we build through doing something together. So we actually deliver on what we said we could deliver on. So we are very focused on not pursuing too much and also being honest with people. If they come and ask for our help, saying: yes. We can help you. But you need to come back middle of next month because the place is full right now. And if we could also help we also be sure to say that. We don't lie to people and tell them if we cannot help. But most of the time we can help either by doing something ourselves or by helping them through networks.

Manuel: Does the incubator offer internship opportunities?

Morten: Yes. We have two interns right now. One of them is Thomas from the MIKE Program. He is in the 9th semester. And we also have Denis who is from the Entrepreneurial Engineering Program. So yes, definitely. We more or less always have interns. Mostly this semester.

Manuel: and is it valuable for the incubator? do they bring value to the incubator?

Morten: Yes. For example Thomas, he has been the best we had. We more or less always have interns.

And if we don't have space for interns, then we will try to get them an internship within one of the incubator's companies, because they always need people

Manuel: Are all the interns that have been here, are they all danish?

Morten: No, no.. Thomas is slovakian, we've had brasilians, we've had russians..

Manuel: But at the moment all the employees are danish..?

Morten: Yeah, yeah..

Manuel: But from first of january it won't be like that anymore?

Romina: Exactly, there would be Thomas as well..

Morten: Yeah there will be Thomas.. And Thomas knows this, that we only speak danish at the office..

Manuel: ..okay..

Morten: So he has to accept that..everyone has to accept that..

Manuel: But he speaks Danish..?

Morten: No, he doesn't speak Danish. So whenever we need to include him in something, we need to switch to English..but on a daily basis we talk Danish.

Manuel: Well maybe he will..

Morten: ..maybe he will learn, yeah. But..but eh..we are honest about that! Saying..we will try to speak english..but most people are most comfortable in speaking Danish. We lose a lot if we switch to english..

Manuel: Yeah..

Morten: But we are in a mode right now..we had an event last month, which was in danish..because they wanted it to be in danish..but I thought it was awkward..really awkward for me..especially hearing my colleagues presenting in danish..what the hell?! That was..we are used to speak english..we work with international entrepreneurs all the time! That..it doesn't matter, but on a daily basis we just speak danish..and most of the communication at university is in danish..so yeah, we just need to..somehow embrace that..

Manuel: ..and..about when you admit new entrepreneurs..so, who is in charge of that? Who decides?

Morten: Ehm..that is..that is a distributed decision..whoever gets into contact with that particular entrepreneur, in the team, makes the decision.

Manuel: Oh already like..that.

Romina: So there is not a selection committee or..?

Morten: We will..with our new program starting early january we will introduce that.

Romina: Oh okay!

Morten: We will introduce selection committees..but we are very very careful about not creating an incubator trying to pick the winners. So we cannot tell if this..we can have an idea if this business opportunity has something underlined, but business opportunities are very much relying on the entrepreneur himself. So there is a lot of gut feeling..you know..it's this dedicated team..there is an emphasis on team..so we are trying not to focus too much on individual entrepreneurs..because the chance of them of succeeding as individuals, it's not that good..we rarely see one guy making it. We need to build teams.

Manuel: So that's the only selection criteria?

Morten: It's not a selection criteria, it's more of an awareness issue. So we know that when we get one guy in, guy or girl, we need to sort of supplement that person. We need to find someone, otherwise he will too much work with it.

Romina: And that's part of your networking activity I guess that you're offering here..not only for investors or so..but also for partners..

Morten: Yeah and for us there will be an increased activity next year..we wanna bring in new students..that have not a business idea..but maybe that would like to get the opportunity to work at start-ups..yeah..so we will be doing more and more of that..

Romina: ..perfect..

Manuel: ..and, will it be introduced a proper selection criteria..or?

Morten: Yeah we will be introducing a proper selection criteria..because..in the new year we will start investing in the new business opportunities..and to be able to do that..it has to work around innovation..so there has to be some sort of innovation in the business opportunity. And that innovation can be in a lot of different fields. But there has to be something in there which is innovative. So that would be our selection criteria.

Manuel: So if a guy just walks in and wants, for example, open a restaurant or a cafe' business, so that's not about innovation..so you wouldn't support him?

Morten: That depends on what he wants to put in..my favourite example is a guy who came to us and wanted to do..he wanted to do a franchising concept with paintball..we were like..this guy must be crazy! Nobody makes money out of paintball..but I think he has 40 employees today..and the business, still has paintball in it, but it has so much more than paintball in it right now..he's a very innovative guy..so we are not picking winners here..we are trying to..we need to..again we need to be honest with people..so if you come to me and say "I have this idea"..and I am like "Have you googled this?" and he says "Yeah..! There is no competition, nobody is doing this" and then I google it and we find ten products that are already on the market..then don't bother with it..tell me, why you're gonna be better than these other already existing..you need to tell me that..if you're gonna tell me that you're gonna do it better or cheaper or smarter..but again, we are honest with people..and say..now we've had a talk about it, you need to convince me..so come back when you are ready to tell why I am wrong..

Manuel: Yeah..

Morten: But we have a sort of saying, that the time entrepreneurs invest, invest with us, will invest back..so we dedicate time to people who are dedicated..people who don't follow up on our agreements, who need to go drinking all the time..or need two months vacation in the summer..don't bother. You are not working with us. Of course everyone needs a vacation, but not everyone needs two months. It's not that hard to be a student. Sorry. We've been there.

Manuel: ..yeah..but so..just to get it straight..you provide for financial support..and it's coming from Aau or..?

Morten: Yeah..

Manuel: The main one..and then it goes through you to the entrepreneur..?

Morten: Yeah, yeah.

Manuel: And what is the entrepreneur giving back, apart from creating..I mean, is he giving back anything?

Morten: Eh..not as it is right now, no. We are working on different models. But this is something we will introduce in the new year.

Manuel: OKay..and you also provide with office space?

Morten: Yeah.

Manuel: And..do they pay a rent..?

Morten: No..but..you know, they need to be..they need to use it..they don't have to be commercial..in the sense, they don't have to have a revenue that would allow them to live somewhere else..most of our companies are pre-commercial..

Manuel: Yeah..

Morten: We are getting to a point, in which as soon as they are commercial, they are out. Then they need to be somewhere else..

Manuel: Okay..and..I guess we already talked about..

Morten: And yes, they are giving back, you know they give back in the sense that we need to be able to use them if a course here at university needs to have a few entrepreneurs coming in and talk about their business, then they need to do that for two hours, and you know..they can say no once or twice..but they cannot continuously say no..so we need to be able to bring them in, to do presentations..or if they are really good within an academic field, then they can go and teach as well..so yes, they are giving back..but they are not paying..it's not out of pocket money..but it's still valuable to us..

Manuel: Okay..and do you promote and keep the networking? Like with entrepreneurs but also outside.

Morten: A lot of events. We do events.

Romina: Like Wofie?

Morten: Yeah like Wofie. That's a very good example for..but not only for network..Wofie for us is a recruiting event. So we can get actual students aware of entrepreneurship and its opportunities.

Manuel: Ehm..I had a question in my mind..Oh yes, do you provide also legal advice?

Morten: No, but we provide access to it.

Manuel: You provide access to it. Also for accounting?

Morten: Yeah, we provide access to accounting services.

Manuel: Okay.

Morten: But not necessarily for free.

Manuel: Yeah I mean, you provide just the contact..?

Morten: A contact and..we have a partner pack, you can see it on the website..with different services in it..

Manuel: ..and..but then they could use the fundings? I mean, to pay for the services?

Morten: Yes, yeah.

Manuel: Okay..mmhh..about the international entrepreneurs, do you have like an integration process? Or like..do you want them to stay in Denmark afterwards?

Morten: Yeah that would be nice, if they would stay..Yeah of course if they create good companies, or if they create values in working with other companies, then..as long as people are valuable, we'd love them to stay here. We don't have a..a particular integration program. But we do see culture as being an issue here. You know, there is a difference in working with Danes and..I don't know..eastern europeans..or germans..chinese..middle-east citizens..there's a lot of cultural differences that we need to..we are learning about that one. Because we..we work in a danish working culture. So we use..we joke, we..you know, there is a lot of things that Danes do, that not necessarily go well with other cultures..I think especially that the eastern european culture has a lot of hierarchy..so we just need to work with it. But we don't really care where people are from, but we need to build relations with them anyway. So we need to on professional terms, so we need to know who people are. We need to know why they are doing this, what keeps them awake at night, what keeps their fire burning.

Manuel: Well maybe the new guy that you're hiring will bring some fresh air in this sense since he is not from Denmark.

Morten: Yeah but he is Slovakian. So yeah maybe he will have a better understanding of the eastern European environment, but, we are not hiring a guy because he is Slovakian. We are hiring him because he is a good guy and he is really good and really dedicated. Had he been Italian or Chinese or Norwegian. I don't care. He is a really good guy. That's why he is being hired.

Manuel: Are you keeping track of the performance of the incubator?

Morten: Not right now

Manuel: And would it be for January?

Morten: we are looking at right now how we can build some sort of indicators, data collection system, so we can try it. Hopefully through statistics somehow

Manuel: So right now you do not have about eleven year any statistics about how many companies succeeded, I do not know in five years

Morten: we have a few statistics about, but nothing for ...

Romina: As a regular basis activity?

Manuel: If you have to estimate, like in your opinion, for what you seen, how many of the entrepreneurs that entered the door, actually leave with, let's say successful company from a good search method...

Morten: But again then you need a sort of indicator that show how many companies succeeded

Manuel: Let's say how many of them still are operating?

Morten: we did some statistics in 2012 for our over a four year period, where we showed that about of 50% of people we work with are involved in founding a company, about 50% of those companies are still active one year after their foundation. So that's sort of a statistics we did

Romina: is there a limit of time of like the incubator can be here, I mean do you have a like kind of graduation deadline or something like that

Morten: Not right now, but we will have that..

Romina: like the incubation period

Morten: A sort of.. there is no a sort of definition of when you are an incubate or not, but we work with people a at one point we will introduce so now you are incubated and in twelve months you are not incubated anymore. Maybe you are not in two months. Ones you are introduced is a sort of, there are not employed by us so we can't fire people, they are only working with us as long as it makes sense, meaning that we are developing them as entrepreneurs and their companies. If they are not developing, if we do not have a good dialogue on how to develop these business opportunities and them, then they are out

Romina: there is some criteria...

Morten: Key criteria right now, if you are not developing while you are working with us, we are not here because of the free rent, we are here to develop you, and the free rent is a part of that, but if you are not developing, you are out

Romina: perfect!

Manuel: coming about your position: how is the manager of AAU Incubator chosen

Morten: I chose chosen?!

Manuel: yeah, how were you chosen? What happened to the previous one?

Morten: She got a new job I think

Manuel: so you just supplied her

Morten: Actually it happened in the sense that she got a new job and the same day my director said to me: “would you like this job”? And I said “I have to think about it” and he said “just give me an answer before the end of the day.” So I had a few hours to think about it, but it wasn’t necessary a question, it was more of...

Romina: how do you feel about it..

Morten: he did not really care

Manuel: And what are your main tasks?

Morten: my main tasks?

Manuel: yeah!

Morten: management of employees and fund raising

Manuel: what are the main challenges that you could face, that you have faced?

Morten: me, as a person?

Manuel: mmm no? you as a manager

Morten: I think getting alignment, getting team, both team and universities alignment about an activity which doesn’t have a clear purpose, goal, keep performance, indications

Romina: Who is in charge of networking activity, I mean which manager is.. the office manager ..

Morten: all of the integrants of the team

Aleksandar: do you have like a certain time when you do this network events or it is just when you decide to?

Morten: It works with a certain time, but there are some windows where make more sense than others, for instance we had an event last night, where they were eight persons there, we have an event tomorrow night where we have a successful Danish entrepreneur coming in, he speaks English, we have like 40 people signed up, the last event we had 240 people.

We have continuous events through out the year. We do not have any in January cause exams, we don't do anything in July to middle August because every one apparently needs some months of vacation. So we try to follow the academic year, we know when you are taking your exams, we know when you are going to graduate.

Aleksandur: Do you think in these meetings, for example the entrepreneurs who speak English will be more attractive for the internationals, I mean you get more people when it is English speaking?

Morten: yes! But there is a question of are we getting the right people. We have an extremely round of international people/students around the programs. I think international students are 20% of the student body in the University, there are more than 50% of our programs or at least our events. When we have stuff in English we know that will scare a lot of the Danes away that are not comfortable speaking English for some reasons, I don't know. There is something in the mix between Danish and international students so we have not figure out yet

Manuel: Do you think because of Aalborg or do you think it could be different in different area?

Morten: I think is Danish. I think is a Danish issue

Manuel: Did you mention before Byens Rum, what is your opinion about them?

Morten: I don't have an opinion about them

Manuel: But would you call them incubators?

Morten: Yes! We don't really distinguish between what is a pre incubator, an incubator or what is an accelerator

Manuel: are they your partner?

Morten: no! we know them, but we do not do anything with them, I think they are more on the creative side, we are more on the consultancy side. We haven't sort a strategically chosen that, but we are more a tech environment. We have a lot of tech companies and everyone works with technology somehow and that is an issue for us because we want bring in more social science students, more economics students, more humanity students

Romina: can entrepreneurs use the laboratories and the infrastructures of the University?

Morten: Yes, they can, we'll try to provide them access. Some of our labs will kill you if you do not know how to use them, and you have to be careful about them

Romina: if someone get graduated and go to work for a company, I don't know for three years, and he decides to star his own company, can he come back and say something like

ok, I am an Alumni from this University and I would like to get some help or is it only for students?

Morten: yes! We also work with Alumni. There is a sort of a “three years limit”. So after three years we do not really work with them anymore, but if the project is really interesting and we think that we can do the difference, we work with them, but we need to consider it carefully. We won’t put any financing into it

Manuel: when you were speaking before about the projects per year, like the past or from January?

Romina: uhm, 10 projects per year

Manuel: you mentioned it before about the fundings, sorry

Morten: going forward we will fund about 50 projects a year

Manuel: and do you get everything from AAU?

Morten: no! we raise it externally. Good friends!

Manuel: but it is still.. you get 0 or 2 millions

Morten: no, no, no! that’s the local investment, this is the local seed investment company which is called Boryan Innovation which is in this building, they have about 10 projects a year for 2 million. We don’t have that much funding, we have initial fundings so that you can go in and a sort of turn the 1st stone to find out whether this is a good opportunity or not, because when you go for an investment they will be looking at the risk factors, so how much have actually tested out? That means if it is a high risk your valuation is very low. With this we can actually take some risks away, so the chance for getting funding is better and the valuation you are able to get should be so much bigger as well

Manuel: we have done! Do you have any questions for us?

Morten: e-mail me if you have further questions, when is the deadline?

Manuel: 21st of December

Morten: oh ok, so you have plenty of time, where are you from?

Aleksandar: I am from Bulgaria

Manuel: Italy

Romina: Venezuela

Appendix B

Appendix B concerns the mail interview questions that were sent to Morten, the manager of the AAU Inkubator, after the first qualitative interview appearing in Appendix A.

1. Is the “Partner Pack” of AAU Inkubator free? Is there any fee that it is charged to entrepreneurs for the services provided by the incubator?

Morten: At this point, there is no charge by the incubator for services rendered to teams, and I don’t foresee that there will be. However we will consider consulting for other institutions and companies trying to build similar programs.

2. Are any EU fundings supporting AAU Inkubator at the moment? Where are the main fundings coming from?

Morten: We have a little funding from Erasmus for Young Entrepreneurs, and we have EU Structural funds for a project called innovative growth. Other funding come from university and private foundations.

3. Do you have a database of potential sponsors and partners?

Morten: Yes.

4. Do you have any training programs for the managers? If yes, which skills are there trained?

Morten: No formal training programs, we do a bit of tool training in e.g. Lean Business Planner, but otherwise not. And then we train staff as needed.

5. How many companies are incubated at the moment? How many have been incubated this year, compared to the previous years?

Morten: We have about 15 startups incubated right now, and this is the first year we have a physical incubator, so no level of comparison.