University of Twente – Bachelor Thesis

The perception of investor readiness

A study about the perception of investor readiness of VC professionals and tech venture teams in Twente

Arjen Goudt
31-1-2017

1st supervisor: Rik van Reekum
2nd supervisor: Patrick Bliek

Abstract

This research aims to show an overview and the biggest pain points between the perception of investor readiness by entrepreneurs and the perception of investor readiness of these start-ups by investors. This research divides investor readiness into four dimensions of readiness namely, technology readiness, market readiness, management readiness, and financial readiness. By combining these four dimensions a complete view of investor readiness is given. In order to obtain a clear overview of the perceptions of start-ups and investors similarities and contradictions have been identified. Data is retrieved by conducting interviews, including a questionnaire, with several entrepreneurs and an investor who knows these all these entrepreneurs and their start-ups very well. By using this overview investors and especially entrepreneurs get insights in each other's way of thinking and attitudes, which could lead to more understanding for each other. This could increase the fruitfulness of the cooperation between the two parties.

Management summary

According to the literature financial resources of a start-up are one of the most important factors to become a successful company, to survive and to grow. In an early stage; family, friends, and fools can arrange these financial resources but in an later phase other types of financing are needed. Venture capital is an obvious source of investment but according to literature and practice only a small percentage of the cases that go through the investment process, ultimately receive an investment from the venture capitalist. To get through this investment process a start-up has to show its investor readiness.

A start-up is investor ready when he is ready to attract an equity investment, for example by a venture capitalist. This research divides investor readiness into four dimensions by combining two conceptualizations of investor readiness based on literature. Douglas and Shepherd (2002) decompose investor readiness into technology readiness, market readiness, and management readiness. Jannach and Bundgaard-Joergensen (2007) divide investor ready business plans into twelve dimensions whereby almost all of these dimensions overlap with the dimensions of Douglas and Shepherd except for the dimension of the financials. In this research the financial readiness of a start-up is the fourth dimension of investor readiness.

This research aims to provide a better and more clear insight in the perceptions of investor readiness of start-ups as well as that of investors. Current researches about these perceptions focussed mainly on start-ups in an early phase.

The focus in this research is to reveal the ways of thinking, attitudes towards certain readiness dimensions of entrepreneurs as well as investors. It tries to clarify the pain points and differences between these two parties by providing a clear overview of the contradictions between each other. This has been done using literature as well by conducting interviews and a questionnaire with four entrepreneurs from Twente and an investment manager of a Dutch venture capitalist to collect new data. These interviews and questionnaires gave insight in the personal attitudes of the entrepreneurs towards their own start-up and its investor readiness on the one side and the attitude of the investor towards these start-ups and his thoughts about their investor readiness. The outcomes of these sessions with the entrepreneurs and the investor could be a valuable contribution to existing literature by adding an extra dimension; financial readiness. Furthermore, by performing this research with start-ups that find themselves in a later phase than the start-ups which participated in other research it can be concluded that this investor (un)readiness is a process that moves along with the maturity of a start-up. For entrepreneurs this research can provide more insights in the focus points of investors and it can give them a better understanding of their differences in beliefs compared to those of investors.

Table of contents

1. Introduction

This chapter presents the 'why' of this research. It shows the motivation behind it. First, the current situation of the start-up culture in Twente will be described to get a clear view about how things are going right now. After this, the relevance of investments for start-ups and in particular Venture Capitalists will be described to underline the importance of connecting these two parties. Subsequently, the current problem, the importance of this problem, and the goal of this research are identified as a foundation for this research. Finally, the research questions to be answered in this research are stated.

1.1 Situation

In Twente there is a huge start-up culture. Last year (2015), the University of Twente won the price for most entrepreneurial University in the Netherlands (Elsevier/ScienceWorks, 2015). The number of start-ups in Twente is still growing, every year 60 till 70 start-ups are founded (Kennispark Twente). However, these start-ups don't provide a significant amount of extra employment. The unemployment rate in the Twente cities Enschede and Almelo is even significantly higher than the Dutch average (Twentse arbeidsmarktmonitor, 2015).

New Technology Ventures (NTV) in Twente can have a positive effect on employment but NTVs generally have a limited survival rate. Only 36 percent of the companies with a minimum of five full time employees survive according to a study held in the US (Song, Podoynitsyna, Bij, & Halman, 2008). Survival might not be the big problem for the start-ups in Twente but the growth seems to be the bigger issue. Those start-ups that have this potential, move away from Twente. For example Booking.com, founded in Twente, generated not a single job in this region. Now it's a multinational with more than 10.000 employees (Booking.com). Besides that, there are no such high-tech multinationals like ASML and Philips in Twente.

In short, the really successful companies with a big growth potential leave the region while the relatively smaller companies stay in Twente. How to keep those successful start-ups in Twente is more likely a question for public administration. How to let more start-ups reach their limits, realise their growth potential and provide more jobs in Twente is a more suitable subject for a Business Administration Bachelor thesis project like this.

1.2 Relevance of investments

There are many ways and many factors that lead to the flourishing and the realisation of growth potential by start-ups. This research will focus on the factor 'capital and investments' (Schutjens & Wever, 1999). This is an important factor for start-ups to survive and to gain success. Investments and other forms of monetary input is usually financed in different rounds, often denoted as 'alphabet rounds' whereby round A is the first formal round of financing followed by round B, and so on (Investopedia.nl). The focus of this research is on Venture Capital. Venture Capital is a very widely used term. This research states Venture capitalists as formal investors which are active from round 1/A till the exit of the start-up. In the graph below different rounds are shown, the black circle shows the stages Ventures Capitals are active in.
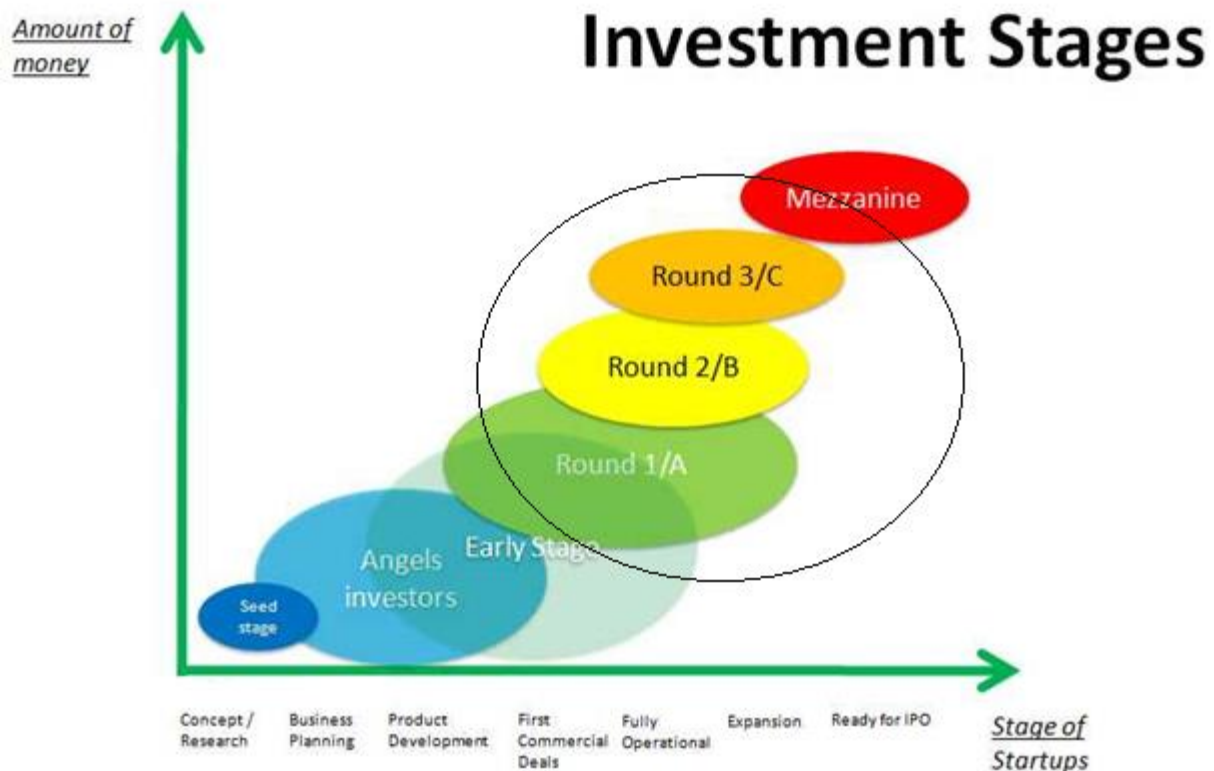
1. Different rounds of investment (startupfreak.com) (adjusted)

1.3 Problem Identification

The problem of the start-up culture in Twente has been described in the previous page. The really successful companies with a big growth potential leave the region while the relatively smaller companies stay in Twente. This study assumes that many of these start-ups that stay small have the potential to grow much bigger and harder than they do now. The observation that start-ups in Twente stay relatively small, although some of them have a big growth potential and that (not) finding a Venture capitalist that provides financial resources influences this, is based on the fact that less than two percent of the deals that go through the process whereby the decision will be made, ultimately receive an investment from the VC (Fried & Hisrich, 1994).

Several studies suggest that the financial resources of a start-up are one of the most important factors to become a successful company, to survive and to grow. There are different ways to gather financial resources; one of the most common and most important ways of doing this is through Venture Capitalists. Venture capital organizations raise money from individuals and institutions for investment in the early-stage of these start-ups, these investments offer high potential but also give high risks (Sahlman, 1990).

In the Netherlands, there are relatively few businesses that have the ambition to grow. Less than 30% of the young entrepreneurs in the Netherlands expect to hire more than five people. In countries like the US, Canada, UK and Japan this percentage is significantly higher (Adviesraad voor Wetenschap, 2011). This lacking growth and innovation eagerness might be due to many different factors, like national culture or the functioning of the labor market.

6

Of course, there are also a lot of Dutch entrepreneurs that surely intend to grow and to innovate. But these entrepreneurs face a lot of barriers. Often the availability of good employees and the access to financial capital are considered as barriers (EIM, 2008). Especially for young and innovative companies financial capital is a real bottleneck. In the Netherlands about 4% of the companies cannot find an organization as a bank as a financer (KMO, 2007). This seems to be a small percentage, but the reason for not finding an investor or financer is often caused by a lack of trust, lack of being in a profitable market, and a lack of enough security. Start-ups often meet these characteristics. They are also more often looking for VCs than established companies, 6% vs. 1% (EIM, 2009).

1.4 Relevance

The problem within the start-up culture in Twente, but also in the rest of Netherlands and maybe even across the borders of this country, is that venture teams can't receive investments by investors. The situation that less than two percent of the deals ultimately receive an investment from the VC, indicates that not finding the right investor for the start-up is a huge problem that also affects the economic situation of the Netherlands.

Economic growth in the Netherlands is caused by two different determinants, these determinants are; labor input and labor productivity (Adviesraad voor Wetenschap, 2011). Labor productivity grows by innovation and entrepreneurship. Innovation leads to more efficient processes and more value for the market (Erken, 2008). Entrepreneurship and especially the growth-focused companies really can influence the economic growth of a country or market (Van Stel & Stam, 2009). Especially the young ambitious ventures that are driven by growth are drivers of economic growth (Stam, Hartog, Stel, & Thurik, 2010). The reason for this is that young ventures have a relatively bigger autonomic growth while established companies tend to grow by mergers and acquisitions. These young ventures are less productive than the established companies, but their contribution to the growth of productivity is much bigger (van Praag & Versloot, 2007). Companies that develop themselves eventually contribute to the growth of labor productivity of the total economy. The labor productivity of ventures that are financed by venture capital show strong growth after about four years (BCVA and NESTA, 2010). Also, growing companies have effect on the established companies in the market, because of competition also these companies become more productive.

Based on these statements, it is clear that the ambition to grow is important for national economy. The Netherlands need to have and to support these companies that have the drive to grow and to innovate. Start-ups are the example of ventures that are growth driven. It is important to have more start-ups that reach their potential and to match suitable investors with them. Not only for the start-ups themselves but also for the region of Twente and the Netherlands.

1.5 Goal

The goal of this study is to contribute to the investment process between start-ups and venture capitalists. At the moment, it seems that start-ups and venture capitalists don't find each other. The findings of Fried and Hisrich (1994) that only less than two percent of the deals ultimately receive an investment from the VC within the decision process, assume that many start-ups can't find investment. This research will focus on the perceptions of investor readiness of start-ups and in what way they differ from the perceptions of VCs. To chart these different perceptions, differences need

to be captured. This study tries to do so and come up with solutions to level these. This way it will help start-ups to reach their limits and their potential.

1.6 Research scope

The identified problems as stated before are too broad for a bachelor thesis study like this one. Even the problem of not reaching the potential by start-ups in Twente is a definition that is too broad. This study focuses on one current cause that contributes to this problem: the investor readiness of start-ups in Twente. This concept will be further specified in the theoretical framework.

1.7 Research Question

How can start-ups better align the perception of their investor readiness to the perception of VCs?

This question will be the central question of this research. In a study of Douglas and Shepherd (2002), it is stated that there is still a significant difference between the perception of venture teams and that of investors. This significant difference in perceptions might be a cause for many unfruitful attempts for cooperation between start-ups and VCs. A study in 1994 concluded that less than two percent of the deals that go through the process whereby the decision will be made, ultimately receive an investment from the VC (Fried & Hisrich, 1994). This number assumes there is still a lot of improvement within this process of finding the right VC for the right start-up. One way to improve this number is to better align the perception of investor readiness of start-ups and VCs. It's important for entrepreneurs to know what VCs are looking for and how start-ups should state their business plan, how they should behave and what their attitude should be. Although a general research question is stated, this study focuses on the region of Twente, but no significant differences in outcome with other Dutch regions are expected.

Based on the data found in literature studies and the conceptualizations of Douglas and Shepherd (2002) and Jannach & Bundgaard-Joergensen (2007) (see Chapter 2) the next hypothesis will be stated:

H1: Start-ups rate themselves more investor ready than Venture Capitalists rate them.

The research question and hypothesis will be supported by four sub questions. These questions underpin the importance of VCs, describe the way VCs invest and eventually describe the perception of investor readiness by start-ups in Twente and try to come up with an advice to better align the possible differences.

What can VCs offer start-ups?

An important question to be answered to underline the importance of this research is the influence of VCs on the successfulness of start-ups and which way they can provide support to start-ups. The question tries to find out how important VCs are for start-ups and their development over time. It's a question that can be answered on basis of existing literature but it's also a question that acts as an important fundament for this research and the importance of it.

How do VCs choose the start-ups they will invest in?

This question tries to find out where VCs pay attention to during their process of analyzing start-ups. There many start-ups at the moment and investing in start-ups is a risky way of investing, so VCs

won't invest in every start-up that comes by. By answering this question, it will be more clear for start-ups where VCs are looking for. When start-ups are aware of this they can adjust to these specifications. This question can partly be answered by a literature study, but in the VC business it really depends on the market they are in what they are looking for.

What is the current perception of their investor readiness by start-ups?

To come up with a proper advice at the end of this research it is important to know what the current perception of the investor readiness of start-ups is. In other words; to what extend do start-ups think they are ready for an investment by a VC. Or how do start-ups rate themselves on several points investors pay attention to. The several points investors pay attention to will be answered in relation to the question before which focusses on how the start-ups think they score on these points.

How can start-ups search for VCs more targeted?

The last sub-question tries to the link the outcomes of the two questions before and tries to come up with an outline on how start-ups should structure their business plan, how they should present themselves, what their attitude should be, and how they should look for VCs that fit the start-up. When these factors are more clear for start-ups they are able to search more targeted for VCs. The answer and the advice that comes forth out of this question eventually contributes to a leveling of the perception of investor readiness of start-ups and the perception of VCs of it.

2. Theoretical Framework

The section of the theoretical framework will cover six topics, namely the role of venture capitalists, analyzing start-ups by venture capitals, the conceptualizations of investor readiness, investor readiness by Douglas & Shepherd, investment readiness levels by Blank, and investor ready business plans (SAT) project. The first two topics function as introduction to, indicator of importance and foundation of investor readiness. The topic conceptualizations of investor readiness give an introduction to the concept of investor readiness and shows the differences between the several conceptualizations. The last three topics of the theoretical framework describe the core of this research. Three conceptualizations and thus approaches of investor readiness will be described in these topics.

2.1 Role of venture capitalists

Venture capitals typically invest in start-ups which have the characteristics of being high-growth, high risk, and often high-technology. These start-ups need financial capital to finance their product development or to grow (Black & Gilson, 1998). Besides this financial capital, venture capitalists also provide start-ups with other support. This support is for example managerial expertise, technical expertise or access to the network of the VC.

A study held by Chang (2004) examines the performance of internet start-ups in the early stages by their IPO. He concludes that Internet start-ups' venture capital financing and strategic alliances affected their ability to acquire the necessary resources for survival and growth. He concludes that endorsements by prominent exchange partners improve start-up performance.

A lot of studies agree to the importance of venture capital and venture investments. Chang appoints it in his research about early-stage IPOs by internet start-ups and Scott Shane & Toby Stuart also conclude that venture capital contributes to the probability of an IPO (Shane & Stuart, 2002).

In the next paragraphs the monetary importance, the importance of other support and the downsides of investments by VCs will be discussed.

Monetary

In many situations, financial investment in start-ups by VCs is done by staged financing. This implies that VCs invest in phases. Between these phases the situation and progress will be evaluated. This way they can revalue their investments and stop it in case the results are negative. This way of financing also encourages the entrepreneur to keep performing and keep creating value over time instead of providing the financial investment in once (Sahlman, 1988). Over time the company becomes less risky so especially in the beginning it's important to receive financial investment for start-ups and keep creating value. Not only is the way of investing money important for start-ups to keep adding value, the investment itself of course is also of great importance.

A notorious situation within the start-up world is the 'Valley of Death'. This concept refers to the situation of the difficulty to cover the negative cash flow of a start-up, this is a typical situation in the early stage before the products or services of the start-up are bringing in revenue from customers (Zwilling, 2013). This is typically the stage in technology venturing where the risk is the highest and public money is not available anymore for technology development, since it involves competitive spending in new product development, requiring high-risk private domain financing. It is stated by Gompers & Lerner (2001) that nearly 90% of all the start-ups fail within three years in case they don't receive an investment from VCs. VCs are reserved because of the high risk, but this fact does underline the monetary importance of VCs.

Other support

Besides the obvious financial investment VCs also support start-ups in other ways. Next to monitoring the status and the network of the VC also play an immense role. The trend of affiliating with more reputable VCs for less money implies that the network and value of the VC is much more important for start-ups than only the highest amount of money (Hsu, 2004). VCs often participate in the board of directors, to do this in a proper way VCs are often specialized in a specific market or industry. Another benefit of specializing is the network that's build up by VCs, this specific network might lead to recruitment of employees, contacts with suppliers and customers and support within the production (Warne, 1988).

Downsides

Besides all the monetary and other ways of help there are also downsides on this way of investing. Because of all the extra mentoring and support this way of investing is very time consuming for both entrepreneurs and investors. It can also have another downside for entrepreneurs; because of the involvement and power of investors, entrepreneurs can lose their control over their own start-up. And in case of the investors; it's an expensive and risky way of investing (Hellmann & Puri, 2000).

2.2 Analyzing start-ups by venture capitalists

There are different theories about whether VCs are good 'scouts' or good 'coaches. In this case 'scouts' recognize potential of start-ups and 'coaches' are able to inject expertise in a good way (Baum & Silverman, 2004).

An important subject for this study is the way venture capitals analyze start-ups. In which way these venture capitals decide whether or not to invest in a start-up is very different per venture capital. It depends on the region the VC is acting in (Zutshi, Tan, Allampalli, & Gibbons, 1999), the market the VC is active in (Baeyens, Vanacker, & Manigart, 2006), the stage of the VC, for example, there is a difference in the importance of the investment criteria for VCs in the early-stage and VCs in the late-stage (Carter & Van Auken, 1994). Of course, an investor looks if the start-ups are ready for an investment: investor readiness. On several dimensions, investors analyze if the start-up is ready to be invested in (PPM Oost).

2.3 Investor Readiness

Start-ups often get rejected by potential investors because the investors don't rate the start-up as 'investor ready'. While start-ups see themselves as ready for larger investments than the funds from founder, family and friends, investors have another perception of it. For the start-up, it's very important to attract these investors because it will have a positive impact on the growth (Cooper, 1994). Investors don't only provide financial capital, they can also provide experience, a network of suppliers or buyers and other investors (Sapienza, Manigart, & Vermeir, 1996).

Attracting equity investors requires an accurate understanding of what the investor is looking for and how the venture will be perceived along those dimensions. It's not always that easy for start-ups to see and understand these criteria. VCs are not always that transparent about what they are looking for. But the distinctiveness of the VCs in the Netherlands falls outside of the scope of this study.

Investor readiness is a relatively new concept that is filled in in different ways by different researchers. The cradle of this concept is the situation that there is a lack of data available on start-ups in the portfolio of the venture capitalists.

In the next section three conceptualizations of investor (or investment) readiness will be described. These three conceptualizations all have a very different approach and they also differ in the point of view and the sector their approach is most suitable for. Start-ups (sectors) differ in terms of where they need investment for, and where the focus is on in the business plan.

Investor readiness by Douglas & Shepherd

According to Douglas and Shepherd (2002) the investor readiness can be decomposed into several sub-concepts. The sub-concepts that can be seen as the main sub-concepts are; technology readiness, market readiness and management readiness together form the investor readiness of a start-up.

Technology readiness

Technology readiness can be seen as the extent to which the intellectual property or trade secrets are embodied in the new product or service, and if the technology is proprietary to the firm and has adequate intellectual property protection. A start-up is technology ready when its technology actually works. For example, when there are already prototypes and they are successfully tested.

Sometimes it is hard whether to decide a start-up is technology ready or not, because in some instances, the founders of the start-up are the leading experts in that area of technology. In this case, they know better than any VC if the technology used is feasible. This could lead to restraint for VCs. In 1995 the NASA came up with different levels of technology readiness. They made a systematic measurement system that assesses the maturity level of a particular technology. This also leads to the opportunity to compare the maturity of different types of technology. In the table below the different technology readiness levels are described.

Technology Readiness Level	Description
TRL 1 Basic principles observed and reported	Lowest level of technology maturation, scientific research starts to translate into applied research and development.
TRL 2 Technology concept and/or application formulated	Invention starts. Basic principles are already observed and practical applications can be invented or identified. At this point applications are still speculative.
TRL 3 Analytical and experimental critical function and/or characteristic proof-of-concept	Active R&D is initiated here. This includes analytical studies and laboratory studies to physically validate analytical predictions of separate elements of the technology.
TRL 4 Component and/or breadboard validation in laboratory environment	Basic technological components are integrated to establish that they will work together. This validation must be devised to support the concept that was formulated earlier, and should also be consistent with the requirements of potential system applications. The validation is relatively "low-fidelity" compared to the eventual system: it could be composed of ad hoc discrete components in a laboratory.
TRL 5 Component and/or breadboard validation in relevant environment	Fidelity of breadboard technology increases significantly. The basic technological components are integrated with reasonably realistic supporting elements so it can be tested in a simulated environment.
TRL 6 System/subsystem model or prototype demonstration in a relevant environment	Representative model or prototype system, which is well beyond that of TRL 5, is tested in a relevant environment. Represents a major step up in a technology's demonstrated readiness.
TRL 7 System prototype demonstration in an operational environment	Prototype near, or at, planned operational system.
TRL 8 Actual system completed and qualified through test and demonstration	Technology has been proven to work in its final form and under expected conditions.
TRL 9 Actual system proven through successful mission operations	Actual application of the technology in its final form and under mission conditions, such as those encountered in operational test and evaluation.

Table 1: Technology Readiness Levels. Sources: John C. Mankins (1995). Technology Readiness Levels. Office of Space Access and Technology, NASA

There is still a lot of criticism about this model because it would be incomplete and subjective, and there also is too little difference between critical technology and non-critical technology (Blank, 2013) and (Engel, Dalton, Anderson, Sivaramakrishnan, & Lansing, 2012).

Market readiness
Market readiness can be seen as the extent to which the start-up and business concept are ready for the market. A start-up is market ready if it has been tested against the needs and preferences of the target customer, and found to be in substantial demand by the target market at the proposed price level.

An important indicator of the market readiness of a start-up is its market orientation. According to Jaworski and Kohli (1993) market orientation can be conceptualized in terms of:

- Generation of information; the emphasis on gathering information on current and future customer needs by the start-up
- Dissemination of information; the amount of information sharing across the different sections of the start-up
- Response design; the use of market intelligence in planning
- Response implementation; execution of these plans.

Market oriented firms are more able to satisfy the needs of their customers and eventually an important determinant of profitability (Narver & Slater, 1990).

Management readiness

Management readiness is the extent to which the Top Management Team (TMT) is ready to launch the start-up and to let it grow. A start-up is management ready when the TMT has the right management focus, experience in the same or similar markets, and prior experience with start-ups. Often investors don't have the same perception on management readiness as the start-ups itself, hereby a lot of investors only agree if they can install their own manager or CEO (Douglas & Shepherd, 2002).

Empirical results

Douglas and Shepherd (2002) describe in their research that they got their data from a MOOT CORP Australia business plan competition held in 2001. 16 teams of MBA students joined this competition. The competition was divided into four heats with four teams each. In every heat the start-ups gave a 20-minute presentation and 20 minute questions and answer session. Every heat had 4-6 judges consisting of venture capitalists, business angels, successful entrepreneurs, managers of venture capital funds, and industry professionals such as accountants, lawyers and business consultants. Eventually the entrepreneurs could win $150.000.

Both the entrepreneurs and the judges had to answer the same questions about the business plans. The judges also had to answer whether they might or might not invest in the start-up and why. The questions were processed into a questionnaire and were about the perception of the degree of readiness in each of the three areas of investor readiness.

Douglas and Shepherd concluded from their findings that:

1. Venture Capitalists' individual assessments of investor readiness in the technology, market and management dimensions can be aggregated and used to significantly explain investors' ranking of new ventures in terms of investment attractiveness.
2. New ventures appear to be more investor ready in terms of their marketing and management than in terms of their technology. This might be due to the business school background of the competitors.
3. Entrepreneurs and investors do have a different perception of the investor readiness of the start-ups. For entrepreneurs to gain investments it's important to step back from the start-up and view it through the eyes of the investor. All the entrepreneurs rated their business plan higher than the judges did, and the heat winners scored the higher ratings from the judges and also had the smallest differences in perception of business plan quality.

Especially the third conclusion is an important conclusion for this research. Start-ups see themselves more positively than investors and the winners had a more aligned perception to the perception of the investors.

Investment readiness levels by Blank

For the readiness of one's technology, the NASA came up with Technology Readiness Levels. Some researchers also tried this for the whole subject of investment readiness; The Investment Readiness Levels. An often-used model for this is the Investment Readiness Level scores of Steve Blank, a renowned investment guru in the US. He tracked the development of more than 500 start-ups with a lean start-up point of view. These start-ups had to do a lot of customer interviews for 10 weeks, on basis of these answers they had to update their Business Model Canvas. Eventually the software came up with an Investment Readiness Level score.

The business model canvas is the basis for the IRL model of Steve Blank. This model refers in every step to this canvas. The canvas can be used as a lean start-up template for new and existing businesses (De Reuver, Bouwman, & Haaker, 2013). The lean start-up is based on the lean principles that are developed by Toyota in Japan (Womack & Jones, 2003). It was designed to make the processes more efficient. The lean start-up is seen as a method for start-ups that thinks that the most efficient innovation is the innovation with actual demand from users. So, from the beginning the potential users are involved.

Investment Readiness Level	Description
IRL 1 Complete first-pass canvas	The business model canvas is completely filled in, and every building block is stated as completely as possible.
IRL 2 Market size/competitive analysis	The value proposition is summarized and the market size and competitive position are stated.
IRL 3 Problem/solution validation	The fit between the problem and the proposed solution is validated. This is based on interviews with (potential) customers.
IRL 4 Prototype low fidelity MVP (minimum viable product)	At this level there is an early stage prototype made that shows what the solution might be and what the current value proposition contains.
IRL 5 Validate product/market fit	The market fit of the product is validated via interviews with (potential) customers. So, it is validated if the start-up is in the good market with a product that can satisfy the market.
IRL 6 Validate right side of canvas	On this level the right side of the business model canvas is validated on basis of interviews with (potential) customers. The right side of the canvas can be seen as the front stage of the business. This contains value proposition for each segment, the unfair advantage such as the relationships with customers, the channels via which the value is brought to the customer, all the people and organisations for which the start-up is creating value and how, and through which pricing mechanisms the business model is capturing value.
IRL 7 Prototype high fidelity MVP	In this phase the prototype is much further along and it resembles a working product. In some cases, this prototype might be ready for use, and prospective customers can already try it.
IRL 8 Validate left side of canvas	On this level the left side of the business model canvas is validated, based on interviews with (potential) customers. The left side of the canvas can be seen as the backstage of the business. This contains the key activities, the internal infrastructure that delivers value, the key partners and the cost structure of the start-up.
IRL 9 Validate metrics that matter	When the start-up reaches the last level of investment readiness, it has metrics that matter. Based on answers of customers and experiences within the start-up trajectory.

Table 3 Investment Readiness Levels. Sources: Steve Blank (2014). Is This Start-up Ready for Investment? Steveblank.com and Matt Foley (2014). What is a minimum viable product really? customerdiscovery.com

On the one hand this approach of Blank is praised but on the other hand there is a lot of criticism about his approach. The criticism is often on basis of his way of teaching and eventually evaluating entrepreneurs on basis of his book. There are different opinions if this is the right way to teach how to start up a company (Corazo, 2013) and if the lean start-up approach is the right way of working during the whole process of venturing (Heitmann, 2014). There are also doubts if programmes like these are sufficient to get business investment ready. Some parts in the business development are company specific and are often not treated in these programmes (Mason & Kwok, 2010).

Investor Ready business plans (SAT project)

A third conceptualisation of investor readiness is described by Jannach and Bundgaard-Joergensen (2007). In their study, they describe a web based SAT (Self-Assessment Tool) project that provides an advisory service which gives feedback on the stage of investor readiness of business plans. It differs here to other programs where only static forms and checklists are filled in. This program uses a virtual advisor that simulates the behaviour of the entrepreneur in different dimensions. This is expressed in the dynamic and interactive interviews based on the characteristics of the business plan of the entrepreneur.

Jannach and Bungaard-Joergensen divide the completeness of a business plan into twelve dimensions. Each individual dimension has a scoring mechanism that eventually produces a readiness score of that dimension. The actual values in the business plan are reviewed and an overall scoring value per dimension is provided based on a Multi-Attribute-Utility-Theory calculation (von Winterfeldt & Edwards, 1986). The twelve dimensions are:

Investors	The market
Management team	Competitors
Product and services	Sales & marketing
Technology/ Business concept	The company
IPR	Financials
Price and customer	Funding

The project also pays special attention to the attractiveness of the business plan towards potential investors. This requires an in-depth analysis of the financial aspects. The (financial) attractiveness is calculated on basis of various inputs such as; estimated profit/loss for the upcoming years and the subsequent years, and time points and amounts of future investments. Based on these financial inputs and forecasts the investors view is derived. Investors typically base their decisions with respect to financials on figures such as Internal Return Rate, Price Earnings Ratio, or the Net Present Value of investments. These values have to be above a certain "hurdle rate" which is based on risk and maturity.

Just like the investment levels of Blank the criticism on programmes like these is that it might not be sufficient to get business investment ready. Some parts in the business development are company specific and are often not treated in these programmes (Mason & Kwok, 2010).

At the moment, no statistical evaluation about the common mistakes by entrepreneurs has been done yet, mainly because the sample size of the more detailed SAT PRO tool is not yet sufficient. The SAT LIGHT tool has more participants but these yet are basic figures on individual numbers in the

profile. What can be found is that than 50 % percent of the online users had a combined practical management experience of less than 4 years, so most of these participants are first time entrepreneurs. Even more users also thought that it would be easy for investors to understand why customers will pay for exactly their products, which indicates a common trend toward overestimation of the advantages and marketability of the new product. Another example would be the description of investor exit opportunities in the business plan, which is fully missing in 40 percent of the cases and which thus indicates that the "investor's view" is commonly not properly taken into account.

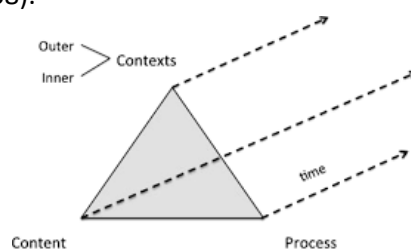## 2.4 Conceptualizations and applications of investor readiness

The conceptualization of investor readiness by Douglas and Shepherd is used to find out the perception of investor readiness of start-ups whereby the founders had a business school background. But this conceptualization is also well suited for more technical start-ups because they dedicate one of the three dimensions to technology readiness. Douglas and Shepherd divide investor readiness into three dimensions; technology, market, and management.

The investment readiness levels of Blank are based on a lean start-up approach, this approach is often used for IT start-ups and companies (Greening, Tripp, & Sutherland, 2016) (Mueller & Thoring, 2012). Nowadays other sectors also start to use the lean start-up approach (Ries. E, 2011), but the main focus is of this approach is on product development as well on customer development. The lean start-up approach focusses on as little resources as possible and is most suitable for early stage development because it focusses on the minimum viable product and shorts on marketing and R&D (Heitmann, 2014). Blanks' investment readiness levels are based on the lean start-up approach, this way his approach is most suitable for early stage developments and investments.

The Investor Ready business plans (SAT project) by Jannach and Bungaard-Joergensen let a smart virtual advisor and investors decide the investor readiness of a start-up's business plan, in an online environment. With twelve dimensions, which cover the whole company and a readiness score per dimension is this investor readiness approach broader set up than the investor readiness by Douglas and Shepherd and the investment readiness levels by Blank. But many of the twelve dimensions fit into the three dimensions of Douglas and Shepherd.

Pettigrew's Triangle

Another distinction between the three approaches can be made via the triangle of Pettigrew (1987). Pettigrew came up with a triangle to understand organizational change over a long period. His triangle serves as a multilevel analysis for change. It makes a distinction between outer context, inner context, content and process. The outer context refers to the environments the organization is operating in, with the following most usual categories: social, economic, political, and competitive. The inner context stands for those organizational elements that influence the change process, these are elements like structure and culture. Content is about the aspects of an organization that are being changed like technology, products, services and the people working in the organization. The last angle of the triangle is process, this term refers to 'the actions, reactions, and interactions from the varied interested parties as they seek to move the organization from its present to its future state' (Pettigrew 1987, p. 657-658).

Source: Pettigrew lecture slides (April 2009)

The three conceptualizations of investor readiness each have their own approach which is more focussed on a particular angle of the triangle of Pettigrew. The conceptualization of Investor Readiness by Douglas and Shepherd includes for a big part a content angle whereby the focus is on the condition of the technology and the people (management) working in the organization. The Investment Readiness Levels of Blank typically is a process approach whereby the whole business plan is based on interaction with consumers. The Investor Ready Business Plans of Jannach and Bungaard-Joergensen includes several angles whereby content (technology/products/services) and outer context (market/ competitors) deserve the most attention.

When introducing the perception of investor readiness to the triangle of Pettigrew the conclusion can be made that this perception has strong links with every angle of the triangle. Perception can be defined as the interpretation of one's observation (Ensie, 2016). It combines all the observations within the several triangles. Every triangle simulates a dimension in which observations are made. Eventually a perception is based on the interpretation of these observations.

The triangle of Pettigrew can be used to divide data into the several dimensions/angles. It also can be used to frame the concept of investor readiness into a process or result. In this research the investor readiness will be observed as a process whereby the perception of the investor readiness changes on basis of i.e. mutual contact between entrepreneurs and entrepreneurs and investors, but always comes back independently from the maturity of a start-up.

3. Methodology

This section will describe the methods that will be used to collect and analyse the data. First, the different approaches of this study will be explained. Secondly, the case selection and the data collection will be discussed. Thirdly, the data analysis will explain how the data is analysed. Lastly, the controllability, reliability and validity will be discussed in this section.

This research tries to find out what the perceptions of the investor readiness of start-ups in Twente are. These are the perceptions of the start-ups themselves as well the perceptions of the venture capitals that might or might not invest in them. This research subject is divided into four sub questions. These questions try to build up the subject and eventually to answer the research question.

3.1 Research approach

Literature review

In the literature review the sub questions: *What can VCs offer start-ups?* And *How do VCs choose the start-ups they will invest in?* can be partially answered. There is a lot of literature about these subjects and the literature will give grounded answers to these sub questions. These questions are also an introduction and an important foundation for the subject of 'perception of investor readiness'. It shows why it's important that start-ups and Venture capitals cooperate, in which ways this can be done, and how the selection process of the Venture Capitals is.

In the literature review, the concept of Investor Readiness and several operationalizations are described. These conceptualizations will be leading methods of gathering and analyzing the data in the multiple case study.

Multiple case study

The sub question: *What is the current perception of their investor readiness by start-ups?* Can partially answered via a literature study. Already evidenced by the conceptualizations of investor readiness, start-ups have a more positive perception than VCs. Although these conclusions are important, this research tries to focus on the region of Twente. Twente does have a vivid start-up culture but there is no evidence about the perceptions of investor readiness by start-ups and VCs.

Two out of the three conceptualizations of Investor Readiness will be used as instrument to gather relevant data and analyze these data. The investment readiness levels of Blank will be excluded because this method is focused on a lean start-up approach and is based on feedback from the customer. The conceptualization is also more focused on early stage start-ups while this study focusses on investment rounds where VCs are involved. These rounds are often only destined for more mature start-ups.

The Investor Readiness conceptualization of Douglas and Shepherd and the SAT Project of Jannach and Bungaard-Joergensen will be used as an instrument for this multiple case study. The dimensions they created will be very useful for modelling the data available. Both conceptualizations do have overlap. Almost all the dimensions/ subjects of Jannach and Bungaard-Joergensen come back in one of the three dimensions of Douglas and Shepherd. Only the dimensions/ subjects of 'financials' and 'funding' can't be found in the dimensions of Douglas and Shepherd. During talks with the investment manager it turned out he pays attention to this when assessing the investor readiness of a start-up. Therefore, a total of four dimensions is introduced; technology readiness, market readiness, management readiness, and financial readiness.

To answer the sub-question a multiple case study will be conducted. A case study is "an in-depth inquiry into a topic or phenomenon within its real-life setting" (Yin, 2014). According to Van Aken et al (2008) a case study is useful to gain more insights in the exploratory stage in this research. Yin (1994) emphasizes that multiple cases strengthen the results by the replication of the patterns, this way it will increase the robustness of the findings. Case studies rely on analytical rather than statistical generalizations. By relying on the replication logic as stated by (Yin, 1984) external validation to the findings will be provided. Each case will confirm or disconfirm the conclusions that are drawn from the others. Eventually this case study will be used to provide insights in the concepts described earlier.

Case studies can combine several data collection methods such as interviews, questionnaires, observation, archives. This way data which are qualitative, quantitative or both are generated. There are several ways to fill in this multiple case study.

3.2 Case selection and Research Design

The selected cases all are in the same sector based on the taxonomy of Keith Pavitt (1984).

Pavitt's Taxonomy

Making a distinction between the different approaches and the different sectors they are suitable for is necessary. It differs per approach where the emphasis is on, for example; Blank focuses on the consumer, Douglas and Shepherd focus on three dimensions of readiness and Jannach and Bungaard-Joergensen have a broader focus that contains many aspects of an organisation. It differs per sector where there is capital needed for. Pavitt (1984) describes these differences in his taxonomy. He makes a distinction between four sectors; the supplier dominated sector, scale-intensive sector, science-based sector, and the specialized supplier sector. The latter three sectors are the more technology intensive sectors. Especially the science-based sector has technology innovations that needs more upfront capital because of the intensive R&D activities. This implies that adoption of new techniques is limited by the rate of investment (Nelson, 1981).

This research focuses on start-ups in the high-tech sector. This is because of the high-tech start-up culture in Twente. This implies, based on the taxonomy of Pavitt, that investments by VCs are necessary for R&D of the technology.
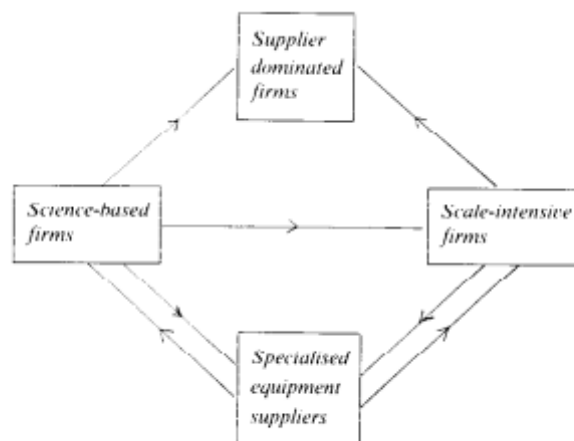
The main technological linkages amongst different categories of firm.

Figure 2 Pavitt's taxonomy - Technology linkages between the different sectors (Pavitt, 1984)

The cases of this study are start-ups in Twente which are seen as high-tech start-ups. All of the start-ups received an investment or loan by the same investment company in Twente. A total of four cases will be conducted via interviews and a questionnaire with the founders and an interview with an investor manager of the investment company who knows the four start-ups very well. He invested in three of them and in the other case a colleague of him did the investment. The four cases are similar to each other in maturity and all of the start-ups are seen by the investment company as high-tech start-ups. Although the investor invested in three of the four companies, it's expected there is still a gap between the perception of investor readiness by the investor and the entrepreneurs.

3.3 Data collection

Within this study, a predominantly qualitative approach is used. This consists of conducting semi-structured interviews with the participants, the founders of the start-ups and an investment manager of the investment company. Besides the interviews all the participants fill in a short questionnaire. The use of semi-structured interviews as a data collection method will provide more in-depth information and deeper understanding about the attitudes and opinions of the participants (Turner,

2010). The interviews will be conducted on several days in a two-week time period. Whereby the last interviews will be with the investment manager. The interviews are based on the literature framework presented in the theoretical section.

Interviews

Founders of start-ups are devoted to their company. They are busy with building their own company and they know (almost) everything about it. This way they will all have an opinion about how the several parts of their company are functioning. The investment manager has a close relationship with these founders and knows them, their business plan and start-up very well. He is in contact with all the entrepreneurs frequently, and he provides advice to three of them.

During the interviews, the questions that were used were developed upfront, however, there was room for the interviewee to have their own input about what they consider as relevant. An interview scheme was developed based on the concepts discussed in the literature review: what is the technology readiness, what is the market readiness, what is the management readiness, and what is the financial readiness. Every interview was recorded, after permission of the interviewee, and lasted for 45 minutes to 1 hour. All of the interviews were conducted in Dutch, since the interviewer and interviewees were all Dutch. Afterwards each interview was transcribed and the confidentially of the sayings was guaranteed by deleting or covering names of persons and company. During the interviews, the entrepreneurs were asked if they wanted to see the transcripts, and two of the entrepreneurs agreed to that. After transcribing the interviews, they were sent back to the two respondents, so they got the opportunity to check if they still agree with the things they said. One entrepreneur approved the transcript and the other entrepreneur didn't respond to it.

Questionnaire

At the beginning of the interviews a small questionnaire was conducted. The participants were asked to fill in 10 multiple choice questions. This questionnaire is used to give a structure to the interview and it's a way to score the several opinions of the participants. The investment manager also filled in this questionnaire, in his case he scored the four start-ups all separately.

In Appendix I the questionnaire can be found. This questionnaire is based on the questionnaire of Douglas and Shepherd and the concepts discussed in the theoretical framework. The questionnaire consists out of 10 question whereby the first two question are about the technology readiness, the questions 3 and 4 are about the market readiness, questions 5-8 are about the management readiness and questions 9 and 10 are about the financial readiness. Every question is stated in the same way whereby answer 1. means not ready at all and answer 5. means highly ready.

3.4 Data analysis

After collecting the data, the data will be analysed. The most important data is filtered by coding the interview transcripts. The data is fractured and then rearranged (Maxwell, 2012). Based on the theoretical framework six main codes are distinguished. These codes are; technology readiness, market readiness, management readiness, financial readiness, other (entrepreneurs), and other (investor). Open coding will be used to label the several questions, answers, and subjects during the interviews. Open coding can be seen as a process through which concepts can be identified and whereby it's possible to discover the properties and dimensions of these concepts. The different parts of the interview transcript are categorized under the different main codes; technology

readiness, market readiness, management readiness, financial readiness, other (entrepreneurs), or other (investor). After distinguishing these main codes, sub-codes are defined. These sub-codes are categorized under one of the six main codes and a distinction is made between entrepreneurs and investor per sub-code. This research tries to find out the differences in perception of investor readiness between entrepreneurs and investors, therefore contradictions and similarities between the entrepreneurs and investor will be distinguished per code. The results of the coding are presented in the result section. The codebook can be found in Appendix III, which contains the main codes, sub-codes, opinions of the entrepreneurs and the investor, and their most important quotes.

3.5 Reliability and validity

Controllability is required for the evaluation of reliability and validity (van Aken, Denyer, & Tranfield, 2008). This research used a multiple case study, therefore the external validity is higher than for a single case study. Different conceptualisations of the concept investor readiness are used and an analysis method is used so there is triangulation, therefore reliability of this study will be high (Yin, 2014).

4. Results

This sections presents the results of interviews and the questionnaires. In total five interviews were held. Four interviews with founders of high-tech start-ups in Twente and one interview with an investment manager of a big investment company in the region of Twente. The investment manager knows the founders of the high-tech start-ups and has read the business plans of the start-ups.

The results will be shown on basis of the four dimensions described in the previous chapters. The dimensions are 1. The technology readiness; 2. The market readiness; 3. The management readiness and 4. The financial readiness. Each dimension will be divided into two sections; one showing the results from the questionnaire and the other presenting the results from the interview. The two sections are again divided into two parts; one showing the results based on the founders of the start-ups and the other describing the results from the investment manager. Eventually, some remarkable results will be stated and this chapter will end with a short overview of the differences between the results from the entrepreneurs and the investor.

4.1 Technology readiness

This section presents the results of the technology readiness dimension. The first paragraph shows the questionnaire results of the founders of the start-ups and the investment manager. The second paragraph presents the interview result with these participants.

Questionnaire

Questionnaire question	Average score of the entrepreneurs	Average score of the investment manager
How far is the technology (behind the product)?	2,375	2,5
To which extend is the used technology innovative in comparison to existing technologies?	4,625	3,75

Entrepreneurs

The question about how far the technology behind the product is, got scored a 2,375 out of 5. This is below average and means within the questionnaire variables a score between 'moderately' and 'fairly' maturity of the technology. None of the entrepreneurs scored their technology above 3,5, and even one entrepreneur scored his technology as 'still being in its infancy', this while all start-ups already have customers.

The question about the innovativeness of the technology in comparison to existing technologies was scored the highest of the whole questionnaire by the entrepreneurs. Two entrepreneurs scored their technology as 'highly innovative' while one scored it as 'very innovative' and one entrepreneur scored his technology between 'highly' and 'very' innovative.

Investor

The investor gives a higher average score for the maturity of the technology than the entrepreneurs. This can be due to the lack knowledge and the lack of active involvement of the investor compared to the entrepreneurs. This is mainly because of one case where the entrepreneur thought his technology was still being in its fancy and the investor thought it was fairly mature. In two case the investor gave the same score as the entrepreneur and in one case the investor thought the maturity

of the technology was moderately while the entrepreneur gave a score between 'fairly' and 'very' mature.

The investor scored the innovativeness of the technology towards existing technology almost a point lower, but he was still fairly positive. In two cases, he thought the was 'fairly' innovative, in one case 'very' innovative and in another case 'highly'. In two cases, he gave the same score as the entrepreneur. In the other two cases, he gave 1,5 points and 2 points lower than the entrepreneur.

Interview
Entrepreneurs
All the interviewed entrepreneurs felt their technology still needed some development although their technology was ready for use and some entrepreneurs paid more attention to the production and product itself at the moment. For all of the entrepreneurs the technology behind their product is off great importance, two of the entrepreneurs even thought their technology would change the industry. In order to stay ahead of the competition, all the entrepreneurs were in some way working on refining their technology. Eventually two of the four start-ups had patents and the other two didn't because in their industry it was hard to patent their technology.

Investor
The interviewed investor indicated that the maturity of the technology behind the product of the start-up wasn't that important for him. Much more important is the progression for him. His investment company works with value inflection points to measure the progression of for example the technology. The investor pays far more attention to the fit between the technology and the market, if there is nog fit you won't make any money out of it. According to the investor the only reason why the start-ups are still existing is because they are staying innovative and that they are staying ahead by refining their technology, if they don't walk ahead another will do it better and more efficient. Eventually the investor can imagine not all start-ups do have patents, in some cases it's too hard, too expensive or unnecessary.

4.2 Market readiness
This section presents the results of the market readiness dimension. The first paragraph shows the questionnaire results of the founders of the start-ups and the investment manager. The second paragraph presents the interview result with these participants.

Questionnaire

Questionnaire question	Average score of the entrepreneurs	Average score of the investment manager
Which problem does the product solve?	4,375	3
How does the plan look to stay ahead of the competition?	3,5	3

Entrepreneurs
Two entrepreneurs saw themselves as at least a game changer. They saw their start-up as a new solution within a business, with a radical change within that business. One entrepreneur saw his start-up as the opener of a new business that solves significant social problems, and one entrepreneur thought he was in between.

Every entrepreneur had thought about how to stay ahead of the competition. Two of the entrepreneurs thought that they had well described their plan and two entrepreneurs thought they had described it reasonable.

Investor

The investor scored the solution that the product should be more than a point lower than the entrepreneurs. Only in one case he thought the same about it as the entrepreneur does. In two cases the investor saw the product as a small improvement of an existing solution while both entrepreneurs thought it was a game changer. And in the fourth case the investor thought the product is a significant solution of an existing solution while the entrepreneur saw himself as something between game changer and solution for a social problem.

The investor was a little bit less positive about the plan to stay ahead of the competition than the entrepreneurs. In one case, he thought the plan was better than the entrepreneur thought himself, in one case they thought the same about the plan, and in two case the entrepreneurs thought their plan was described well while the investor thought it was reasonable and even inadequately.

Interview

Entrepreneurs

All the entrepreneurs were of the opinion that their product would succeed. Everyone for another reason, the reasons; cheaper, better, faster, and solution for two social problems were mentioned. From a geographic point of view all the entrepreneurs saw themselves crossing the Dutch boarder, two entrepreneurs because they already have customers abroad and the two others thought their product could go international really easy. When looking at the market potential all the entrepreneurs were also really positive, they all saw a big market with a great demand. The existence of this demand was in one case based on own experience, in one case based on growing competition, in one case based on market research, and in one case based on the demand from a customer of the company the founder of the start-up used to work. Although one entrepreneur based the existence of market demand on a market research, three entrepreneurs in some way did a market research and entrepreneur didn't because he doesn't believe in it. Two of the entrepreneurs did a small market research and one entrepreneur did a market research in terms of stating specifications of the targeted product with potential customers.

All the start-ups already have customers or potential customers they're working together with. In two cases the customers really give feedback and the contract is really close. In the other two cases this is not the case. Finally, every entrepreneur felt they were one of a kind. They all thought they were unique and in three cases the entrepreneur really thought there wasn't any close competition.

Investor

According to the investor it can't be said if the start-ups will become successful. The entrepreneurs think they are one of a kind but there is always competition. *"They have the potential but it's still a long way."* The fact that the start-ups do have potential doesn't mean that it can be stated how their geographical and market potential is. The start-ups should think big and they should think international, but statements about the geographical and market potential don't make any sense, there are too many factors for that.

Market research might be one of the most important things to do as a start-up according to the investor. It's the proof that your technology fits the market. There are several ways to do a market research, the best way is to: *"do free pilots and talking with customers and listening to their feedback, that's real market research."* This also indicates the importance of the first customers. They should have a big influence on the development of the product of the start-up and it's positioning in the market. According to the investor, investors often use these customers to find out more about the start-up, its management and the fit with the market, they do their own market research. This also includes the search for possible competitors. While entrepreneurs say, they don't have any the investor searches for current solutions and similar solutions, these are the competitors.

4.3 Management readiness

This section presents the results of the management readiness dimension. The first paragraph shows the questionnaire results of the founders of the start-ups and the investment manager. The second paragraph presents the interview result with these participants.

Questionnaire

Questionnaire question	Average score of the entrepreneurs	Average score of the investment manager
What experience do the founders and their team have?	4	3,5
How complementary is the management team?	3,875	3
How complete is the business plan?	3,875	3
How realistic is the business plan?	3,75	2,5

Entrepreneurs
All the entrepreneurs saw their management team as a 'team consisting of individuals whose skills and experience nicely complement each other's expertise'. They all are fairly positive about the complementary of their team varying from 'reasonable complementary' to 'excellent complementary'.

The entrepreneurs in general thought that their business plan was as complete as realistic and three out of four entrepreneurs rated their business plan as at least good with lack of some small parts and under many circumstances realistic. Only one entrepreneur was a little bit less positive and rated his business plan as reasonable with lack of some parts and it could be realistic but it could also be unrealistic.

Investor
While all the entrepreneurs saw their team as a 'team consisting of individuals whose skills and experience nicely complement each other's expertise' the investor was more divided in terms of opinion. He saw all the teams of the start-ups in a different way. In one case, he thought the team was 'a solo entrepreneur with substantial technical and business knowledge and experience in this industry'. In one case, he saw the team as 'a team of two or more individuals who cover some important areas of management expertise but who lack qualifications or experience in other important areas'. In one case, he agreed with the entrepreneur, and in the last case he estimated the team further than the entrepreneur, he saw it as 'a team of individuals with complementary skills

and experience, no gaps in required knowledge or experience, and who have prior business start-up experience'.

The investor scored in two cases the management team of the start-up as 'moderately' complementary and in two cases he scored the management team as 'very' complementary. In three cases the investor scored one to two points lower than the entrepreneurs, in one case he scored even higher than the entrepreneur did himself.

The entrepreneurs were also more positive about the completeness of their business plan, while the entrepreneurs gave a score of 3,875 out of 5 for the completeness of the business plan the investor scored them a 3 out of 5. In two cases the investor thought that the business plan missed some significant parts and in two cases the investor thought the business plan was reasonable but lacked a few small parts. Only in one case the entrepreneur scored the same as the investor, in the other cases the investor was less positive than the entrepreneur.

The investor was even less positive about how realistic the business plans are. In two cases, he thought the business plan is under many circumstances not realistic and in two cases he thought that it could be realistic but it could also be not realistic. In three cases the investor scored one point lower than the entrepreneurs did. In one case, even two points lower.

Interview

Entrepreneurs
The entrepreneurs reacted quite different on the question if their team has it to become successful. In two cases the entrepreneur thought it was hard to say at this moment, the other two entrepreneurs thought their team could become successful but some reinforcements could make it more easy. In all cases the reinforcements should be in the fields of sales or marketing. The start-ups are entering the market and they lack sales and marketing at the moment. In one case, some IT specialists are desirable and in one case a CTO is needed. Although they are still missing some positions all entrepreneurs thought their teams where quite to extremely complementary, with the right mix of people.

The entrepreneurs are quite satisfied about their business plans. They all see room for improvement on some parts but besides these parts they think it's all right. And they all think it's quite realistic, what they've stated in their business plans. There are some significant conditions and some entrepreneurs made several scenarios. Only one of the four entrepreneurs have a description of their ideal investor. The others don't have it because two of them don't think that they need an investment.

Investor
"The management team might be the most important part of a start-up. They're the people that should do it." Says the investor, but it´s impossible to say of these teams have it to become successful. According to the investor most start-ups lack sales positions, just as in these four cases. Often CEO's do the sales but entrepreneurs sometimes forget how much time it costs. In later phases start-ups often miss a CFO and a HR position. He can imagine that the entrepreneurs think their teams are complementary. They have their competences straight but they still miss some important positions.

26

"Every business plan is wrong." According to the investor. Although the entrepreneurs think their business plan is complete and realistic it's never right. Investors always have additional questions and it's impossible to predict further than 6 to 12 months. The reason why there are business plans is that investors can see if you are thinking the right way. The investor understands that entrepreneurs often haven't any description about their ideal investor, start-ups can't be that picky but it's good when they have their wishes about the ideal investor straight.

4.4 Financial readiness

This section presents the results of the financial readiness dimension. The first paragraph shows the questionnaire results of the founders of the start-ups and the investment manager. The second paragraph presents the interview result with these participants.

Questionnaire

Questionnaire question	Average score of the entrepreneurs	Average score of the investment manager
How are the best, worst and most likely scenarios for future capital need outlined?	3,75	2,5
How is the exit strategy described in the business plan?	2	3,25

Entrepreneurs

The entrepreneurs thought that their best, worst and most likely scenarios for future capital need were outlined really well. Only entrepreneur was less positive and thought it was outlined reasonable.

The question about how the exit strategy was described got scored the lowest in the whole questionnaire. One entrepreneur didn't describe the exit strategy at all, two entrepreneurs thought it was described very inadequately and one entrepreneur thought his exit strategy was described reasonably.

Investor

The investor scored more than a point lower than the entrepreneurs did about how the best, worst, and most likely scenarios for future capital need were outlined. In two cases the investor thought it was 'inadequately' outlined and in two cases he thought it was 'reasonably' outlined. In each case the entrepreneur was more positive about the scenarios.

The entrepreneurs gave a very low average score for their exit strategy. The investor scored their exit strategies higher. In three of the four cases the investor thought the exit strategy was described better than the entrepreneurs thought. In one case the investor and the entrepreneur were in line. Although the investor scored higher than the entrepreneurs his score was still not much more than 'reasonable'.

Interview

Entrepreneurs

Only one entrepreneur admits that he needs investment to come further. The other three entrepreneurs think it could help them but don't see it as a necessary thing. They all think to know

what they need and what their costs and benefits will be. Most entrepreneurs talked about having several scenarios. And they all think these are realistic. Remarkable is that none of the entrepreneurs thinks that he has his exit strategies straight. Not for themselves nor for the investor.

Investor

"All the four start-ups need investment in the future." Unlike the entrepreneurs the investor thinks these start-ups need funding to survive because he doesn't see them becoming profitable in the next coming years. He doesn't believe in their financial scenarios, but he pays attention to it to find out how he should read their plans. He knows that an exit strategy often misses in these plans. While this is the most important thing for him as an investor. He thinks that start-ups should pay more attention to these exit strategies because these are so important for investors and investors are very important for these start-ups.

4.5 Other remarkable results

Criticism

There is a lot of criticism from the entrepreneurs on investors in general. *"Investor don't dare to take risks for starters." "They come when it's too late." "They lower their investment and expect you to reach the same results"* and *"Investor do offers that you can't accept if you want to go further with your company"* are quotes by the entrepreneurs from the four cases. The investor counters this with the statements that entrepreneurs see their company too positive and the lack of understanding which leads to that entrepreneurs forget the risks of losing all the investment by the investor.

Reasons for failure

The lack of understanding for each other is also a cause for the failures in the investment process according to the investor who analysed more than 500 start-ups invested in only 20 individual start-ups. This causes wrong opinions about risks and leads to situations where the entrepreneur thinks he's done short when the investor does a proposal. *"Another failure is that some entrepreneurs aren't open to feedback."* Says the investor. The plans of the entrepreneurs can't be all right so the entrepreneur should listen to the advice of the investor.

5-year forecast

All the entrepreneurs think they have a successful and internationally operating company within five years. According to the investor they can't say any meaningful thing about it. There are too many factors too look forward to that period. The investor thinks that 50-75% percent of the four start-ups won't exist anymore in 5 years.

Overview

Subject	Entrepreneurs	Investor
Technology readiness	- Technology still needs some development in every case - Technology behind the product is of great importance in every case - Technology would change the industry in two cases - Working on refining the technology in every case - In possession of patents in two cases, hard to get patents in two cases	- Progress matters more than maturity - Fit between technology and market is the most important thing - Refining the technology and walking ahead is the only reason the start-ups are still existing - Not having any patent isn't always bad
Market readiness	- Product would succeed in every case - Product would go abroad in every case	- Impossible to say if start-ups will become successful

	- Positive about the market potential and the market demand - Different reasons for knowing there is market demand - Market research done in three cases - (Potential) customers in all cases - Feeling unique in every case	- Start-ups are not one of a kind - Market research most important thing because it proofs the fit between technology and market - Market research should contain close contact with customers
Management readiness	- Team has it to become successful in two cases, impossible to say in two cases - Reinforcements in the field of marketing or sales in every case - Need for IT specialists in one case, need for CTO in one case - Teams are quite to extremely complementary - Satisfied about business plan - Awareness there are points of improvement in the business plan in every case - Business plan is quite realistic in all cases - Description of ideal investor in only one case	- Management team itself one of the most important things - Often lack of sales positions - In a later phase lack of CFO and HR positions - Competences straight but still missing positions - Every business plan is wrong - Investors always have additional questions - Impossible to look further than 6 to 12 months - Business plans exist to see if the vision is right - Understandable why entrepreneurs don't have any description about an ideal investor but it's good to have one
Financial readiness	- Admitting there is a need for investment to survive in only one case - Investment makes it only faster in other three cases - Cost/ benefit scenarios are clear in every case - Cost/ benefit scenarios are realistic in every case - In none of the cases the exit strategy is clear	- All the four start-ups need investment to survive - Financial scenarios are always wrong - Pay attention to the financials to form opinion about how to read the plans - Start-ups should pay more attention to the exit strategy, it's the most important thing for investors
Criticism	- Investor don't dare to take risks for starters - Investors come when it's too late - Investors lower their investment and expect you to reach the same results - Investor do offers that you can't accept if you want to go further with your company	- There is a lack of understanding for each other's situation
Failure in the process	- Offers that are too low	- Lack of understanding for each other - Assessing the risks in a wrong way - Entrepreneurs think they're done short - Lack of openness towards feedback by entrepreneurs
5-year forecast	- Big successful international company	- Impossible to say - 50-75 percent possibly wont exist anymore

5. Conclusion

By combining two conceptualizations of investor readiness, the perception of this criterion from both the perspectives of start-ups and an investor was studied. Especially the opinion of and the attitude towards certain dimensions and cases is examined. In this chapter, conclusions are drawn from the results per dimension and these results are compared to existing literature, which was described in the theoretical framework. Eventually the theoretical contribution, the practical implications and the research limitations of this study are stated, whereby an indication for further research is made.

Technology readiness

In all of the four cases the entrepreneur admits there is still need for further development of the technology. The investor sees this in the same way but doesn't pay too much attention to it.

Progression within the technology development and the fit of the technology with the market is what counts for the investor. Because the entrepreneurs all have a technical background the technology readiness isn't that big of an issue in the field of investor readiness.

Market readiness

Entrepreneurs do forecasts which can't be made at this point in time. There are too many factors that can influence a market and a start-up. This indicates the positive view and the confidence of these entrepreneurs. The opinion of the investor is that they should keep this attitude, because entrepreneurship isn't that easy. However, entrepreneurs should support this attitude with solid research whereby a solid market research might be the most important because this is the proof of fit between technology and market.

Management readiness

According to the investor, the management team is the most important thing of a start-up. They're the people that should do it. Unfortunately, management teams often lack some important positions such as sales. This can be due towards the lack of money, but entrepreneurs should keep in mind the importance of these positions.

The business plan functions as a way to show the vision of the entrepreneur. Things stated in these business plans almost never work out, but the vision behind these statements and forecasts is the thing an investor pays attention to.

Financial readiness

Three of the four entrepreneurs in these cases indicated they don't need investment. Remarkably the investor was firmly sure they absolutely need investment. This might indicate the differences in trust in the start-up and the level of experience between the entrepreneurs and the investor. Another important factor within the financial readiness is having an exit strategy for the investor. This might be the most important thing to the investor and by leaving this strategy out of one's business the most important thing for probably the most important partner is omitted.

Criticism and failure in the investment process

During this study, some general criticism from the entrepreneurs towards investors in general is conducted. These criticism is also submitted to the investor. He devoted this to the lack of understanding between entrepreneurs and investors. This lack of understanding is also a cause for failure within the investment process according to the investor. Besides this misunderstanding, lack of openness towards feedback by entrepreneurs is also claimed to be a cause for failure by the investor.

5.1 Theoretical contribution

This research contains some theoretical contributions for the study of investor readiness. Based on literature research and information from the investor it implies that the combined conceptualizations of Douglas & Shepherd and Jannach & Bundgaard-Joergensen is an appropriate framework to measure the perception of investor readiness. All facets of the company and its investor readiness are taken into account. From interviews with the investor became clear that his investment company analysed investor readiness in the same way. This assumes that the framework is usable to measure the perception of entrepreneurs as well of investors. Especially the framework of the questionnaire shows a clear difference between the perception of entrepreneurs and the perception of investors.

This study also assumes more attention for the dimension of financial readiness than often is given for in existing conceptualizations of investor readiness. Jannach & Bundgaard-Joergensen describe 'financials' as a dimension but the SAT project goes more into the numbers and calculation rather than the thinking behind it. The focus of the investor readiness in this study was more about 'how' and 'why' entrepreneurs made their financial statements and how the investor thought about this. The big differences in views on financials between the entrepreneurs and the investor assume this dimension to be an important obstacle in the investment process even so when the investor stated he always starts reading a business plan at the financials.

Most importantly, this study provides evidence to the findings of Douglas & Shepherd (2002) and Jannach and Bundgaard-Joergensen (2007). Douglas & Shepherd conclude in their research that new ventures appear to be more investor ready in terms of their marketing and management than in terms of their technology. They also conclude that entrepreneurs and investors do have a different perception of investor readiness of the start-up, entrepreneurs rate the content of their business plan higher and the winners of the heat had the smallest difference in scores in comparison with the investors. This study assumes the same; the entrepreneurs and the investor scored the maturity of the technology relatively low, but this study also showed that this low technology readiness isn't a big deal for investors, it's about the development of this technology. The investor scored the business plans of the entrepreneurs lower than the entrepreneurs themselves, and in general the entrepreneurs scored themselves much higher than the investor except for one case, there the investor scored higher. Jannach and Bundgaard-Joergensen concluded a common trend toward overestimation of the advantages and marketability of the new product by the entrepreneurs and the absence of a description of investor exit opportunities in the business plan, in 40 percent of the cases. This study also indicates an overestimation of advantages and marketability; in almost all of the cases the entrepreneurs where positive about the success of the product, the geographical and market potential and the market demand, while these estimations can't be made at this point in time according to the investor. In none of the cases an adequate exit strategy was made which shows comparisons with the statement of Jannach and Bundgaard-Joergensen who state that the "investor's view" is commonly not properly taken into account. Besides providing evidence for the outcomes of the studies by Douglas & Shepherd and Jannach & Bundgaard-Joergensen this study also shows identical outcomes for start-ups in a later phase than examined by the other two studies. While in the other two studies the participants were entrepreneurs who just started without any investments yet, were the participants of this study entrepreneurs who already received investment and who might be ready for venture capital. Even in more mature start-ups the same trends become clear.

5.2 Practical implications

This study tries to be an objective overviewing of how entrepreneurs think about their own company and how an investor sees it. As stated earlier, entrepreneurs see their start-up much more positive than investors. This leads to incomprehension whereby in many cases investments are thwarted. That's too bad because it causes a big loss of potential, time, and money. A way of reducing the incomprehension between entrepreneurs and investors is to provide insight in each other's way of thinking and by exposing the obstacles between the two parties. Investors see many cases per month and deal with entrepreneurs a lot, this way they should know more about the way entrepreneurs think than the other way around. Especially founders of high-tech start-ups with predominantly

technical experience could lose the way in the world of entrepreneurship. An overview of the experience of other entrepreneurs and their way of thinking, the experience and way of thinking of investors and the biggest contradictions between these two parties might be a useful manual to become attractive for, and have a fruitful cooperation with investors. But in the end, are these differences in views and attitudes between entrepreneurs and investors bad? An investor might need to be (too) positive. Bosma & Schutjens (2011) state in their study that it seems inherent that people who are involved in entrepreneurial activity have positive attitudes towards entrepreneurial activity, and that people who lack these positive attitudes are almost certain not to be involved in entrepreneurial activity. This implies there will be and should be always differences between entrepreneurs and investors.

5.3 Research limitations and further research

This research provides some interesting contributions and clear insights in the differences between entrepreneurs and investors, there are also multiple limitations that should be mentioned. This research was conducted in only one region of the Netherlands: Twente. In fact, all the start-ups where start-ups from the city of Enschede, but the investor is active within the whole region.

The start-ups are chosen in consultation with the investor himself. This is necessary because the interviewed investor should know all the interviewed entrepreneurs to receive a reliable view of the perception of the investor. Although this practical condition was necessary for this research it is questionable if the same answers came forward with four other entrepreneurs or another investor. This may cause a bias because they stay people who have to give their opinion about something, for example character, timing, and the relationship with the investor may play a role in their answers. Because of space of time and practical limitations only four entrepreneurs were interviewed. For a representative view and conclusion, many more entrepreneurs should've been interviewed. Lastly, this study is conducted by only one researcher. Wrong questions could be asked; wrong interpretations could be made and important information could've been missed.

In future research, start-ups from a different maturity phase should be examined to explore whether the perception of the entrepreneur aligns more to that of the investor. For example, when a start-up already received some big investments. This research assumes no difference between different maturity phases but in this study, only four cases were examined and even the start-ups in these cases are relatively 'young'. Another point for future research, which is in another field of study, should be the psychology within the investment process. Besides the several dimensions of investor readiness, investors also invest on basis of feeling with the company and its management team. Many effort is put into minimizing investing on basis of feelings and emotions but an interesting research case might be the role of it within the investment process.

5.4 Final Conclusion

To return to the stated hypothesis and research question, this study stated the hypothesis: *H1: Start-ups rate themselves more investor ready than Venture Capitalists rate them.*

In this study one entrepreneur gave himself a lower score than the investor did. This might be due to the character of this entrepreneur but it also indicates the trust the investor has in the start-up. For a reason, this start-up has already the most investments compared to the other three. Experience gathered in the previous processes with investors could have led to his more realistic vision. Another

way shouldn't also be excluded; a more realistic vision leads to more investments. In the other cases the entrepreneurs saw themselves more investor ready than the investor saw them.

The goal of this research was to answer the research question: *How can start-ups in Twente better align the perception of their investor readiness to the perception of VCs?*

This study finds out several pain points which can be tackled by mainly these entrepreneurs. Having a positive attitude towards your company is a good thing but the trick is to convert this attitude in a founded vision towards investors. This study suggests that this vision should include; a well-founded market research, focus on improving the management team, a clear description of the vision within the business plan, and a clear exit strategy for the investor. Besides a well-founded vision, understanding and openness towards feedback are important things for an investor. Differences between entrepreneurs and investors aren't bad, and entrepreneurs should never lose their enthusiasm and positive attitude, it's the only reason they are entrepreneurs.

6. Bibliography

Adviesraad voor Wetenschap, T. e. (2011). *Kaptitale Kansen .* Rijswijk: Quantes.

Baeyens, K., Vanacker, T., & Manigart, S. (2006). Venture capitalists" selection process: the case of biotechnology proposals. *International Journal of Technology Management*, 28-46.

Baum, J. A., & Silverman, B. S. (2004). Picking winners or building them? Alliance, intellectual, and human capital as selection criteria in venture financing and performance of biotechnology startups. *Journal of Business Venturing*, 411-436.

BCVA and NESTA. (2010). *From funding gaps to thin markets.*

Black, B. B., & Gilson, R. (1998, March 15). Venture capital and the structure of capital markets: banks versus stock markets. *Journal of Financial Economics Vol. 47*, pp. 243-277.

Blank, S. (2013, November 25). *It's time to play moneyball*. Opgehaald van Steve Blank: http://steveblank.com/2013/11/25/its-time-to-play-moneyball-the-investment-readiness-level/

Booking.com. (sd). Opgehaald van Working at booking: https://workingatbooking.com/

Calabrese, T., Baum, J., & Silverman, B. (2000). Canaian biotechnology start-ups, 1991-97: the role of incumbents' patens and strategic alliances. *Social science research*, 503-534.

Carter, R. B., & Van Auken, H. E. (1994). Venture Capital Firms' Preferences for Projects in Particular Stages of Development. *Journal of Small Business Management*, 60-73.

CBS. (2009). *Het Nederlandse ondernemingsklimaat in cijfers 2009.* Den Haag: Centraal Bureau voor de Statistiek.

Chang, S. J. (2004). Venture capital financing, strategic alliances, and the initial public offerings of Internet startups. *Journal of Business Venturing*, 721-741.

Cooper, A. C.-G. (1994). Initial human and financial capital as predictors of new venture performance. *Journal of Business Venturing*, 371-395.

Corazo, K. (2013, June 3). *What are some substantive things that are wrong or flawed, if any, in Steve Blank's Four Steps to the Epiphany?* Opgehaald van Quora.com: https://www.quora.com/What-are-some-substantive-things-that-are-wrong-or-flawed-if-any-in-Steve-Blanks-Four-Steps-to-the-Epiphany

De Reuver, M., Bouwman, H., & Haaker, T. (2013). Business model roadmapping: A practical approach to come from an existing to a desired business model. *Journal of Innovation Management 17.01*.

Douglas, E. J., & Shepherd, D. (2002). Exploring investor readiness: assessments by entrepreneurs and investors in Australia. *Venture Capital: An international journal of entrepreneurial finance*, 219-236.

Douglas, E., & Shepherd, D. (2002). Exploring investor readiness: assessments by entrepreneurs and investors in Australia. *Venture Capital: An international journa of entrepreneurial finance*, 219-236.

EIM. (2008). *De grootste knelpunten van MKB- en technologiebedrijven.*

EIM. (2009). *Financieringsmonitor Groei: Gevestigde bedrijven en snelle groeiers vergeleken.* Zoetermeer.

Eisenhardt, K. (1989). Building theories frome case study research. *The Academy of Management Review*, 532-550.

Elsevier/ScienceWorks. (2015). *Valorisatieranglijst 2015.* Elsevier.

Engel, D., Dalton, A., Anderson, K., Sivaramakrishnan, C., & Lansing, C. (2012). *Development of Technology Readiness Level (TRL) Metrics and Risk Measures.* Washington: Pacific Northwest National Laboratory.

Ensie. (2016, August 4). Opgehaald van www.ensie.nl: https://www.ensie.nl/redactie-ensie/perceptie

Erken, E. (2008). *Productivity, R&D and Entrepreneurship.* Erasmus University Rotterdam.

Fried, V. H., & Hisrich, R. D. (1994). Toward a Model of Venture Capital Investment. *Financial Management (Vol. 23, No. 3)*, 28-37.

Gompers, P. A., & Lerner, J. (2001). *The Money of Invention: How Venture Capital Creates New Wealth.* Harvard Business School Press.

Greening, D. R., Tripp, J., & Sutherland, J. (2016). *Introduction to the organizations, products and development minitrack.* KauaiKoloa: 49th Annual Hawaii International Conference on System Sciences.

Heitmann, J. (2014). *The lean startup - A pragmatic view on its Flaws and Pitfalls.* University of Twente.

Hellmann, T., & Puri, M. (2000). The interaction between product market and financing strategy: the role of Venture Capital. *The review of financial studies*, 959-984.

Higgins, R. G. (2003). Which Ties Matter When? The Contingent Effect of Interorganizational Partnerships on IPO Success. *Strategic Management Journal*, 127-144.

Hsu, D. (2004). What do entrepreneurs pay for venture capital affiliation? *Journal of Finance 59*, 1805-1844.

Investopedia.nl. (sd). Opgehaald van Breaking down 'alphabet rounds': http://www.investopedia.com/terms/a/alphabet_rounds.asp

Jannach, D., & Bundgaard-Joergensen, U. (2007). *SAT: A web-based interactive advisor for investor-ready business plans.* Dortmund.

Jaworski, B. J., & Kohli, A. K. (1993). Market orientation: Antecedents and Concequences. *Journal of Marketing*, 53-70.

Kennispark Twente. (sd). Opgehaald van www.kennispark.nl: www.kennispark.nl

KMO, E. F. (2007). *Vermogen om te ondernemen: De Nederlandse finance gap.* Den Haag.

Mason, C., & Kwok, J. (2010). Investment Readiness Programmes and Acces to Finance: A critical review of design issues. *Local Economy Vol. 25*, 269-292.

Maxwell, J. A. (2012). *Qualitative Research Design. An interactive approach.* London: SAGE Publications.

Mueller, R. M., & Thoring, K. (2012). *Design thinking vs. lean starup: a comparision of two user driven innovation strategies*. Berlin: International Design Management Research Conference.

Narver, J. C., & Slater, S. F. (1990). The effect of market orientation on business profitability . *Journal of Marketing*, 20-35.

Nelson, R. (1981). Research on Productivity Growth and Productivity Differences: Dead Ends and New Departures. *Journal of Economic literature*.

Pavitt, K. (1984). *Sectoral patterns of technical change: Towards a taxonomy and a theory.* Brighton: Elsevier.

Pettigrew, A. (1987). Context and action in the transformation of the firm. *Journal of managment studies Vol. 24 No. 6*, 649-670.

PPM Oost. (sd). *Zijn jij en je bedrijf klaar voor een investeerder?* PPM Oost.

Ries. E. (2011). *The Lean Startup: how today's entrepreneurs use continuous innovation to create radically successful businesses.* New York: Crown Business.

Sahlman, W. (1988). Venture captial: A model of project governance. *Journal of Financial Econcomics*, 23-36.

Sahlman, W. (1990). The structure and governance of venture-capital organizations. *Journal of financial economics*, 573-521.

Sapienza, H. J., Manigart, S., & Vermeir, W. (1996). Venture capitalist governance and value added in four countries. *Journal of Business Venturing*, 439-469.

Schutjens, V., & Wever, E. (1999). Determinants of new firm success. *Papers in Regional science*, 135-139.

Seker, P. M. (2015). *Twentse arbeidsmarktmonitor.* Enschede: Kennispunt Twente.

Shane, S., & Stuart, T. (2002). Organizational endowments and the performance of university start-ups. *Management Science*, 154-170.

SHEPHERD, E. J., & DOUGLAS, D. (2002). *Exploring investor readiness: assessments by entrepreneurs and investors in Australia.* Routledge.

Song, M., Podoynitsyna, K., Bij, H. v., & Halman, J. I. (2008). Success Factors in New Ventures: A Meta-analysis. *The journal of product innovation management*, 7-27.

Stam, E., Hartog, C., Stel, A. v., & Thurik, R. (2010). *Ambitious entrepreneurship, high-growth firms and macroeconomic growth.* SCALES Zoetermeer.

Turner, D. (2010). Qualitative Interview Design: A practical Guide for Novice Investigators. *The qualitative report*, 754-760.

Twente.nl. (sd). Opgehaald van Twente.nl.

van Aken, J. E., Denyer, D., & Tranfield, D. (2008). Developing Design Propostistions through Research Synthesis. *Organization Studies*, 393-413.

van Praag, M., & Versloot, P. (2007). *What Is the Value of Entrepreneurship? A review of recent research.* Bonn, Institute for the Study of Labour.

Van Stel, A., & Stam, E. (2009). *Types of Entrepreneurship and Economic Growth.* United Nations University Maastricht.

Vesper, K. (1990). *New Venture Strategies.* Washington: Prentice-Hall.

von Winterfeldt, D., & Edwards, W. (1986). *Decision analysis and behavoioral research.* Cambridge, UK: Cambridge University Press.

Warne, K. (1988). *Risk and industry characterisitics of venture capital invesments,.* Unpublished.

Womack, J. P., & Jones, D. T. (2003). *Thinking Lean.* New York: Free press.

Yin, R. K. (1984). *Case study research: Design and Methods 1st edition.* Beverly Hills: Sage Publications.

Yin, R. K. (1994). *Case study research: design and methods second edition.* Newbury Park: Sage Publications.

Yin, R. K. (2014). *Case Study Research: Design and Method 5th edition.* London: SAGE.

Zutshi, R. K., Tan, W. L., Allampalli, D. G., & Gibbons, P. G. (1999). Singapore Venture Capitalists (VCs) Investment Evaluation Criteria: A Re-Examination. *Small Business Economics (13)*, 9-26.

Zwilling, M. (2013, Februari 18). *10 ways for startups to survive the valley of death*. Opgehaald van Forbes: http://www.forbes.com/sites/martinzwilling/2013/02/18/10-ways-for-startups-to-survive-the-valley-of-death/#b5090755e403

Appendix I

Below the questionnaire used at the beginning of the interviews can be found. This questionnaire is based on the questionnaire of Douglas and Shepherd and the concepts discussed in the theoretical framework. The questionnaire consists out of 10 question whereby the first two question are about the technology readiness, the questions 3 and 4 are about the market readiness, questions 6-8 are about the management readiness and questions 9 and 10 are about the financial readiness. Every question is stated in the same way whereby answer 1. means not ready at all and answer 5. means highly ready.

Questionnaire

Enquête over de perceptie van 'investor readiness'   Arjen Goudt

Hierbij de enquête over de perceptie van 'investor readiness'. De enquête bestaat uit 10 vragen, bij iedere vraag is er keuze uit vijf antwoorden. Gelieve het antwoord omcirkelen dat het meeste overeenkomt met uw eigen beleving. De enquête is binnen enkele minuten in te vullen aan het begin van het interview. Antwoorden zullen vertrouwelijk worden behandeld en alle gegevens zullen worden geanonimiseerd.

Technologie

1. Hoe ver is de technologie (achter het product)?
   o 1: De technologie staat in de kinderschoenen
   o 2: De technologie is matig volwassen
   o 3: De technologie is redelijk volwassen
   o 4: De technologie is zeer volwassen
   o 5: De technologie is in staat om huidige producten en hierop volgende generaties op de markt te brengen
2. In hoeverre is de ontwikkelde technologie vernieuwend ten opzichte van de bestaande technologieën?
   o 1: De technologie is niet vernieuwend
   o 2: De technologie is matig vernieuwend
   o 3: De technologie is redelijke vernieuwend
   o 4: De technologie is zeer vernieuwend
   o 5: De technologie is uiterst vernieuwend

Markt

3. Welk probleem lost het product op?
   o 1: Het biedt een identieke oplossing aan een bestaand probleem
   o 2: Het is een kleine verbetering van een bestaande oplossing. Bijvoorbeeld een nieuwe generatie telefoons
   o 3: Het is een significante verbetering van de bestaande oplossingen voor een probleem
   o 4: Het is een totaal nieuwe oplossing binnen een business, een gamechanger. Het brengt een radicale verandering in de business teweeg
   o 5: Het is een nieuwe innovatieve oplossing voor een groot significant(maatschappelijk) probleem. Een nieuwe business wordt geopend.
4. Hoe ziet het plan eruit om de concurrentie voor te blijven?

- 1: Daar is niks over aangegeven
- 2: Het plan is matig omschreven
- 3: Het plan is redelijk omschreven
- 4: Het plan is goed omschreven
- 5: Het plan is uitstekend omschreven

Management

5. Welke ervaring hebben de oprichters en hun team?
    - 1: Een solo ondernemer met passende technische kennis maar onvoldoende managementtraining en ervaring in deze markt
    - 2: Een solo ondernemer met passende technische en business kennis en ervaring in deze markt
    - 3: Een team bestaande uit twee of meer individuelen die een aantal belangrijke onderdelen van management expertise dekken maar die geen kwalificaties of ervaring hebben in andere belangrijke onderdelen
    - 4: Een team bestaande uit individuelen die op het gebied van skills en ervaring elkaar goed aanvullen op elkaars expertises
    - 5: Een team bestaande uit individuelen met aanvullende skills en ervaringen, met de juiste kwalificaties en eerdere business start-up ervaring
6. Hoe complementair is het managementteam?
    - 1: De teamleden zijn niet complementair aan elkaar
    - 2: De teamleden zijn matig complementair aan elkaar
    - 3: De teamleden zijn redelijk complementair aan elkaar
    - 4: De teamleden zijn zeer complementair aan elkaar
    - 5: De teamleden zijn uitstekend complementair aan elkaar
7. Hoe volledig is het Businessplan?
    - 1: Het businessplan mist een groot aantal significante onderdelen
    - 2: Het businessplan mist een paar significantie onderdelen
    - 3: Het businessplan is redelijk maar het mist een aantal kleine onderdelen
    - 4: Het businessplan is goed maar mist een paar kleine onderdelen
    - 5: Het businessplan is volledig en gedetailleerd uitgewerkt
8. Hoe reëel is het businessplan?
    - 1: Het businessplan lijkt niet reëel
    - 2: Het businessplan lijkt onder veel voorwaarden niet reëel
    - 3: Het businessplan kan reëel maar ook niet reëel zijn
    - 4: Het businessplan lijkt onder veel voorwaarden erg reëel
    - 5: Het businessplan lijkt erg reëel
    -

Financieel

9. Hoe zijn de beste, slechtste en verwachte scenario's voor toekomstige kapitaalbehoeftes geschetst?
    - 1: Daar is niks over aangegeven
    - 2: De scenario's zijn matig omschreven
    - 3: De scenario's zijn redelijk omschreven
    - 4: De scenario's zijn goed omschreven
    - 5: De scenario's zijn uitstekend omschreven

10. Hoe is de exit strategie omschreven in het businessplan?
    - o   1: Daar is niks over aangegeven
    - o   2: De exit strategie is matig omschreven
    - o   3: De exit strategie is redelijk omschreven
    - o   4: De exit strategie is goed omschreven
    - o   5: De exit strategie is uitstekend omschreven

Questionnaire scores

Below the scores of the entrepreneurs and the investor from the questionnaire can be found.

Case	Participant	Question	1	2	3	4	5	6	7	8	9	10	Total
Case A	Entrepreneur	Score	2	4	5	4	4	4	4	4	4	3	3,8
Case A	Investor	Score	2	4	3	3	3	2	3	3	3	3	2,9
Case B	Entrepreneur	Score	3,5	4,5	4,5	4	4	3,5	4,5	4	4	2	3,85
Case B	Investor	Score	2	3	3	2	2	2	3	2	2	3	2,4
Case C	Entrepreneur	Score	1	5	4	3	4	5	3	3	3	1	3,2
Case C	Investor	Score	3	3	2	3	4	4	2	2	2	3	2,8
Case D	Entrepreneur	Score	3	5	4	3	4	3	4	4	4	2	3,6
Case D	Investor	Score	3	5	4	4	5	4	4	3	3	4	3,9
		Average score entrepreneurs	2,375	4,625	4,375	3,5	4	3,875	3,875	3,75	3,75	2	3,6125
		Average score investor	2,5	3,75	3	3	3,5	3	3	2,5	2,5	3,25	3

Interview scheme – Entrepreneurs

Below the interview script can be found. This script is used during the interviews with the founders of the high-tech start-ups in Twente.

Introductie

Doel van het interview: een gesprek met ondernemers die een high-tech startup hebben opgericht en hierbij kijkende naar hun perceptie van de 'investor readiness' van hun bedrijf.

Belang van dit interview: inzicht krijgen in hoe de oprichters van verschillende high-tech startups in Twente ervaren hoe 'investor ready' hun bedrijf is.

Geïnterviewden: (mede)oprichters van high-tech startups in Twente.

Voorafgaand aan het interview:

- **Bachelor International Business Administration en de interviews zijn data voor mijn thesis.**
- **Interviews starten met een korte questionnaire van een paar minuten.**
- **De vragen in dit interview gaan over de perceptie van 'investor readiness' bij high-tech startups.**
- **De vragen gaan over hoe u uw onderneming ervaart op het gebied van:**
  - **Technologie**
  - **Markt**
  - **Management**
  - **Financieel**
- **De resultaten zullen gebruikt worden voor het beantwoorden van de onderzoeksvraag, maar niet aan derden verstrekt worden**
- **Het interview zal opgenomen worden, maar dit interview zal anoniem verwerkt worden. Achteraf zal niet te herleiden zijn wie welke antwoorden gegeven heeft.**
- **Het interview duurt 45 minuten**
- **Heeft u nog vragen voordat we beginnen met het interview?**

Invullen questionnaire

Opening questions

Ik heb al het een en ander kunnen lezen over uw bedrijf op uw website. Kunt u mij iets vertellen over uw bedrijf? En hoe bent u erbij gekomen?

Uw achtergrond?

Aantal jaren bezig met uw onderneming?

<div align="center">

Core questions

</div>

Topic 1 – Hoe kijkt u aan tegen uw 'technology readiness'?

1. Bij vraag 1 heeft u aangegeven dat de technologie …. . Welke stappen moeten er nog worden gemaakt?
2. Bij vraag 2 gaf u aan dat de technologie … vernieuwend is. Hoe belangrijk is de technologie achter het product eigenlijk?
3. En hoe belangrijk is het om innovatief te blijven en de technologie door te ontwikkelen?
4. Is de technologie gepatenteerd?
5. Heeft u nog overige IPRs?

Topic 2 – Hoe kijkt u aan tegen uw 'market readiness'?

1. Bij vraag 3 gaf u aan dat ….. . Kunt u uitleggen waarom uw product een succes wordt?
2. En Welke potentie heeft het product? Hoe ver kan het komen? Geografisch, qua markt
3. En waar is het bestaan van een vraag vanuit de markt op gebaseerd?
4. Heeft u bijvoorbeeld een marktonderzoek uitgevoerd/ laten uitvoeren? En hoe zag deze eruit?
5. Hoe ervaren huidige klanten uw product? Denken ze ook mee bij de ontwikkeling?
6. Hoe is de marketing –en distributiestrategie uitgewerkt?
7. Bij vraag 4 gaf u aan dat uw plan om de concurrentie voor te blijven … is omschreven. Hoe ga je dat doen? En zijn er concurrenten?

Topic 3 – Hoe kijkt u aan tegen uw 'Management readiness'?

1. Bij vraag 5 geeft u aan dat het managementteam … ervaren is. Is dit voldoende om het tot een succes te maken?
2. Welke functies missen er bijvoorbeeld nog?
3. Bij vraag 6 geeft u aan dat jullie … complementair aan elkaar zijn. Waarom vindt u dit?
4. Bij vraag 7 en 8 geeft u aan hoe volledig en compleet u uw businessplan vindt. Wat mist er nog? Wat kan er nog verder worden uitgewerkt?
5. Bevat het businessplan een duidelijke omschrijving van de ideale investeerder voor u?

Topic 4 – Hoe kijkt u aan tegen uw 'Financial readiness'?

1. U geeft bij vraag 9 aan dat de scenario's … omschreven zijn. Heeft u eigenlijk een investering nodig om verder te komen?
2. En is het voor u duidelijk hoeveel u dan nodig heeft?
3. En hoe reëel zijn uw scenario's en prognoses?
4. Bij vraag 10 geeft u aan dat uw exit strategie … is omschreven. Kunt u iets meer vertellen over uw exit strategie? Hoe reëel is deze?

Waarom zou een investeerder in u moeten investeren?

Waar staat u over 5 jaar?

Rounding up

We are at the end of the interview

1. *Is er nog iets wat u zou willen toevoegen?*
   Is there anything you would like to add?

2. Heeft u nog vragen?
   Do you have any questions before we round up?

3. Wilt u een transcript van het interview ontvangen?
   Would you like to receive a copy of the transcript of the interview after I transcribed it?

Bedankt voor uw medewerking

Thank you for your cooperation!

Interview scheme – Investor
Below the interview script can be found. This script is used during the interviews with the investor of the investment company in Twente.

Introductie

Doel van het interview: een gesprek met de investeerders die een high-tech startup beoordelen voor mogelijke investeringen en hierbij onder anderen kijken naar hun perceptie van de 'investor readiness' van de startup.

Belang van dit interview: inzicht krijgen in hoe de investeerders in verschillende high-tech startups in Twente ervaren hoe 'investor ready' van deze startups is.

Geïnterviewden: investeerders in high-tech startups in Twente.

Voorafgaand aan het interview:

- **Bachelor International Business Administration en de interviews zijn data voor mijn thesis.**
- **Interviews starten met een korte questionnaire van een paar minuten, indien akkoord.**
- **De vragen in dit interview gaan over de perceptie van 'investor readiness' bij high-tech startups.**
- **De vragen gaan over hoe u uw onderneming ervaart op het gebied van:**
  - **Technologie**
  - **Markt**

- o **Management**
- o **Financieel**
- **De resultaten zullen gebruikt worden voor het beantwoorden van de onderzoeksvraag, maar niet aan derden verstrekt worden**
- **Het interview zal opgenomen worden, maar dit interview zal anoniem verwerkt worden. Achteraf zal niet te herleiden zijn wie welke antwoorden gegeven heeft.**
- **Het interview duurt 45 minuten**
- **Heeft u nog vragen voordat we beginnen met het interview?**

Invullen questionnaire

Opening questions

Kunt u mij iets vertellen over uw investeringsmaatschappij? En hoe bent u erbij gekomen?

Uw achtergrond?

Aantal jaren bezig met binnen de maatschappij? Hoeveel startups beoordeeld? Hoeveel investeringen gedaan?

Core questions

Topic 1 – Hoe kijkt u aan tegen 'technology readiness'?

6. Bij vraag 1 hebben de startups van 2,375 uit 5, bij de vraag hoe ver de technologie achter hun product is, dit is vrij laag. Hoe belangrijk is het voor jou dat de technologie op een bepaald niveau is?
7. Bij vraag 2 gaven de startups een gemiddelde van 4,625 uit 5 aan de vernieuwendheid van hun technologie. Hoe zie jij dit? En hoe belangrijk is het dat de technologie zeer vernieuwend is?
8. Hecht jij veel waarde aan het hebben van patenten van startups alvorens jij een investering doet?
9. Hoe belangrijk is het voor deze startups om te blijven innoveren en doorontwikkelen?
10. Let jij nog op andere dingen bij de technology readiness?

Topic 2 – Hoe kijkt u aan tegen 'market readiness'?

8. Bij vraag 3 gaven de startups een 4,375 uit 5. Alle investeerders zagen zichzelf als gamechanger of iemand die een geheel nieuwe business opent. Hoe zie jij dit? En hoeveel waarde hecht je hieraan als investeerder? En hoe zie jij de succeskansen bij deze startups?
9. En welke potentie hebben de producten? Hoe ver kan het komen? Geografisch, qua markt
10. Hoe belangrijk is een uitgevoerd marktonderzoek voor jou? En de manier waarop?
11. Hoe belangrijk is de uitwerking van het marketing –en distributiestrategie voor jou?

12. Bij vraag 4 gaven de startups aan dat hun plan om de concurrentie redelijk tot goed is omschreven. Wat voor waarde hecht je aan zo'n plan? En hoe kijk jij als investeerder aan tegen het bestaan van concurrenten?
13. Let jij nog op andere dingen bij de market readiness?

Topic 3 – Hoe kijkt u aan tegen 'Management readiness'?

6. Bij vraag 5 gaven alle startups aan dat het management team een team is bestaande uit individuelen die op het gebied van skills en ervaring elkaar goed aanvullen op elkaars expertises. Ben jij het hiermee eens? En is dit voldoende om het tot een succes te maken?
7. Welke functies missen er vaak nog?
8. Bij vraag 6 geven de startups verschillende antwoorden maar ze vinden het op z'n minst redelijk complementair. Kan jij je hierin vinden? Waarom?
9. Bij vraag 7 en 8 zijn de startups erg positief over hun businessplan 3,875 uit 5 voor de volledigheid en 3,75 voor hoe reëel het is. Hoe zie jij dit? En hoe zie je dit in z'n algemeen? Wat mist er vaak nog bij business plannen van startups?
10. Vind jij het belangrijk dat een businessplan een duidelijke omschrijving van een ideale investeerder voor u?
11. Let jij nog op andere dingen bij de management readiness?

Topic 4 – Hoe kijkt u aan tegen 'Financial readiness'?

5. De startups geven een gemiddelde van 3,75 uit 5 voor de geschetste beste, slechtste en verwachte scenario's voor toekomstige kapitaalbehoeftes. Hoe zie jij dit? En hoe belangrijk is dit voor jou? Lijkt het je noodzakelijk dat al deze startups een investering krijgen om te overleven?
6. En is het voor u duidelijk hoeveel zij nodig hebben?
7. En hoe reëel zijn uw scenario's en prognoses?
8. Bij vraag 10 geven de startups aan dat ze eigenlijk niet hebben nagedacht over een exit strategie. 2 uit 5. Kun je iets meer vertellen over het belang van een exit strategie? Hoe belangrijk is dit voor jou?
9. Let jij nog op andere dingen bij de financial readiness?

Heb ik nog dingen over het hoofd gezien waar jij veel waarde aan hecht bij het beoordelen van een startup?

Kun je wat vertellen over de risico's van een investeerder?

Wat mis jij bij startups?

Wat kun jij naast geld bieden?

Waar loopt het volgens jou vaak spaak binnen het investeringsproces?

Waar staan deze startups over 5 jaar?

Rounding up

We are at the end of the interview