Master thesis Business Administration

Entrepreneurial team support for new technology venture development:
A design oriented approach

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Preface and acknowledgements

Together everyone achieves more (TEAM). Perhaps more commonly, some argue that 1+1 is 3, while others quote Aristotle: "the whole is more than the sum of its parts"[1]. These descriptions all refer to the same phenomenon: the effect of collaboration is greater than each individual party could achieve. Processes of teamwork can be found as far back as the very beginning of known humankind. Recently, scholars discussed how a unique combination of human traits helped our species survive to colonize the globe; one of them being teamwork[2]. For example, situations of hunting, foraging, and migrating had much to gain through the collaboration of many.

Even though teams and cooperation lie at the very heart of mankind, for a long period of time entrepreneurship literature focused mainly on the individual entrepreneur; in line with the Schumpeterian entrepreneur: "The lone hero, who comes up with a brilliant new combination of resources and, against all odds, makes a fortune out of it" (Kloosterman & Rath, 2001). Thus, research focused on how entrepreneurs recognized, developed and exploited opportunities linked to the creation of new ventures. However, during the late eighties, scholars began to emphasize collective entrepreneurship (Reich, 1987) and, until recently, even found evidence that teams of entrepreneurs are the superior entrepreneurial start-up concept (Harper, 2008). Hence, contemporary literature also focuses on the skills, abilities, and interactive dynamics of entrepreneurial teams (Amason, Shrader & Tompson, 2006). As a result, insight was gained in how Organization X as business incubator facilitated team support in their enterprise-support program to participating entrepreneurs. As not a lot of practice-based papers were found by the author on this specific topic, hopefully contributions were made to the field of entrepreneurship literature.

This thesis is performed in the context of graduating the master study 'Business Administration' at the University of Twente. By finishing this project, a period of three years of academic education has almost ended. Almost, as I have yet to finish another thesis in order to graduate from the master study 'Communication Studies', preferably before the first of November; as I will start a new life span in Amsterdam. It should become clear that I do not resent the idea of finishing; on the contrary, I very much look forward to these new challenges in my life. Living in a new and larger city, meeting new people, and of course starting my professional career are all part of this new life span.

In the past three years, and more specifically during this graduation project, several people have helped and supported me throughout the process. In this line, I would like to thank all of those people. However, some of them deserve a special mention. Completing two master studies not only relies on yourself, but also on having people close to you that no matter what, always support you. Thus, first and foremost I would like to mention my parents Romeo and Marleen. I am so very grateful to them for all their financial and psychological support and never giving up on me. Furthermore, I would also want to mention Eefje (my girlfriend) for her continuous support and love throughout this process. Finally, Dominique and Alexander (my brothers) deserve a special mention.

I would also like to thank Huub Ruel for having me as a master student and facilitating the support and guidance in defining and refining this project. Furthermore, I would like to thank Ellen Donkers for her help as co-reader on such a short notice. Finally, I would like to thank all Organization X staff for their help and open attitude towards helping me find appropriate interview subjects. In this line, I would also like to thank all Organization X participants and staff, whom I interviewed, for their time and interesting input.

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[1] Source: http://www.goodreads.com/quotes/20103-the-whole-is-greater-than-the-sum-of-its-parts
[2] Source: http://www.scientificamerican.com/article.cfm?id=humans-brain-power-origins

Management summary

This thesis is performed in the context of the master study 'Business Administration' at the University of Twente, commissioned by Organization X; a business incubator with an enterprise support program focused on the support and development of high-tech new ventures. The problem owner, content expert of team development within Organization X, acknowledged that contemporary entrepreneurial team support offerings possibly lack scientific research findings. In this line, the performance of team support offerings could be improved. Hence, the main goal was to create guidelines derived from literature in how entrepreneurial teams could be effectively supported in the formation and development of their teams. Furthermore, since Organization X is a business incubator which supports entrepreneurs in their business development, our secondary goal was to create additional value by increasing performance by transferring the proposed guidelines to the contemporary situation of Organization X. We outlined the following research questions: *1) Which guidelines can be derived from the literature for the formation and development of new high-tech entrepreneurial teams? 2) How can these guidelines be transferred to high-tech entrepreneurial team support at Organization X?*

For this business solving project, as our focus was performance-based and we wanted to create value from an individual organizational perspective, we chose to employ design oriented research; more specifically: the regulative cycle. Based on a first exploratory stage we explored and assessed the full scope and depth of the preliminary business problem by interviewing several internal and external stakeholders. The second stage contained the analysis and diagnosis of the proposed problems in relation to team support, i.e. we validated the business problem based on validation interviews and explored the causes and consequences of the problem. The final stage incorporated a theoretical investigation in which we related theoretical insights as solution to the validated problems, formulated several scientific guidelines and designed an integral model of team support. We presented the following guidelines:

1. When supporting entrepreneurial team formation attention is needed on human and social resources
2. When supporting entrepreneurial team formation emphasis is considered necessary on social connections
3. When supporting entrepreneurial team development attention is required on managing relationships
4. When supporting entrepreneurial team development emphasis is vital on team behavior and understanding
5. When supporting entrepreneurial team development priority is essential on personal integration to tasks

The next step was to integrate our research findings as idealized design, to the contemporary processes of team support employed by Organization X. In order to do so, we conducted a final round of integration interviews with several internal and external stakeholders. Even though the outcomes showed that most of the current processes of Organization X withstand the scientific evaluation to a great extent, still the design of our tool supports certain process steps and therefore is of value. Furthermore, the integral model provided practical implications, namely as tool for: communication, quality control, formal information repository, input for a real-life team simulation and team formation processes. However, we noticed that as the identified problems weren't directly related to the content of team support processes, other fundamental problems must exist which constrain contemporary team support processes in order to effectively support entrepreneurs.

As the regulative cycle contains multiple feedback loops, we returned to the outcomes of our exploratory interviews and found that several organizational processes exist which constrain team support. In other words, possibly the training program fails to reach its goals due to organizational constraints. To cope with these constraints, we outlined several preliminary recommendations on the basis of the exploratory interviews which Organization X needs to consider when improving performance of their overall enterprise support program. However, as validation and

diagnosis has not taken place, the following recommendations are neither complete, nor final. They do however provide preliminary insights as main focus points for further research. Therefore we outlined the following recommendations:

1. Organization X should establish the underlying needs of entrepreneurs before training comes in place
2. The Organization X support program needs a clear structure and needs to be clearly communicated
3. Organization X needs to refocus on the social binding with and between their participants
4. Organization X should create occasional consultation between key stakeholders to build an integral program
5. Organization X ought to relocate resources to implement time-saving and quality-improving instruments
6. Organization X must align its training methods to their specific target group

In the final part we evaluated the application of the regulative cycle in our business solving project based on sound theoretical evaluation guidelines. Furthermore, we presented several theoretical contributions from practice, which were generalized from the organizational problems encountered within Organization X. Even though the propositions need to be empirically investigated, they provide a first step in the contribution to theory:

1. Organizational constraints negatively affect training outcomes
2. When the underlying needs of participants are established before training, support will be more effective
3. Clear communication of the contextual factors of an enterprise support program leads to higher participation
4. The greater the social binding between participants, the higher the value of an enterprise support program
5. Facilitating adult learning principles in an enterprise support program leads to more effective practice

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Part 1: Introduction

According to Shepherd, Douglas and Shanley (2000) the question that lies at the very heart of entrepreneurship research is: why do some new ventures excel, while others fail? This question is especially significant as the survival rate of new ventures is only 60% in the first year and 10% over five years. Even more specifically, new technology ventures (hereafter: NTV's) have the lowest survival rate among new ventures in general (Song, Podoynitsyna, Van der Bij & Halman, 2008). Hence, it isn't strange that Weinzimmer (1997) contended that it is important to understand factors that foster small-business growth in order to increase our understanding of firm survival; as identifying the determinants of growth may help decrease high failure rates among small firms.

In this line, the University of Twente also noticed that most of their spin-offs tended to remain relatively small. As a result an expert centre for technology based entrepreneurship conducted several studies to identify factors which affect the growth of spin-off ventures. The analysis revealed that having an international market strategy, an experienced multi-disciplinary team, considerable start-up capital and networks in the areas of science, market, and industry are important predictors of venture growth. To cope with the outcomes of these studies Organization X was designed as business incubator. Business incubators such as Organization X focus on compensating for the resource scarcity of newly founded innovative ventures to ensure entrepreneurial stability, sustainable economic growth and long-term business survival (Schwartz & Hornych, 2008). The main role of business incubators is to offer high-tech new ventures the opportunity to take part in programs designed to support the successful development of their ventures, as these resources and business expertise provides participating NTV's a competitive edge (Smilor, 2009).

However, in line with research findings, universities and their agencies might not spend enough time and resources developing the entrepreneurial teams of the new ventures they support (Ensley & Hmieleski, 2005). Rather contradictory, Harper (2008) discusses that there is an increasing amount of empirical evidence that entrepreneurial teams are touted as the superior entrepreneurial start-up concept. In addition, Song et al. (2008) found that the entrepreneurial team is seen as a key part in new entrepreneurial firm performance, which according to Aspelund, Berg-Utby and Skjevdal (2005) holds even more for NTV's due to the higher degree of 'liability of newness'. Ensley and Hmieleski (2005) argue that guideline creation for the development of entrepreneurial teams is essential for the long-term viability and success, especially related to the technology transfer process of high-tech new ventures.

Focus and research questions
Our main focus lies on the support of entrepreneurial teams in relation to new venture performance. Hence, the questions that stand at the basis of our research are: *1) Which guidelines can be derived from the literature for the formation and development of new high-tech entrepreneurial teams? 2) How can these guidelines be transferred to high-tech entrepreneurial team support at Organization X?*

Our primary goal is to support entrepreneurs in the formation and development of their entrepreneurial teams. However, as Organization X as business incubator supports NTV's in their business development, our secondary goal is to explore the contemporary problems Organization X faces in regard to their team support processes. Thus, although we take an independent standpoint as how to support entrepreneurial teams in relation to their team formation and development, we will also align our findings to the contemporary processes of Organization X in order to possibly create higher value by increasing performance.

To cope with our research questions we will employ a different type of research methodology, namely: design oriented research. We employ this specific type of research as it is performance-focused, i.e. it fits best to the focus of

this thesis, as we will solve several problems (in this case for both Organization X as for its entrepreneur participants) to create higher performance. In this line, design oriented research is known to cover both issues of rigor as well as relevance (Shrivastava, 1987; Van Aken, 2005) as it fills the gap between empirical (rigor) and practical (relevance) research. A logical structure for solving business problems is the regulative cycle (March & Smith, 1995; Van Aken, 2004), as the regulative cycle starts with a practical problem in the field and through the design processes bases its solution on strong theoretical guidelines (Van Aken, Berends & Van der Bij, 2009). According to Wieringa (2010) practical problem solving delivers artifacts with the aim of solving practical problems in an organizational environment, and design science research investigates properties of these artifacts.

Theoretical and managerial implications

The theoretical implications of our research are threefold. First, we will attempt to bridge the gap between rigor and relevance in managerial research, as there is a broad consensus that scientific rigor and relevance should be combined (Hodgkinson, Maule, Brown, Pearman & Gleister, 2002). Second, whereas most contemporary literature focuses on quantitative methods to empirically test the determinants of entrepreneurial teams related to business growth (e.g. Song et al., 2008), we focus on qualitative methods to understand which determinants are important especially for entrepreneurs and for business incubators. Finally, current research focuses on entrepreneurial team characteristics and training strategies separately. Our research design combines both streams of research in order to create an integral model of entrepreneurial team support.

The managerial implications of our research mainly lie with Organization X as business incubator and focus on entrepreneurial team support. First, a list of contemporary problems and solutions are listed, validated and visualized based on results of both internal and external stakeholders. Furthermore, an integral model of entrepreneurial team support was fitted to the specific processes of Organization X. Finally, entrepreneurs who find profit and growth most important in developing their business could be satisfied with our integral model as a means of aligning entrepreneurial team development factors to business development and growth.

Business project outline

The first part of this project is to further outline the proposed research methodology of design oriented research. The second part of this project focuses on the internal and external exploration of the topic. In the third part we will further validate the team support problems raised in the first part and focus on a central problem to solve. Finally, in the fourth part, a fitting theoretical framework will be designed in order to provide an answer to our research questions and as the basis for an integral model of team support; as artifact related to the main problems outlined. The integral model of team support contains several design guidelines of entrepreneurial team support. Finally, we will integrate the model of entrepreneurial team support (as idealized design) to the contemporary processes of Organization X and provide recommendations.

Part 2: Research methodology

This preliminary part is set out to describe the use of design oriented research in business and management studies. As design oriented research is performance-based, it possibly fits our research purpose best as it provides a solution to the rigor-relevance gap (Shrivastava, 1987; Van Aken, 2005) and provides value from a single organizational perspective.

2.1 Rigor-relevance dilemma

In today's society innovation happens everywhere at a fast pace except in academia (Fendt & Kaminska-Labbé, 2011). The problem is that science (from a business scholar's point of view) is most often considered as empirical (where rigorous validation and reliability issues are addressed) which leads to rather generic knowledge. However, does research always have to be usable to a large general population? What about individual research studies with specific research questions? Especially when we look at the management and business field; what is the applicative functionality of general knowledge from a single organizational perspective (Van Aken, 2005)? In other words, for whom and to what ends is scholarly research ultimately aimed?

A large amount of scholars acknowledge above analysis and state that there is a clear gap between empirical and practical research (Fallman, 2007; Fendt & Kaminska-Labbé, 2011; Hodgkinson & Starkey, 2011; Patas, Milicevic & Goeken, 2011; Thorpe, Eden, Bessant & Ellwood, 2011; Van Aken, 1994; Venable, 2010). This holds that management scholars cannot exclusively rely on Lewin's, as cited in Weisbord (2004), notable assumption: "there is nothing as practical as a good theory". Most scholars refer to this gap as the rigor-relevance dilemma (Bridgman, 2007; Kieser & Leiner, 2009; Starkey & Madan, 2001). Within the business and management field, this gap is also coined as an utilization problem of management research (Van Aken, 2004), as Mode 1 vs. Mode 2 thinking (Gibbons et al. 1994), as a needed realist turn in business and management studies (Reed, 2005), and as the research-practice gap (Syed, Mingers & Murray, 2009). However, all descriptions refer to the same: "a theory is either scientifically proven, however too broad or too general to provide relevance for practice, or relevant to practice, however lacking sufficient rigorous justification" (Van Aken, 2004). But how does this dilemma form a problem for the specific field of management and business studies?

To provide a sound answer to this question, several reasons are outlined. First, according to Van Aken (1994) the discipline of business studies hasn't been fully accepted as a scientific discipline for a long time, thus business scholars concentrated primarily on empirical research where they could find 'hard' empirical evidence for certain events. As a consequence, the equally essential practical and relevant side of research has been somewhat under researched and is considered as 'not meeting scientific standards'. Secondly, Starkey and Madan (2001) argue that the contemporary business world sets a premium upon knowledge as source of competitive advantage. However, universities and businesses continue to stay very divergent institutions in terms of how they produce and manage knowledge, and their differentiating motivations for participating in and utilizing research. In other words, businesses are progressively concerned with relevance, while universities hold on to a contrasting view of knowledge. Finally, Susman and Everard (1978), as cited in Davies (2007), discovered a crisis arising in organizational research: "even though our research methods and techniques have become more sophisticated, they have also become less useful for solving the practical problems that members of organizations face". Given that research methods have since become even more sophisticated it is not surprising that the relevance gap remains and persists in surfacing as a concern, as internal validity could be more rigorously controlled, while external validity is limited. Hence, science in the management and business field is contemporarily viewed as theory oriented and not so much practical oriented.

However, according to Rynes, Giluk and Brown (2007) the failure to implement research-supported practices has been observed in nearly every field where there is a separation between those who conduct research (i.e. scholars) and those who are in a position to implement research findings (i.e. organizational managers). To put even more emphasis on the problem, some of the harshest criticism of the relevance of academic research has come from academia itself (Ghosh et al., 2009). Thus, the problem of relevance persists and continuous to be a much studied subject in literature (Fendt & Kaminska-Labbé, 2011; Hodgkinson & Starkey, 2011; Nicolai & Seidl, 2010; Van Aken, 2004; Wieringa, 2010).

2.2 Rigor-relevance dilemma within business and management research

To find a solution to bridge the rigor-relevance gap, we need a deeper insight in the nature of business and management research. We will do so by seeking the differences between the science disciplines. Contemporary management and business studies (as part of social sciences) fit the description of the explanatory science discipline (as rigorousness is dominant over relevance), coined by Simon (1969). Van Aken (2004), describes the mission of explanatory science, as: "to describe, explain and possibly predict observable phenomena within its field".

Judging by academic publications most management research is directed towards advancing theory (i.e. the gaining of generic knowledge usable to a large general population) and the conclusion of such research is implicating statements as: "if the environment becomes more complex, the company has to decentralize its decision making" (Fendt & Kaminska-Labbé, 2011). When conducted rigorously scholars expect that this statement is plausible, especially when there is ample supporting theory. However, Fendt and Kaminska- Labbé (2011) argue that management and business studies are pursuing physics and other natural sciences where causality can occur. According to this analysis, the ideal is that a manager, when implementing a particular theory, would know that when performing X (e.g. decentralizing decision making) under conditions A (e.g. environment becomes more complex), will lead (with reasonable certainty) to the predicted and preferred conditions B (e.g. flexibility to effectively cope with external contingencies). Indeed, some predictions precede to expected outcomes, however, practitioners (e.g. organizational managers) realize that for numerous more complex issues this does not maintain. Thus, should business and management studies still be fully seen as an explanatory science or should the field of business and management also be discerned within other disciplines of science?

To provide an answer to this question, we need to further elaborate in how management and business science differs from other explanatory sciences such as natural science. In this line, Fendt and Kaminska- Labbé (2011) argue that business and management studies dissent from other explanatory sciences in the sense that too little theories exist for causation issues. In other words, complexity leads to unpredictability. Due to multiple contingencies apparent within organizations, predictions with a reasonable precision cannot be made. The corporate environment is full of intelligent opponents that constantly change their behavior. Hence, organizations need a mix of resources and action, and the competence to react appropriately to surprise. Thus, it is essential that organizational managers rely on their intuition in order to hesitate and improvise in regard to these situations. However, contemporary academic research is a quest for truth, i.e. to accomplish a shared understanding of causal patterns (Van Aken, 2005). Due to this contrasting situation, Davis (2007) outlines that practitioners rarely read academic literature and even if they do, findings are not adopted as they are not effective enough in specific situations. Therefore, the primary indicated critique of academic management research is that it has had very little impact on the thinking and behavior of managers (Davies, 2007).

According to Fendt and Kaminska-Labbé (2011) the relevance gap is a natural consequence of the predominant paradigms of management science. In other words, social phenomena are not physics and thus need to be researched differently (at least to a certain extent). However, when practitioners (i.e. organizational managers) search for

answers regarding questions to non-generic and complex specific problems, what type of science should be considered? Similarly, could this proposed type of science provide a solution to the rigor-relevance gap? In this line, possibly the differences between the Mode 1 vs. Mode 2 approach to knowledge production in business and management studies could provide more insight to the matter (Bartunek, 2011; Gibbons et al., 1994; Kieser & Leiner, 2009; Nicolai, Schulz & Göbel, 2011; Starkey & Madan, 2001; Van Aken, 2005;).

2.3 Bridging the rigor-relevance gap

Mainly the British schools of management conducted a vast number of research publications in the domain of relevance. The debate was strongly induced by the originative research of Gibbons et al. (1994), on the distinction between Mode 1 and Mode 2 knowledge production. Van Aken (2005) explains that Mode 1 knowledge production is purely academic and mono-disciplinary; while on the contrary, Mode 2 knowledge production is multidisciplinary and is directed at solving complex and relevant field problems. In addition, Mode 2 knowledge production is allegedly the example to follow in academic management research to bridge the relevance gap (Starkey & Madan, 2001). Arguably, the contemporary dominant Mode 1 approach is no longer tenable in management and business research (Starkey & Madan, 2001). Thus, Mode 2 approaches to research have received a reasonable amount of attention. Nicolai, Schulz, and Göbel (2011) describe that Mode 2 affirm a new approach of research which includes the interests and viewpoints that arise in broader social and economic contexts (e.g. organizational contexts). Nicolai, Schulz, and Göbel (2011) continue by stating that Mode 2 research can be understood as: "a system of knowledge production conducted in the context of application". Advocates of the Mode 2 approach therefore argue that knowledge should be produced both in the context of a particular research discipline and in that of application.

The literature on design science and practitioner–academic collaboration is also based on Gibbons et al. (1994)'s ideas and regards Mode 2 as a promising approach to overcome the rigor-relevance dilemma. Romme (2003) portrays that management and business studies should be expanded to entail design as one of its dominant modes of employing management research; as design prioritizes solution finding, broader purposes, and ideal target systems. Thus, design fills the relevance gap to a large degree. In addition, design science has been represented by scholars (Starkey, Hatchuel & Tempest, 2009) as the personification of Mode 2. Polzer, Gulati, Khurana and Tushman (2009) agree with this analysis and suggest that a full-cycle approach to research could help bridge the rigor-relevance gap. This occurs when an individual researcher cycles between multiple research methods and for example combines an explorative step (relevance) with a validating step (rigorous) both needed to explain the observable fact. In particular, conducting design oriented research on the basis of the structured regulative cycle (as full-cycle approach) could be the solution to bridge the rigor-relevance gap, as it leads to the coverage of both issues of rigor as well as relevance (Shrivastava, 1987; Van Aken, 2005).

2.4 Design oriented research as solution

There is broad consensus that scientific rigor and relevance should be combined (e.g. Hodgkinson at al., 2002). The proposal to differentiate social science (e.g. business and management studies) amid explanatory science and design science is strongly motivated by Simon's (1969) 'The Sciences of the Artificial'. However, as we argued previously, contemporary design science is derived from the explanatory paradigm (Van Aken, 2004). Yet, the understanding and predicting of causal phenomena in social science, contradictory to e.g. natural sciences (Van Aken, 2005), in many cases does not hold due to (amongst others) the complexity and contingencies of social systems. Moreover, a dominant approach of explanatory science alone is not adequate as it is seldom relevant to practice (Davies, 2007; Fendt & Kaminska- Labbé, 2011). Hence, Van Aken (2004) argues that the crucial task in order to bridge the relevance

gap is to increase design knowledge, i.e. knowledge that can be used in designing solutions to specific problems in specific contexts.

As research in regard to design science is generally found in the literature of other disciplines, the next subparagraphs will be used to describe contributions made in two related fields, namely: Information Systems (hereafter: IS) and Computer Science (hereafter: CS). Possibly the contributions of these fields concerning the process of design science could form a basis in order for us to make generalizations for the specific field of business and management studies, as it could help in how to conduct design oriented research. Particularly as there is not a great amount of research on the subject of design science within the social sciences (Verschuren & Hartog, 2005) and even more specifically concerning business and management studies; apart from the Dutch school of research (Van Aken, 1994; Van Aken, 2004; Van Aken, 2005; Verschuren & Hartog, 2005). However, the first step is to conceptualize the term 'design'.

2.4.1   Conceptualization of design

The term 'design' is difficult to conceptualize as it can indicate a variety of meanings, to a variety of individuals, in a variety of different contexts. For example, Fallman (2007) explain that some individuals view design as: a profession, as an activity, or as an artifact. Thus, defining 'design' frequently becomes a problem of being either too broad or too narrow. In this line, March and Smith's (1995) definition is too broad: "attempts to create things that serve human purposes". Still, the definition outlined in this paper is inclusive rather than exclusive. Following the definition proposed by Fallman (2007) we conceptualize design as: "a process in which something is created – working out the form of something new, consciously creating something which was not previously there". In other words, 'to design' is concerned at creating a conscious aim to develop formerly missing artifacts; to make things better in the real world.

2.4.2   Business and management research as design science

Now that we have conceptualized 'design', we will search for literature in the IS and CS research domains with the aim to enhance design science in business and management studies, i.e. insight in how to effectively conduct design science by making sound generalizations. In this line, Hevner, March, Park and Ram (2004) explain seven solid guidelines in how to evaluate design science: 1) the outcome of a design should be an artifact, i.e. producing an identifiable and viable artifact, 2) the design must address a relevant and important problem, i.e. important and relevant to the stakeholders, 3) the utility, quality, and efficacy of the design artifact must be rigorously evaluated, 4) the contribution to research must be clear and verifiable, 5) research methods must be rigorously applied, 6) the researcher should approach the process as a cyclical problem solving process, and 7) the presentation of the results should address both the rigorous requirements as relevance requirements.

Even though Hevner et al. (2004) dominate the criteria, standards, guidelines, and expectations for how design science research should be conducted, there is a debate about how the quality (rigor and relevance) of design science research should be evaluated. The study of Venable (2010) investigates the current state of this debate and outlines that variance on what guideline areas should be used as criteria and standards in order to judge the quality of design science research exist. For example, several respondents cautioned against the use of guidelines as a mandatory checklist for evaluating design science research. Furthermore, possibly there are more than just these criteria. Nevertheless, there is near consensus on a few areas, such as: the need to address and help solve an important problem, to have a clear design artifact, and to have some form of evaluation.

2.5   Regulative cycle as general structure to conduct design oriented research

As previously outlined, a full-cycle approach to research could help bridge the rigor-relevance gap (Polzer et al., 2009). The regulative cycle is such a full-cycle approach, i.e. a general structure of a rational problem solving process to

analyze the current situation and current change goals, to propose possible changes to meet those goals, to evaluate possible changes and select one, and to apply the change and then start all over again (Van Aken, Berends & Van der Bij, 2009). Thus, the regulative cycle provides relevant guidelines for solving practical problems. Van Strien (1997) explains: "the regulative cycle is directed towards the improvement of individual problem-situations with the help of low-level, problem-directed theories and is guided by norms and criteria". In business and management, the regulative cycle is used in order to improve the performance of a business system, division or an organization on one or more criteria. However, the regulative cycle is but one option to conduct research on the basis of design science. Other possibilities include prototyping (e.g. Visscher-Voerman & Gustafson, 2004) where the design, prototyping and testing of tools are predominant. Still, in our research we will employ the proposed regulative cycle (Van Strien, 1997) and utilize additional guidelines (Van Aken, Berends and Van der Bij, 2009) as they clearly specified their research methods to business problem solving (hereafter: BPS), which is most in line with our research focus. Furthermore, other possibilities such as prototyping will not be employed due to strict time and resource constraints.

The classic problem-solving cycle (Van Strien, 1997) has five basic process steps: 1) problem definition, 2) analysis and diagnosis, 3) plan of action, 4) intervention, and 5) evaluation. The steps are usually incorporated in a design part, namely: problem definition, analysis and diagnosis, and plan of action; a change part: intervention; and a learning part: evaluation. However, again due to time constraints we will predominantly focus on the design part of the regulative cycle, which is common to most BPS projects (Van Aken, Berends, Van der Bij, 2009): "the implementation of the final design, along with the evaluation of such an implementation, is often left to the organization that started with the problem mess." However, based on the proposed guidelines by Hevner et al. (2004) we will also focus on evaluating the application of our design approach. Concluding, we will briefly further elaborate on the steps of the design part of the regulative cycle and how we will fill in these steps:

Step 0: Problem mess
The problem mess is the starting point of a BPS project and contains the initial problem which is constructed by the problem-owner of the organization (Van Aken, Berends & Van der Bij, 2009). A meeting will be held with the problem-owner within the organization to outline the problem mess and define a preliminary problem statement.

Step 1: Problem definition
The problem mess is the step where the problem is constructed by the problem-owner, however problem analysis may show that the initial problem is a perception problem or a target problem, or may show that the problem is only a symptom of an underlying one. Hence, this step is a thorough scoping process (Van Aken, Berends & Van der Bij, 2009). We will conduct secondary research and several exploratory interviews to gain knowledge in regard to the contemporary problems related to team support processes at Organization X.

Step 2: Analysis and diagnosis
Within the analysis and diagnosis step, the problems found in the problem definition will be empirically analyzed. This leads to input for the diagnosis, where specific knowledge concerning the context and problem is created. In other words, this is the analytical part of the project (Van Aken, Berends & Van der Bij, 2009). We will conduct several validation interviews in order to analyze and diagnose the problems and its consequences encountered. In this line, we could also establish the relative importance of the proposed problems and we could choose a central problem to solve.

Step 3: Plan of action
The plan of action step involves fitting contemporary literature to the validated context specific information and problems in the analysis and diagnosis step. On the basis of the alignment, a theoretical solution will be designed (Van

Aken, Berends & Van der Bij, 2009). We will create several sub research questions based on the validated problems in order to fit the literature to the problems. This will lead to clear guidelines and the design of a sound artifact, namely an integral model of entrepreneurial team support. Finally, the model (as idealized design) will be transferred to the contemporary situation of Organization X in order to recommend improvements. In this line, we will employ a final round of interviews.

2.5.1   Regulative cycle as general structure to solve Organization X's business problems

Now that we have outlined the regulative cycle as logical structure for design science research (Van Strien, 1997), which bridges the gap between the rigor-relevance dilemma (Shrivastava, 1987; Van Aken, 2005); we will briefly argue why this fits our thesis best. Our main purpose is to design a clear artifact (an integral model of entrepreneurial team support) and improving an existing situation (the contemporary enterprise-support program within Organization X). In other words, we want to create value from a single organization perspective. Thus, our goal is not only to provide generic rigorous knowledge for the field of business and management studies, but also to solve a problem relevant within a specific context. To effectively do so, we will follow the design steps of the previously described regulative cycle. Furthermore, we will employ both rigor (empirical and theoretical exploration, analysis and validation) as well as relevance (creating an artifact for NTV's in general and transferring it to Organization X as business incubator). Finally, we will use the evaluation criteria proposed by Hevner et al. (2004) and Venable (2010) to evaluate our conducted research and in this line provide future research possibilities.

Part 3: Problem definition

In the problem definition part a preliminary problem was stated and via a thorough scoping process further explored. In this line, several interviews with internal and external stakeholders were held. Finally, on the basis of the interview outcomes a cause and effect diagram is presented.

3.1 Intake and external orientation

According to Van Aken, Berends and Van der Bij (2009) the objective of the intake process is to explore the possibilities of a BPS project. The external exploration should establish relationships between existing developments in the industry and the topic of focus: entrepreneurial team support.

3.1.1   Intake process

The intake process started with an intake meeting with the problem-owner, content expert of team support, as company representative. A content expert is the knowledgeable discussion partner of the educational designer, whom seeks input when designing the curriculum for a specific topic. Table 1 provides background information regarding the intake meeting.

Date	Time	Location	Duration	Sex	Education	Occupation
10-11-'11	15.00	University	60 min.	M	Business Administration/European Studies	Assistant Professor/Senior Researcher

Table 1: Background information intake meeting

Summarized, the problem-owner outlined the problem mess which Organization X faces. First, it was mentioned that not enough emphasis lies on team development, rather than business development and personal development, the two other main pillars of the Organization X program. Second, the role of content expert of team development is unclear, as he doesn't provide input in the training program of Organization X related to team development. Third, the value that Organization X provides is unclear. According to the problem-owner, the current training program lacks sufficient scientific justification. Too much emphasis lies on the practical experience of the trainers, coaches and external experts and too little is theoretically grounded on the basis of latest research insights. In other words, to what extent does the contemporary program differ from a practical entrepreneurial study? Consequently, the initial business problem (hereafter: BP) primarily concerns a deeper needed understanding and insight in team support within Organization X, and the lack of rigorous justification in the contemporary training program. Based on the intake meeting, the following preliminary problem statement derived: *'Too little scientific emphasis lies on the development of entrepreneurial teams, while this is seen as a main pillar for the long-term viability and growth of high-tech entrepreneurial ventures'.*

3.1.2   External orientation

Universities in developed countries are progressively more entrepreneurial (Rothaermel, Agung & Jiang, 2007). However, universities and their agencies (i.e. business incubators such as Organization X) might not spend sufficient effort and resources in developing the entrepreneurial teams of the new ventures they support (Ensley & Hmieleski, 2005). Even though entrepreneurial team development is a significant aspect associated with new venture performance (Song et al., 2008), still entrepreneurial support predominantly focuses on aspects directly related to business development, e.g. marketing and technology (Ensley & Hmieleski, 2005). As a result, there is a large opportunity for support entities to form guideline initiatives that support the development of entrepreneurial teams

as a means to enhance the viability and success of NTV's (Ensley & Hmieleski, 2005). In this line, Ensley, Pearson and Pearce (2003) explain that new venture performance has typically been defined along two dimensions, namely: survival and success.

Ensley and Hmieleski (2005) explain that trainers and coaches, who guide participating start-ups, need more skills than just intellectual property protection, market and product development, and financial feasibility; it is fundamental that these individuals expand their understanding in how entrepreneurial teams function and the impact they have on new venture performance. Moreover, the authors argue that these individuals should get specific training on the coaching and developing of entrepreneurial teams and to support the building of teams. In this line, guideline creation for the specific assessment, monitoring, and development of entrepreneurial teams is essential for the long-term viability and success of the technology transfer process. Finally, Ensley and Hmieleski (2005) describe that such guidelines would enlarge the likelihood that the support they provide to new ventures, will translate into performance gains. Moreover, Forbes, Borchert, Zellmer-Bruhn and Sapienza (2006) delineate that while various determinants of new venture performance are outside management control (e.g., market conditions and competitor response); the entrepreneurial team is a fairly controllable entity. Hence, team formation and team development support guidelines for team training could be created to enhance new ventures' probability of success.

3.2 Internal orientation

The internal orientation is employed to evaluate the full span and depth of the preliminary business problem, and to include additional perspectives to the issue. In this line, the preliminary BP is discussed with important internal and external stakeholders concerning the problem (Van Aken, Berends & Van der Bij, 2009). As previous research has been conducted in this specific context, in addition, secondary research was performed.

3.2.1 Secondary research

Secondary research integrates the collation and synopsis of existing research (Crouch & Housden, 2003). In this line, a vision document was composed in regard to team development processes by an external expert. The goal was to outline the role of team development in the enterprise support program of Organization X, as offerings related to team development were limited. Furthermore, according to several important internal stakeholders, team development is contemporarily specific rather than aligned to the other pillars in the enterprise support program, namely: business development and personal development. Spread over approximately three months, interviews were held with several internal and external stakeholders, to be exact: members of the management team, core teachers, members of the expert centre for technology based entrepreneurship, trainers, coaches, and participants.

3.2.1.1 Vision document

To cope with the complexity of the vision document and to convey a deeper understanding, a meeting was planned with the author of the document. Table 2 provides background information regarding the vision document meeting.

Date	Time	Location	Duration	Sex	Education	Occupation
01-12-'11	14.00	University	60 min.	F	Educational Design and Management	Expert/Trainer team development

Table 2: Background information vision document meeting

The results of the interviews described in the vision document were quite divers:

The *management team* feels that after a clear business strategy is determined, the focus lies on the development of the entrepreneur (personal development) and his or her entrepreneurial team (team development) within a dynamic entrepreneurial environment. Practice however shows that this focus isn't always visible. In other words, business development is dominant. The *coaches and trainers* emphasize that team development cannot be treated separately from personal development and business development, i.e. equilibrium is required. However, contemporarily the type of coach or trainer and his or her knowledge and experience determine which area dominates. *Members of the expert centre for technology based entrepreneurship* assert that there are relatively a lot of loose training modules offered by Organization X; however, not a lot of emphasis lies on the integration of gained knowledge and skills during training assignments or business simulation cases. In addition, from a coach perspective, participants only gain limited advice in reference to which training modules fit his or her specific situation, needs, phase of business development and goals determined in their individual development plan.

Entrepreneur participants feel that team development begins to play a role when a concrete mission, vision and strategy are clear and determined in a business plan or when the market rapidly asks for concrete results and the entrepreneur has too little time and resources available. Participants do not consider collaboration efforts via their network as a form of team development. Team development is more associated with: the development of a team which collaborates and together works towards the achievement of business results, in which the team members complement each other in tasks and responsibilities. As a team in its entirety, entrepreneurs expect to gain higher business results than when individuals are separately used as experts, e.g. for questions regarding complex issues. Participants do have particular questions in reference to how a team can be effectively built.

3.2.2   Exploratory interviews

The most important function of exploratory interviews is to include additional perspectives to the preliminary problem (and the outcome of secondary research) to assess its full scale and depth (Van Aken, Berends & Van der Bij, 2009). In addition, exploratory interviews offer a general point of reference and help identify which areas need deeper analysis and diagnosis (Downs & Adrian, 2004). Thus, several interviews were conducted with internal stakeholders (people who are responsible for the problem) and external stakeholders (people who are confronted with the problem).

Dooley (2009) explains that the interview is a verbal obtrusive measure; the most extensively adopted method in social research. Millar, Crute and Hargie (1992) regard the research interview as a specific kind of interview: "a two-person conversation initiated by the interviewer for the specific purpose of obtaining research relevant information and focused by him on content specified by research objectives". However, Millar, Crute and Hargie (1992) argue that there is no predetermined research interview; the purpose of the research question determines the type of interview, namely: structured or unstructured. Our purpose for conducting exploratory interviews is twofold: to explore the preliminary outlined problem and to gather further information to gain a deeper insight into the motivations of important internal and external stakeholders. In this line, Lindlof and Taylor (2003) explain that interviews are principally well suited to understand the social actor's experience and perspective.

Marshall and Rossman (1989) explain that in-depth interviewing is: "a conversation with a purpose". This particular type of interview is to a large extent less structured than formal interviews. The researcher usually explores a few general topics to help expose the participant's meaning perspective; but otherwise respects how the participant frames and constitutes the responses. Mitchell (1998) argues that in-depth interviews are generally exploratory in nature and are conducted when the researcher needs to refine and increase his understanding of a topic; which is evidently required for this particular step of the regulative cycle (Van Aken, Berends & Van der Bij, 2009). Finally, Dooley (2009) points out that when standardization is limited, an interview guide provides a checklist of topics an

interviewer could cover. The guide provides only a general approach which facilitates the natural rhythm of the dialogue and supports unbiased disclosure by the interviewee (see appendix A for the exploratory interview guide). Following the guidelines proposed by Van Aken, Berends and Van der Bij (2009) the exploratory interviews were set up to gain specific knowledge and insight regarding contemporary team support processes. For that reason we sought for perspectives in regard to the following sub research question: *'What are the current problems, causes and possible solutions related to entrepreneurial team support within Organization X?'*

3.2.2.1   Interview sampling and analysis

To generalize the whole organization on the basis of an interview sample, the sample needs to be: representative, random and stratified (Downs & Adrian, 2004). By interviewing several different internal and external stakeholders, both practitioners of the Organization X business program and Organization X staff focused on team support, we made the interview sample *representative*. Furthermore, these specific participants were chosen as they could provide stories related to the topic of the study and discuss whether there really is a problem, why it exists and has not already been solved within the organization. In addition, these interviewees could offer insight in required questions concerning possible solutions and the potential difficulty of solving the problem (Van Aken, Berends & Van der Bij, 2009). However, as Organization X is a rather small organization it was difficult *to randomize* the sampling procedure. On the contrary, it was possible to randomize the entrepreneur participants. Together with the program director of Organization X a list of entrepreneurial teams was outlined and an e-mail was sent to the list. The first three willing entrepreneurs were invited for an exploratory interview. Finally, we *stratified* the sample by including participants of all layers within the organization: a program director, an educational designer, a trainer, and entrepreneur participants. Even though not all participants were stratified in the explanatory interviews, it was made sure they were included in the validation interviews (see part 4, p. 23).

The final sample consisted of two Organization X employees whom are directly responsible for the problem, and three interviews were conducted with entrepreneur participants of the Organization X program who are part of an entrepreneurial team. In addition, two meetings were planned with the program director of Organization X and a graduate in team development, which led to an even deeper exploration of team support processes within Organization X. Furthermore, this provided the possibility to test whether the preliminary problem statement and interview outcomes coincide with their views or if additional perspectives should be considered. Table 3 provides background information regarding the exploratory interviews, while table 4 provides background information of the additional meetings.

No.	Date	Time	Location	Duration	Sex	Education	Occupation
1.	22-12-'11	10.00	Organization X	51 min.	F	Educational Design and Management	Educational designer
2.	23-12-'11	11.00	Organization X	55 min.	F	Educational Design and Management	Expert/Trainer team development
3.	19-03-'12	10.00	University	57 min.	M	Communication Studies	Entrepreneur participant
4.	23-03-'12	13.00	Organization X	37 min.	M	Communication Science/Business Administration	Entrepreneur participant

5.	26-03-'12	10.00	Losser	49 min.	F	Nieuwe Leraren Opleiding	Entrepreneur participant

Table 3: Background information exploratory interview participants

Date	Time	Location	Duration	Sex	Education	Occupation
08-03-'12	13.00	Organization X	60 min.	M	Physics/Business Administration	Program director/MT Organization X
09-03-'12	11.00	Organization X	83 min.	F	Business Administration	Graduate team development within Organization X

Table 4: Background information additional exploration meetings

After the interviews were conducted, they were analyzed using the full interview transcriptions (see appendix B). According to Saldana (2010) the information acquired from the qualitative exploratory interviews can be obtained and construed in a variety of ways, i.e. all research questions and methodologies are context specific. Hence, it is the challenge to find "the right tool for the right job". As the nature of the internal orientation stage is exploratory and the goal is to add other perspectives to the preliminary formulated problem (Van Aken, Berends & Van der Bij, 2009), we employed the selective or highlighting approach to isolate thematic statements. In this line, we listened to the recordings and read the full transcriptions numerous times and raised the question: what statement(s) or phrase(s) seem above all crucial or instructive about the phenomenon or experience being described? (Van Manen, 1990) The crucial and revealing statement(s) and phrase(s) were those particularly linked to the interview guide (see appendix A). Afterwards, the specific content of the thematic statements was coded (see appendix C), i.e. the statement(s) and phrase(s) were compressed into shorter formulations, or thoughts of the coder, in order to grasp the central point of the statement (Kvale & Brinkmann, 2009). This open type of coding is employed due to the specific exploratory nature and goals related to this part of the research.

3.2.2.2   Interview outcomes
Practice shows that the focus of Organization X on team development isn't always visible. However, Organization X has put more effort in setting up curriculum for specific team development training programs. In this line a vision document was created, however it lacks specific guidelines in how to effectively execute team development. Thus, a meeting was organized with internal stakeholders (team development trainers and members of entrepreneurial teams) to set up the curriculum for team development training. However, this lacked latest research experience (as the content expert of team development wasn't present). Furthermore, these modules are quite loose as the form of team training and the content of the training is unclear due to the different approach contemplated by team development trainers. In this line, there are no overarching guidelines in how to effectively execute team development within Organization X. In addition, the current content and training strategies aren't monitored.

The interviews conducted with the entrepreneur participants' show that there is a rather low binding between entrepreneurs and Organization X, especially in regard to team development. Several explanations exist. First, entrepreneurs have a free choice in which training modules they follow and which not. In other words, there is no obligation and entrepreneurs clearly state that they do not want any obligation. Furthermore, as entrepreneurs mainly do not participate as teams, but as individuals, it is difficult for Organization X to create value. In this line, the focus of entrepreneurs mainly lies on business development. In regard to the team training strategies, entrepreneurs find that they are not specific and interactive enough. The training modules are highly dependent on the type of trainer. Moreover, according to the entrepreneurs, no inventory is made what is important specifically for the target

group apparent at the training modules. In other words, there are too many differences between the entrepreneurs based on the phase in which entrepreneurs are in and their specific needs. Also, entrepreneurs feel that a lot of information provided is too generic and not aligned enough to their own problems and questions regarding their businesses. However, coaches could play an important role in aligning specific training modules to the specific questions of entrepreneurs. In practice however, coaches are unaware of the contemporary content of the training program. Furthermore, it isn't clear to entrepreneurs what the exact value team development brings and thus, how it relates to new venture growth.

3.2.2.3 Preliminary cause and effect diagram

Figure 1 provides a visual presentation of the interview results in a preliminary cause and effect diagram:
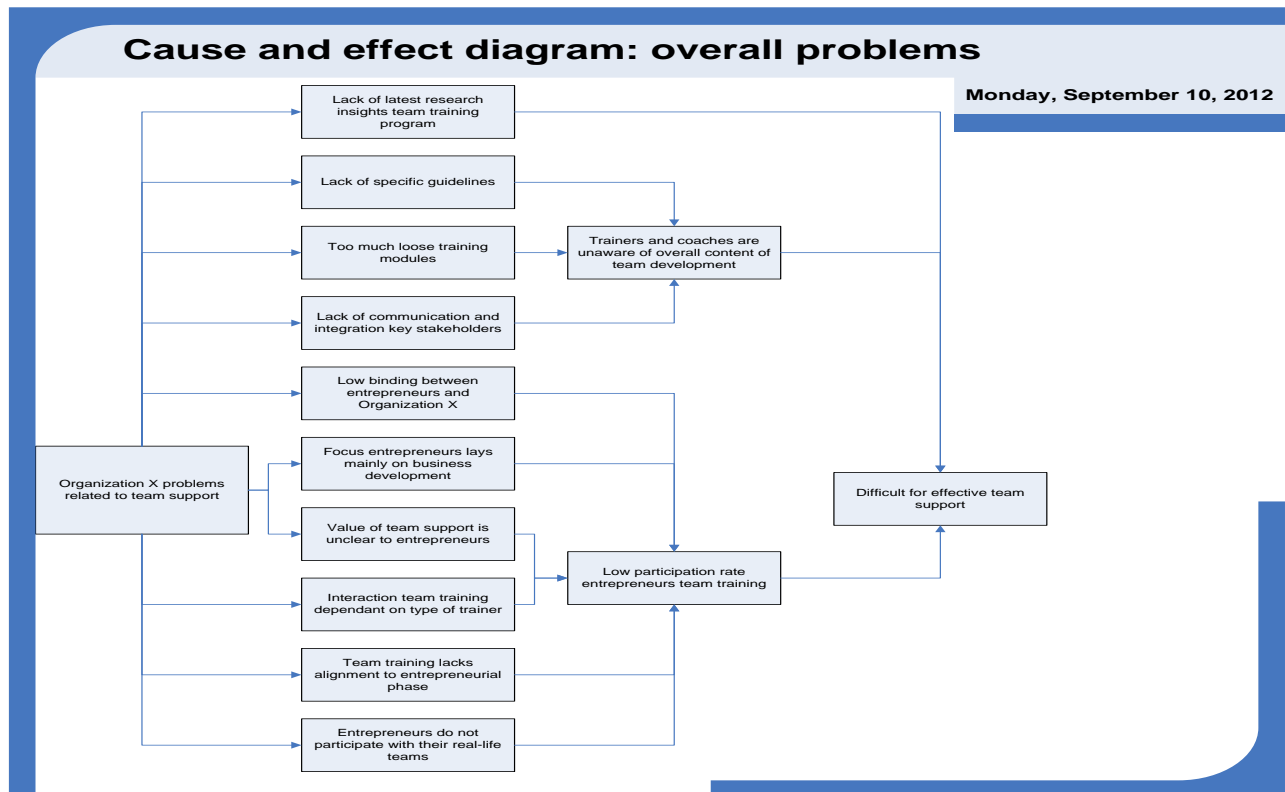
Figure 1: Preliminary cause and effect diagram based on interview outcomes

3.3   Problem specification

As the nature of the conducted interviews was primarily to explore, it evidently led to rather broad interview outcomes. Hence, we were required to specify the problems. First, we specified the problems based on which directly led to an answer to our interview research question, i.e. problems that related directly to team support as main focus of our thesis. In addition, we specified the problems based on the type of problems. Van Aken, Berends and Van der Bij (2009) explain that three different types of problems exist and only real problems are meaningful to make as a topic for a BPS project. In this line, a perception problem reveals a situation where the problem-owner has an erroneous perception of the business system, while a target problem refers to a problem based on unfeasible targets. A real problem however, refers to a situation that in reality does not meet realistic standards. Consequently, e.g. 'lack

of communication between key stakeholders' is considered a target problem as it would be unfeasible when asked to solve as an external graduate, mainly due to lack of knowledge of organizational processes and time constraints.

The following table provides brief code descriptions of the most important interview outcomes, specified based on their relation to team support processes and their indication as real (i.e. feasible) problems.

Problem no.	Problem description
1.	Focus entrepreneurs lies on business development, not on team development
2.	Value of team support is unclear to entrepreneurs
3.	Low participation rate entrepreneurs team training
4.	Interaction team training dependant on type of trainer
5.	Team training lacks alignment to entrepreneurial phase
6.	Entrepreneurs do not participate with their real-life teams
7.	Lack of latest research insights team training program

Table 5:   Summary of the problems regarding team development support of Organization X

3.3.1   Cause and effect diagram

Based on the intake meeting, external orientation and exploratory interviews with members of Organization X and entrepreneur participants; a cause and effect diagram has been developed. Figure 2 depicts the problems related to team support:
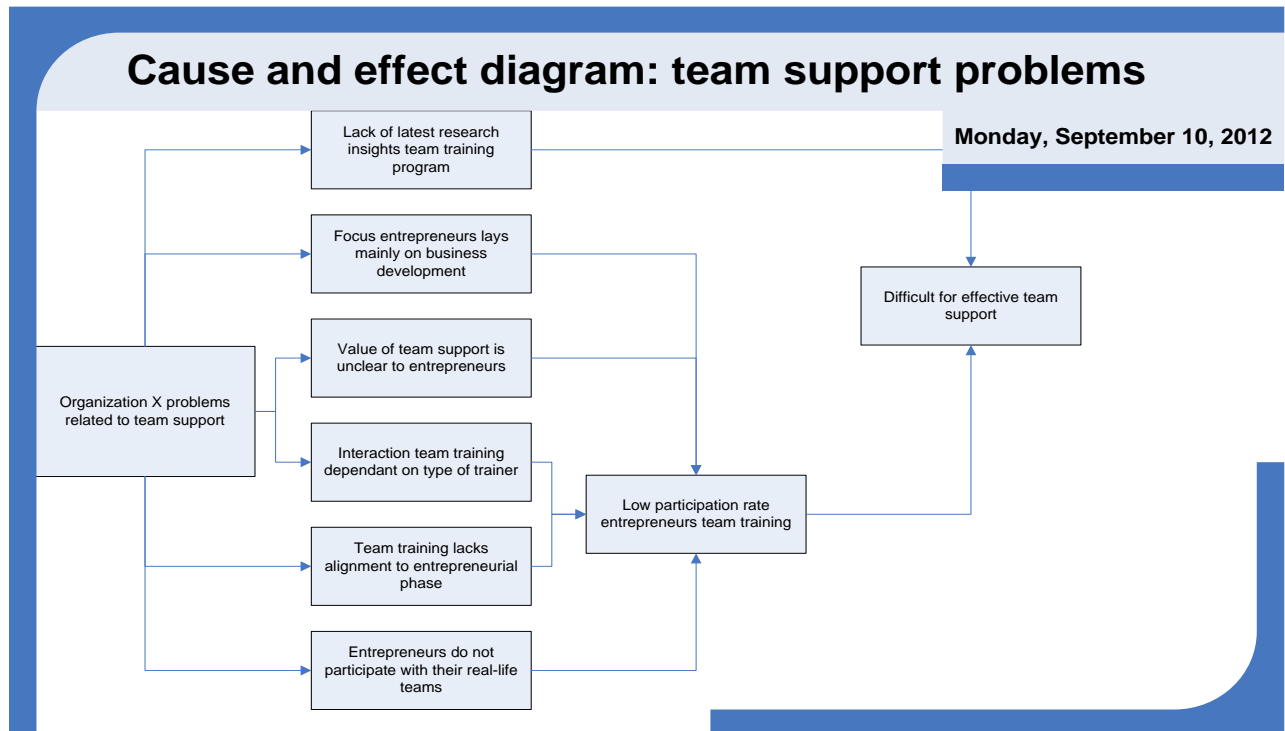
Figure 2: Cause and effect diagram based on interview outcomes related to specific team support processes

Still, the cause and effect diagram needs to be be interpreted cautiously as it is based on a restricted number of interviews. Thus, there is no assertion that the problems and causes outlined are valid and reliable. However, it designates the directions that will be further explored and validated in the analysis and diagnosis part of the regulative cycle (Van Aken, Berends & Van der Bij, 2009).

Part 4: Analysis and diagnosis

The predominant purpose of the analysis and diagnosis step is to validate the found business problems and to explore and validate their causes and consequences (Van Aken, Berends and Van der Bij (2009). In this line, we will further refine the cause and effect diagram, define the central problems of focus, and propose theoretical directions to solve the problems.

4.1 Empirical-based investigation

To validate the business problems and their consequences found in the exploratory interviews, we will conduct a second round of interviews with different stakeholders. Downs and Adrian (2004) argue that whereas the first round of interviews were designed to explore, the second round of interviews should be issue oriented and therefore have a high explanatory value.

4.1.1 Validation interviews

Following the guidelines proposed by Van Aken, Berends and Van der Bij (2009), we developed and executed a strategy to explore and check the ideas of the organizational stakeholders that were raised throughout the internal orientation stage. The goal is to portray valid conclusions at the end of the analysis and diagnosis stage of the regulative cycle (Van Strien, 1997). A validation interview seemed ideal for such a goal given that it is a dialogue between interviewer and respondent intended to confirm, substantiate, verify and/or correct preceding research findings (Buchbinder, 2010).

4.1.1.1 Interview sampling and procedure

The sampling of the validation interviews was quite similar to the exploratory interviews. In this line, the sample consisted of three Organization X employees: an educational designer, the program director and a team trainer; and three individual entrepreneur participants all part of different entrepreneurial teams. None of the participants was interviewed during the exploratory stage. This made the sampling representative and stratified (Downs & Adrian, 2004). However, the type of interview differed from the exploratory interviews.

Millar, Crute and Hargie (1992) argue that there is no predetermined research interview; the purpose of the research question determines the type of interview, namely: structured or unstructured. Whereas the exploratory interviews were flexible and unstructured, as the main goal was to explore; the validation interviews are far more structured, as the main goal is to validate the previous outcomes. According to Merrigan and Huston (2009) structured interviews have clear protocols that dictate what questions to ask and when. Furthermore, the amount of questions and their phrasing remains indistinguishable for all participants, the questions are presented in the same order, and researchers do not attempt to explain or clarify any questions.

The problems and consequences outlined in the preliminary cause and effect diagram (p.20) served as a basis for the interview protocol. In other words, the problems and consequences employed in the preliminary cause and effect diagram served as propositions which were presented to respondents. When clear, participants could respond to the propositions and further ventilate their opinions. See appendix D for the validation interview guide and appendix E for the full interview transcriptions. Table 6 provides background information of the validation interview participants.

No.	Date	Time	Location	Duration	Sex	Education	Occupation
6.	25-05-'12	10.00	Organization X	32 min.	M	Organic Chemistry & Material Technology	Entrepreneur participant
7.	25-05-'12	12.15	Organization X	25 min.	M	Electro Technical Engineering	Entrepreneur participant
8.	07-06-'12	11.00	University	73 min.	F	Educational Science and Technology	Educational designer Organization X
9.	06-07-'12	11.00	Organization X	47 min.	M	Physics/Business Administration	Program director/MT Organization X
10.	19-07-'12	16.30	Organization X	58 min.	M	Communication and Media Studies	Entrepreneur participant
11.	20-07-'12	13.00	Arnhem	80 min.	F	Human Behavior	Team trainer/expert Organization X

Table 6: Background information validation interview participants

4.1.1.2 Interview outcomes

The validation interviews should provide deeper insight in the problems established during the exploratory interviews and as a result present explanatory meaning (Downs & Adrian, 2004). First, each problem found in the exploratory interviews, regarding team support processes, was outlined. Second, the results of the exploratory interviews were described. Finally, the outcomes of the validation interviews were presented.

Problem 1: Focus entrepreneurs' lies on business development, not on team development
Respondent no. 1 explained: "entrepreneurs participate at Organization X with the highest goal to set-up a business and to make it as successful as fast as possible. Even though some entrepreneurs also participate for personal development and team development purposes, it is constantly related to developing their business. As they have this strong focus on business development, it is very complicated to effectively convey team development knowledge". Several entrepreneur participants agreed: "I do not have time to participate, due to the time constrains posed by my business. It only interests me to make money" (respondent no. 3); "in the end, every participating entrepreneur is there to make a profit that is what counts" (respondent no. 4); "our main focus was related to improving business operations and to formulate our business mission, vision, and strategy" (respondent no. 5).

The validation interviews made the exploratory arguments even stronger. In this line, respondent no. 8 explained: "it is absolutely true that the main focus of entrepreneur participants lies on developing their businesses. But this is not only our participants' point of view, but also Organization X internally. What do you expect when you mostly recruit business developers as coaches for participants?" Furthermore, as the type of entrepreneurs changed, also the type of questions in relation to team development changed. Respondent no. 8 outlined: "contemporary participants with already established businesses have different questions than questions related to team support, i.e. more related to their own businesses. For example: how can we market our product better? Instead of: I have a big order and can't cope with it alone, should I consider recruiting a new team member?" However, respondent no. 10 explained that even at the new venture creation phase, business development is the primary concern of entrepreneurs: "in the beginning you will mainly focus on your business case, especially when you just start. The only thing on your mind is, how do I get more business, how do I get more customers?" Finally, respondent no. 11 also acknowledged that the main focus of participants lies with business development.

Problem 2: Value of team development is unclear for entrepreneurs

The previous problem also made clear that the value of team development is unclear, as entrepreneurs mainly focus on developing their businesses. However, respondent no. 2 argued: "for every entrepreneur, also for a sole proprietorship, team development could be of importance, as these entrepreneurs mostly participate in networks, which you could also see as a team. My vision is that every entrepreneur is part of a team, it just differs in the way you look at it." Respondent no. 1 acknowledged partly and mentioned: "even though you are alone, you still have external parties with which you have to work together; so team related skills also hold for these types of collaborations". However, respondent no. 1 continued: "this type of collaboration isn't actually a team, as both parties have differing goals. Even though another party could help your business in achieving a certain goal, it differs from working together with your entrepreneurial team". Thus, apart from an entrepreneur perspective, also internally team development and its value isn't always clear and differs between internal stakeholders.

The validation interviews made clear that entrepreneur participants do not see the value of team development. An illustrative example of an entrepreneur participant is that even when his team functioned poorly and they had to discharge one of three ill-functioning team members, he still didn't perceive the value of team support: "I haven't done much with team development. We didn't see the value it could bring. The way I see it, you can either function well together or you can't, it's really that simple." Respondent no. 6 continued: "within Organization X there are a lot of sole proprietorships. I really can't imagine that these entrepreneurs feel the need to work on team development skills." On the contrary respondent no. 7 did participate in several team support training modules. He mentioned: "you particularly learn 'soft' skills." Respondent no. 11 agreed: "yes, team training does emphasize feeling, emotion and identity; we have heard that often as feedback. Even though it is appreciated by some, the problem remains that an individual who creates a new venture, in most cases, associates the term 'team' with future importance."

Problem 3: Low participation rate entrepreneurs team training

Respondent no. 1 claimed: "entrepreneurs are mainly focused with their own businesses. There is no obligation posed by Organization X and various entrepreneurs do not attend all training modules. This makes it difficult to effectively convey team development knowledge". Furthermore, respondent no. 3 explained that he did not participate in many training sessions, as he felt that: "the training sessions did not create enough value, even though I pay a lot of money, which is strange". In addition, respondent no. 4 explained that the value is too low: "otherwise I would attend a lot more training sessions; if I knew that it would help me make more money". These entrepreneur participants also argued that this not only counts for them, but is much more general.

Throughout the validation interviews several causes were mentioned by respondent no. 8 why there is a low participation rate. First, due to the reduction in capacity, the binding aspect between Organization X staff and its entrepreneur participants (as it was in the beginning) was diminished. Secondly, the type of entrepreneurs which participate at Organization X has changed. Contemporarily, mostly already established entrepreneurs participate with the desire to grow. These participants are already busy and only focus on the specific needs they have and are much less focused on participating in a community. In this line, respondent no. 6, entrepreneur participant with an already established business mentioned: "some training sessions were interesting, while others were not. So you really have to choose the best training modules for yourself". However, in the beginning generally entrepreneurs with new business ideas participated in training and were eager to learn as much as possible in regard to entrepreneurship. These participants attended more training sessions, were closer related to Organization X (also as the group was smaller in size) and there was more time for Organization X to build a 'personal touch'.

Problem 4: Interaction team training dependant on type of trainer

According to respondent no. 2: "it highly depends on the trainer if a session is either interactive or that it is one-way communication (when someone only conveys theoretical knowledge in a classical setting)." She continued: "there are large differences in didactic skills between the trainers; however, my opinion is, if you do not possess these skills, you shouldn't be a trainer or Organization X should professionalize." Respondent no. 5 agreed: "I feel that a lot of training sessions involve unidirectional communication, where you do have the possibility to ask questions which leads to some interaction. However, most trainers just tell their own story during an entire morning or afternoon." Respondent no. 2 continued: "what I try, is to interact with the target group so participants can also learn from each other. In this line, you foster the collaboration process in which you learn things that you can afterwards bring to your own business. I feel it would be desirable if much more trainers work in this way, instead of a tedious story of someone who dedicates a 'one-man-show'. Do you wonder why some participants yawn after a half an hour?"

The validation interviews showed similar outcomes. Respondent no. 8 explained: "one of the principles in adult education is to use the experiences of participants, i.e. experience is the adults learning textbook." However, respondent no. 8 argued that Organization X, on a micro level, spent insufficient attention to make training sessions more interactive: "the idea was that every training session should be application-oriented. In other words, entrepreneurs should use their own experiences during the training sessions. However, the additional development of these plans was put on hold due to short-term more urgent matters." In this line respondent no. 6, entrepreneur participant, explained: "what I need are practical examples by trainers and not classical teaching." Respondent no. 5 agreed: "we much rather work on a case where you can actively work on the subject of the training. I find it important that there is direct interaction with your own business or team."

However, respondent no. 11 argued: "in the new contemporary program of team development we tried to make it very practical and interactive, because we thought that a lot of other workshops were already rather theoretical. Furthermore, as we focus on team dynamics, you have to actually feel working in teams; this cannot be done by only focusing on one-way communication." Thus, the validation interviews clearly showed that this is not considered a real problem, but a perception problem (i.e. problem-owners have an erroneous perception of the business system) in relation to contemporary team support processes of Organization X (Van Aken, Berends & Van der Bij, 2009).

Problem 5: Team training lacks alignment to entrepreneurial phase entrepreneurs

This problem is in line with the prior outlined problem (interaction team training dependant on type of trainer), however focuses on the alignment between the content of the training and the needs of the specific target group. As we outlined earlier, the type of entrepreneurs have changed and therefore also the type of questions and problems of participating entrepreneurs changed. Respondent no. 3 argued: "in a training setting, there are starting entrepreneurs such as us. However, you also have an entrepreneur who already established a business and employs thirty people. His entrepreneurial phase asks for different insights than ours. We, as starting entrepreneurs, find everything interesting related to entrepreneurship." Respondent no. 3 continued: "I think there also lays a problem with Organization X. I don't think they have the right people to help you. These people either do not have the specific knowledge needed for your business, or people that know things that are only interesting when you are in a later entrepreneurial phase."

Respondent no. 8 validated: "the basic idea of the Organization X program is that as we have a lot of different entrepreneurs, with different backgrounds, differing entrepreneurial phases, and differing growth possibilities; we still want to create value for all different target groups. That is why entrepreneurs can choose their own training modules and that training modules are offered three times a year. When you have ninety participants continuously, which was the intention, than this is possible. However in the new situation as our subsidy stopped, and we will have less and/or

another type of participants, than the design of our program needs to change. We already quit with some of our training modules, as our program is fit to serve the mass." In this line, respondent no. 6, an entrepreneur with an already established business with five people, mentioned: "I have participated in a team development recruitment training that absolutely did not connect to our entrepreneurial phase, as it was focused on businesses that employed multiple people and already have a HRM department. So, the needs of entrepreneurs with a start-up in relation to the needs of an SME or an entrepreneur with only a business idea quite differ." According to respondent no. 8: "clarity should exist in regard to the entrepreneurial phase that training modules focus on. In this line, you have different training modules for beginners and for intermediates. However, Organization X did not pay much attention to which entrepreneurs fit best in which phase as the Organization X program was initially developed for start-ups. Also growth was of importance, but more in the sense of start-ups that are more successful than others. However, we gained a totally new target group of already established businesses, which eventually even gained the upper hand. Even though we made some adjustments to the program, the program is still in essence based on start-ups."

Problem 6: Entrepreneurs do not participate with their real-life teams
Respondent no. 1 explained: "the fact that entrepreneurs do not work here in a team setting, that they do not participate in this program as their team, and that entrepreneurs have teams outside of Organization X, but do not work here in team settings during training modules; makes it very difficult to effectively and efficiently do something with team development. In other words, as we do not work here with their real-life teams, makes team development difficult." Respondent no. 1 continued: "in the end, you learn best when things happen in real-life. In the training modules, the way it is set-up contemporarily, participants do not actually work in a team, with a collective goal and with strict deadlines. In other words, the dynamics of working in a team, such as pressure, isn't apparent. Participants can now simply hang back, and listen to a trainer. However, my opinion is that what participants learn and take back to their own businesses will be fairly minimal."

Respondent no. 8 validated: "participants do not actually form teams. We have had the idea to let participants form a team with other participants and let them do something together. However, in practice, participants just perform team building exercises with the participating group. But this isn't an actual existing team." Respondent no. 10 outlined: "the problem of team training modules is that you do not participate with your actual entrepreneurial team. You work with several co-participants who coincidentally participate in the same training module. Furthermore, no selection is made in what could possibly be an effective team based on the participants and on differential team questions based on entrepreneurial phases." Respondent no. 10 continued: "when you have to empathize that you are a team, then it is too non-committal, giggly, and acted. Hence, I get the feeling that such training sessions do not provide enough value for my own new venture." Respondent no. 11 argued: "preferably we want to go in-depth with a team, a same group of participants who repeatedly meet, so actual team skills could be developed. This also happens in real-life teams. However, still this isn't a real team, because they are all loose participants, but we still would like this to be a part of the team processes. However, until now we haven't actually succeeded in this part."

Problem 7: Lack of latest research insights team support program
Respondent no. 1 claimed that: "as the content expert of team development wasn't apparent at the meetings, in which the content of team development was developed, and the external experts mostly based their knowledge from practical experience, it could be that there is a lack of latest research integration." Respondent no. 11 argued: "if you ask me personally, I would have found it interesting as the content expert was apparent, as I am always very open to developing further knowledge." However, respondent no. 11 explained: "we did focus on both practice and support via several theories. We for example incorporated Quinn's cultures and Tescala's MBTI." Even though based on theoretical principles, these models are still practice-based. Respondent no 11 finalized: "we off course did not

coincidentally devise the training content. However, it would be interesting if someone with an independent scientific standpoint looks at team development processes."

Also entrepreneur participants provided further explanatory value. Respondent no. 10 argued: "it is important that the training modules are based on the latest scientific insights. The ideal situation is using practical examples and explaining the scientific principles on which the examples are based, so you can generalize it to your own business." In this line, an entrepreneur participant no. 7 argued: "the current training modules should be more research oriented; it would be of value when it is made clear more often where certain claims come from and that these were substantiated".

Problem 8: Lack of communication and structure team training program
Throughout the validation interviews, an additional problem was encountered. This problem is related to the contemporary communication and structure in regard to Organization X's team support offerings. Respondent no. 11 explained: "contemporarily we have three basic training modules and we wanted to provide several advanced training modules. The idea is that participants gain basic knowledge which is needed in order to participate in the advanced training modules. However, in practice it is more complicated, as participants have a free choice to participate in every training module they find interesting. So, what we saw was that participants joined in two separate groups, or participated in advanced training while they did not previously participate in the basic training. Furthermore, different participants joined who were in different entrepreneurial phases and had different questions in regard to team development. Moreover, Organization X arbitrarily started with team modules. So, when we started with a basic workshop, we expected to see the same group for the sequel training for which we prepared follow-up material. However, we only saw new participants. Then things start to get more complicated and team training does not work due to overlap, participants missing important prior knowledge and no one has any idea what we meant with our course outline. Thus, the problem is: how can we provide more structure in the free offering of team training modules of Organization X? This especially holds for team training, as you want to go in-depth with a group of people so these participants can get to know each other better and team skills can be developed." As Organization X has provided its new team training program for the first time, respondent no. 11 argued: "it is very important to rethink how to communicate the program to newly starting entrepreneurs." In this line, respondent no. 8 explained: "also organizational problems could lead to the perceived unclear value of team development. It should be dealt with in the first training sessions. Furthermore, the mandatory kick-off could help create insight in the value of team development." Respondent no. 11 argued: "it is of essence that we start with a certain group. In this line, you could focus on their needs and let the group follow the process and let them actually behave as a team."

4.2 Definitive problem specification

As we have validated the found business problems and explored their causes and consequences (Van Aken, Berends & Van der Bij (2009), we were possible to further refine the cause and effect diagram and define the central problems of focus.

4.2.1   Problem context
Organization X, having around 15 employees and 160 participating entrepreneurs, offers support for technology-based start-up businesses and is a business growth accelerator for well-established companies. Business incubators such as Organization X focus on compensating for the resource insufficiencies of newly established high-tech ventures to guarantee entrepreneurial stability, sustainable economic increase and long-term business endurance (Schwartz & Hornych, 2008). In this line, Organization X offers high-tech new ventures the opportunity to take part in programs designed to support the successful improvement of their businesses, as these resources and business expertise offer

participating NTV's a competitive edge (Smilor, 2009). Although team support always was a main pillar within Organization X support processes, in line with research findings, universities and their agencies might not spend enough time and resources developing the entrepreneurial teams of the new ventures they support (Ensley & Hmieleski, 2005).

To cope with this problem, Organization X developed a vision document with the goal to outline the role of team development in the total business development program of Organization X, as offerings related to team development were limited. Practice showed however, that the vision document did not provide the guidelines in how Organization X should develop teams and what the content should be, i.e. it was not contemporarily implementable. Thus, several meetings were planned to outline the content of team development offerings. In this line, several training modules were designed with the main goal to stimulate participants, who are mainly focused on their product and developing their business, to work together with others as you could in some cases achieve more by working effectively together. Furthermore, the goal was to enable entrepreneur participants to build ventures where actual employees will work some day (respondent no. 11). However, our exploratory and validation interviews showed several problems and consequences, e.g. lack of latest research insights in the team support program, entrepreneurs focus lays on making direct profit, and the value of team development is unclear; possibly due to lack of structure and communication. As main consequence, it is difficult for Organization X to effectively convey team development knowledge to their participating entrepreneurs.

4.2.2   Problem definition

Based on the intake meeting, the following preliminary problem statement was derived: *'Too little scientific emphasis lies on the development of entrepreneurial teams, while this is seen as a main pillar for the long-term viability and growth of new (technology) ventures'.* However, desk research and interviews (exploratory and validation) were conducted to further specify the main problem statement. In this line six of the seven proposed problems from the exploratory interviews were validated and one additional problem was outlined. Table 7 provides a summary of the outlined problems.

Problem no.	Problem description
1.	Focus entrepreneurs lays mainly on business development, not on team development
2.	Value of team support is unclear to entrepreneurs
3.	Low participation rate entrepreneurs team training
5.	Team training lacks alignment to entrepreneurial phase
6.	Entrepreneurs do not participate with their real-life teams
7.	Lack of latest research insights team training program
8.	Lack of communication and structure team training program

Table 7: Summary of the validated problems regarding entrepreneurial team support of Organization X

As we outlined, the main focus of entrepreneurs lies on making a profit and developing their business. However, this holds that the value of team development as main pillar within Organization X is unclear to participants. Especially as team support is related to 'soft skills' and perceived as not adding direct value for sole-proprietorships. Additionally, the team support program and its structure are not clearly communicated to participants. Thus, the perceived value cannot be conveyed, which leads to a low participation rate. Furthermore, due to changes in the participants, the contemporary program does not focus on and clearly communicates which training is suited for which entrepreneurial phase. Finally, as entrepreneurs do not participate with their real entrepreneurial teams, team support is not as effective as it could be.

In line with the guidelines proposed by Van Aken, Berends and Van der Bij (2009), scoping the BPS project by choosing those issues as central business problems makes the problems more feasible, but still relevant from the perspective of business performance. In this line we chose to focus on the following problems: the focus of entrepreneurs lays mainly on business development, not on team development; there is a lack of latest research insight within the current team training program; and team training lacks alignment to specific entrepreneurial phases. Figure 3 depicts the validated problems and consequences and clearly shows that the described problems of focus are central in the cause and effect diagram, i.e. these problems have clear consequences and are therefore relevant from the perspective of business performance (Van Aken, Berends & Van der Bij, 2009).
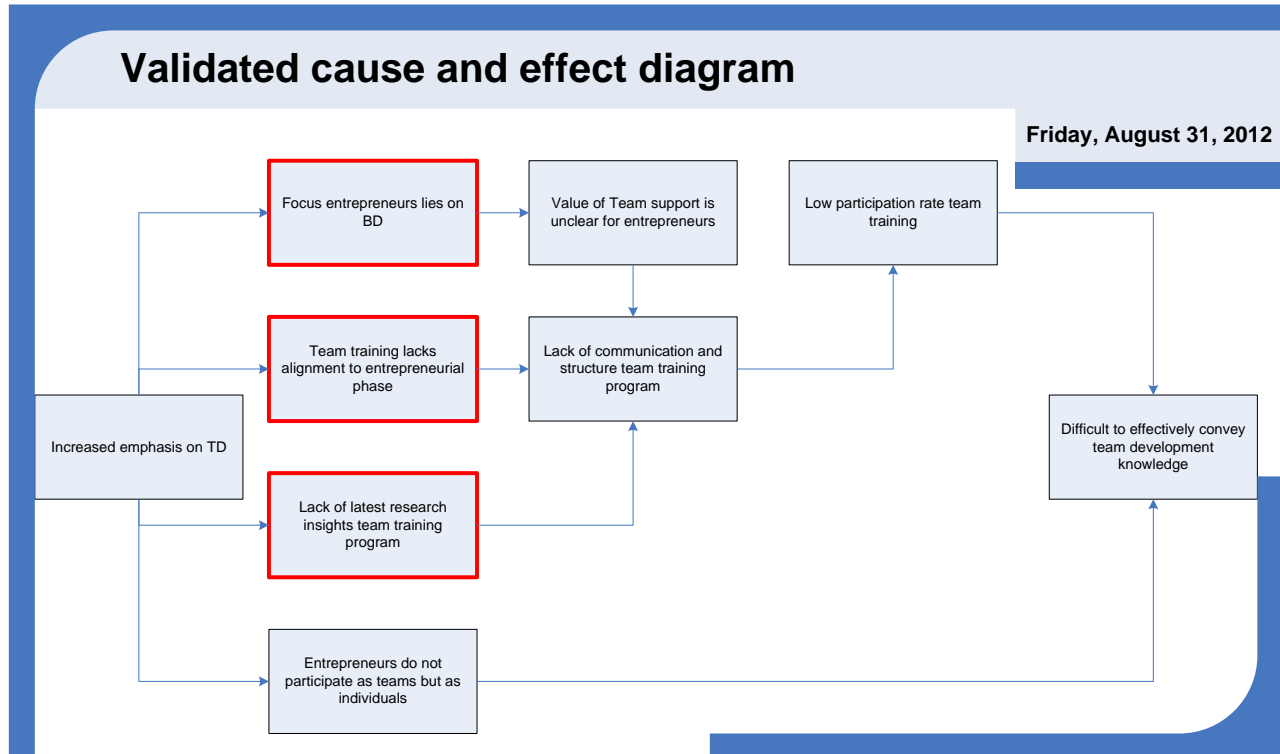
Figure 3: Validated cause and effect diagram

4.2.3   Theoretical directions to solve problems

Finally, the proposed central problems of focus will be fitted to several theoretical directions. According to Van Aken, Berends and Van der Bij (2009) the design solution should result in the solution of the defined business problems and focus on its potential consequences. In this line, we will integrate team support to business development, i.e. we will perform an extended scientific literature review focused on entrepreneurial team characteristics and team support strategies; which are directly related to new venture performance. Moreover, these insights provide a means for guideline creation for the specific assessment, monitoring, and development of entrepreneurial teams, which is essential for the long-term viability and success of entrepreneurial firms (Ensley & Hmieleski, 2005). Hence, our solution is a tool to support certain process steps, i.e. a scientific-based redesign of contemporary team support processes, specifically aligned to the business problems, namely: integration with new venture performance, based on latest research insights, and aligned to specific entrepreneurial phases (i.e. formation and development). In this line, we identify how processes should be (i.e. an idealized design) by forming clear guidelines derived from scientific literature.

In order to structure the literature review, we outlined several knowledge questions, which should together provide an answer to our first outlined main research question, namely: *Which guidelines can be derived from the literature for the formation and development of new high-tech entrepreneurial teams?*

Based on the proposed central problems and in order for us to provide an answer to this research question, we outlined the following knowledge questions:

- *What is the conceptualization of an entrepreneurial team?*
- *How is an entrepreneurial team related to high-tech new venture performance?*
- *Which team characteristics influence the formation and development of high-tech new venture performance?*
- *How can team support assist in the formation and development of high-tech entrepreneurial teams?*

In the following plan of action step of the regulative cycle, we will focus on answering the proposed knowledge questions which form the basis for our research design.

Part 5: Plan of action

The plan of action step of the regulative cycle focuses on solution design, i.e. the design of a solution for the proposed central problems of the validated cause and effect diagram. In this line, we will conduct a thorough literature review and develop an idealized design of team support. Furthermore, we will transfer the guidelines of the idealized design to Organization X processes in order to transfer the intended performance improvement.

5.1 Theory-based investigation

Contemporary literature was used to counter the problems identified and to produce a solid research design. To structure the literature review, we outlined several knowledge questions related to the proposed central problems. The answers to the outlined knowledge questions should provide a definition of the specifications to which the solution must conform (Van Aken, Berends & Van der Bij, 2009), i.e. design guidelines of team support for the formation and development of new high-tech entrepreneurial teams.

5.1.1   Introduction

According to Garud and Karnoe (2002) entrepreneurship involves the discovery, creation and exploitation of opportunities. Rumelt (2005) complies and adds that entrepreneurship involves the creation and development of new ventures. Sharma and Chrisman (1999) explain that a new venture is the ending result of the process of creating a new venture that develops, fabricates, and markets products or services; to gratify unmet market needs, for the principle of revenue and growth. Davidsson (2005) outlines that entrepreneurship research encompasses: "the study of processes of emergence of new business ventures, across organizational contexts. This entails the study of the origin and characteristics of venture ideas as well as their contextual fit; of behaviors in the interrelated process of discovery and exploitation of such ideas, and of how the ideas and behaviors link to different types of direct and indirect antecedents and outcomes on different levels of analysis." We specifically focus on how the idea and behavior of an entrepreneurial team relates to the direct and indirect outcomes of new technology venture performance. In this line, Ensley, Pearson and Pearce (2003) argue that new venture performance has typically been defined along two dimensions, namely: survival and success.

The survival rate of new ventures in general is low. Shepherd, Douglas and Shanley (2000) estimate the failure rate for new ventures at 40% in the first year and 90% over 10 years, and NTVs have the lowest survival rate amid new ventures in general (Song et al., 2008). Aspelund, Berg-Utby and Skjevdal (2005) argue that the cause lies with the 'liability of newness', i.e. new ventures possess resource poverty, a lack of legitimacy, and weak ties to external actors; these factors count even more for NTV's, as they, in addition to the proposed factors, need to fill large resource needs related to the development of technology before market introduction. Song et al. (2008) conducted a longitudinal analysis of more than 11.000 established new technology ventures and found that after four years only 36 percent of businesses with more than five full-time employees had survived. After five years, the survival rate fell to 21.9 percent. Even though there is disagreement amongst scholars in regard to exactly how low the survival rate for new ventures is, it is generally accepted that starting a new venture is an action with high-risk involved (Shepherd, Douglas & Shanley, 2000). In this line, it isn't odd that the question that lies at the very heart of entrepreneurship research is: why do some new ventures excel, while others fail? (Amason, Shrader, & Tompson, 2006)

Smilor (2009) argues that business incubators, such as Organization X, provide new ventures (especially new high-tech ventures) structure and legitimacy due to the provision of knowledge, eagerness, improved efficiency, and the awareness of success. Furthermore, these resources and support regarding facility, administrative assistance and business expertise, give new ventures a competitive edge; as participating entrepreneurs are almost twice as likely to

succeed as to fail (Smilor, 2009). However, according to Ensley and Hmieleski (2005) support focuses primarily on marketing and technology (i.e. business development), while entrepreneurial team support is a critical factor related to new venture performance. Moreover, Song et al. (2008) targeted surviving NTVs to see what potential factors might have made these firms successful. Their theoretical framework consisted of five elements, one of them being the entrepreneurial team.

Before we theoretically outline entrepreneurial team characteristics and training strategies related to new venture performance, we need to define the term entrepreneurial team. In particular as Vanaelst, Clarysse, Wright, Lockett, Moray, and S'Jegers (2006) argue that there has been a substantial discussion amid scholars as to what precisely is meant by an entrepreneurial team.

5.1.2   Conceptualization of entrepreneurial team

Timmons and Spinelli (1999) define an entrepreneurial team as: "the management team of a new venture". However, as this definition is rather one-dimensional and thus still a lot of delineations are possible; we find this definition too broad. An extensively acknowledged definition of an entrepreneurial team, as described in the literature, is devised by Kamm, Schuman, Seeger and Nurick (1990): "two or more individuals who jointly establish a firm in which they have a financial interest". However, according to Gartner, Shaver, Gatewood, and Katz (1994) this definition must be expanded to cover those individuals that have direct control on strategic choices. Hence, Ensley, Carland and Carland (1998) combined both delineations and argued that individuals need to fulfill three criteria in order to be considered members of an entrepreneurial team: 1) each individual has to jointly establish a firm, 2) each individual has a financial interest and 3) each individual has a direct influence on the strategic choice of the firm. However, several scholars made the financial interest condition even stricter and imposed a minimum equity stake before one can be considered as member of an entrepreneurial team (Ucbasaran, Lockett, Wright & Westhead, 2003). More recently, Cooney (2005) argued that two elements of the previously outlined criteria are areas under discussion. First, the enclosure of the term 'equal' financial interest; where a more open interpretation of financial interest is required. Secondly, the focus on the term 'establishment'; where an individual could become a team member at any point in the maturation of the firm. Based on these disagreements Cooney (2005) defines an entrepreneurial team as: "two or more individuals who have a significant financial interest and participate actively in the development of the enterprise." Although this definition fits best to the purpose of our research, we will briefly outline two additional delineations which came forward during the exploratory interviews. Moreover, this will help fine-tune the line of research to provide specific answers to our proposed knowledge questions.

The difference between entrepreneurial teams and top management teams

The importance of teams has been widely acknowledged both in recent management as in recent entrepreneurship research. However, Huovinen and Pasanen (2010) reveal that entrepreneurial teams differ from top management teams, as both teams operate in different contexts and consequently have contradictory roles for management. Vyakarnam and Handelberg (2005) explain that the circumstances of uncertainty and the need for legitimacy, in addition to factors relating to the access to resources and information; make the start-up conditions for entrepreneurs diverse to the conditions of established organizations. Busenitz and Barney (1997) argue that the level of uncertainty that entrepreneurs face is greater due to the lack of access to trend data, past performance, and other important information. In other words, it is the opposite of standard optimization, where the best possible solution is determined exclusively by objective situational factors (Harper, 2008). Hmieleski and Ensley (2007) explain that in the context of new venture creation, founders need to lead since there are no standard procedures or organizational structures to rely on, when creating a firm from scratch. Hence, this dissimilarity differentiates entrepreneurial teams from corporate top management teams, who often have more well-defined goals, structures, and work processes to direct them.

The difference between entrepreneurial team member addition and employment growth
According to Forbes, Borchert, Zellmer-Bruhn and Sapienza (2006) there are two wide-ranging clarifications for member addition in the entrepreneurial team literature. One view perceives member addition as a rational process determined by economic, instrumental contemplations; while the other view perceives member addition as driven by interpersonal attraction. However, as described previously, alike Cooney (2005) we define an entrepreneurial team as: "two or more individuals who have a significant financial interest and participate actively in the development of the enterprise" (Cooney, 2005). In this line, employment growth, when a member is added who has a significant financial interest and will participate actively in the development of the venture is considered as part of the entrepreneurial team. However, when these standards are not met, we perceive these individuals as employment growth of the new venture and not as members of the entrepreneurial team.

5.1.3   The impact of entrepreneurial teams on new venture performance
Where conventional entrepreneurship research was predominantly concerned with the individual entrepreneur, contemporarily it is well understood that entrepreneurship is a highly societal effort which often entails the cooperative efforts of multiple individuals (Wright & Vanaelst, 2009). Hence, the skills, abilities, and interactive dynamics of the entrepreneurial team are vital too (Amason, Shrader & Tompson, 2006). Moreover, there is evidence that numerous ventures are founded by teams of entrepreneurs and that the completeness of these teams has a positive impact on new venture performance, particularly technology based new ventures (Roure & Keeley, 1990). Garud and Karnoe (2002) in line with Aspelund, Berg-Utby and Skjevdal (2005) argue that technology entrepreneurship is a much more complex and comprehensive process that builds on the efforts of many. Garud and Karnoe (2002) continue that the abilities and resources considered necessary to take an idea from its initiation to the market have to be assembled by exploiting the generative impulses of individuals from diverse domains. Hence, it isn't odd that high-tech start-ups are more frequently created by a team of entrepreneurs than by a lone entrepreneur (Claryse & Moray, 2004).

Ensley and Pearce (2001) explain that a natural connection exists amid entrepreneurial teams and new venture performance. Vyakarnam and Handelberg (2005) argue that both academics and practitioners working with new ventures have stressed the significance of entrepreneurial teams to the success of the venture. Harper (2008) claims that there is a rising amount of empirical verification that entrepreneurial teams are touted: "the superior entrepreneurial start-up concept"; as it is regarded as a major mechanism of new venture creation (Lechler, 2001). Kamm et al. (1990) describe: "entrepreneurial teams are responsible for many (or perhaps most) of the major start-ups of today". Moreover, team started ventures answer for an excessively higher number of high-growth firms (Claryse & Moray, 2004). According to Cooney (2005) multiple scholars discussed the advantages of combining talent to create and advance a new venture; these benefits consist of grouping financial and physical resources, the dispersal of risk and anxiety, increasing the stock and skills of expertise obtainable, and compensating for individual weak points. In this line, Vyakarnam and Handelberg (2005) explain that numerous studies have acknowledged that successful ventures are more frequently established by a team of individuals than by a single person. Furthermore, new ventures held by teams are more likely to have a greater variety of skills and competences to count on in addition to a wider network of social contacts, thus at the point of venture creation, teams can enlarge the legitimacy of their proposition (Fiet, Busenitz, Moesel & Barney, 1997). So, amidst the challenging environment of high-tech new ventures, the performance of the entrepreneurial team is a key factor to success. As such, scholars argue that, in the future, the highest performing entrepreneurial firms will be those with the most exceptional entrepreneurial teams (Timmons & Spinelli, 2009). This is consistent with the upper echelon view that the performance of the top management team is reflected in the performance of the firm itself (Hambrick & Mason, 1984).

5.1.4   The influence of entrepreneurial team characteristics on new venture performance

Although entrepreneurial teams have a positive impact on new venture performance, particularly in regard to new technology entrepreneurship, the survival rate of new ventures is low (Shepherd, Douglas and Shanley, 2000). In this line, Weinzimmer (1997) contends that it is vital to recognize those aspects that promote new venture performance, as identifying these factors helps reduce high failure rates among new ventures and provides additional benefits, such as: increased profits. Vyakarnam and Handelberg (2005) outlined four characteristics to enlighten the links between entrepreneurial teams and venture performance (each with specific underlying factors), namely: entrepreneurial team resources, structural and process effects of entrepreneurial teams, task leadership, and the effects of team members' personal integration into the task process.

Nonetheless, Vyakarnam and Handelberg (2005) contend the importance of focusing on differing characteristics based on differing entrepreneurial phases, i.e. there are entrepreneurial team characteristics that clearly relate to new venture creation and others that relate to new venture growth. In this line, entrepreneurial team resources are highly significant when a team is being formed, due to their alignment with factors for the selection of team members at new venture creation. Once the business is underway and new venture creation is overtaken by new venture growth, entrepreneurial team resources may also be overtaken by underlying factors such as social integration or commitment to the task, i.e. focused on the behavior and understanding within an entrepreneurial team. Thus, the entrepreneurial phase is important when considering which entrepreneurial team characteristics influence new venture performance (Vyakarnam & Handelberg, 2005). Consequently, we will differentiate between entrepreneurial team formation (i.e. related to new venture creation) and entrepreneurial team development (i.e. related to new venture growth). Nevertheless, we do view entrepreneurial team formation and team development as an iterative process, i.e. when a new venture is in its growth phase and the team needs to focus on developing characteristics, still selecting a new team member can be of essence e.g. due to a strategic decision. Hence, feedback loops from team development to team formation are possible and needed.

5.1.4.1   Entrepreneurial team formation characteristics

Vyakarnam and Handelberg (2005) argue that resources such as knowledge and skills are required in order for entrepreneurial teams to function effectively in the market. Thus, entrepreneurial teams need to capture the essential resources for success. However, Forbes, Borchert, Zellmer-Bruhn and Sapienza (2006) explain that two differing views exist in the literature when selecting team members. In line with entrepreneurial team resources (Vyakarnam & Handelberg, 2005), one view perceives team member selection as a rational process driven by resource needs (e.g. filling the gaps in their own competencies) and economic considerations. Nonetheless, another dominant view perceives team member selection driven by interpersonal attraction, i.e. social psychological needs related to relational trust and similarity of personal characteristics. Thus, we will focus on both areas, as Aldrich and Kim (2007) argue that the proposed principles are not mutually exclusive, i.e. within the constraints of resource-based needs; teams can still choose people who are 'attractive' and vise versa.

Entrepreneurial team resources

Vyakarnam and Handelberg (2005) explain that the entrepreneurial resources include: the entrepreneurial team's industry experience; the team's work experience; the complementarities of functional backgrounds; the team size; the team's joint experience; and the team's networks and contacts. In the upcoming sub sections we will outline each underlying factor separately.

Knowledge and experience

Acquiring knowledge of the industry in which the new venture functions is critical for success. Individuals' with experience of functioning in a specific industry, convey their knowledge of how the industry operates to the new

venture, which becomes particularly significant when the new venture accomplishes a scale where industry-wide competition cannot be avoided (Vyakarnam & Handelberg, 2005). In this line, Roure and Keeley (1990) argue that team completeness in terms of preceding industry experience and knowledge is an important forecaster of new venture success. Furthermore, Shrader and Siegel (2007) found that managers with a comprehensive quantity of knowledge and experience have a comparative advantage in helping new ventures successfully adjust to new technologies and industries, i.e. their capability to solve problems and adjust to change in the highly-dynamic external environment. Shane and Venkataraman (2000) explain that individuals recognize those opportunities related to information which they already possess; whether developed from work experience or education, it influences an entrepreneur's ability to understand, construe, and apply new information in ways that those missing that preceding information cannot reproduce. According to Beckman (2006) prior affiliations are key because the past ventures for which members of the entrepreneurial team have worked, offer models and designs for what a new venture should look like and how it should act. However, there is a difference in the type of affiliations. Entrepreneurial teams with comparable preceding company connections share a coherent language and vision that lets them to effortlessly implement and routinize actions (Nahapiet & Ghoshal, 1998). However, entrepreneurial teams whose members come from a broad array of past ventures bring a diversity of knowledge and contacts to their new venture, which encourages innovation and the detection of new alternatives (Amabile, Conti, Coon, Lazenby, & Herron, 1996), activities which are essential for new technology ventures. The empirical results of Beckman (2006) suggest that ventures whose entrepreneurial teams have both types of connections are more probable to grow over time, whereas Delmar and Shane (2006) provide empirical evidence that entrepreneurial teams' experience improves new venture survival rates and increases sales.

Number of team members
According to Vyakarnam and Handelberg (2005) the number of entrepreneurial team members is strongly connected to the development of a new venture, i.e. a higher degree of entrepreneurial team members relates to a higher degree of individuals' accessible to perform the vast job of new venture creation; due to resource poverty, lack of legitimacy, and weak ties to external actors (Aspelund, Berg-Utby & Skjevdal, 2005). Thus, the number of problems new ventures face legitimizes the requirement for a larger team. In this line, the larger the size of human capital, the higher amount of characteristics such as education, experience, knowledge, and skills are apparent; which are widely seen as critical resources for success in entrepreneurial ventures (Unger, Rauch, Frese & Rosenbusch, 2011). However, according to Ucbasaran et al. (2003), a proxy for the quality of human capital is the size of the team, i.e. if the size of the team remains constant in the short to medium term, human capital can only be enlarged via learning and training. However, a faster means of increasing the absolute level of human capital could be via the selection of a new team member, but as a down side, team size is also associated to conflict (Vyakarnam & Handelberg, 2005). Lechler (2001) explains that entrepreneurial teams potentially could lead to inefficient communication, complex long lasting decision processes and personal conflicts; dysfunctions like group losses, social loafing, group think and risk-shifting are well recognized in team research literature. Thus, enhancement of team size could negatively influence the efficiency caused by an excess of expertise and differing management approaches (Lechler, 2001).

Social capital
According to Khaire (2010), due to the many advantages of large size, growth is an advantageous result for new ventures. He found that social resources, such as legitimacy and the social status of customers, compensate for an organizations lack of financial resources. In other words, the quality and status of new ventures to an industry can be contingent from their contacts with high-status organizations (Zaheer, Gözubuyuk & Milanov, 2010). Thus, social resources are a means for new ventures to grow and overcome the 'liability of newness'. Moreover, Witt (2004) argues that entrepreneurs can get cheaper and other resources than offered by the market through their networks. In this line, Vyakarnam and Handelberg (2005) argue that the central proposal of social capital theory is that the

networks of relationships embody a valuable resource for the conduct of social interactions, i.e. it becomes potential to realize certain ends that would not otherwise be possible or only at a higher cost. Therefore, the importance of social ties has a specific significance in the premature stages of new venture creation, i.e. when in search of new venture capital and to find additional team members (Shane & Cable, 2002). Davidsson and Honig (2003) argue that the value varies from the stipulation of concrete resources, e.g. a loan provided by a father to his son, to intangible resources, e.g. information about the location of a potential customer. Hence, social capital can be a constructive resource both by enhancing internal organizational trust through the connection of individuals, as by connecting external networks in order to make resources available.

Team composition

Rentsch and Klimoski (2001) argue that team composition is the compilation of all entrepreneurial team members' characteristics. Humphrey, Morgeson and Mannor (2009) argue that the actions and performance of a team are influenced by the composition of its members. According to Orvis and Zaccaro (2008) team members are frequently formed based on diverse knowledge, skills and abilities, which Vyakarnam and Handelberg (2005) refer to as team heterogeneity. The benefits of heterogeneity are particularly essential for entrepreneurial teams in unstable environments (Ensley & Amason, 1999), as heterogeneity offers a stimulus for innovation as ideas come from a greater variety of backgrounds. Heterogeneity in functional backgrounds is also principally essential in complex environments, where the new venture counters contradictory demands from numerous constituencies (Vyakarnam & Handelberg, 2005).

Contrarily, team homogeneity assists in new venture performance in less complicated environments as the entrepreneurial team could communicate effortlessly and rapidly (Keck, 1997). Amason, Shrader and Thompson (2006) argue that the extent of spreading within an entrepreneurial team on characteristics such as age, education, and functional background influences the entrepreneurial team's actions and performance, and entails a wide selection of skills, expertise, and a broad network of social ties. However, within more homogeneous entrepreneurial teams communication is easier, less formal, and more frequent; consequently, homogeneous teams are likely to experience greater levels of behavioral assimilation (Amason, Shrader & Thompson (2006).. Finally, Vyakarnam and Handelberg (2005) describe that team composition is a big influence in new venture team formation and therefore on organizational performance.

Interpersonal attraction

Contrasting to the view that new member selection is an effect of the search for resources; a different explanation views new member selection as a result of an intrinsic human need for interpersonal attraction and social connection (Forbes et al., 2006). In this line, Francis and Sandberg (2000) explain that friendship assists in the formation of entrepreneurial teams of new ventures, thereby improving early performance. Furthermore, Aldrich and Kim (2007) explain that constructive social relations within an entrepreneurial team can generate a supportive context within which team members are confident to commence innovative activities.

However, Forbes et al. (2006) explain that entrepreneurial team members frequently share related relationships, personal connections, and backgrounds that can create extremes of homogeneity in the team; which contradicts the resource-based view related to high-tech complex environments. Especially, as individuals tend to socialize with others comparable to themselves, contact amid similar people takes place much more often than contact among dissimilar people (Forbes et al., 2006).

5.1.4.2 Entrepreneurial team development characteristics

Whereas selecting entrepreneurial team members is closely related to venture performance at the early stages of venture creation, other factors relate to new venture growth. In other words, once the new venture is in progress, entrepreneurial team resources may be overtaken by factors as group processes, task leadership, and commitment to the task (Vyakarnam & Handelberg, 2005), i.e. related to the behavior and understanding to work in a team.

Group processes

Vyakarnam, Jacobs and Handelberg (1999) argue that the main competency for entrepreneurs is the capability to create and manage relationships. In this line, the group process determinant originates from social psychology which acknowledged social integration and communication as important predictors of entrepreneurial team performance (Vyakarnam & Handelberg, 2005).

Social integration

Vyakarnam and Handelberg (2005) explain that social integration replicates the attraction to the group, satisfaction with other team members, and integration amid the group members; members of socially integrated groups' experience higher morale, satisfaction, and display greater efficiency in the organization of tasks. Ensley, Pearson and Pearce (2003) argue that cohesion is the central mediator of group continuation and productivity. Lechler (2001) explains that cohesion is the extent to which team members aspire to stay in the team. Ensley, Pearson and Pearce (2003) describe that cohesion exposes itself not only at the cognitive level of team members, but also in affective circumstances, i.e. cohesion influences motivation, morale, and willingness to engage in social and task related behavior, group potency, and ultimately performance. Furthermore, cohesion is thought to facilitate group productivity, while a lack of cohesion is thought to constrain productivity (Ensley, Pearson & Pearce, 2003). Ensley, Pearson and Pearce (2003) continue by mentioning that highly cohesive teams spend more time planning and problem solving, whereas low-cohesion groups are rife with social conflict. Lechler (2001) claims that communication within a team provides the means for information exchange among team members; thus, the quality of the communication largely depends on the frequency and formalization of the information exchange.

Communication frequency and formality

Communication has been portrayed as the heart of group behavior and the core of social systems (Vyakarnam & Handelberg, 2005). Communication frequency refers to how often and comprehensively team members communicate (Lechler, 2001). Unexpectedly, however, Smith et al. (1994) found a negative connection between communication frequency and performance. Their explanation was that: "communication frequency indicates conflict and disagreement in the group, resulting in a flurry of meetings and written memos that detract from task-oriented activities". Thus entrepreneurial teams may be communicating frequently to reduce conflict. Conversely, infrequent communication may point out that the team functions well, with little need for information exchange and explanation (Vyakarnam & Handelberg, 2005).

Vyakarnam and Handelberg (2005) argue that communication formality is the degree entrepreneurial teams favor less formal communication channels over more formal channels. Lechler (2001) adds that communication formalization also refers to the extent of preparation is necessary before communication amid team members can take place. In this line, Shaw (1981) argued that if a team is to function well, its team members need to be capable to communicate effortlessly and effectively. Interestingly, however, Smith et al. (1994) found a negative relationship between informal communication and organization growth, as teams require a certain level of formality in communication to attain high sales growth. Possibly, as a means of frequently sharing information, however, this formality may also be damaging team integration if the level gets too high. In this line, common sense and individual contexts need to be taken into

account (Vyakarnam & Handelberg (2005), both to create support concerning the frequency of the communication as to the formality of the communication within entrepreneurial teams.

Task leadership

Zaccaro, Rittman and Marks (2001) explain that team members must effectively integrate their individual actions; as the performance of each function contributes to joint accomplishment. In this line, two key aspects relate to new venture performance: a team members' perception concerning the clarity of diverse issues related to task behavior and his perception in regard to the shared understanding within the team (Vyakarnam & Handelberg (2005).

Goal and role clarity

Vyakarnam and Handelberg (2005) explain that in order for team members to be effective, there needs to be transparency in the goals, values, and norms about how to effectively execute tasks within the entrepreneurial team. Hence, the most important concerns of team processes contain widespread understanding about the mission, goals, and the structure of the team. In this line, the failure to openly communicate goals and aspirations between the team members of a new venture can cause major problems during the growth phases of the venture (Vyakarnam & Handelberg, 2005). Ensley and Hmieleski (2005) refer to a similar term, namely: team potency; defined as: "the level of shared efficacy within a team in the direction of attaining its goals". An entrepreneurial team which is decidedly potent trusts with great self-belief that it can comprehend the tasks in which it has been formed to accomplish (Pearce, Gallagher & Ensley, 2002). In this line, numerous studies have found a direct linkage between team potency and performance. For example Gevers, Van Eerde and Rutte (2001) indicate that teams low in potency tend to experience a larger degree of perceived time pressure and respond more negatively to time pressure, whereas highly potent teams (due to the self-belief in their capability) more frequently rise to the occasion under time limited circumstances.

Shared understanding

Mohrman and Cohen (1994) found that team member perceptions of each other's contributions to the team and recognized shared understanding of what they are trying to achieve, influences team performance. Hackman (1990) stresses that team members' understanding of the team's business is critical to their success. Watson, Ponthieu and Critelli (1995) argue that entrepreneurial team members have to continue similar 'wavelength' about business operations to be successful. According to Ensley, Pearson and Pearce (2003) leadership has been associated with effective strategic decision making and to new venture performance; shared leadership is a team process where leadership is conducted by the team in its entirety, instead of exclusively by a high executive (i.e. vertical leadership). Thus, the entrepreneurial team as a whole shares and contributes wholly in the tasks of leadership; which Katzenbach and Smith (1993) considered critical for the effective functioning of an entrepreneurial team. This contains entrepreneurial team members motivating one another, sharing feedback, and directing activities of the team mutually (Ensley, Pearson & Pearce, 2003). Consequently, research proposes that when shared leadership arises, teams are more successful and gain a higher degree of: collaboration, coordination, cooperation, and innovation; and are better capable to understand group needs such as task interdependence (Perry, Pearce & Sims, 1999). Shared leadership has also been found to be an important predictor of new venture performance (Ensley & Pearce, 2001).

Personal integration to tasks

According to Vyakarnam and Handelberg (2005) personal integration of entrepreneurial team members to the task clearly contributes to new venture performance, i.e. comprehensible trust and commitment in the vision and principles of the venture. Thus, effective decision-making relies upon the compliance of distinctive entrepreneurial team members to collaborate in realizing those decisions (Woolridge & Floyd, 1990). In this line, two dominant features are connected to the personal integration to tasks: 1) the individual commitment to the decided tasks, and 2)

the extent entrepreneurial team members have internalized the values and goals of the task process to their core self (Vyakarnam & Handelberg, 2005).

Commitment

Team commitment exhibits a considerable and strong impact on new venture performance (Lechler, 2001) and is positively connected to entrepreneurial team effectiveness (Chowdhurdy, 2005). According to Vyakarnam and Handelberg (2005) commitment to the execution of a decision is essential as entrepreneurial team members can obstruct or disrupt the realization of proposed initiatives. Even minor stalls can be significant in highly competitive and dynamic environments (Eisenhardt, 1989), which in particular holds for NTV's (Aspelund, Berg-Utby & Skjevdal, 2005).

Korsgaard, Schweiger and Sapienza (1995) define team commitment as: "the extent to which team members accept the strategic decision and intent to cooperate in carrying it out". As previously noted, lack of individual commitment to a decision has effects far beyond its impact on that decision alone (Eisenhardt, 1989), particularly as performance and failure of the entrepreneurial team is directly revealed in new venture performance (Hambrick & Mason, 1984), in line with the upper-echelon view. Chowdhurdy (2005) therefore argues that successful entrepreneurial teams have high team member commitment and develop procedures which employ different perceptions on problems, a diversity of possible solutions and various criteria for evaluating the solutions; in order to make complex and innovative decisions. Hence, entrepreneurial teams should create an environment of trust and reliability to improve team commitment.

Internalized values and goals

According to Vyakarnam and Handelberg (2005) a high quantity of personal integration into the task and goals holds that the fundamental values of a new venture are internalized to the core self; thus an individual team member will perform with a sense of choice that is aligned with his or her own values. This improves the autonomy of the individual team member which affects in greater creativity (Amabile, 1996), higher self-esteem, greater satisfaction and trust, and enhanced bodily and emotional well-being (Deci, Nezlek & Sheinman, 1981); all traits that are frequently associated with highly effective entrepreneurial teams (Vyakarnam & Handelberg, 2005). Contrarily, low personal integration into the task holds that the fundamental values of the task are not internalized, and individual behavior is determined by circumstance or obligation (Vyakarnam & Handelberg, 2005).

5.1.4.3 Overview of entrepreneurial team characteristics

Below we present a clear overview (see table 8) of the team formation (i.e. related to the new venture creation phase) characteristics which are associated with new venture performance.

Team formation characteristics	Underlying factors	Description
Team resources		Basic resources such as knowledge and skills are needed in order for entrepreneurial teams to operate successfully in the market.
	Knowledge and experience	Possessing knowledge and experience of the industry in which the new venture is to function.
	Number of team members	The larger the size of human capital related to an entrepreneurial team, the higher amount of attributes including education, experience, knowledge, and skills.
	Social capital	The networks of relationships constitute a valuable resource for the conduct of social affairs and legitimacy.

	Team composition	The degree of diversity in entrepreneurial team backgrounds.
Interpersonal attraction		Social psychological needs related to relational trust and similarity of personal characteristics.

Table 8: Summary of the team formation characteristics related to new venture performance

Below we present a clear overview (see table 9) of the team development (i.e. related to the new venture growth phase) characteristics which are associated with new venture performance.

Team development characteristics	Underlying factors	Description
Group processes		The ability of entrepreneurial teams to build and manage relationships within the team.
	Social integration	The attraction to the group, satisfaction with other members of the group, and integration among the group members.
	Communication frequency	Refers to how often and extensively team members communicate.
	Communication formality	Extent to which entrepreneurial teams favor less formal communication over more formal channels.
Task leadership		The team members' perceptions about the clarity of task behavior and the team members' perceptions about the degree of shared understanding within the entrepreneurial team.
	Shared understanding	Team member perceptions of each other's contributions to the team and established shared understanding of what they are trying to accomplish.
	Goal and role clarity	Clarity of goals, values, and norms about how to perform work within the entrepreneurial team.
Personal/Task integration effects		The degree of a clear belief and commitment in the vision and values of the new venture by the entrepreneurial team members.
	Commitment	Extent to which team members accept the strategic decision and intent to cooperate in carrying it out.
	Internalized values and goals	Underlying values are highly internalized to the core self and the person is acting with a sense of choice that accords with the whole self.

Table 9: Summary of the team development characteristics related to new venture performance

5.1.5   The influence of team support on entrepreneurial team performance

Now that we have outlined the characteristics and underlying factors of entrepreneurial teams related to new venture performance and segregated two distinct entrepreneurial phases, in this sub section we will focus on how these team characteristics can be effectively conveyed to entrepreneurial teams as means of support. Similarly, we will focus on team formation and team development separately.

5.1.5.1   Entrepreneurial team formation support

As described previously, when forming entrepreneurial teams, the selection of team members is of essence. In this line, two perspectives are dominant: a rational process based on resource needs, and a social psychological process based on the interpersonal fit between team members. Hence, team support could assist in successfully combining both perspectives, i.e. forming a social network and relating it to entrepreneurial team formation and the selection of team members based on resource needs and interpersonal attraction. However, contemporarily, no research has specifically focused its research on this topic. Thus, a gap in the literature remains. We will however refer to this gap from a practical point of view in the practical implications of the solution design section (p. 52).

According to Baron and Markman (2000). Research does however point out that specific social skills such as the ability to read others correctly, make constructive first impressions, adjust to a broad variety of social situations, and be influential, can influence the outcomes of social interactions. Hence, as these social skills can be improved via suitable training, entrepreneurs who take advantage of such occasions may attain essential benefits (Baron & Markman, 2000).

5.1.5.2 Entrepreneurial team development support

As cited in Masiello (2011), teamwork is defined as: "a set of behavioral abilities, such as: effective communication, anticipation, meeting of others' demands, and inspiration to confidence"; which assist in the useful interaction amid team members (Smith & Cole, 2009; Lerner, Magrane & Friedman, 2009). In this line, team training is the employment of instructional strategies to a detailed set of competencies, i.e. the incorporation of learning theory principles and team behaviors, the practice of these, and the stipulation of corrective feedback (Baker, Day & Salas, 2006). Team training is functional to advance cognitive outcomes, affective outcomes, teamwork processes, and performance outcomes (Salas et al., 2008). Moreover, Salas, Cooke and Rosen (2008) argue that team training support is a practicable means organizations can take in order to further develop and improve team outcomes.

According to Marks, Sabella, Shawn Burke and Zaccaro (2002) training programs should be directed to center on conveying underlying knowledge rather than a limited set of skills, i.e. the consideration of needs to be positioned on the examination of knowledge structures (e.g. shared mental models) as indication of training effectiveness and as a antecedent to team processes and outcomes. In addition, Salas, Nichols and Driskell (2007) argue that teams can be supported to perform more effectively when the team members contribute in a training aimed at the team as a whole. Hence, Cannon-Bowers and Salas (1998) outlined several team support strategies from which three specific components of support have received empirical evidence, namely: cross-training, team coordination and adaptation training, and guided team self-correction training (Salas, Nichols & Driskell, 2007).

Cross training

Marks, Sabella, Shawn Burke and Zaccaro (2002) explain that cross-training is: "an instructional strategy in which each team member is educated in the functions of his or her teammates, with the aim to increase knowledge of interpersonal actions by introducing entrepreneurial team members to the roles and responsibilities of their team mates". Cannon-Bowers and Salas (1998) argue that by employing cross-training, team members increase their understanding of the basic knowledge required to effectively execute the functions and duties of other entrepreneurial team members. In addition, cross-training provides entrepreneurial team members a general outline for understanding the team's task and how each individual's role is significant to it (Salas, Nichols & Driskell (2007). Marks, Sabella, Burke and Zaccaro (2002) continue and explain that cross-training enhances team communication, coordination, and team regulation by encouraging team members to value the actions and behavior of those around them. In this line, team members are better capable to anticipate to the requests of others and to offer support to team members in need of aid.

According to Cannon-Bowers and Salas (1998) research reveals that cross-trained teams surpass teams without training; cross-trained teams utilize more efficient communication and show higher levels of inter-positional knowledge. Moreover, cross-training assists entrepreneurial team members to interrelate more effectively. Finally, Blickensderfer, Cannon-Bowers and Salas (1998) outlined three categories of cross-training, which vary on the depth and method in which team members' roles are trained. First, positional clarification entails verbally proposing team members with knowledge regarding other team members' roles via lecture or discussion. Second, positional modeling involves both verbal discussion and observations (e.g. via videotape) of other team members' roles. Third, positional rotation offers entrepreneurial team members the physical practice of executing other team members' tasks via active partaking in each team member's role.

Team coordination and adaptation training
According to Shawn Burke et al. (2006) team performance directly details the approach how an entrepreneurial team acclimatizes to the huge amount of encountered contingencies. In this line, highly effective teams are capable to become accustomed to stressful situations (e.g. induced by uncertainty, ambiguity, and/or time pressure) by the employment of effective coordination strategies (Entin & Serfaty, 1999), and consequently decrease the amount of communication required for successful task performance (Cannon-Bowers & Salas, 1998). Thus, Salas, Nichols and Driskell (2007) explain that team coordination and adaptation training is presumed to support entrepreneurial team members to optimize the value of idle periods, i.e. when task demands are low; by anticipating and arguing about potential troubles. Entin and Serfaty (1999) argue that team coordination and adaptation training supports teams to develop under a high degree of time pressure due to a switch from explicit to implicit coordination; implicit coordination entails the application of shared mental models amid team members. Consequently, Cannon-Bowers and Salas (1998) induced several experiments with teams and found that the training of team members in order to understand the skills connected to teamwork had a positive impact on the team's performance. In addition, training team members in how to utilize low-workload periods to plan for task contingencies enlarged the degree of volunteered information before being asked and enhanced overall team performance (Serfaty, Entin & Johnston, 1998).

Guided team self-correction
According to Smith-Jentsch, Cannon-Bowers, Tannenbaum and Salas (2008) guided team self-correction is defined as: "a team debriefing strategy in which members are given the responsibility for diagnosing and solving their team's performance problems with guidance as to what topics they should discuss and how to do so constructively". These after-event reviews are generally employed as a team building option, as they allow team members to jointly make sense of their environment and to develop a shared vision for how to continue in the future (Smith-Jentsch, Canon-Bowers, Tannenbaum & Salas, 2008). Cannon-Bowers and Salas (1998) argue that the encouragement of feedback between team members is a method that appears covenant for team training; the procedure whereby the team diagnoses problems in its performance and develops solutions to cope with these problems has been described as team self correction. This process can help foster correct expectations (i.e., shared mental models) amid team members and thereby add to more effective team performance (Salas, Nichols & Driskell, 2007).

Team members frequently have a great deal of the information and know-how required to recognize and solve their own problems (Blickensderfer, Cannon-Bowers & Salas, 1998), however empirical results illustrate that teams which acquired direction, developed greater shared task expectations and established more efficient teamwork processes than teams with unguided team self-correction (Smith-Jentsch et al., 2008). Thus, team self-correction guided by a trainer has been acknowledged as guided team self correction (Smith-Jentsch, Zeisig, Acton, & McPherson, 1998). In this case, the trainer examines the team in regard to the quality of their teamwork interactions, in which the team classifies its own problems; which develops into the aim for improvement in training exercises. Conversely, the task of the trainer is to impose structure on the team's exchange, thereby focusing on teamwork interactions that have formerly been outlined to be important for the performance of the team (Cannon-Bowers & Salas, 1998).

Assertiveness training
Cannon-Bowers and Salas (1998) explain that effective decision making in teams necessitates that: "the distinctive knowledge, skills, ideas, and observations of each team member are renowned as resources that are obtainable to solve problems". In this line, it is significant that each team member has the capability and motivation to express concerns assertively. Hence, researchers investigated and trained task related assertiveness. Pearsall and Ellis (2006) found that team member assertiveness positively influenced team performance and team satisfaction; in which assertiveness is the ability to effectively communicate in interpersonal encounters by distributing thoughts clearly and

openly. Cannon-Bowers and Salas (1998) argue that team members need to communicate assertively in various situations, e.g. when implementing feedback, when delivering opinions, when contributing a solution to a problem, when instigating an action, when requesting assistance, or when in need for backup. Cannon-Bowers and Salas (1998) describe that research focusing on how to train task-related assertiveness showed that active practice and feedback are essential, i.e, training that contained only lecture and critique of behavioral models (i.e. where no active practice takes place) enhanced team member's attitudes toward being assertive in a team, however did not improve performance.

Team leader training

Ensley, Carland and Carland (2000) empirically confirmed the existence of lead entrepreneurs amid new ventures and argued that the magnitude of their strategic vision and their self-confidence makes them differ from other team members. Cooney (2005) explains that a lot depends on whether the team came into existence before the new venture idea was created or afterwards; if it was formed first by an individual then that person would be the 'lead entrepreneur' who makes prior decisions regarding the composition and behavior of the team. According to Kozlowski, Gully, Salas and Cannon-Bowers (1996) the function of the team leader is to direct and organize team experiences. Hence, Cannon-Bowers and Salas (1998) explain that there has been a change in the way team leadership is perceived; attention has turned to focusing on the coach facilitator role engaged by team leaders; which entails mapping out each team member's distinctive contribution to the team and managing team climate (i.e. team members' norms and expectations regarding their interaction).

According to Cannon-Bowers and Salas (1998) a team leader's behavior impacts the team members' opinions in regard to the team's climate; which aids or obstructs the team's performance by affecting interaction patterns. In this line, leaders who gained formal leadership training were more expected to critique themselves and to ask their teams for feedback on their own performance. Sanhueza (2011) asserts that a positive relationship subsists between leadership development programs and organizational performance. Cannon-Bowers and Salas (1998) argue that trained leaders probe their teams more specifically and guide the teams in self critique; with the result that team members are more liable to acknowledge their own errors.

5.1.5.3   Overview of entrepreneurial team support strategies

Below we present a clear overview (see table 10) of team training strategies which are associated with team performance and therefore lead to new venture performance.

Training strategy	Description
Cross training	Team members rotate positions in order to develop an understanding of the basic knowledge necessary to successfully perform the tasks and duties of other team members
Team coordination and adaptation training	To help teams adapt to increased task demands by shifting their coordination strategies, and to reduce the amount of communication necessary for successful task performance.
Guided team self-correction	Process whereby the team diagnoses problems in its functioning and develops effective solutions to these problems. Helps to foster correct expectations (i.e., shared mental models) among team members
Assertiveness training	To help team member's ability and willingness to voice concerns assertively in a team, e.g. when providing feedback to other members, when stating opinions, when offering a potential solution to a problem, when initiating an action, when offering or requesting assistance, or when he or she needs a backup.
Team leader training	This entails drawing out each team member's unique contribution to the team and managing team climate (i.e., team members' norms and expectations regarding their interaction).

Table 10: Overview of support strategies related to entrepreneurial team performance

5.2 Solution design

Now that we have explored the problems related to team support (part 2), rigorously analyzed and diagnosed the problems (part 3), and conducted a literature review on the basis of several proposed knowledge questions (part 4); we need to define the specifications of the solution (Van Aken, Berends & Van der Bij, 2009). Thus, we will outline several design guidelines of team support based on the literature review. In this line, we will create an idealized design (Ackoff, Magidson & Addison, 2006) of team support, more specifically; on the basis of the design guidelines we will present an integral model of team support as artifact.

5.2.1   Design guidelines how to support entrepreneurial teams

Based on the conducted literature review, the following specifications could be outlined as design guidelines for the characteristics and support of entrepreneurial teams in relation to new venture performance. In other words, organizations should focus on the following guidelines to effectively support entrepreneurial teams:

1.   When supporting entrepreneurial team formation attention is needed on human and social resources

Organizations could support the formation of entrepreneurial teams by assisting in the capturing of essential human and social resources. In this line, entrepreneurial teams should be aided in the determination of their own resource needs and their quest for the selection of new team members based on these resource needs. The previous experience of working in the industry, the degree of relevant social ties, and the degree of heterogeneity based on the complexity of the environment should be weighed. Furthermore, assistance is needed in the determination of an appropriate quantity of team members based on the complexity of the environment. In addition, organizations could support entrepreneurial teams in gaining knowledge of the industry in which the new venture is to function, and when the environment is complex and a high degree of team members and heterogeneity is needed, organizations could support in conflict management imposed by too much expertise.

2.   When supporting entrepreneurial team formation emphasis is considered necessary on social connections

Organizations could support the formation of entrepreneurial teams by assisting in the selection of new team members based on interpersonal attraction. In this line, organizations should support new entrepreneurial teams in gaining trust and forming interpersonal relationships. In addition, organizations could support entrepreneurial teams in selecting new team members by determining their own personality characteristics and matching them to others based on effective alignment of personality characteristics (however in line with their resource needs). Finally, organizations could help support entrepreneurial team members by training them in specific social skills such as the ability to make favorable first impressions and to adapt to a wide range of social interactions.

3.   When supporting entrepreneurial team development attention is required on managing relationships

Organizations should support the development of entrepreneurial teams by assisting in the managing and developing of interpersonal relationships. In this line, organizations need to support entrepreneurial teams in their *social integration* by creating an environment where the affective state of team members is framed, possibly by offering team building exercises; where the attraction to the group and integration among team members is supported. In addition, the cognitive state of team members needs to be supported. By employing the team leader strategy, which contributes to managing team climate, i.e. team members' norms and expectations regarding their interaction, assists in the integration among team members. Furthermore, this strategy helps entrepreneurial teams in drawing out each member's unique contribution to the team, which leads to a higher degree of satisfaction with others in the group.

In addition, organizations should support entrepreneurial teams in their *communication* by determining whether entrepreneurial teams communicate efficiently. By simulating tasks, i.e. employing the team coordination and

adaptation strategy, where entrepreneurial teams are trained in reducing the amount of communication necessary for successful task performance, teams could be effectively supported in communication efficiency. In this line, feedback can be given regarding the frequency and formality of their communication.

4. When supporting entrepreneurial team development emphasis is vital on team behavior and understanding

Organizations should support the development of entrepreneurial teams by assisting in the clarity of tasks. In this line, organizations need to support entrepreneurial teams in their *goal and role clarity* by aiding teams in setting a clear mission, goals, and team structure which hold responsibilities for all team members. In this line, teams should be supported to effectively communicate their aspirations. By employing the guided team self correction strategy, it could assist in fostering correct expectations among team members and develop a shared vision for how to proceed in the future.

In addition, organizations should support entrepreneurial teams in their *shared understanding* by offering aid in the domain of realistic perceptions of each other's contributions to the team and what they are trying to accomplish. By employing the cross training strategy, knowledge of interpersonal activities will be enhanced by introducing team members to the roles and responsibilities of their team members. Furthermore, it provides an overall framework for understanding the team's task and how each individual's role is important to it.

5. When supporting entrepreneurial team development priority is essential on personal integration to tasks

Organizations should support the development of entrepreneurial teams by assisting in the personal integration of team members to their tasks. In this line, organizations need to support entrepreneurial teams in their *commitment to the task* by showing team members the possible impacts when sabotaging or delaying a decision. Furthermore, organizations should support entrepreneurs in making effective strategic decisions by help developing processes of diverse perspectives on problems, a variety of potential solutions, and criteria to evaluate the solutions. Thus, organizations should support entrepreneurs in the provision of an environment of trust and loyalty to improve team commitment. By employing the assertiveness training strategy, team members are trained in the ability and willingness to voice concerns assertively.

In addition, organizations should support entrepreneurial teams by *internalizing their values and goals*. If participants are trained in assertively voicing concerns when creating values and goals, their voice will be heard which leads to integration. Thus, the assertiveness training strategy, where team members are trained in the ability and willingness to voice concerns assertively, could assist team members. Furthermore, team leader training, could aid in drawing out each members unique contribution to the team which helps internalizing values and goals.

The following sub paragraph (figure 4) visualizes the proposed design guidelines in an integral model of team support.

5.2.2   Integral model of entrepreneurial team support

The final step is to visualize the proposed design guidelines in to a model of the theoretical business system:
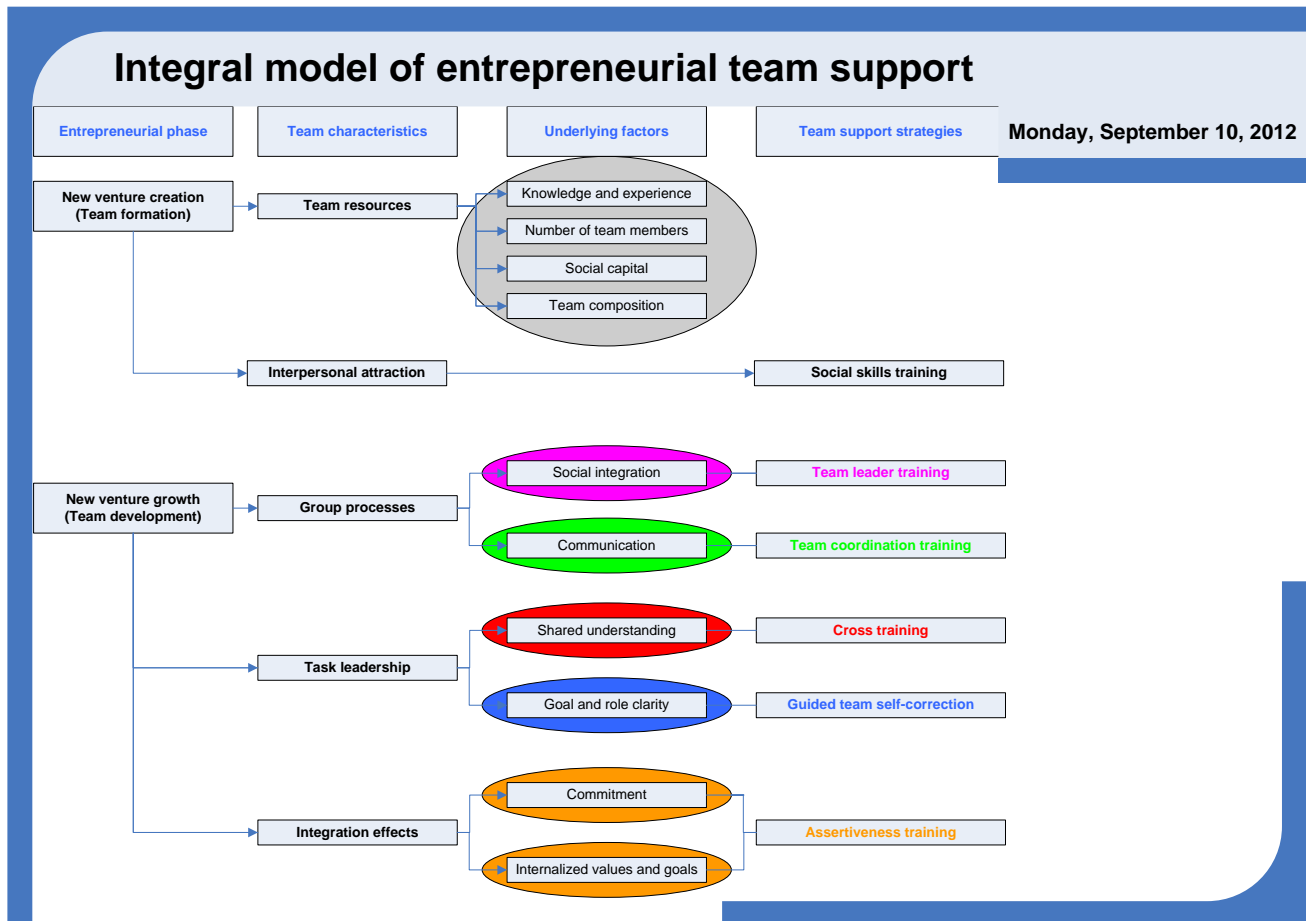

Figure 4: Theory-based integral model of team support

The main value of the proposed team support model lays in the fact that it solves the proposed problems of Organization X related to entrepreneurs. First, it provides clear links between team support and new venture performance, which is seen as the key issue for entrepreneurs for participating in training modules. Furthermore, the theoretical model clearly divides its support in two different entrepreneurial phases, namely: new venture creation, for entrepreneurs who have the idea to start a new venture or entrepreneurs who started a venture but need additional human resources; and new venture growth, for entrepreneurs with an already established team. Finally, the theoretical model of team support is based on the latest scientific insights related to entrepreneurial team support.

5.3 Transferring solution design to team support processes Organization X

The step in the plan of action part encompasses the integration of the proposed idealized design to the contemporary processes of Organization X to seek where we can fill gaps in order to improve performance. Thus, Van Aken, Berends and Van der Bij (2009) argue that the next step is to logically evaluate whether the proposed solution solves the problems. However, first we need to shortly outline the (practice-based) contemporary team support training modules of Organization X.

5.3.1   Team support training modules Organization X

To investigate the contemporary team support training modules of Organization X we used the previous conducted interviews as input and in addition conducted secondary research. The secondary research contained an analysis of the Organization X team support offerings. In this line, we found that contemporarily Organization X team support training modules have three basic training modules and two advanced modules. The basic training modules are meant to create awareness, i.e. to apply theory and experience theory by working with cases. The advanced training modules are designed so participants can work with their own casuistry. Organization X offers its participants the following team support training modules:

1. *Appreciative inquiry: sharing of successes and pitfalls (basic training)*
The focus of this training lays on the identification of processes which are successful and creating a vision of future successful processes. The rationale behind this method is that every team and every person within a team has something good on which the team could build. Hence, instead of focusing on what goes wrong, this method focuses on what goes well.

2. *Me and my team (basic training)*
This training focuses on creating awareness that every member of a team has a different perspective which has an influence on collaboration and imaging, i.e. how does this effect collaboration processes? Hence, the main topics include: communication and behavior style preferences, positioning in collaboration, and values and norms.

3. *Introduction team development (basic training)*
This training provides participants insight in how individual ambitions can be converted in collective ambitions when further developing the new venture.

4. *From business case to entrepreneurial team (advanced training)*
This training focuses on the question: how do we build a winning team focused on the enrolment of the business model and the business strategy which are previously defined?

5. *Integration training modules: me and my team and introduction team development (advanced training)*
This advanced training module integrates the collective ambitions and how to put this back to your own ambitions (basic training modules 2), and the way an individual entrepreneur influences collaboration (basic training modules 3); to a training where entrepreneurs bring in their own problems and questions from practice with the challenge to come to collective ambitions.

5.3.2   Integration interviews

To cope with the integration of the proposed solution design to the contemporary processes, a final round of interviews was scheduled with internal and external stakeholders of Organization X. The goal of these interviews was to present the theoretical model of team support and verify if these guidelines were already integrated within the contemporary processes of team support of Organization X or not and/or if there were possibilities to create additional value for participating entrepreneurs in regard to team support. We employed such a design instead of e.g. prototyping (Visscher-Voerman & Gustafson, 2004) mainly due to time restraints.

5.3.2.1   Interview sampling and procedure

We specifically sampled to gain a high degree of stratification (Downs & Adrian, 2004) as the evaluation should be based on the opinions of all major internal and external stakeholders, i.e. both high and low stakeholders within the organization, and internal and external stakeholders of the organization. Moreover, we could also gain organizational

support throughout the business incubator (Van Aken, Berends & Van der Bij, 2009). In this line, we sampled the final interviews as following: one respondent is a member of the contemporary management team (internal stakeholder with a high position in the organization), a team development trainer/expert who was involved in the process of creating the team training modules (internal stakeholder with a operational position in the organization), and finally an entrepreneur participant apart of an entrepreneurial team (external stakeholder). For the interview guideline see appendix F and for the full interview transcriptions see appendix G. Table 11 provides background information regarding the interview subjects.

No.	Date	Time	Location	Duration	Sex	Education	Occupation
9.	06-07-'12	11.00	Organization X	47 min.	M	Physics/Business Administration	Program director/MT Organization X
10.	19-07-'12	16.30	Organization X	58 min.	M	Communication and Media Studies	Entrepreneur participant
11.	20-07-'12	13.00	Arnhem	80 min.	F	Human Behavior	Team trainer/expert Organization X

Table 11: Background information integration interview participants

5.3.2.2 Interview outcomes

The interviews provided insight in how the design guidelines could be transferred to high-tech entrepreneurial team support at Organization X. The following outcomes came forward:

Team resources and interpersonal attraction
The underlying factors of team resources were recognized within the contemporary team support processes of Organization X. First, in regard to *knowledge of the industry*, the interviews outlined that with this determinant is actually meant that you understand the branch, the venture, your goals, mission, vision etc. In this line, you also mean culture. Organization X especially focused on this with support of Quinn's roles, i.e. there are certain branches where different types of cultures dominate, where different leadership styles are expected, where different types of employees work; thus, also in your team development approximation this should be considered. Second, the *number of team members* has a direct link to peer meetings. A certain size of a team has influence on the team dynamics which is also interrelated to perceptions of equality in teams. This is different from focusing on diversity in teams and the tendency of entrepreneurs to form a team with the similar type of individuals, i.e. making the team homogeneous, while heterogeneity yields so much more. Hence, the size of the team and therein the different team roles and team phases is definitely in the contemporary program. Third, *social capital* is something that often is proposed by entrepreneurs when asked what the goals and expectations are within Organization X. When considering social capital, Organization X sees it also as your own identity, i.e. your own social capital: who are you, what do you bring, how do you use it and to what extent are you aware of this? There are additional ways of meeting interesting network partners, however, this exceeds the scope of Organization X's team development processes but is the focus of other underlying pillars such as marketing. What Organization X did focus on within team support processes was that you are aware of yourself, your qualities, competences, but also your weaknesses and how you can easily form these to your advantage. Organization X also received inquiries from entrepreneurs who sought for help in regard to building an effective team. However, Organization X did not treat this as material for basic workshops, thus they saw it as a possibility for an advanced workshop. Finally, *team composition*, is also part of the contemporary team support training modules. Organization X focused mainly on the roles of team members, team qualities and patterns which arise in teams. Furthermore, also the team phases in development are of importance, i.e. the difference between being a leader and a team member. Additionally, *interpersonal attraction* was found within the core of contemporary

team support processes of Organization X. As participants within team training will need to work together, get to know one and other and share the experience of working in a (fictional) team together, the social aspects such as trust and making social connections with others are trained.

Concluding remarks: Most underlying factors of team resources and interpersonal attraction have been incorporated in the contemporary program of Organization X. However, Vyakarnam and Handelberg (2005) clearly describe that a distinction should be made between constructs related to venture creation (team formation) and others that relate to venture growth (team development). Hence, even though Organization X incorporates the proposed theoretical constructs in their team development processes, they contemporarily possibly do not provide support in relation to these theoretical constructs in team formation processes. In this line, performance could be increased by using the proposed theoretical constructs as means to develop an advanced training for effective team formation in relation to new venture performance by focusing on how to effectively select new team members based on: resource needs (knowledge of the industry, number of team members, social capital, and team composition) and interpersonal attraction. We will focus on this in the practical implications of the solution design (p. 52).

Group processes

The underlying factors of group processes were recognized within the contemporary team support processes of Organization X. First, *social integration* is incorporated in the current team training modules as being attractive to others, and awareness that people can be different and therefore can experience things different than you do, i.e. the difference between intention and effect. However, *communication frequency and formality*, comes forward in another form. Organization X focuses less on frequency and formality. In this line you could for example think of: what is handy to put in e-mails, what should you always communicate personally, and how do you structure meetings? These affairs are more based on formal communication channels and forms. Organization X focuses more on providing feedback: how is that for individuals, how do you do that, and non verbal communication during these processes. Thus, it focused more on creating awareness in the practical and emotional aspects within communication.

Concluding remarks: The underlying factors of group processes have been incorporated in the contemporary program of Organization X to a great extent, especially the social integration aspects. However, we could see a difference in the communication frequency and formality between the idealized theoretical design and contemporary team support processes of Organization X. Thus, possibly further insight in these processes could provide increased performance, especially as Vyakarnam and Handelberg (2005) argue that if a team is to function effectively, its members must be able to communicate easily and effectively, i.e. the preparation that is required before communication among the team members can occur. Hence, entrepreneurial teams may be communicating frequently to reduce conflict. In this line, team coordination and adaptation training, designed to help teams adapt to increased task demands by shifting their coordination strategies and to reduce the amount of communication necessary for successful task performance, could provide additional value for entrepreneurs.

Task leadership

The underlying factors of task leadership were recognized within the contemporary team support processes of Organization X; however Organization X hasn't had the possibility to focus on these factors as there was no retention of groups. To train *shared understanding* and *goal and role clarity* it is necessary that participants know each other and have previously worked with each other, because only if these requirements are met then Organization X can provide feedback about the collaboration process. We did however let participants work with fictive cases and formed teams to solve these cases. In this line, you could see that individuals took different roles and asked them to provide feedback to one and another. Hence, you need a group that shares an experience in order to create content to provide feedback. Thus, Organization X did think about these factors when they created their team offerings.

Concluding remarks: The underlying factors of task leadership have been incorporated in the contemporary program of Organization X. However, due to the low retention rate of participants it is difficult to create value for participating entrepreneurs. Possibly, increased communication and insight in the proposed underlying factors (as they are designed as solution to entrepreneurs' problems with team support) leads to higher participation and retention rates and therefore leads to increased performance of the team support processes.

Personal integration to the task
The underlying factors of personal integration to the task were recognized within the contemporary team support processes of Organization X. First, *commitment* emerges when participants develop a product and /or invention on their own and build a business around this, and how they then need to attract and integrate new members to help make it successful. This could deem to be difficult as someone else fills in tasks differently than you did and you need to help them be as committed as you are. Organization X then focuses on: how is that for an entrepreneur, how do you create positive feelings in regard to these changes and how can you let negative feelings go? In this line, also *internalized values and goals* play a role, as effort should be put in aiding others understanding your vision. Hence, Organization X believes that the proposed underlying factors are incorporated. However, it is a very personal part within team development. It is about self-knowledge and self-reflection.

Concluding remarks: The underlying factors of personal integration to the task have been incorporated in the contemporary program of Organization X.

5.4 Practical implications solution design

The following sub paragraphs will outline the additional value of the integral team support model, namely as a tool for: communication, quality control, formal information repository, a real-life team simulation, and team formation processes.

5.3.4.1   Team support model as communication tool
The interview outcomes showed that the proposed entrepreneurial team characteristics and their underlying factors weren't completely surprising and new to Organization X. However, interview respondent no. 11 explained that a new question could be raised: "did we highlight these seemingly important characteristics enough and bring them under attention to participants, i.e. is it clear for participants that they will gain the proposed performance when participating in our training modules?" Interview respondent no. 11 continued: "if we are able to retain participants in multiple training sessions, then you could actually create more depth in the program and focus even more on the proposed characteristics. However, in the contemporary situation these are only briefly treated and often only from theory as the participating entrepreneurs are only together and working as a team for the first time. Thus, the proposed characteristics of team support should be communicated clearer to entrepreneur participants beforehand." Hence, the characteristics of the theoretical model of team support and the structure of team support processes need to be communicated clearly prior to the training, especially as they are proposed as solution to the mentioned problems.

According to Salas and Canon-Bowers (2001) training motivation can be conceptualized as: "the direction, effort, intensity, and persistence that trainees apply to learning-oriented activities before, during, and after training." In this line, scholars have found (and confirmed) that trainees' motivation to learn and attend training has an effect on their skill acquisition, retention, and willingness to apply the newly acquired knowledge, attitudes and skills. Thus, motivation has a positive effect on retention. Hirsch, Kang and Bodenhausen (2012) argue that motivational messages are most effective when tailored to reflect the concerns of the intended audience. As we focused on integrating team

support with new venture performance (i.e. tailored to the concerns of the intended audience), communication to motivate entrepreneurs to participate and retain team training, as it is critical to effectively convey knowledge and skills, via the proposed model can be framed more effectively. In addition, several possibilities were raised during the exploratory interviews to communicate the structure more effectively. First, the mandatory kick-off could play a larger role in communicating the proposed characteristics and underlying factors of entrepreneurial team support. Second, the team module descriptions tailored to the proposed characteristics on the website could play a role. Third, the very first training sessions could provide deeper insight in the role of the program.

5.3.4.2   Team support model as tool for quality control

Knowledge in regard to team characteristics could also serve as means to control the quality of team training modules. Respondent no. 8 argues: "monitoring trainers does happen to a certain extent, however, whereupon they are exactly monitored isn't always clear. We do ask participants to evaluate the training and ask them to provide feedback. In addition, content experts also look at the relevance as there could possibly be more questions related to other topics." However, the proposed characteristics could be a means to create a more extensive and rational evaluation. In this line, Salas and Canon-Bowers (2001) argue that events that occur after training are as important as those that occur before and during training, thus focus is needed on examining the events that ensure transfer of newly acquired knowledge, skills and attitudes. Fisher and Millar (2008) argue that despite the difficulties, obtaining student perceptions of learning outcomes can contribute to program evaluation. Hence, the proposed theory-based model of team support could be a means to evaluate team training processes as the degree to which participants have obtained knowledge and skills in regard to the proposed characteristics, could be a basis for evaluation purposes. In this line, participants could fill in an evaluation form where they indicate to what extent the team characteristics and underlying factors are met in the training session, and in relation to Kirkpatrick's training criteria taxonomies (Alliger et al., 1997) Organization X could monitor behavior, learning, and results.

5.3.4.3   Team support model as formal information repository tool

Obviously, the theory-based model provides additional knowledge in regard to team support from a scientific perspective. However, according to Wagner (2006) much of today's organizational knowledge still exists outside of formal information repositories and is often only in people's heads; even though it is widely recognized that knowledge is an essential strategic resource for a firm to retain sustainable competitive advantage (Choi, Poon & Davis, 2008). Hence, it is of importance to increase internal knowledge in regard to team support processes and transform it into formal information repositories (Wagner, 2006) such as the theory-based integral model of team support.

5.3.4.4   Team support model as input for a real-life team simulation

The team support model provides means as input for a real-life team simulation. In this line, respondent no. 1 argued the difficulty for Organization X to effectively offer team support due to not working with real life teams: "the fact that entrepreneurs do not work here in a team setting, that they do not participate in this program with their team, and that entrepreneurs have teams outside of Organization X, but do not work here in team settings during training modules; makes it very difficult to effectively and efficiently do something with team development." In addition, the proposed characteristics in the theoretical model were all measured within actual entrepreneurial teams (e.g. Song et al., 2008; Vyakarnam & Handelberg, 2005; Ensley & Hmieleski, 2005). Thus, a real-life case was proposed as solution; where entrepreneurs work together, work on a case in which a collective goal is set with strict deadlines. In this line, even though entrepreneurs still do not work with their real-life teams, Organization X could still simulate the dynamics of working in a team instead of simply hang back, and listen to a trainer. Furthermore, as actual behavior takes place, trainers could analyze the situation and provide feedback to participants.

Salas and Canon-Bowers (2001) argue that more emphasis lies in the literature on behavior role modeling as specific type of simulation-based training. Skarlicki and Latham (1997) found that a training which included role-play was successful in training organizational citizenship behavior in a labor union setting. Similarly, Smith-Jentsch, Jentsch, Payne and Salas (1996) found that a behavior modeling approach emphasizing practice (i.e. role playing) and performance feedback was superior to a lecture for training assertiveness skills. For example, in line with the study by Blum et al. (2005) effective simulation teams could be formed on the basis of the team formation characteristics with the objective to complete several scenarios where the teams need to respond to challenging events. Thus, teams gain knowledge and attitudes in the aspects of team formation and gain real-life insight in the application of the determinants related to new venture performance. In addition, the scenarios could be in line with the proposed team support strategies, e.g. assertiveness training, where team member's ability and willingness to voice concerns assertively in a team are addressed. In this line, trainers could provide feedback on the basis of several underlying factors of entrepreneurial team support such as the need to communicate commitment and to create shared understanding. This way participants who are too dominant gain insights in the need to listen to others and conversely participants who are not assertive enough gain insight in the need to voice concerns.

In addition, Organization X could also stimulate the participation of real-life teams. In this line, Salas, Nichols and Driskell (2007) argue that teams can be supported to perform more effectively when the team members contribute in a training aimed at the team as a whole. First, it would be a possibility to individually coach real-life teams, however, it could also be stimulated to let real-life teams be a case-study within a workshop. Respondent no. 5 explained: "what I miss in the current training program is the sharing of experiences by entrepreneurs and the interaction." Thus, a case or problem of a real-life team could be proposed in which other participants provide feedback. In this line, both the real-life team as the other participants gain from the learning experience in which active practice takes place. Respondent no. 11 argued: "when an intervision case is made like this, it could pollinate to other participants and take these insights back to their own organizations."

5.3.4.5   Team support model as tool for team formation processes

Finally, the team support model provides means for team formation processes. Respondent no. 8 argues: "the knowledge that we have in how we can help high-tech start-ups build an entrepreneurial team is quite limited". Forbes et al. (2006) explain that two general explanations for team formation exist in the entrepreneurial team literature. One view sees it as a rational process driven by economic, instrumental considerations; while another view sees the addition process as driven primarily by interpersonal attraction and by social networks. In this line, interview respondent no. 3 outlined: "we work a lot in project teams. However, the people that form these teams mainly look at rational aspects based on CV's. What type of person isn't even considered, that isn't important to them. That is strange." Interview respondent no. 10 continued: "yes, rational factors are of essence when forming a team, however, only forming a team on logical values, with people who do not socially connect with each other, is deemed to fail in my opinion".

A too dominant approach towards one of two proposed principles even led to actual team failure. In line with the rational processes, respondent no. 6 explained: "we originally started with three founding members so that we could completely manage the technical process. Every one of us had his own specific competences and experience on which the team was built. However, eventually our team failed." In line with the interpersonal attraction processes, respondent no. 10 outlined: "when we started, it was important to bring in someone with the main focus that we understood each other good and quickly, the personal click needed to be there. However, also downsides occurred as we both had the same weaknesses. What you saw is that the personal click was there, however the additional values were insufficient to continue as a team." Furthermore, interview respondent no. 10 explained: "I think that you should look at the type of person and once a connection is established, then there should be investigated whether it fits

within the theoretical proposed characteristics." In line with these practical findings, Aldrich and Kim (2007) argue that the proposed principles are not mutually exclusive, i.e. within the constraints of resource-based needs; teams can still choose people who are 'attractive' and vise versa. As we already proposed guidelines in how to form teams on the basis of rational aspects, the question remains: how could we integrate both principles to create even more value in team support for participant entrepreneurs?

Interview respondent no. 4 explained: "I would have found it interesting to set up my business in the beginning 50/50 with someone else who was as excited as me. I would have found it helpful if Organization X would have matched me with someone else. They do try it, for example in synergy groups, however I don't think the appropriate structures are in place." Interview respondent no. 10 added: "matching people to form a team now primarily lies with the gut feelings of Organization X staff. Some people within Organization X are very good at this due to years of experience; however, as you have the personality profiles of participants and you have insight in the rational factors to form teams, then all you have to do is to establish: does it click?" Thus, the additional knowledge gained in how to form a team on rational factors and insight in personality types, could lead to better matches of entrepreneurs; which could be communicated to participants as a means to increase new venture performance, as Harper (2008) established evidence that entrepreneurial teams are the superior entrepreneurial start-up concept. Hence, matching sessions on the basis of both principles, could lead to new venture performance; especially in the high-tech environment (Aspelund, Berg-Utby & Skjevdal, 2005) where survival rates are low (Song et al., 2008) and considering that while many determinants of new venture performance are uncontrollable; the entrepreneurial team is a relatively controllable entity (Forbes et al, 2006).

In this line, we can conclude the additional value of the proposed team support model and the need to put more emphasis on the proposed characteristics and integrated team support strategies within the contemporary program of Organization X.

5.4 Additional recommendations

Now that we have investigated how the design guidelines could be transferred to high-tech entrepreneurial team support at Organization X, we can argue that most of the current processes of Organization X withstand the scientific evaluation to a great extent. This holds that the content of the contemporary processes of team support and the support strategies are both from a practical-based as from a scientific-based view, up to date. Hence, interview outcomes show that the proposed design guidelines weren't entirely new to Organization X and, to a great extent, already incorporated in the current training modules. In this line, Van Aken, Berends and Van der Bij (2009) explain that also the design of tools to support certain process steps are of value.

However, this holds that other underlying problems within the training program make it difficult to effectively support participating entrepreneurs. In this line, the exploratory interviews show several organization wide problems. This isn't completely new as Salas and Canon-Bowers (2001) argue that many training programs fail to reach their goals due to organizational constraints. Thus, the general conclusion is that Organization X needs to further outline their overall organizational problems which make it difficult to effectively support participating entrepreneurs, as the contemporary content of the team support program is both from a practical as from a scientific viewpoint formed and integrated well. In this line, the proposed problems in the exploratory interviews, summarized in appendix C, could be seen as an important starting point. However, as we specifically focused on the contemporary team support processes, we did not provide insight in the explanation (analysis and diagnosis) and solution design (plan of action) as these problems fall outside the scope of our main topic. However, we did outline the proposed problems of the exploratory phase, in which we could provide preliminary recommendations for future research.

1.   Organization X should establish the underlying needs of entrepreneurs before training comes in place

The interviews show that training is just an element of what participants need. In other words, the effectiveness of a training program is largely determined by events that occur before training, e.g. to provide entrepreneurs insight in what they want and need to gain from training. This is in line with Salas and Canon-Bowers (2001) findings who claim that these events can be as important as (and in some cases more important than) those that occur during and after training; hence, activities that occur prior to training have an impact on how effective training turns out to be. Interviews show that coaches play an important role in this part, as they work individually with participants and could establish where learning is needed. However, contemporarily there is no synergy between coaches and the training program, every element stands on its own. It probably isn't even clear to coaches what topics are included in the training program and as most coaches are business developers, there could be a lack of knowledge in regard to personal development and team development. Thus, coaches cannot advise participants who run into problems to follow a specific training module which can help them and afterwards reflect on learning, i.e. what the learning points mean for their organization. Also participants acknowledge this situation, as they all mentioned no synergy took place between coaches and the training program. So, the motivation of entrepreneurs to participate in a training program mainly lies on their interests and not on their underlying needs. Klofsten (2001) clearly explains that participants themselves are not the best ones to determine their real needs, whereas a mentor based on experience can effectively help to define the actual need and assist with a solution, e.g. a training module. However, in the current situation, the training is just an element in the whole which makes the effectiveness of training lower than it could be.

2.   The Organization X enterprise support program needs a clear structure and needs to be clearly communicated

Contemporarily there is no obligation for entrepreneurs to participate in training modules and Organization X does not perform any selection among its participants. However, gradually the target group of the Organization X training program changed from start-ups to already established businesses. In this line, also the needs and questions changed, while the structure of the training program remained the same. Klofsten (2001) clearly argues the importance of integration of the training program to the target group. To cope with this situation, Organization X introduced basic and advanced training modules. However, as the structure of the training program lets participants freely choose from all training modules, problems occurred. First, participants complained about the lack of integration between training and their problems, i.e. not relating to their entrepreneurial phase. Second, trainers cannot go in depth with their groups as they do not know who exactly will participate and it is not clear that a certain group will retain who for example followed a basic training and has enough knowledge to go deeper into a topic. Consequently, negative events affect learning and retention (Salas & Canon-Bowers, 2001). Thus, if you really want to offer participants a high-end training program, than a certain structure is needed.

Furthermore, as we previously saw, it is important to communicate the value and structure of the training program. Salas and Canon-Bowers (2001) argue that the approach in which the organization outlines a training, influences learning outcomes. Some possibilities to create more emphasis in the communication of the value and structure of the program include: the kick-off, during the first training sessions and on the website.

3.   Organization X needs to refocus on the social binding with and between their participants

Besides the content and structure of the training program, also the social side in business development should be a main goal in entrepreneurial support, such as developing skills, contacts, and self-development. In this line, Klofsten (2001) argues the need for entrepreneurial training programs to support acquaintances between participating entrepreneurs, to create business and to learn from each other; and the need to increase participant's self-belief. However, the interviews show a trend in the wrong direction, as entrepreneurs aren't often present at Organization X and the binding with Organization X isn't enough. In addition, as we previously saw, as there is no structure within the training program, entrepreneurs do not often follow training modules with the same group, which also limits social

binding. Hence, contemporarily participants have a business and pick the training modules which fit their interests, instead of actively taking part in a community form. The interviews show two causes of the above effects. First, at the beginning of Organization X a lot of time and effort was put in maintaining relationships with entrepreneurs, which led to binding and support. However, as the groups became larger and the contracts of several employees were ended, so did (to a large extent) the binding. Second, as mentioned previously, the type of entrepreneurs changed. The dominant entrepreneurs now are those with already established businesses mainly focused on (short-term) business development and to busy for the social aspects, whereas at the start entrepreneurs had much more need for broad training and support.

4.   Organization X should create occasional consultation between key stakeholders to build an integral program

As we outlined previously, Organization X focuses on three main pillars, namely: business development, personal development and team development. Even though the design of Organization X was focused on the integration of these pillars, in practice this isn't always the case. Furthermore, within Organization X there are a lot of different stakeholders. However, if you have different people with different ideas in how Organization X should operate (e.g. does Organization X help to develop the entrepreneur to let him/her grow their business; or does Organization X help the entrepreneur in business growth?) and every stakeholder does his or her part separately, then there is no integral character. Thus, stakeholders need to communicate clearly. In addition, the interviews show that several meetings have been planned where external stakeholders were excluded; however, in order to create an integral character it is of essence to also include these stakeholders. However, due to time and investment constraints it is difficult to implement reflexive meetings and communication.

5.   Organization X must relocate resources in order to implement time-saving and quality-improving instruments

Finally, interview results show that Organization X has developed several instruments to cope with the previous mentioned organizational wide problems. For example, an IDP is developed as instrument so beforehand Organization X gains insight in participants' main problems and what they want to improve. However, as we previously saw, participants themselves are not the best ones to determine their real needs (Klofsten, 2001). Hence, you would expect that coaches who work individually with participants would help them find their real needs. However, in practice this happens too often that this link doesn't work. Possibly due to a lack of knowledge of coaches in other pillars, e.g. team development and personal development. Furthermore, the type of coaches Organization X is dominantly consultant, who likes to help solve problems of entrepreneurs and share their knowledge instead of actively searching entrepreneurs' real needs. Hence, while the instrument IDP works, problems lie with the effective implementation. Another example includes an instrument designed to help participants gain insight in their real needs. The idea was to create a competence profile which could be linked to training modules. In other words, if entrepreneurs want to work on a certain competence, than they know which training they need to participate in. However, in practice Organization X did not further develop this idea. Finally, the idea was to design an instrument in which an analysis was made which training modules fell under which specific pillar. In this line, training modules could be more effectively integrated with each other. However, also these examples weren't further developed due to organizational constraints, e.g. time and resources.

6.   Organization X ought to align its training methods to their specific target group

The specific target group of Organization X concerns adults. Hence, the training programs should also be aligned to adult learning. Even though the validation interviews made clear that this is not a problem within the team support pillar; the exploratory interviews clearly show that many trainers still convey their knowledge one-directional to a group of people in the other pillars. In other words, as no interaction takes place between trainer and its participants, the knowledge remains abstract. The interviews do show that the understanding that training needs to be application-oriented, i.e. aligned to participants own experiences, however due to time constraints this received too little

attention. Moreover, the interviews outline that to make training more interactive and align it to the specific target group of adults; trainers need to the appropriate skills to do so. The question is: is this contemporarily the case, or should Organization X from now on focus on attracting trainers that do possess these skills?

Part 6: Evaluation of conducted research

Van Aken, Berends and Van der Bij (2009) explain that the deliverables of the final project should involve: a problem definition, a problem analysis and diagnosis of the major causes and consequences of the problem; an exploration of potential solutions to the problem; and an elaboration of one of them in a detailed solution design. Now that we have met these standards, the final step is the evaluation of the conducted research.

6.1 Answering the main research questions

Our primary goal was to support entrepreneurs in the formation and development of their entrepreneurial teams, which contributed to the contemporary team support processes of Organization X. To cope with these goals, two main research questions were outlined. The first research question aimed at uncovering guidelines derived from literature for the formation and development of high-tech entrepreneurial teams. This contributed to the design of a theory-based integral team support model which supports certain process steps of the contemporary team support program offered by Organization X. In addition, the guidelines create additional performance in several areas, namely: communication, quality control, as formal information repository tool, as input for a real-life team simulation, and for team formation processes. By following the regulative cycle steps, the following guidelines (table 12) were proposed to answer our main research question and as solution to the outlined problems in relation to contemporary team support processes of Organization X:

Which guidelines can be derived from the literature for the formation and development of new high-tech entrepreneurial teams?
1.   When supporting entrepreneurial team formation attention is needed on human and social resources
2.   When supporting entrepreneurial team formation emphasis is considered necessary on social connections
3.   When supporting entrepreneurial team development attention is required on managing relationships
4.   When supporting entrepreneurial team development priority is vital on personal integration to tasks
5.   When supporting entrepreneurial team development emphasis is essential on team behavior and understanding

Table 12: Design guidelines of entrepreneurial team support

The second research question aimed at transferring the proposed guidelines to high-tech entrepreneurial team support at Organization X. However, this led to the conclusion that not team support processes, but fundamental organizational problems relate to why the enterprise support program isn't as effective as it could be. As the regulative cycle is an iterative process (Van Aken, Berends & Van der Bij, 2009) we went back to the problem definition phase and found several organizational problems which negatively affect the support program. In this line, several recommendations were proposed (table 13), in order to cope with the organizational constraints posed on the support program:

Recommendations to Organization X to cope with organizational constraints posed on the support program
1.   Organization X should establish the underlying needs of entrepreneurs before training comes in place
2.   The Organization X enterprise support program needs a clear structure
3.   The Organization X enterprise support program needs to be clearly communicated
4.   Organization X needs to refocus on the social binding with and between their participants

5.	Organization X needs to create occasional consultation between key stakeholders to build an integral program
6.	Organization X needs to relocate resources in order to implement time-saving and quality-improving instruments

Table 12: Recommendations to cope with organizational constraints

6.2   Discussion of findings

While the concept of transferring design guidelines to the contemporary team support processes of Organization X was perceived as interesting by several stakeholders, the proposed guidelines did not evolve into a redesign of the business system. Even if we provided additional value of the model and the guidelines could be implemented to put more emphasis on the proposed characteristics and integrated team support strategies, it still is merely a designing tool to support certain process steps (Van Aken, Berends & Van der Bij, 2009). Hence, several logical questions rose: 1) did we conduct design oriented research appropriately? 2) Did we focus our BPS project on a real problem?

To answer the first question, we employed the guidelines for how design oriented research should be conducted (Hevner et al., 2004; Verschuren & Hartog, 2005) and linked them to the application of the regulative cycle conducted in this project. In this line, we can systematically (based on sound theoretical principles) follow the guidelines described in literature and link these to our conducted research design in order to evaluate. Hevner et al. (2004) describe seven guidelines to evaluate design science. Even though Venable (2010) argues there is a possibility that there are more than just these criteria, there is near consensus that some form of evaluation is needed, thus we employed the criteria proposed by Hevner et al. (2004). However, we will place more emphasis on the criteria which are clearly consented upon in the literature, namely: to have a clear design artifact, and the need to address and help solve an important problem. The following table presents an answer to the first question:

Design evaluation guidelines (Hevner et al., 2004)	Application in BPS project
1. Outcome of design should be an artifact	We created an integral model of entrepreneurial team support.
2. Design must address a relevant and important problem to stakeholders	We held several rounds of interviews in which we explored and validated problems related to team support processes of internal and external stakeholders.
3. Utility, quality, and efficacy of design artifact must be rigorously evaluated	A final round of interviews was held to rigorously investigate the utility and efficacy of the design artifact. A scientific literature review was conducted which incorporates the quality of the design artifact.
4. Contribution to research must be clear	In the introduction we clearly outlined the theoretical implications of our research.
5. Research methods must be rigorously applied	We employed several different rounds of interviews. First exploratory, then validation and finally integral interviews. The sample and design have all been rigorously applied based on theoretical insights which led to specific interview guidelines.
6. Researcher should approach the process as cyclical problem solving process	We employed the regulative cycle outlined by van Strien (1997) as cyclical problem solving processes. Furthermore, we specifically followed the guidelines proposed by Van Aken Berends and Van der Bij (2009).
7. Presentation of results should address both rigorous as relevance requirements	The first part of our solution design addresses rigorousness, as we conducted a scientific literature review based on validated interview results. However, the second part of the solution design incorporated the integration of the solution to the contemporary deployed processes by Organization X. In this line, clear recommendations could be outlined specifically relevant to Organization X.

Table 13: Design evaluation guidelines applied to our application of the regulative cycle

Concluding, we can argue that we did conduct design oriented research in the appropriate way as we employed the regulative cycle and took both rigor and relevance in to consideration to the highest possible degree, i.e. we explored the problems, validated the problems and provided solutions on the basis of interviews, secondary research and theoretical insights.

Still, in relation to the second proposed question, arguably the real problem did not only lay with team support processes (e.g. value of team development is unclear and the lack of scientific integration), but extends to the general organizational processes in which team support is offered. In other words, whereas we specifically focused on team support processes in the enterprise support program of Organization X, we found that much of the scientific evaluation and guidelines we proposed were already incorporated. Hence, the main conclusion of this project was that the deepened exploration of organizational wide problems negatively influences the effectiveness of the enterprise support program as it limits certain necessities. In this line, Salas and Canon-Bowers (2001) argue that many training programs fail to reach their goals due to organizational constraints. Although these explored problems need to be further analyzed and diagnosed, these problems do provide a clear starting point for Organization X to think about the possibilities to redesign organizational processes steps, in order to make the enterprise support program more effective in creating support to participating entrepreneurs. Hence, not the content of team support is of essence for the effective conveying of entrepreneurial team support, but the processes in which team support is limited due to organizational constraints.

Additionally, this provides means to construct contributions to theory from practice, as contemporarily most research focuses on the link between entrepreneurial teams and new venture performance (e.g. Song et al., 2008), on the underlying factors of the link between entrepreneurial teams and new venture performance (e.g. Vyakarnam & Handelberg, 2005) and on team support strategies (e.g. Salas, Nichols & Driskell, 2007). However, our research showed that in relation to entrepreneurial team support more emphasis and elaboration is needed on the organizational processes which restrain the effective implementation of team support training. In this line, Salas and Canon-Bowers (2001) explain that organizational constraints and conflicts could have been identified and ameliorated before the training was implemented by conducting an organizational analysis; as the organizational environment can have effects on whether newly acquired knowledge, skills, and attitudes are transferred. Whereas Klofsten (2001) provided a contribution to theory by proposing the success factors of entrepreneurial training programs, our main contribution to theory is the proposal of several propositions in relation to organizational constraints which negatively affect the effectiveness of entrepreneurial training programs, based on practical experience. In this line, we generalized several propositions from the recommendations to Organization X as first step towards theoretical contribution from practice. Consequently, further empirical research is needed in order to accept or reject the propositions.

6.2.1   Theoretical contributions from practice

Below we will outline the generalized propositions from the recommendations. Furthermore, we will briefly connect the propositions to contemporarily conducted research in order to take a first step towards theoretical contribution from practice. A first step, as further empirical research is needed in order to accept or reject the propositions.

1.   Organizational constraints negatively affect training outcomes

As previously described, Salas and Canon-Bowers (2001) argue that many training programs fail to reach their goals due to organizational constraints, which according to the authors could have been acknowledged preceding to implementing a training program. In other words, an organizational analysis focuses on the uniformity between training objectives with factors as organizational goals, available resources, constraints, and support for transfer (Salas

& Canon-Bowers, 2001). However, when these aspects have not been analyzed, they could negatively affect training outcomes.

2.   When the underlying needs of participants are established before training, support will be more effective
Salas and Canon-Bowers (2001) findings show that actions which arise preceding to training, e.g. a training-needs analysis, influence how effective training turns out to be. According to Tennant (2006), adults need to discern why they need to learn something before initiation of their learning. However, Klofsten (2001) explains that participants themselves are not the best ones to establish their real needs, whereas a supervisor based on experience can effectively help define the actual needs of participants. By focusing on the actual needs of participants other needs can be tailored prior to training, and efforts to move participants toward a mastery orientation should be developed (Salas & Canon-Bowers, 2001). In this line, Tannenbaum, Smith-Jentsch and Behson (1991) found evidence that the degree to which training meets a participant's expectations and requests positively influences post-training commitment and training motivation. Saks and Belcourt (2006) explain that supervisors can provide support to participants by the discussion of the training program and its content, setting goals, and encouraging their attending and partaking; which can assist in the transfer of training even before the training begins. Afterwards, a supervisor could assist in the evaluation of the set goals.

3.   Clear communication of the contextual factors of an enterprise support program leads to higher participation
Salas and Canon-Bowers (2001) argue that the approach in which organizations outlines a training, influences learning outcomes. For example, when framing training as advanced or remedial, influences training motivation and learning. In this line, Cohen (1991) explains that the way how a training program is initiated, e.g. a company's publicity about the program; influences the motivation to participate and to attend actively in the training program. Also Baldwin and Magjuka (1991) found evidence that the transfer of training is greater when participants received information preceding the actual training program.

4.   The greater the social binding between participants, the higher the value of an enterprise support program
Klofsten (2001) argues the need for training programs to support links between participating entrepreneurs, to create business and to learn from each other, and the need to enlarge a participant's self-confidence. This is in line with social capital theory, i.e. interpersonal relationships in social systems (Bollingtoft & Ulhoi, 2005). According to Bollino, Turnley and Bloodgood (2002) individuals work together more effectively and efficiently when they know one another, and trust and identify with one another. In this line, by its nature, a business incubator may help build social capital, as incubatees all operate under one roof, which makes cooperation much more expected (Bollingtoft & Ulhoi, 2005).

5.   Facilitating adult learning principles in an enterprise support program leads to more effective practice
According to Illeris (2004), when adults enter institutionalized learning situations, deterioration frequently takes place in which they slip back into the patterns from their schooldays, i.e. they leave the responsibility in the hands of the trainer. Consequently, a school oriented culture within adult learning is problematic, as it forces adults into a child's role, e.g. due to a traditional class instruction. Thus, facilitation needs to be joint where learners and facilitators are involved in a continual process of activity and reflection upon activity (Galbreith, 1991). In other words, whereas children have a subject-centered direction to learning, adults have a problem-centered direction to learning; hence, the collected experiences of adults can be a rich resource of learning (Tennant, 2006). Moreover, training that consists of only lecture and critique of behavioral models (i.e. where no active practice takes place) improves team member's attitudes but does not develop performance (Canon-Bowers & Salas, 1998). Hence, according to Salas and Canon-Bowers (1997) diverse methods could be employed in order to create active practice, such as: information-based methods, demonstration-based methods (e.g. video), and most specifically practice-based methods (e.g. guided practice and role play). This does however, hold that content expertise alone is not enough to effectively convey

knowledge; also the understanding of adult learners, technical proficiency and the ability to utilize a multitude of instructional methods and formats are fundamental (Galbreith, 1991).

6.2.2   Theoretical and managerial implications

In addition, due to our research design also other theoretical implications could be made. First, we attempted to bridge the gap between rigor and relevance in managerial research, as there is a broad consensus that scientific rigor and relevance should be combined (Hodgkinson, Maule, Brown, Pearman & Gleister, 2002). Second, whereas most contemporary literature focuses on quantitative methods to empirically test the determinants of entrepreneurial teams related to new venture performance (e.g. Song et al., 2008), we focused on qualitative methods to understand which determinants are important especially for entrepreneurs and for business incubators. Finally, current research focuses on entrepreneurial team characteristics and training methods and strategies separately. Our research design combined both streams of research in order to create an integral model of entrepreneurial team support. Additionally, we made a first attempt to integrate literature of entrepreneurial team characteristics and team support strategies.

The managerial implications of our research mainly lay with Organization X as business incubator and focuses on entrepreneurial team support. First, a list of contemporary problems and solutions are listed, validated and visualized based on results of both internal and external stakeholders. Furthermore, an integral model of entrepreneurial team support was fitted to the specific processes of Organization X. Finally, entrepreneurs who find profit and growth most important in developing their business could be satisfied with our integral model as a means of aligning entrepreneurial team characteristics to business development and new venture performance.

6.3   Limitations of research design

Several limitations of the research design could be outlined. The first limitation is the use of interviews. Even though we incorporated several rounds of interviews, used full interview transcriptions and included two separate rounds of structured validation interviews; the misinterpretation of answers to interview questions is always a possibility. Additionally, in regard to the selection of interviewees, no randomization took place which could, together with a rather small sample size, also be seen as a limitation (Downs & Adrian, 2004). However, we did stratify the sample and by asking validation questions in all rounds of interviews, we tried to counter these possible limitations to the best possible extent. However, as the program was implemented during the time we conducted our research, possibly things changed and information in the exploratory interviews (when the program just started) differs from the integration interviews (when the program ended as was evaluated). In addition, as we randomized our respondents to the greatest possible extent, the possibility rises that in regard to entrepreneur participants, the way team support was set-up, differed (as the new program just started this year). Therefore the problems encountered could differ based on the timeframe entrepreneurs participated.

The second limitation refers to the validity of the interview outcomes. As interviews were the main research method employed to gain insights in the Organization X enterprise support program and more specifically their team support processes, much relies on the value and completeness of the interviews. With an interview, researchers can learn the perceptions of stakeholders (Downs & Adrian, 2004). However, it is of importance to speak to the stakeholders who posses appropriate information in which they have perceptions about. This especially holds for design oriented research, as the very first step is to explore the problems in which the later research design is dependent on. In our research, this led to several problems. First, we specifically focused on integrating our theoretical model of team support to the team skills training modules. However, team support within Organization X is broader than just team skills, as it also relates to the topic of team roles, i.e. how to effectively build an entrepreneurial of the basis of various team roles (e.g. CEO, CTO, CFO, and CMO). Even though our theoretical model of team support also focused on the

characteristics of team formation in relation to new venture performance, we could not integrate these findings with the contemporary processes of team roles within Organization X due to the lack of interview information. In other words, the interviews guided us towards team skills and left out team roles. However, as Organization X internally also lacks knowledge in regard to team roles, the interview as research method limits insight in possible needed directions. In addition, no emphasis lays on the IDP (personal development plan) for the same reasons, while the IDP is a powerful tool to beforehand gain insight in the strengths and weaknesses of entrepreneurs and therefore also relates to team support processes. Finally, also individual coaches play an important role in facilitating support to teams. However, by focusing on team trainers, knowledge experts, members of the management team and entrepreneur participants in the interviews; does provide a clear view in regard to team training support, however additional viewpoints in regard to team coaching would possibly provide even more insight in the total domain of team support. In this line, Salas and Canon-Bowers (2001) argue that training-related approaches, including action learning, just-in-time training, mentoring, coaching, organizational learning, and managing skill portfolios are all currently being explored.

The third limitation refers to the use of the guidelines proposed by Van Aken, Berends, and Van der Bij (2009). Even though these guidelines provide a clear tool to conduct design oriented research and we chose for a type of design which relates specifically to business and management studies, an open view to additional sources is recommended. In this line, whereas we employed the regulative cycle to conduct our research, possibly a generalized version of the pragmatic paradigm as means for solution design would have led to even higher external validity. According to Visscher-Voerman and Gustafson (2004), when conducting the pragmatic paradigm, products are designed by a process of building, testing, and revising several prototypes, in which intended users (stakeholders) are directly involved in test and analysis activities. In this line, we could have created a blueprint of a training design based on the proposed design guidelines and effectively implement it within Organization X by testing and revising it to the usefulness of the stakeholders. However, mainly due to time restraints and resources we made the decision to perform integration interviews.

The fourth limitation refers to the main choice of team support problems over organizational problems. In other words, as we started our research, the topic of team support processes within Organization X was already determined. However, as we outlined in a later phase, the content of team support processes and the strategies to effectively convey team support knowledge are (to a large extent) up-to-date. Thus, even at the very start of a BPS project, and when the BPS project is shortly outlined by the problem owner or organization, an open view by the researcher is needed in order to provide solutions to the real problems. Furthermore, we did not incorporate a focus group as method in our design, mainly due to the complexities of contingencies, i.e. it was difficult to organize a lengthy focus group in the vacation period. However, a focus group could have led to even more insight, discussion and validation of problems and provide deeper insight in whether these problems were important and how to cope with them; due to interaction possibilities. As a downside however, focus groups also have specific limitations, such as: possible group think and lack of assertiveness of focus group participants, e.g. due to the differences in power within the organization (Downs & Adrian, 2004). In this line, a ranking system in the analysis and diagnosis stage could have provided extended insight in the relevance of problems to stakeholders. Chen and Cheng (2010) argue that a group ranking system leads to ranking the results which represent the group will, preference or decision. Hence, by employing such a ranking system, the internal validity of the problem specification would have possibly increased.

6.4   Future research directions

The proposed limitations form a basis for future research directions. As the exploratory interviews with internal and external stakeholders provided an elaborated insight in organizational constraints relating to team support processes

and possibly even organization wide, future research should focus on these areas as focal points for improvement processes. In this line, a deeper organizational analysis could be conducted, where the system wide components of the organization are outlined which may affect the delivery of a training program (Salas & Canon-Bowers, 2001). By employing a prototyping approach, solutions could be directly designed, tested, and redesigned (Visscher-Voerman & Gustafson, 2004)and therefore create a high degree of external validity, i.e. relevance for the focal organization. Furthermore, although the outlined design guidelines of how to support entrepreneurial teams in there formation and development processes were to a great extent already incorporated, future research in several domains is needed. First, it needs to be determined how the seemingly important characteristics can be communicated clearer to the participants of the enterprise support program. Second, more research is needed in how to create an effective social network structure for the selection of new team members, i.e. to effectively support entrepreneurial teams in their formation based on their resource needs and interpersonal attraction. Third, future research is needed to create insight in the underlying factors of interpersonal attraction. Research clearly distinguishes team support characteristics and its underlying factors regarding team resources, group processes, task leadership, and personal integration to tasks (e.g. Vyakarnam & Handelberg), however not in relation to interpersonal attraction. Hence, empirical research is needed to investigate its underlying constructs. Fourth, the integration between entrepreneurial team characteristics and team support strategies has not yet been validated. In this line, additional quantitative research could help to gain empirical results between the proposed linkages. Thus, the proposed linkages could be viewed as hypotheses to further investigate. Fifth, whereas our project focused on the specific integration between team support and new venture performance, integration effects could similarly be sought in the relation between team support and personal development. Sixth, whereas we specifically focused on team training as team support strategies, the domain of team support is much broader. Thus, the role of coaching, the personal development plan, and team roles in team support processes could be seen as directions for future research relating to the total team support program. Finally, we focused on the business incubator perspective in this research project. However, other institutions possibly differ from this perspective. Thus, future research is needed to determine the generalizability of the results to other industries.

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Appendices

Appendix A: Exploratory interview guide

A.1 Exploratory interview guide: people who are responsible for the problem within Organization X

Doel van het interview

Het doel van het interview is om verschillende perspectieven toe te voegen aan het vooraf opgestelde probleem betreffende de ondersteuning in teamontwikkeling door Organisatie X. Hierdoor bestaat de mogelijkheid om de diepte in te gaan en om te achterhalen in hoeverre de al afgenomen interviews uit het visiedocument overeenkomen met de uitkomsten van deze interviews. Als laatst dienen de interviews als mogelijkheid om ondersteuning te krijgen vanuit de organisatie voor het oplossen van het probleem.

Introductie interview

Dank u wel dat u wilt deelnemen aan dit interview. Door middel van dit interview wil ik graag inzicht verkrijgen in een aantal zaken. Ten eerste over de huidige manier waarop er binnen Organisatie X met teamontwikkeling wordt omgegaan. Ten tweede over de manier waarop teamontwikkeling zich verhoudt tot de pijlers bedrijfsontwikkeling en persoonlijke ontwikkeling. Ten derde, in hoeverre de onderlinge pijlers die vallen onder team ontwikkeling op elkaar zijn afgestemd. En als laatst, tot op welke hoogte gegronde wetenschappelijke kennis als basis heeft gediend voor het opgestelde trainingprogramma betreffende team ontwikkeling.

Voordat we beginnen, eerst een aantal vragen met betrekking tot de uitvoering en afsluiting van het interview. Het interview zal om en nabij de zestig minuten duren en zowel het interview als de uitkomsten zullen volledig anoniem blijven. Vindt u het een probleem het interview wordt opgenomen? Dit, zodat naderhand het gehele interview opnieuw beluisterd kan worden en een volledig transcript kan worden vervaardigd.

Interview guide

1. Wat doet Organisatie X precies als organisatie en wat is uw rol is binnen dit proces? Wat is de link tussen uw rol binnen Organisatie X en teamontwikkeling?
2. Zou u wat kunnen vertellen over het proces teamontwikkeling binnen Organisatie X? Op welke manier verhoudt teamontwikkeling zich tot bedrijfsontwikkeling en persoonlijke ontwikkeling? Wat zijn de positieve aspecten m.b.t. de ondersteuning en facilitatie van teamontwikkeling aan jonge ondernemingen door Organisatie X en wat zijn de negatieve aspecten? Als er een probleem bestaat, waarom bestaat het probleem en wie is er verantwoordelijk?
3. Wat zijn de belangrijkste oorzaken van het probleem? Welke zaken hebben geleid tot de problemen die u net noemde?
4. Wat zijn mogelijke oplossingen voor het probleem? Wat is er nodig om het probleem op te lossen en hoe compenseert Organisatie X op dit moment het probleem? Bestaat er een oplossing voor het probleem? Zijn er al oplossingen uitgevoerd? Zo ja, waren deze oplossingen succesvol?

A.2 Exploratory interview guide: people who are confronted with the problem within Organization X

1. Zou u in het kort willen schetsen waarom u bent gelieerd aan Organisatie X, hoe lang dat is en wat uw ervaringen zijn tot nog toe? In hoeverre maakt u gebruik van de mogelijkheden die Organisatie X biedt? Wat zijn de oorzaken dat u wel of niet deelneemt aan trainingen? Wordt u geadviseerd door uw coach om deel te nemen aan specifieke trainingen?
2. Wat is in uw ogen team ontwikkeling? In hoeverre bestaat er bij u een specifieke vraag naar team ontwikkeling ondersteuning? In welke fase van uw bedrijf denkt u dat team ontwikkeling van belang is/wordt?

3. Hoe denkt u dat Organisatie X uw bedrijf het best kan ondersteunen m.b.t. team ontwikkeling? Waar bestaan bepaalde (toekomstige) problemen en uitdagingen? Is het voor u van belang dat Organisatie X gebruik maakt van interactieve casussen in de trainingen? Is het voor u van belang dat Organisatie X zijn curriculum baseert op de laatste wetenschappelijke bevindingen?

Appendix B: Validation interview guide

D.1 Validation interview guide: people who are responsible for the problem within Organization X

Hartelijk dank voor de medewerking aan dit interview. Het gesprek zal ongeveer 60 minuten in beslag nemen en zal volledig anoniem worden behandeld. Ik voer onderzoek uit over hoe team ontwikkeling effectief kan bijdragen de groei van jonge (technische) ondernemingen. Het uiteindelijke doel van mijn scriptie is om tot een op wetenschap gebaseerd integraal model te komen betreffende team ontwikkeling en team training strategieën. Daarnaast adviseer ik hoe dit model kan worden afgestemd op de huidige team ontwikkeling processen van Organisatie X en hoe het deze kan verbeteren.

Ondertussen heb ik een eerste ronde interviews afgenomen bij mensen binnen en buiten Organisatie X die direct te maken hebben met team ontwikkeling. Het doel was om verduidelijking te krijgen betreffende het proces team ontwikkeling binnen Organisatie X, de manier waarop trainingen worden gegeven en waar de huidige uitdagingen/problemen liggen. Deze informatie dient als input voor een tweede ronde interviews met als doel enerzijds de resultaten uit de eerste ronde te valideren en anderzijds om mogelijke nieuwe inzichten niet uit te sluiten.

Hoe vult Organisatie X (organisatorisch) op dit moment de pijler team ontwikkeling in?
1. Binnen Organisatie X wordt meer tijd en aandacht besteed aan de pijler team ontwikkeling. Tijdens een interne meeting met verschillende interne stakeholders is de invulling voor verschillende team ontwikkeling trainingen bepaald. Mede doordat de kennis expert op het gebied van team ontwikkeling hierbij niet aanwezig was en omdat er tijdens deze meeting vooral vanuit een praktische inslag naar team ontwikkeling is gekeken, mist het huidige aanbod van trainingen de laatste wetenschappelijke kennis. In hoeverre is dit wel voor Organisatie X van belang?
2. Om meer nadruk te leggen op de pijler team development is er een visie document opgesteld. Dit visiedocument is echter in consultancy stijl gefabriceerd en mist daardoor een wetenschappelijke inslag. Daarnaast loopt het document 'te ver op de troepen vooruit' en biedt het geen leidraad in hoe Organisatie X hierdoor team development ontwikkelt en wat de inhoud moet zijn. Wat vind jij van het visiedocument?
3. Er zijn binnen Organisatie X relatief veel losse trainingsmodules die ondernemers kunnen volgen. Er ligt echter te weinig nadruk op de integratie van de opgedane kennis en vaardigheden gedurende de training modules. Daarnaast is de rode lijn tussen de pijlers business development, team development en personal development in de praktijk niet altijd even goed zichtbaar. In hoeverre is dit van belang?
4. Er bestaat te weinig communicatie en integratie tussen de sleutelfiguren m.b.t. team ontwikkeling binnen Organisatie X. In andere woorden, bij de bepaling van de inhoud van de team development trainingen was de inhoudsdeskundige niet aanwezig. Ook trainers onderling weten vaak niet wat de inhoud is van team ontwikkeling trainingen, evenals de coaches. Welke problemen brengt dit met zich mee?

Hoe kijken ondernemers tegen team ontwikkeling aan?
5. Er bestaat weinig binding tussen Organisatie X en deelnemende ondernemers. Hoe kan dit?
6. De echte focus van ondernemers ligt binnen Organisatie X op de pijler business ontwikkeling en niet zozeer op de pijlers team ontwikkeling en persoonlijke ontwikkeling. Weten ondernemers wel wat team ontwikkeling inhoudt en wat het kan betekenen voor hun ondernemingen?
7. Binnen Organisatie X weten ondernemers vaak niet wat de meerwaarde van team ontwikkeling kan zijn voor hun onderneming.
8.

Hoe wordt op dit moment kennis m.b.t. team ontwikkeling overgedragen aan ondernemers?

9. De kwaliteit en type training dat wordt verzorgd, is vaak geheel afhankelijk van de trainer. Er wordt vanuit Organisatie X niet gemonitord hoe de trainingen precies worden gegeven. Wat vind jij hier van?

10. Trainingen die binnen Organisatie X worden verzorgd, missen vaak een directe link naar de doelgroep. In andere woorden, er wordt te weinig een koppeling gemaakt naar de vragen en bedrijven van deelnemende ondernemingen. Daarnaast bestaat er een verschil in vragen van ondernemers op basis van de fase waarin ze met het bedrijf verkeren. Zou Organisatie X dit ook anders kunnen vormgeven?

11. Aangezien ondernemers veelal niet bij Organisatie X binnen komen als teams, maar als individuen, is het lastig om waarde te creëren en kennis over te dragen m.b.t. team ontwikkeling.

D.2 Validation interview guide: people who are confronted with the problem within Organization X

Hartelijk dank voor de medewerking aan dit interview. Het gesprek zal ongeveer 30 minuten in beslag nemen en zal volledig anoniem worden behandeld. Ik voer onderzoek uit over hoe team ontwikkeling effectief kan bijdragen de groei van jonge (technische) ondernemingen. Het uiteindelijke doel van mijn scriptie is om tot een op wetenschap gebaseerd integraal model te komen betreffende team ontwikkeling en team training strategieën. Daarnaast adviseer ik hoe dit model kan worden afgestemd op de huidige team ontwikkeling processen van Organisatie X en hoe het deze kan verbeteren.

Ondertussen heb ik een eerste ronde interviews afgenomen bij mensen binnen en buiten Organisatie X die direct te maken hebben met team ontwikkeling. Het doel was om verduidelijking te krijgen betreffende het proces team ontwikkeling binnen Organisatie X, de manier waarop trainingen worden gegeven en waar de huidige uitdagingen/problemen liggen. Deze informatie dient als input voor een tweede ronde interviews met als doel enerzijds de resultaten uit de eerste ronde te valideren en anderzijds om mogelijke nieuwe inzichten niet uit te sluiten.

De eerste vraag omvat het algemene onderwerp: team formatie. De tweede vraag omvat het algemene onderwerp: team ontwikkeling. De derde vraag omvat het onderwerp: team ontwikkeling processen binnen Organisatie X. De vierde vraag omvat het onderwerp: team training strategieën binnen Organisatie X.

1. Zou je in het kort willen schetsen hoe en waarom jullie team tot stand is gekomen? Wat was de reden voor de keuze van een team i.p.v. een individuele onderneming, vb. sociaal kapitaal, kennis en ervaring, team heterogeniteit?

2. Tegen welke problemen/uitdagingen lopen of liepen jullie aan binnen het team, vb. communicatie, niet overeenkomende doelen, onduidelijkheid in de verschillende rollen?

3. Heb je vanuit Organisatie X ondersteuning gekregen m.b.t. de formatie en/of de ontwikkeling van jullie team, vb. trainingen en/of coaching? Zo ja, heeft dit jullie voldoende geholpen en ondersteund? Zijn de trainingen voldoende op elkaar afgestemd? Heb je het gevoel dat jullie team hierdoor sterker is geworden? Zo nee, wat is de reden?

4. Wat vind je van de manier waarop de trainingen worden gegeven? Bestaat er voldoende interactie? Is de manier van training geven voldoende afgestemd op het type training? Waar kan Organisatie X zichzelf verbeteren?

Appendix F: Integral interview guide

Dit gesprek heeft twee doelen. Ten eerste een validiteitrol: in welke mate kunt u zich vinden in de benoemde interviewresultaten? Ten tweede als afstemmingsrol: wat vindt u van de beschreven oplossing en op welke manier kan het worden afgestemd op de huidige situatie van Organisatie X? Om meer te weten te komen over Organisatie X, Organisatie X participanten en huidige processen is een eerste ronde interviews gehouden, met als doel antwoord te geven op de volgende vragen:

Wat zijn de huidige problemen met betrekking tot team ondersteuning processen van Organisatie X?

1. 'Huidige team trainingen zijn praktijkgericht en missen daardoor wetenschappelijke inzichten'
2. 'Voornaamste focus van ondernemers ligt bij ontwikkeling bedrijf, hierdoor lastig team kennis en vaardigheden aan te dragen.'
3. Huidige team trainingen missen interactie en afstemming op de wensen van deelnemers.

Wat zijn de huidige problemen van ondernemersteams in hun formatie en ontwikkelingsfase?

1. Team formatie: welke type mensen heb ik nodig in mijn team?
2. Team formatie: hoe vind ik de juiste mensen?
3. Team ontwikkeling: hoe kan ik omgaan met de rol van een leidende ondernemer in een ondernemersteam?
4. Team ontwikkeling: hoe kan ons ondernemersteam gedeeld begrip creëren?
5. Team ontwikkeling: hoe kan ons ondernemersteam sociaal integreren?
6. Team ontwikkeling: hoe worden onze ondernemersteam doelen duidelijk?

Interviewvragen:

➢ Wat vind je van de huidige opzet van team trainingen? Vind je het belangrijk dat de inhoud van de trainingen zijn gebaseerd op wetenschappelijke inzichten?

➢ De echte focus van ondernemers ligt binnen Organisatie X op de pijler business ontwikkeling en niet zozeer op de pijler team ontwikkeling. Weten ondernemers wel wat team ontwikkeling inhoudt? Hoe wordt dit door Organisatie X gecommuniceerd? Denk je dat team trainingen kunnen bijdragen aan de groei van jouw onderneming?

➢ Vind je dat team trainingen interactief genoeg zijn? Vind je dat de trainingen zijn afgestemd op de specifieke wensen van de deelnemers?

Naar aanleiding van validatie interviews is er gezocht naar een theoretische oplossing met als doel: de laatste wetenschappelijk kennis in ondernemerschapteam literatuur te koppelen aan de problemen van Organisatie X en haar ondernemerschapteams. De volgende determinanten van team ondersteuning kwamen naar voren:

1. *Formatiefase: team resources*

- <u>Kennis en ervaring:</u> het hebben van kennis en ervaring betreffende de industrie is essentieel voor succes. Hierdoor weten teamleden hoe de industrie eruit ziet en hoe ze de processen en ontwerpen toe kunnen spitsen op hun eigen onderneming. Het voordeel van teamleden die al in dezelfde industrie hebben gewerkt is: routine en een duidelijke visie. Anderzijds zijn teamleden met kennis van andere industrieën ook van belang voor een: variëteit aan kennis en contacten wat innovatie en nieuwe te ondernemen activiteiten stimuleert.

- Aantal teamleden: des te groter het menselijk kapitaal, hoe groter de hoeveelheid aan educatie, ervaring, kennis en vaardigheden. In andere woorden, de kritieke factoren die leiden tot het succes van een nieuwe onderneming. Toch kan hoe groter het team wordt, eerder conflict ontstaan. Hierdoor kan training een bijdrage leveren.
- Sociaal kapitaal: sociaal kapitaal houdt in, een grotere verscheidenheid en aantal netwerk contacten. Helemaal in het begin van de onderneming zijn deze essentieel voor de legitimiteit en daardoor het vergaren van klanten.
- Team compositie: team heterogeniteit is van belang in complexe omgevingen zoals voor de meeste technologische ondernemingen geldt. In andere woorden, de mate waarin leeftijd, educatie en werkervaring onderling verscheelt. In meer stabiele omgevingen kan team homogeniteit leiden tot betere gedragintegratie en meer gemak in de communicatie. Hiervoor kan training een bijdrage leveren.

Interviewvragen:
➢ Bent u gedurende de formatie van uw team tegen problemen aan gelopen, zo ja welke?
➢ Bovenstaande wetenschappelijke determinanten leiden volgens onderzoekers tot groei en succes van ondernemingen. Zou volgens u Organisatie X deze determinanten moeten opnemen in haar huidige trainingscurriculum?
➢ Hoe zouden we deze determinanten kunnen afstemmen op Organisatie X om zo meer waarde te creëren voor Organisatie X participanten?

2. Ontwikkelingsfase: team processen
- Sociale integratie: sociale integratie reflecteert de aantrekkingskracht van het team. In andere woorden, de tevredenheid over de andere teamleden en de integratie onderling. Des te hoger de sociale integratie, des te hoger het moraal, de tevredenheid en hoe efficiënter taken worden uitgevoerd. Hierbij staat teamcohesie centraal, de wil van teamleden om in het team te functioneren.
- Frequentie en formaliteit van de communicatie: dit gaat over de mate waarin er binnen ondernemersteams wordt gecommuniceerd, hoe vaak en hoe intensief. Hoewel, te veel aan communicatie kan ook worden gezien als negatief ten aanzien van productiviteit omdat het in lijn kan liggen met conflict. Formaliteit van communicatie wordt gezien als in welke mate ondernemersteams formele dan wel informele communicatiekanalen prefereren.

Interviewvragen:
➢ Bent u gedurende de ontwikkeling van uw team tegen problemen aan gelopen, zo ja welke?
➢ Bovenstaande wetenschappelijke determinanten leiden volgens onderzoekers tot groei en succes van ondernemingen. Zou volgens u Organisatie X deze determinanten moeten opnemen in haar huidige trainingscurriculum?
➢ Hoe zouden we deze determinanten kunnen afstemmen op Organisatie X om zo meer waarde te creëren voor Organisatie X participanten?

3. Ontwikkelingsfase: taak leiderschap
- Doel en rol helderheid: dit gaat over de perceptie van teamleden ten aanzien van de helderheid in de manier waarop taken worden uitgevoerd. Om succesvol te zijn, moet er een gemeenschappelijke duidelijkheid ontstaan over de doelen, waarden en normen over hoe effectief te werken in een ondernemersteam. Het niet goed tot uiting brengen en communiceren van de doelen en aspiraties kan leiden tot conflict.
- Gedeeld begrip: dit gaat over de het gedeelde begrip binnen het ondernemersteam. Waar het in het vorige deel ging over de gedeelde doelen en rollen van de uit te voeren taken, gaat deze pijler meer in op het gedeelde begrip van elkaars contributie in het team als geheel en wat ze als team willen bereiken.

Interviewvragen:
- ➢ Bent u gedurende de ontwikkeling van uw team tegen problemen aan gelopen, zo ja welke?
- ➢ Bovenstaande wetenschappelijke determinanten leiden volgens onderzoekers tot groei en succes van ondernemingen. Zou volgens u Organisatie X deze determinanten moeten opnemen in haar huidige trainingscurriculum?
- ➢ Hoe zouden we deze determinanten kunnen afstemmen op Organisatie X om zo meer waarde te creëren voor Organisatie X participanten?

4. *Persoonlijke/Taak integratie effecten*
- • <u>Toewijding:</u> dit ligt in lijn met de toewijding van teamleden en het accepteren van strategische beslissingen.
- • <u>Geïnternaliseerde waarden en doelen:</u> het gaat er hier om in hoeverre de taken zijn integreert met jou zelf. In andere woorden, is het uitvoeren van de taak omdat jij gelooft dat deze taak jou verder zal brengen als organisatie of geloof je niet in de taak en zie je deze als obligatie?

Interviewvragen:
- ➢ Bent u gedurende de ontwikkeling van uw team tegen problemen aan gelopen, zo ja welke?
- ➢ Bovenstaande wetenschappelijke determinanten leiden volgens onderzoekers tot groei en succes van ondernemingen. Zou volgens u Organisatie X deze determinanten moeten opnemen in haar huidige trainingscurriculum?
- ➢ Hoe zouden we deze determinanten kunnen afstemmen op Organisatie X om zo meer waarde te creëren voor Organisatie X participanten?

De volgende interactieve trainingsmethoden kwamen naar voren:
- • <u>Cross training:</u> teamleden roteren van posities om een basis houding te ontwikkelen die benodigd is om de taken en individuele rollen van andere teamleden beter te begrijpen.
- • <u>Coördinatie en adoptie training:</u> in stressvolle tijden wordt er door de verhoogde druk vaak minder gecommuniceerd, terwijl dit juist meer zou moeten zijn. In dit type training worden in minder stressvolle tijden gecommuniceerd over mogelijke stressvolle tijden, zodat men hierop kan anticiperen en men minder communicatie nodig heeft voor het uitoefenen van de taken.
- • <u>Team zelfcorrectie training:</u> deze training gaat in op het geven van feedback tussen onderlinge teamleden. Vaak hebben individuen zelf de informatie en expertise om hun eigen problemen te identificeren en op te lossen. Dit proces gaat in op de problemen die voortkomen uit het team en om hier effectief op in te spelen en effectieve oplossingen hiervoor te bedenken.
- • <u>Assertiviteitstraining:</u> in elk team zijn er individuen die meer macht hebben dan anderen. In sommige gevallen kan dit de overhand nemen. Assertiviteitstrainingen kaarten dit aan en geeft een leidraad hoe assertief gereageerd kan worden op dit soort situaties.
- • <u>Teamleider training:</u> deze training gaat in op de unieke bijdrage van elk teamlid aan het team. Het gaat ook in op het managen van het teamklimaat, in andere woorden, de normen, waarden en interactie van het team en hoe er met elkaar wordt omgegaan.

Interviewvragen:
- ➢ Bovenstaande wetenschappelijke trainingstrategieën leiden volgens onderzoekers tot groei en succes van ondernemingen. Zou volgens u Organisatie X deze determinanten moeten opnemen in haar huidige trainingscurriculum?
- ➢ Hoe zouden we deze trainingstrategieën kunnen afstemmen op Organisatie X om zo meer waarde te creëren voor Organisatie X participanten?