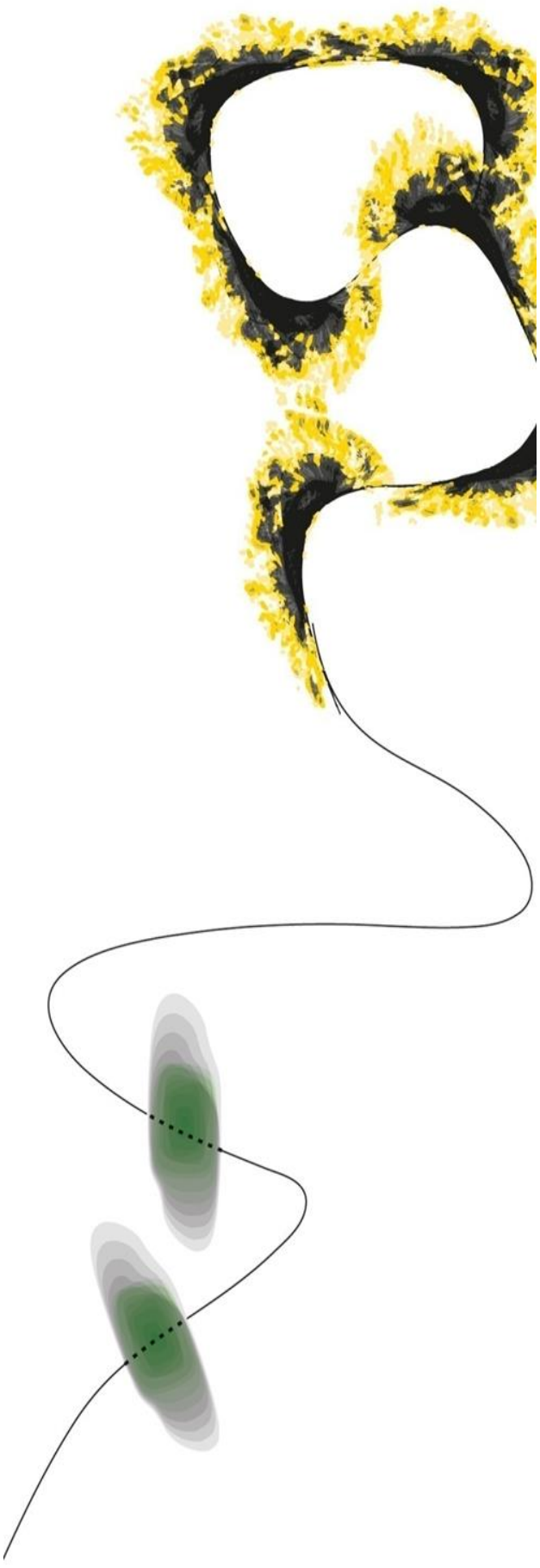

THE IMPACT OF THE SERVICES OF AN INCUBATOR ON THE DEVELOPMENT OF THE TENANTS

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Foreword and Acknowledgements

This thesis was completed in the context of the Business Administration Master's Program of the University of Twente, with Innovation & Entrepreneurship being the specialization track. The subject of this thesis, the impact of the services of an incubator on the development of its tenants, falls within the scope of this master's field, since the focus is shed on the new venture creation process within an incubator context, an environment which is meant to foster Innovation and promote Entrepreneurship.

For this research, I spent 6 months at Orange Grove, a business incubator initiated by the Royal Dutch Embassy in Athens, Greece. During these months I learned a lot, not only about the scientific part of entrepreneurship and new venture creation, but also about the start-up ecosystem in general, the struggles of having an own startup and what the life of an entrepreneur looks like. I would like to thank the entrepreneurs, the staff and the other individuals of Orange Grove for the valuable time they spent on helping me with the data collection and my thesis in general. Also, I would like to thank my supervisors of the University of Twente, their insights and feedback helped me structure and organize my research, especially in the first phase. Last but foremost, I would like to thank my parents for making this possible in the first place, and supporting me throughout this whole process.

Abstract

This study focused on the impact of the provided services of a business incubator on the development of its tenants. A single-case study design with embedded units of analysis was used, with a business incubator in Greece serving as the case study. The shared space and resources, the business support services and the access to the networks were identified as the main shared provided services of business incubators, while activity-based models containing gestation activities were used to capture the development of the tenants during their incubation period.

Documents, interviews and direct observation were used as sources of data for the empirical part of the study. The tenants of the incubator and certain selected individuals closely related to the operations of the incubator formed the research sample, where the latter were used to validate the data obtained by the entrepreneurs about whether and how the incubator contributed to the completion of the gestation activities. The two data sets were analyzed in two different ways, providing a more holistic answer to the main research question. These were the analysis per startup and the analysis per activity. The first analysis aimed at pointing out which provided service contributed the most, while the second one was used to identify which gestation activities were mainly completed with the direct or indirect support of the services provided by the incubator.

The first way of analyzing the data resulted in the business support services as being the most important service for the development of the entrepreneurs, being responsible for half the activities completed by the entrepreneurs, followed by the access to the networks and the shared space and resources. From the 35 selected gestation activities, the second way of analyzing the data yielded 11 as being completed with the significant support of the incubator, since they were completed by at least half the entrepreneurs and were seen as important by almost all the individuals interviewed.

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1. Introduction

In the entrepreneurship literature domain, an incubator is an entity that 'hatches' new ideas by providing physical resources and support to nurture the growth of new business ventures which can be an independent start-up or an internal corporate venture (Allen & McCluskey, 1990). The role of the incubator in the entrepreneurial process has changed from being just a business center with office facilities to one offering training, networking and consulting in all areas of expertise to startup firms (Peters, Rice, & Sundadarajan, 2004), studies have documented that legitimate incubators increase their tenant companies' likelihood of success to 80–90% (compared with 20% in general) (Nowak & Grantham, 2000). In this thesis, the role of the incubator in the entrepreneurial process is studied, by examining how the provided services of an incubator influence the development of its tenants.

Incubator performance has been widely discussed in the literature. In the systematic review of business incubator research by Hackett & Dilts (2004), there is one study that addresses the question ''does the operationalized incubator-incubation concept make any difference in the survival rates of incubatees?''. This was the study of Allen & McCluskey (1990) which embodied the relationships between incubator structure, services and policies and incubatee survival. The measures used for this study were occupancy, jobs created and firms graduated. Similarly, in the same year, when the focus of the incubator-incubation research started being on the impact of this phenomenon (Hackett & Dilts, 2004), Udell, (1990) pointed out that the number/rate of new start-ups created, the number/rate of corporate start-ups created, and the number/rate of new jobs created are also measures for incubators-incubation impacts. This is in line with the study of Bergek & Norrman (2008), who stated that incubator assessment literature until now has tended to emphasize the measurement of incubator outcomes. Hackett & Dilts, (2004) confirmed this by stating that to justify a renewal of funding arrangements for the incubator, most incubation industry stakeholders prepare annual incubation performance reports where the incubator is often the unit of analysis. Though, according to these authors, there is a running count of incubation outcomes measured in terms of incubatee job growth, incubatee financial performance, and incubatee developmental advances at the time of incubator exit that can also be used as measures of the incubator's performance. Measures like these are used in more recent studies like Chan & Lau (2005) who researched this from a venture creation and development process perspective and Ratinho, Harms, & Groen (2009), who looked into the extent to which incubators help their tenants overcome their developmental problems.

So, until now incubator assessment literature mainly focuses on graduation ratios, since the simplest measure of incubatee success is ''graduating'' from the incubator upon overcoming resource gaps and developing sustaining business structures (Hackett & Dilts, 2004). Though, beyond this simple measure, firm growth and development measures have also been applied to the incubatees. Growth measures include examining increases in number of jobs or sales over time, while development measures are reflected in ''product innovation, quality of the management team, and strategic alliances consummated'' over time (Bearse, 1998). However, incubation research utilizing many of these measures to capture affiliated venture success has offered contradictory findings (Scillitoe & Chakrabarti, 2010). The conflicting results regarding incubatee success can be attributed to difficulties associated with control group sampling and a limited understanding of the incubation process (Scillitoe & Chakrabarti, 2010). Current literature suggests that the greatest research potential for understanding the incubation process lies in focusing on the incubation process of individual ventures (Hackett & Dilts, 2004; Grimaldi & Grandi, 2005). Taking all the aforementioned literature suggestions into account, this study focuses on the

developmental advances of individual ventures so as to examine the impact of the incubators incubation on the incubatees, like proposed by Hackett & Dilts (2004).

In order to capture these developmental advances, activity-based models that describe entrepreneurial activities of nascent entrepreneurs are used. The incubatees of Orange Grove are the units of analysis in this study, a business incubator that was founded by the Dutch Embassy in Athens, Greece in 2013. The following research questions were formulated for this study:

How do the services offered by a business incubator impact the development of its tenants?

Which of the provided services of an incubator contributes the most to its tenants?

Which gestation activities are mainly completed with the support of the incubator?

2. Theoretical background

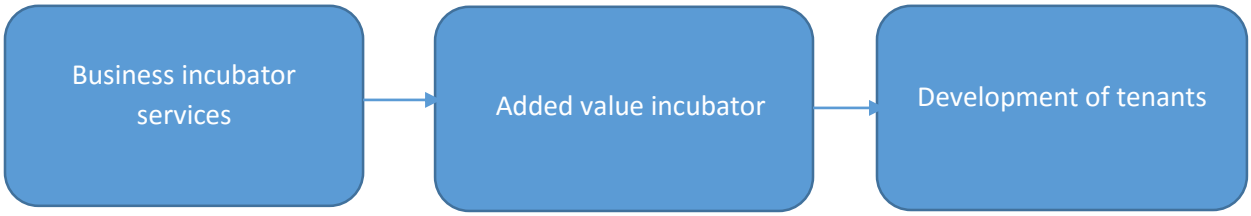


Figure 1 *Graphical representation of the main concepts of the theoretical background*

The main goal of this research is to examine how the services provided by an incubator influence the development of its tenants along the entrepreneurial process. This translates to linking the services provided to the development of the incubated firms. Though, first the added value of an incubator in general should be analyzed, to explain why this link should exist in the first place. Like depicted in the above figure, the services provided by an incubator, form the basis of the value added for its tenants. The way in which this leads to the development of the tenants is what is examined, linking the 2nd and 3rd box in figure 1.

There exist different definitions and descriptions of what is needed for something to qualify as a 'theory' (Davidsson, 2005). Though, two of the elements that are usually required are 1) a set of well-defined, abstracted concepts and 2) a set of well-specified relationships among these concepts. In this study, each of the 3 blocks that can be found in the above figure constitute a set of well-defined abstracted concepts, embodying the first element of this theory according to (Davidsson, 2005). The main theories and models of each one of these concepts are analyzed in this section, forming the basis of the theoretical background of this study. Meanwhile, the link created between these theories, creates a set of well-specified relationships among the 3 depicted concepts. This way both the elements by Davidsson (2005) that can be found above are fulfilled.

2.1 Incubators

2.1.1 Definition and typology of incubators

The term 'incubator' is relatively new in scientific literature, so there is no dominant definition. Yet, many scholars have tried to define what an incubator is and classify incubators based on some criteria. According to Hackett & Dilts (2004), a business incubator is a shared office space facility that seeks to provide its incubatees (i.e. ''portfolio-'' or ''client-'' or ''tenant-companies'') with a strategic, value-adding intervention system (i.e. business incubation) of monitoring and business assistance. This system controls and links resources with the objective of facilitating the successful new venture development of the incubatees while simultaneously containing the cost of their potential failure.

When it comes to the typology of incubators, many scholars have classified them in their studies. Although the general goal of incubators is to develop firms and stimulate entrepreneurship, different incubators have different priorities. When looking at the body of literature on incubators in general and their typology, it becomes evident that most relevant models use the institutional mission (e.g for profit or non-profit) or their main objective as criteria to categorize them. Though, even among incubators of similar models, there are differences between their operations and goals (Bøllingtoft & Ulhøi, 2005). Allen & McCluskey, (1990), who based their work on Brooks (1986), identified four types of incubators that are distributed along a value adding continuum, focusing on their primary and secondary objectives. From least value-adding to most value-adding, these incubator types are: for-profit Property Development Incubators, non-profit Development Corporation Incubators, academic Incubators, and for-profit Seed Capital Incubators. Similarly, but based on their primary philosophy (what they are mainly dealing with) and main objective, Aerhoudt (2004) argued that there exist five different types of incubators. According to this study, mixed incubators are mainly dealing with the business gap and try to create startups, economic development incubators deal with regional or local disparity gaps and have the regional development as their main objective, while technology incubators try to create entrepreneurship while focusing on the entrepreneurial gap. On a different note, social incubators have the integration of social categories as their main purpose while dealing with the social gap. At last, basic research incubators focus on Bleu-Sky research by dealing with the discovery gap. In similar fashion, Peters et al. (2004), in their study about the role of the business incubator in the entrepreneurial process, identified three types of incubators based on their governance structures and business models. These are the (a) Non-profits focused on diversifying the local economy—like small business incubators, (b) incubators linked to universities, and (c) for-profit incubators—like private organizations.

The need for a new incubator model, due to the new expectations of companies, was pointed out by Grimaldi & Grandi (2005). Drawing on the evolution of the incubators industry, and taking previous attempts on categorizing incubators into account, two main incubating models were created in the study of these authors. Within the two main incubating models, there exist four different main incubator types. These are the following: Business Innovation Centres (BICs), University Business Incubators (UBIs), Independent Private Incubators (IPIs), and Corporate Private Incubators (CPIs).

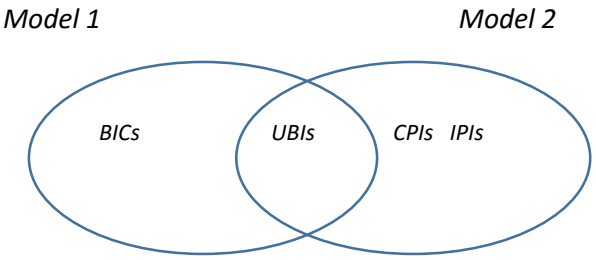


Figure 2 Incubator spectrum, taken from Grimaldi & Grandi (2005)

According to the authors, at the one hand of the spectrum there are BICs and regional public incubators that offer services that are more oriented towards the provision of tangible assets and market commodities. Their activities and services fit in quite well with the requirements of companies operating in traditional sectors. On the other hand, private incubators (CPIs and IPIs) , who offer services that are oriented towards the provision of finance and more intangible and high-value assets, with a short time orientation are placed. Apart from funding, private incubators also offer access to sources of technological and economic/management expertise that they have both in-house and not, making the networking attitude a distinguishing characteristic of incubators that conform to model 2. Due to their revenue model, UBIs are hard to place in one of these two models. Their incubating model is similar to that of BICs, since they rely on incubatees' fees and on public subsidies. Their main objective is to provide knowledge-based companies with continuous access to advanced technological knowledge, academic infrastructures (laboratories and facilities) and academic networking.

2.1.2 Shared Incubator services

In order for an incubator to function properly and fulfill the needs of its tenants, a set of services should be developed which can be offered (Hackett & Dilts, 2004). As stated above in the previous section on the typology of incubators in general, there is a wide range of services that an incubator provides to its tenants, depending on many factors. ''When discussing the incubator, it is important to keep in mind the totality of the incubator. Specifically, much as a firm is not just an office building, infrastructure and articles of incorporation, the incubator is not simply a shared-space office facility, infrastructure and mission statement'' (Hackett & Dilts, 2004, p.57) .The authors state that an incubator is also a network of individuals and organizations including the incubator manager and staff, incubator advisory board, incubatee companies and employees, local universities and university community members, industry contacts, and professional services providers such as lawyers, accountants, consultants, marketing specialists, venture capitalists, angel investors, and volunteers. The incubator is not simply a facility that offers shared office space and infrastructure but includes a network of organizations and individuals, although the boundaries of this network can vary (Scillitoe & Chakrabarti, 2010).

Many scholars have established classifications of services that should be offered by every incubator, despite its institutional mission and business model. Peters et al. (2004), used a sample of 49 incubators in order to define the role of incubators in the entrepreneurial process. Factors considered in this research, besides the different types of incubation models, were also the provision of services by each of

the incubators. The three shared services that were found were labeled as (i) infrastructure, (ii) coaching and (iii) networking. Similar to Peters et al. (2004), Carayannis & von Zedtwitz (2005) proposed an overarching incubator model that synthesizes elements and best practices from the five incubator archetypes that were empirically identified. Despite the fact that these empirical results are very similar to the findings of Peters et al. (2004), five services instead of three were identified as central to incubation. These were the access to physical resources, office support, the access to financial resources, the entrepreneurial startup support and the provision of professional services. In general, the provided services of incubators have been central in many incubation related papers and have been examined by many previous scholars (e.g. Allen & McCluskey 1990; Chan & Lau, 2005; Peters et al., 2004; Carayannis & von Zedtwitz, 2005; Bøllingtoft & Ulhøi, 2005). Bergek & Norrman (2008) created a 'best practice framework' that can serve as a basis for identifying best practice incubator models and for more rigorous evaluations of incubator performance. In their article, they pointed out four components which have received particular attention in the most important prevailing scientific articles when it comes to the services of an incubator. A similar review was also done by Ratinho et al. (2009), resulting in the same four components. These four are: the shared office space and shared resources, the business support services and the access to networks. Taking the theoretical background and the date of publishing into account, the four aforementioned components identified by Bergek & Norrman (2008) and Ratinho et al. (2009) form the basis in this case.

The **Shared office space & Resources** includes the rental spaces, equipment and the administrative facilities like fax, phone and internet lines (Chan & Lau, 2005; Peters et al., 2004). In certain cases labs and conference facilities are also offered by the incubators (Peters et al., 2004). In general, all amenities that are related to infrastructure and real estate (Carayannis & von Zedtwitz, 2005) are a part of this service. Besides the physical space and the aforementioned physical resources, the maintenance of the efficient operation of basic office support such as secretarial and reception services, mail handling, fax and copying services, computer network support and book-keeping is also included here (Carayannis & von Zedtwitz, 2005). This is also in line with Chan & Lau (2005) who stated that administrative support is a part of the physical resources provided by the incubator. The importance of the shared localities is pointed out by Bergek & Norrman (2008), emphasizing on the opportunities for knowledge transfer and experience sharing between the incubatees.

The **Business support services** include all the services that support and educate the tenants during their incubation period at the incubator. The training and educational workshops offered, together with all the seminars or programs that are offered to the tenants by the incubator (Peters et al., 2004) and the provision of professional services such as accounting, legal advice for incorporation and taxation issues and formulating ownership and employee option plan structures (Carayannis & von Zedtwitz, 2005; Chan & Lau,2005)) form the basis of the business support services. Moreover, mentoring and coaching are offered by incubators. The importance of the incubator management team in consulting and mentoring their tenant was highlighted by Grimaldi & Grandi (2005). ''The role of the mentor is to enable the entrepreneur to reflect on actions and, perhaps, to modify future actions as a result; it is about enabling behavioral and attitudinal change. In all, it is about facilitation that enables the entrepreneur to dissect, reflect and learn from what could be termed 'critical incidents' '' (Sullivan, 2000) . Lastly, the access to financial resources as stated by Carayannis & von Zedtwitz (2005), indicating the access to venture capital, both private funds and outside capital invested by business angels, venture capitalists or local institutions and companies is also part of the business support services.

At last, the **Access to networks** refer to all the networking services. These are described as the access available to the tenants of the incubator to managers, administrative, management, financial, legal, insurance consultants (Peters et al., 2004) as well as to suppliers, subcontractors (Chan & Lau, 2005) and prospective customers(Chan & Lau, 2005; Peters et al., 2004). Through these service incubatees are given the chance to identify and leverage key individuals for the success of their startup (Carayannis & von Zedtwitz, 2005). Incubatees can utilize two kinds of networks: internal and external networks (Bøllingtoft & Ulhøi, 2005). Lyons, (as cited in Bøllingtoft & Ulhøi, 2005) states that they are both equally important and also points out that the most important service offered by the incubator is the opportunity for networking among its tenants. This is in line with the study of Chan & Lau (2005), who argue that knowledge sharing of technology firms in the same field is another advantage that each firm in the incubator could gain.

2.2 Added value of incubators

The role and different functions of incubators, in terms of adding value, have been central in many different studies, examining this value on the entrepreneurial process of entrepreneurs as well as on a national economy level. In this study, the added value of incubators are analyzed and mapped so as to give this study a purpose, a logical explanation why the services of an incubator should help its tenants' develop in the first place. In order to examine the relation between the services of an incubator and the development of its tenants, first it has to be proven that incubators actually can contribute.

In the 1960s and 70s incubation programs diffused slowly as government sponsored responses to the need for economic revitalization (Hackett & Dilts, 2004). The importance attached to incubators as mechanisms for enhancing the economic and technological development was also pointed out by Grimaldi & Grandi (2005), who stated that over the last 20 years before their study, promoting the rise of promising entrepreneurial ideas and encouraging the growth of newly established companies was how incubators succeeded in remaining as important for economic boost. Perhaps the most compelling evidence of the added value of incubators, is that the major source of systematic job expansion is found among new firms. Indeed, there is a net loss of jobs among establishments of any age greater than one year, as jobs destroyed by establishment contractions and terminations outnumber those created by expansions (Acs & Armington, 2004). So, this indicates that without a steady influx of new firms creating new jobs the total number of jobs would decline.

Apart from their importance on a national level, incubators and their added value have also been recognized as significant during the entrepreneurial process by many scholars. Bøllingtoft & Ulhøi (2005) stated that the access to administrative support and reduction of early-stage operational costs, such as rent, service fees, etc., are typical critical barriers which many 'new infants' have difficulty in overcoming, indicating the added value of incubators during the startup phase of new ventures.

2.2.1 The 4s model

In this study, the focus is on the added value of incubators during the entrepreneurial process of its tenants, and not on the importance of incubators on a higher level. In order to capture the added value of incubators in the entrepreneurial process, the 4S model by Groen (2005) acts as a framework. This framework is meant to fit the goals of entrepreneurship and is inspired by the work of Parsons (1964) and his definition of a social system. The specific definition yielded four mechanisms, which were the following: 1. Interaction between actors, 2. Striving for goal attainment, 3. Optimization of processes and 4. Maintaining patterns of culturally structured and shared symbols.

Each of these mechanisms produces its own type of processes, within those processes its own type of capital, and for each of those processes specific methods of intervention (Groen, 2005). The four types of capital are the strategic capital, the economic capital, the cultural / human capital and the social capital. In table 1, an overview can be found of this framework. The mechanisms of action for each of the dimensions are described, also the most important resources leading to such capital are mentioned. Last, but not least, some intervention methods, which fit within this dimension of action, are mentioned.

These mechanisms provide a four-dimensional space for analyzing the entrepreneur's development starting with opportunity recognition, consequently developing a business concept and bringing it into a value creation process leading to some level of growth. The central hypothesis is that on each of those four dimensions entrepreneurs, within network embedded enterprises, will need sufficient capital in each of the dimensions to create sustainable enterprises (Groen, 2005). So, business incubators, whose role is to provide a support environment for startup and fledging companies (Peters et al., 2004), should offer support in all four dimensions, so that, as intended, after the incubating period, the graduated ventures will become independent, self-sustaining businesses (Grimaldi & Grandi, 2005). Since the goal of this study is to capture the development of entrepreneurs along the entrepreneurial process, and examine how the services of an incubator can contribute, these four dimensions are used to examine how an incubator can add value for these dimensions and act as a supporting environment. These four dimensions are discussed below, combined with the role that an incubator can have in each of these 4 dimensions.

Dimension	*Relates to*	*Capital*	*Resources*	*Some interventions*
Scope	Strategic goals	Strategic capital	Power, authority, influence, strategic intent	Using power, Redefining strategy
Scale	Economic optimization	Economic capital	Money	Using financial incentives, Cost cutting
Skill & Value	Institutions and patterns maintenance	Cultural / Human capital	Values, organization, knowledge, skills, experience, technology	Training & education, Teambuilding, Organizational systems, New technology
Social network	Interaction pattern / process	Social capital	Contacts (multiplex, filling structural holes, cohesive equivalent	Relation management, Changing network, Using brokers, Supply chain management

Table 1 4S Model, taken from Groen (2005)

The **Strategic capital** comprises the goal attainment function and concerns an actor's capacity to mobilize resources and actors in the interest of attaining its particular goals. The associated type of capital is 'strategic capital', which is defined as 'the set of capacities that enables actors to decide on goals and to control resources and other actors to attain them' (Groen, Wakkee, & De Weerd-Nederhof, 2008, p.62).

Goal orientation is reflected in entrepreneurial strategies aiming at creating certain possibilities and exploiting them successfully. The entrepreneurial orientation of the entrepreneur determines the ambition level and scope of entrepreneurial action (Groen, 2005). A typical example of strategic capital is power, which, when exercised, enables an actor exactly to achieve this (Groen et al., 2008). Like seen in table 1, related examples are authority and status.

Business incubators nurture young firms, helping them to survive and grow during the start-up period when they are most vulnerable (Aerhoudt, 2004), so using power and redefining strategy, which here are seen as the possible interventions, are provided by the supporting environment of the entrepreneur, so that he can develop along this dimension. Like discussed in the previous part of the theoretical framework, mentoring and coaching is one of the support services provided by incubators. The role of the mentor, according to Sullivan (2000) is, among others, to enable the entrepreneur to reflect on actions and, perhaps, to modify future actions as a result; it is about enabling behavioral and attitudinal change. This is aligned with the findings of St-Jean & Audet (2012), who looked into the role of mentoring in the learning development of the novice entrepreneur, based on the fact that arguing that learning outcomes can be divided into three general categories: Cognitive, skill-based and affective learning. This division of learning outcomes was firstly introduced by Kraiger, Ford, & Salas (1993). According to the authors, through discussions with a mentor, a mentee takes the time to figure out which direction to take, which not only helps clarify but also develop one's vision and find new avenues to explore. Moreover, discussions with a mentor allow an entrepreneur to develop his ability to select the best problem-solving strategy and by being paired with another entrepreneur, a mentee can find common characteristics with his mentor thereby validating his own status as an entrepreneur. Similarly, Clarysse & Bruneel (2007), in their study about the role of policy in nurturing and growing innovative startups, make a distinction between active and passive coaching. In this dimension, the role of passive coaching is applicable, since passive coaching represents the sounding board function each start-up needs (Clarysse & Bruneel, 2007), supporting and advising the start-up in strategic planning rather than assisting the company in daily organizational decision making (Stiles, 2001). The role of active coaching will be discussed in the cultural/human capital dimension, since it addresses different needs that are not aligned with the goal orientation scope.

Economic capital is defined as the set of mobile resources that are potentially usable in exchange relationships between the actor and its environment in processes of acquisition, disposal or selling (Groen et al., 2008). The degree of efficiency when it comes to the exchange of goods and services is the central process in this dimension (Groen, 2005), with money being seen as the general medium of exchange. The use of financial incentives and cost cutting are seen as the main potential interventions, like depicted in table 1.

Within business incubators, tenants profit from existing economies of scale when renting office space together with shared resources (Bruneel, Ratinho, Clarysse, & Groen, 2012), pointing out how incubators can contribute to the development of their tenants in this dimension. The authors argue several ways in which scale economies reduce the costs of incubated teams, highlighting the cost cutting incentive that can be found in table 1. According to this study, the overhead costs are reduced, since each tenant enjoys the office space with a bundle of shared resources, while new firms are also provided with services they probably would not otherwise have access to in such stages, like meeting rooms, reception services and private parking spaces. This way, the new ventures don't need to plan, set up and pay individual providers. This was also stated by Hansen, Chesbrough, Nohria, & Sull (2000), who examined the importance of networks for incubators. They argue that, although the Internet has made it easier for individual start-ups

to procure their own services at competitive rates, entrepreneurial teams still face large opportunity costs in the form of hours spent finding, negotiating, and contracting for such services.

Next to cost cutting, access to capital is another way that the support of an incubator can contribute in this dimension. The difficulties small firms face to find and attract financial means has been widely studied in the literature. Most entrepreneurs do not have sufficient financial means to start-up a business. Clarysse & Bruneel (2007), argue that the demanding financial needs of new firms are even higher than in other businesses due to necessary investments for technological developments. This makes obtaining a bank loan very hard, leaving the venture capital community as the final source of capital for startups. Business incubators build networks with early stage investors such as business angel networks and venture capitalists, which reduce the search costs for tenants companies (Bruneel et al., 2012), contributing to this dimension and making it easier for the tenants to attract venture capital, which few succeed in doing despite the fact that it seems to be the perfect match for these firms (Clarysse & Bruneel, 2007) .

The **Cultural / Human capital** is 'the set of values, norms, beliefs, assumptions, symbols, rule sets, behaviors and artefacts that define the actor in relation to other actors and environment' (Groen et al., 2008). This definition of this capital translates in the following resources according to table 1: values, organization, knowledge, skills, experience and technology. Accordingly, training & education, team building, organizational systems and new technology are the corresponding interventions proposed by Groen (2005).

Individuals contemplating entrepreneurship might benefit from high levels of cultural capital; obtaining key business skills, especially tacit knowledge, occurs most easily through direct exposure to an entrepreneurial environment (Kim, Aldrich, & Keister, 2006) This implies the need of incubators to respond to this need so that their tenants can develop along this dimension. In fact, nascent technology-intensive companies typically lack business experience and marketing skills and therefore may have limited chances for survival (Bruneel et al., 2012). Similarly, Carayannis & von Zedtwitz (2005), highlighted that entrepreneurs may be strong in technology and perhaps business vision, but usually lack organizational, management and legal skills.

Regarding the human capital, previous research tends to support the existence of a positive relationship between human capital and entrepreneurial activity (Davidsson & Honig, 2003). In order to increase this kind of capital, the venture will need to professionalize its management and hire qualified personnel to enhance their entrepreneurial skills (Ratinho et al., 2009). Formal education is one component of human capital that may assist in the accumulation of explicit knowledge that may provide skills useful to entrepreneurs (Davidsson & Honig, 2003) According to this study, human capital is not only the result of formal education, but includes experience and practical learning that takes place on the job, as well as non-formal education, such as specific training courses that are not a part of traditional formal educational structures.

Business incubators reacted to these needs by including knowledge based services in their value proposition (Bruneel et al., 2012), since according to this study, Business support services such as coaching and training are crucial elements of learning within business incubators. Peters et al. (2004) refer to coaching as one of the main services provided by a incubator, including all the training and educational workshops offered, together with the seminars or programs offered either for a fee or free of charge to the tenants of the incubators. Like discussed in the strategic capital section, Clarysse & Bruneel (2007),

make a distinction between active and passive coaching. In the case of the cultural/human capital, active coaching is relevant, since it implies a basic support towards the start-up in the field of financial, human, technological and organizational resources. Similarly, Sullivan (2000) argued that one of the developmental functions of mentors in an entrepreneurial mentor-mentee relationships is the career function that enhances the learning of skills and knowledge including the political and social skills required to succeed in an organization or own business. St-Jean & Audet (2012), confirmed this learning of skills in their empirical study by stating that some mentees recall working on very specific skills pertaining to the management of their business with their mentor. The example given was the involvement in financial management, which requires not only knowledge but competences as well. In essence, incubators guide entrepreneurs through the necessary steps a newly founded company must take, sometimes even helping define the business plan, but more often providing professional services such as accounting, legal advice for incorporation and taxation issues, and formulating ownership and employee option plan structures (Carayannis & von Zedtwitz, 2005).

Social capital relates to the network connections of an actor that directly or indirectly give access to other actors (Groen et al., 2008). Due to the broad definition of this capital, and the fact that this capital overlaps the other capitals of this model, the authors restrict the term social capital to the network of relations that give access to resources of others. So, with the resources excluded to make a clear distinction between social capital and the other capitals, social capital is defined here as 'the set of network relations through which actors can utilize, employ, or enjoy the benefits of capital that is controlled or owned by other actors' (Groen et al., 2008). The importance of social capital, in all stages of the entrepreneurial process has been highlighted by many studies in the past. Like argued previous in this study, in the shared services section, there are two dominant ways in which tenants of an incubator can utilize networks offered by an incubator and develop along this dimension.

Firstly, good incubators are able to identify and leverage key individuals for the success of their startups (Carayannis & von Zedtwitz, 2005). Hansen et al. (2000), pointed out that the networking activities are the most important value added activities of incubators, though, they argue that not all networks provide the same level of value added. According to this study, institutionalizing the networks is of great importance, so that the network no longer depends on the connections of a few people. These institutionalized networks established and managed by business incubators ensure that networking is no longer dependent on individuals' personal networks or contacts (Bøllingtoft and Ulhøi, 2005), especially since entrepreneurs usually do not have the network that an incubator has taken years to create (Carayannis & von Zedtwitz, 2005). Incubators can provide tenants with preferential access to potential customers, technology partners, investors or venture capitalists (Carayannis & von Zedtwitz, 2005; Hansen et al., 2000), who are important to a start-up's business (Carayannis & von Zedtwitz, 2005). Facilitating access to these external networks by incubators, eases the acquisition of resources and specialized expertise (Bruneel et al., 2012) and results in accelerated learning (Clarysse & Bruneel, 2007).

Secondly, the networking that takes place amongst tenants is also a way to stimulate the social capital of the incubated firms. Hansen et al. (2000) argue that the distinguishing feature of a networked incubator is that it has mechanisms to foster partnerships among start-up teams and other successful Internet-oriented firms. This facilitates the flow of knowledge and talent across companies and the forging of marketing and technology relationships between them. The importance of knowledge spillover was also pointed out by Acs & Plummer (2005), who state that the process of knowledge spillover is a key element of modern growth theory models. Incubators can intensify the knowledge spillover between tenants by

either the active incorporation of knowledge into the existing operations of incumbent firms or the founding of new ventures established specifically to exploit such knowledge (Acs & Plummer, 2005). With the help of such an incubator, start-ups can network to obtain resources and partner with others quickly, allowing them to establish themselves in the marketplace ahead of competitors (Hansen et al., 2000).

2.3 New venture creation: Stage based vs Activity based models

The last building block of figure 1, depicting the relationships between the main concepts of the theoretical background of this study, is the one about the development of the entrepreneurs along the entrepreneurial process. Here, the main prevailing models and theories on how the new venture creation process can be mapped are analyzed, so as to find an appropriate way to capture the development of the tenants of the incubator in this study.

Categorizing small organizations and startups based on their progress seems like a hopeless task due to the fact that there is a significant differences in size, markets, growth potential etc. Though, many scholars have tried to develop models that actually capture every stage an organization goes through when going from small to large and from young to mature, since during every stage of development common problems show up. Liao, Welsch, & Tan (2005) pointed out that, in general, two main literature streams of venture creation process research can be identified. These are the developmental process models and the activity based models of new venture creation. The first category refers to studies that have identified general stages of development that new ventures are likely to encounter, while the latter embodies all studies examining frequency of occurrence and temporal sequencing of activities/events.

2.3.1 Stage based models

Regarding the stage-based models of venture creation, Churchill & Lewis, (1983) ,who prepared the ground for most startup and startup stages research chose a rather organizational lens on firm development but did not explicitly distinguish between small businesses and startups. The identified phases were existence, survival, success, take-off and resource maturity. Similarly, many business researchers have developed a number of models over the last years that seek to delineate stages of corporate growth, similar to these authors. The most recent and relevant process based model study for new venture creation was by Baron and Shane(2003), who explain that the entrepreneurial process unfolds over time and moves through a number of different phases. According to the authors these phases are: (1) the idea for new product or service and/or opportunity recognition, (2) initial decision to proceed, (3) assembling the required resources, (4) actual launch of the new venture, and (5) building a successful business and finally harvesting the rewards.

2.3.2 Activity based models

Another typical approach for the study of the venture creation process is to examine the activities, key milestones, the frequency and time frame of those activities (Liao et al., 2005). Reynolds & Miller (1992) tried to analyze the gestation process from an activity based perspective. They analyzed four key events of the gestation process (principal's commitment, initial hiring, initial financing and initial sales) in more than 3000 established firms. They didn't manage to find a pattern in the length of the gestation process or a specific sequence of events and they also concluded that not all 4 of these events were reported in every case. This was also found by subsequent empirical explorations of the Katz & Gartner (1988) framework, despite the fact that some events (e.g. Personal commitment by individuals involved in the new venture) were way more common as first events than other events (e.g. having sales, hiring or financial support) in the new venture creation process. Contrary, Carter, Gartner, & Reynolds, (1996), who

examined 14 activities in a sample of 71 nascent entrepreneurs, having as main objective to explore the kind, the amount and the timing of the undertaken activities, indicated that the sequence that the events are undertaken do matter, as do the kinds of activities and the number of activities. This is not exactly confirmed by Liao et al. (2005), the most recent study about entrepreneurial activities in the gestation period, whose results suggested that the venture creation processes are more complex and fluid than expected.

In general, previous research had resulted in orderly, unitary and progressive paths on which the nascent entrepreneurs would progress step by step through a series of events that would culminate in a firm's gestation (Liao et al., 2005), though the results of this study showed the exact opposite. This study, using an inductive rather than deductive approach in theory building, aimed to generate a grounded process model of firm gestation process by linking conceptual categories and sub-processes in the venture creation process identified from the Panel Study of Entrepreneurial Dynamics (PSED) data. The US Panel Study of Entrepreneurial Dynamics (PSED) research program consists of two longitudinal projects. PSED I was based on a representative sample of nascent entrepreneurs identified in 1998–2000 and contacted again three times over the following four years. PSED II is based on a representative sample of nascent entrepreneurs identified in late 2005 and early 2006 with follow-ups at 12 and 24 months (Reynolds & Curtin, 2008) According to most previous scholars, no sequencing patterns of startup activities are found (only single-activity sets were yielded), leading to little support for the stage-based theory. A stage is referred to as a meaningful set of co-occurring activities (items) in the gestation process (Liao et al., 2005). This is the main reason why stage-based models are not chosen in this study, leading to the completion of the entrepreneurial activities in the gestation period as being the best indicator for the development of the tenants.

3. Methodology

In this chapter the methodology of this study is analyzed. In the first part the chosen research methods are discussed. Following, the research sample criteria are analyzed, leading to the data collection methods. How the data collected is analyzed and presented forms the last part of this chapter, completing the methodology.

3.1 Research method

Finding how a business incubator contributes to the development of its tenants along the entrepreneurial process through the services provided, is what is researched. In order to find out the answer to this question, a literature study is conducted in the previous chapter, forming the basis for the qualitative research approach that is used to conduct the empirical part.

3.1.1 Case study methodology: Definition

Although no single definition of the case study exists, case study research has long had a prominent place in many disciplines and professions, ranging from psychology, anthropology, sociology, and political science to education, clinical science, social work, and administrative science. One of the mostly used definitions in recent studies that use case study methodologies is the following.

An empirical inquiry about a contemporary phenomenon (e.g., a "case"), set within its real-world context—especially when the boundaries between phenomenon and context are not clearly evident.

(Yin, 2009, p.18)

3.1.2 Why Case Study Methodology

There are some characteristics of the entrepreneurship domain, which point at a need for qualitative research (Davidsson, 2005) . The two main characteristics pointed out by the author are the relative youth of the field and the heterogeneity of the phenomenon. Especially the latter is of great interest in this case as it explains why qualitative research is the best option in this research setting. The following quote perfectly captures the necessity for qualitative research and case study methodology, also because the nascent entrepreneurs of a business incubator are the units of analysis in this case.

''If we only did research at arms-length distance there are the risks that because the relationships are different for different parts of the heterogeneous population we would either come out with only weak results, or results that are true on average but not for most individual cases (Davidsson, 2005, p. 56)*.''*

The type of research question in this case is aligned with the nature of research questions that should be answered with case study research methods, according to Yin (2011). Descriptive and explanatory questions are appropriate in these cases, so mainly questions that answer 'why' and 'how' research questions. Also, case study is an ideal methodology when a holistic, in-depth investigation is needed (Feagin, Orum, & Sjoberg, 1991) and when there is a desire to derive a(n) (up-)close or otherwise in-depth understanding of a single or small number of "cases," set in their real-world contexts (Bromley, 1986).

3.1.3 Units & Level of analysis

Specifying the level of analysis employed helps to limit the scope of an investigation by focusing the research efforts. Hackett & Dilts (2004) list all possible levels of analysis in incubator incubation research with the corresponding generic management research label given in parentheses as a guide for future research efforts: Entrepreneur (individual) level, Incubator manager (individual) level, Incubatee

(group/firm) level, Incubator (firm) level, Community (local) level and Incubation industry (industry) level. Specifying the unit of analysis is critical for creating any research design. The range of potential units of analysis in incubator-incubation research includes (a) the community in which the incubator operates, (b) the incubator as enterprise, (c) incubator manager, (d) incubatee firms, (e) incubatee management teams, and (f) the innovations being incubated.

In this study, research was done on an incubator level and the tenants of this incubator were used to examine the impact of the services provided by this incubator on their development. This implies that the incubatee firms form the units of analysis for this research.

3.1.4 Type of case study

According to Yin (2011), the next step in case study methodology is choosing which one of four types of case study designs better fits the research setting. Whether the case study consists of a single case or multiple cases (single- or multiple-case study) and the choice between a holistic case and having embedded subcases, result in a two-by-two matrix with four different case study designs. This matrix can be found in appendix A. In this case, research is done in a business incubator context, so as to find how it contributes to the development of its tenants. So, the incubator forms the research domain and acts as a case study. The incubated firms are the units of analysis, examining those firms leads to an answer to the main research question. As a result, these ventures function as embedded subcases, resulting in a single case design with multiple embedded subcases.

3.1.5 Data collection methods

Case study research is not limited to a single source of data, as in the use of questionnaires for carrying out a survey. In fact, good case studies benefit from having multiple sources of evidence (Yin, 2011). In the second table of Appendix A, a table can be found with an overview of all the possible sources of data that can be used while doing a case study. Each of these may require different skills from the researcher and not all sources are essential in every study. The importance of multiple sources of data to the reliability of the study is well established (Yin, 1994). The six sources identified by Yin (1994) are: documentation, archival records, interviews, direct observation, participant observation and physical artifacts. Later in this chapter, the sources of data that were used for this study are furtherly analyzed.

3.2 Research sample

Defining the research sample is the next step. The research sample of this study consists of two groups: the tenants of the incubator and individuals that are closely related to the incubator. Regarding the first group, every tenant is an entrepreneur responsible for a new venture, and the data obtained from them forms the basis for the outcomes of this research. The data obtained from the second group, the individuals related to the incubator, was used to verify the data derived from the tenants.

3.2.1 Entrepreneurs

How many cases, or embedded subcases in this case, should be used? According to Yin (2009, 2011), this question has been central in many studies using case study research designs. Students and scholars appear to assume the existence of a formulaic solution, as in conducting a power analysis to determine the needed sample size in an experiment or survey (Yin, 2011). Though, for case studies (again, as with multiple experiments) no such formula exists. The more cases (or experiments), the greater confidence or certainty in a study's findings; and the fewer the cases (or experiments), the less confidence or certainty.

The tenants examined in this study can be defined as nascent entrepreneurs. The term 'nascent entrepreneur' has been used in many entrepreneurship studies and many different ways have been used to separate them from other entrepreneurs. According to the PSED II, an active nascent entrepreneur was defined as a person who (a) considered themselves in the firm creation process; (b) had been engaged in some behavior to implement a new firm — such as having sought a bank loan, prepared a business plan, looked for a business location, or taken other similar actions; (c) expected to own part of the new venture; and (d) the new venture had not yet become an operating business. Due to the high scientific importance of the PSED database and the fact that the PSED studies are considered to have the highest number of participating nascent entrepreneurs, these criteria are also used in this study.

The aforementioned criteria are combined with more specific criteria that apply to the research sample of Orange Grove, completing the criteria used for this study. The program offered by Orange Grove to the tenants is supposed to last one year, with an evaluation every 6 months. After the one year, the tenants will have had the chance to acquire enough information and knowledge in order to make a significant progress and leave the program, since the program is set up in such a way. After the one year, the startups can still make use of the services at a reduced rate. As a result, only nascent entrepreneurs who have been in the program for at least 10-12 months and have been given the chance to fully use the provided services qualify for this study. To sum up, nascent entrepreneurs that qualify for this study are the ones that:

1. consider themselves in the firm creation process (PSED)
2. are engaged in some behavior to implement a new firm (PSED)
3. expect to own part of the new venture (PSED)
4. the new venture is not yet an operating business (PSED)
5. have been a part of the incubation program of Orange Grove for at least 10-12 months
6. Were selected for the program during the 1st, 2nd or 3rd application round.

Orange Grove has hired 64 startups in 15 months from which the 72% is still in the program. The background of these new ventures varies from agro-food to app-building. In total, 20 startups that were selected in the first three application rounds are still in the program, and fit the aforementioned requirements for this study. From these 20 cases, 16 are being used for an interview.

3.2.2 Key individuals

Individuals that are closely related to this incubator are also interviewed. In the following chapters, they will be referred to as 'key individuals', due to their key position in the incubator. The aim of the use of this secondary data is to cross check the data derived from these individuals, with the answers of the entrepreneurs.

The selected individuals are shortly presented below, together with their role within the incubator.

1. ***Individual A;*** *Dutch Ambassador in Greece - one of the people that took initiative for Orange Grove - chairing the selection committee and the advisory board.*
2. ***Individual B;*** *Political advisor of the Dutch Embassy in Greece - part of the team that set up Orange Grove - coordinated the whole educational program, the mentoring system, the selection features - member of the selection committee.*
3. ***Individual C;*** *Project manager of Orange Grove - working for Orange Grove on a daily basis - member of the selection committee.*

4. ***Individual D;*** *Lawyer specialized in venture capital and private equity - helps Orange Grove and its tenants with legal issues by providing legal services and advice - mentor at Orange Grove - member of the selection committee.*
5. ***Individual E;*** *Consultant- Cost Engineer - wrote the business plan of Orange Grove - mentor at Orange Grove - gives seminars and workshops about accounting and costing - provides accounting services for the startups - member of the selection committee.*

The individuals above share their view on the general contribution that an incubator can have on the development of its incubated ventures, based on their knowledge and their experience with the startups. Their key role, which points out the direct involvement with this incubator, combined with the fact that they represent all the 3 shared incubator services highlighted by the literature (2.1.2), makes them appropriate for this setting.

3.3 Data collection

Like discussed in the research method section, the six sources of data identified by Yin (1994) are: documentation, archival records, interviews, direct observation, participant observation and physical artifacts. Not all sources are essential in every case study, but the importance of multiple sources of data to the reliability of the study is well established (Yin, 1994). In this study, documents, interviews and direct observation were used as sources of data, enhancing the reliability of the data obtained.

3.3.1 Documents

According to Yin (1994), one of the most important uses of documents is to corroborate evidence gathered from other sources. When startups apply for Orange Grove, they have to hand in a canvas model that is based on Osterwalder & Pigneur (2010) and an application form in which they have to describe their business. The documents in this case are the canvas models and application forms of the selected startups that participate in the research. These are analyzed so as to define the amount of entrepreneurial activities that had been completed before joining Orange Grove.

3.3.2 Interviews

Semi-structured interviews with all the selected tenants and key individuals that fit the requirements for this study took place, serving as the main part of data collection. According to Tellis (1997), interviews are one of the most important sources of case study information. The main objective of the interviews was twofold. First of all, the development of the selected startups was determined. The entrepreneurial activity-based models described in the literature review were used to capture this development. The phase of a startup before joining Orange Grove (t0) can be determined by looking at the amount of gestation activities that had been completed when entering. The phase after at least one year of incubation (t1) is determined by identifying how many of these activities have been completed. After having determined the amount of entrepreneurial activities before admittance and after one year, the development can be measured from an entrepreneurial activity perspective (t1-t0). Secondly, the way in which the activities have been completed in the one year at Orange Grove is the next point of interest, whether Orange Grove had an impact or not on the completion of the activity and which service led to this. Here is where the in-depth part of the interview comes into effect. Apart from the interviews with the selected startups, key individuals were also interviewed. Since the main purpose of this data set is to compare it with the data yielded from the interviews with the entrepreneurs, the same questions were used again, but formulated slightly different so as to fit the needs of the research.

As mentioned earlier in the theoretical background, activity based models are used to capture the development of the nascent entrepreneurs along the entrepreneurial process. Regarding the activities that are used to capture this development during the interviews, these are based on the PSED I and PSED II dataset. In 2008, Reynolds and Curtin, did an extensive assessment on the results of the PSED II dataset. Comparing the startup activities of PSED I and PSED II was also done in this report, an overview of this table can be found in Appendix B. The most recent and important study using the PSED gestation activities was the one by Liao et al. (2005). As a result, the activities used in their study form the basis of the structure of the interviews (Appendix C). From the 26 activities that were identified in the study of Liao et al. (2005), some were excluded. After conversations, brainstorm sessions with the staff of Orange Grove and some startup teams and after conducting some test interviews, it was concluded that three activities are irrelevant. These three activities were about paying the state unemployment insurance tax, paying federal security taxes and listing with Dun & Bradstreet. The low average of entrepreneurs that stated to having completed these three during PSED I and PSED II, as pointed out by Reynolds & Curtin, (2008) (Appendix B), confirms this as being a right decision. During the PSED II, several methodological procedures implemented were designed to expand the "capture" of nascent enterprises (Reynolds & Curtin, 2008), leading to another 13 new questions about startup activities. From these, all but one were also used in this study. The one excluded (Acquired federal Employer Identification Number (EIN)), was considered as being irrelevant in the specific research setting, since it only applies to the U.S laws and procedures. Furthermore, it should be mentioned, that questions about 2 activities were rephrased in order to capture the contribution of Orange Grove while not changing the essence of the startup activity. These were the questions about hiring a lawyer and hiring an accountant (Appendix B). A potential outcome of these questions would not capture the contribution of the incubator if formulated this way. Also, for the same reason, 2 other questions were adjusted after being tested in test interviews (follow-up questions were asked when an entrepreneur stated not to having completed that activity, to find out whether participating in the Orange Grove program was the main reason). This concerns questions 11 and 31 of the interview template (Appendix C).

Regarding the sequence of the questions asked, the activities used in the study of Liao et al. (2005) form the basis of the structure, while the additional 12 questions about PSED II activities, are added in such a way that they are grouped with similar activities. Since the findings of the study of Liao et al. (2005) pointed out that the activities the nascent entrepreneurs engage in may not follow any particular sequence, the sequence is not of great importance. Nascent entrepreneurs are driven by a strategic choice (their intention) to start a business as opposed to some other economic or social activity or behavior.

These alterations to the set of gestation activities of PSED I and PSED II, yielded the 35 activities, which form the basis for the interview questions. Below, an overview of these activities can be found, in Appendix C the interview template can be found for both the entrepreneurs and the key individuals.

1	Spend time thinking about the business idea.
2	Prepare the business plan.
3	Organize startup team.
4	Develop models, prototypes of the service/product.
5	Initiate marketing and promotional efforts.
6	Apply for a patent/copyright/trademark.
7	Determine the regulatory requirements.
8	Register legal form of business.
9	Obtain liability insurance.
10	Purchase raw materials, inventory or supplies.
11	Purchase/lease/rent any equipment/facilities/property.
12	Use physical space.
13	Define market opportunities.
14	Begin collecting information on competitors.
15	Develop projected financial statements.
16	Begin saving money to invest in the business.
17	Invest own money in the business.
18	Ask financial institutions or other people for funds.
19	Receive outside funding.
20	Establish credit with a supplier.
21	Arrange child care or household help to allow more time on business.
22	Devote full time to the business.
23	Hire any employees/managers.
24	Hire an accountant, or use accounting services for the startup.
25	Hire a lawyer, or use legal services for the startup.
26	Open a bank account exclusively for this business.
27	Begin talking to customers.
28	Receive money for the sales of goods/services.
29	Take classes/workshops on starting a business.
30	List new business in the phone book or the Internet.
31	Install a separate phone line for business.
32	Fill a federal tax return.
33	File for fictitious name.
34	Join a trade association.
35	Fully develop proprietary software.

After composing the sample and formulating the interviews, the data collection began. The interviews with the entrepreneurs were conducted between the 12th of February 2015 and the 11th of March 2015. The interviewees were contacted through email, while a follow up email was sent when there was no direct response. From the 16 interviews, 10 were conducted face to face while the remaining 6 were done through Skype. The interviews with the key individuals took place between the 24th of March 2015 and the 9th of April 2015 and were all done face to face. Before each interview, a short introduction was made to the topic and the purpose of the research, but not to the aim of the specific interview. This was done intentionally, so as to avoid potential bias.

3.2.3 Direct observation

Finally, direct observation in this case includes all the formal and informal talks with members of the incubator and the entrepreneurs themselves that helped generate ideas and give an impression about how Orange Grove exactly works. The interview questions were partially come up with due to these talks. Like discussed above, some entrepreneurial activities were excluded from the interviews based on discussions with individuals that are directly or indirectly related to Orange Grove. Moreover, during a 6-month period, starting from the 6th of October of 2014, I (the researcher) was present at the incubator every day and participated in every event, seminar, boot camp and workshop, helping create a general picture about how an incubator works. In Appendix D an overview can be found with all the events, seminars and workshops that took place at the incubator in this 6-month period. Also, through this source of data, the added value of the incubator was captured. The provided services of the incubator, and how they can add value to the tenants, can be found in the next chapter where Orange Grove is analyzed.

3.4 Data analysis

After the data collection, the results were analyzed in two different ways; (i) per startup (amount of activities completed and how) and (ii) per activity (amount of startups that completed an activity and how), in order to better understand the contribution of an incubator in the entrepreneurial process. In the second case, also the data of the interviews with the key individuals was used, so as to find potential overlap or significant differences between how a tenant and how somebody representing Orange Grove believe that the incubation program contributes. Two different 'perspectives' were generated, which were analyzed and compared: the 'Entrepreneur's perspective' and the 'Incubator's perspective'.

3.4.1 Data analysis per startup

Regarding the first way of analyzing the data, and like mentioned earlier in the methodology section, during the interviews the selected entrepreneurs were asked about their development after one year of incubation by answering whether they had completed the entrepreneurial activities discussed earlier. If that was the case, whether and how Orange Grove contributed significantly to the completion of each activity was the next point of interest. After every interview, a transcript was made. If answers could be linked to components of the three identified provided services, then the conclusion was drawn that Orange Grove contributed in the completion of that activity. The answers were coded and labelled as following:

(X): Activity completed before Orange Grove (t0)

(Y, A): Activity completed after one year of incubation, due to Shared space and resources of Orange Grove

(Y, B): Activity completed after one year of incubation, due to Business support services of Orange Grove

(Y, C): Activity completed after one year of incubation, due to Access to networks of Orange Grove

(Y, D): Activity completed after one year of incubation, but not because of services provided by the incubator

So, after every transcript of the interview with an entrepreneur was coded, two main things became clear. Firstly, the development of each startup was captured, since the amount of activities that were completed before joining Orange Grove (t0) and the amount after having been part of the program for approximately a year (t1) pointed out how much a startup had progressed. Secondly, with the above coding, the way in which the incubator contributed in completing an activity, and whether that was the case in the first place, formed the basis for the overall contribution of Orange Grove to its tenants.

3.4.2 Data analysis per activity

So as to the second way of analyzing the data, the focus was shed on how every one of the 35 selected activities was completed, depending on which of the services contributed the most and whether this was the case or not. After all the data was collected, it became clear which of the provided services is the most significant for the completion of every activity amongst the startups. The five selected key individuals representing all three services provided were asked to give their insights on how Orange Grove can contribute to these 35 activities, based on their experience with Orange Grove startups and Orange Grove in general. The answers on how Orange Grove can help its tenants to complete each activity, were coded and labelled as following:

(A): Orange Grove can or has contributed in completing this activity through the Shared space and resources

(B): Orange Grove can or has contributed in completing this activity through the Business support services

(C): Orange Grove can or has contributed in completing this activity through the Access to its networks

These two different interviews, with the entrepreneurs on the one hand and the key individuals on the other hand, focusing on the same 35 entrepreneurial activities, led to the two different perspectives of how an incubator contributes to the development of its tenants along the entrepreneurial process. These two perspectives, formed the basis of this part of the data analysis.

4. The case: Orange Grove

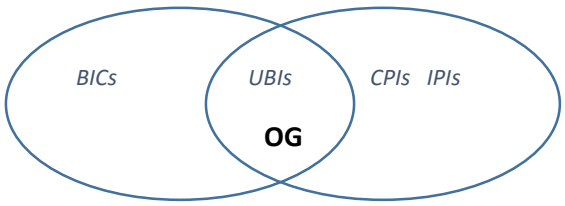
In this chapter, the specific incubator is analyzed, based on the theoretical framework. So, first it is described according to the typology of incubators by prevailing scientific theories, the first part of the theoretical framework. The actual services provided are then classified based on the shared services highlighted by the literature. Lastly, the 4s model is used to analyze the added value of Orange Grove along the entrepreneurial process.

4.1 Description of Orange Grove

Orange Grove is a business incubator started by the Dutch Embassy in Athens in September 2013. It is sponsored by a number of Greek and Dutch corporations and universities and besides the flexible workspace it also provides networking events, mentoring programs, educational programs and legal/accounting services to its tenants. (About Orange Grove, 2015)

From a literature perspective, according to Peters et al. (2004), Orange Grove could be classified as a non-profit incubator focused on diversifying the local economy. The initial purpose of Orange Grove was to boost the Greek economy and fight the brain drain effect, which was a result of the financial crisis that hit the country. Creating jobs through new ventures is considered to be the best way to do this. So, according to Aerhoudt (2004), Orange Grove can be classified as an economic development incubator, since the main objective of this incubator is the regional development by dealing with the regional disparity gaps. Though, since this is done by creating startups, a mixed incubator profile is also applicable but the fact that the main purpose initially was (and still is) to contribute to the economic climate in Greece, the regional development profile seems to be the best choice. Regarding the business model of Orange Grove, it is funded by Dutch and Greek corporations for the biggest part and receives a small amount of money from its tenants as a fee. So, according to the model of Grimaldi & Grandi (2005), this specific incubator would be positioned somewhere between model 1 and model 2, like the UBI's. Like discussed above in the theoretical framework, the incubating model of the UBI's is similar to that of BICs, since they rely on the fees of the incubated firms and on public subsidies.

Model 1 *Model 2*



4.2 Provided services

The provided services of Orange Grove are categorized according to the three shared services categories that were illustrated in the theoretical framework of this study.

Regarding the **Shared space and resources** Orange Grove offers a flexible workspace that is equipped with a printer, internet and phone lines, conference areas and everything an entrepreneur needs to work. These form the basis of this service (e.g. Peters et al., 2004; Chan and Lau, 2005; Carayannis and von Zedtwitz, 2003). The space of Orange Grove is very flexible and is built in such a way that collaboration is enhanced. All the furniture and conference booths are on wheels, so that they can be moved every day and create inspiring settings for the entrepreneurs.

Also, the maintenance of the efficient operation of basic office support like mentioned by Carayannis and von Zedtwitz (2003) is available at Orange Grove. Secretarial support, copying services, computer network support and book keeping are all part of the Orange Grove service package and complete this section of services. This is done by the project manager, the assistant project manager, the secretary and an intern. These form the permanent staff of the incubator, also providing advice and guidance to startups for daily issues.

Various **Business support services** are offered by this specific incubator to support and educate the tenants. A boot camp organized by Orange Grove in cooperation with the knowledge partners of the incubator. Moreover there are many seminars on a weekly basis in order to educate the tenants. In general, Orange Grove also hosts many events that are related to entrepreneurship and the startup scene like the Startup Safary Athens 2014 that was hosted by the most important Athenian incubators.

After a startup is accepted, it is matched with a mentor and sometimes a coach if the tenants wishes so. The choice of the matches are based on the needs of the startup and the professional background of the mentors. Orange Grove also has links with legal, accounting and consultancy firms that offer their services to the tenants of the incubator on a discount.

Lastly, the access to financial resources like mentioned by Carayannis and Zedtwitz (2003), complete the business support services of Orange Grove. Due to its nature, Orange Grove attracts many investors that attend seminars or give speeches during big events. Staring from December 2014, a quarterly pitch competition with money prizes donated by Greek foundations for the best two startups is also offered.

At last, the **Access to networks** are a crucial part of Orange Grove. Many networking events take place at Orange Grove. The tenants are given the chance to access key individuals for the success of their startup during big events or seminars. Also, networking among the tenants can take place since they all have access to the same shared facilities, enhancing the collaboration among them.

Shaped by the literature about the shared incubator services and combined with how Orange Grove aims at helping its tenants, the next framework was constructed. This framework was used to code the answers given during the interviews with the entrepreneurs and the key individuals.

Shared space and resources	• Shared space equipped with printer, internet and phone lines • Maintenance of the efficient operation of basic office support • Permanent incubator staff
Business support services	• Educational workshops, boot camps • Seminars • Legal, accounting, business services • Mentoring • Coaching • Financial resources
Access to networks	• Access to key individuals (external networks) • Collaboration among tenants (internal networks)

Table 2 Overview of provided services by Orange Grove, based on direct observation

4.3 Added value Orange Grove

The 4s model by Groen (2005) is used to map the added value that Orange Grove can offer to its tenants through the aforementioned provided services.

Regarding the strategic capital dimension, the mentor and/or coach of every startup can help the entrepreneur develop. Most startups meet with their mentors or coaches on a weekly basis, but communication also takes place through phone or e-mail. Mentors are mainly involved in the business strategy issues while the coaches can help the entrepreneurs manage their stress, gain more self-confidence, learn how to better negotiate with potential suppliers or customers and enhance their public speaking skills. Orange Grove has a wide network of mentors and coaches with varying backgrounds so as to be able to guide startups with different needs.

From an economic capital perspective, Orange Grove contributes in two ways, like discussed in the theoretical background of this study. Firstly, the tenants of Orange Grove can use the flexible workspace with all the resources and all the support services that can be found in the table above, for a small fee, profiting of economies of scale. Also, due to its nature, Orange Grove attracts potential investors, pointing out that next to cost cutting, access to capital is the second way in which Orange Grove can contribute in this dimension. Moreover, like stated above, staring from December 2014, a quarterly pitch competition with money prizes donated by Greek foundations for the best two startups is also a part of the program, offering direct access to capital.

Incubated firms of Orange Grove are also offered a wide range of business support services, helping them develop along the cultural/human capital dimension. Apart from the strategy redefining role that fits the strategic capital dimension, the dedicated mentor offered by Orange Grove, can also contribute in the enhancement and development of financial, human, technological and organizational skills. The entrepreneur can also attend lectures for free on subjects such as flexible working, branding, market research, personal accounting, procedures & legislation, intellectual rights, business ethics / integrity and receive help in drawing up or improving the business plan. Moreover, Orange Grove offers the possibility to its tenants to ask for legal or accounting advice at a set time and day. If the entrepreneur needs more extensive support in these areas, Orange Grove offers a list of cooperating lawyers and accountants, who offer their services at special rates. Also, after every application round, the startups that are accepted are offered a 2-4 day educational program organized by University incubators like the University of Wageningen (StartLife) or by the Universities of Amsterdam (Amsterdam Centre for Entrepreneurship) and DeLft (YES!Delft).

Lastly, the social capital of the Orange Grove incubated firms is enhanced by the access to the external and internal networks of the incubator. Startups can cooperate with each other and give each other feedback due to the flexible workspace. There are meetings on a weekly basis among different startups for several reasons. There also exists a closed Facebook group for all the entrepreneurs, mentors and coaches where people can post an idea or a question. Regarding the external networks, Orange Grove has a huge network of experienced people in the Netherlands and Greece who visit the working space in order to meet with the startups and exchange ideas and views with them. These people are all experts in their fields and they come from a wide range of multinationals, companies, universities, authorities, or they are entrepreneurs themselves. Also, since Orange Grove is an initiative of the Dutch Embassy in Greece, Orange Grove members are involved in official networking activities of the Embassy. The sponsors of Orange Grove, which are Greek and Dutch corporations also offer access to a great network for the

tenants of the incubator. Lastly, since its opening Orange Grove has drawn significant publicity attention, since it has been featured in international press (Bloomberg, Reuters, The New York Times, The Wall Street Journal) and has had the honor to welcome H.M. King Willem-Alexander and H.M. Queen Máxima, President Karolos Papoulias, EU Commissioner Neelie Kroes, and more prominent figures. This media attention helps to draw attention to the startup scene in general but mainly to the startups of Orange Grove.

In a nutshell, it can be concluded that Orange Grove can help its tenants develop along the entrepreneurial process, in all 4 dimensions. So, Orange Grove, perfectly fits the requirements of this study and therefore it is used as the case study. The nature of the support provided is aligned with what incubators of this type are supposed to provide to their tenants, making it the perfect setting for a research of such kind. The actual services of this specific incubator can be operationalized easier because of this, enhancing the internal and external validity.

5. Analysis and Results

In this section the results of the empirical part of this study are presented. For this study a total of 16 entrepreneurs, representing 16 different startups, and 5 individuals that have key positions in Orange Grove were interviewed. The purpose of this study was to examine how the provided services of an incubator influence the development of a startup along the entrepreneurial process.

5.1 Analysis per startup

In the first part of the result section, the main purpose is to find out which of the 3 main services of Orange Grove had the most significant impact on the development of the selected tenants. In the table below, an overview of the data with the entrepreneurs can be found. First, an explanation of the different variables that represent each column of this table can be found.

***X**= Amount of activities completed before joining Orange Grove (t0)*

***Z**= Total amount of activities completed after one year in Orange Grove (t1)*

***Z-X**= The difference between these two points out how many activities were completed in one year of incubation (t1-t0)*

***A**= Amount of activities completed due to the 'Shared space and resources' of Orange Grove*

***B**= Amount of activities completed due to the 'Business support services' of Orange Grove*

***C**= Amount of activities completed due to the 'Access to Networks' of Orange Grove*

***D**= Amount of activities completed without the contribution of Orange Grove*

***A+B+C**= Total amount of activities completed with the contribution of Orange Grove*

***%**= Average percentage of total amount of activities completed with the contribution of Orange Grove (A+B+C), in relation to the total amount of activities completed after one year in Orange Grove (t1) (Z), per startup.*

Startup name	Completed before joining OG(X)	Completed after one year of incubation(Z)	Z-X	Shared space & resources (A)	Business support services (B)	Access to networks (C)	No OG contribution (D)	A+B+C	(%) of activities completed throug A,B or C
A	7	18	11	2	2	3	4	7	63.6%
B	5	26	21	2	11	4	4	17	81.0%
C	15	24	9	1	4	2	2	7	77.8%
D	2	21	19	9	4	5	1	18	94.7%
E	5	26	21	2	8	1	10	11	52.4%
F	2	25	23	1	10	2	10	13	56.5%
G	15	27	12	4	4	3	1	11	91.7%
H	7	27	20	1	9	4	6	14	70.0%
I	8	28	20	1	7	5	7	13	65.0%
J	13	24	11	1	4	2	4	7	63.6%
K	1	16	15	2	5	2	6	9	60.0%
L	2	28	26	2	10	10	4	22	84.6%
M	12	24	12	4	4	0	4	8	66.7%
N	6	10	4	1	1	1	1	3	75.0%
O	6	19	13	5	3	3	2	11	84.6%
P	3	19	16	3	4	6	3	13	81.3%
Total			253	41	90	53		184	
% relative to A+B+C				22%	49%	29%			
Average startups A-P									**73.03%**

Table 3 Overview of data from interviews with entrepreneurs

In general we see that in average, Orange Grove contributes to the entrepreneurial development of its tenants, since the average percentage of the total amount of activities completed with the contribution of Orange Grove (A+B+C), in relation to the total amount of activities completed after one year in Orange Grove (t1) (Z), per startup, is around 73%.

The general contribution of the incubator was also reflected in the statements of the entrepreneurs during their interviews .The next quotes sum up what the majority of the research sample argued about the general contribution of Orange Grove, not specifically about how a specific service potentially contributed to the completion of a specific activity.

'The whole vibe and atmosphere, the fact that you see many other startups on a daily basis that struggle with the same problems as you do. Especially in Greece where the term 'startup' is pretty new compared to other countries, not everybody knows what you are talking about when you talk about your venture. In Orange Grove of course this is not the case, making it feel like a very friendly and supporting environment. It helps you stick to the purpose and stay focused.' Startup A.

'For us, Orange Grove was, and still is, a connection with the outside world and with sources of knowledge. These are the two most important things. So, on the one hand we learn, on the other we connect with people which means that we can negotiate our ideas. We sit together and discuss these ideas. About the first part, Orange Grove has managed to get great speakers here, which have learned us a lot and inspired us. These contacts also give you extra opportunities to sell your idea to more people.' Startup L.

'They provide a climate where we started finding it significant to define our market. Before that, we didn't think, we just thought we could launch a product in the market and have it, you know, give us return on our investment. After that we understood how significant it is to have a target market. In order to make targeting, marketing, promotional campaigns, in order to have expectations within specific timelines.' Startup M.

Though, this was not the main purpose of this study. The main goal of this research is to examine how the provided services can influence the development of nascent entrepreneurs in the startup phase. When looking at the table 3, we see that in almost half the cases, the business support services were responsible for the completion of an entrepreneurial activity or had the highest impact when compared with the other provided services. This points out that this service is mainly responsible for the development of the entrepreneurs after they have been selected for the incubation program. In the transcripts of the interviews several different ways were found that these services managed to contribute, directly or indirectly, in completing several activities for entrepreneurs and help them complete a milestone.

'Every step we make is influence by the Orange Grove program somehow. Before joining we had absolutely no idea what the business part of an organization looks like, now we do and have made important steps. The boot camp and the seminar changed our mindset and made us realize how things like collecting information on your competitors is also very important.' Startup K.

About 3 out of 10 activities were completed due to the access to several networks of Orange Grove, both internal and external, or even both in some cases.

'We had the first contacts with our client when we started here at Orange Grove. A big name that visited Orange Grove for a seminar liked our idea and wanted to help us and buy our product, but unfortunately that never happened for several reasons. He is a friend of the Ambassador, sold his company for millions and came to give a seminar about that.' Startup J.

'Before Orange Grove I was with another woman, she found the Orange Grove application. We came together in the beginning, but then she did not have time. So I was a few months on my own but I was hoping and that I would find somebody to help me and join my team. Afterwards the things got more organized and I found my first real colleague, Constantinos here at Orange Grove.' Startup D.

At last, the shared space and resources that are provided by the incubator, account for a direct or indirect contribution in about 1 out of 5 activities of the nascent entrepreneurs. The following quote captures how the shared space and the shared resources contributed in general.

'The co-working space makes it easier to invite people over. Somehow people like it a lot here, maybe that led to more people coming over and people being more eager to say yes when asking if they want to work for us or do an internship.' Startup G.

So, in general the degree of support of the incubator to its tenants in the entrepreneurial process, is reflected in the high percentage (73%) of gestation activities that were completed with its direct or indirect contribution. When comparing the three services provided, the business support services (B) account for almost half the activities completed, followed by the access to the networks (C) and the shared space and resources (A), which are responsible for completing one out of three and one out of 5 activities respectively.

5.2 Analysis per activity

In this part of the analysis section, a different way of looking at the data is discussed. An analysis per activity was done, resulting in two perspectives. The first perspective is the one of the entrepreneur, where the contribution of Orange Grove per activity can be seen, for its tenants. The second perspective is the one of the incubator itself, where the 5 individuals that represent Orange Grove state how they believe that Orange Grove can help or already has helped its tenants, again per activity. These two activity-based perspectives on how the services of an incubator can help its tenants to develop along the entrepreneurial process, were analyzed and compared where needed.

Pointing out the activities with the highest degree of contribution by the incubator, according to the entrepreneurs, was the main purpose of the first perspective. The use of the secondary data set, which is the basis of the second perspective, has two main intentions. The first one is to examine whether the way in which these activities highlighted by the entrepreneurs are completed, is reflected in how these 5 individuals believe that the incubator can add value. Secondly, it is also interesting to look whether the incubator serves its purpose. This can be done by comparing the way that activities can be completed from the other way round. This means that the activities where the incubator can significantly contribute according to the key individuals of Orange Grove, are compared to whether and how these activities were actually completed by the tenants due to the services provided by Orange Grove.

These two main goals of the second data set form the basis of the way the data from the interviews with the 5 individuals was analyzed.

5.2.1 The entrepreneur's perspective

So, in the following table, it becomes clear whether and how Orange Grove helped its tenants per activity. The complete table, containing the detailed data from all the entrepreneurs can be found in appendix E. First, like in the previous part, the different variables that represent each column of this table are explained.

Total X= *total amount of cases where the activity was completed before joining Orange Grove (t0)*

Total A= *total amount of cases where the activity was completed due to the 'Shared space and resources' of Orange Grove*

Total B= *total amount of cases where the activity was completed due to the 'Business support services' of Orange Grove*

Total C= *total amount of cases where the activity was completed due to the 'Access to Networks' of Orange Grove*

Total D= *total amount of cases where the activity was completed without the contribution of Orange Grove*

After all the transcripts of the interviews with the entrepreneurs were ready, the contribution of the incubator per activity was mapped and entered in the table below. The sums of the different variables in the table are included to explain potential exceptions and were also used to compare this table to the one generated for the second perspective.

	Entrepreneurial activity No.	Total X	Total A	Total B	Total C	Total D	Sum A,B,C	Sum A,B,C,D	Sum X,A,B,C,D	%X	%A	%B	%C	%D
1	Idea	16	0	0	0	0	0	0	16	100%	0%	0%	0%	0%
2	Business plan	2	0	11	1	1	12	13	15	13%	0%	73%	7%	7%
3	Team	8	0	1	3	4	4	8	16	50%	0%	6%	19%	25%
4	Prototype/model	3	3	1	4	4	8	12	15	20%	20%	7%	27%	27%
5	Marketing/promotion	0	1	3	8	0	12	12	12	0%	8%	25%	67%	0%
6	Patent/copyright	1	0	4	0	0	4	4	5	20%	0%	80%	0%	0%
7	Regulatory requirements	1	0	4	0	3	4	7	8	13%	0%	50%	0%	38%
8	Legal form	4	0	5	0	2	5	7	11	36%	0%	45%	0%	18%
9	Liability insurance	0	0	1	0	2	1	3	3	0%	0%	33%	0%	67%
10	Raw materials/inventory/s	2	0	0	1	6	1	7	9	22%	0%	0%	11%	67%
11	Equipment/facilities/prope	4	6	0	0	3	6	9	13	31%	46%	0%	0%	23%
12	Physical space	0	16	0	0	0	16	16	16	0%	100%	0%	0%	0%
13	Market opportunities	3	0	5	7	1	12	13	16	19%	0%	31%	44%	6%
14	Competitors	7	0	6	2	1	8	9	16	44%	0%	38%	13%	6%
15	Financial projections	3	0	6	3	1	9	10	13	23%	0%	46%	23%	8%
16	Save money	10	1	1	1	0	3	3	13	77%	8%	8%	8%	0%
17	Invest own money	5	1	2	0	6	3	9	14	36%	7%	14%	0%	43%
18	Ask for funds	1	1	1	2	4	4	8	9	11%	11%	11%	22%	44%
19	Receive funding	0	0	1	1	2	2	4	4	0%	0%	25%	25%	50%
20	Supplier credit	0	0	0	1	1	1	2	2	0%	0%	0%	50%	50%
21	Child care/ help	0	0	0	0	1	0	1	1	0%	0%	0%	0%	100%
22	Full time devotion	3	6	1	2	1	9	10	13	23%	46%	8%	15%	8%
23	Hire employees/managers	1	1	2	1	1	4	5	6	17%	17%	33%	17%	17%
24	Accounting services	8	0	3	0	2	3	5	13	62%	0%	23%	0%	15%
25	Legal services	2	0	9	0	3	9	12	14	14%	0%	64%	0%	21%
26	Bank account	3	0	2	0	1	2	3	6	50%	0%	33%	0%	17%
27	Talk to customers	3	1	0	9	2	10	12	15	20%	7%	0%	60%	13%
28	Receive money	2	0	0	2	1	2	3	5	40%	0%	0%	40%	20%
29	Take classes/workshops	0	0	16	0	0	16	16	16	0%	0%	100%	0%	0%
30	List business	9	0	0	1	6	1	7	16	56%	0%	0%	6%	38%
31	Phone line	0	2	0	0	3	2	5	5	0%	40%	0%	0%	60%
32	Fil tax return	3	0	0	0	1	0	1	4	75%	0%	0%	0%	25%
33	Ficticious name	4	0	3	1	1	4	5	9	44%	0%	33%	11%	11%
34	Trade association	1	0	0	0	2	0	2	3	33%	0%	0%	0%	67%
35	Develop software	0	1	1	3	3	5	8	8	0%	13%	13%	38%	38%

Table 4 Overview of data from entrepreneurs per activity

The rows that are colored green indicate which of the activities were completed by the half or more than the entrepreneurs interviewed, with help from the incubator. All these activities have a sum of 8 or more cases in the first sum column, indicating that at least 8 out of the 16 cases completed the specific activity with the help of the 3 aforementioned services provided. In total, 11 of the 35 entrepreneurial activities meet this requirement. These 11 entrepreneurial activities concern:

- Preparing the business plan (activity 2)
- Developing models, prototypes of the service/product (activity 4)
- Starting promotional and marketing efforts (activity 5)
- Using any physical space for the startup (activity 12)
- Defining the market opportunities for the product/service (activity 13)

- Beginning collecting information on the competitors (activity 14)
- Developing projected financial statements (activity 15)
- Devoting full time to the business (>35 h/week) (activity 22)
- Hiring a lawyer of making use of legal services for the startup (activity 25)
- Beginning talking to customers (activity 27)
- Taking classes/workshops on starting a business (activity 29)

Not all 11 activities were characterized by being completed mainly by one type of service. Like seen in the table above, there was a relatively even distribution of the contribution per service in many cases. Though, there also were activities where one type of service was dominant. Following, how these 11 activities were found to be completed are illustrated through specific parts of the transcripts.

Preparing the business plan **(activity 2)** was mainly done though the business support services that are offered by Orange Grove.

'I must say that the biggest help from the side of Orange Grove came from the boot camp. That was the first boot camp ever at Orange Grove, and it was organized by the Delft University. Also, my mentor gave me a lot of tips on how to structure my business plan, he really helped me out a lot.' Startup B.

Developing models, prototypes of the service or product **(activity 4)** was done a lot outside the services of the incubator, but when there actually was some contribution, it was mainly because of the space and resources of the access to the networks.

'Well our mentor helped us out a bit by giving some useful insights, but it was mainly the space of Orange Grove. This co-working space made it easier for us to meet with each other, brainstorm and develop this prototype.' Startup O.

'I did research amongst the sponsors of Orange Grove to identify their needs when using a platform like mine and I also did a test drive with one of the startups here. With the feedback I got I managed to make important changes to my prototype, it got a lot better.' Startup L.

Marketing and promoting efforts **(activity 5)** were initiated by the access to the networks of the incubator, followed by a significant smaller contribution by the business support services.

'I must say that Orange Grove helped a lot here. We got linked to big corporations in the Netherlands. We also were able to compete in the Poseidonia, world's most prestigious maritime event, because we got introduced and recommended by important people from the network of Orange Grove, like the Ambassador. During that event we met many important people and closed some deals for good projects. Marketing wise, being there, was very important because it put us on the map. Doing these important projects was also good for our prestige and status.' Startup H.

Using any physical space for the startup **(activity 12)** was ruled completely by the shared space and resources of the incubator. All startups answered in a similar manner, the following quote sums up what was said in this case.

'Yes, we have used Orange Grove for everything that is related to our startup. Interviews, seminars, brainstorm sessions, meetings etc.' Startup O.

Defining the market opportunities for the product or the service **(activity 13)** and developing the projected financial statements **(activity 15)** were both mainly fulfilled by the business support services and the access to the networks, where the first contributed the most at projecting the financial statements

whereas the latter scored a bit higher when it came to defining the market opportunities for the product or service. Concerning the definition of market opportunities, entrepreneurs argued the following:

'With the help we got from the boot camp and from experts who came at times and spoke at Orange Grove we managed to separate in our minds possible target markets and develop marketing strategies for each market. At the moment we still have a plan to launch in both target markets, but we are narrowing our options down constantly.' Startup M.

'Through the people that are part of the Orange Grove community I managed to define my opportunities. I spoke to many people like the marketing manager of Heineken and other people I met during networking events, I talked to them later on and they gave me good insights about the olive oil market in Greece and Europe.' Startup C.

Regarding activity 15, the next quotes give an impression of the data from the interviews with the entrepreneurs.

'Miltiadis (mentor and accounting consultant) did almost everything for us in this case. First he showed us how this is done in the case of a startup in general, where not many data is available regarding revenue and the potential market share. Then he also gave us practical tips on how to develop these financial forecasts.' Startup B.

'I met some people through the network of Orange Grove that helped me with this and gave me tips. These were people that knew this sector and helped me make my financial projections more accurate. In my case this is pretty hard, because there is not a lot of data available about the size of the market.' Startup P.

Aligned with the two previous activities, but with a significantly higher score for the support by the business services, beginning collecting information on the competitors **(activity 14)** was also mainly completed by these two services.

'The seminars I had here and the boot camp changed my mindset from the very beginning and made me realize that it is essential to always be updated on what the competitors are doing. So, in an indirect way I got help here on starting to look what is going on around me in general.' Startup P.

'In the beginning I made a pitch, and at the end of the pitching we got questions about Trip Advisor. These were questions from people that represented other startups of Orange Grove, it was a closed event just for members. In the beginning I was like surprised, but then I opened my mind and I thought: Just the fact that they asked about Trip Advisor means that we have to search that. Why do they ask? And it all contributed to the business spirit. So yes, Orange Grove contributed, with feedback we got from the other startups here. After that day we started looking into the direct and indirect competition.' Startup D.

Devoting full time to the business **(activity 22)** was mainly a result of the shared space and resources of the incubator, the answers of most interviews are in line with the following quote:

'Well, we always spent a lot of time on our startup, but since we are here we all work full time on it. Before there were weeks that one of the members would work full time for some reason, but the full devotion from all the members started here.' Startup O.

Hiring a lawyer of making use of legal services **(activity 25)**, was also a case where the support by the business services was of great importance.

'We borrowed the legal services of Orange Grove, we have mentors that are lawyers, and yes once we did the 'terms and conditions' and the regulatory requirements needed, we also looked at some other legal issues for the platform.' Startup I.

Beginning to talk to customers **(activity 27)**, was mainly achieved by the access to the networks. Though, only the external networks of the incubator were used here.

'After the pitching competition at Orange Grove, we were approached by some people from other incubators who linked us to people who could be interested, they were supposed to be the 'big players' in the sector. They also knew other agricultural startups so they had some experience in these things. Actually, one of the people that were introduced to us that day, will be the first one who will use our product as a pilot.' Startup A.

Lastly, taking classes or workshops on started a business **(activity 29)**, was dominated by the business support services, since this type of classes or workshops are the core part of this service.

'Here at Orange Grove we have participated in many seminars, the boot camp and workshops. We try to stay updated on what is going on and when we see something that might interest us, we try to attend.' Startup K.

In table 4, the number in column Sum (A, B, C, D) indicates the total amount of entrepreneurs that completed a specific activity in their incubation period, while the number in column Sum (A, B, C) designates how many startups completed these activities through the direct or indirect support of one of the three provided services by the incubator. Comparing the results in these two columns for these 11 gestation activities, we see little difference in most cases apart from two, activities 4 (developing prototypes and models) and 25 (Using legal services). This means there was a high degree of contribution for these activities by the incubator in general. Only the two aforementioned activities yielded different results, meaning that there were some entrepreneurs that completed these activities without the support offered by the incubator. When looking at table 4 again, the number in column Sum (X, A, B, C, D) indicates the total amount that completed a specific activity after one year of incubation in general, including the ones that completed this activity before joining the program. When comparing the Sum (A, B, C) and the Sum(X, A, B, C, D) column, we see that in almost all cases (apart from 4 and 25 again), the big difference in results is due to the relatively high percentage of startups that already had completed the activity before entering the program. This indicates that, in these cases, a potential contribution of Orange Grove was not possible, since the specific activity was largely completed before joining the program, pointing out that even with a significant number of cases having completed this from before there still was significant contribution by the services provided. So, 11 out of the 35 gestation activities are completed with the direct or indirect contribution of the incubator. This is also the case for activities 4 and 25, though it seemed that a relatively high percentage of startups chose to seek for help outside the incubator.

5.2.2 The incubator's perspective

As stated in the introduction of the 'analysis per activity' section, the use of the data of the interviews with the 5 selected individuals that represent Orange Grove is twofold. Firstly, the main goal of the data from these interviews is to see whether the actual contribution of the incubator, in this case the 11 activities that were pointed out above by the entrepreneurs, are aligned with what the key individuals believe about these activities. The second point of interest is to see whether what these individuals believe an incubator should offer in general, is aligned with how the entrepreneurs actually performed at these activities. So, only activities that meet one of the 2 or both following requirements are displayed:

1. Activities that are completed with the significant contribution of the incubator according to the entrepreneurs (the 11 from the previous section, table 4)
2. Activities where the incubator can add significant value. Activities where at least 4 out 5 individuals argue that a specific type of service can lead to completing an activity, are included here.

The complete table with the data of all 5 individuals can be found in appendix E. First, the different variables that represent each column of this table are explained.

A: Orange Grove can or has contributed in completing this activity through the Shared space and resources

B: Orange Grove can or has contributed in completing this activity through the Business support services

C: Orange Grove can or has contributed in completing this activity through the Access to its networks

Entrepreneurial activity No.		A	B	C
1	Idea	4/5	4/5	3/5
2	Business plan	0	5/5	3/5
3	Team	1/5	0	5/5
4	Prototype/model	0	3/5	5/5
5	Marketing/promotion	0	4/5	5/5
6	Patent/copyright	0	4/5	4/5
7	Regulatory requirements	0	5/5	3/5
8	Legal form	0	5/5	1/5
11	Equipment/facilities/property	4/5	0	2/5
12	Physical space	5/5	0	0
13	Market opportunities	0	5/5	2/5
14	Competitors	0	5/5	3/5
15	Financial projections	0	5/5	1/5
18	Ask for funds	1/5	1/5	5/5
22	Full time devotion	5/5	0	0
23	Hire employees/managers	0	0	5/5
24	Accounting services	0	5/5	2/5
25	Legal services	0	5/5	1/5
27	Talk to customers	0	0	5/5
29	Take classes/workshops	0	5/5	0
32	Fil tax return	0	4/5	0
33	Ficticious name	0	5/5	0
35	Develop software	1/5	2/5	4/5

Table 5 Overview of data from key individuals per activity

The key individuals pointed out that 24 out of the 35 activities can be seen as activities where the incubator can add value, meeting the 2nd requirement (yellow cells). From these 24, the green colored rows are the ones that were pointed out by the entrepreneurs, meeting the first 1st requirement.

When looking at the 11 activities (green), it becomes clear that in all cases the two perspectives have a complete overlap. In other words, for all the 11 activities where startups argued that the incubator

contributed significantly, at least 4 of the 5 individuals agree and actually believe that Orange Grove can contribute in completing the activity (yellow).

Also, when taking into consideration by which service each activity was completed, it becomes clear that in most cases the view of these 5 individuals is reflected in how the startups actually managed to complete these milestones. This can be seen in the next table, where the data for these 11 activities is compared to the view of the key individuals about these activities.

		Entrepreneurs					Key individuals		
Entrepreneurial activity No.		%X	%A	%B	%C	%D	A	B	C
2	Business plan	13%	0%	73%	7%	7%	0	5/5	3/5
4	Prototype	20%	20%	7%	27%	27%	0	3/5	5/5
5	Marketing/promotion	0%	8%	25%	67%	0%	0	4/5	5/5
12	Physical space	0%	100%	0%	0%	0%	5/5	0	0
13	Market opportunities	19%	0%	31%	44%	6%	0	5/5	2/5
14	Competitors	44%	0%	38%	13%	6%	0	5/5	3/5
15	Financial projections	23%	0%	46%	23%	8%	0	5/5	1/5
22	Full time devotion	23%	46%	8%	15%	8%	5/5	0	0
25	Legal services	14%	0%	64%	0%	21%	0	5/5	1/5
27	Talk to customers	20%	7%	0%	60%	13%	0	0	5/5
29	Take classes/workshops	0%	0%	100%	0%	0%	0	5/5	0

Table 6 Overview of the 11 gestation activities selected by the entrepreneurs, compared to the key individuals

So, only for **activity 13** "defining the market opportunities", there is a difference in how the activity was mainly completed by the entrepreneurs compared to what the individuals believe. Contrary to the entrepreneurs, who argue that the access to the networks is the most valuable, the business support services are thought to be the most helpful here according to these 5 individuals.

'If a startup comes in here with an idea already, it is our job to say if it is a good or bad idea. Personally I think it is a part of Orange Grove to do this, to help them define their market opportunities. I think the point of Sillicon Valley and all the other countries that have a pedigree of startup behind them, is the fact that they fail so many times. And they've learned from that failure. So if you come here and you are the so called specialist and you tell the startup there is no business opportunity there or no market opportunity there, while he presents that idea with which he came in here, you will not help him define what the market offers. I think it is the wrong thing to do. You let him try something that he is passionate about and learn along the way. If there is a market opportunity he'll see that on the course and if there is not he will fail quickly and learn from it. We can give them general guidelines in terms of: this is a good idea, that maybe, but that is probably not scalable. So, we can only guide them as mentors to make the right decisions, that's the most we can do.' Individual D.

Regarding the remaining 10 activities that can be found in table 6, the two perspectives yielded very similar results, pointing out that the incubator serves his purpose, since the provided services lead to the desired results. Preparing the business plan **(activity 2)** in general, together with other activities that are part of the business plan like beginning to collect information on competitors **(activity 14)** and developing projected financial statements **(activity 15)** were argued to benefit most from the business support services. Though, for activities 2 and 14 the access to the networks was also mentioned, this was not the

case for activity 15. The following quotes about these activities sum up what these 5 individuals thought about the potential contribution in these cases.

'We help with the boot camps. We also offer seminars on part of the boot camp, like e.g. pitching, or how to make a financial plan. We have a special mentor who is specialized in that. We also have the business services, like legal and accounting advisors, which also helps in making your business plan. We have many people in our network that can help if a person has specific questions about the business plan. Besides from asking their mentor they can ask their network. Basically I think they can speak with each other in Orange Grove and find out how to overcome certain difficulties in writing the business plan. They can train their pitching skills, also during the Squeeze. All our services are centered on creating a good business plan.' Individual C.

'We don't do it directly as Orange Grove, but we can help them to contact all these companies that can help them with market research and information on competitors. Also, the boot camp they are offered at the beginning and some seminars emphasize these kind of issues and make them actually start doing this.' Individual B.

'I think that Miltiadis Gkouzouris has helped a lot of people with the financial projections. Also the accountants we have can help them with this.' Jan Vesteeg.

This also stands for making use of legal services **(activity 25)** and taking classes/workshops on starting a business **(activity 29)**, two activities that represent core milestones that can be achieved through the business support services of incubators.

'This is very helpful for many startups. I personally have assisted many of them in legal issues, from setting up contracts to helping them apply for a patent. Most of them struggle with the technical issues of these legal documents and the regulations that change every now and a bit.' Individual D.

'We offer seminars on a weekly basis, 3-4 boot camps every year which we organize together with our knowledge partners and several other workshops and lectures for our startups.' Individual C.

The access the internal and external networks that is offered by the incubator can lead to the development of models and prototypes of the service/product **(activity 4)** , the initiation of marketing and promotional efforts **(activity 5)** and beginning to talk to customers **(activity 27)**, according to all 5 key individuals. Though, the contribution of the business support services was also present for activities 4 and 5, where 3 and 4 individuals argued this respectively.

'We have some teams that had a prototype of a product, and they started remaking that in Orange Grove, I can image that if it would be a different kind of team with a very huge product that you cannot bring to Orange Grove that would be a problem, but I think people with a prototype can work on it, yes. And they do. Also many teams work with each other, get each other's feedback and based on to that they make it better. Many startups help each other.' Individual B.

'It depends on the management team, if they have a strong marketing person in it, that marketing person would be able to see what they can get out of Orange Grove. And definitely Orange Grove can help, just with its network, from the people in the marketing field and not only that. But I think it helps more the people that don't have a marketing person in their team. The mentors that are specialized in marketing, can give some guidance and get linked to teams that don't have a marketing person in their team. But

again, teams that have a marketing person in their management team can get more out of the network of Orange Grove, rather than the support given. I also think that when people talk to each other, get ideas from each other, they can inspire each other. So, our startups can inspire each other by just talking about these things.' Individual D.

'Potential customers and startups are visiting events at Orange Grove, so they can get in touch like that. And members of the Orange Grove committee or the organizing part foster these kind of networking events and connections to specific startups with some potential customers. I believe that the network in general can help a lot here.' Individual E.

According to all the interviewed individuals, the shared space and resources are seen as the main source of support a startup can get in order to use physical space for the startup **(activity 12)** and devote full time to the business **(activity 22)**

'The space of Orange Grove is very important to the startup. They use it for many reasons, and many of them use it on a daily basis. They can have their meetings, brainstorm and work together here.' Individual C.

'That's what we try to get across, that if you want to be successful as a startup you have to dedicate a lot of time to it. Focusing on it, go for it and not to see it as a waste of time. If you spend a couple of weeks or a few days a week on it, or a few hours a week, that is not the way. I think that with the space we offer downstairs many people get inspired and spend more time on the business than they would do otherwise, even full time in many cases. We try to provide everything we need so that they can make the most out of their idea.' Individual A.

The second purpose of the use of this second data set was to examine if the activities that are supposed to be completed by the three types of provided services of the incubator, seem as important for the entrepreneurs. Comparing the two data sets results in 13 activities where the incubator individuals seem to believe that entrepreneurs can benefit from the incubator, while this was not the actual case for the tenants. In the table below, an overview of these 13 activities can be found.

		Entrepreneurs								Key individuals		
Entrepreneurial activity No.		Sum A,B,C	Sum A,B,C,D	Sum X,A,B,C,D	%X	%A	%B	%C	%D	A	B	C
1	Idea	0	0	16	100%	0%	0%	0%	0%	4/5	4/5	3/5
3	Team	4	8	16	50%	0%	6%	19%	25%	1/5	0	5/5
6	Patent/copyright	4	4	5	20%	0%	80%	0%	0%	0	4/5	4/5
7	Regulatory requirements	4	7	8	13%	0%	50%	0%	38%	0	5/5	3/5
8	Legal form	5	7	11	36%	0%	45%	0%	18%	0	5/5	1/5
11	Equipment/facilities/property	6	9	13	31%	46%	0%	0%	23%	4/5	0	2/5
18	Ask for funds	4	8	9	11%	11%	11%	22%	44%	1/5	1/5	5/5
23	Hire employees/managers	4	5	6	17%	17%	33%	17%	17%	0	0	5/5
24	Accounting services	3	5	13	62%	0%	23%	0%	15%	0	5/5	2/5
32	Fil tax return	0	1	4	75%	0%	0%	0%	25%	0	4/5	0
33	Ficticious name	4	5	9	44%	0%	33%	11%	11%	0	5/5	0
35	Develop software	5	8	8	0%	13%	13%	38%	38%	1/5	2/5	4/5

Table 7 Overview of the remaining 13 gestation activities indicated by the key individuals, compared to the entrepreneurs

In table 7, we see that in most cases this big difference in the two views is because the majority of entrepreneurs had not actually completed the activity (sum X, A, B, C, D < 8), or because many of them had completed it before joining Orange Grove (%X relatively high). This implies that a potential

contribution was not captured, since most entrepreneurs did not actually need the direct or indirect support of Orange Grove.. Though, there were some activities where the entrepreneurs seemed to prefer getting support from outside the incubator to complete an activity, despite the fact that the 5 individuals representing the incubator argued that significant support can be found for these cases. These were the activities that were completed by the majority of entrepreneurs (sum X, A, B, C, D >= 8) and had a high percentage of those people that completed this activity without any support of the incubator (%D higher than %A, %B, %C). This applies to the activities 7 (determining regulatory requirements), 18(asking financial institutions or other people for funds) and 35(fully developing the proprietary software).

6. Discussion

'How do the services offered by a business incubator impact the development of its tenants' was the main research question of this study. Overall, the results reveal that the incubator plays a significant role in the entrepreneurial process of the incubated firms. About 7 out of 10 gestation activities were completed with the direct or indirect contribution of the incubator, pointing out that the services provided significantly influence the development of the startups. So as to get a more holistic answer on the main research question and better understand the role of the incubator during the entrepreneurial process, two subsidiary research questions were formulated. 'Which of the provided services of an incubator contributes the most to the development of its tenants' was the first of these questions and resulted in the first way of analyzing the data gathered, the analysis per startup (5.1). The second question, 'Which gestation activities are mainly completed with the support of the incubator', led to the analysis per activity (5.2). These two ways of analyzing the data form the basis of the discussion chapter.

6.1 Analysis per startup findings

The first way of analyzing the data, was the analysis per startup (5.1). The shared space and shared resources, the business support services and the access to the networks are the three dominant incubator shared service categories according to most prevailing articles.

In this study, the business support services were identified as the main contributor by the tenants, and accounted for the completion of almost half the gestation activities. This is aligned with the study of Hackett & Dilts (2004), who argued that key findings from incubatee development studies include the importance of providing dynamic, proactive feedback to incubatees, assisting incubatees with business planning, and encouraging incubatees to introduce control systems during the early stages of incubate development, pointing out the importance of the business support services along the entrepreneurial process. Similarly, Bergek & Norrman (2008) argued that the business support services are the most important, since without business support activities, the denomination ''hotel'' is a better description than incubator. Contrary, the results of the study of Ratinho et al. (2009), showed that incubators are not intensively helping their tenants, despite the fact that they experience frequent and serious problems.

The access to the networks yielded the second best score, since the entrepreneurs argued that about 3 out of 10 gestation activities were completed through the access to internal and external networks of Orange Grove. The importance of the networks of incubators for the development of the tenants has been widely discussed. Hansen et al. (2000) argued that the network activities are the most important value added activities of incubators; since the entrepreneurs lack credibility and a history of operations, the incubator allows them to overcome this liability by providing a networking infrastructure (Rice, 2002). The credibility that startups derive from affiliation with an incubator is of great importance in terms of creating important contacts (Gassman & Becker, 2006), as these contacts significantly augment and exceed the few contacts of the tenants, serving as a valuable source of knowledge and new networking opportunities (Hansen et al., 2000).

Lastly, the shared space and resources accounted for about 2 out of 10 activities that were completed through the direct or indirect support of the incubator. These findings are aligned with the study of Gassman & Becker (2006), who argued that while incubator managers stress the importance of physical goods, technology ventures tend to place greater value on intangible skills passed on through physical co-location. Similarly, Nowak & Grantham (2000) proposed that with the globalization of today's technical

and business resources, location should not be a constraint. According to this study, the best option would be to create a ‘‘network of innovation’’ which brings together, if only in a virtual sense, centers of technical and business or management excellence.

In general, the findings of this research are in line with most prevailing theories about the significance of the services of incubators for the tenants. In essence, the services that distinguish the success of incubators relate mostly to the presence or absence of coaching and access to networks (Peters et al., 2004), while the shared space and resources offered by incubators, support firm survival but have little impact on the development of the firm (Rice, 2002). In the incubator literature, the relative emphasis on each component has varied over time, from an initial focus on facilities and administrative services to a more recent emphasis on the importance of business support (Peters et al., 2004). The advent of the Internet age has ushered in a period of significant development of new models of doing business and managing organizations (Nowak & Grantham, 2000). This is also reflected in the most dominant incubating models nowadays, since the attention of more recent incubators is focused on the provision of direct access to capital and of more intangible and high-value services (Grimaldi & Grandi, 2005).

6.2 Analysis per activity findings

The second way of analyzing the data, was the analysis per activity (5.1), yielded 11 out of the 35 as being completed with the support of the incubator. This was argued by both the selected entrepreneurs and the key individuals. When looking at the table with all the PSED I & PSED II gestation activities (Appendix B), formulated by Reynolds & Curtin (2008), it becomes evident that 10 out of the 11 score very high on this list. From the research sample of PSED I & PSED II, at least 30% of all entrepreneurs completed these activities in their gestation period. This overlap indicates that important milestones are achieved by participating in the incubation program of Orange Grove. Moreover, these specific activities lie in the core mission of business incubators since they are essential for the development of startups along the entrepreneurial process. The only activity that has a low average in the table with the occurrence of each activity (Appendix B), is hiring a lawyer or making use of legal services. One possible explanation for this is that in this study, this question was rephrased in order to capture the potential contribution of Orange Grove, while not changing the essence of it. Specifically, the original gestation activity formulated by Reynolds & Curtin (2008) only referred to hiring a lawyer, while in this study making use of legal services was also added to the same activity. This was done because incubated firms don’t need to hire a lawyer in most cases, due to the fact that legal services are offered by the incubator. So, rephrasing the activity in order to capture the potential support of the incubator, may have led to this significant difference between the PSED I & PSED II dataset and this study.

The initial objectives of incubators are often not aligned with incubatee objectives (Hackett & Dilts, 2004). Also here, three gestation activities were identified where the incubator failed to serve its purpose, as the key individuals argued that Orange Grove can support them with these, while the entrepreneurs chose to complete these activities outside of the incubator. Determining the regulatory requirements (activity 7), asking financial institutions for funds (activity 18) and fully developing the proprietary software (activity 35) were these three. The fact that the regulatory requirements for every startup differ a lot from each other, since every sector of the market has its own regulations and requirements, explains why an incubator which hosts startups that operate in varying sectors, is not capable of supporting the majority of the startups with determining the regulatory requirements. The same stands for the development of the proprietary software, where the needs of most startups when it comes to the proprietary software

cannot be met, due to the big variety of sectors they operate in. Lastly, connecting startups and financial institutions for funding purposes is very common for incubators since start-ups can network to obtain resources (Hansen et al., 2000). Though, this seemed not to be the case here. This can be explained by the fact that a significant amount of startups incubated by Orange Grove are not eligible for funding by financial institutions yet, since they are not that advanced.

The findings of this way of analyzing the data, make room for the 4S model that was introduced by Groen (2005) and discussed in the second chapter. The central hypothesis is that on each of those four dimensions, entrepreneurs will need sufficient capital to create sustainable enterprises. The findings indicate, that this is the case here, since the 11 activities that were found to be completed by the majority of the entrepreneurs, actually span all four dimensions. For example, preparing the business plan (activity 2) and devoting full time to the business (activity 22) can be related to the strategic capital, since this dimension entails the ambition level and scope of entrepreneurial action (Groen, 2005). Making use of physical space for the startup (activity 12) and making use of legal services (activity 25) are examples of activities that form part of the economic capital, since they lead to cost cutting for the incubatees. Developing models, prototypes of the service/product (activity 4), defining the market opportunities for the product/service (activity 13), beginning collecting information on the competitors (activity 14), developing projected financial statements (activity 15) and taking classes/workshops on starting a business (activity 29) are activities that are completed through training & education, and therefore can be positioned in the cultural / human capital dimension. At last, starting promotional and marketing efforts (activity 5) and beginning talking to customers (activity 27) are mainly completed by the network connections of the incubator that directly or directly give access to other actors, and fit the description of the social network dimension. This implies that the services provided by Orange Grove, give the tenants the chance to develop across all four dimensions, making it possible for them to create sustainable enterprises.

Though, Groen (2005) argues that in the 4s framework, every exchange between actors involves each of the four types of capitals rather than only one or two. ‘‘For instance, each economic transaction is governed by the use of strategic capital (e.g. power and authority) and leads to the build-up of social capital between the actors as they start to trust each other, while at the same time cultural capital (e.g. a joint frame of reference or knowledge) is enhanced’’(Groen, 2005, p.64) So, the categorization of the aforementioned activities into the 4 dimensions does not imply that every activity can only be placed into one dimension, but that some activities can be placed in two or more, depending on how they are interpreted.

7. Conclusions

7.1 Contributions to the field

In the literature, incubator success has been defined as a ratio expressed in the following terms: Number of Firms Exiting the Incubator and Number of Firms Discontinuing Operations While Still a Tenant (Allen & Weinberg, 1988). According to previous scholars, the development of the incubatees during the incubation period can also be used as a measure to assess the quality of incubators, but the incubatee development studies are rather underdeveloped and probably will remain so due to the difficulty of obtaining data from early stage ventures regardless of whether the venture is located within an incubator (Hackett & Dilts, 2004). Nevertheless, in this study, the incubatee development was used as a measure, to examine the influence of the provided services of an incubator, offering a new perspective to this body of literature. In order to capture the development of the incubatees during their incubation period, gestation activities proposed by PSED I & PSED II were used.

7.2 Conclusions

Case study methodology was used so as to provide in-depth results on this matter. From the six possible sources of data that were pointed out by Yin (2009), documents, interviews and direct observation were used in this study. Nascent entrepreneurs that have been incubated for at least one year and individuals that are closely related to the incubator formed the research sample of this study. The results were analyzed in two ways, providing a more holistic answer to the main research question 'How do the services offered by a business incubator impact the development of its tenants?'.

The analysis per startup was done to figure out which service provided by Orange Grove is of greatest importance to the tenants. The findings indicated that from the three shared incubator services highlighted by the literature (A. Shared Space and Resources, B. Business support services, C. Access to networks), the business support services are responsible for completing about half of the gestation activities of the tenants, followed by the access to the networks and the shared space and resources.

The second way of analyzing the data, the analysis per activity, was done to find which gestation activities are mainly completed through the support of the incubator. The individuals closely related to Orange Grove were also asked about what they think the contribution is of the incubator for every one of these activities. The data from the entrepreneurs and the key individuals led to two different perspectives, the 'entrepreneur's perspective' and the 'incubator's perspective'. The purpose of creating these two perspectives was twofold. Firstly, this happened to examine whether the way in which these activities were completed by the entrepreneurs, is reflected in how these selected 5 individuals believe that the incubator can add value. Secondly, whether the incubator serves its purpose was the next point of interest. The activities where the incubator can significantly contribute according to the key individuals of Orange Grove, were compared to whether and how these activities were actually completed by the tenants through the services provided by Orange Grove. In general, this analysis yielded that 11 gestation activities out of the 35 used in this study, were completed by the majority of the tenants through the direct or indirect support of the incubator, this was verified by the selected individuals mentioned above. These are the following:

- Preparing the business plan (activity 2)
- Developing models, prototypes of the service/product (activity 4)
- Starting promotional and marketing efforts (activity 5)

- Using any physical space for the startup (activity 12)
- Defining the market opportunities for the product/service (activity 13)
- Beginning collecting information on the competitors (activity 14)
- Developing projected financial statements (activity 15)
- Devoting full time to the business (>35 h/week) (activity 22)
- Hiring a lawyer of making use of legal services for the startup (activity 25)
- Beginning talking to customers (activity 27)
- Taking classes/workshops on starting a business (activity 29)

When looking at the way in which these were completed, apart from defining the market opportunities **(activity 13)**, there was a complete overlap between the two perspectives. The Shared Space and Resources (A) contributed the most in using any physical space for the startup **(activity 12)** and devoting full time to the business **(activity 22).** The Business Support Services (B) were argued as being responsible for preparing the business plan **(activity 2)**, beginning collecting information on the competitors **(activity 14)**, developing projected financial statements **(activity 15),** hiring a lawyer of making use of legal services for the startup **(activity 25)** and taking classes/workshops on starting a business **(activity 29).** The Access to the Networks was seen as the most important service for developing models, prototypes of the service/product **(activity 4)**, starting promotional and marketing efforts **(activity 5)** and beginning talking to customers **(activity 27)**. Defining the market opportunities for the product/service **(activity 13)** was the only activity were there was a clash between the two perspectives. According to the tenants this was mainly done through the Access to the Networks, while the key individuals argued that the Business Support services are the most important. Lastly, in only 3 cases it seems that the incubator does not serve its purpose, since there was a clash between what the key individuals stated and how these activities were actually completed by the tenants. This concerns determining the regulatory requirements **(activity 7)**, asking financial institutions or other people for funds **(activity 18)** and fully developing the proprietary software **(activity 35)**.

In this study, the 4s model by Groen (2005) was used to capture the added value of an incubator to its tenants during the entrepreneurial process. This model is meant to fit the goals of entrepreneurship and is inspired by the work of Parsons (1964) and his definition of a social system. The specific definition yielded four mechanisms, which were the following: 1. Interaction between actors, 2. Striving for goal attainment, 3. Optimization of processes and 4. Maintaining patterns of culturally structured and shared symbols. Each of these mechanisms produces its own type of processes, within those processes its own type of capital, and for each of those processes specific methods of intervention (Groen, 2005). The four types of capital are the strategic capital, the economic capital, the cultural / human capital and the social capital. These provide a four-dimensional space for analyzing the entrepreneur's development starting with opportunity recognition, consequently developing a business concept and bringing it into a value creation process leading to some level of growth. The central hypothesis is that on each of those four dimensions entrepreneurs, within network embedded enterprises, will need sufficient capital in each of the dimensions to create sustainable enterprises (Groen, 2005). It was concluded that the 11 gestation activities that were highlighted as being completed with the direct or indirect support of the incubator in this study, actually span all four dimensions. This implies that the tenants can develop along all 4 dimensions through the services provided by the incubator, pointing out its importance during the entrepreneurial process.

7.3 Managerial implications

Regarding the managerial implications of this research, these findings can give valuable insights to the incubator management. It is acknowledged that these implications are mainly applicable for the management of Orange Grove, since Orange Grove was the case study. The findings of this study can be used so as to streamline and standardize the service provision process to the tenants. Having a clear overview of the impact of the provided services on their development and the way gestation activities are completed, the services provided can be adjusted so that the highest contribution to the startups can be achieved. Moreover, the activities where the individuals of Orange Grove argued that the incubator can add value while this not being the case, can be taken into consideration by the management.

7.4 Limitations

This study also had its limitations, these are discussed below.

Due to the nature of this study, the results of this study are not generalizable for all incubators. Though, this is not the intention of this research since an in depth understanding of how an incubator contributes to the development of the tenants was the primary goal. Also, prevailing articles on incubators suggested that incubators of similar types are of unequal quality (Aerhoudt, 2004), leading to the fact that it is not possible to draw conclusions about the quality of the provided services of incubators in general and how they influence the development of their tenants.

Studies in firm gestation have given little consideration to contextual influences, such as entrepreneurs and the nature of start-ups (Liao et al., 2005). This also applies to this study. The contextual influences are not taken into consideration, due to the fact that this lies beyond the scope of this research. Regarding the nature of the startups, this is also not taken into account and there is no distinction between different kinds of startups. It is acknowledged that the nature of a startup plays a significant role in its development and the amount of gestation activities that can be completed in one year. Though, in both the analysis per startup and the analysis per activity, the results are based on the relative amounts of activities completed and the relative amounts of startups that completed an activity respectively. (For example, when looking at table 3 in section 5.1, if a startup has completed 1 out of 2 activities with the support of Orange Grove, the same results are yielded as when a startup would have completed 12 out of 24 activities with the support of the incubator.) This way, the problem of not considering the nature of the startups that were selected to take part in this study can be considered negligible.

An entrepreneur's traits serve to influence the skill sets that are developed and the level of entrepreneurial motivation, which in turn affect strategy (Baum, Locke, & Smith, 2001) . In this study, the ‘person’ behind every startup was not taken into account. Despite the fact that this is beyond the scope of this study, it is acknowledged that the entrepreneur as a person can significantly influence the development of each startup and the amount of activities completed during the incubation period. Though, like the previous limitation, the fact that the relative amount of activities completed forms the basis for the results, compensates for this. Also, 16 out of the 20 startups that qualified for this study were selected, excluding the ones that were still members but did not seem to put much effort in their startup.

7.5 Further research

This study was purely based on the gestation activities of the PSED database. This database is the result of a longitudinal study with the biggest sample of nascent entrepreneurs, but it would be interesting for future researchers to add some activities to this database so that it meets future standards. Also, the same

research design but then in incubators that operate in environments that significantly differ from one another, could yield interesting results about the relation between the development of startups and the influence of their direct environment. Making a distinction between the nature of startups (high-tech, low-tech) or the market they operate in could result in potential patterns regarding the amount/type of gestation activities completed in every case or the role of each one of the incubator services.

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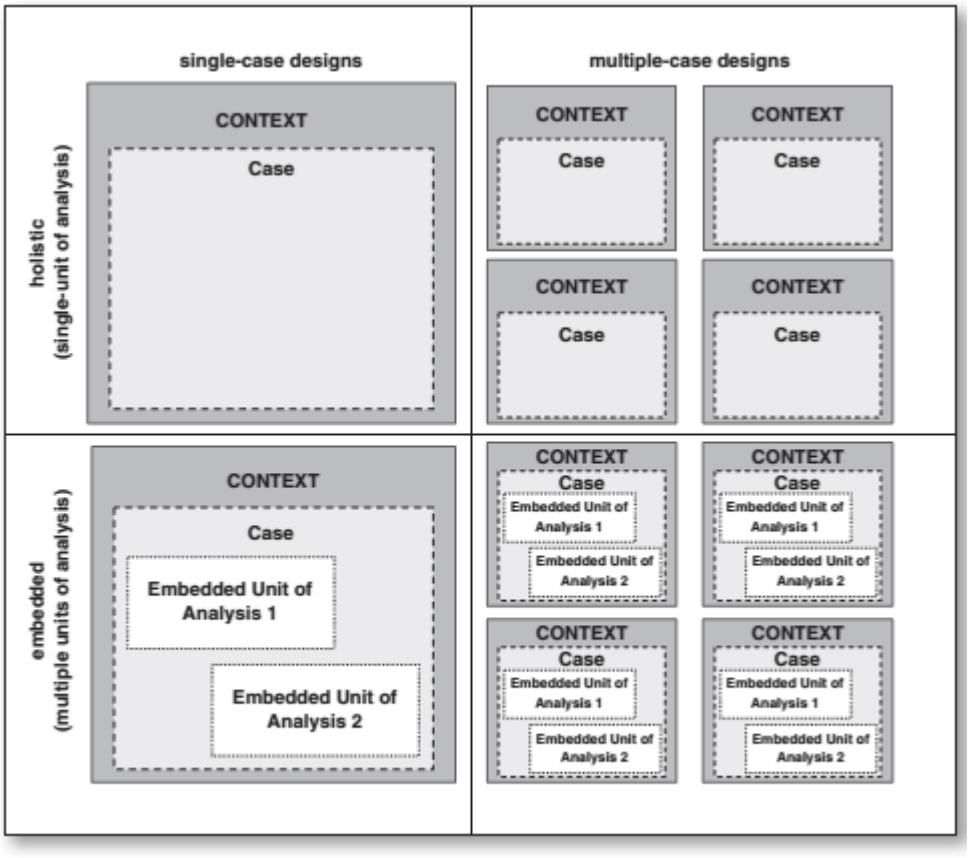
Appendix A



SOURCE: COSMOS Corporation.

Case study design matrix. Taken from Yin (2011)

1. Direct observations (e.g., human actions or a physical environment)
2. Interviews (e.g., open-ended conversations with key participants)
3. Archival records (e.g., student records)
4. Documents (e.g., newspaper articles, letters and e-mails, reports)
5. Participant-observation (e.g., being identified as a researcher but also filling a real-life role in the scene being studied)
6. Physical artifacts (e.g., computer downloads of employees' work)

Case study sources of data. Taken from Yin (2011)

Appendix B

Start-up activity	Indices	PSED I (%)	PSED II (%)	Average (%)
Serious thought given to the start-up		100	99	100
Actually invested own money in the start-up	SUI.4	87	75	81
Began saving money to invest in the start-up		69	—	69
Began development of model, prototype of product, service	SUI.5	79	53	66
Began talking to customers		—	66	66
Began defining market for product, service	SUI.4	86	40	63
Organized start-up team		58	—	58
First use of physical space		—	57	57
Purchased materials, supplied, inventory, components	SUI.2	70	43	57
Initiated business plan	SUI.3	61	48	55
Began to collect information on competitors		—	49	49
Purchased or leased a capital asset	SUI.2	52	41	47
Began to promote the good or service	SUI.2	56	36	46
Receive income from sales of goods or services	SUI.2	40	47	44
Took classes, seminars to prepare for start-up		41	—	41
Determined regulatory requirements		—	39	39
Open a bank account for the start-up	SUI.1	35	29	32
Established phone book or internet listing	SUI.1	17	44	31
Developed financial projections	SUI.3	37	25	31
Arranged for child care, household help		31	—	31
Began to devote full time to the start-up	SUI.1	31	29	30
Established supplier credit	SUI.2	34	19	27
Legal form of business registered		—	26	26
Sought external funding for the start-up	SUI.3	23	13	18
Hired an accountant		—	17	17
Liability insurance obtained for start-up		—	14	14
Established dedicated phone line for the business		14	—	14
Initiated patent, copyright, trademark protection	SUI.5	20	4	12
Hired a lawyer		—	12	12
Hired an employee	SUI.1	14	7	11
Received first outside funding		—	9	9
Joined a trade association		—	7	7
Proprietary technology fully developed		—	5	5
Initial positive monthly cash flow	SUI.2	2	3	3
Acquired federal Employer Identification Number (EIN)		—	18	18
Filed initial federal tax return	SUI.6	17	12	15
Filed for fictitious name (DBA)		—	11	11
Paid initial federal social security payment	SUI.6	13	9	11
Paid initial state unemployment insurance payment	SUI.6	8	4	6
Know that Dun and Bradstreet established listing		3	3	3

Start-up activities by prevalence: PSED I and PSED II. Taken from Reynolds & Curtin (2008)

Appendix C

Interview template for entrepreneurs

Interviewee name:

Company name:

Date:

Entrepreneurial activities

1. Have you spent time on thinking about your business idea?
    a. If yes, was this before you joined Orange Grove or did it take place while you were participating in the program of the incubator? (If it was completed in the past year and not before joining Orange Grove, the next question is asked)
    b. If the program of Orange Grove has contributed to this activity in any way, directly or indirectly, how did that happen?

(Questions i and ii are asked after every question)

2. Has a business plan been prepared for?
3. Has a startup team been organized?
4. Have you developed models, prototypes of the service/product?
5. Have marketing and promotional efforts been started?
6. Have you applied for a patent/copyright/trademark?
7. Have you determined regulatory requirements?
8. Has the legal form of the business been registered?
9. Has the liability insurance been obtained for the startup?
10. Have you purchased any raw materials, inventory or supplies?
11. Have you purchased/leased/rented any equipment/facilities/property?

    a1**. If yes**, was this before you joined Orange Grove or did it take place while you were participating in the program of the incubator? (If it was completed in the past year and not before joining Orange Grove, the next question are asked)

    a2. If the program of Orange Grove has contributed to this activity in any way, directly or indirectly, how did that happen?

    b1. **If no**, have the shared services of Orange Grove contributed to this by already providing this?

12. Have you used any physical space for your startup until now?
13. Have you defined your market opportunities? (Defined the market for your product, service)
14. Have you began collecting information on your competitors?
15. Have you developed projected financial statements?
16. Have you saved money to invest in the business?
17. Have you invested your own money in the business?

18. Have you asked financial institutions or other people for funds?
19. Have you received any outside funding? (Funding that comes from outside of the startup)
20. Have you established credit with a supplier?
21. Have you arranged child care or household help to allow more time on business?
22. Have you devoted full time to the business? (>35 h/week)
23. Have you hired any employees/managers?
24. Have you hired an accountant? Or used accounting services for the startup?
25. Have you hired a lawyer? Or used legal services for the startup?
26. Have you opened a bank account exclusively for this business?
27. Have you began talking to customers?
28. Have you received money for the sales of goods/services?
29. Have you taken classes/workshops on starting a business?
30. Listed new business in the phone book or the Internet (domain name)?
31. Installed a separate phone line for business?

    a1**. If yes**, was this before you joined Orange Grove or did it take place while you were participating in the program of the incubator? (If it was completed in the past year and not before joining Orange Grove, the next question are asked)

    a2. If the program of Orange Grove has contributed to this activity in any way, directly or indirectly, how did that happen?

    b1. **If no**, have the shared services of Orange Grove contributed to this by already providing this?

32. Have you filled a tax return?
33. Have you filed for fictitious name?
34. Have you joined a trade association?
35. Is your proprietary software fully developed?

Interview template for OG key individuals.

Interviewer name:

Interviewee name:

Date:

Location:

General

Tell me something about yourself, your role within Orange Grove.

Entrepreneurial activities

Based on your experience with Orange Grove and its startups, and the way you have helped them until now, do you think that Orange Grove can help its tenants, directly or indirectly, to :

1. Spend time on thinking about the business idea?
   If **yes**, how do you believe that this can take place?
   (Question a be asked after every question, if the answer is yes)
2. Prepare the business plan?
3. Organize the startup team?
4. Develop models, prototypes of the service/product?
5. Start marketing and promotional efforts?
6. Apply for a patent/copyright/trademark?
7. Determine regulatory requirements?
8. Register the legal form of the business?
9. Obtain the liability insurance for the startup?
10. Purchase any raw materials, inventory or supplies?
11. Purchase/lease/rent any equipment/facilities/property?
    If yes, how do you believe that this can take place?
    If no, have the shared services of Orange Grove contributed to this by already providing this?
12. Use any physical space for the startup?
13. Define the market opportunities? (Define the market for the product, service)
14. Begin collecting information on the competitors?
15. Develop projected financial statements?
16. Save money to invest in the business?
17. Invest money in the business?
18. Ask financial institutions or other people for funds?
19. Receive any outside funding?
20. Establish credit with a supplier?
21. Arrange child care or household help to allow more time on business?
22. Devote full time to the business? (>35 h/week)
23. Hire any employees/managers?
24. Hire an accountant? Or use accounting services for the startup?

25. Hire a lawyer? Or use legal services for the startup?
26. Open a bank account exclusively for this business?
27. Begin talking to customers?
28. Receive money for the sales of goods/services?
29. Take classes/workshops on starting a business?
30. List the new business in the phone book or the Internet (domain name)?
31. Install a separate phone line for business?
    If yes, how do you believe that this can take place?
    If no, have the shared services of Orange Grove contributed to this by already providing this?
32. Fill in a tax declaration?
33. File for a fictitious name?
34. Join a trade association?
35. Fully develop the proprietary software?

Appendix D

October

2: How to increase your chances of getting funded / Floris van Alkemade (Solid Ventures)
7: Socratis Ploussas / MOU presentation for startups and mentors
9: Can entrepreneurship be taught / Mw. Rosendahl-Hubner (Amsterdam Center for Entrepreneurship) NIA Series
18: Goodbye party Filisia
20: John Sitilides, Marcel Crèmer, Mr. Manish Gupta and Ms Evgenia Diatsigou, Athina Pitta, Androniki Pavlidou, Nikos Kavounis, Fotis Merakos, CoolRadar, Melei, LIA, Geomiso
21: Minister Dendias: Kalimera, The City Game, Adel Sanoussi, FGO, Fansinator, Aerable, Gigalize, Geomiso, ActClick, Agri Tech, FEAC, Wreeple, Melei. Dimitris Drakoulis, Dimitris Tsigos, Yiannis Mavragannis (AfterSearch),
23: "Managing Organizational Energy to boost value in entrepreneurial projects"
Joan Cos Pinea 3
30: Product Engineering: what comes in between the idea and profit? / Mike Lee
31: Pitch Club session Mike Lee

November

<u>Startup spotlight</u>
Oinovation wine tasting event with Dutch sommeliers
Gigalize's Open Coffee presentation
"OpenWalkAthens" with Atenistas and Clio Muse
"Libraries, Innovation and Entrepreneurship" with Marian Koren and Clio Muse, TheCityGame and CulturPlay
Greka interview with startups Join Cargo, Gigalize and Cool Radar
Ones on ones with Mike Lee, Marco ten Vaanholt
Tasting & Networking (Startup Safary) with LIA olive oil, Oinovation wine and Orange Grove sponsors

<u>Events</u>
Mike Lee: "Product Engineering: what comes in between the idea and profit?"
Sakis Ladopoulos: "Choosing your start-up BOA and BOD. How you go about it?"
Marco ten Vaanholt "Introduction to Silicon Valley"
De Correspondent "From News to New"
Meet & Greet with new startups
Brian Karey (Simply Burgers), Dimitris Melachroinos (Spitogatos), Apostolos Apostolakis "From Startup to Success"
Peter Economides "Branding for startups" (Startup Safary)
Dr. John Kalogerakis "Startup & Pump Up your Career" (Startup Safary)
100 mentors meetup (Startup Safary)
Demo Day Metavallon
IDGC Startup Scale Up event with Dutch speaker Wouter Chompf
IDGC press meeting about Startup Scale Up event Up with Orange Grove

December

<u>Startup spotlight</u>
Presentation LIA at the Hellenic American University
Hashtag show with Eleonora Meleti Clio Muse, TheCityGame, Timimas, Oinovation

Events
Ben Schouten “Getting serious about Games”
Agro Food Bootcamp with Startlife
Pre-selection for The Squeeze (8 out of 10 startups)
Athens – Amsterdam municipality event
Open Day Netherlands Embassy & first The Squeeze event
Living Postcards 2 years’ celebrations with Vicky Xantzi, Mporoume, Ploos Design, Apivita, LIA olive oil e-volution award given from Jan Versteeg

January
Startup spotlight
BNR radio interview with Clio Muse, JoinCargo
French TV TF1 interview with Big Olive, TheCityGame, Girapp, Clio Muse
LIA olive oil tasting event
One on ones sessions with Nico Mulder (IAMsterdam)

Events
Brainstorm session with KLM, Heineken, IAMsterdam, Athens Airport
Fania Pallikarakis, and panel discussion with eg. Dimitris Bourantas "Coaching, Consulting, Mentoring: What's the difference?"
Rockstart Answers event
Orange Grove Pitta Cutting
Daan Sistermans “Innovation in Organisations”
Deadline new application round

February
Startup Spotlight
Athens Fashion Club “Entrepreneuship in Fashion”
Dutch newspaper AD interview with startups and mentors
Dutch newspaper Telegraaf interview with startups
Clio Muse launch event at the Museum of Greek Gastronomy
PJ Catalyst ones on one meetings with startups

Events
Growth Rocks “Growth Hacking”
Dimitris Axiotis “Content Marketing meetup” with Panos Ladas
Selection committee meetings
Visit from students from Oman
Dutch University Fair 2-day event with 9 universities
Netherlands Embassy “Architectural Design”
Miltiadis Gkouzouris “Cost Calculation”
In-Edit festival and launch party in Orange Grove
Visit from students from Haarlem
Oren Simanian “The Israeli startup ecosystem”
ASTIET “Network event for business entrepreneurship” for unemployment engineers

March

Startup Spotlight

French Arte TV with startups
Brainstorm session with Glossopolis
Job Fair Ekpaidefski kai Ergasia event with Clio Muse, Gigalize and Timimas

Events

Bootcamp with ACE and YES!Delft and AUEB
Metavallon Impact Day
Sakis Ladopoulos “Silicon Valley experience and more”
Adel Sanoussi “Creative meetup”
Hub Dot Athens launch party
Pre-selection Squeeze
Christian van der Haagen “Go 2 market” strategy

Appendix E

	Startup name																							
Entrepreneurial activity No.	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Total X	Total A	Total B	Total C	Total D	Sum A,B,C	Sum A,B,C,D	Sum X,A,B,C,D
1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	16	0	0	0	0	0	0	16
2	B	B	B	B		B	X	B	C	B	B	B	B	X	D	B	2	0	11	1	1	12	13	15
3	D	X	X	C	B	D	X	X	D	X	D	C	X	X	X	C	8	0	1	3	4	4	8	16
4	D	C	X	A	D	D	C	B	X	X	D	C	A		A	C	3	3	1	4	4	8	12	15
5		C	C	A		C	C	C	C	B	B	B			C	C	0	1	3	8	0	12	12	12
6		B	X		B	B			B								1	0	4	0	0	4	4	5
7		B	X		B		B	D	B	D		D					1	0	4	0	3	4	7	8
8	X	B	X		B		X	B	D	D		B	X		B		4	0	5	0	2	5	7	11
9		B			D				D								0	0	1	0	2	1	3	3
10	C		X	D	D			D	D		D		X			D	2	0	0	1	6	1	7	9
11		A	X	A	X	D	A	D		X	A	D	X		A	A	4	6	0	0	3	6	9	13
12	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	0	16	0	0	0	16	16	16
13	C	X	C	C	B	B	C	C	B	B	D	C	B	X	X	C	3	0	5	7	1	12	13	16
14	X	X	B	C	X	B	X	B	X	X	B	B	D	C	X	B	7	0	6	2	1	8	9	16
15		B	B	B	D	B	X	B	B	X		C	B	X	C	C	3	0	7	3	1	10	11	14
16	X	B	X	C	X	X	X	X	X	X		X	A			X	10	1	1	1	0	3	3	13
17	X	B	D	A	D	D	D	X	X	X		B	D		X	D	5	1	2	0	6	3	9	14
18				A		D	B		D	X	C	D	D		C		1	1	1	2	4	4	8	9
19		D				D	B					C					0	0	1	1	2	2	4	4
20					D							C					0	0	0	1	1	1	2	2
21									D								0	0	0	0	1	0	1	1
22	A	X		A	A	D	X	B		X	C	C	A		A	A	3	6	1	2	1	9	10	13
23		B					A	X	B			C	D				1	1	2	1	1	4	5	6
24	X	D	X		X	B	X	B	X	X		B	X	D		X	8	0	3	0	2	3	5	13
25	D	D	D	B	B	B	X	B	B		B	B	X		B	B	2	0	9	0	3	9	12	14
26						B	X	D	X	X		B					3	0	2	0	1	2	3	6
27	C	C	X	C	D	C	X	C	C	C	D	C	X		A	C	3	1	0	9	2	10	12	15
28			X					C	C	D			X				2	0	0	2	1	2	3	5
29	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	0	0	16	0	0	16	16	16
30	X	D	X	X	C	D	X	X	D	X	D	D	X	X	X	D	9	0	0	1	6	1	7	16
31				A	D	D				D		A					0	2	0	0	3	2	5	5
32			X		D		X						X				3	0	0	0	1	0	1	4
33		B	X		B	D		X	X	C		B	X				4	0	3	1	1	4	5	9
34					D		X	D									1	0	0	0	2	0	2	3
35	D	C				B	A	D	C			C			D		0	1	1	3	3	5	8	8

Overview of the analysis per activity (entrepreneurs)

	OG Key individual name										
Entrepreneurial activity No.	Anna-Maria Poullis	Jan Versteeg	Natasha Apostolidi	Miltiadis Gkouzouris	Dimitris Katsouris	Total A	Total B	Total C	%A	%B	%C
1	ABC	ABC	AC	B	AB	4	4	3	4/5	4/5	3/5
2	BC	BC	BC	B	B	0	5	3	0	5/5	3/5
3	AC	C	C	C	C	1	0	5	1/5	0	5/5
4	BC	C	C	BC	BC	0	3	5	0	3/5	5/5
5	BC	BC	BC	C	BC	0	4	5	0	4/5	5/5
6	BC	C	BC	B	BC	0	4	4	0	4/5	4/5
7	BC	B	BC	B	BC	0	5	3	0	5/5	3/5
8	BC	B	B	B	B	0	5	1	0	5/5	1/5
9	C	B		B		0	2	1	0	2/5	1/5
10	ABC				C	1	1	2	1/5	1/5	2/5
11	AC	A	A	C	A	4	0	2	4/5	0	2/5
12	A	A	A	A	A	5	0	0	5/5	0	0
13	BC	B	BC	B	B	0	5	2	0	5/5	2/5
14	BC	BC	BC	B	B	0	5	3	0	5/5	3/5
15	BC	B	B	B	B	0	5	1	0	5/5	1/5
16	ABC	BC	B	A		2	3	2	2/5	3/5	2/5
17	B		C	B	B	0	3	1	0	3/5	1/5
18	AC	C	C	C	BC	1	1	5	1/5	1/5	5/5
19	AC	C			BC	1	1	3	1/5	1/5	3/5
20	C		C			0	0	2	0	0	2/5
21						0	0	0	0	0	0
22	A	A	A	A	A	5	0	0	5/5	0	0
23	C	C	C	C	C	0	0	5	0	0	5/5
24	BC	B	BC	B	B	0	5	2	0	5/5	2/5
25	BC	B	B	B	B	0	5	1	0	5/5	1/5
26	BC				B	0	2	0	0	2/5	0
27	C	C	C	C	C	0	0	5	0	0	5/5
28						0	0	0	0	0	0
29	B	B	B	B	B	0	5	0	0	5/5	0
30	C		C			0	0	2	0	0	2/5
31				A		1	0	0	1/5	0	0
32	B	B	B		B	0	4	0	0	4/5	0
33	BC	B	B	B	B	0	5	0	0	5/5	0
34				B		0	1	0	0	1/5	0
35	ABC	C		C	BC	1	2	4	1/5	2/5	4/5

Overview of the analysis per activity (key individuals)