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The Vigo Programme Mid-Term Evaluation

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1 Executive Summary

The Vigo Accelerator Programme was launched in 2009 to address perceived gaps in the Finnish National System of Entrepreneurship – notably, those existing in the high-growth venturing ecosystem: (1) insufficient number of new ventures with potential for high growth; (2) equity funding gap in the region from approximately 20k€ to 200k€; and (3) insufficient experience and competence base in high-growth venturing.

This mid-term evaluation addressed four questions: (1) whether the Vigo Programme had achieved its early-stage goals; (2) whether the Vigo concept addresses a real gap in the Finnish high-growth venturing ecosystem; (3) whether the Vigo Programme is likely to lead to the creation of a self-sustaining field of new venture accelerators in Finland; (4) what role the Vigo Programme might play in the Finnish high-growth venturing ecosystem in the medium to long term.

1.1 Achievement of Early-Stage Goals

We find that the Vigo Programme has been successful in achieving its early-stage goals:

1. **Attracting significant equity investment in Finnish high-potential start-ups**. The overall objective of the Vigo Programme was to attract at least 200 M€ in the form of equity investment to Finnish high-growth ventures over the originally anticipated 6-year life of the programme. By June 2012, some 60 M€ private money had already been invested, and the ratio between public and private sector funding is approximately 1:1. The programme thus seems on course to achieving this target.
2. **Attracting experienced accelerator teams into the emerging field of new venture accelerators in Finland**. Our evidence shows that experienced accelerator teams have been attracted to the sector, and at least some of these would not have entered the field without the Vigo Programme.
3. **Facilitating the creation of investment-ready, high-potential new ventures in Finland**. The evidence thus far indicates a healthy deal flow and significant investment activity.
4. **Revitalising and internationalising the Finnish venture capital sector**. To date, two new venture funds have been created by Vigo accelerators, with significant investment by foreign investors. Of the 60 M€ invested in Vigo portfolio firms thus far, 30 M€ originated from abroad. There is also evidence of active networking with non-Finnish venture funds.
5. **Creating the most effective European accelerator programme and a model for others to emulate**. As a field creation attempt, the Vigo Programme has been successful in its early stages, and the Vigo concept appears to carry many distinctive aspects. Several alternative development paths remain open for Vigo's subsequent development, however. These are discussed in the concept evaluation section of this report.

The Vigo Programme also has the goal of speeding up the growth and internationalisation of early-stage ventures in Finland. The prospect appears positive. However, it is too early to assess whether the programme has managed to produce value-added beyond the multiple selection effects. Whilst we believe that the Vigo Programme has a good prospect of achieving this goal, this is nevertheless something that should be monitored in subsequent evaluations.

It should be noted that at this stage it is too early to say whether the above effects are likely to be temporary or permanent. The crucial aspect in this regard will be whether the programme succeeds in creating a self-sustaining, vibrant field of new venture accelerators in Finland. This outcome requires productive adjustments at many levels and with many stakeholders. We will address these challenges in Chapter 6.

1.2 Gaps in the Finnish High-Growth Venturing Ecosystem

We find that the gaps in the Finnish high-growth venturing ecosystem appear real and an intervention like Vigo therefore justified. Specifically, there appears to exist a real gap in the Finnish National System of Entrepreneurship in terms of growth aspirations and realised growth by new ventures. The causal mechanisms underlying this gap remain unclear, however. For example, we do not know whether the gap exists because few high-potential individuals self-select into entrepreneurship; whether the gap is due to the dearth of high-growth venturing experience in the Finnish system; or whether the gap is due to insufficient availability of hands-on venture funding. It is probable that at least some of the underlying causes are mutually reinforcing, making it possible that, if appropriately configured, the Vigo Programme could prove helpful in feeding positive feedback mechanisms in the Finnish high-growth venturing ecosystem. Such dynamics are discussed in Chapter 6 .

Our qualitative evidence also supports the notion of a funding gap existing roughly in the area of equity investment ranging from 20k€ - 200k€ (although it does not prove it). Although it is difficult to prove the existence of a funding gap, there was agreement that this is a challenging area particularly for high-potential and high-risk early-stage new ventures, who require active, hands-on intervention to realise their growth potential.

1.3 Accelerator Field Creation and High-Growth Venturing Ecosystem Dynamic

From an institutional perspective, the Vigo Programme represents an attempt to introduce an embed a new organisational field into the Finnish high-growth venturing ecosystem: that of new venture accelerators. As a field creation exercise, the field is likely to follow a certain path and face distinctive challenges in different phases. These are discussed in more detail in Chapter 6.6 (page 53). At present, the field remains in emergence stage. This stage is characterised by intense sense-making, experimentation with different accelerator models and active discourse (and occasional controversy) among different stakeholders. The key challenges in this stage are to establish a shared identity for the new field, discover efficient models and practices, and establish a shared understanding with key stakeholders with regard to what the field is all about, how it contributes, and why it is needed – i.e., achieve cognitive legitimacy. From the coordination perspective, this means that different models should be tolerated; there should be sufficient flexibility to allow improvisation; the programme should actively monitor emergent practices and identify, codify and disseminate good ones; the field should record and advertise evidence of early successes; and the field should also address potential sources of controversy that, if left unattended, might undermine the field's legitimacy in the eyes of key stakeholders.

We find that the Vigo accelerator concept is novel and distinct from several other existing accelerator concepts, which typically address an earlier stage of venture development. The focus of the Vigo concept is much closer to commercialisation. While exciting, this also

creates challenges in terms of balancing between public goods and private profit-seeking. As the new venture accelerator field is still emerging, different accelerator models proliferate. Different practices are being tested, some with better success, some with less success. The field is still undergoing an intense sense-making phase, with different stakeholders trying to make sense of the new concept, adjust to it and discover the best practices when working with Vigo accelerators. We see obtaining cognitive legitimacy as a key prerequisite for achieving a stable, self-sustaining dynamic so that the accelerator field becomes self-sufficient. Importantly, this requires the different stakeholders adjust their operations, processes and practices to accommodate the new field – i.e., that the field achieves socio-political legitimacy. Achieving cognitive and socio-political legitimacy presents several challenges:

> First, the Vigo Programme should continue to tolerate and entertain (as it has done) different accelerator models and facilitate experience exchange between these.
> Second, the Vigo Programme should maintain a constant dialogue with different stakeholders to facilitate collective sense-making and thereby establish a shared understanding of what the new field is about. It needs to actively communicate this understanding to key stakeholders and to the general public.
> Third, while tolerating diversity, the Vigo Programme should also be vigilant in monitoring, and, if necessary, rooting out emergent practices that might threaten to undermine the viability or the legitimacy of the new field if left unattended.
> Fourth, the Vigo Programme should eventually (in this case, relatively soon) to start converging towards a number of accelerator models that should become the blueprint for subsequent accelerators.
> Fifth, the Vigo Programme should pay particular attention to the delicate balance between public good and private profit-seeking, mindful that it operates closer to the market than many of the existing new venture accelerator initiatives do.

As is typical for an emerging field, also controversies occasionally arise. These need to be dealt with if the field is to achieve cognitive and socio-political legitimacy. At the moment, the chief controversies appear to relate, first, to the use of management fees in incentivising entry by experienced accelerator teams; and, second, to decision-making with regard to allocating public support toward Vigo portfolio firms. A third, smaller controversy relates to the relationships between accelerators and their portfolio firms. This third controversy is smaller than the other two (which themselves are not huge). Nevertheless, we recommend that Vigo pay attention to all three.

As regards the first, it appears necessary to be clear and transparent about the rules that govern the extent to which management fees can be charged from Vigo portfolio firms. While justified as an incentive mechanism, the use of management fees should be regulated so as to prevent potential agency problems that might arise from the use of public funding to incentivise private profit seeking. Achieving the right balance becomes trickier, the closer one operates to the market. The Vigo Programme already has clarified the rules that regulate the use of management fees at different levels of accelerator ownership in their portfolio firms. We find the rules useful, but also, we believe that there may be further scope for restricting the time period during which management fees can be charged. Potential agency problems might arise from the tension between encouraging fast failure and preventing the 'living dead' problem – i.e., a situation in which unviable portfolio firms

are sustained longer than optimal because of the possibility to continue charging management fees from the portfolio firms. Striking the right balance is challenging, but we nevertheless recommend that the Vigo Programme consider introducing a time limit after which management fees can no longer be paid from public support such as the NIY funds.

The second potential controversy concerns decision-making: who should have the final say about the allocation of public support towards Vigo portfolio ventures. At present, this decision power remains with public-sector agencies, such as Finnvera and Tekes. Some accelerators are of the opinion that they should have more say on these decisions, on the grounds that they are investing their own funds into their portfolio ventures, and therefore, this risk-taking should constitute a sufficient condition for the allocation of public funds such as NIY funding and Finnvera investments towards those firms. In support of their position, they cite existing examples (notably, from Israel), where accelerators have more say about the allocation of public funding towards accelerator portfolio firms. Public-sector agencies, on the other hand, are of the opinion that while they are committed to prioritising funding applications from Vigo portfolio firms, they should nevertheless have the final say as to whether the support is approved or not.

This evaluation finds that the current balance is about right. Although public-sector agencies are committed to prioritising Vigo funding applications, the final decisions should be made by the agencies themselves following established criteria. We feel that this is the correct balance, for three reasons:

> First, Vigo operates closer to the market than the majority of existing accelerator schemes. There is wide agreement that a market failure exists in R&D – and therefore, public subsidy in this area is justified. This principle is also applicable to pre-seed situations, and therefore, there is scope of devolving decision-making towards individual accelerators. However, when one operates closer to the market, potential agency issues may arise. As accelerators have invested their own funds into their portfolio firms, their decisions could become driven more by the motivation to prevent losses, as opposed to maximising growth potential. In close-to-market accelerators, it seems clearer to keep public funding decisions separate from private equity investment decisions.
>
> Second, Finnish public-sector agencies are probably better equipped to exercise judgment than public-sector agencies in some other countries. Agencies such as Tekes and Finnvera are highly regarded internationally, and they have also developed competency to understand high-growth ventures. Therefore, while the capacity for judgment by public-sector agencies can be rightfully questioned in some other countries, the Finnish agencies should be better equipped to make the correct judgment.
>
> Third, Finnish agencies are increasingly evolving towards and equity-funding model. It seems sensible to wait until this transition has advanced sufficiently before deciding the extent to which decisions concerning public subsidy can be devolved towards private-sector operators.

The third potential controversy concerns relationships between Vigo accelerators and their portfolio firms. Generally speaking, this interface works well, and the Vigo accelerators add value to their portfolio firms. However, the accelerator teams tend to be more experienced

than prospective portfolio firms, and they therefore are better positioned to negotiate favourable terms for themselves. Their negotiation position may be further enhanced, if the accelerator is perceived by the prospective portfolio firm as acting as a gatekeeper towards public funding. Although not widespread, there have been occasions where, for example, a given accelerator has managed to negotiate an anti-dilution clause to their shareholder agreement, meaning that during subsequent investment rounds, the accelerator's share will not dilute, unlike those of other shareholders. Such clauses are likely to act as a strong deterrent for subsequent investment rounds. As another potential problem, inexperienced entrepreneurial teams may cede too much ownership too cheaply to the accelerator, again potentially undermining subsequent investment by external venture capitalists. A third potential problem concerns setting the level of management fees and what the portfolio firm should expect in return of the fee. Finally, there appear to have been a few isolated occasions where a given accelerator has let the portfolio firm understand – incorrectly – that they control access to, e.g., NIY funding. While none of these issues is widespread, and none are currently threatening the field viability, such problems do occasionally arise. Although the Vigo Programme cannot reasonably be expected to start policing contracts between individual accelerators and their portfolio firms, there nevertheless might be scope for enhancing and extending information packages for prospective portfolio firms so that they become aware of these issues.

Some of the above issues could also be reflected in Vigo's performance monitoring system. We recognise that the administrative burden of Vigo accelerators should be kept at a minimum, and that the Vigo programme already collects much relevant information from the Vigo accelerators. However, to maintain transparency and enhance legitimacy, we feel that it would be useful to collect more data on ownership shares and amounts of money invested into the portfolio firms through accelerator firms' balance sheets, through venture funds, and from accelerator team members' personal funds (see also discussion in Chapter 9.3).

1.4 Long-Term Prospects for the Vigo Programme

We also speculated what the long-term prospects of the Vigo Programme might look like in terms of concept evolution and Vigo's steady-state role in the constantly evolving Finnish high-growth venturing ecosystem. Originally, the Vigo Programme intervention was anticipated to last six years. This evaluation supports continuing the Vigo Programme until the end of the six-year period. After this, we see two alternatives, the viability of which will depend on how the Finnish high-growth venturing ecosystem evolves as a whole:

> **Vigo is discontinued after six years**. This becomes a likely scenario if the accelerator concept becomes established and the accelerator field self-sustaining. In this scenario, collaborative procedures with key stakeholders (e.g., Tekes, Finnvera, universities) become so well established that a dedicated programme no longer adds significant additional value.
>
> **Vigo becomes a steady-state programme, perhaps in reduced form**. This scenario is possible if the accelerator field does not become self-sustaining without continued intervention and if the gaps in the Finnish high-growth venturing ecosystem persist. One possible scenario for a Vigo-like programme could be to become a feeder

mechanism towards some kind of fund-of-funds structure that attracts new accelerator teams to the field and provides an opportunity for these to establish sufficient track record and credentials to raise and operate new early-stage equity funds.

1.5 Recommendations

In conclusion, we make the following major recommendations. These are elaborated later in the report:

Recommendation 1	***The Vigo Programme should be continued until the end of its six-year lifespan.***

Recommendation 2	***The Vigo Programme should retain sufficient flexibility to support different accelerator models.***

Recommendation 3	***The Vigo Programme should consider some adjustments in the use of management fees, as elaborated later in this report.***

Recommendation 4	***The decisions regarding the allocation of public funds and support should continue to be kept separate from decisions regarding the allocation of private equity investment.***

Recommendation 5	***The Vigo Programme should extend and update its information package for prospective portfolio firms with further information on shareholder agreements.***

2 Vigo Mid-Term Evaluation

2.1 Background

The "Finnish paradox" states that, in spite of extensive support infrastructure and high R&D expenditure, Finland suffers from the lack of high-growth innovative firms (Autio, 2009). This paradox has raised the question whether the Finnish SME support ecosystem might be lacking important elements – i.e., those that push new innovative firms to seek growth. While there are numerous initiatives to support the *creation* of new innovative firms, there are only a few initiatives designed to push innovative firms to grow, such as the NIY Programme of Tekes.

There has been some speculation why the number of high-growth start-ups in Finland is small relative to its investment in R&D. For example, it has been observed that, after a good start in the 1990-2000s, early-stage venture capital has faded in recent years. It has also been speculated that because truly high-growth cases remain rare in Finland, Finland might simply lack the kind of experience and contact networks necessary to effect rapid venture growth. After all, many of the skills and contacts required to effect growth can only be acquired through experience. Thus, it may be that the growth bottleneck in Finland may reflect deeper systemic deficiencies.

The VIGO Accelerator Programme has been designed to address multiple bottlenecks that are believed to exist in the Finnish high-growth venturing dynamic. Vigo seeks to connect innovative business ideas that have international potential with internationally experienced business professional and private and public growth finance (TEM, 2012). Specifically, it has been designed to provide contributions to the Finnish entrepreneurship ecosystem:

> Accelerate growth and internationalization of new firms
> Help high-potential new firms attract equity funding, both from Finland and abroad
> Strengthen high-growth capability (both managerial and governance) in Finland
> Strengthen the links between the Finnish high-growth venturing community and its foreign equivalents
> Create a network of business accelerators in Finland to address growth bottlenecks in the post-incubator phase

The Vigo Programme was launched in March 2009 by the decision of the Ministry of Employment and Economy (TEM, 2012). In the planning phase, two issues in particular were highlighted that had been earlier recommended for example in the evaluation report of the national Technology Incubator Programme in 2008 (Luukkonen, 2010). First, the continuation of the agreement between the start-up and the incubator should be based on the achievement of jointly agreed milestones; and second, the funding of start-ups should be connected with the incubator either through seed funds or through closer co-operation with national or cross-border venture capitalists (Luukkonen, 2010).

Summarising, the Vigo concept seeks to address the deficiency of high-growth new ventures in the Finnish National System of Entrepreneurship. It seeks to do so by facilitating the creation of new business accelerators that raise and invest their own funds (and that of other private-sector operators) to take equity stakes in new ventures. To support this development, public-sector funds are provided for Programme coordination. Also, public

sector agencies (notably, Tekes and Finnvera) commit themselves to respecting the Vigo brand and providing preferred treatment of funding applications from Vigo firms (provided these are within regulation and meet the usual criteria, as applied in the support instruments concerned). By facilitating the creation of a well-functioning network of business accelerators, the Vigo Programme seeks to enhance the provision of 'smart' and 'hands-on' funding for potential high-growth ventures in Finland, and to introduce mechanisms that push high-potential ventures to proactively and aggressively seek growth.

Central to the configuration of the Vigo Programme (and also NIY Programme) was the "VICTA –Vitual ICT Acclerator" report that was a joint project of the venture capital industry and public sector (Ruohonen, 2007). Among other things, "the Incubator 2.0 Programme" was outlined in the paper, and it seems that it is – almost as such – implemented in the Vigo initiative. From the outset, the Vigo Programme has been designed as a temporary initiative, in accordance with the principle that public sector direct interventions in the VC industry should not be permanent (see Lerner, 2009). Accordingly, the Vigo Programme has been originally envisioned to last six years, subject to subsequent revisions. As the Vigo Programme has now been operating two years, it is therefore appropriate to perform a mid-term evaluation of the Programme. This is the purpose of this report.

2.2 Objectives of the Evaluation

This mid-term evaluation of the Vigo Programme was commissioned by the Ministry of Employment and Economy. The evaluation was commissioned as a concept evaluation and not strictly as an evaluation of the Programme implementation. Consequently, the main focus of the evaluation was on:

- The effectiveness and success of the Vigo concept in facilitating the creation of a new business accelerator industry in Finland
- The Vigo concept's fit for purpose in addressing the structural deficiency of high-growth entrepreneurial ventures in the Finnish National System of Entrepreneurship
- Assessment of how the Vigo concept should modified (if any) in the future

Consistent with the above, this evaluation has also reviewed the implementation of the Programme, its ability to achieve initial targets and the prospects for future performance.

To achieve the above, several methodologies and evaluation approaches have been used:

- Concept evaluation

The concept evaluation has been conducted as a qualitative hypothesis-testing evaluation. As the available data and track record does not permit rigorous quantitative analysis (e.g., differences-in-differences analysis with appropriate selection and endogeneity controls and control groups), our approach has been to model the externalities and system-level effects that need to be in place for a sustainable new business accelerator industry in Finland. From this initial model, a number of hypotheses were derived. The operationalized forms of these, then, provided the main focus for the qualitative interviews with the various stakeholders of the Vigo Programme. In total, 38 qualitative interviews were conducted, using semi-structured interview templates that had been customised to fit with the different

stakeholder groups. On average, the interviews lasted approximately one hour. Typically, one to two persons participated in each interview.

All interviews were recorded and transcribed for subsequent content analysis. Interview summaries were written for qualitative evaluation purposes. During the interviews, we used an iterative approach, during which hypotheses were examined against accumulating data. Emerging insights from the interviews were used to refine and elaborate the hypotheses, and such insights were then tested in subsequent interviews. As a result of this iterative process, our initial theoretical model was refined and gradually rendered more tangible. Emergent insights were also discussed and debated in advisory panel meetings, which panel included various industry stakeholders.

Where available, interview insights and evidence were complemented with, e.g., financial data, archival data, and web data.

From theoretical perspective, we have evaluated the Vigo concept as a field creation process – i.e., as an attempt to launch and organise a new organisational field (DiMaggio & Powell, 1983; Wooten & Hoffman, 2008). This is an institutional process that involves adjustment by numerous stakeholders. To make sense of accelerator models, we have also drawn on research on venture capital value added and more recent research on business accelerators (Katila, Rosenberger, & Eisenhardt, 2008; Sapienza, 1992). Our assessment of new venture development and growth potential has been informed by the broad literature on new venture creation and growth.

Performance evaluation

As part of the concept evaluation, we also reviewed the Vigo Programme performance during its first two years. This evaluation was mainly based on archival records that tracked, e.g., numbers of calls; numbers of applications; records of successful applications; numbers and growth of Vigo ventures; financial flows; numbers of deals; and other performance data. These data were distilled and compared against initial goals. For a closer examination of Vigo's effects on firm-level performance, we also conducted a survey among all 60 Vigo accelerator firms. The findings from this survey are reported in chapter seven.

Complementary analyses

The above analyses were complemented with a conceptual description and analysis of Vigo accelerator models. This work was carried out as a student project. The projects explored the concepts of all currently active Vigo accelerators and sought to identify and describe different accelerator models using a shared set of configuration parameters. The project also sought to identify accelerator success factors and links between accelerator model and venture performance. These findings are summarised in chapter eight.

In addition to the above, we also reviewed received literature and research on new business accelerators and their success factors. This literature informed our analysis and interpretation of Vigo accelerator models and accelerator success factors (e.g., Dee, Livesey, Gill, & Minshall, 2011; Miller & Bound, 2011).

Next we provide a brief description of the history of the Vigo Programme, its design, launch and initial model in chapter three. Then we describe the current administrative model of Vigo in chapter four. This is followed by chapter five with our initial conceptual model of how the Vigo concept operates within the Finnish National System of Entrepreneurship, with a focus on externality dynamics. We then discuss and refine our hypotheses in the light of interview and archival evidence in chapter six and examine empirical survey results in chapter seven. Different accelerator models are discussed in Chapter 8. Finally, in Chapter 9 we present our conclusions and recommendations.

3 The Vigo Programme: Concept and History

3.1 Concept

The central purpose of the Vigo Programme is to facilitate and support Vigo accelerators, and thus, facilitate the creation of new venture accelerator industry in Finland. Vigo accelerators are typically private firms that invest in and help manage high-potential growth ventures. They provide experience, expertise, and hands-on managerial support for their own portfolio firms. They are expected to invest their own funds to take equity stakes in their portfolio firms, in addition to helping raise further equity funding from other investors. In order to attract high-quality accelerator teams to the emerging field, public-sector agencies are committed to providing coordination services; providing favoured treatment to Vigo firms as they seek support (e.g., NIY support); and (temporarily at least) condone the use of NIY funding to pay management fees to accelerators.

The Vigo accelerator teams are selected in competitive calls for applications. The basic requirements for Vigo accelerators are that they have to be profit-seeking, privately held firms; they need to demonstrate investment capability; the managers need to hold a majority ownership of the accelerator; the accelerator managers need to have solid venturing experience in their sector of focus; and there have to be at least two managers who work primarily in the accelerator business and have previous experience on starting, growing, and internationalising young innovative firms or experience as an investor in young innovative firms (TEM, 2012). Vigo documents suggest that during the selection process, the main emphasis has been on managers' skills, international experience, previous achievements and ambition level – these constituting 60% of the selection criteria. Additional selection criteria have included, e.g., the accelerator's focus area, anticipated deal flow, the management team's service offering and execution skills, the accelerator firm's goals and past and anticipated performance track record, as reflected in, i.e., its profitability, sales growth, financial plans, portfolio development and risk management (TEM, 2012).

Vigo accelerator teams have three prospective sources of income. In theory, the primary incentive for a potential accelerator team to join Vigo is the prospect of enhanced access to, and development of, promising portfolio firms, and consequently, enhanced prospect for valuable exits and associated capital gains. In addition to investing their own funds, accelerator teams may also earn additional returns in the form of fund management fees paid by their portfolio firms (under separate agreement). The portfolio firms can use NIY funding to pay such management fees, provided that certain threshold criteria are met. As a third possibility, the Vigo accelerators can create their own venture capital funds, to be operated consistent with established industry practice. During the first half of the Vigo Programme, two Vigo accelerators have also raised their own investment funds, which target early-stage equity investment in Vigo portfolio firms.

Vigo portfolio firms qualify for preferred treatment by public-sector agencies such as Tekes and Finnvera. The rules of 'preferred treatment' are not firmly established, but they involve at least a commitment to speedy processing of support applications, and also, the use of NIY funding to pay management fees under certain conditions. The typical duration of the acceleration period for service portfolio firms is 18-24 months, after which period the firm

no longer qualifies for preferred public funding. The firm may still remain in the Vigo accelerator portfolio as an ordinary portfolio investment.

Vigo accelerators are attractive for innovative new firms because of the skills, networks and experience of accelerator managers in their sectors. Potential portfolio firms also benefit in terms of equity funding, as every Vigo accelerator is required to have the financial capability to make an investment of at least 30 k€ in each portfolio firm and help bring in additional external investors if necessary. Through their investments and allocation of management resources, accelerator teams share in the risk (financial, reputational) with the portfolio firm.

Figure 1 exhibits the organisational structure and operating logic of the Vigo Programme. The programme coordination activities are subsidised by Tekes, which has commissioned (through competitive calls for applications) Profict Partners Oy to co-ordinate the Programme. Proficit Partners Oy reports to Tekes and is supported by the VIGO Steering Group, with which it maintains a continuous dialogue. The Steering Group includes as members representatives of all the public stakeholders of the Vigo Programme (i.e., Tekes, TEM, Finnvera, and Finnish Industry Investment), as well as seasoned venturing professionals from start-up and venture finance sectors.

Profict Partners Oy is responsible for all coordination and reporting activities in the Vigo Programme. It also operates as a service centre for Vigo accelerators. In this role, it promotes the Programme to the general public and various stakeholders; it administers and carries out Programme performance data collection for monitoring and reporting; it provides and develops rules and templates for contractual and other documents; and it distils and communicates the development needs of the Programme to Tekes and the Steering Group.

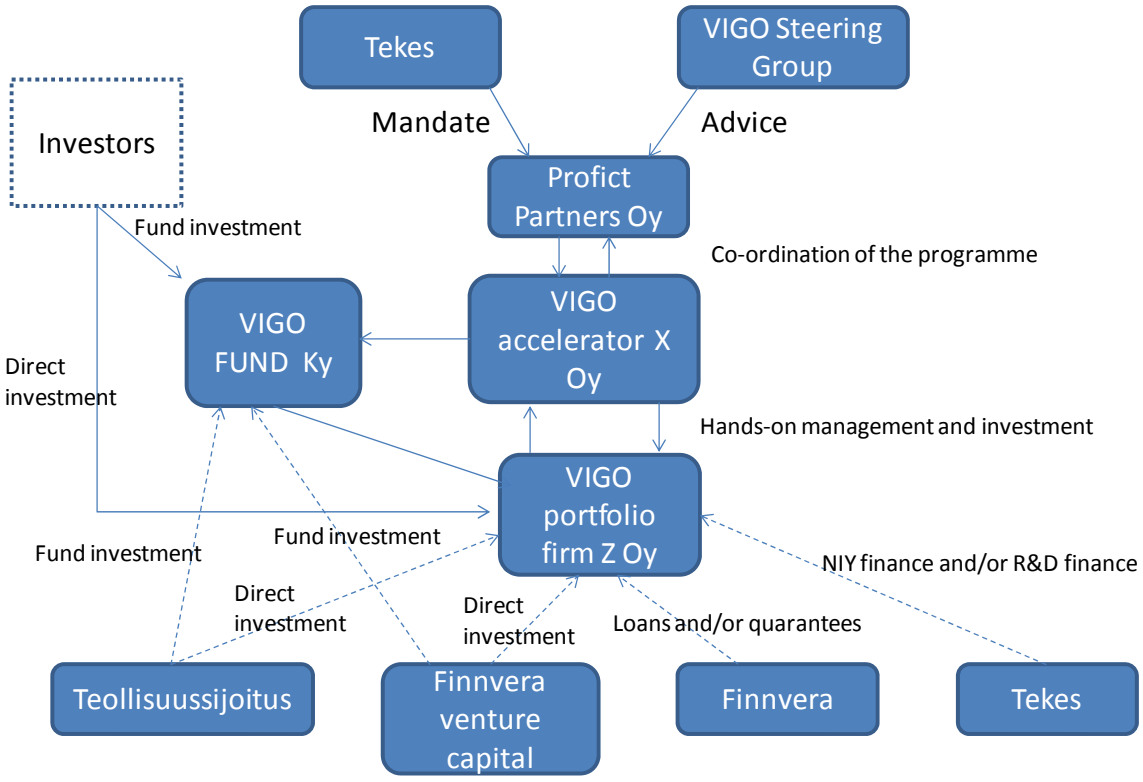

Figure 1 Operation Structure of the Vigo Programme

The stated overall objective of the Vigo Programme is to attract 200 M€ worth equity funding into innovative start-ups from domestic and international sources during the intended six-year life span of the programme (TEM, 2012). In addition to this general objective, the programme also has four additional objectives. First, the Vigo Programme aspires to become the most effective European accelerator programme under the public-private collaborative model. To this end, the programme aspires to become a benchmark to be emulated by others at both national and European levels. Progress towards this objective is monitored through the programme's media visibility and also through this mid-term evaluation report. Second, the Vigo Programme aspires to attract high-quality accelerator teams to the field. This objective is monitored through observing team quality and the revenue and profitability of Vigo accelerators. Third, Vigo seeks to facilitate the creation of investment-ready, high-potential start-up firms in Finland. This objective is monitored through accelerator deal flow and through the development of accelerator portfolio firms in terms of sales, employment growth, and market value. Fourth, the Vigo Programme aspires to make a non-trivial contribution towards re-vitalizing and internationalization of the Finnish venture capital industry. This objective is monitored through the number and amount of foreign venture capital flows towards Finnish venture funds and start-up sector.

3.2 Early-Stage Funding Gap

As noted above, the central justification for the Vigo Programme is to help re-vitalise and internationalise the Finnish early-stage venture funding sector. Following a boom in the 1990-2000s, the early-stage venture capital sector has faded in recent years, as shown in Table 1. Here, the term: 'venture capital' refers to private equity investments in seed, start-up, and in growth stages. The table shows venture capital investments made by Finnish private equity firms. We can see that, in particular, seed-stage investment has suffered during recent years and is now at levels last seen in mid-1990s. In the start-up stage, the situation appears better, and the investment rate appears to have stabilised at around 50 M€ annually. On the other hand, the volume of late-stage investments appears to have been in decline over the past several years. When we look at the number of deals made, we can see that in 2012, 212 deals were made – a level last seen in 1999. Thus, this analysis supports the notion of an equity gap existing in the area of 20k€ to 200k€.

Table 1 Development of the Finnish VC Sector in from 2000 to 2012 (source: Finnish Venture Capital Association)

Year	1996	1997	1998	1999	2000	2001	2002	2003
Seed (M€)	2	3	4	15	27	22	29	11
Start-up (M€)	8	5	22	19	43	61	35	28
Later stage venture (M€)	17	49	33	37	84	92	33	32
Venture total (n)	98	120	156	181	267	288	285	254
Year	2004	2005	2006	2007	2008	2009	2010	2011
Seed (M€)	12	23	12	19	11	9	5	3
Start-up (M€)	16	17	26	20	52	48	60	48
Later stage venture (M€)	47	49	41	33	51	29	32	26
Venture total (n)	236	237	258	299	324	268	242	212

Figure 2 illustrates the gap in early-stage funding, as shown in a recent analysis of the Finnish equity funding landscape (Mikkola, 2010). The illustration identifies two gaps in early-stage equity funding: Between 20k€ and 200k€; and also, between 2M€ and 5M€. In between these gaps, it is believed that the existing public-sector offering of support programmes – notably, the NIY programme in combination with Finnvera funding – is sufficient to support new venture growth. This illustration is important, as it illustrates the rationale of the Vigo Programme – i.e., to plug and complement early-stage funding gaps with funding primarily attracted from private-sector investors, both domestic and foreign. According to the Vigo Programme working group, the main shortcoming in early-stage public-sector funding is that it is not sufficiently hands-on, and also, too rigid to efficiently progress a promising start-up firm case from an idea stage to the growth and expansion stages (Mikkola, 2010).

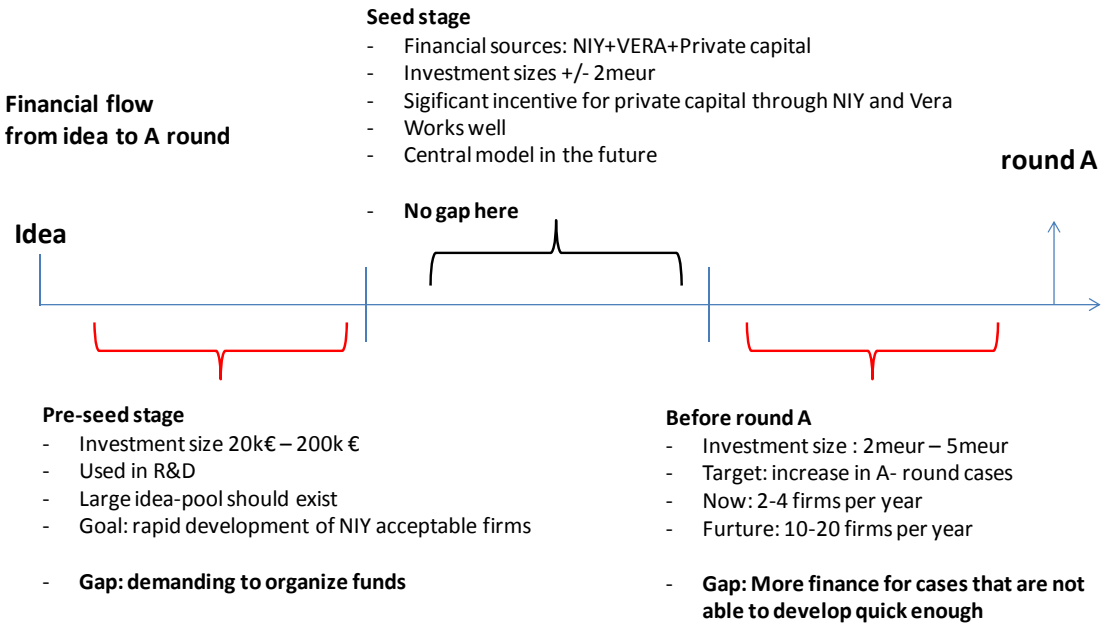

Figure 2 Illustration of the Finnish Equity Funding Gap (source: Mikkola 2010)

In addition to pre-seed and seed stages, he second gap in early-stage finance is thought to arise when growing firms need to attract A-round investment from domestic and international investors. Required investments in this stage typically range from 1-2 M€ to 5 M€. Compared to the seed stage, A-round projects are typically fewer in number but larger in size. In this area, accelerators can no longer invest from their own balance sheet, but rather, they need to mobilise additional funding from external investors. However, it is normally important for the accelerators also to invest in such rounds, as venture capitalists are reluctant to buy out old investors at this stage. According to estimates there are annually two to four firms in Finland that are able to raise the A-round (Mikkola, 2010). One of the goals in the Vigo Programme was that the number of A-investment ready firms should increase five-fold – i.e., to ten to twenty firms annually (Mikkola, 2010).

Alongside with the Vigo Programme, a number of ideas and propositions have been advanced to address the funding gaps discussed above. Through investment funds raised by Vigo accelerators, investments could be made to both seed stage and the stage immediately before possible A-round. The first draft proposal was prepared by Mikkola in December 2010, suggesting principles according to which public and private capital could be invested in 'pre VC' funds with asymmetric terms for capital repayment. Soon thereafter, in March 2011 the Ministry of Employment and Economy decided that Veraventure may invest in Pre VC funds, but under symmetric terms only ('symmetric' meaning that no difference exists between public- and private-sector investors in terms of the allocation of capital gains and repayments). At the same time it was decided that the Vigo Programme should further explore the viability of asymmetric terms in encouraging early-stage venture capital investment. As a result of the ensuing deliberations, a report was published by the Vigo Programme in the end of year 2011, discussing principles for the use of asymmetric terms in early stage investment funds (Koponen & al., 2011).

After careful planning and considering private sector feedback and international examples, the Vigo Working Group suggested that a very simple model should be adopted in Finland

that is based on asymmetric distribution of profits between public- and private-sector investors. According to the Working Group, this would provide incentives for private investors to invest in accelerators' small venture funds (less than 10 M€). It was estimated that with this model, three to five new funds could be created under the Vigo Programme in 2012 - 2013. In the anticipated funds, the government funding (up to 20 M€) would be channeled through Veraventure. This government investment would be accompanied by private sector investments of up to 20-40 M€. If materialised, this would significantly improve the early-stage funding landscape in Finland.

3.3 History of the Vigo Programme

After the launch of the Vigo Programme in March 2009 the first three accelerators were selected in August 2009 from a field of 43 applicants. The successful applicants were Veturi Venture Accelerator, Lifeline Ventures and Lots. Three further accelerators, Clenatech Invest, Food Process Innovations, and KoppiCatch were selected in November 2009. After the second application round, five new accelerators were selected in April 2012. These were: Innovatum Partners (formerly Bio Asset Invest), Gorilla Ventures, Newentures, Royal Majestics Helsinki and Vendep.

That only six accelerators out of 43 applicants were selected to the program in the first rounds should indicate that the selection criteria have been applied quite thoroughly and the accelerators should hence represent the very best of potential or available accelerators and growth venture professionals in Finland. Similarly, the second round in 2012 produced 17applicants of which only five accelerators were approved. The selection committee this time emphasized the selection of a broader variety of industries compared to a previously ICT-heavy list of accelerators (TEM, 2012).

The Vigo Programme guidelines state that the accelerators should provide their portfolio firms with funding, know-how and experience, and a network to investors, customers and partners. Specifically, *risk sharing* is emphasised, which implies active participation in the development of the business. (TEM, 2012) However, the program does not specify a preferred *nature* or *level* of participation, which gives the accelerators the freedom to choose working methods according to their own preferences.

By August 2012, when the current evaluation work started, two accelerators (Food Process Innovations and Lots) had given up their Vigo status. According to Petri Niemi, the chairman of the Vigo Steering Group, Lots was drawn so deeply into managing an individual portfolio firm that the accelerator partners no longer wanted to continue the accelerator business. In the other case, Food Process Innovations saw that in functional foods, the product development cycles were so long that they could not feasibly be accommodated within the Vigo Programme (Niemi, 2012). This current evaluation is based mostly on experiences from the first six accelerators, since the ones selected in 2012 had not yet effectively started their operations under the Vigo Programme. However, the material and experiences from the latest application round was also used as background information in this evaluation.

By August 2012, experiences from the Vigo Programme have been assessed in at least one discussion paper (Luukkonen, 2010) and in the Ministry of Employment and Economy's report on public funding for growth ventures (Puttonen, 2010). Luukkonen (2010) analysed the effectiveness of the Vigo Programme in terms of timing, design, size, flexibility, top-down selection and implementation. According to Luukkonen, a positive aspect of the Vigo

Programme was that the length of 3+3 years with interim evaluation may be sufficient to test the concept, although it may be too short to sufficiently institutionalise business accelerator practices and an accelerator culture, such that these would survive after the programme. Luukkonen also found that the size of potential public funding that a portfolio firm may obtain is sufficient for the need of seed-stage ventures, especially those in the software business (Luukkonen, 2012).

As potential drawbacks, the report observed that VIGO accelerators have no authority to allocate public support to their portfolio firms by themselves. The report also opined that government regulations, although light, nevertheless introduce inflexibility into the Programme, in the form of onerous reporting requirements in situations where a start-up company deviated from earlier plans. Also, Luukkonen (2010) found that the ownership shares that accelerators could take in their portfolio firms, as well as the level of management fees that they could charge from their portfolio firms were too narrowly regulated in the Vigo Programme, thereby constraining the incentives the Programme was able to offer for accelerators. Luukkonen also observed that ICT sectors appeared over-represented in the Programme. Finally, she was of the view that as long as public-sector agencies such as Tekes and Finnvera have latitude to decide whether or not provide funding for Vigo portfolio firms, the public-sector commitment to the Vigo Programme should not be considered strong enough.

4 Money Flows and Deal Flows in the Vigo Programme

Central to the operation of the emerging accelerator field are various money flows that have been mobilised by the Vigo Programme. Therefore we collected data on different financial flows generated under the programme. The survey and archival data was triangulated against information from Tekes and Finnvera. The findings are presented in Figure 3 and in Table 2.

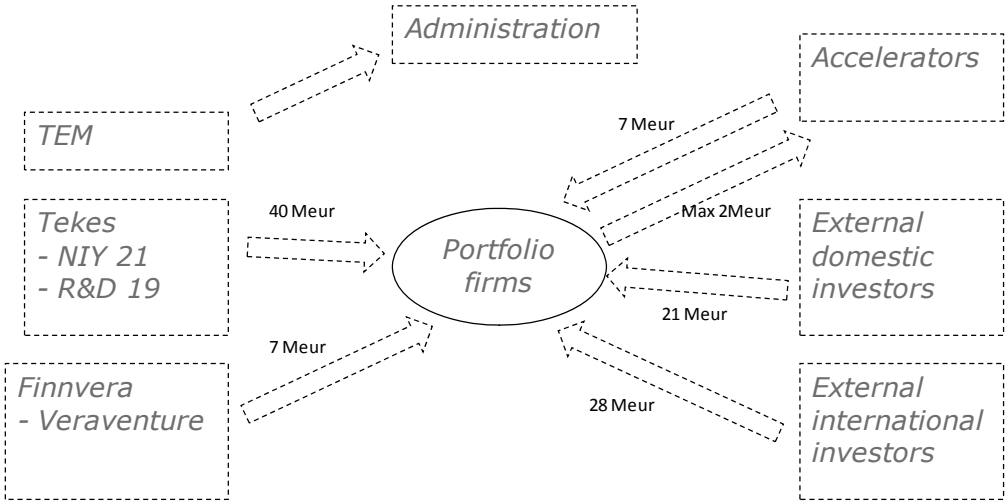

Figure 3 Funding Streams Catalysed by the Vigo Programme

Figure 3 shows the aggregate funding flows. The first funding stream is represented by the administration expenses. Thus far, approximately 500 k€ has been allocated to programme administration. The second funding stream is made up by Tekes NIY and Tekes R&D funding. Vigo portfolio firms have been able to attract a total of 40 M€ by June 2012 from Tekes, of which 21 M€ was young innovative firm funding (NIY) and 19 M€ R&D funding. NIY funding was in the form of grants, and R&D funding was in the form of grants and loans. The third funding stream flows from Finnvera to portfolio firms. By June 2012, 7 M€ had been invested by Finnvera into portfolio firms. The fourth funding stream flows from accelerators to portfolio firms, for a total of 7 M€ thus far. These flows include investments made from accelerator firms and from funds that are under their management. Thus, the figure may overestimate one accelerator's (Cleantech Invest) level of own investments. The fifth funding stream– from portfolio firms to accelerators - was estimated from the survey data that was collected as a part of this evaluation project. According to the survey data 23 firms that answered the survey had paid 1 002 000 € as management fees by October 2012. Through this figure we estimate that a total of under 2 M€ has been paid as management fees from portfolio firms to accelerators. The sixth funding stream runs from external domestic investors to portfolio firms and totals 21 M€ by June 2012. Finally, external international investors have contributed approximately 28M€ to portfolio firms.

Table 2 summarises aggregate funding flows in greater detail by providing information about the number of investment decision and sizes of average investments. This table is based on the information received from the programme administration.

Concerning the money flow from Tekes to portfolio firms, figures show that the average number of financing decisions per accelerator is seven for NIY finance and five for R&D finance. If we divide the aggregate sums of NIY finance and R&D by the number of financing decisions, we get an average decision size of 395k€ for NIY finance and 494k€ for R&D finance. At most, a given accelerator's portfolio firms have received a total 20 funding decisions. Similarly, the average funding decision size from Finnvera is 333k€, and on average, three decisions have been received by an accelerator's firms. At most, a given accelerator's portfolio firms have received six decisions from Finnvera. Accelerators themselves have made on average 11 decisions to invest. The average level for these is 79k€ per investment decision. The most active accelerator has made 23 investments. From external domestic investors on average 17 decisions have been made per accelerator portfolio, and the average size of such investments is 159k€. The most active accelerator's portfolio firms have received 71 decisions from external domestic investors. Finally, from external international investors, six investment decisions have been received per accelerator portfolio, with the most active portfolio receiving 23 investments from abroad. The average size of external international investor's investment is 608k€.

Table 2 Financial Events Created under the Vigo Programme

	Average per accelerator	Min per accelerator	Max per accelerator	Average decision size
NIY funding decisions	7	1	20	395 509 €
R&D funding decisions	5	1	11	494 709 €
Finnvera funding decisions	3	1	6	333 286 €
Accelerator investments decisions	11	3	23	79 502 €
External domestic investment decisions	17	1	71	159 202 €
External international investment decisions	6	3	23	608 370 €

In order to facilitate money flows, accelerators seek to attract potential firms into their portfolios. In principle, these may come to from all over Finland and from all industries. The Vigo Programme does not have a geographical focus beyond restricting its operation to Finland. However, most of the accelerators are located in the Helsinki capital region, and therefore, the main locus of their operations may be thought to be in southern Finland.

Regarding industry sectors, Vigo Programme has not had specific pre-assigned focus, either. However, some focus is starting to emerge through the operations of current accelerators – see Chapter 8 for details.

The accelerator – portfolio firm relationships often start through direct contacts between an accelerator and a prospective portfolio firm. According to Vigo survey statistics, in 68% of the cases, the information concerning acceleration business has reached prospective portfolio firms directly from accelerator representatives (Ruotsalainen, 2011). This indicates that accelerators have established themselves well in their fields of operation. All accelerators are naturally actively participate in various industry and investor events to increase their visibility.

Concerning typical sources of deal-flow, there is no obvious pattern. The programme administration does not collect statistic about this aspect. However, according to undocumented experience, many portfolio cases originate from universities in the capital region, from research institutes such as VTT and also through Keksintösäätiö (The Foundation of Finnish Inventions). Most of the IT-related cases have originated from Aalto University's Venture Garage. According to Vigo statistics, Vigo accelerators had cumulatively processed 4832 proposals by June 2012. A term sheet had been signed with 73 firms, and due diligence stage had been completed with 71 firms. The acceleration agreement had been signed by June 2012 with 53 firms. The Vigo statistics show that in one to five scale the quality and quantity of the deal-flow is valued to slightly over three, indicating a slightly positive view both on the quantity and quality of potential cases.

Within the Vigo Programme, attempts have been made to guide the formation of accelerator-firm relationships. The process of becoming an accelerator's portfolio firm has been documented and contractual templates developed and made available for Vigo Accelerators. The development of the relationship between a Vigo accelerator and a portfolio firm can be divided to three phases: pre-evaluation phase, due diligence phase and portfolio phase. Contractual templates regarding the pre-evaluation include a term sheet template, a non-disclosure agreement template, and an engagement letter template. The term sheet details possible co-operation between an accelerator and a potential portfolio firm (e.g. investment size, size of equity stake sought etc). Engagement letter aims to set the terms and conditions for the relationship. If an agreement is reached on the general parameters of the co-operation, the accelerator and the firm proceed to the due diligence phase, during which detailed examination about candidate firm's situation regarding business, legal issues, intellectual property rights and technology is carried out. Also for this phase the Vigo Programme administration has prepared document templates from different viewpoints. These, as well as an investment memo, investment agreement, and shareholders agreement must be signed before co-operation may continue to the portfolio phase.

A specific emphasis in Vigo Programme's guidelines and documentation package has been on detailing opportunities for obtaining public financing. The due diligence phase may already include applying for support from Tekes' NIY Programme. In this phase or possibly later in the portfolio phase, an accelerator and a firm may apply for equity investment by Finnvera or loans or grants from Tekes. Indeed, one value-added aspect of the Vigo Programme is that Vigo templates can be easily used in negotiations with Finnvera and Tekes.

5 Vigo Concept in the Light of Field Dynamics

From an ecosystem perspective, the Vigo Programme is essentially an attempt to introduce a new organisational field into the Finnish National System of Entrepreneurship. So doing, it seeks to plug a perceived gap in the high-growth entrepreneurship ecosystem. As elaborated in Chapter 3, this gap is thought to reside somewhere in between public subsidies, business angels and early-stage VC investors. It is thought that the growth potential and growth orientation of Finnish new ventures can be enhanced by providing hands-on managerial and entrepreneurial services together with small doses of equity funding.

As a field-building effort, Vigo operates at the centre of the Finnish high-growth entrepreneurship ecosystem. Vigo accelerators will complement existing operators and collaborate closely with these. To become viable, we anticipate that the Vigo accelerators will need to feed five different feedback dynamics and associated flows of human, intellectual, and financial capital, see Figure 4.

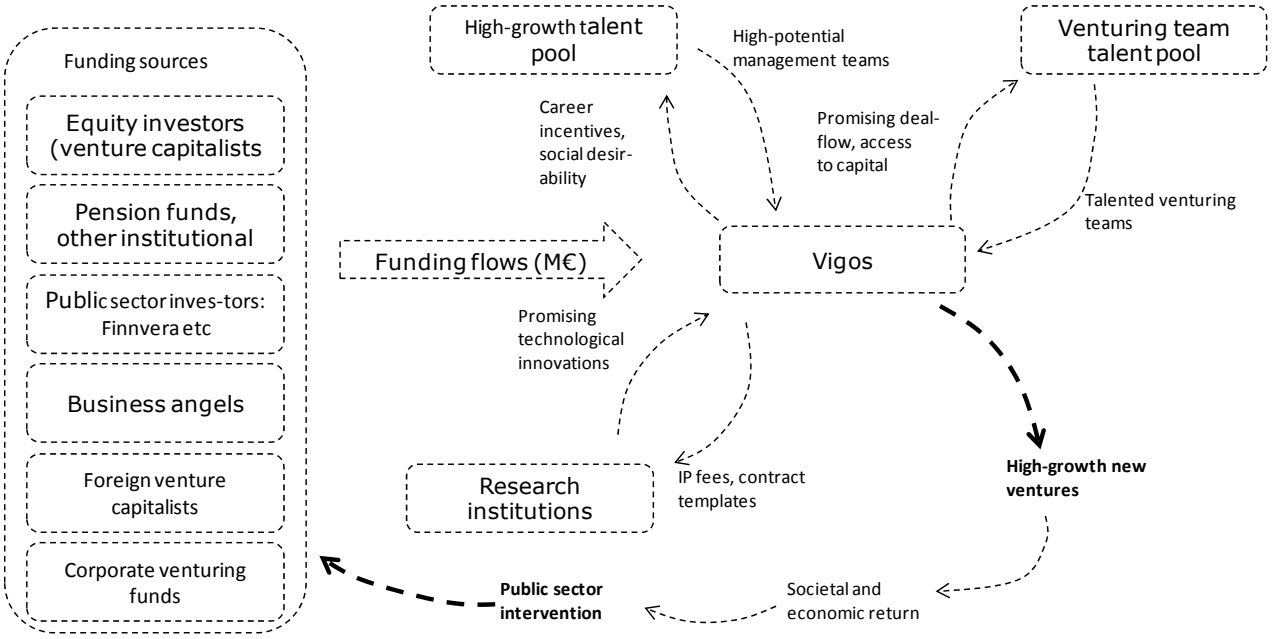

Figure 4 Anticipated Dynamic of the New Venture Accelerator Field

First, the Vigo Programme needs to attract new, talented accelerator venturing teams into the field. The venturing teams will set up accelerators and start working with new ventures. They will bring with them their experience, contact networks and funding, all of which will be mobilised to support the rapid growth of high-potential ventures. To achieve this, the Vigo Programme will need a strong reputation and offer sufficient incentives and a setting which improves the prospects of the accelerator of locating and investing in high-potential ventures. This prospect needs to be strong enough to offset the opportunity cost created by the rejection of alternative occupational pursuits. The Vigo Programme also needs to offer support services for a long enough time to allow for the accumulation of experiences and expertise within the Vigo accelerators.

Second, the Vigo Programme needs to attract high-potential entrepreneurial teams into the field. To achieve this, the Programme needs to develop a strong reputation and offer incentives and growth prospects that make joining the programme an attractive proposition for prospective entrepreneurial teams. The prospects need to be sufficiently attractive to overcome trade-offs and opportunity costs created by the abandonment of alternative occupational pursuits and venture development paths. In addition to the prospect of funding and other support, one important way of achieving this outcome is by creating and communicating tangible success stories that demonstrate the value added by Vigo accelerators.

Third, the Vigo Programme also needs to facilitate the availability of technologies and innovations around which new ventures can be created. Although innovative technologies and business ideas usually travel with entrepreneurial teams, the Vigo Programme has a potential role to play in encouraging structural adjustments (e.g., contractual templates, IP transfer practices) that facilitate the transfer of, e.g., research results from universities to entrepreneurial teams.

Fourth, the Vigo Programme needs to facilitate requisite structural adjustments with public-sector agencies such as Finnvera and Tekes, such that these optimally support both the Vigo accelerators as well as their portfolio firms. Possible structural adjustments could involve, for example, the processing of applications from Vigo portfolio firms; contractual templates for participation in equity funding rounds; the development of procedures to prompt participation in different initiatives as certain milestones are reached; and so on. To ensure smooth adjustment and continued support by public-sector agencies, Vigo needs to demonstrate an ability to generate sufficient societal and economic returns to justify continued public-sector participation.

Fifth, the Vigo Programme needs to facilitate the flow of equity funding into the accelerator portfolio firms. This may involve a number of different adjustments – e.g., the availability of funds to early-stage investment funds; the availability of equity funding from non-Finnish venture funds; the successful facilitation of Round A and Round B investments with Finnish and foreign venture capital funds; to name a few examples. To achieve this, Vigo needs to demonstrate high-quality deal flow and attractive returns to equity investment.

Finally, the Vigo Programme needs to succeed in facilitating mutual reinforcement and positive feedback among the various dynamics discussed above. The availability of experienced accelerator teams needs to attract new high-potential ventures into the high-growth entrepreneurship ecosystem; these, then, will help attract further accelerator teams or retain existing ones in the field. This dynamic should reinforce the availability of equity funding, which should feed back to the attractiveness of the field for potential entrepreneurial and accelerator teams. This dynamic should reinforce the adaptation of the research sector to support the accelerator activity and the continued participation of public-sector agencies in the field. For the accelerator field to evolve into a viable high-potential venturing ecosystem, both direct externalities and mutual reinforcement between these need to gain momentum.

Above we have described our initial hypotheses and expectations with regard to the successful creation of a vibrant field of new venture accelerators in Finland. It should be

noted that these were only initial conjectures that preceded our field research. The field itself remains very much in its initial sense-making stage, and established practices are only taking shape. The ‘ideal’ template for a new venture accelerator – if any single one exists – is still being searched, and different models currently proliferate. In the next chapter, we state our hypotheses for the six mechanisms identified and discuss our findings in the light of those hypotheses.

6 Vigo Model in the Light of Interview Data

During the interviews and archival research, the hypotheses illustrated in the model in Figure 4 were tested and refined. As a field-building effort, Vigo needs to achieve several goals, if it is to help establish a viable accelerator community in Finland:

1. It needs to establish cognitive and socio-political legitimacy for the emerging accelerator field (Aldrich & Fiol, 1994)
2. It needs to prompt the requisite cognitive and structural adjustments in its interfaces with various stakeholders
3. It needs to generate the necessary externalities and positive feedback mechanisms to achieve a self-sustaining dynamic

Broadly speaking, cognitive legitimation refers to the spread of knowledge about a new field. When new fields are being created, there is a lot of sense-making going on, as the field participants themselves – as well as their stakeholders – try to make sense of what this new field is actually about (Möller, 2010). This means that the actors operating in the new field have to develop a shared and accepted understanding of professional norms and standards; and also, about how the field works and what the different roles, practices, and forms of collaboration are. If such a shared vision fails to emerge, the field is not likely to take off due to practical collaboration problems and more far-reaching legitimacy problems.

Socio-political legitimacy refers to the degree to which key stakeholders, the general public or government view the field as appropriate and right. Not only do the accelerators themselves develop a shared understanding of what they are about and how they contribute; this understanding also needs to be shared by key stakeholders. If the key stakeholders do not accept the shared vision of what the field is about, the field creation attempt is not likely to succeed.

Socio-political legitimacy has also other consequences. If the stakeholders do not perceive accelerators as acceptable and beneficial, the stakeholders will fail to perform the necessary cognitive and structural adjustments required for the new field to operate efficiently. In the context of accelerators, this would create difficulty in attracting new accelerator and venture teams; in attracting funding; and in accessing other resources such as space and technology.

Cognitive and socio-political legitimacy and cognitive and structural adjustments are necessary conditions for the field externalities and positive feedback mechanisms to set in motion. This aspect will ultimately determine whether the new accelerator field will be viable or not.

In the following, each of our initial hypotheses and associated insights is discussed in the light of our interview material. In the discussion we focus on evidence indicating whether or not the three prerequisites, as noted above, are being met and associated field-level dynamics gathering momentum. For presentational reasons, we present the hypotheses in a positive format (e.g., ‘Vigo has been able to achieve goal A’). The hypotheses are then assessed in the light of archival and interview data, and they may or may not receive support.

It should be noted that, as an organisational field, the new venture accelerator field is still very much in the initial, sense-making phase. We anticipate that, if successful, the field will evolve through three stages: (1) initiation; (2) momentum-building; and (3) established operation. As noted above, the first, initiation stage is characterised by intense sense-making, and the role definitions and field norms and collaborative practices are not necessarily established, as yet. When this evaluation started, the field was still making sense of itself, and some of this sense-making is distilled in the following discussion.

6.1 Externality Dynamic Between Vigo and Accelerator Teams

Our conceptual model in Figure 4 captured our initial conjectures with regard to the dynamic between the Vigo Programme, potential accelerator teams and Vigo accelerators. To provide focus for our field research, we next expressed our conjectures in the form of formal hypotheses. These were tested during the interviews and against archival data. During the iterative process, we refined our conjectures and explored emerging themes. This process then underpinned our final insights and conclusions. This iterative and qualitative approach was employed because there was not sufficient heard evidence to quantify accelerator team dynamics.

Our analysis sought to understand whether the accelerator field is developing a self-sustaining dynamic to attract and retain talented accelerator teams to the new field. To achieve this, the field needs to be developing cognitive and socio-political legitimacy. The first involved, e.g., a shared understanding about how the accelerator business works; whether there are different accelerator business models and how these work; and what the emergent practices, roles, and collaborations are. The second involved, e.g., the degree to which key stakeholders, the general public and government recognised the accelerator field as a legitimate one that offers good opportunities for value creation. To become fully embedded in the Finnish high-growth venturing ecosystem, the accelerator field needs to become 'taken for granted' – that is, so widely accepted that no one seriously questions the utility and purpose of the new field. Against this background, we formulated the following hypotheses to guide our empirical research:

H1 The Vigo Programme is able to attract talented accelerator venturing teams to the emerging field

H1a The Vigo Programme is able to facilitate sufficient financial incentives for prospective accelerator teams to offset opportunity costs that result from the abandonment of alternative occupational pursuits (e.g., attractive returns to investment; direct financial incentives for experienced accelerator managers (e.g., in the form of management fees); asymmetric returns in public-private joint investments; R&D subsidies)

H1b The Vigo brand in itself adds sufficient value and cognitive and socio-political legitimacy to attract prospective accelerator teams

H1c The centrally offered coordination services add value to prospective accelerator teams

During our field interviews, we found evidence to support all of the above hypotheses. Our interview evidence suggests that, during the initial phase of the field development at least, the Vigo Programme has been able to attract talented and experienced management teams to set up new venture accelerators. Consistent with H1a, there was evidence that the Vigo concept offers sufficient financial incentives to attract experienced and talented accelerator teams to set up new venture accelerators. Consistent with H1b, we also found that the Vigo brand itself is well known and valued in the Finnish high-growth venturing community, and that it operates as a legitimation mechanism that makes it easier for Vigo accelerators to implement their operational models. Consistent with H1c, we also detected early signals that the centrally provided coordination services add value to new venture accelerators – although these alone probably are not sufficient to prompt new accelerator teams to enter the field.

However, the above conclusions are tempered by a number of factors. Although new accelerators have clearly been created *because* of the Vigo Programme (and not in spite of it), we do not know as yet whether we are observing an 'apple tree' effect or a permanent, self-sustaining dynamic. The 'apple tree' effect means that a number of potential accelerator teams may have developed over a longer period of time, and the Vigo Programme may have simply prompted these mature teams to enter the field at approximately the same time. A self-sustaining dynamic would mean that we are observing a steady-state supply of new accelerator teams entering the field on a constant basis. Second, we do not know whether the legitimacy effect (i.e., the branding effect articulated in H1b) is sustainable, or whether this brand may dilute over time. Finally, at this point, it is still unclear how permanent the need for centrally provided coordination and experience exchange services may be.

In the following we highlight illustrative evidence with respect of each of the three mechanisms.

6.1.1 Hypothesis H1a: Financial Incentives

Our hypothesis H1a explored whether the financial incentives work as intended. The role of financial incentives is to offset the opportunity costs for prospective accelerator management teams. Such opportunity costs arise because managerial talent is scarce and highly valued, and therefore, experienced venture managers have lots of opportunities to choose from. The Vigo Programme therefore needs to offer sufficient incentives to offset the opportunity cost arising from the abandonment of alternative occupational pursuits. While we found overall support for this hypothesis, our interviews suggested that only some of the mechanisms are currently working while others have not materialised as yet. Specifically, there have been no successful, high-profile exits as yet, meaning that capital gains returns from successful exits have not yet materialised. Also, while the concept of asymmetric returns in public-private syndication deals has been floated and lobbied for, this incentive mechanism has not yet been implemented.

Thus far, there has been only one case of successful exit in the Vigo Programme. This occurred when KoppiCatch accelerator's portfolio firm was sold to the USA. However, according to the interview material there is an expectation that attractive capital gains may materialise increasingly often, as accelerator portfolio firms mature. The accelerators are

using diverse strategies to increase the value of their portfolios. As one accelerator manager put it:

> *'We have tried to look for such firms that we can make investment in – the best firms in the market. Not that we go into firms to collect management fees[1]. In practice we invested two years without any salary at all and invested all possible and impossible money we could get into these firms.'*

Although capital gains from investments are supposed to be the primary incentive to enter the accelerator field, some suggested that this mechanism may not have been given sufficient attention in the early stages of the Vigo Programme. An external financial expert comment suggested that at least early on, the accelerator's investment capability was probably not sufficiently emphasised relative to management fees:

> *'When Vigo accelerators were chosen I think that knowhow was the focus. Only a little attention was paid on what is the investment that these accelerators make in their firms - whether one has any accumulated wealth at all. In this case then a portfolio firm's finance is based on other sources than accelerator investments, in practice in many cases to public finance. When Vigo concept allows that the accelerators' earnings are based on monthly fees from portfolio firms you may ask that where the risk is? I think that the earning model should be based on increasing the value of an accelerator's initial investment in a portfolio firm.'*

This comment – which was echoed in a number of interviews – is important, since it raises the question of the role of management fees as an incentive to enter the accelerator field, and specifically, the relative importance of the management fee relative to capital gains. On the one hand, it seems clear that some incentives are required for entry into the field: capital gains may take years to materialise, yet investments need to be made upfront. Without management fees, the equation might thus become prohibitive for many accelerator teams. On the other hand, Vigo is a new venture accelerator programme. Risk taking in anticipation of future returns is a fundamental element of entrepreneurship. In this perspective, it seems clear that management fees cannot and should not provide a full substitute for salary. If accelerator managers can live comfortably off their management fees alone, this would reduce the incentive for them to work hard to increase the value of their portfolio firms. As one interviewee put it, too high management fees could risk turning accelerator managers into 'civil servant entrepreneurs with Nokia-level salaries'. It thus seems that, on balance, management fees should allow accelerator teams to survive the gap between upfront investments and eventual capital gains returns, but not in undue comfort. As a principle, one cannot have the cake and eat it.

The above does not mean that inappropriate use of management fees was observed. However, for continued socio-political legitimacy, it is important that the Vigo Programme has clear and transparent rules about when they can be applied, so as to prevent even an impression that the possibility might exist for inappropriate incentives. As a rule, the management fees work as intended, as illustrated by the following quote:

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[1] This accelerator has a policy of not collecting any management fees, except in the rare situations where one team member steps into a portfolio firm to act as CEO for a limited period of time.

> *'We came from the fund business thus it was familiar to us. The pitch for possible investors to our fund is that if you invest in our fund, every penny that you invest will go into our portfolio firms. There is no administration fee on our fund. The two components – the sweat equity possibility and management fee from firms made it possible for us to pay at least our bills.'*

As such, the possibility of using the 'sweat equity' mechanism and management fees have made it possible to attract new management teams to the accelerator field, and this is a perfectly legitimate mechanism. However, our interviews also highlighted impressions that there is a possibility of misuse. Again, for socio-political legitimacy, impressions count even if not based on actual fact. This makes it important to eliminate even the possibility of false impressions. One such is illustrated below:

> *'When it has been possible to convert accelerator's own labour to shareholder's capital it is, at least theoretically, possible that an accelerator manager has without risk managed to organise work for him/herself and simultaneously significant ownership stake in a portfolio firm. If the firm proves to be successful you may get oversized returns on what you have done.'*

Again, the above is an impression rather than an observation based on factual examples. However, the comments highlight two strategic issues for accelerator field creation. First, as noted above, socio-political legitimacy matters. This legitimacy can be undermined by perceptions, whether based on fact or not. Second, the difference between legitimate use and abuse is not always clear-cut. The first observation underlines the need to have clear and transparent rules. The second observation underlines the need to monitor the situation carefully and be ready to undertake corrective action whenever there is even a hint of potential breaches. If these issues are not addressed head-on, the legitimacy of the new field may suffer, thereby undermining its ability to become self-sustaining. In the worst hypothetical scenario, inappropriate use of incentives could even create market failures instead of correcting them. The illustration below provides an example of impressions that may end up undermining the legitimacy of the field it not addressed head-on:

> *'We know these accelerators and have tried co-operation case by case. There are two issues that have killed our processes. The first is the 'sweat-equity' stakes which we have felt that have been too large. In our philosophy the founding team should be heavily involved. If we have cases in which Avera has 25% and Vigo 10%, as we have seen, where does the venture capitalist fit in if you consider that the entrepreneur holds 30% and his financial manager 20%. This, we think represents a viable venture-case. The second issue that we have really wondered in some cases is this 'dilution-protection' what Vigo accelerators have had in with their shares. We have really not understood how this is possible! How is it possible that their share would not dilute when other owners' shares dilute.'*

The above quote highlights another potential unintended consequence in the use of equity stakes as an incentive mechanism. Again, although this is a natural mechanism, and large equity stakes by accelerators can be fully justified in some situations, it also has to be remembered that the accelerators will be negotiating their equity stakes, as a rule, with relatively inexperienced entrepreneurs. For example, excessive use of, e.g., dilution

protection clauses may end up being counterproductive if it scares away venture investors. This creates a need for the Vigo Programme to monitor clauses such as anti-dilution clauses in accelerator-portfolio firm deals, even though Vigo itself is not party to those deals. If this turns out to be impracticable, an alternative could be to highlight such issues in an information package made available to prospective Vigo portfolio firms and accelerator teams.

As a rule, the management fees worked well in most cases and provided the intended incentive at broadly the right level. This did not mean that all accelerator teams would have used this incentive the same way though. For a number of teams, management fees provided a powerful inducement to enter the accelerator field, as it provided a way to overcome early operating costs of the accelerator (salaries, rents, travels, etc.). For one accelerator with its own fund, the management fees chargeable from portfolio firms appears to have made it possible to create the fund in the first place, as it made it possible for the accelerator not to charge fund management fees (as opposed to portfolio management fees). This accelerator, which operates through their own early-stage fund, would likely not have been able to create the fund if it had been forced to charge fund management fees, as is the custom in more established and larger, later stage venture capital funds:

> *'[before joining Vigo] …Our firm operated in fund business as investment advisor. In 2009 we applied to the Vigo Programme and established our own fund. Investors include industrial investors and pension funds. The aim was to make ten investments from the fund to 'clean technology' firms that have international growth potential. The lifetime of the fund is 6+2 years. We have experience from Cleantech business and from fund business and there were no actors in this area so it was a clearly an opportunity for us. In addition we knew how it is with early stage firms – at least the same amount of work, or more than with more mature firms. Thus, without the Vigo Programme we would not had gone into early stage sector at all. In case of small funds the fund management fee does not have any meaning. The two components – the sweat equity possibility and management fee from firms made it possible for us to pay at least our bills.'*

Another example from applying management fee comes from an accelerator that has been driven by very different operational philosophy. Formerly they had been planning to set up their own fund but what seems to have driven their work is their passion to work operationally with portfolio firms. According to the interview material the manger worked as CEO of their portfolio firm that was in a 'scientific stage'. The founder needed to be replaced and there was no way that they could have hired an international manager to the firm in that stage. He held the position for one and half years and spent about 80% of his work time at the job. His moderate salary (in comparison to his experience) was covered by the Vigo management fee.

> *'We have a very hands-on approach. For example I served as a managing director in one of our portfolio firms for one and a half years. The founder had to be removed from CEO position and I took over his role. The firm was in a 'scientific stage' so it was impossible to find an internationally experienced director to that firm at that stage. We established operations in Silicon Valley, Taiwan and Finland. We thought that if I work in this position for one year with experienced senior professionals, we should be able to*

reach the point when we may be able to hire a CEO. In reality it took a little bit longer and my modest salary was paid through the management fee.'

However, while the management fee has good uses and can be justified on this basis, the configuration of this incentive is not trivial. The interview material suggests that the way the management fee had been configured early on may have caused some damage to the Vigo Programme's credibility among potential entrepreneurs. This is illustrated in the following quote from an accelerator manager:

'Vigo does not have very good reputation among the best entrepreneurs out there. A year ago it was that you receive "a vice guy" to give you smart advice for 9000 €/month [giving rise to bad examples] ... Now I think that it has become better again ... [In the end] I think that the programme has been successful by causing positive action in the market. For example I do not think that our fund would be up and running without the Vigo Programme.'

Such sentiments were echoed by some portfolio firms:

' I feel that the negotiations with the accelerator were unnecessarily tough and long. I spoke also to other portfolio firms and they share my view. We negotiated about the management fee and we were able to make it smaller. Management fee was also a problem when we negotiated with investors – they do not have very positive attitude towards them and it took us time to argue that why they are there. And then there was this 'anti-dilution' rule that we did not like at all. Luckily we were able to negotiate that away. To improve this situation I think that prospective founding teams should have more information on what kinds of deals have been done so far, that there would be a norm available, that do we pay more than the others? It is easy for a young founding entrepreneur to give up in the negotiations.'

On the other hand, from accelerators' viewpoint, the configuration in which the fee is paid (i.e., by the portfolio firms using NIY funding) has caused some problems. As new, growing firms have only scarce financial resources, while the costs are high, it may be difficult for accelerator manager to enforce the payment for their services even though the terms would had been agreed on and the actual money would come from the Tekes NIY funding. Sometimes it might be tempting for an entrepreneur to suggest delaying accelerator manager's payment. One interviewed accelerator manger told that they have had to give up tens of thousands of agreed management fees because of the liquidity problems in their portfolio firms. This viewpoint more generally was commented upon by another accelerator manager:

'In my opinion the main problem in the implementation is how the management fee has been configured. It puts too much emphasis on consulting. This is what we discussed in the accelerator meetings. The management fee should not be delivered through firms. It is not easy to ask the founder to pay the management fee when you at the same time have to convince them to make decisions that they do not like but that are necessary for the development of the firm.'

While an argument can be made that negotiations between accelerators and portfolio firms should be left to them and let the market mechanism work, market mechanisms work better

when the number of transactions is high and price information transparent. Because of such experiences, the Vigo Programme introduced (through Tekes) tighter rules to the use NIY funding to pay management fees to accelerators. If the accelerator holds a maximum stake of 10% in the portfolio firm, it can charge the full management fee of 9 k€ per month if it wants and the portfolio firm agrees that this is good value. If the accelerator's equity stake is in between 10 and 20%, the maximum allowable management fee is 4 500 € per month. If the equity stake is 20% or more, the use of NIY funding to cover management fees is not allowed. However, the issues highlighted above suggest that an even more nuanced approach might be needed.

In summary, the empirical evidence concerning management fee shows that this mechanism has helped to overcome opportunity costs and thus encouraged entry by experienced accelerator managers. There are, however, multiple caveats that need to be considered in implementing this powerful but controversial financial incentive. Ideally, it would facilitate the entry of talented individuals who do not have significant own capital – however, it is very difficult to draw the line where such subsidy is really justified. Maybe it should be sized to facilitate entry but should be phased out after the first year or so. In any case the management fee must not become a substitute for salary. Finally it must not be diluted into a mechanism that effectively returns the capital investment to the accelerator teams during a short period of time and If too high an equity stake.

6.1.2 Hypothesis H1b: Vigo Brand

Our hypothesis H1b stated that 'the Vigo brand adds sufficient value to attract prospective teams'. While we basically find support for this hypothesis, our interviews suggested that there are also opposing views present concerning the value of the Vigo Programme. Moreover, it seems that belief in the brand value has varied over time. In the following, we discuss illustrative evidence with regard to different views that relate to the brand value of the programme.

Our first observation concerning the brand value of the Vigo Programme is that the programme was seen by many operators as an important ingredient for the Finnish high-growth ecosystem. According to one interviewed accelerator manager the Vigo Programme was seen to change the operating landscape in a way that they saw it necessary to apply to the programme. Vigo was seen as able to attract new players into the field, meaning that those not involved might lose out in terms of access to deal flow:

> *'Our firm was established four-five years ago, that is before the start of the Vigo Programme. The idea was to help early-stage firms to expand internationally and to organise funding for these firms. The ultimate reason for us to apply for the Vigo Programme was that we saw that there is a risk that the best deal flow goes to Vigo accelerators i.e. that if you are not in the programme you won't get access to the best cases. I think that we would be doing similar things even without the Vigo Programme but I do not know whether we would do it in exactly the similar way.'*

Another accelerator manager adds another reason for being in the Vigo Programme. Their motivation to apply was to introduce their focus area into the programme. They were also looking for the brand value and for improving the procedures with public sector actors. He describes their relationship with the Vigo Programme as follows:

'Our analysis in the beginning was that in the food industry the scientific knowledge is at a high international level in Finland and there are innovations around. What is missing is the money and the knowledge of commercialisation. To fill in this gap we gathered a team in 2006, and in year 2009 a fund from University of Helsinki joined us. Thus we were active in early stage business even before the Vigo Programme. We joined the Vigo Programme because we thought that Vigo sounds like a good concept. First, Vigo accelerators were technology focused. We thought that our branch of business should also come part of the programme and we should see whether it works well in this context. Besides this we were looking for the brand value from of the Vigo Programme and that we would be able to 'streamline' our processes with public actors in the field (Tekes, Finnvera, Teollisuussijoitus). But definitely, one can't say that we are or we have been in the business due to the Vigo Programme.'

The above illustrative evidence suggests that the Vigo Programme offers brand value to management teams that already were involved in working with new business development. In addition, in the previous section it was already illustrated how this positive brand, together with financial incentives, has attracted also prospective teams into the acceleration business. However, it was also observed that the positive brand value is not self-evident. It seems that any negative experiences of entrepreneurs working with accelerators circulate quickly among potential entrepreneurs and may result in the Vigo Programme and its participants gradually losing credibility and momentum if not countered effectively. The statement by an accelerator that they want to streamline their processes with public actors through the Vigo Programme relates also to the brand value and brings us towards another important question. Specifically, it is obvious that accelerators that act at the boundary between entrepreneurs and public officials rapidly develop expertise in applying for funding from public sources. This information advantage may strengthen their position when negotiating management fees and ownership shares with prospective portfolio firms. However, an abuse of this power might end up undermining the brand value of the programme.

6.1.3 Hypothesis H1c: Coordination Services

Our final hypothesis H1c anticipated that 'the coordination services add value to prospective teams'. We found support for this hypothesis. Our interviews and analyses also suggest that this value-added has increased recently, as the Vigo Programme has progressed and started to organise workshops to discuss accelerator management issues. From a rather hasty start, the programme is now well on its way towards establishing shared understandings of what the accelerator business is about. Such shared understandings are important for efficient experience accumulation and exchange.

We have understood that the Vigo Programme did not have any co-ordination in the beginning, possibly because of the quick launch of the programme due to political pressure. Soon after the initiation of the programme, however, it was realised that a coordinator is needed that pulls together different actors and speaks to the public on behalf of the programme. To achieve this, Profict Partners was hired by Tekes to co-ordinate the programme.

Overall, coordination and facilitation services are experienced as useful, and there may be a need to offer even more of them. Formally, co-operation between accelerators has mostly taken place in dedicated accelerator meetings. Accelerators have been able learn from each other during these events. Besides these within-programme-events, the planning phase of the Vigo Programme was also found helpful. Some of the accelerator managers participated in the planning process and found this experience useful:

> *'What comes to co-operation, we have these team meetings and then we have for example forwarded some cases to another accelerator and have received cases from another accelerator, depending on whose focus it suits the best. And then we have an Israel trip coming and something else. In this co-operation the team of Seppo Ruotsalainen has done a good job as a 'primus motor'.*

> *'A good thing in the Vigo Programme has been that Vigo teams have something in common. When thoughts and ideas are being discussed, it improves our work. We do not compete with each other. I personally have learned quite a bit as I have been able to listen other people's thoughts. I really admire the accelerator, how they have organised their business.'*

Facilitating knowledge and experience exchanges seems particularly important during the early stages of field development, when there is still a lot of sense-making going on in terms of what the field is all about and what the optimal business models are for new venture accelerators. Given that one important objective of the Vigo Programme is to attract new, high-quality accelerator teams to the field, coordination services and field organising events are important.

6.1.4 Conclusions: Accelerator Team Dynamic

Overall, we may conclude that the Vigo concept has been attractive in the eyes of experienced venturing teams. Some prospective accelerators have entered the new venture acceleration field because of the Programme while others represent re-orientation of previously existing efforts and planned action through the programme. Thus, the Vigo Programme has added value in facilitating the emergence of a new venture accelerator field in the Finnish high-growth venturing ecosystem. Specifically, the most successful accelerator thus far, the Lifeline Ventures, explicitly stated that they would not have started their business, had it not been for the Vigo Programme. Given the small numbers nature of the accelerator and new venture creation business, only two or three 'hits' such as the Lifeline Ventures will justify the effort[2].

The interview material suggests that the incentives offered by the Vigo Programme have helped to overcome the market failure that exists in the area of new venture growth skills and early-stage venture funding. Most of the accelerators emphasised their hands-on approach with portfolio entrepreneurs. In many cases, this hands-on approach has been viable because of the Vigo management fee and sweat equity possibilities. Seasoned venturing professionals have plenty of opportunities and associated opportunity costs, and

[2] Note that this is not a commentary on the quality of the other Vigo accelerators. In general, all of the operating accelerators reviewed each exhibited their own distinctive strengths.

Vigo has helped overcome some of these at least. In addition to incentives, the brand value of the Vigo Programme, as well as the co-ordination services, have provided further value for the Vigo accelerators.

Finally, the interview material reveals significant on-going debates about what the accelerator business models should look like, what the different roles and practices are, and how the incentive mechanisms should be configured. The empirical evidence further suggests that some confusion still remains concerning the degree to which some key stakeholders view the accelerator field and its current practices as appropriate and proper. The latter findings are expected and consistent with the initiation stage of a new field development. In order for the accelerator field to make progress and establish itself as a self-sustaining organisational field, some challenges therefore appear to remain.

6.2 Externality Dynamic Between Vigo and Entrepreneurial Teams

In order to study the relationship between accelerators and potential entrepreneurs the second set of hypotheses explored whether Vigo was able to attract talented entrepreneurial teams to the field. For this to happen, the field has to offer sufficiently tractive prospects of real value added through new venture acceleration. The theory of entrepreneurial action suggests that the decisions whether or not to act are determined on the basis of perceived feasibility and desirability of the intended action (McMullen & Shepherd, 2006). Perceived feasibility refers to rational calculations regarding, e.g., availability of resources (e.g., financial, technological and human capital resources) and the likelihood that the intended action can be executed successfully. Perceived desirability refers to the expectation that the intended action will be perceived by others as legitimate – i.e., appropriate, proper and valued. The Vigo Programme can contribute towards these perceptions in several ways. The specific hypotheses formulated to guide our empirical inquiries were as follows:

H2 Vigo accelerators are able to attract talented entrepreneurial teams and thereby increase the supply of high-potential ventures in the Finnish high-growth venturing ecosystem

H2a Vigo accelerators are able to add value to their portfolio firms by accessing and mobilising financial resources towards their portfolio firms

H2b Vigo accelerators are able add value to their portfolio firms through managerial services

H2c Vigo accelerators are able to enhance the legitimacy and credibility of their portfolio firms, thereby enhancing their chances of success

H2d The Vigo Programme is fostering the accumulation of experience and start-up competence within the Finnish high-growth venturing ecosystem

Our interview evidence suggests that, during the initial phase of the field development at least, Vigo accelerators have been able to engage with high-potential entrepreneurial teams and attract them to the new venture accelerator field. Consistent with H2a, there was evidence that the Vigo accelerators' role in organising external finance has contributed to

this end. In line with hypothesis H2b, we found that accelerator managers' management skills have added value in many to the portfolio firms. Consistent with H2c, we detected early signals that the Vigo accelerators have been able to enhance the legitimacy and credibility of their portfolio firms. Finally, we found evidence that, as a whole, the Vigo Programme has contributed positively to the start-up community and experience accumulation as hypothesised in H2d.

These initial conclusions, while positive, are indicative of early progress only. Specifically, it is too early to tell whether we are observing an 'apple tree' effect (i.e., accelerators able to exploit bent-up supply of high-potential ventures) or whether we are observing a more self-sustaining dynamic. The challenge for Vigo remains to embed the new venture accelerator field deeply enough, such that its starts influencing the self-selection of high-potential entrepreneurial teams on a steady and sustainable basis. This objective likely requires cultural, structural and procedural adjustments within the university sector, high-growth venturing support functions, as well as with other relevant stakeholders.

6.2.1 Hypothesis H2a (Finance)

Our hypothesis H2a anticipated that the Vigo accelerators are able to add value to their portfolio firms by mobilising and accessing external sources of finance. The early evidence suggests that the Vigo accelerators have indeed been successful in this respect. In Chapter four we reviewed data on realised financial events and funding streams until June 2012. In summary, portfolio firms have received 60 m€ funding from private sources and 50 m€ funding from public sources.

These findings were also echoed in our interview data:

> *'We … were already negotiating about early stage funding with the accelerator and it appeared that we have to start a new firm in order to involve all people in a smart way. We were first thinking applications that would deal with people physical exercise and games. However, we soon changed our focus on tracking people moving. … When we realised that the revised plan had more potential we went [to the accelerator] to do pitching seriously .... Our knowledge about Vigo was weak and still is. We work closely with the accelerator however. From them we have got valuable support and advice in drafting the business plan and also now when we have applied for more funding. In the beginning, when it was clear to us that we want the larger founding team for whom we also want to pay salary we saw the need for funding. Thus, we also met other investors, also venture capitalists abroad. The things just went so well with this accelerator that we have kept with it. But I think that we would be doing the same thing.'*

This and several other examples show that the Vigo accelerators add real value to their portfolio firms, and also, that they address real funding needs. Although many of the cases would have moved forward even without the accelerator, there is good evidence that the Vigos have increased the ambition level of their portfolio firms, and also, helped these to design more robust and scalable business models. Further evidence is shown in the survey data, as reported in Chapter 7.

Although many portfolio firms re-orient existing effort rather than representing de novo activity, the Vigos still add value. We observed a number of mechanisms through which this outcome materialised:

- The accelerators had a positive effect on the ambition level of the portfolio firms
- The accelerators appeared able to mobilise funding in ways that likely would not have been possible through alternative venues
- In some cases, the accelerators were able and willing to introduce prospective portfolio firms to other accelerators whose specialisation provided a better match with the portfolio firm's needs
- There is also evidence of network effects, notably, in the form of experience exchange and mutual learning within the Vigo community

As noted in previous discussions, we do not yet know whether the financing dynamic is going to be self-sustaining. Because early-stage equity investments are made on the basis of expectations rather than realised potential, the venture capital industry is notoriously cyclical. On the one hand, this means that by generating a little 'buzz' it is possible to influence funding flows, and we believe that Vigo has had some such effect alongside with other similar developments such as the Aalto Centre for Entrepreneurship, the Start-Up Sauna and the recent high-profile successes in the mobile gaming industry (e.g., Rovio and SuperCell). Thus, some buzz is good, although history shows that it can easily turn into froth, and we may soon be on the verge of another bubbly phase in the venture capital sector development. On the other hand, therefore, the cyclicality of the venture capital sector warrants some caution, and Vigo should carefully monitor signs of incautious and speculative entry by accelerator and entrepreneurial teams that have little prospect of success.

6.2.2 Hypothesis H2b: Management Skills

Our hypothesis H2b anticipated that Vigos are able add value for their portfolio firms through managerial services. We found supportive evidence from many cases, although evidence also suggests that this impact has not been as significant as in the case of fundraising. Sometimes, however, this aspect has been crucial for the start-up, especially when dealing with research spin-outs whose managers might have little or no managerial or venturing experience. This is illustrated in the example below:

> *'Our firm was founded in January 2012. We were practically a research group at the university and the firm was established on my research findings. We first met the accelerator representative in the end of 2010 when he was visiting our university. It is due to his support that we ended up founding a firm. If we had not founded a firm we would had most likely commercialised our findings in some other way. The accelerator manager got us to think big. It would have been easy to continue on a project basis – to offer our technology for different kinds of applications. Now we are going forward in a more generic way. For us it is natural to think not only about Finland but about opportunities globally.'*

Another example similarly illustrates the value of managerial services, not only in terms of contact networks, but also, in terms of raising ambitions:

'The origins of [our] firm are in the intellectual property rights (in the field of chemical wood processing) that were moved from Kemira Oyj to us around year 2005. In our case I see at as very important and positive thing that we are in the Vigo Programme. It brings another piece to the support network in the start-up world. I think that our firm would have been established otherwise as well but the speed would not been the same as now. The target setting has changed. We had an international approach originally but it has concretised due to the co-operation with the accelerator. I think it is especially through the board networks that we have gained from the programme and also through benchmarking with cases in the same industry.'

The accelerator value added typically takes the form of contact networks, business planning and business model design and governance. There have also been examples where an accelerator manager temporarily takes over the CEO role in the portfolio company. Otherwise direct contributions towards the substance of the business are less common. There were also a couple of examples where the portfolio firm felt that it had not received enough support to justify the management fee.

6.2.3 Hypothesis H2c: Legitimacy and Credibility

We also explored whether Vigos had been able to enhance the legitimacy and credibility of their portfolio firms. Similar to H2b, supporting evidence was observed, although not as widely as in the case of fundraising (H2a).

6.2.4 Hypothesis H2d: Community Learning Effects

In summary, our interviews with portfolio firms broadly support the second set of hypotheses that accelerators have been able to add value through various mechanisms. Thus, it looks that they have been able to fill the expectations to certain extent. The interview material reveals that accelerators are well positioned in their industries and other networks through which the relationships with portfolio firms have been formed. These observations indicate that accelerators have been seen as attractive partners. In some cases the firm has been more proactive and in other cases accelerator has been more proactive. In most of the cases other options have been available but the accelerator has been chosen as the partner. One can't argue that it is because of the Vigo Programme that the businesses have been started but that accelerators have been available in the market and seemingly have been able to attract deal flow.

From the specific mechanisms of adding value to portfolio firms the interviews reveal that organising finance has been the primary source of the value-added. This is in line with the original targets of the Vigo Programme that highlighted the importance of this topic. Besides this, it is fair to say that firms have gained from the management skill and overall improved their legitimacy in eyes of various interest groups. Accelerator managers have for example been able to improve the board work and corporate governance as well as the strategies of their portfolio firms.

However, while the interviews indicate an overall positive impact from accelerators on portfolio firms they further inform us about possible challenges in the accelerator-firm relationship. Entrepreneurs' comments about the negotiations with accelerators point that that the relationship between venture-capitalist like investor (accelerator) and a founding

entrepreneur is posed to multiple hazards and therefore it is not self-evident that matched pairs all prove to be success stories. As pointed out in the previous section to improve the starting conditions of the accelerator-firm relationship increasing the negotiation power and awareness of prospective entrepreneurial teams might be beneficial. Two examples presented in this section show that in reality things might go wrong….

Finally, the interview material reveals maybe less controversies and on-going debates about the targeted benefits from the accelerator- portfolio-firm relationship (cognitive legitimacy) than what was experienced in the previous section. Similarly the empirical evidence suggests that less confusion exists concerning the degree to which key stakeholders, the general public or government view the gains from the accelerator-portfolio-firm relationship as appropriate and right (socio-political legitimacy). Consequently, it seems that structural adjustments in the Vigo Programme's interfaces with various stakeholders have been prompted. The latter findings hint that in this respect the Vigo Programme has progressed within the initiation stage of the field development. However, in order for the accelerator field to make further progress and establish itself as a field of business both the cognitive and socio-political legitimacy should be still fostered.

6.3 Externality Dynamic Between Vigo and Potential Sources of Deal Flow

The third set of hypotheses explored the dynamic between the Vigo Programme and the university sector. For the Finnish high-growth ecosystem to work well, the translation of research findings to business models must work smoothly. The important issues in this interface relate to the transfer of IP and to spin-out firms; collaboration with important stakeholders such as university technology transfer offices; and strengthening an entrepreneurial culture in research institutions. The following set of hypotheses was therefore explored:

H3 Vigo accelerators are able to enhance the translation of research advances into high-potential new ventures

H3a The Vigo Programme is able offer contractual templates to ease the commercialisation of research advances

H3b University technology transfer offices work smoothly with Vigo accelerators

H3c The Vigo Programme helps foster an entrepreneurial culture in universities

Our interview evidence suggests (although weakly) that, during the initial phase of the field development at least, the Vigo Programme has had some impact on improving the mechanisms through which research advances translate to high potential new ventures. Providing partial support for H3a, we found that some contractual templates have been developed under the Vigo Programme. However we feel that these could be used more widely. In relation to H3b, evidence was mixed. On the one hand, Vigo was seen as a possible step further from the gates of the university in the commercialisation process. On the other hand, contacts to university officers and interviews with them suggested that the Vigo Programme was not widely known within universities. Perhaps because of this, we found no evidence that the Vigo Programme has had an impact on fostering an entrepreneurial

culture in universities. We next highlight illustrative evidence with respect to each of the three mechanisms.

Hypothesis H3a received some support. Contractual templates have been developed, and they are available for download in the Vigo Programme intranet. At least the accelerators have been able to benefit from these. One accelerator manager commented:

> *'What the Vigo Programme has brought to us: we have gained access to lots of information through Vigo meetings, we have got access to document templates and opened different kinds of doors, so in that sense it has helped us. We develop start-ups independent of whether Vigo types of programs exist or not. But in certain way it has had an impact on our operation.'*

Hypothesis H3b explored whether university technology transfer officers consider Vigo accelerators as partners. We found some supportive evidence for this from those universities we talked to. However, feedback was mixed. One university officer did not recognise the Vigo Programme at all but requested us to contact a person in the local business incubator. Those university representatives that were aware of the programme considered it as a potential avenue for their cases, as illustrated below. This interviewee also called for a more proactive approach by accelerators in their co-operation with universities:

> *'In my work in innovation transfer I have ran into Vigo through the couple of cases that we have been working out. In my work I am trying to build cases that may be potential Vigo cases. Concerning communication about the Vigo Programme if I think about my network outside the university and potential applicants there I think that they do have to dig the information. In our university there are two accelerators that have visited here. I think that their approach is that they come and see potential cases. Their approach could be more proactive.'*

Poor familiarity with Vigo might be an issue from the socio-political legitimacy perspective. The better the reputation of the Vigo accelerators, and the better known its success stories are, the more likely it will be that university researchers consider this option when stumbling upon interesting discoveries. Although this impact is not likely to be huge, it nevertheless would contribute to the overall Vigo dynamic.

Besides accelerators, the university relationships are formed and sustained through the Vigo portfolio firms. However, although many portfolio firms interact actively with universities, the Vigo Programme has not had a discernible effect on how this co-operation works:

> *'Well with universities (also applied science universities) and their research institutes we have had lots of co-operation. In R&D as well, quit a bit…. I think that in this area Vigo has had little impact.'*

Hypothesis H3c explored whether the Vigo Programme has helped foster an entrepreneurial culture in universities. This could happen, for example, through good visibility and by providing cases of successful commercialisation. Considering this aspect, one university representative pointed out that how entrepreneurship is fostered within a given university is their internal matter, not Vigo's:

> *'We focus on getting our own processes to work. Our package is not working at a moment. I do not think that the Vigo Programme has had any impact in this sense. We see Vigos as good partners to us. They support our work.'*

Thus, although many more structural adjustments are needed in the university sector for the technology commercialisation process to work efficiently, it does not seem likely that Vigo will play a major role in this respect, at least not in the short term.

In summary, the interview material suggests that the Vigo Programme has had only a minor role in increasing the translation of research advances into high-potential new ventures. Beyond the direct effect on new firm creation, Vigo appears to have had little impact in facilitating structural adjustments in universities. While contractual templates have been designed, they have been only applied by the Vigo accelerator teams. Concerning the Vigo Programme's co-operation with the university sector, the evidence was mixed. On one hand, many Vigo accelerators and portfolio-firms are naturally connected to certain research institutions and universities. On the other hand, we suspect that the awareness of university officers about the Vigo Programme is relatively weak and could be enhanced. A more proactive approach towards the university sector might also contribute to enhancing the entrepreneurial culture in universities.

The topic of firm governance is related to the creation of an entrepreneurial culture and the commercialisation of research advances. This is especially important topic for growth-oriented technology based new ventures. For example, when a venture capitalist gets involved with a particular firm, an extensive due diligence will take place. This process seeks to find out any weaknesses in the firm's business model, its operations, and its contractual basis. Venture capitalists are particularly sensitive to lack of clarity in IP ownership. New ventures are sometimes not sensitive to such issues. We suspect that the Vigo Programme might be able to play a role in making entrepreneurs more aware of such issues, for example, by incorporating such issues more explicitly in its training and support materials. Also the various contractual templates were created in accordance with the standards of the venture capital industry has contributed to this end.

Finally, the interview material revealed some controversy with regard to the different roles, practices, and forms of co-operation between Vigo Programme and research sector. Similar to other stakeholders, the Vigo Programme needs to maintain an ongoing conversation with universities to make itself better known and find the best ways to collaborate.

6.4 Externality Dynamic Between Vigo Accelerators and Sources of Venture Funding

A crucial element of a viable high-growth entrepreneurship ecosystem is the existence of sufficient flows of funding from the financial sector to the new venture accelerator field. These flows may take many shapes, such as direct equity investment by Finnish and foreign private investors, business angels, and venture capital funds; investments into early-stage VC funds by, e.g., the banking and insurance sectors and pension funds; funds-of-funds investments; and investment syndication. Some of these mechanisms may be triggered by accelerators themselves. Others may be attracted to the field by the reputation of the Vigo Programme and by accumulating evidence of attractive returns on investment. It is likely

that early on, most funding sources will be accessed through the personal contact networks of the accelerator teams, and more elaborated structures (e.g., funds of funds investments) will emerge once sufficient proof of concept has accumulated.

As discussed earlier, a key motivation for the Vigo Programme was that neither the management talent market nor the financial market was believed to work sufficiently well in the context of early stage technology firms. Used to high income, capable managers are typically not incentivised to join start-up firms. The financing problem is thought to arise because of the high commercial and technological risk associated with the venturing projects. Unless sufficient and sustained returns can be demonstrated, capital will continue to flee away from the sector towards more secure and predictable late-stage investments. The Vigo Programme was designed to overcome these problems by allowing management compensations to be subsidized from government funding and promising Vigo portfolio firms a preferred position when government financial involvement for risk-sharing purposes is discussed. To address this problem and increase the attractiveness of the high-growth venture sector for investment, the Vigo Programme may implement a number of different remedies, some of which have been tested while others have been proposed. These include:

- Participation in the technical risk of the Vigo portfolio firms
- Supplementing private funding with public subsidies (e.g., NIY funding)
- Acceptance of asymmetric returns to investment by public investors (several mechanisms are applicable, including asymmetries involving investor precedence; accepted returns; buy-out clauses; the timing of returns; and so on)
- Attracting wealthy accelerator teams into the sector with sufficient own capital to invest in the ventures

Our initial hypotheses regarding the externality dynamic between accelerators and possible financers explored whether the Vigo model is evolving towards financial viability. In practice this involved exploring whether the Vigo accelerators had been able to attract equity funding for their portfolio firms. This hypothesis was evaluated against archival data. In order to explore the broader dynamic, we also explored interview evidence from different stakeholders. One aim of the analysis was to understand whether the actors operating in the accelerator field had started to develop a shared understanding about the accelerator financial model. We also explored how the financial model worked and what the evolving roles, practices, and forms of financial collaboration were (i.e., cognitive legitimacy). We also assessed the degree to which key stakeholders, the general public or government viewed the financial model as appropriate and right (socio-political legitimacy). Finally, we assessed whether the requisite cognitive and structural adjustments in Vigo's interfaces with various stakeholders were occurring. Formally, the working hypotheses were stated as follows:

H4 Vigo accelerators are able to catalyse sufficient flows of capital to maintain the infrastructure required for successful operation

H4 Mechanisms are evolving to attract private investment in the Finnish high-growth venturing ecosystem

H4a A shared understanding is emerging among various stakeholders as to the role and operations of Vigo accelerators in the Finnish high-growth venturing ecosystem

H4b The ownership structure of Vigo portfolio firms provides for smooth integration of Vigo portfolio firms in the venture capital value chains

Our interview evidence suggests that the externality dynamic is gathering momentum consistent with Phase I of field development. Consistent with H4a, there was also evidence that private investments are being attracted. Also, a shared understanding concerning the role and operations of Vigo accelerators appears to be emerging, as H4b suggested. Similarly, as anticipated by hypothesis H4c, some (though not extensive) evidence was found that portfolio firms are being integrated to VC value chains. In the following we highlight illustrative evidence with respect of each of the three mechanisms (data pertaining to H4 having been shown in Chapter 4).

Our hypothesis H4a anticipated that mechanisms are evolving to attract private investment in the Finnish high-growth venturing ecosystem. Overall our interviews suggest that Vigo accelerators have been able to assist in organising private investments in Vigo portfolio firms. Survey and archival data support this evidence by providing more detailed information on the extent to which private investments have been attracted.

As a positive indication about the ability of accelerator managers to assist in organising private finance we saw that private finance was most commonly cited as a value-adding mechanism by accelerator managers. For example, the following quotes first a portfolio-firm founder explains the benefits from the accelerator-firm relationship. In this case founders were serial entrepreneurs. From early on the project seems to have advanced as planned. If the relationship would not had developed as planned, this firm would had continued with other investors. The Vigo Programme has had an impact on the emergence of the accelerator which has provided an alternative financial path for potential firms. From all possible alternatives this firm's choice was the accelerator. In the second quote, another entrepreneur confirms what was stated above but at the same time expects even more in the area of finance.

> *'We work closely with the accelerator however. From them we have got valuable support and advice in drafting the business plan and also now when we have applied for more funding. In the beginning, when it was clear to us that we want the larger founding team for whom we also want to pay salary we saw the need for funding. Thus, we also met other investors, also venture capitalists abroad. The things just went so well with this accelerator that we have kept with it.'*

> *'I would say that the most important thing we have received from the Vigo Programme relates to finance and the networks in that area. As a matter of fact this is what I would had expected even more: direct contacts to business angels in the seed phase and later to international VCs. I also think that a basic requirement should also be that these accelerators should be able to invest themselves. Those firms that do not have the money should not be in that business.'*

Similar sentiments were echoed in most of the interviews with entrepreneurs. Since the statistics from various sources demonstrate the inflow of private capital to Vigo portfolio firms, it may be concluded that 'Mechanisms are evolving to attract private investment in the Finnish high-growth venturing ecosystem'.

Our second sub-hypothesis H4b anticipated that 'a shared understanding is emerging among various stakeholders as to the role and operations of Vigo accelerators in the Finnish high-growth venturing ecosystem'. Overall our interviews provide some evidence that a shared understanding is evolving, as track records are being established and the most successful accelerator models identified. The interviews show, however, that some controversy continues to exist around this specific topic.

Concerning accelerator models, there were plenty of approaches. These are described in more detailed in Chapter 8. Here we just point out that many configurations are seen as appropriate for the accelerator industry at this stage. One model is based heavily on increasing the value of portfolio firms and the main emphasis in the accelerator operation is in organising finance (both private and public) for their portfolio firms. Because the earning model emphasises potential future earnings, some previous wealth is required in order to sustain operational costs. The interaction with portfolio firms is selective, in the sense that only when required, support and interaction with entrepreneurs will take place. This model may mean that large portfolio of firms may be managed, and it requires strong established ties with possible investors. However, this model also places important demands upon the accelerator team's skill. Consequently, from this operation mode it is possible to advance towards being a fund-management accelerator. One possible candidate from this operation mode explained their philosophy as follows:

> *'We have tried to look for such firms that we can make investment in – the best firms in the market. Not that we go into firms from which we receive money as management fee. In practice we made two years without any salary at all but invested all possible and impossible money we could get into these firms.'*

Another emerging accelerator concept seems to have been one with deeper involvement with fewer firms than what was described above. The incentives are also in value creation, but accelerator managers prefer a more hands-on approach, in which they participate in the firm operations more deeply than in the first accelerator model. A possible candidate accelerator for this model describes their approach in the following. As opposed to the first model, the interviewed manager does not see himself as managing other people's money i.e. being in the fund business.

> *'We have not changed our operation principles. More and more we think that we will not do the fund business, I do not feel that I am the right person to manage other people's money. I am an operative guy who likes to work with real cases. Why we came in is that we are eager to develop firms, and it would be nice to enjoy the upside. '*

The very opposite from the above accelerator model is evidenced by another accelerator manager who describes their accelerator to be in fund business – i.e. in managing other people's money. The accelerator utilises the management fee component to compensate low administration fees from managing funds. Thus in this model, the management fee can be seen as a subsidy from government to investors so as to make a small-scale fund management model viable. The accelerator manager describes their approach in the following:

'Our firm operated in fund area as e.g. investment advisor. In 2009 we applied to the Vigo Programme and established a fund beside with the accelerator. Investors include industrial investors and pension funds. The aim was to make ten investments from the fund to 'clean technology' firms that have international growth potential. The lifetime of the fund is 6+2 years. We came from the fund business thus it was familiar to us. The pitch for possible investors to our fund is that if you invest in our fund, every penny that you invest will go into our portfolio firms. There is no administration fee on our fund. The two components – the sweat equity possibility and management fee from firms made it possible for us to pay at least our bills.'

Still another accelerator manager explains how they applied to the Vigo Programme because they wanted to learn a standard way to do accelerator business. This actor was already active in the start-up scene before the Vigo Programme. They were well established in the industry with personal contacts to start-up in their focus area. Also they were interested in the finance opportunities that at least in the beginning they thought would be available through the public sector. The quote below illustrates how their rationale for joining the Vigo Programme was to gain insight in how to organise the accelerator business:

'In 2009 when the first application round came we thought that OK this could be an interesting thing. What was promised in the beginning and what the Vigo Programme has become today were quite different. We were not so much interested in the deal flow since we knew all the firms in our focus area through personal contacts. For us that time it was a bit unclear that how we should operate as an accelerator and we thought that maybe we could get the standard operation mode through the Vigo Programme. However, as far as I understand this was not what happened, instead all accelerators have quite different operation models. In the beginning there was also this promise that Vigo would be a way to finance accelerator business through public sector. We had this mode that we pay all the expenses from our own pockets. And as you work with start-ups this means that there are many years before the first exits come and you receive money. There were many iterations concerning how this would work but in the end a model was chosen in which a firm may pay management fees to accelerators and this may come from Tekes NIY funding. This caused harms all the time all accelerator firms and they were forced to find alternative ways to make the living. The options were raising traditional fund beside the accelerator, to fund the daily expenses from own pockets or do some kinds of more traditional consulting tasks. For us it was very helpful and interesting to participate in co-operation with public sector actor (TEM and Tekes) and other accelerators to get the insight and ideas concerning how things should be done. Economically we did not benefit from the Vigo Programme and it did constrain the cases that we should work with.'

As the above comments demonstrate, no 'dominant design' has emerged in the accelerator field in terms of accelerator models. Whether one dominant design will evolve remains unclear at this stage of the field development. It is more likely that several different models will emerge, adapted to different industries and different accelerator team profiles. The interviews nevertheless indicate that field-level sense-making and learning is taking place with regard to possible accelerator models, and best practices are being discovered. This on-going discussion is facilitated by the open culture in the Vigo Programme, and, for example,

through regular Vigo accelerator meetings. Alternative operation models are elaborated in more detail in Chapter 9.

The last sub-hypothesis H4c anticipated that 'the ownership structure of Vigo portfolio firms provides for smooth integration of Vigo portfolio firms in the venture capital value chain'. Overall, our interviews and archive material provide some indications that integration of Vigo accelerators and portfolio firms in the venture capital value chain is taking place. An indication from this are, for example, the received private investments into the Vigo portfolio firms. There are, however, also two issues that require continued attention. First, doubts were raised by some venture capitalists that the ownership share of the Vigo accelerators may occasionally be too high, leaving little room for follow-on investors to join in. Second, there were individual (though isolated) instances where anti-dilution clauses had been included in contracts between accelerators and their portfolio firms. Such anti-dilution clauses would deter follow-on investors from investing into the portfolio firm. Although neither issue was widespread, they nevertheless merit attention.

If the ownership stake of an accelerator grows too large, this may risk aggravating the early-stage venture capital market failure instead of alleviating it. This could happen if an accelerator firm receives too high a share in the portfolio firm too cheaply. A high ownership share would mean that there might not be room for a venture capital investor to enter the firm later. Early-stage venture capitalists want to ensure that the active management team holds sufficient equity stakes in their firm so as to be sufficiently incentivised by the prospect of capital gains. If the equity stakes held by the management team are too small, they may not have sufficient incentive to work hard to increase the value of the firm. If an external (i.e., not active) investor (such as an accelerator team) holds too large an equity stake (in practice, over 25-30%), this may leave too little equity for follow-on investors to invest in without risking excessive dilution. Buying out the accelerator team is not a feasible prospect, as venture capitalists avoid cashing out existing investors in early-stage rounds. This logic was discussed by an interviewed venture capitalist who explains in the following quote why they have not invested in any of the Vigo portfolio firms, although they know the Vigo accelerators and have even evaluated investment prospects. In addition to the 'sweat equity' problem, the interviewed venture capitalist describes what he perceives as unfair deal structures that they have encountered. He also cited how they have encountered anti-dilution clauses that seem not to make sense from the venture capitalist's viewpoint:

> *'We know these accelerators and have tried co-operation case by case. There are two issues that have killed our processes. The first is the 'sweat-equity' stakes which we have felt have been too large. In our philosophy the founding team should be heavily involved. If we have cases in which Avera has 25% and Vigo 10%, as we have seen, where does the venture capitalist fit in if you consider that the entrepreneur holds 30% and his financial manager 20%. This, we think represents a viable venture case. The second issue that we have really wondered in some cases is this 'dilution-protection' that some Vigo accelerators have had in with their shares. We have really not understood how this is possible! How is it possible that their share would not dilute when other owners' shares dilute!'*

In summary, our interviews provide confidence that the Vigo Programme is evolving towards financial viability i.e. that Vigo accelerators are able to catalyse sufficient flows of capital to

maintain the infrastructure required for successful operation. There is some evidence that private investments have been attracted to portfolio firms although great variation remains among accelerators in this regard. The Vigo Programme being young, evidence of follow-on investments has not yet had time to accumulate. Furthermore, varying views exist about the detailed mechanisms through which this investment activity should take place. What also remains an open question is whether the financial viability requires the continued participation of public sector agencies. This issue is examined more closely in the next section.

Finally, the controversies and on-going debates highlighted in discussions between Vigos and different stakeholders hint that also in this sense the field remains in the initiation stage. As such, some level of controversy is natural during field creation stage. In order for the accelerator field to become more established, it needs to entertain an active discourse with different stakeholders to advance the cognitive legitimacy of the field. In this respect, it is important to tolerate and explore different accelerator models, as one model is not likely to fit all sectors and all accelerator teams. This is what Vigo has done thus far. At the same time, it is important to remain vigilant and pay attention towards emerging practices that might raise controversy, and thus, hurt the emerging field's socio-political legitimacy. As highlighted in this section, some controversy lingers around the proper role and use of management fees, with different accelerators adopting different practices, and Vigo portfolio firms, finance industry players and other stakeholders occasionally highlighting examples of practices, the appropriability of which can be rightly questioned. This in spite of Vigo already having clarified the rules governing the use of management fees.

Enhancing legitimacy would require developing a more detailed and shared view on the mechanisms and principles through which the acceleration investment activity and accelerator dependent investment activity takes place. Once the specific role is clarified and openly distributed it may be that the field is becoming accepted with various stakeholders and consequently required structural adjustments prompted by them.

6.5 Vigo Venturing Dynamic

Finally, we explored the overall role of the Vigo Programme in fostering the Finnish high-growth ecosystem. Government interventions should always address an identified market failure. If a given market failure has been successfully plugged by a policy initiative, there may be scope for the government intervention to be withdrawn. We considered such issues when assessing the general dynamic set in motion by the Vigo Programme in the emerging accelerator field.

To achieve a self-sustaining dynamic, the Vigo Programme needs to succeed in facilitating mutual reinforcement and positive feedback among the various dynamics discussed in previous sections. First, experienced accelerator teams need to attract new high-potential ventures into the high-growth entrepreneurship ecosystem. If successful, these will help attract further accelerator teams and retain existing ones in the field. Third, this dynamic should reinforce the availability of equity funding, which should feed back to the attractiveness of the field for potential entrepreneurs and accelerator teams. Fourth, this dynamic should reinforce the adaptation of the research sector to support the accelerator activity and the continued participation of public-sector agencies in the field. Fifth, for the

accelerator field to evolve into a viable high-potential venturing ecosystem, both direct externalities and mutual reinforcement between these need to gain momentum.

The various sub-dynamics and associated hypotheses were discussed in earlier sections and some evidence found for most of these at least to the extent that is consistent with the first stage of acceleration field development. While this, as such, suggests that also the broader dynamic is gaining momentum we wanted to address this broader view through expert interviews. In specific the issue here is whether a self-sustaining dynamic may be achieved. Our final hypothesis (H5) was formulated as follows:

H5 This dynamic [that has been created by the Vigo Programme] boosts the creation of high-growth new ventures, which enables the entire dynamic

Our interview evidence suggests that the dynamic created by the Vigo Programme has helped boost the creation of high-growth new ventures, at least to an extent consistent with Phase I of the accelerator field development. However, whether this effect is able to support the entire dynamic on a continued basis, as further suggested by the hypothesis five, remains unclear at this stage. In the following we highlight illustrative evidence with respect to the overall Vigo venturing dynamic.

Our first expert rejected the idea that the Vigo Programme should come to an end in the near future. Moreover, according to this expert the level of public resources devoted to start-ups is not satisfactory currently. This expert suggested that an appropriate level would be around 100M€ annually as capital investments to promising Finnish start-up firms. This experienced start-up expert described the Vigo Programme and the requirements of the Finnish high-growth eco-system as follows:

> *'It is a good programme: there are competent people there. But structurally in my opinion there are not enough resources. In Finland perhaps 20Meur-40Meur annually is invested by venture capital funds to Finnish target firms. In Finland one should invest 100M€ annually for ten years in order for a decent self-sustaining market to emerge. If Lifeline Ventures were able to organise a 20M€ fund and administration fee is maybe 2,5 %, you can't do much with that. And it is difficult to protect your position when the VC round comes. Vigos could be from that 20-30%. An in addition of course then come the international investors' investment that are usually larger.'*

Another financial expert took a similar view that the current situation in early-stage finance is not satisfactory. According to his view there is plenty of room in the market for new investors to enter. However, the policy-makers must be sensitive that the public intervention does not perpetuate the market failure. This would be the case if publicly supported accelerators prohibit private investors from entering the market[3]. This financial expert described the stage of the ecosystem as follows:

> *'I think that Vigo accelerators have been able to bring expertise in the sector. And if new funds emerge that will invest in start-ups, it signals that market failure has been addressed. It is a good question when it works without intervention. It requires that*

[3] No evidence of such a development was detected during the evaluation.

intervention kicks the market to make it go forward, what is sufficient, it is difficult to say. But two or three investors in this segment are not enough. I think there are two actors previously in the sector. There is plenty of room. So in a way we are far away from a situation that public intervention could come to end. At the same time, however, we need to pay attention that public sector intervention does not perpetuate the failure. That private money does not want to enter the market because it would face competition from public money. At worst the private money learns to be lazy: public sector first pre-selects the best cases and when there is also money available from them decides that let's take them first and then invest our own money.'

One of the interviewed university representatives touches upon the sustainability of the impacts that are being developed by the Vigo Programme. However, he insists on clarification of the roles of the accelerator models:

'If the aim is to improve the conditions in the early stage financing sectors through Vigos, I think that it might work. However, I think that there it is a little bit of confusion about whether we are trying to create accelerators or are we trying to create early-stage investors. You might also think that it is the founding teams that should be developed. That we need instruments that allow the founders to develop and take further their ideas. I think that the investment industry develops after we have good enough cases. In 'advisory –style' acceleration model the problem is that the knowhow does not stay within the firm.'

In summary, no strong support can be found for hypothesis five through the interview material. It seems that it would be premature for the Vigo Programme to be stopped at this point on the grounds that the market failure has been plugged. The accelerator field is still emerging, and we estimate that it needs at least another 2-3 years to achieve sufficient maturity and track record to allow a more accurate evaluation of this question.

6.6 Vigo and Accelerator Field Dynamics: Summary

Overall, the interview material provided many interesting insights into the Vigo Programme and the emerging accelerator field. In the following we summarise key insights from the hypothesis testing. Some of these are then elaborated further in the light of survey data in Chapter 7.

As regards the first dynamic, we conclude that the Vigo model has been attractive in the eyes of experienced and wealthy accelerator teams. Some prospective accelerators have entered early stage business acceleration because of the Vigo Programme. Others had been in similar business before and were seeking other benefits, such as brand value, access to deal-flow, improved co-operation with public agencies, revising and updating their current business model, or attractive revenue prospects.

The interview material suggests that especially the financial incentives appear to have helped alleviate the market failure that early stage firms lack management skills and funding. Seasoned management professionals have high opportunity costs, when they choose between alternative occupations. Vigo's management fee has helped overcome some of these, and thus, attract experienced accelerator teams to the field. The brand value of the

Vigo Programme, as well as its co-ordination services, have provided further value added for participants.

The analysis of the second dynamic supports the view that accelerators have been able to add value to their portfolio firms. The interview material reveals that the Vigo accelerators have extensive industry networks that they have been able to deploy to assist their portfolio firms. Our observations also indicate that accelerators have been seen as attractive partners by their portfolio firms. In some cases, the portfolio firm has been more proactive in initiating the first contact, and in other cases the accelerator has been more proactive. While these observations do not prove that it was because of the Vigo Programme that the portfolio firms had been started, the Vigo accelerators nevertheless appear to have had a positive impact upon their portfolio firms' growth motivation and their capacity to grow.

The interviews reveal that organising finance has been the primary form of value-added gained by the Vigo portfolio firms. This is in line with the original objectives of the Vigo Programme. Besides this, it is fair to say that portfolio firms have gained in terms of managerial services, and also, that they have seen their credibility improve overall in the eyes of various stakeholders. Accelerator managers have, for example, been able to strengthen the governance and the strategies of their portfolio firms.

However, while the interviews indicate an overall positive impact from accelerators towards their portfolio firms, they also inform us about possible challenges in the accelerator-firm relationship. Entrepreneurs' comments about the negotiations with accelerators reveal that the relationship between an accelerator and a founding entrepreneur can also be subject to multiple hazards. Specifically, accelerators enjoy an experience and information advantage when negotiating the terms of their participation with a prospective portfolio firm. While the default starting point in such a conversation is co-alignment of both parties' interests, accelerator teams might be tempted to introduce clauses that are within their own best interest but not necessarily in the portfolio firms' interest. For example, anti-dilution clauses would protect the accelerator's equity stake against dilution, but they could also deter any venture capitalists from investing into the firm in follow-on rounds. So as to improve the starting conditions of the accelerator – portfolio firm relationship, enhancing the negotiation power of prospective entrepreneurial teams therefore appears beneficial. In practice, this would mean further improving prospective portfolio firms' awareness of the potential hazards and trade-offs associated with external equity investments.

The analysis of the third dynamic hints that the Vigo Programme has had only a minor role in enhancing the translation of research advances into high-potential new ventures. While contractual templates have been designed, they have been only applied by the Vigo accelerator teams and not more widely by the universities. Concerning the Vigo Programme's co-operation with the university sector, the evidence is split. On the one hand, many Vigo accelerators and portfolio firms are naturally connected to certain research institutions and universities. On the other hand, we suspect that the awareness of university officers about specific details of the Vigo Programme is relatively weak and could be enhanced. A more proactive approach of the Vigo Programme towards the university sector might also contribute to enhancing the entrepreneurial culture in universities. Of this we did not find any evidence currently.

The analysis of the fourth dynamic suggests that the accelerator field appears to be evolving towards financial viability – i.e., that Vigo accelerators are able to catalyse sufficient flows of capital to maintain the infrastructure required for successful operation. That said, the field is not there yet, and there is no guarantee that sustained financial viability will eventually be reached. There is some evidence that private investments have been attracted to portfolio firms, although the programme is still young and there is great variation among accelerators in this ability. Furthermore, varying views exist about the detailed mechanisms through which this investment activity should take place. What also remains an open question is whether sustaining financial viability requires continued public sector intervention.

The analysis of the fifth overall dynamic leads us to suspect that financial viability requires the participation of public sector intervention at least until the end of the originally envisioned life span of the Vigo Programme. The accelerator field is still emerging, and we estimate that it takes at least another 2-3 years to achieve sufficient maturity and track record to allow a more accurate evaluation of whether or not continued public sector participation is required, and if yes, in which form.

7 Vigo Performance in the Light of Self-Collected Indicators

In order to provide a comprehensive view of the accelerator cases as well as additional triangulation for some of the empirical evidence, data was collected from a variety of sources in addition to interview materials. To collect quantitative information from Vigo portfolio firms, a survey was carried out using a Webropol internet questionnaire. Data was also collected from the Voitto+ database, which contains the financial statements of Finnish firms, from entrepreneurs' LinkedIn profiles, and from accelerator web pages that provided semi-formal subjective resumes on accelerator managers' professional backgrounds. This accelerator-specific data, together with accelerator performance data, is presented in Chapter 8, where individual accelerators are analysed in more detail.

The survey was sent to 60 firms that were thought to be in the portfolios of Vigo accelerators. The survey focused on:

- participation and interaction in the Vigo Programme;
- benefits from accelerator–firm cooperation;
- impact on growth orientation and resource mobilisation;
- operative outcomes;
- growth breakthroughs; and
- ownership and finance.

After two reminders were sent, answers from 23 firms were received providing a response rate of 38 percent. This can be considered good although the distribution of responses is skewed. The respondents represented different accelerators as follows: Lifeline Ventures,11 responses; Cleantech Invest, 6 responses; KoppiCatch, 3 responses; Vendep, 2 responses; and Veturi, 1 response.

7.1 Participation in the Vigo Programme

The first two survey items inquired about participation in the Vigo Programme. First, firms were asked how they had received the idea of cooperating with an accelerator. As statistics show, most of the 23 firms knew the Vigo Programme and simply contacted an accelerator. None of the firms applied because of advice from Tekes, and some firms were contacted by a Vigo accelerator. This result is in line with the view that accelerators have been well established in their markets and have been able to attract deal flow from prospective portfolio firms.

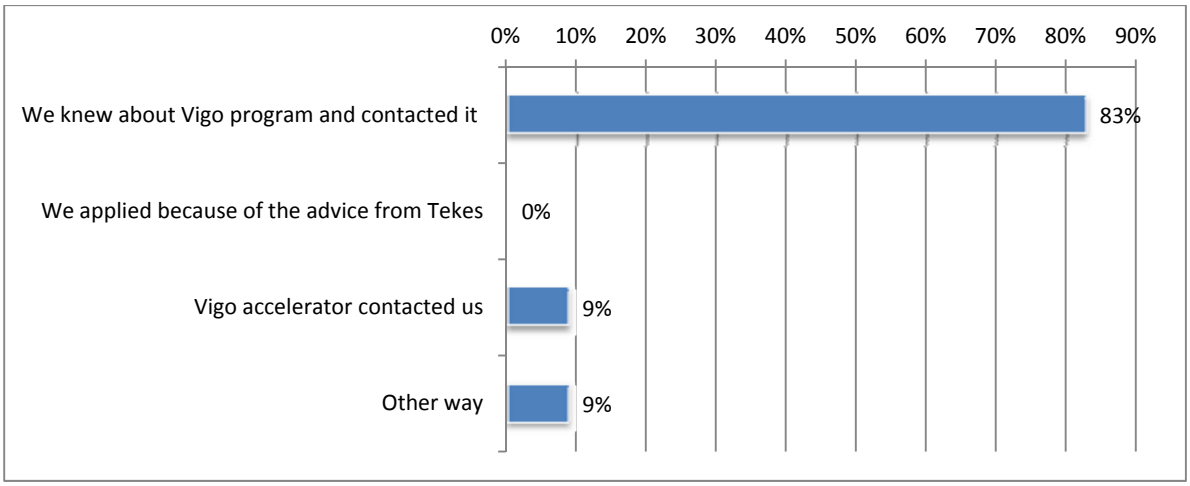

Figure 5 From where did you receive the idea to apply to the Vigo programme?

The next item inquired about the time (year and month) when the firms started their Vigo project. Responses show that 2010 was the most common year. Only a few firms started in 2009 when the programme was launched. During 2011 and 2012, still more firms have joined the programme.

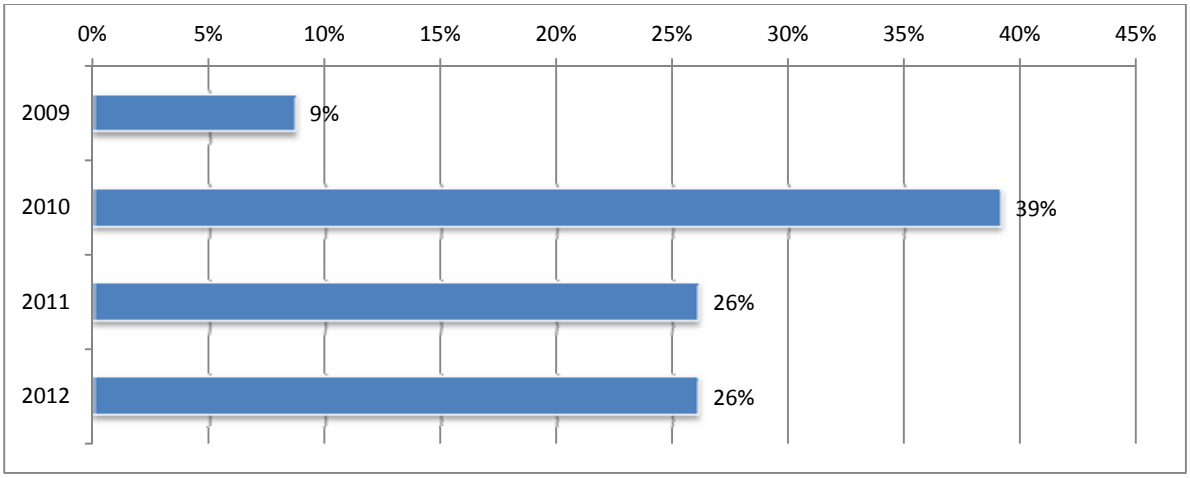

Figure 6 When did you start your Vigo project?

7.2 Interaction in the Vigo Programme

To gain an understanding about the Programme's interaction models, respondents were first asked how often they were in contact with their Vigo accelerator in board meetings, in operative work, or in other ways. Results show that, on average, board meeting contacts took place approximately once per month. In board work, this can be considered frequent interaction, and it reveals that accelerator managers aim to have an impact on their portfolio firms. In operative work, on average, one person from an accelerator participated on average 4.5 hours per week. This hints that relationships are close and hands-on. In other ways, such as contacting investors, interactions took place on average 2.8 hours per week.

Table 3 How often are you in contact with your Vigo accelerator?

	Contact per month	Persons	Hours per week
Board meetings (23 firms)	0.7	-	-
Operative work (21 firms)	-	0.9	4.5
Other ways (e.g., contacting investors) (21 firms)	-	-	2.8

Subsequent questions referred to typical accelerator ownership shares in their portfolio firms. The results show that this varies considerably. The minimum ownership share was 1 percent, the maximum ownership share was 51 percent, and the average ownership share was 13 percent. In approximately half of the firms, the ownership share was less than 10 percent.

Table 4 How large an ownership share in the Vigo accelerator does your firm currently have?

	Average	Min.	Max.
Ownership share (23 firms)	13 %	1 %	51 %

During the evaluation project interviews, it was recognised that management fees and consulting fees are important mechanisms for facilitating interaction between portfolio firms and accelerators. Subsequent questions asked how much the portfolio firms had paid in management fees and consulting fees and for how long. According to the responses, 11 firms out of 23 had paid management fees while only three firms had paid consulting fees. Two firms responded that they had paid both management fees and consulting fees, and 11 firms had not paid any fees. This information indicates that between different firms there is great variation on fee practices.

Table 5 Management fees and consulting fees

	Eur Mean	Eur Min.	Eur Max.	Months Mean	Months Min.	Months Max.
Management fee (11 out of 23 firms)	3,000	0	9,000	8	0	22
Management fee (fee paying 11 firms only)	6,300	800	9,000	14	2	22
Consulting fee (3 out of 23 firms)	430	0	6,000	-	-	-
Consulting fee (fee paying 3 firms only)	3,300	1,000	6,000	-	-	-

Concerning the fee levels, the results show that for firms that paid management fees (11 firms), the average level was 6300 € per month, and the average duration was 14 months. For those three firms that paid consulting fees, the average level was 3300€ per month. The 12 firms that were paying fees had cumulatively spent 1M€. While there was one firm that had cumulatively spent 200k€ on fees, there were at the same time 11 firms that had not spent any money on fees. Thus, also in monetary terms, there is high variance between

firms. The same seems to be true for different accelerators: from the cumulative management fee sum of 1M€, one accelerator's share was 800k€ from six firms, and other accelerator's share was 150k€ from two firms. On average, these make 133k€ and 75 k€ per firm, respectively.

Table 6 Maximum cumulative management fees and consulting fees

	Eur Mean	Eur Min.	Eur Max.	Eur Sum
Management fee + consulting fee (23 firms)	43,600	0	198,000	1,002,000
Management fee + consulting fee (fee paying 12 firms)	83,500	3,000	198,000	1,002,000

Finally, subsequent questions addressed whether those firms that paid fees for their accelerators were differently satisfied in services they received compared to firms that do not pay any fees. Differences in opinion were examined between fee payers and non-fee payers with an independent-samples t-test for all relevant questions in the survey. There were no significant differences between these two groups. Thus, the fee payers do not seem to be either more or less satisfied with the services they receive from accelerators than non-fee payers.

7.3 Benefits from Accelerator Cooperation

To evaluate the benefits of accelerator cooperation, respondents were first asked how much the portfolio firms had perceived value from accelerators on relevant development issues (growth orientation, focusing strategy, organising finance, credibility, strategy implementation, board work, customer relationships, product and service development, governance, operative management, and recruiting).

Statistics show that there are five themes that the respondents appreciated the most. The first two, 'growth orientation' (average, 3.91) and 'focusing firm's strategy' (average, 3.7) relate to strategic issues. This hints that accelerators have been able to have an impact on managers' attitudes concerning growth and how to achieve it.

The third and fourth topics relate to organising finance abroad (average, 3.7) and organising finance in Finland (average, 3.68), respectively. This hints that accelerators have succeeded in what the Vigo Programme was designed for; that is, helping firms raise equity funding. The fifth highest-scoring item was credibility, meaning that, overall, accelerator cooperation had made portfolio firms more credible and legitimate exchange partners in the eyes of different stakeholders.

While it is clear that for various operational issues the Vigo accelerators may not have had an impact, it is interesting to recognise that the perceived value added for board work, governance, and customer relationships is at a relatively low level. However, it should also be recognised that few portfolio firms have real reference points in this regard.

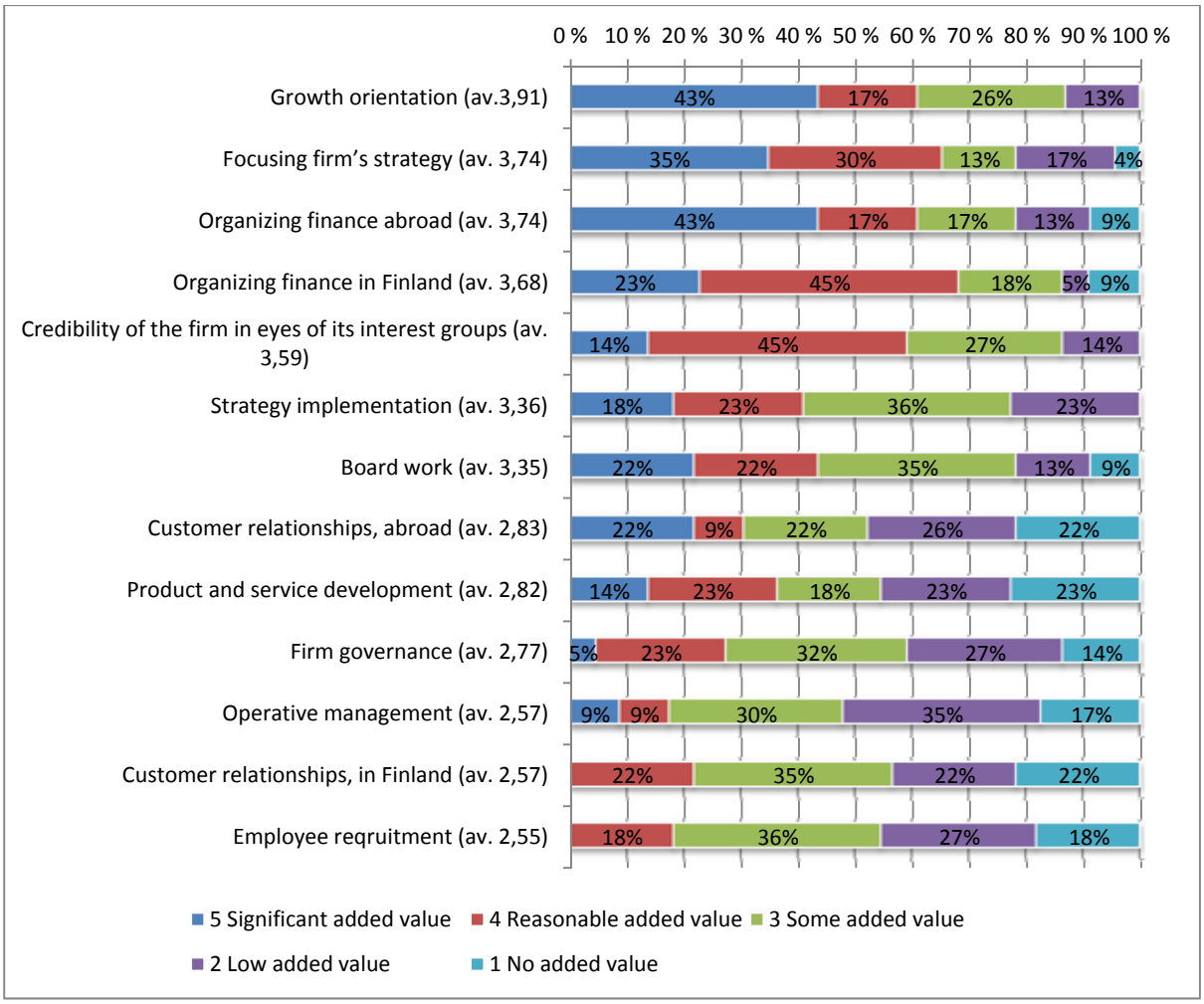

Figure 7 How would you evaluate the value added of Vigo accelerator on following themes?

In addition to learning from the Vigo accelerator, it was assumed that portfolio firms may be able learn from one another (although it was recognised that this aspect was not a Programme priority). Respondents were asked how much the portfolio firms perceived to have learned from other portfolio firms. Responses show that almost no learning spill-overs have occurred. Only in the case of international growth is the average above two on a scale of one to five where five indicates significant learning and one no learning at all.

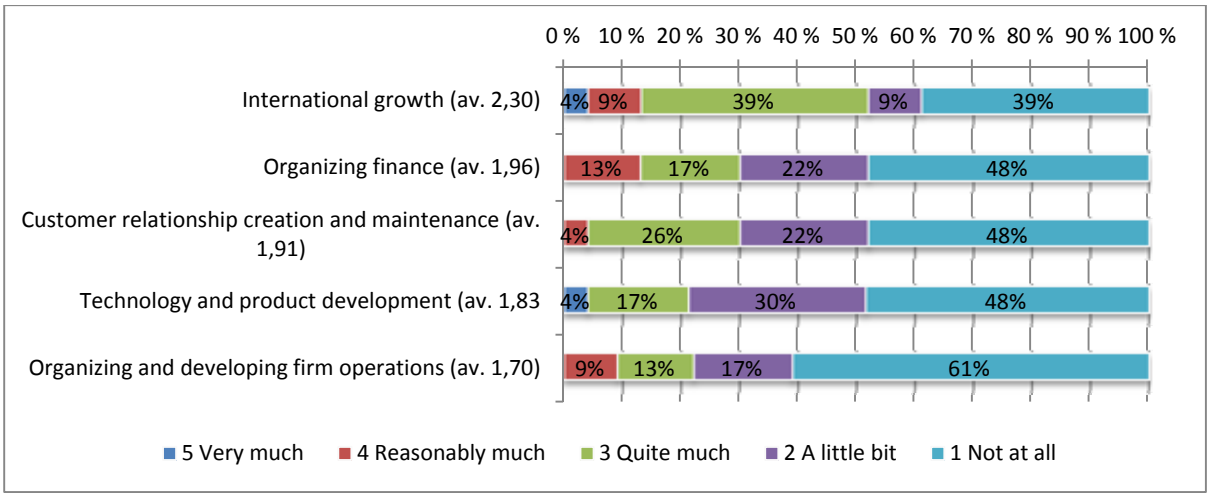

Figure 8 How much has your firm been able to learn from other firms participating the Vigo Programme?

7.4 Impact of the Vigo Programme on Growth Orientation and Resource Mobilisation

To further estimate the impact of the Vigo Programme on portfolio firms, questions were formulated about how respondents evaluated their growth orientation and resource mobilisation both before and after joining the Vigo Programme.

Growth orientation refers here to the importance of growth as a goal for a firm vis-à-vis other possible goals. High growth orientation means that rapid growth is a top priority. Risk is accepted in order to achieve growth. Low growth orientation means that safe, slow, and steady growth is a priority for management. Resource mobilisation relates to idea that organisational survival depends on its ability to procure critical resources from the external environment. Especially in technology-based new firms, this can be critical.

In order to measure growth orientation, representatives were asked to evaluate their firm's position concerning profitability versus growth, technical achievement versus growth, and longevity versus growth. Respondents were asked to think about their emphasis both prior to joining Vigo and at present. The results show that firms clearly prefer growth over profitability and longevity. However, concerning technical achievement versus growth, the same pattern cannot be observed. Instead, it seems that the respondents are not willing to give up technical work in order to achieve growth. This was expected, since a similar pattern has also been recognised in other new, Finnish, technology-based firms (Rannikko, 2012). It also seems that, in Vigo portfolio firms, technical achievement has been greatly emphasised and it is thought that competitive edge builds on that achievement.

If emphases are compared prior to and after joining the Vigo Programme, it is clear that all items exhibit higher means after the firm had joined the programme. The highest increase is observed for growth over profitability. Thus, it seems fair to say that Vigo accelerators have been able to make portfolio firms more growth-oriented, which is consistent with the findings in the previous sections.

Table 7 How would you evaluate your firm's position concerning the following statements before joining the Vigo Programme?

Label	**Measurement**							Label
End 1	End 1 ←←						End 2 →→	End 2
We aim for high profitability even if we had to sacrifice growth opportunities	1	2	3	4	5	6	7	We aim for high growth even if we had to sacrifice profitability
	-	-	4 %	9 %	22%	30%	35 %	
	Mean 5.91							
We aim for high technical achievement even if we have to sacrifice some profitable growth opportunities	1	2	3	4	5	6	7	We aim to take advantage of growth opportunities with any product or service that is demanded in the market
	-	13%	13	35%	26%	9 %	4 %	
	Mean 4.18							
We prefer longevity over growth	1	2	3	4	5	6	7	We prefer dynamic growth and internationalisation if the risks increase
	-	4 %	4 %	13%	22%	26%	30 %	
	Mean 5.59							

Table 8 How would you evaluate your firm's position concerning the following statements after joining the Vigo programme?

Label	**Measurement**							Label
End 1	End 1 ←←						End 2 →→	End 2
We aim for high profitability even if we had to sacrifice growth opportunities	1	2	3	4	5	6	7	We aim for high growth even if we had to sacrifice profitability
	-	-	-	4 %	17%	39%	39%	
	Mean 6.23							
We aim for high technical achievement even if we have to sacrifice some profitable growth opportunities	1	2	3	4	5	6	7	We aim to take advantage of growth opportunities with any product or service that is demanded in the market
	4 %	17%	-	30%	26%	13%	9 %	
	Mean 4.32							
We prefer longevity over growth	1	2	3	4	5	6	7	We prefer dynamic growth and internationalisation if the risks increase
	-	4 %	-	9 %	26%	22%	39%	
	Mean 5.86							

Concerning resource mobilisation, respondents were asked how easy it was for the firms to access competent managers, competent personnel, customers, distribution channels, international markets, and finance, both before and after joining the Vigo Programme.

Prior to joining, the easiest resources to access were competent personnel and customer relationships. Clearly the most difficult resource to access was finance. After the firm had jointed the Vigo Programme, the easiest resource to access was finance and then competent managers and international markets. Clearly the largest difference between the average before and after joining the Vigo Programme is in accessing finance. However, the averages of all items were significantly higher after having joined the Vigo Programme. Thus, these results hint that, overall, the Vigo Programme has helped portfolio firms to access various vital resources and especially finance.

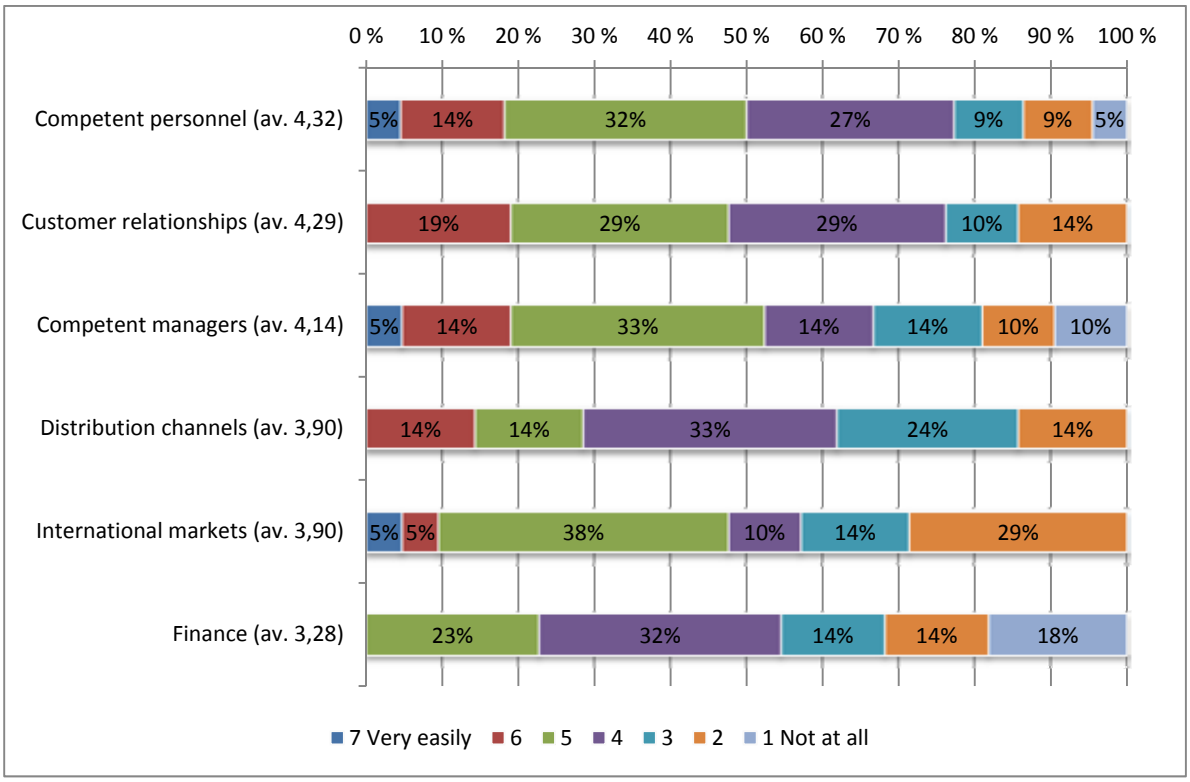

Figure 9 How easy was it for you to access the following resources before joining the Vigo Programme?

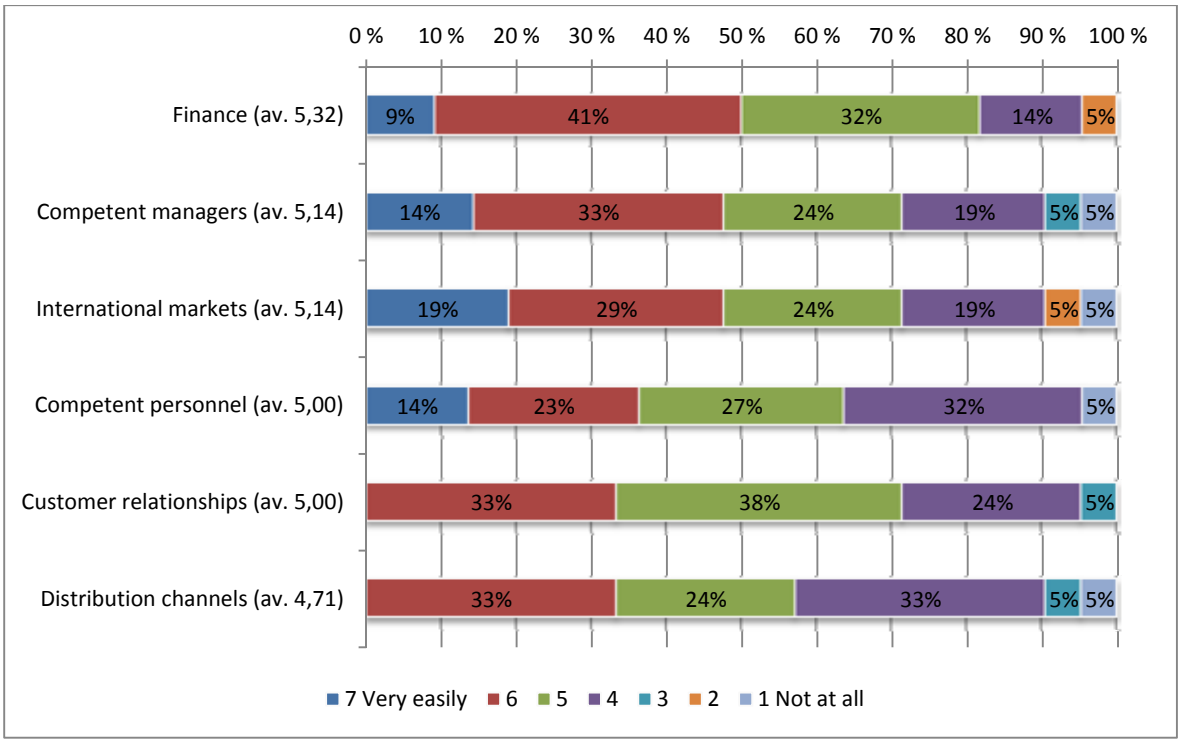

Figure 10 How easy is it for you to access the following resources having joined the Vigo Programme?

7.5 Operative Outcomes

Concerning operative outcomes, subsequent questions addressed research and development and internationalisation.

As an output from their development activities, the respondents had cumulatively introduced 38 new products or services and 37 improved products or services over the past two years. Only three firms had not introduced any new products or services, and only six firms had not introduced any improved products or services. The share of sales from products and services created less than two years ago was 80 percent on average. For 16 firms, the share of sales from products and services created less than two years ago was 100 percent.

Table 9 Research and development

Label	Mean	Min	Max	Sum
How many new products/services have you introduced over past two years? (23 firms)	1.7	0	5	38
How many improved products/services have you introduced past two years? (23 firms)	1.6	0	5	37
What % of your sales is created with products less than two years-old? (23 firms)	80 %	0 %	100 %	-

Concerning internationalisation, the firms were asked what share of their sales they had been able to generate from abroad during the last four years. Statistics show that the respondents have an international scope. In 2009, none of the firms had international sales. Thereafter, the share of international sales grew significantly.

Table 10 What is the share of international sales for your firm in different years?

Label	Mean	Min	Max
2009	0 %	0 %	0 %
2010	5 %	0 %	100 %
2011	21 %	0 %	100 %
2012	42 %	0 %	100 %

7.6 Market Opportunity

Concerning market opportunity, subsequent questions addressed how respondents felt about their market breakthrough possibilities. The natural expectation is that firms within the Vigo Programme see their breakthrough opportunity materialising in the near future; otherwise, they would not have been selected. To capture this aspect, respondents were asked whether the firms had achieved or were expecting a breakthrough. The results show that 19 firms expect a breakthrough in next one to two years. Three firms had just achieved a breakthrough, and one firm was expecting a breakthrough after three years.

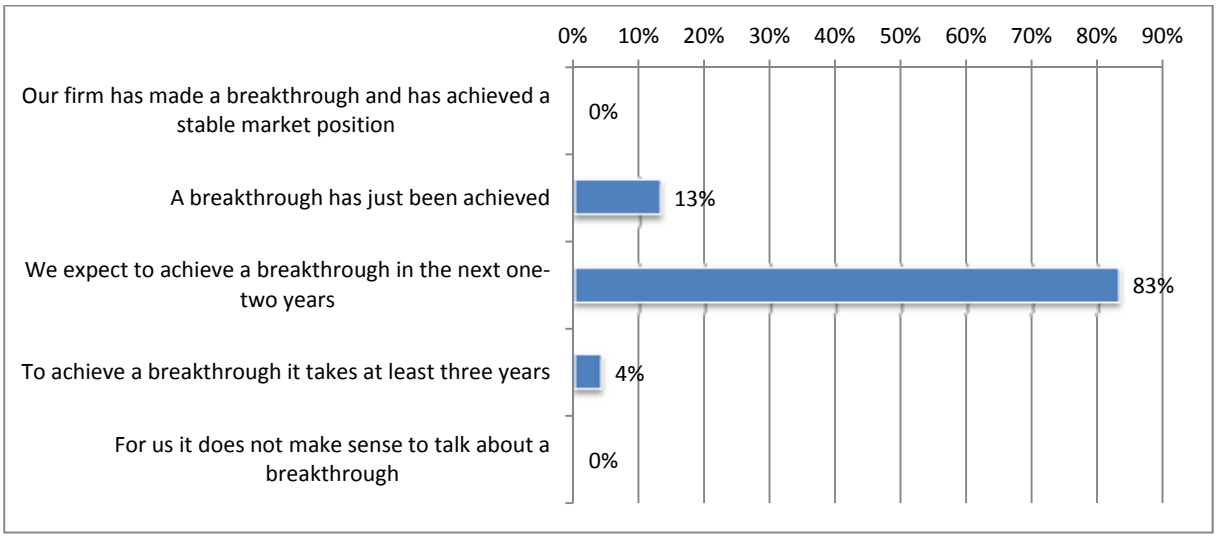

Figure 11 Has your firm achieved or are you expecting a breakthrough?

7.7 Ownership and Finance

The final survey area was ownership and finance. Subsequent questions addressed ownership distributions, then whether firms had received venture capital investments, and, finally, from what additional sources they had received funding and, if so, how much.

The responses show that founders and management have the largest share of ownership, 53 percent on average. This hints that, on average, portfolio firms represent 'venture cases' in which the entrepreneurs may be thought to have enough ownership to drive their incentives for value creation. However, it is not possible to determine how this share varies, for example, along with firm investment stages. The second-largest share was held by venture capitalists, 26 percent on average. Other parties: private investors, other firms and other owners have shares less than 10 percent on average.

Table 11 How is your firm's ownership divided between different parties?

	Mean	Min.	Max.
Founders and management	53 %	12 %	87 %
Employees	1 %	0 %	10 %
Venture capitalists	26 %	0 %	70 %
Private investors	8 %	0 %	25 %
Firms	8 %	0 %	37 %
Other	3 %	0 %	60 %

The second question considered venture capitalist investments. The figure below shows whether firms had received new venture capital during the Vigo Programme. Nearly two-thirds of the firms had received new investment. Although 25 percent of the respondents had not been able to receive new venture capital (although they had tried), the figures support the view that the Vigo programme has been helpful in raising venture capital.

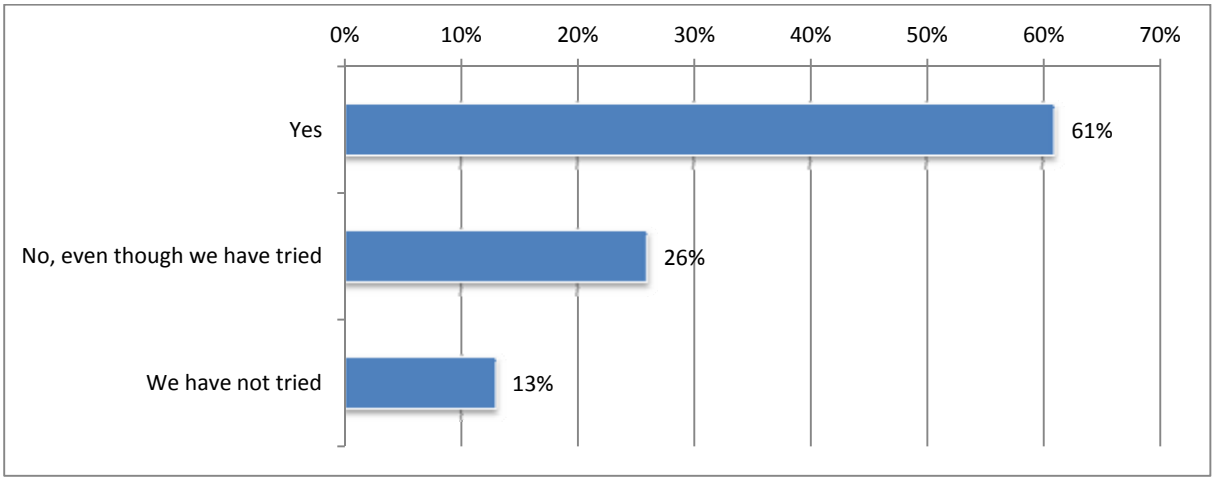

Figure 12 Have you received new venture capital investments during the Vigo Programme?

Survey statistics show that the most important sources of finance were Tekes (NIY), Tekes (other), and venture capital firms abroad. Each of these corresponded to about 25 percent of all financing. Other financiers made up one-quarter.

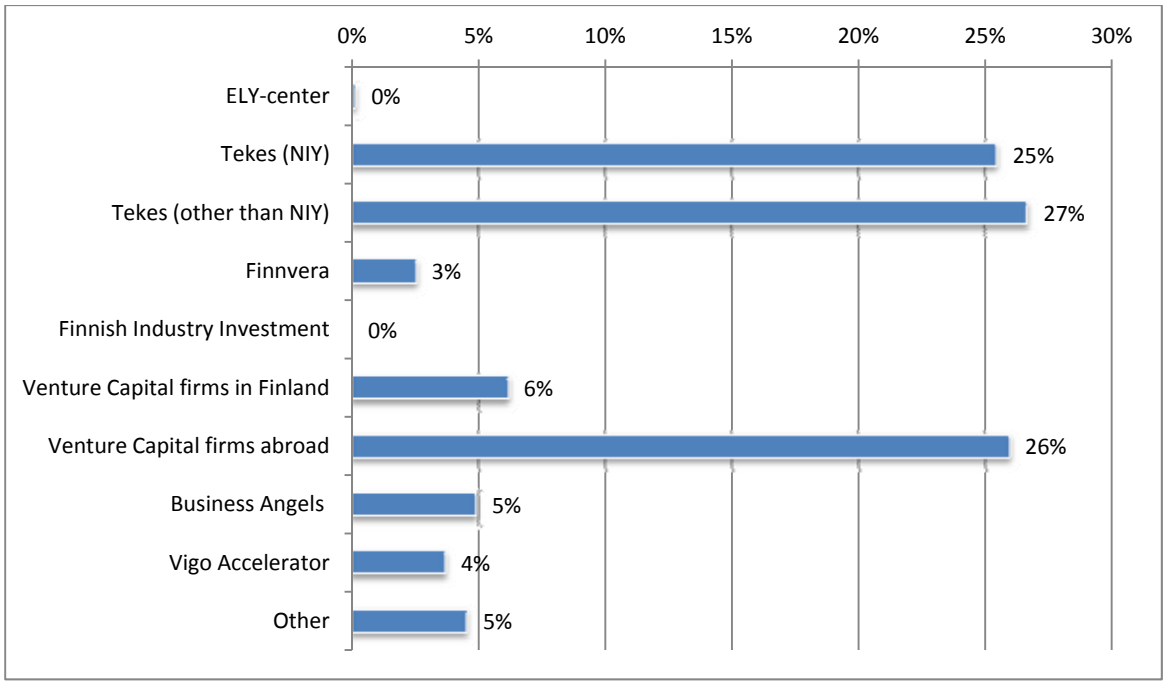

Figure 13 From where and how much have you received finance during the Vigo Programme?

Finally, Figure 15 shows the amount of finance from each financier to the individual respondent on average. Four firms that had received VC financing from abroad had received 2,5M€ on average. Average funding from VC firms in Finland (three firms) was approximately 0,8M€ The reported average sum from Tekes, other than NIY finance was 0,6M€ (16 firms), Tekes NIY finance 0,5M€ (19 firms), Finnvera 5,0M€ (two firms) and other finance 0,5 M€ (three firms). These figures are consistent with figures represented in chapter four.

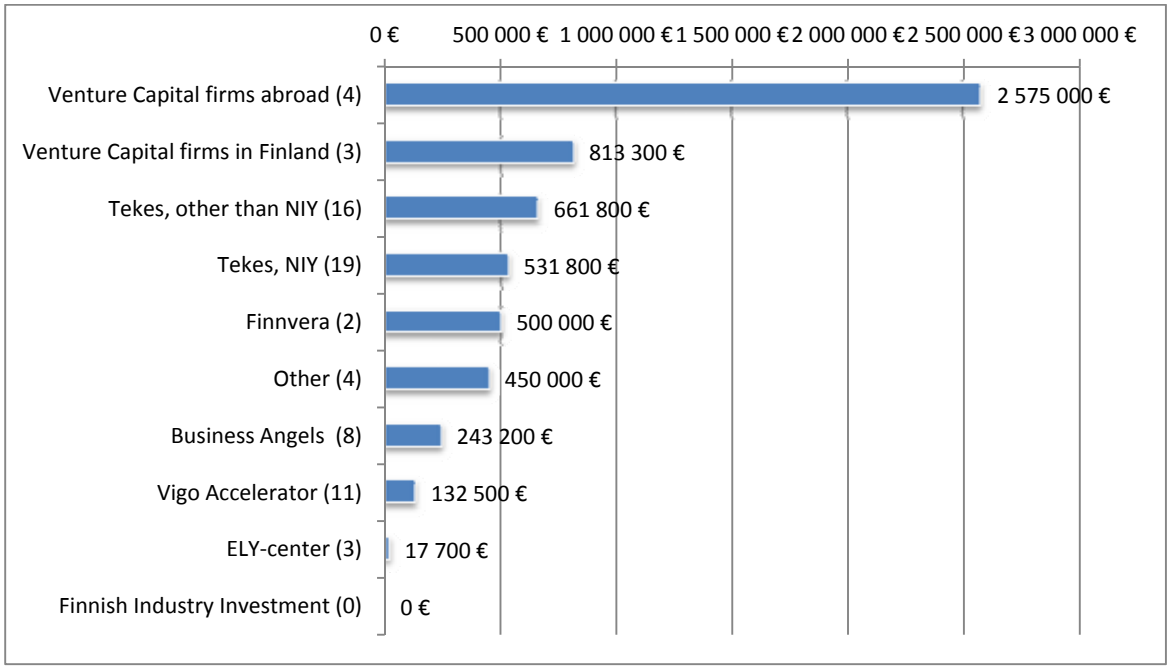

Figure 14 From where and how much have you received finance on average during the Vigo Programme?

In summary, the survey provides interesting information on different aspects of the Vigo Programme. However, in analysing the results, it is valuable to keep in mind the limitations and biases that may have influenced the results. As regards the distribution of responses, all except two were received from the four original accelerators' portfolio firms (Lifeline Ventures, Cleantech Invest, KoppiCatch, and Veturi); nearly half of the responses were received from the LifeLine Ventures portfolio firms . Thus, the survey reflects these firms' views, especially those of LifeLine Ventures' firms.

One important survey finding is the aggregate level of management fees, which was approximately 1M€ from those 23 firms that had responded to the survey. It is also interesting that this aggregate sum was not divided evenly between accelerators, but that two accelerators' shares made up almost the total, and their average fees per firm were substantially higher than for the other accelerators.

Taken as a whole, it may be concluded that accelerators have had an impact on various aspects of operation, adding value especially in strategy and finance. Strategic value seems to have come both through changing risk-taking and growth attitudes, and focusing the firms' business models. Although it was expected that respondents do not perceive value added for operational development, the low value added to topics such as governance, board work, and finding customers may be surprising. Little or no learning spill-overs occurred among the portfolio firms.

The survey responses portray Vigo portfolio firms as research-oriented, and placing a high value on technical achievement. They expect to be breaking through in the next one to two years, and have an international operational scope. On average, founders are the firms' majority owners; therefore, they should have an incentive to make their firms grow in value.

Finally, the responses suggest that instead of investing their own money, accelerators have been able to assist portfolio firms financially by helping raise external funding.

8 Analysis of Individual Vigo Accelerators[4]

In this chapter, individual Vigo accelerators are discussed in the light of various data sources. First, Vigo accelerators' cumulative performance is compared. This information comes mostly from programme administration performance summaries. Portfolio firms' financial development is also described using Voitto+ database information. Secondly, accelerator team backgrounds are discussed followed by a short description of each accelerator. Team background information was received mainly through LinkedIn profiles. The accelerator-specific analysis in this chapter serves as a starting point for the next chapter's characterising of different accelerator models.

8.1 Accelerator Performance

Previous analyses have revealed that different accelerators may cooperate, but they may also compete in terms of deal flow and both private and public finance, especially if they operate in the same industry. Ultimately, if a Vigo accelerator fails to perform, it won't be able to continue; therefore, it is interesting to analyse how different accelerators have performed in relation to each other. Here, performance is analysed in terms of:

1. number of portfolio firms;
2. total amount of own investments in the portfolio firms;
3. external private equity raised;
4. foreign private equity raised; and
5. public investment or grants received.

These are calculated as the total sum per accelerator as well as per portfolio firm and per accelerator's active months. The results are presented as a performance ranking among the Vigo accelerators, with '1' as the best performer and '11' as the worst. Equal results are given the same rank (the following rank is omitted), which, in practice, means that rank 9 is shared by the last three accelerators with no results yet.

While the figures used in this analysis may be objective, the resulting performance evaluation should not be considered definitive. Different accelerators have different business models. For example, having the largest portfolio does not automatically mean superior performance. Moreover, the initial figures will not as yet reveal how successful accelerators will ultimately be in creating high-growth ventures. This will only be seen after a few more years.

Lifeline Ventures

Lifeline Ventures works with health, web, and gaming firms, and boasts a portfolio of several successful game studios and publicized technology start-ups like SuperCell, GrayArea, and ZenRobotics. It is the biggest Vigo accelerator according to several size measures. During its time with Vigo, Lifeline has acquired by far the highest number of portfolio firms, gathered

[4] The analysis in Chapter 8 was carried out alongside with the Vigo evaluation by two Aalto University students, Andreas Bergenvall and Erik Berglund under the supervision of Erkko Autio and Heikki Rannikko.

the most external and foreign equity investment, and made the second-highest equity investments (surpassed only by Cleantech's fund investments). Also, the Lifeline portfolio firms have the highest cumulative revenue and number of employees. Lifeline and Cleantech are the only two accelerators that manage a fund, although Lifeline's fund had not yet started investing at the time of collecting data for this study.

Table 12 LifeLine Ventures' performance

Lifeline Ventures	Portfolio companies	Own investments	External private equity	Foreign private equity	Public investments
TOTAL SUM	1	2	1	1	1
PER PORTFOLIO COMPANY		6	2	1	4
PER ACTIVE MONTH	1	2	1	1	1

(36 months, since joining Vigo)

The Lifeline team consists of three members, all with strong entrepreneurial backgrounds. According to Timo Ahopelto, Lifeline works very closely with their portfolio firms. The approach is very operative with one of the Lifeline team currently serving as CEO in one of the firms, and another team member formerly having been CEO in two other firms. Lifeline emphasises profit as an accelerator by contributing to firm growth. According to Ahopelto, Lifeline's focus has been on finding firms in which they can invest themselves rather than firms they can bill for consultancy services. Indeed, the definition of a Vigo firm is one that they can contribute to by means other than just financial. Cumulatively, their firms generated approximately 3,3M€ in sales during 2011, with an operating profit 8,2M€. Lifeline Ventures Oy itself reports 0,3M€ turnover in 2011 and an operating profit of 20M€.

Table 13 Development of Lifeline Ventures portfolio firms (k€)

	Turnover				Gross Profit				Operating Profit			
Accelerator/firm	2008	2009	2010	2011	2008	2009	2010	2011	2008	2009	2010	2011
Lifeline Ventures Oy			523	305			468	281			68	26
Oncos Therapeutics Oy		157	360	258		144	310	217		5	-289	-1 011
MediSapiens Oy		11	0	79		12	-136	62		-69	-442	-316
Valkee Oy	15	7	495	1 429	15	-35	342	1 314	-4	-86	-557	-580
ZenRobotics Oy	107	55	59	207	82	66	91	-66	-89	-354	-455	-958
Enevo Oy				2				2				-155
Applifier Oy				0				1 591				-436
Sofanatics Oy			4	7			106	143			-439	-216
Grey Area Oy		29	18	196		44	11	469		4	-56	-873
Thinglink Oy			3	5			-76	91			-234	-496
Playmysong Oy				3				3				-112
Uplause Oy			163	171			139	260			10	-363
NonStop Games Oy				31				31				-38
Tinkercad Oy			0	0			-1	0			-16	-431
Supercell Oy			0	151			-43	521			-315	-1 849
GrandCru Oy												
Somia Reality Oy				0				0				-6
MakieLab Oy												
Somia Dynamoid Oy (IRC Galleria)	5 436	4 377	2 207	726	4 411	3 638	2 035	607	263	-359	-1 831	-215
Ductor Oy			0	15			-2	15			-50	-234
Total	5 558	4 636	3 309	3 280	4 508	3 869	2 776	5 260	170	-859	-4 674	-8 289
Firms in total	3	6	12	17	3	6	12	17	3	6	12	17

Cleantech Invest

As the name says, Cleantech Invest works in clean technology, ranging from a web portal to swapping goods to reuse of the ash from power plants. Like Lifeline, Cleantech Invest also manages a fund. Even though the fund's capacity is just a fraction of Lifeline's, nearly 65 percent has already been invested, which makes Cleantech Invest the top investor by all measures. In addition, Cleantech Invest has acquired the fourth-highest number of portfolio firms and gathered the fourth-highest amount of external equity investment. However, most likely due to the fund structure, the accelerator has not mobilised any foreign private capital.

Table 14 Cleantech Invest performance

Cleantech Invest	Portfolio companies	Own investments	External private equity	Foreign private equity	Public investments
TOTAL SUM	3	1	4	7	4
PER PORTFOLIO COMPANY		2	6	7	3
PER ACTIVE MONTH	3	1	4	7	4

(31 months, since joining Vigo)

There are four Cleantech Invest team members. Their backgrounds vary, but, taken as a whole, they are academic and are consultancy-based. Compared to Lifeline, Cleantech seems to take a more financial approach in its portfolio firm intervention. Cleantech invests through a fund which it manages. Cumulatively Cleantech portfolio firms generated approximately 0,5M€ sales in 2011, with an operating profit of 3M€. Cleantech Invest itself reports 0,5M€ in sales in 2011 and an operating profit of -59k€.

Table 15 Development of CleantechInvest portfolio firms (k€)

	Turnover				Gross Profit				Operating Profit			
Accelerator/firm	2008	2009	2010	2011	2008	2009	2010	2011	2008	2009	2010	2011
Cleantech Invest Oy	144	50	330	549	142	59	325	545	60	-32	17	-59
Savo Solar Oy			92	109			524	377			6	-1 109
Netcycler Oy		108	2	14		180	87	100		-21	-199	-791
Enersize Oy			27				192				-309	
Metgen Oy	16	77	119	120	0	32	229	288	-258	-301	-213	-283
BT-Wood Oy			0	18			0	244			-8	-170
Ultranat Oy		0	28	25		0	28	3		-19	-41	-160
Enercomp Oy	12	22		21	-6	-5		57	-156	-165		-208
Matox Oy	21	55	57	77	21	199	119	77	-118	-120	-292	-142
One 1 Oy			87	113			9	121			-62	-123
Total	49	262	412	497	15	406	1 188	1 267	-532	-626	-1 118	-2 986
Firms in total	3	5	8	8	3	5	8	8	3	5	8	8

KoppiCatch

KoppiCatch works in digital media, the internet, and mobile businesses and services, with a special focus on analytics and consumer intelligence. The accelerator ranks second in number of portfolio firms and third in both raised private equity and collected public investment. Also, KoppiCatch is the only accelerator with a successful exit during the studied period.

Table 16KoppiCatch performance

KoppiCatch	Portfolio companies	Own investments	External private equity	Foreign private equity	Public investments
TOTAL SUM	2	8	3	6	3
PER PORTFOLIO COMPANY		8	4	6	2
PER ACTIVE MONTH	2	7	3	4	3

(31 months, since joining Vigo)

However, the accelerator ranks last in terms of own invested capital among the accelerators with firms in their portfolio. This might be due to a high use of sweat equity. KoppiCatch aims to work very closely with its entrepreneurs, and all three managers work in different roles on almost every case. The team consists of three managers. Their backgrounds range from academic to hands-on managerial, mainly with experience with larger corporations, but also with smaller ventures. Cumulatively, KoppiCatch's portfolio firms generated approximately 2M€ in sales in 2011 and an operating profit of -3,2M€. KoppiCatch itself reports 0,2M€ sales in 2011 and an operating profit of -66k€.

Table 17 Development of KoppiCatch portfolio firms (k€)

	Turnover				Gross Profit				Operating Profit			
Accelerator/firm	2008	2009	2010	2011	2008	2009	2010	2011	2008	2009	2010	2011
KoppiCatch Oy		201	168	220		186	138	5		83	38	-66
Meetin.gs Oy												
DesignStory Oy			1	4			13	24			-252	-350
Cabforce Oy			3	25			-23	-18			-170	-466
Rapid Blue Solutions Oy	17	17	12	108	17	22	16	163	-9	-13	-53	-573
Happy Or Not Oy		2	60	221		0	34	184		-5	5	4
Joberate Oy			94	343			100	343			-87	-322
Fenomen Creator Oy (SpotZebra)	247	54	82	37	224	72	90	52	47	-27	9	-17
Steam Republic Oy (Mobile Backstage)	186	169	52	65	97	57	14	273	-209	-406	-417	-291
Arbitron Mobile Oy (Zokem)	0	22	79	1 212	-2	102	512	1 490	-62	-182	-107	-1 204
Total	450	264	383	2 015	336	253	756	2 511	-233	-633	-1 072	-3 219
Firms in total	4	5	8	8	4	5	8	8	4	5	8	8

Veturi Venture Accelerator

Veturi Venture Accelerator's portfolio contains businesses from the ICT field. Veturi ranks low in terms of own investments, but ranks second in terms of raised foreign private equity and public funding, which are two of the main objectives of the Vigo Programme.

Table 18 Veturi performance

Veturi Venture Accelerator	Portfolio companies	Own investments	External private equity	Foreign private equity	Public investments
TOTAL SUM	6	7	5	2	2
PER PORTFOLIO COMPANY		7	3	3	1
PER ACTIVE MONTH	4	8	5	2	2

(36 months, since joining Vigo)

The team behind Veturi consists of four members, of which at least three are former entrepreneurs. According to Jussi Harvela, Veturi was formed when he met Moaffak Ahmed and they realised that they both were assisting other firms. After finding two other partners, Veturi started its business; according to Harvela, he personally played a role in launching the Vigo Programme. Veturi has a very hands-on approach to working with its portfolio firms. This way of working resembles LifeLine. However, it is important to consider that Veturi's portfolio only consists of six firms compared to Lifeline's 23. Veturi normally invests in firms that are in the Vigo stage, meaning existing firms in need of early-stage financing. Cumulatively Veturi's portfolio firms generated approximately 1M€ in sales in 2011 and an operating profit of -1,7M€. Veturi itself reports 0,3M€ sales in 2011 and an operating profit of 122k€.

Table 19 Development of Veturi portfolio firms (k€)

	Turnover				Gross Profit				Operating Profit			
Accelerator/firm	2008	2009	2010	2011	2008	2009	2010	2011	2008	2009	2010	2011
Veturi Growth Partners Oy	153	281	350	316	153	279	350	316	55	100	91	122
Digital Foodie Oy (Foodie.fm)			331	591			627	856			-168	-326
Blaast Oy			0	0			50	234			-183	-323
HyperIn Oy		198	157	302		212	223	281		-76	-356	-138
Tuubio Oy				0				73				-65
Senseg Oy	8	0	160	72	8	23	607	524	-277	-325	-423	-807
Nosto Solutions Oy				0				-5				-6
Total	8	198	648	965	8	235	1 507	1 963	-277	-401	-1 130	-1 665
Firms in total	1	2	4	6	1	2	4	6	1	2	4	6

Food Process Innovations

Food Process Innovations (FPI) differs from the other accelerators in terms of its industry focus. Whereas most of the other accelerators are more or less focused on ICT and Internet solutions, FPI operates in the food industry. This is possibly the reason why FPI decided to leave the Vigo Programme.

When looking at the statistics for FPI, there are a couple of interesting points. First, FPI has the lowest ratio of own invested capital compared to capital invested by external private

entities. Second, the ratio between own invested capital and public funding is also at the lowest level. The reason for these numbers might have to do with FPI's industry focus.

Table 20 Food Process Innovations performance

Food Process Innovations	Portfolio companies	Own investments	External private equity	Foreign private equity	Public investments
TOTAL SUM	7	5	8	7	8
PER PORTFOLIO COMPANY		1	8	7	7
PER ACTIVE MONTH	7	3	8	7	8

(25 months, from joining Vigo to 12/2011)

There is a broad team behind FPI. The team members have different backgrounds ranging from academic to managerial. The entrepreneurial background appears, however, weaker than in the other accelerators. Based on the data, it is hard to exactly define how FPI works with its portfolio firms. At the very least it contributes financially, assists the founders with their experience, and introduces a broad contact network to the company. FPI might also appoint a managing director if needed. Cumulatively FPI's portfolio firms generated approximately 0,1M€ sales in 2011 and an operating profit of -0.2M€.

Lots (Love of Technology Strategies L.O.T.S.)

Lots operates in the field of media technology. Lots was one of the first three accelerators chosen for the Vigo Programme but, like FPI, Lots is no longer involved in the Vigo Programme.

Table 21 L.O.T.S. performance

Lots	Portfolio companies	Own investments	External private equity	Foreign private equity	Public investments
TOTAL SUM	7	6	2	3	6
PER PORTFOLIO COMPANY		5	1	2	5
PER ACTIVE MONTH	8	6	2	3	6

(30 months, from joining Vigo to 12/2011)

Lots was founded and is managed by three members with a strong technology background, and it was one of only a few business accelerators functioning in Finland before the Vigo Programme. At this time, as Miettinen explains, they did not have a formal model for how a portfolio firm should be accelerated. This was the primary reason for joining the Vigo Programme. Lots left the Vigo Programme after one year as they felt that there was no added value for them. Lots' involvement with its portfolio firms seems to vary depending on the firm.

Lots had three firms in their portfolio. (The accelerator reports seven firms in the statistics, but with only three reported investments and three reported company names, only those in the comparison were counted.) Miettinen says that some of the firms in their portfolio required full-time commitment by the Lots managers, while occasional meetings were enough for the rest. Cumulatively Lots' portfolio firms generated approximately 0,5M€ sales in 2011 and an operating profit of -1,9M€.

Table 22 Development of LOTS and FPI portfolio firms (k€)

	Turnover				Gross Profit				Operating Profit			
Accelerator/firm	2008	2009	2010	2011	2008	2009	2010	2011	2008	2009	2010	2011
Past Accelerators												
Microtask Oy (LO)		0	10	11		-36	-54	-229		-298	-887	-1 412
Transfluent (Xiha) (LO)	55	79	60	61	23	17	112	28	-210	-238	-171	-217
DrawElements Oy (LO)		301	387	374		289	357	423		10	5	-12
Namantal Oy (FPI)				0				-94				-200
Ruisvoima Oy (FPI)		0	11	72		-20	-40	-18		-64	-131	-205
Siruin Valley (FPI)												
Total	55	380	468	518	23	250	375	110	-210	-590	-1 184	-2 046
Firms in total	1	4	4	5	1	4	4	5	1	4	4	5

The Last Five Vigo Accelerators

The last five accelerators are Newentures, Vendep, Gorilla Ventures, Innovatum Partners and Royal Majestics Helsinki (RMH). They all joined the Vigo Programme in spring 2012 and have had only a few months of active time in the programme. However, both Newentures and Vendep were active accelerators before joining Vigo.

Newentures focuses on clean technology, energy, and ICT solutions for industry, and the managers have backgrounds from ICT, engineering, and banking. The accelerator was founded in 2008. Cumulatively, Newentures' portfolio firms generated approximately 0,3M€ sales in 2011 and an operating profit of -1,2M€.

Vendep focuses entirely on web-based services for consumers. The team has background from several larger, commercial sites, as well as larger ICT houses. The accelerator was founded in late 2006, although it is unclear when the actual acceleration of ventures started. Although Vendep has many firms in its portfolio, there seem to be little activity in these. Cumulatively, Vendep's portfolio firms generated approximately 11k€ sales in 2011 and an operating profit of -128k€.

As there is very little data on the last three accelerators (Gorilla Ventures, Innovatum Partners, and RMH), it is not possible to say very much about them. Gorilla Ventures works within ICT, Innovatum Partners within medicine or biotech, and RMH with fashion and lifestyle consumer goods. The latter two stand out from the otherwise ICT-heavy group of accelerators, and they might face a different set of difficulties and opportunities than the others. As for publicity and potential deal flow, Innovatum Partners seems to take an industry-inside approach, as there is virtually no public information available on the accelerator or its managers.

Table 23 Newentures performance

Newentures	Portfolio companies	Own investments	External private equity	Foreign private equity	Public investments
TOTAL SUM	5	4	6	5	5
PER PORTFOLIO COMPANY		3	5	4	6
PER ACTIVE MONTH	5	4	6	5	5

(49 months, since founding

Table 24 Vendep performance

Vendep	Portfolio companies	Own investments	External private equity	Foreign private equity	Public investments
TOTAL SUM	3	3	7	4	7
PER PORTFOLIO COMPANY		4	7	5	7
PER ACTIVE MONTH	6	5	7	6	7

(68 months, since founding 11/2006)

Table 25 Gorilla, Innovatum, RHM performance

Gorilla Ventures, Innovatum Partners, RMH	Portfolio companies	Own investments	External private equity	Foreign private equity	Public investments
TOTAL SUM	9	9	9	7	9
PER PORTFOLIO COMPANY		9	9	7	9
PER ACTIVE MONTH	9	9	9	7	9

(2 months, since joining Vigo)

Table 26 Development of Vendep portfolio firms (k€)

	Turnover				Gross Profit				Operating Profit			
Accelerator/firm	2008	2009	2010	2011	2008	2009	2010	2011	2008	2009	2010	2011
Vendep Oy	68	57	411	1 282	60	44	411	745	41	13	35	18
Meontrust Oy			33	5			14	9			-14	-121
Engajer												
Cloud'n'Sci Oy				0				0				-10
Vertaislaina Oy			0	6			0	6			-1	3
Kvartum Oy												
Kuukausierä Oy		0				0				0		
Suomen Taloportaali Oy												
Wellness Four Oy												
Blancspot Oy												
Total		0	33	11		0	14	15		0	-15	-128
Firms in total		1	2	3		1	2	3		1	2	3

Table 27 Development of Newentures portfolio firms (k€)

Accelerator/firm	Turnover				Gross Profit				Operating Profit			
	2008	2009	2010	2011	2008	2009	2010	2011	2008	2009	2010	2011
Newentures Oy		229	279	176		230	297	236		31	14	-136
Aqsens Oy				0				16				-419
Havainne Oy		0	126	249		0	54	220		-35	-294	-221
Effmag Oy			0	2			20	32			-43	-542
Eedu Oy				0				0				-7
Safelylocked Oy												
Methator Oy				0				0				-4
Pajat Solutions Oy												
Magion Oy												
Leanpark Oy	0	0	0	0	0	10	0	0	0	0	-3	-18
Total	0	0	126	251	0	10	74	268	0	-35	-340	-1 211
Firms in total	1	2	3	6	1	2	3	6	1	2	3	6

In aggregate, the financial figures of the portfolio firms suggest a decent amount of activity. The activity level has also increased, as new firms have joined the programme and older Vigo portfolio firms may have grown. In 2011, the cumulative operating profit was almost -20M€ negative, suggesting that the portfolio firms are very much in the building phase.

Table 28 Development of all portfolio firms (k€)

All firms	Turnover				Gross Profit				Operating Profit			
	2008	2009	2010	2011	2008	2009	2010	2011	2008	2009	2010	2011
Total	6120	5740	5379	7537	4890	5023	6690	11394	-1082	-3144	-9533	-19544
N	13	25	41	53	13	25	41	53	13	25	41	53

8.2 Accelerator Team Backgrounds

Accelerator team backgrounds were analysed because an accelerator's success is influenced by the experience of its managers. For success, an accelerator management team has to have solid experience and skills and an extensive contact network. Within the Vigo Programme, it may be expected that accelerator managers have these qualities because of the selection criteria: managers may be expected to be seasoned veterans that have operated in the field for a long time and established good industry reputations and networks.

All venture accelerators by design should be interested in growing the value of their portfolio; the available tools and methods for achieving this goal are similar regardless of the

focus industry. For example, most accelerators claim to work intensively and hands-on with their investments, and it is difficult to identify a difference in commitment based solely on the data available. That said, accelerators seem to be as different from one another as are the individual portfolio cases. The teams behind the accelerators have different skill sets, and this is reflected in the accelerator models.

To illustrate differences in team backgrounds, each accelerator manager was scored on a scale from 0 to 2 for experience (as self-reported by the managers in LinkedIn or similar) in six categories that were considered somehow relevant to venture acceleration. In this scale, '0' corresponds to no self-reported experience in the category, whereas '2' corresponds to extensive experience in the category. Only the pre-accelerator history of the managers was considered and points were granted primarily based on the number of entries within a category rather than size of the organisation or length of the task. General statements such as *'vast experience'* or *'experience ranges from A to B'* were mostly ignored if there were no specifics to back them up. The categories were as follows:

a) Researcher
b) Consultant
c) Developer (R&D)
d) Entrepreneur (small business)
e) Manager (large business)
f) Board member

The scores are subjective, based on publicly available data only, but they give an indication of focus and work with new ventures. Initially a seventh category, *Investor*, was also included, but the managers seem to either have very little prior experience of investment or just choose not to report it specifically and publicly. In either case, it was concluded that there was too much uncertainty for that measure to be included in the comparison.

In some cases, there was a difference between how many managers the accelerator reports in official statistics and how many people are described as managers in the accelerator's web pages. Taking everything into consideration, the term *manager* should refer to a person actively involved with investment in and acceleration of portfolio firms. This was the inclusion criterion used (see Appendix 2 for further details).

The results are illustrated as averages for each team in Figure 15. Overall, it seems that the accelerator teams report most experience with management of larger businesses, and most of them have experience from small business entrepreneurship and board work. Seemingly less experience is self-reported for categories: researcher, consultant, and developer. shows that all accelerators have at least one manager with some experience in the 'entrepreneur' and 'manager' categories. In addition, all accelerators except Lots and Lifeline Ventures have managers with experience as board members. It could be argued that an average score does not do justice to a diverse and well-balanced team, but it appears that an average will highlight an inclination toward a specific set of skills or preferred working methods. Overall, the statistics suggest that all accelerators have managers with sufficient and relevant business experience.

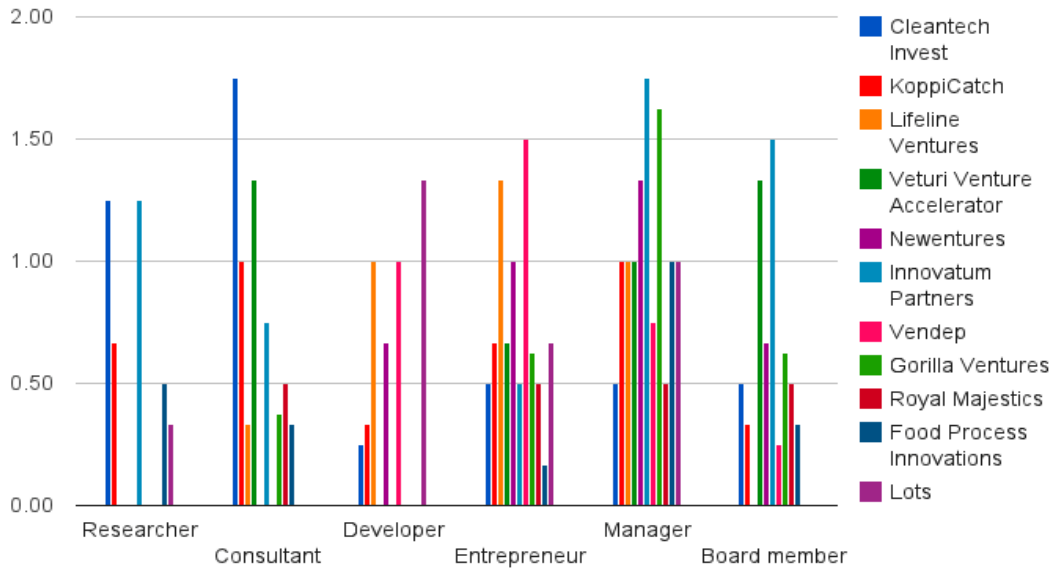

Figure 15 Team background score

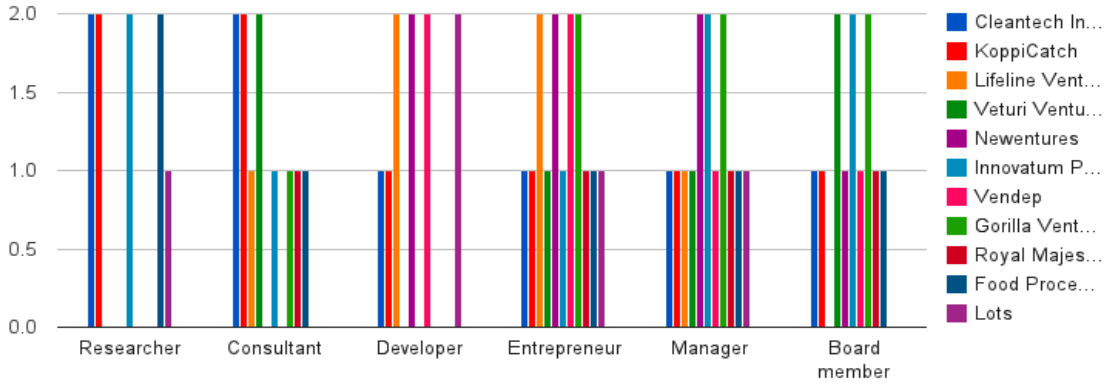

Figure 16 Team maximum score

In order to profile the different accelerator teams, the scores were plotted for each accelerator and the results compared. In the end, it was possible to distinguish five types of teams as illustrated in Figures 18–22:

- The ***Developer-Entrepreneurial teams*** had a higher emphasis on the *Developer* attribute than the others, and also scored high within *Entrepreneur* and *Manager*. Under this category, were management teams from Lifeline Ventures, Vendep, and Newentures. Lots could otherwise fit in the next category, but are placed here thanks to the highest score under *Developer*.
- The ***Managerial teams*** also score high on *Manager* and *Board member*, but they lack points under *Entrepreneur* and especially under *Developer*. The team members generally have a strong background from managerial positions, but perhaps fail to report a breadth of experience from R&D or entrepreneurial ventures. Under this category were the management teams from Gorilla Ventures and Food Process Innovations.
- The ***Research-Consultancy teams*** have an average score overall (and no zero categories), but score high on the attributes *Researcher* and *Consultant*. Under this category were the

management teams from Cleantech Invest and KoppiCatch. However, KoppiCatch scores fairly evenly and could perhaps be placed in a category of its own or in two categories.

- ***Advisory teams*** has two examples of the same profile, but with significant differences in magnitude. Both lack points under *Researcher* and *Developer*, but where Veturi Venture Accelerator scores very high on both *Consultant, Manager* and *Board member*, Royal Majestics scores low overall.
- Finally, Innovatum Partners represents its own category: ***Research and Management Professionals***. Although it seems clear that all accelerators are professionals within their own fields, the team behind Innovatum Partners scores highest on both *Researcher* (tied with Cleantech Invest), *Manager*, and *Board member*.

Figure 17 Developer-Entrepreneurial Teams

Figure 18 Managerial Teams

Figure 19 Research-Consultancy Teams

Figure 20 Advisory Teams

Figure 21 Research and Management Professionals

8.3 Accelerator Analysis: Summary

In the analysis below, all information received through interviews, survey, performance statistics, financial statistics, and background statistics is drawn upon in order to understand a particular accelerator business.

Cleantech Invest

Based on the interviews, most of the first six accelerators claim that their approach is very hands-on. This is an idea that receives some support in the questionnaire data. However, Cleantech Invest is an exception to this pattern. According to one accelerator manager, Cleantech Invest operates in the field of capital investment. During the interview, there is no mention of active operative involvement other than taking part in shaping the management team, which is supported by the questionnaire data. The accelerator gets higher points in the questionnaire for raising capital, an advisory position, and board membership, and it seems that the fact that Cleantech Invest makes investments from a fund that it manages means that its working methods resemble those of a traditional venture capitalist.

Lifeline Ventures

Although Lifeline Ventures also manage a fund, their approach is different from that taken by Cleantech Invest. Ahopelto from Lifeline Ventures says that the accelerator works very closely with their portfolio entrepreneurs, and their website claims: "*We are serial entrepreneurs. Being highly execution-focused, we work closely with the founders to realize their vision*" (Lifeline Ventures, 2012). However, taking the high number of portfolio firms into consideration, along with the fact that one of the three managers holds the CEO position in one of the companies, it is hard to imagine a very hands-on approach with all of the businesses. This conclusion is supported by the data from the questionnaire, as the hands-on component receives the lowest importance score of all the attributes when rated by the portfolio companies. It seems that Lifeline makes careful choices regarding which aspects and which of the portfolio companies to focus on and when. This argument is substantiated by the interview data, as Ahopelto mentions that good firms often do so well that there is no point in assisting them, and bad firms are so bad that they cannot be assisted. This is also supported by the questionnaire, as the portfolio firms provide a high spread of answers for the level of operative involvement from this accelerator. In addition, other accelerators mention that Lifeline has moved more toward fund management and a wide investment portfolio, which supports the interpretation that Lifeline employs a mix of approaches.

Food Process Innovations

The interview with Food Process Innovations provides no clear indication about how it interacts with its portfolio firms. Saapunki says that at least some of the deal flow consists of researchers with ideas that can be monetised. In this situation, FPI prefers to take control of the firm and the management of the firm by appointing someone to lead the firm.

KoppiCatch, Veturi and Lots

The last three of the first six accelerators –KoppiCatch, Veturi and Lots – seem to be rather similar in terms of their working methods. They do not make investments through a fund. They all claim that they are very operatively involved in their portfolio firms, and the number of their portfolio firms is similar. Lots might be considered slightly different from the other two accelerators, as it openly describes itself as an entrepreneur and founder of one of the businesses in its portfolio. On the other hand, Lots is still an accelerator in the sense that it is involved in multiple firms without engaging in an entrepreneurial role in all of them. Like Lots, Veturi works very hands-on, and one of the managers of Veturi was formerly CEO of one of the portfolio firms. It is worth noting that Ahopelto from Lifeline Ventures mentions both Veturi and Lots as being very operatively involved in their firms.

Also, KoppiCatch seems to take a similar approach where they actively take part in the business development of their portfolio firms. Unlike Lots and Veturi, where members of the accelerator are associated with specific portfolio firms, KoppiCatch's involvement seems to be more distributed. According to Oskari Lehtonen from KoppiCatch, each of the three managers works in different roles in almost every case. Since none of the KoppiCatch managers have officially been employed by any of the portfolio firms, the resemblance to Veturi and Lots can be questioned. However, according to the involvement described in the interviews, it can be argued that a parallel between these three firms can be drawn.

9 Conclusions and Recommendations

9.1 General Conclusions

Our evaluation suggests that the Vigo Programme is on course to meeting its early-stage objectives. The early-stage objectives have been met in terms of:

- Number of accelerators created
- Amounts of funding attracted to the Vigo portfolio firms – although this success is influenced by some highly successful cases
- Branding effect, with the Vigo brand perceived as valuable and a mark of quality
- Contribution to the creation of growth-oriented new ventures
- Connecting with public funding
- Starting a systemic process of experience accumulation in new venture development and growth

The Vigo Programme should be commended for its early success. By June 2012, it had attracted over 100 M€ investments in the Vigo portfolio firms. This is a major achievement, given that these are early-stage investments.

We also observe that the gap, as identified in the Vigo planning documents, appears real. There appear to be too few high-potential ventures in Finland successfully progressing the gap between product development and the tangible demonstration of market demand and follow-on investment readiness in the scale of 200k€ to 2M€.

Further, we observe that, consistent with the initial stage of organisational field development, there are a number of different accelerator models, and a 'dominant design' is still being searched. It is possible, even likely, that there will be several different models, with different governance implications. We will elaborate on these further down in this chapter.

While the early development of the Programme appears positive, this is not to say that there have not been issues, and also, that the field development will automatically continue as anticipated. Several challenges remain ahead – both in terms of clarifying the Vigo concept and in terms of continued development of the field. In terms of the latter, there is insufficient evidence at this stage to conclude that the observed early dynamic of the field is sustainable. Specifically, we cannot say:

- Whether we are observing an 'apple tree' effect, in terms of attracting accelerator teams and high-potential ventures
- Whether suitable financial models are eventually found to provide seamless connectivity with the venture capital value chain
- Whether the Vigo Programme will reach its mid- to long-term goal of at least doubling the number of investment-ready, mostly A-round ready ventures in Finland
- Whether the Vigo Programme will succeed in introducing a sustainable change in terms of financial flows towards the high-growth new venture sector in Finland

The above does not imply that we consider the outlook to be negative. We are, in fact, relatively optimistic. At this stage, however, it is still too early to firmly conclude either way.

Below we elaborate what we see as the primary challenges in effecting a successful transition from Stage I to Stage II in accelerator field development. Following this, we highlight specific challenges associated with the accelerator concept itself.

9.2 The Accelerator Concept: Does it Work?

From an institutional perspective, the Vigo Programme represents an attempt to introduce an embed a new organisational field into the Finnish high-growth venturing ecosystem: that of new venture accelerators. As a field creation exercise, the field is likely to follow a certain path and face distinctive challenges in different phases. These were discussed in more detail in Chapter 6.6 (page 53). At present, the field remains in emergence stage. This stage is characterised by intense sense-making, experimentation with different accelerator models and active discourse (and occasional controversy) among different stakeholders. The key challenges in this stage are to establish a shared identity for the new field, discover efficient models and practices, and establish a shared understanding with key stakeholders with regard to what the field is all about, how it contributes, and why it is needed – i.e., achieve cognitive legitimacy. From the coordination perspective, this means that different models should be tolerated; there should be sufficient flexibility to allow improvisation; the programme should actively monitor emergent practices and identify, codify and disseminate good ones; the field should record and advertise evidence of early successes; and the field should also address potential sources of controversy that, if left unattended, might undermine the field's legitimacy in the eyes of key stakeholders.

We find that the Vigo accelerator concept is novel and distinct from several other existing accelerator concepts, which typically address an earlier stage of venture development. Relative to most other accelerators, the focus of the Vigo concept is much closer to commercialisation. While exciting, this also creates challenges in terms of balancing between public goods and private profit-seeking. As the new venture accelerator field is still emerging, different accelerator models proliferate. Different practices are being tested, some with better success, some with less success. The field is still undergoing an intense sense-making phase, with different stakeholders trying to make sense of the new concept, adjust to it and discover the best practices when working with Vigo accelerators. We see obtaining cognitive legitimacy as a key prerequisite for achieving a stable, self-sustaining dynamic so that the accelerator field becomes self-sufficient. Importantly, this requires the different stakeholders adjust their operations, processes and practices to accommodate the new field – i.e., that the field achieves socio-political legitimacy. Achieving cognitive and socio-political legitimacy presents several challenges. We therefore recommend:

Recommendation 6	***The Vigo Programme should continue to tolerate and entertain (as it has done) different accelerator models and facilitate experience exchange between these.***

Recommendation 7	***The Vigo Programme should maintain a constant dialogue with different stakeholders to facilitate collective sense-making and thereby establish a shared understanding of what the new field is about. It needs to actively communicate this understanding to key stakeholders and to the general public.***

Recommendation 8	***While tolerating diversity, the Vigo Programme should also be vigilant in monitoring, and, if necessary, rooting out emergent practices that might threaten to undermine the viability or the legitimacy of the new field if left unattended.***

Recommendation 9	***The Vigo Programme should eventually (in this case, relatively soon) to start converging towards a number of accelerator models that should become the blueprint for subsequent accelerators.***

Recommendation 10	***The Vigo Programme should pay particular attention to the delicate balance between public good and private profit-seeking, mindful that it operates closer to the market than many of the existing new venture accelerator initiatives do.***

By introducing the accelerator model to the Finnish high-growth venturing ecosystem, TEM is trying to strike a delicate balance between public subsidies and private-sector profit-seeking. This challenge exists with all innovation-oriented public interventions but grows more delicate near the marketplace. Although the case for subsidising R&D is widely accepted, challenges arise when trying to balance the need to incentivise accelerator teams and entrepreneurs with the generation of public goods. The Vigo Programme has introduced several devices to address this challenge: management fees for accelerator teams; priority processing of support applications by Vigo portfolio firms; and participation in equity funding in the Vigo portfolio firms.

The Vigo Programme has already learned that the combination of management fees with equity stakes can create agency problems. Because Vigo accelerators buy early-stage stakes in their portfolio firms, the required investments are often small. This makes it possible, in principle, to recover equity investment in the form of management fees in a relatively short period of time – effectively producing publicly subsidised equity stakes in start-up firms. To counter this possibility, the Vigo Programme has instituted limitations as to the level of management fees that can be charged at different levels of equity ownership: the greater the equity stake, the smaller the allowable management fee.

This evaluation supports such limitations. We also believe that it is probably necessary to institute strict time limits for the use of management fee. Although the management fee may be justified as an incentive in cases where a talented accelerator team has insufficient funds to operate without some sort of income, this practice is likely justified in rare cases only. On the other hand, a temporally unlimited management fee could well give rise to agency problems, such as:

- An incentive to keep an unviable venture going in the interest of collecting management fees
- Inappropriate ‘milking’ of the fee to subsidise the equity investment
- An incentive to assemble a larger investment portfolio than the accelerator team has capacity to effectively add value to

In short, a steady-state management fee risks diluting the incentive to push for capital gains through value increase. Such agency problems may be exacerbated because of the lack of experience by the entrepreneurial teams, which may prompt them to give up equity too cheaply without demanding sufficient sweat equity. Therefore, although we support the concept of management fees and find it to provide an important incentive for new accelerator teams to join the field, we recommend:

Recommendation 11	***The Vigo practice of imposing limits to the use of management fees as a function of accelerator's equity stake in the portfolio firm should be continued.***

Recommendation 12	***Vigo should explore the possibility to limit the possibility to charge management fees to a defined period of time, such as, for example, twelve months.***

Recommendation 13	***The Vigo information package should be reviewed to ensure that it offers complete and unbiased information to prospective portfolio firms with regard to potential pitfalls in a portfolio firm – accelerator – venture capitalist relationships. Vigo should regularly check to ensure that prospective portfolio firms receive this information package at the start of their discussions with Vigo accelerators.***

In summary, we believe that the management fee is a justified incentive mechanism to attract experienced accelerator teams. We observed a case where the management fee made it possible for one accelerator manager to step in as CEO for one of their portfolio firms for a limited period, which was crucial to put the firm in question on a sound footing. However, like any incentive, also this one may have unanticipated consequences, and these need to be appropriately identified and pre-empted.

9.3 Towards One Model – or Several?

During the evaluation, we have observed several different accelerator models, each of which have their own implications and governance challenges. There is no certainty that the field will eventually converge towards a shared model. Instead, it is likely that several different models will prevail, tailored to different industry contexts and different team capabilities. We have identified several models:

1. Involved Investor model
2. Venture Fund model
3. Sweat Equity model
4. Accelerator-to-Entrepreneur model

The **Involved Investor model** represents the original accelerator idea, where accelerator teams invest in entrepreneurial ventures and provide managerial services (including

fundraising) to help the venture grow in size and market value. This is the classic model that also fits most closely with the identified capability bottlenecks in the Finnish high-growth venturing ecosystem. Key features of this model are that:

- Entrepreneurially experienced individuals create an accelerator company that invests in multiple ventures
- The accelerator team contributes their time and industry networks to help their portfolio ventures grow and attract equity funding
- The accelerator investment and contribution signals enhanced potential for growth, justifying preferential treatment by public-sector agencies such as Tekes and Finnvera

Ideally, this model would create a portfolio that the accelerator team can reasonably manage. This depends on the capabilities of the team, with, e.g., Lifeline Ventures apparently successfully managing a fairly large portfolio with active monitoring and well-timed interventions. On the other hand, there is also a lower limit to the size of the portfolio, as, e.g., single-firm portfolios become de facto entrepreneurial ventures.

Key challenges, risks, and potential agency problems in this model appear to be: (1) careful selection of the portfolio ventures; (2) resisting the temptation to assemble too large a portfolio (this temptation could be exacerbated by overly generous management fees and the accelerator's ability to negotiate equity stakes in unjustifiably favourable terms)[5]; (3) selecting sufficiently capable accelerator teams and avoiding adverse selection; (4) ensuring fast failures and avoiding the accumulation of 'living deads' in the accelerator portfolios (this risks could be exacerbated by overly generous management fees that are not temporally limited, and also, the escalation of commitment by accelerator teams who have invested their own equity into their portfolio firms); (5) the exploitation of information asymmetries between the accelerator team and public-sector stakeholders (with the accelerator team picking and focusing on the highest-potential portfolio firms while ignoring others and even offloading portfolio firms with poor prospects to, e.g., public-sector investors).

Although this evaluation did not detect hard evidence that the above risks and issues were materialising, they were nevertheless signalled here as potential risks with the accelerator model that should be monitored. We therefore recommend that:

Recommendation 14	***The Vigo Programme should continue to practice careful vetting, evaluation and selection of the accelerator teams***

Recommendation 15	***The Vigo Programme should continue to develop and apply protocols for: (a) detecting underperforming accelerator teams; and (b) ensuring the exit of such teams from the programme. The established practice of formally agreeing milestones with new accelerators is a good one and should continue.***

[5] As a rule of thumb, industry experts suggest that one partner can normally handle 2-4 portfolio firms. This, however, depends considerably on the business model of the accelerator and should not be taken as a strict rule.

Recommendation 16	***The number of accelerator portfolio firms should be monitored and possible over-reaches addressed if such should occur.***

Recommendation 17	***Public-sector initiatives, such as the NIY should monitor the performance of Vigo portfolio firms that have received or seek subsidies and apply the same admission and performance criteria as when dealing with non-Vigo applicants.***

Recommendation 18	***The Vigo accelerators investments should be only made from the balance sheet of the accelerator company or from accelerator-managed venture capital funds. As a rule, direct investments from the personal funds of accelerator team members should not be allowed.***

The **Venture Fund** model represents an evolution of the Involved Investor model. In this format, the accelerator raises an equity fund from external investors and starts operating effectively as a venture capital fund. Key features of this model are:

- The accelerator team creates an equity fund, with investments from external investors such as, e.g., pension funds and funds of funds
- The accelerator team effectively becomes a venture capital investor, raising fund management fees and performance incentives from fund investors
- The accelerator team's participation in its portfolio firms likely becomes less intensely involved than in the Involved Investor model

As such, this model is a welcome addition to the classic accelerator model, as it helps plug an identified gap in the Finnish high-growth venturing ecosystem – as long as the new fund continues to focus on early-stage investments that precede the A-round. However, as with any model, there are also potential problems and challenges. For example, if the new fund continues to operate alongside with the accelerator company's own portfolio, the prospect of agency problems may arise, to the extent that the accelerator team has freedom to choose between the accelerator company and the new fund as the primary investment vehicle. Also, if the new fund effectively becomes a new, independent venture capital operator, it might gain unfair advantage relative to other venture capital operators because of its Vigo status. This would be the case particularly where the new fund continues to charge management fees from their portfolio firms. We therefore recommend:

Recommendation 19	***If a Vigo accelerator sets up its own investment fund with capital inputs from external investors, the terms of operation between the accelerator company and the new fund should be designed such that the potential for agency problems on the part of the accelerator team is minimised (note that this is the responsibility of the accelerator team and its external investors).***

The **Sweat Equity** model represents a downgraded version of the Involved Investor model. In this model, the accelerator 'earns' its equity stakes by working more intensely for their portfolio firms, perhaps even participating in the day-to-day management of the portfolio company. This model could occur, for example, in situations where the accelerator team members do not have sufficient personal or external investor funds to invest in their portfolio ventures. The accelerator team could, for example, use management fees to recoup their own equity investment into the company. This model would result in relatively small portfolios with highly involved accelerator participation.

The benefits of the Sweat Equity model are that it allows the entry of low net worth, yet highly capable individuals into the accelerator field. This model therefore provides some justification for the charging of management fees from the NIY support that accelerator portfolio firms receive. The potential challenges and agency problems relate to the intensity of participation by the accelerator team members in their portfolio ventures. In one sense, the Sweat Equity model implies that the accelerator team member or members become part-time entrepreneurs in the portfolio firm and earn their equity stake similarly to the portfolio firm's management team members. Potential issues could arise when the involvement becomes so intense and permanent that the accelerator ceases to be a proper accelerator and transforms into one or several ventures. When this happens, there may be justification for revoking the accelerator status – see the Accelerator to Entrepreneur model below.

The **Accelerator to Entrepreneur** model is a potential evolution of all three accelerator models discussed above but a particularly likely outcome of the Sweat Equity model. In this model, the accelerator team ceases to operate a portfolio consisting of several portfolio firms, but instead, the team members become active entrepreneurs in one or several of their portfolio firms. In principle, this kind of outcome is not undesirable, since this evolution would have contributed towards increasing the growth potential of selected entrepreneurial teams in the Finnish high-growth venturing ecosystem. However, this evolution might also have the undesirable outcome of leaving some portfolio firms without the accelerator team attention and services that the portfolio firm may have anticipated. Also, if the accelerator transforms itself into one or several ventures, its privileged treatment by public-sector agencies can no longer be justified. Therefore, we recommend:

Recommendation 20	***Where an entire accelerator team migrates to becoming virtually full-time entrepreneurs in one or several of their portfolio ventures on a permanent basis, the team's Vigo accelerator status should be revoked. (Note that this recommendation does not apply to situations where one accelerator team member steps into a portfolio firm, for example, to temporarily assume CEO responsibilities for a limited period of time.)***

In summary, several different accelerator models have been observed during this evaluation. All of the models represent desirable outcomes of the Vigo Programme, with their own distinctive contributions towards the Finnish high-growth venturing ecosystem. However, as is the case with all public-sector to interventions in the market system, and particularly so when public funds are channelled to encouraging private-sector profit-seeking activity, the

desired outcomes are balanced by potential unintended consequences. In the case of the Vigo Programme, the desired outcomes include addressing market failures that exist in the Finnish high-growth venturing ecosystem and the generation of associated economic externalities. However, these have to be balanced with the risk of unintended consequences. In our view, such consequences may materialise through agency risks created during the selection and operation of accelerator teams and firms; and through unintended market distortions generated by the Vigo intervention. Against this background, we provide the following general recommendations for the different accelerator models:

Recommendation 21	***The Vigo Programme should monitor different accelerator models and be mindful of the distinctive benefits and potential problems associated with each model.***

Recommendation 22	***The Vigo Programme should be prepared to anticipate, support and even facilitate transitions between different accelerator models, mindful of potential challenges created by each transition***

Recommendation 23	***The performance monitoring system of the Vigo Programme should not only track the expected benefits, but also, the potential problems and market distortions and intervene when such problems arise. This should be the task of the Vigo Programme's steering group.***

Recommendation 24	***An overview of different Vigo accelerator models and associated benefits and challenges should be included in accelerator team training materials.***

9.4 Towards Maturation of the Accelerator Field

Throughout, this evaluation has assumed a field evolution perspective. The accelerator field has been treated as an emerging organisational field which operates as part of the Finnish high-growth venturing ecosystem. The accelerator field dynamic model in Figure 4 (page 26) reflected this perspective and considered the field dynamics that the Vigo Programme had to catalyse to become established and self-sustaining. We have also found that the field is still in its emergence phase.

The challenge then arises how the field could move from an emergence to a stability phase. We present our speculative model in Figure 22. This model draws on the institutional literature of organisational field evolution and thus summarises general characteristics of fields in different stages.

At the moment, we consider the accelerator field to remain in Phase I (emergence). As noted earlier, this stage is characterised by intense sense-making, search for good practices, experimentation with different accelerator models, active field discourse and occasional

controversy as the field operators and the major stakeholders make sense of and adjust to the new field. In this stage, it is important to remain flexible, adapt coordination mechanisms flexibly as the field evolves, improvise if necessary, and identify, document and disseminate emergent good practices and lessons. We have seen signs of all of these activities during the Vigo evaluation. At this stage it is also important to protect the field, so that the experiment can reach a stage where an accurate estimation of its viability is possible. At this stage, it is still too early to consider that issue, as it takes time for the Vigo portfolio firms to mature and attract follow-on investment. This is one key reason why we have recommended that the Vigo Programme should be continued until the end of its initially projected lifespan, at which point another evaluation should take place.

The key objective during the emergence phase is to establish cognitive legitimacy for the emerging new venture acceleration field. To achieve cognitive legitimacy, it is important to produce and communicate evidence that the programme is meeting its early targets and is on its way to fulfilling its wider goals. Some such evidence has been documented in this evaluation. Given that the accelerator field has many stakeholders and connects with many established fields (e.g., universities, the venture capital sector, public-sector agencies), it is also important to ensure that: (1) an active dialogue is maintained with all of these; (2) controversies are swiftly addressed and reconciled; (3) any offending and legitimacy-undermining practices are eliminated; (4) structural adaptations are facilitated amongst key stakeholders. The key here is active communication and interaction with key stakeholders, as the accelerator field cannot establish itself in isolation.

If all goes well, the field starts reaching stability at some point. Early signals of stability would occur when transactions with different stakeholders take on the appearance of becoming fairly routine. This appears to be the case in Vigo's core business: dealing with accelerator teams and Vigo accelerators, and also, in interactions between Vigo accelerators and their portfolio firms.

The same level of routinisation is not yet strongly evident in Vigo accelerators' dealings with other stakeholder groups – notably, with universities, public sector agencies, and, to some extent, the venture capital sector. This is understandable, since these stakeholders are either more fragmented (university and venture capital sectors in particular) and or have strong, established roles and agendas (universities and public sector agencies in particular). To facilitate routinisation in the interactions with these stakeholders, it appears important to achieve some level of convergence in terms of accelerator models and practices. We hope that the analyses and discussion presented in this evaluation report will prove helpful in this regard. As regards the university sector, active interaction with university technology transfer offices and equivalents appears important, since not only are universities themselves still learning to deal with entrepreneurial ventures (e.g., in terms of transferring IPO to spin-off firms), but also, this evaluation has detected quite important variance in terms of, e.g., IPO transfer negotiations between individual accelerator teams and universities. It seems that Vigo could play a more active role in facilitating that particular interface.

When it comes to dealings with the venture capital sectors (both Finnish and foreign venture capital firms), it is important to continue accumulating experience particularly from A-round investments with the venture capital sector. Naturally, this is a development that Vigo itself

can do relatively little to move forward. However, this aspect remains a key objective for the Vigo Programme as a whole and should be continuously monitored, as recommended above.

At this point, it is premature to speculate how the new venture accelerator field could look like when mature. We note that there are important open developments in both the Finnish and EU ecosystems for high-growth entrepreneurship. Tekes, Finnvera and Finpro are moving to the same building in 2015-2016, and further integration in their roles is anticipated. Re-organising the role of the public sector in equity funding is under way. At the EU level, major investment in new venture accelerators is anticipated during 2013-2014. The Finnish new venture acceleration field will need to adjust to all these and likely even more changes. We nevertheless advance two long-term scenarios for the Vigo Programme: continuation and discontinuation.

Continuation scenario. Under this scenario, Vigo becomes a steady-state programme. This scenario would mean that the accelerator field does not become self-sustaining without continued intervention and the gaps in the Finnish high-growth venturing ecosystem continue to persist. This is a possible outcome, since the challenges in establishing a viable early-stage venture funding sector without at least some public intervention are widely acknowledged. If, however, the accelerator model itself proves useful, a case might emerge for a continued Vigo-like activity, perhaps in a reduced form. If this scenario materialises, one possible development for Vigo could be to become a feeder mechanism towards some kind of national fund-of-funds structure. Operating in a feeder role, Vigo could continue to work to attract new accelerator teams to the field, helping these to build a sufficient track record and credentials to raise and operate new early-stage equity funds.

Discontinuation scenario. There are two scenarios under which Vigo could be discontinued after six years: it either fails to establish an accelerator field dynamic, or it succeeds in establishing a self-sustaining dynamic. If Vigo fails to demonstrate the viability of a new venture accelerator field even in the presence of continued Vigo-type intervention, then the programme should be discontinued. In the light of the current evidence, we do not consider this to be a very likely scenario, given the institutional momentum the new venture acceleration concept currently enjoys at the EU level. However, the outcome is not completely unlikely, either. In the more positive scenario, the accelerator concept becomes established and the accelerator field self-sustaining. In this scenario, collaborative procedures with key stakeholders (e.g., Tekes, Finnvera, universities) become so well established that a dedicated programme no longer adds significant additional value. This is obviously the preferred, although aspirational scenario. However, although aspirational, the evidence reviewed under the current evaluation suggests that this is a fully realistic scenario if the field dynamic gains sufficient momentum.

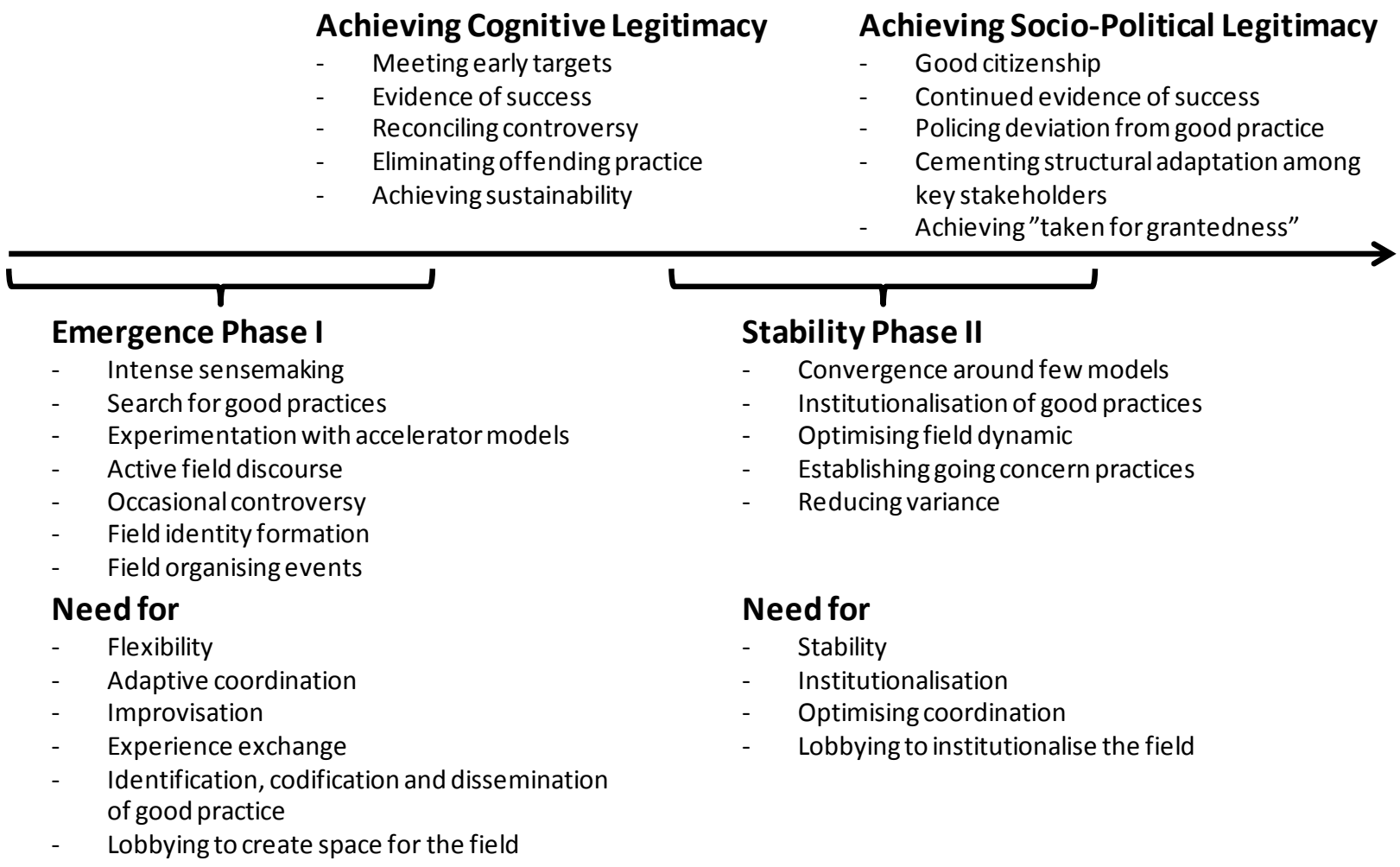

Figure 22 Model of Accelerator Field Evolution

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Appendix 1 List of interviewed persons

Petri Niemi	G2 Invest Oy
Seppo Ruotsalainen	Profict Partners
Kristiina Laurila, Jukka Häyrynen, Kari Herlevi	Tekes
Keith Bonnici	Finnvera
Heli Ahlroos	Suomen Teollisuussijoitus Oy
Tarja Teppo	Cleantech Invest Oy
Jari Varjotie	Savo-Solar Oy
Timo Reisto ja Juha Estakari	BT Wood OY
Vesa Hietalahti	Enercomp Oy
Matti Reinikainen	Ultranat Oy
Oskari Lehtonen	KoppiCatch Oy
Sampo Parkkinen	RapidBlue Solutions Oy
Erno Syvälahti	HappyOrNot Oy
Timo Ahopelto	Lifeline Ventures Oy
Juho Malmberg	ZenRobotics Oy
Sampo Karjalainen	ProtoGeo Oy
Jussi Harvela	Veturi Growth Partners Oy
Harri Länsipuro	Technopolis Oy
Petri Leukkunen	Oulun yliopisto
Patrik Louko	Aalto yliopisto /ACE
Riku Asikainen	Fiban
Marko Saapunki	Food Process Innovations
Ville Miettinen	LOTS Oy
Janne Haverinen	Indoor Atlas Oy
Sakari Sipola	Oulun yliopisto
Tommi Toivola	EK
Petri Peltonen	TEM
Juha Koponen	Netcycler Oy
Johannes Savolainen	Royal Majestics Helsinki
Artturi Tarjanne	Nexit Ventures Oy
Jari Mieskonen	Conor Oy
Timo Ritakallio	Ilmarinen Oyj
Petri Lehmuskoski	Gorilla Ventures
Jussi Kaasinen	Sport’s Tracking Technologies Oy
Antti Latva-Aho	Notava Oy
Sampo Ahonen	Beneq Oy

Appendix 2 Pre-accelerator team background scores

	Researcher	Consultant	(R&D) Developer	(Small business) Entrepreneur	(Corporation) Manager	(Pre-acc.) Board member
Cleantech Invest	**1,3**	**1,8**	**0,3**	**0,5**	**0,5**	**0,5**
MAX	*2,0*	*2,0*	*1,0*	*1,0*	*1,0*	*1,0*
LN	1	1	0	1	1	1
TT	2	2	1	0	0	0
TL	2	2	0	0	0	0
FA	0	2	0	1	1	1
KoppiCatch	**0,7**	**1,0**	**0,3**	**0,7**	**1,0**	**0,3**
MAX	*2,0*	*2,0*	*1,0*	*1,0*	*1,0*	*1,0*
IM	0	1	0	0	1	0
HS	0	2	0	1	1	1
IP	2	0	1	1	1	0
Lifeline Ventures	**0,0**	**0,3**	**1,0**	**1,3**	**1,0**	**0,0**
MAX	*0,0*	*1,0*	*2,0*	*2,0*	*1,0*	*0,0*
TA	0	1	0	1	1	0
PK	0	0	2	2	1	0
IP	0	0	1	1	1	0
Veturi Venture Accelerator	**0,0**	**1,3**	**0,0**	**0,7**	**1,0**	**1,3**
MAX	*0,0*	*2,0*	*0,0*	*1,0*	*1,0*	*2,0*
JH	0	1	0	1	1	2
MA	0	1	0	1	1	2
MP	0	2	0	0	1	0
Newentures	**0,0**	**0,0**	**0,7**	**1,0**	**1,3**	**0,7**
MAX	*0,0*	*0,0*	*2,0*	*2,0*	*2,0*	*1,0*
TT	0	0	0	2	2	1
NT	0	0	2	1	1	0
AW	0	0	0	0	1	1
Innovatum Partners	**1,3**	**0,8**	**0,0**	**0,5**	**1,8**	**1,5**
MAX	*2,0*	*1,0*	*0,0*	*1,0*	*2,0*	*2,0*
SM	2	0	0	0	2	2
WB	1	1	0	0	2	1
KL	2	1	0	1	2	1
AL	0	1	0	1	1	2
Vendep	**0,0**	**0,0**	**1,0**	**1,5**	**0,8**	**0,3**
MAX	*0,0*	*0,0*	*2,0*	*2,0*	*1,0*	*1,0*
SP	0	0	2	1	1	0
HK	0	0	0	2	1	1
JA	0	0	1	2	1	0
MB	0	0	1	1	0	0
Gorilla Ventures	**0,0**	**0,4**	**0,0**	**0,6**	**1,6**	**0,6**
MAX	*0,0*	*1,0*	*0,0*	*2,0*	*2,0*	*2,0*
PL	0	0	0	2	2	1
RR	0	1	0	1	2	0
RS	0	0	0	1	2	0
TT	0	0	0	0	2	2
Royal Majestics	**0,0**	**0,5**	**0,0**	**0,5**	**0,5**	**0,5**
MAX	*0,0*	*1,0*	*0,0*	*1,0*	*1,0*	*1,0*
JS	0	0	0	0	1	0
PA	0	0	0	1	0	1
HK	0	1	0	0	0	0
JL	0	1	0	1	1	1
Food Process Innovations	**0,5**	**0,3**	**0,0**	**0,2**	**1,0**	**0,3**
MAX	*2,0*	*1,0*	*0,0*	*1,0*	*1,0*	*1,0*
MS	0	1	0	0	1	0
HJ	0	0	0	0	1	0
AK	1	1	0	1	1	1
SP	0	0	0	0	1	0
RV	2	0	0	0	1	1
HS	0	0	0	0	1	0
Lots	**0,3**	**0,0**	**1,3**	**0,7**	**1,0**	**0,0**
MAX	*1,0*	*0,0*	*2,0*	*1,0*	*1,0*	*0,0*
VM	1	0	2	1	1	0
HH	0	0	2	1	1	0
PW	0	0	0	0	1	0

The first row of each accelerator presents the average score and the second row maximum score. Each manager is referred to with two capital letters.