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# VentureLab Twente: a new business support concept for high tech high growth companies

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Cooperation and competition with universities

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# VentureLab Twente: a new business support concept for high tech high growth companies

**Executive summary**

High Tech job creation is important for sustainable economic growth. The region of Twente in The Netherlands has developed several initiatives to achieve this. These initiatives include a new University, a business incubator and a Science Park. However, the desired job creation fell short of expectation. Therefore a new and intensive *high tech high growth* business support program was designed and implemented: *VentureLab Twente* (VLT). More than 200 participants joined the program within 3 years and the first analysis of results shows that VLT has major impact on business growth and job creation. Participants are extensively monitored, leading to a rich research database and future publications on high tech entrepreneurship. The VentureLab concept is an important contributor to the success of Science Parks.

**Introduction**

The region of Twente in The Netherlands has the objective to create more high tech jobs to stimulate sustainable economic growth.
During the past decades the region has developed several initiatives to support economic growth. These initiatives have so far not resulted in the desired growth and the need was felt to develop a strong business support program for business creation and business acceleration in addition to the existing initiatives. This program is VentureLab Twente (VLT).

In this article we first describe the history of **economic development in the region of Twente** to provide the context for the need for a new business support program and then we describe the **design** of this program, called VentureLab Twente. We conclude with showing **initial results** of the program.

**Economic development in the region of Twente**

The Region of Twente is located in the Eastern part of The Netherlands and now has 600.000 inhabitants. In the early twentieth century Twente developed a strong textile industry. This industry collapsed in the sixties, laying off more than 40.000 people and leaving the region in economic turmoil. In 1961 the Dutch state granted Twente a Technical University (located in the township of Enschede) with the objective to attract and develop high skilled labor. After 50 years the University of Twente (UT) achieved high international rankings in nanotechnology, medical technology and information sciences. The UT is renowned as the *Entrepreneurial University* and has yielded more than 800 spin-off companies in the past 25 years. The UT always invested in a stimulating entrepreneurial ecosystem. In the early eighties the UT started with the first business incubator in The Netherlands. Also in the eighties a revolving fund was set up to provide easy loans for start-up companies. Around 60% of the spin-off companies made use of these loans. With a strong focus on entrepreneurship, the UT started NIKOS, the Dutch Institute of Knowledge Intensive Entrepreneurship. NIKOS employs 50 researchers and students investigating the entrepreneurial process of high tech companies. The strong combination of good science and focus on entrepreneurship has been an important driver for the large number of spin-off companies.
Many spin-off companies settled in the direct vicinity of the University, leading to the development of the Business & Science Park Enschede. Currently, more than 600 companies have residence in this B&S Park and founded the Entrepreneurship Association B&S Park Enschede.
In 2005 the City of Enschede, the University of Twente and the Province of Overijssel further joined forces and established a Science Park (*Kennispark Twente*), the innovation campus for knowledge intensive entrepreneurs. Kennispark Twente offers access to talent and expertise, finance and coaching and to University research.
Also in 2005, the regional authorities have taken the initiative to start a regional innovation board, the Innovation Platform Twente (IPT). IPT comprises of representatives from the industry, government and educational and research institutions.
The main objective of IPT is to stimulate sustainable economic growth and to create high tech jobs. These high tech jobs are regarded as important driver for further growth of indirect jobs and low skilled jobs in the region. The approach is to design large innovation programs in which industry – in particular small and medium enterprises – and educational institutions collaborate and government facilitates through allocating subsidies and funds. This approach led to the identification of 5 clusters of strong economic activity and an investment program to further support these clusters: the Innovation Route. The clusters are High Tech Systems & Smart Materials; Medical Technology; Food; Safety & Security and Building & Construction.
Although building & construction is not generally regarded as high tech, it makes up more than 10% of the gross income of this region. This cluster focuses on the development and application of high tech materials and new concepts for energy neutral buildings. The objective is to combine and enhance the innovative power of SME's in order to maintain the high competitive position in this sector.
Until 2011 more than 200 million Euro has been invested in the IPT program, with money coming from local, regional, national and European subsidy programs and money from regional industries. Key achievements are the establishment of several shared production facilities such as High Tech Factory (shared production facilities for companies in nanotechnology) and open innovation centers such as OICAM (Open Innovation Center for Advanced Materials) and TPRC (ThermoPlastic composite Research Center).

**Need for a new business support program**

All the above economic initiatives resulted in a large science park around the university and a strong entrepreneurial ecosystem.
However, the observation was that most University spin-off companies remained small in size: 800 spin-off companies generated 6000 to 7000 new jobs in the past decades[1]. Therefore, the IPT asked NIKOS, the Dutch Institute of Knowledge Intensive Entrepreneurship, to investigate why so many high tech start-ups failed to grow and then to develop a program to create more successful growth companies.
A comparative study between our region of Twente and the regions of Leuven (Belgium), Cambridge (United Kingdom) and Silicon Valley/Stanford University (USA) showed that the University of Twente has the highest number of spin-off companies per 1000 students, but the lowest net effect on job creation. The study identified 4 key success factors for high growth: ambition, multidisciplinary entrepreneurial team from the start, product/service with grow potential and access to sufficient finance[2]. This study further led to the development of the NIKOS 4S model, describing the needs of a successful growth company: Scope, Scale, Social Networks and Skills.

> *Scope relates to the ability for long term planning and strategy development (Strategic capital of a firm). Scale relates to the ability to size the company and to access financial means to support growth (financial capital). Social Networks relate to the ability to establish relationships outside the company, which are key to further development, i.e. launching customers, suppliers (social capital). Skills relate to the skills and competencies of the employees (cultural capital). Successful companies usually have all four capitals in place, whereas companies showing hampering growth usually lack one or more of these capitals. In particular small companies in the startup phase find it difficult to address these company capitals in a balanced way.*

A key finding in the study was that although many start-up companies may have 'a good idea for a product' and 'ambition for growth' at the start, they often lack the execution power to become successful: too much focus on technology and too little market orientation. This usually leads to a long time to market, insufficient funds and strategic drift: instead of becoming an internationally oriented product company, many change to become a nationally oriented service company, i.e. a consultancy firm. The survival rate of these firms is high (>80% survives longer than 5 years), but they contribute little to economic growth.

**Design of VentureLab Twente**

The large number of spin-offs of the University of Twente indicates that the beginning of the value creation process (opportunity recognition) is well organized. And indeed, all University Institutes have assigned specialists to help scientists to understand the commercial value of their research and to support the start-up of a new company. But 'having a good idea for a product' is not enough for a successful company. As our 4S model describes, more skills are required to develop and execute plans with a high change of success in the opportunity preparation and exploitation phase. We used this 4S model as the basis for the design of VentureLab Twente program: action oriented, acquiring the right knowledge, developing the optimal business model, building the winning team, creating access to investors and to launching customers and providing required facilities.

Summing up, the one year VLT program offers the following to the participants:

1. ***Business Coaching: i****ntensive weekly coaching by experienced business coaches to drive the entrepreneurial process.*
2. ***Expert coaching****: additional coaching by expert coaches on knowledge intensive topics such as patents, contracts, research, etc. These expert*

[1] *TILBURG, J.J. van; Researchers become entrepreneur. International benchmark on spin-offs of research centres - Dutch Ministry of Economic Affairs - TopSpin International; April 2003*
[2] *ENTER, M.; Identifying factors that contribute to high-growth knowledge-intensive ventures - University of Twente; 2006*

*coaches come from the University and from regional service companies. They provide their services free of charge to our participants.*

3. ***Knowledge**: intensive training and educational program (1 day per week) on topics such as Strategy, Finance, Marketing, Operations and Technology Venturing (70 half day modules). It is possible to obtain University Certificates for each topic.*
4. ***Skills**: training in personal skills and team skills.*
5. ***Networks**: entrepreneurial environment with access to relevant academic, business and financial networks (i.e. banks, business angel networks and Venture Capitalists). 'Launching customer meetings' are organized to create easy access to large companies.*
6. ***Facilities**: free office space at the VentureLab and access to university research facilities*
7. ***Action programs**: a limited number of high potential participants can follow action programs such as 'business modeling' and 'Investor readiness'. These series of workshop are done in small teams or individually and are intended to prepare the participants for presenting their plans to investors.*
8. ***Student support**: if needed, students can be assigned to various projects which are relevant to the entrepreneur.*
9. ***Market Research**: VLT provides free access to market research reports of international knowledge brokers.*
10. ***Network meetings**: VLT regularly organizes network meeting, so called VentureClasses, with renowned keynote speakers from industry, research and government. These VentureClasses are open to a wide public.*
11. ***Entrepreneurial environment**: participants, coaches, expert coaches, trainers, service companies, launching customers and many others create a low-threshold entrepreneurial environment were it is easy to establish relevant contacts.*

The program is flexible and tailor made to the needs of individual participant. Participants make individual development plans in collaboration with their coaches at the start of the program.

The following preconditions were taken into account for the design of the program:

- *The VLT program is open to all ambitious entrepreneurs who want to start a high tech company (business creation) or want to grow an existing high tech company (business acceleration).*
- *The VLT program is not restricted to university spin-offs. Although our University yearly generates approximately 30 spin-off companies, this is still only 1% of the total of new companies which are founded each year in our region.*
- *The VLT program can support large numbers of participants (more than 100 per year).*
- *The VLT program addresses all needs of an entrepreneur to become successful.*
- *The VLT program is intensive, but flexible, with the notion that long term support is needed, but every company has different needs.*
- *The VLT program has a low selection threshold. Self-assessment of the entrepreneur is important. During the program additional support and training is available for high potentials.*
- *The VLT program acquires subsidies to allow participation of individuals and start-up companies that need intensive support but would not join because of the costs.*
- *The VLT program creates an entrepreneurial ecosystem.*
- *The VLT program is action oriented. Participants actively work on their own company.*

The VLT program is designed in such a way that it allows real time and longitudinal data collection on its participants. The resulting database can be used for scientific research into entrepreneurship, leading to a better understanding of the entrepreneurial process, but also to improved policy measures from government, aimed at creating sustainable economic growth and job creation.
Data collection includes a profile survey of the participants, a weekly diary of made progress, 4-montly monitors and panel presentations (dragon's den), exit interviews and annual follow-up monitors. In addition to this, business coaches also fill out weekly diaries on their participants.
Detailed analysis of these data will give valuable insight in the type of entrepreneur and the entrepreneurial process in relation to business success.

**Initial Results of VentureLab Twente**

VLT started accepting participants in May 2009 and by January 2012 more than 200 participants enrolled the program. Participants are admitted every four months in small groups of approximately 20 – 25 participants each. So far 10 groups have entered the program. The groups exit the program after one year. This is celebrated with a 'certification day'. Participants can then join an alumni program allowing them free access to lectures and services of VLT. Their prolonged participation results in a growing and active entrepreneurial environment, further benefitting economic growth.

Scientific research on the rich database of information is now under way and will lead to scientific publications on different aspects of high tech entrepreneurship in the near future. Here we restrict ourselves to presenting some qualitative and quantitative findings of the first 6 groups (108 participants) that by now have exited the program.

*Phase of the entrepreneurial process*
VLT is open to high tech, high growth and high ambition entrepreneurs. To attract participants VLT is advertised in the regional newspapers. We position ourselves as partners in value creation.
The first six groups showed a high diversity in the entrepreneurial phase. Ten percent entered the program in the ideation or opportunity recognition phase, with the objective to identify business opportunities. These people have a strong drive to be an entrepreneur and they joined VLT expecting a higher chance to identify business opportunities in this environment. Forty percent is in the opportunity preparation phase, having a clear business idea, which needs to be worked on. Fifty percent of the participants already have a company generating turnover (opportunity exploitation phase). They are looking for business acceleration. Although most of them employ less then 3 people, also larger companies – up to 100 employees – have joined the program. We think that this is an interesting finding. It is known from literature that large companies become less entrepreneurial and have more focus on planning and control (ambidexterity). We now actively search for large companies to join VLT in order to investigate if participation will help them to reintroduce the entrepreneurial process and thus enhance business development and competitiveness (corporate venturing).

*Average Age of participants*
Entrepreneurial attitude is not age related. The youngest participant in the program was 21 years, the oldest participant was 62. The average age of all participants was 46 years. We expected a higher number of young participants and in particular more spin-off companies from the University. Less than 20% of University spin-offs joined the program, whereas the program was originally designed to speed up growth of University spin-offs. There for it will be of interest to study over the next five years if University spin-offs who joined the VLT program will have higher growth rates than spin-offs that did not join the program.

*Need for (free) office space*
VLT has been set up as a business incubator program with strong emphasis on coaching and training. In addition we provide free office space during the one year program. This comprises of shared rooms with desks, computers, printing facilities, meeting rooms and front desk. Only 5% participants made permanent use of these facilities for a prolonged period of time and approximately 20% of the participants made regular use (1 – 2 days per week).

Our conclusion is that the training program is more important than office facilities. So it turns out that VLT is now a virtual business incubator.
The intensive training and educational program is restricted to the Fridays. On Fridays on average 40 – 50 percent of the participants are present to attend lectures and coach sessions. These Fridays are important for networking

*Effect on business development of participants*
In the last decade the principle of effectuation has been described for successful entrepreneurship[3]. Effectuation is a logic of entrepreneurial expertise that entrepreneurs use in the highly unpredictable start-up phase of a venture to reduce failure costs for the entrepreneur. In practice this means that when an entrepreneur encounters a new situation he will flexibly adapt to that, rather than 'sticking to the old plan'. The data collection at VLT is designed in such a way that the process of effectuation can be studied.
A significant finding is that all participants of the first group (18) made major changes to their original business models after encountering new situations. These changes had mainly to do with their earning model, their marketing strategy and their need for equity.
The VLT participants will be followed for a number of years in a longitudinal study in order to further understand the importance of the effectuation process.

*Effect on business creation and job creation*
The main objective of the VentureLab program is to create more high tech jobs for the region. Thirty-four of 45 participants who did not have a company at the time they joined VLT established a company by registering at the Chamber of Commerce. It is difficult to determine the impact of VLT on business creation, but the high number of new registrations reflects the high ambition of our participants to become entrepreneur.
The effect on job creation will be measured after five years of completing the program.
So far we have documented several individual business cases showing that the program can have direct effect on job creation.
One success story showed that a 20 year old company (level control sensors) with never more than 10 fte, changed their business model, positioning itself higher in the value chain, and doubled in size within 12 months. They now have an order portfolio which allows them to more than double in size again in the next year. Job creation can be directly measured in time in this company.
Another success story deals with three companies that focus on the technology for 3D-printing or rapid prototyping. 3D-printing is a disruptive technology that will have a strong impact on the classical make industry. The impact will be severe job loss for companies that lack competencies for innovation (they do not adapt easily to new technology) and new job creation for start-up companies and adaptive companies that can deal with innovation. VentureLab Twente recognized the importance of this new technology and established a Foundation Rapid Manufacturing Center, together with other parties, including the University. The objective of the Foundation is to act as knowledge center for this new technology and to initiate open innovation programs. In the long run this should result in maintaining existing jobs (or reducing job loss) and in creating new jobs. The impact on overall job creation will be indirect and thus more difficult to measure.

*Acquisition of international companies*
The intensive full business support program is also valuable to foreign companies that want to start a subsidiary in Europe or The Netherlands. Therefore, VLT established a collaboration with the Regional Development Agency and together we can now offer all services required for a foreign start-up company, including support with visa, language, culture, regulations, relevant networks and local customers. VLT joint the NBIA (National Business Incubator Association) and received a Soft Landings International Business Incubator Designation. Since the beginning of VLT in 2009 seven foreign companies were supported in setting up a subsidiary in Twente.

*Collaboration in the VentureLab Community*
The idea is that companies that regularly meet each other in an informal way are more likely to collaborate and thus create a steeper learning curve and faster business development. Mutual trust and easy access to each other are then important determinants.

[3] *Saras D. SARASVATHY - Effectuation: Elements of Entrepreneurial Expertise (New Horizons in Entrepreneurship) - 2009*

An initial survey amongst participants show that they have a lot of interaction amongst themselves: sound boarding (i.e. learning from each other), collaboration (in the same value chain) and doing business amongst each other (usually against 'special prices'). They all see this as a benefit of the entrepreneurial environment that VLT creates for them. The long term impact of collaboration on business acceleration will be further investigated.

*Perceived value of VLT for participants*
As stated before, VLT positions itself as partner in value creation for its participants. But how do participants experience that? During the intake participants are questioned about their expectations when joining the program. When they leave the program they were asked if their expectations were met. In all cases they replied that the program exceeded their expectations and that VLT had significantly contributed to their personal development and the development of their business. Most often were mentioned the importance of intensive coaching, networks (launching customers, access to capital) and business modeling.

**Conclusion**

Although the Region of Twente in The Netherlands has an entrepreneurial University and an large Science Park the need was felt to develop an effective business support program for high tech high growth companies in order to create more high tech jobs and sustainable economic growth. Therefore VentureLab Twente was developed and within 3 years more than 200 companies joined the program. Initial results show that VLT has a significant impact on job creation and company growth. This will be further investigated using the rich database of entrepreneurial data which is compiled while monitoring the participants. If the initial findings are further substantiated we conclude that a flexible and intensive coaching and training program in the entrepreneurial ecosystem that has now been created by VentureLab, is an important contribution to the potential economic success of Science Parks.