



Insight Study on the German Early Stage Investing, Incubation and Business Angel System

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List of Abbreviations

| | |
|-------|--|
| ADT | German Association of Innovation, Technology and Business Incubation Centres |
| BA | Business Angels |
| BAN | Business Angel Network |
| BAND | Association of Business Angel Networks |
| BMWi | German Federal Ministry for Economic Affairs and Energy |
| CEO | Chief Executive Officer |
| CSES | Centre for Strategy & Evaluation |
| EBAN | European Business Angel Network |
| EFRD | European Fund for Regional Development |
| ESF | European Social Fund |
| EU | European Union |
| EXIST | University-based Business Start-Up Program |
| GEM | Global Entrepreneurship Monitor |
| GIZ | German Development Cooperation |
| HTGF | Hightech-Gründerfonds – Venture capital for Start-Ups |
| MSME | Micro, small and medium-sized enterprises |
| TEA | Total Early-Stage Entrepreneurial Activity |
| ASPP | Private Accelerator “Axel Springer Plug and Play” |
| ABAN | Accelerate Business Angels Nordhessen |
| BANS | Business Angels Netzwerk Saarland |
| BAN | Business Angel Netzwerk Nordbayern |
| TGFS | TechnologieGründerfonds Sachsen |
| TZDO | Technologiezentrum Dortmund |
| VC | Venture capital |
| B2B | Business to Business |

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Introduction

The existence of highly dynamic and successful micro, small and medium-sized enterprises (MSME) is one of the characteristic features of the German economy. They have been, and continue to be, the country's growth and job engine. Their strong performance has raised interest in other countries with less dynamic MSMEs, which are keen to strengthen their MSME sector. Learning from the German experience appears to be a promising exercise. Nonetheless, every country has its own economic structure and development path.

However, since the 1980s in particular increasing importance has been given to promoting new businesses and new sectors due to economic structural change processes, the decline of traditional employment-intensive business sectors and the challenge of promoting additional economic pillars. Additionally, the increasing specialization of the German economy and its competition in knowledge-intensive product markets has also required the promotion of new innovative start-ups in industry and in services. Although Germany is not the leading country in the promotion of start-ups (see next chapter), it has been able to set up a highly competitive support infrastructure and an MSME eco-system which can also be regarded as the backbone of the German economy.

On the other side, India's economic structure is also very much dominated by its MSME sector. Around 27 million MSMEs employ roughly 60 million people. However, the support environment is rather weak and 90% of the MSMEs are in the informal sector. They experience limited access to finance, non-availability of suitable technologies, constraints on modernization, non-availability of skilled labour, etc. Moreover, the MSME sector will have to grow and innovate if India wants to ensure its competitiveness in the longer run. The country has to create 180 million new jobs by 2025 to ensure inclusive growth. In order to be more competitive in the international market, India must therefore improve its start-up and MSME eco-system.¹

¹ GIZ (2013)



This study has been designed to provide an insight into the German start-up eco-system with the specific objective of highlighting innovative incubation and start-up finance models. The study focuses on the institutional embedding of incubation and start-up finance models in Germany, instruments, new trends, success factors as well as possible ways of exchanging learning between Germany and India. However, it is not the objective of the study to portray Germany as a best practice model. Instead it seeks to provide an insight into the institutional setting of start-up promotion and business angel finance as well as its integration into generic economic development support from the bottom-up and the top-down.

The authors of the study applied a mixed method approach in order to develop a deeper understanding of the German start-up finance and incubation system. In a first stage, based on an in-depth review of the existing literature, the most important players in the start-up promotion eco-system in Germany were identified and described. In order to ascertain the main success factors for the performance of these players, 19 case studies were developed based on direct interactions with the respective institutions. These 19 cases represent a mix of incubators, co-working spaces, business hubs, angel networks and other financing institutions. The insights derived from the interviews and literature research are summarized in this study. The case studies can be found in the 2nd part of this paper (chapter 7).

This study hence is structured as follows: it starts with an overview of the trends and figures relating to entrepreneurship in Germany (chapter 1) and a short overview of the German start-up eco-system and its main actors (chapter 2). The 3rd and 4th chapters present the core of the study, which focuses on the German incubation and start-up finance system, including main identified success factors. Chapter 5 provides a summary of the two earlier chapters and chapter 6 the consideration of learning opportunities. The 19 related case studies are summarized in chapter 7 including opportunities to exchange learning between Indian and German experts in the start-up promotion eco-system.

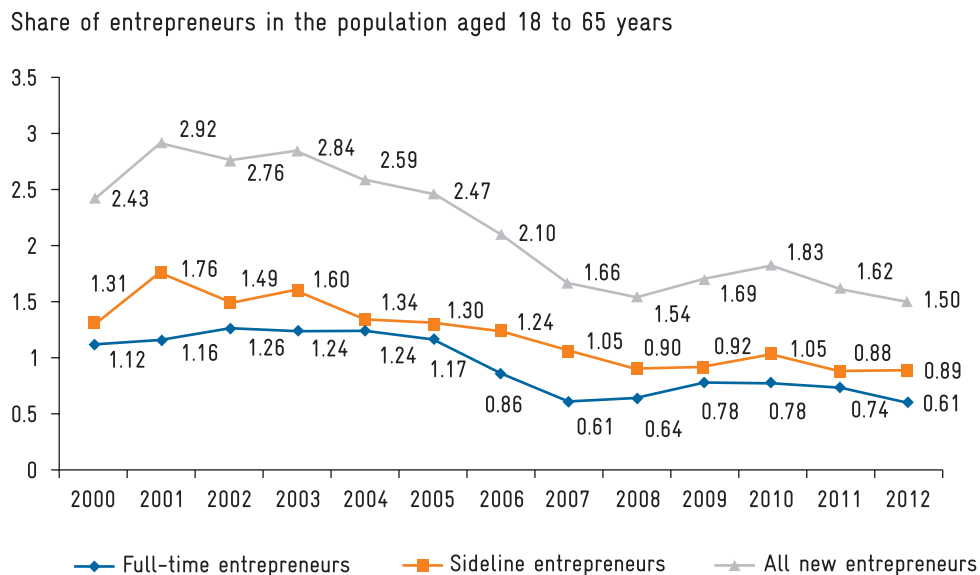
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Entrepreneurship in Germany: Trends and Figures

1.1. Start-up activities in Germany

To understand the state of the art of the German start-up promotion system, it is important to understand the status of entrepreneurship in the country and in the international context. Self-employment in Germany is of major importance in overall employment. From 2001–2003 in particular, Germany showed a sharp increase in the entrepreneurship rate. However, according to a survey conducted by KfW (2013c), start-up activities since that have declined significantly; reaching rock bottom in 2012.

Figure 1: Entrepreneurship rates in Germany (2000 to 2012, in %)



Source: KfW (2013c).

Figure 1 shows a total entrepreneurship rate of 1.50 % in 2012 (all new entrepreneurs). This is equivalent to 775,000 new entrepreneurs. Table 1 below illustrates the pattern of development in terms of real numbers.



Table 1: Number of Entrepreneurs, Germany (2010-2012)

| | 2010 | 2011 | 2012 |
|-------------------------------------|---------|---------|---------|
| All new entrepreneurs | 941,000 | 835,000 | 775,000 |
| Full-time entrepreneurs | 401,000 | 381,000 | 315,000 |
| Sideline entrepreneurs | 540,000 | 454,000 | 460,000 |
| Opportunity entrepreneurs | 356,000 | 292,000 | 361,000 |
| Entrepreneurs acting as freelancers | 270,000 | 300,000 | 303,000 |

Source: KfW (2013c).

Three major reasons have been cited by KfW expert's explaining the low level of start-up activity: (1) job market environment, (2) economic performance, and (3) entrepreneurship support measures.

- Job market environment: The rate of unemployment dropped by 0.4% to 5.3% from 2011-2012. This development, and the slight increase in registered jobs, shows that the prospect of finding paid employment remains good; resulting in a negative impetus for start-up activity.
- Economic performance: On an annual average, calendar-adjusted real GDP grew by 0.9 %. The weak economic momentum dropped further in the course of 2012 and was negative in the last quarter of 2012. The performance of the economy had a weak pull effect on start-up activity.
- Entrepreneurship support measures: The number of start-ups has significantly reduced due to the adjustment of support for new entrepreneurs by the Federal Employment Agency².

The decrease in the number of new self-employed persons and business founders in 2012 led to a reduction in the direct gross employment effect of new businesses (14% fewer full-time equivalent jobs created by start-ups compared to 2011). However, the share of opportunity-based entrepreneurship in particular has gained in significance. In 2012 around 47% of entrepreneurs implemented an explicit business idea with their start-up projects (2011: 35 %). Additionally, the number of new entrepreneurs acting as freelancers continues to show a positive development (2005: 187,000; 2012: 303,000).

² Because of the restrictions on grants from the Federal Employment Agency, the number of business founders that have previously been unemployment has reduced by -32 % against 2011. For more information about the level of restrictions on grants, see KfW (2013c).

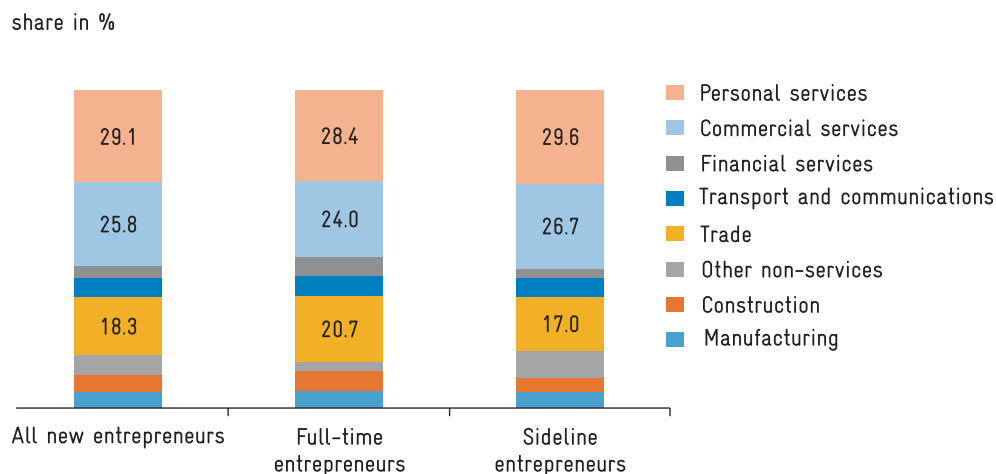


According to KfW (2013c), business plans are implemented on a very fast pace. Around 75% of full-time founders usually take less than a year from the first idea until their business is set up. The average time taken to develop a business is seven months. 50% of entrepreneurs take less than three months.

When looking at the overall household income, evidence shows that self-employment usually pays off. However, it must be taken into account that, due to extensive working hours, the hourly earnings rate is often relatively low. Nonetheless, comparing it to a regular employment, the average household income of entrepreneurs is in average higher (KfW 2013c).

Figure 2 gives an overview of the share of new start-up projects in different business sectors. Based on the graphical representation it is evident that most start-up projects are covering personal and commercial services as well as trade. This is the fact for all three types of entrepreneurs (new, full-time and sideline entrepreneurs).

Figure 2: Start-up projects by sector (2012)



Source: KfW (2013c, d).

1.2. German start-up eco-system in the international context

According to the 2012 Global Entrepreneurship Report (GEM)³, Germany is not one of the leading nations with regard to start-up activities. In 2012, 5.3% of Germany's working age population were actively trying to start a business or were owners or managers of firms that were no more than 3½ years old. Germany ranks 20 out of 24 innovation-based

³ See Sternberg et al. (2013).



economies with regard to Total Early-Stage Entrepreneurial Activity⁴. However, the TEA rate has remained stagnant as compared to the previous year, but is considerably higher than compared to the years prior to 2010 (Sternberg et al. 2013).

Table 2: Ranking of innovation-based economies, Total Early-stage Entrepreneurial Activity (TEA) 2012

| | | | | | |
|---|-------------|----|-------------|----|----------|
| 1 | USA | 9 | Norway | 17 | Spain |
| 2 | Singapore | 10 | Korea | 18 | Slovenia |
| 3 | Netherlands | 11 | Israel | 19 | Denmark |
| 4 | Slovakia | 12 | Greece | 20 | Germany |
| 5 | Austria | 13 | Sweden | 21 | Belgium |
| 6 | UK | 14 | Ireland | 22 | France |
| 7 | Portugal | 15 | Finland | 23 | Italy |
| 8 | Taiwan | 16 | Switzerland | 24 | Japan |

Source: Sternberg et al. (2013).

The share of nascent entrepreneurs⁵ in Germany was approximately 3.51% (Spring 2012). In this context, Germany ranks 13 in the segment of innovation-based economies. However, in recent year the nascent entrepreneurship rate has showed a significant increase as compared to the TEA rate. Nevertheless, countries like the US, the Netherlands, Austria or the UK are still well ahead of Germany (Sternberg et al. 2013).

Table 3: Ranking of innovation-based economies, nascent entrepreneurs 2012

| | | | | | |
|---|-------------|----|---------|----|-------------|
| 1 | USA | 9 | Ireland | 17 | Taiwan |
| 2 | Singapore | 10 | Greece | 18 | Belgium |
| 3 | Slovakia | 11 | France | 19 | Denmark |
| 4 | Austria | 12 | Norway | 20 | Slovenia |
| 5 | UK | 13 | Germany | 21 | Switzerland |
| 6 | Sweden | 14 | Israel | 22 | Korea |
| 7 | Portugal | 15 | Finland | 23 | Italy |
| 8 | Netherlands | 16 | Spain | 24 | Japan |

Source: Sternberg et al. (2013).

⁴ TEA (Total Early-Stage Entrepreneurial Activity): Rate of individuals in the working age population who are actively involved in business start-ups, either in the ideation phase (before the birth of the firm) or in the phase spanning 42 months after the birth of the firm; see Sternberg et al. (2013).

⁵ Nascent Entrepreneurship Rate: Percentage of 18-64 population who are currently a nascent entrepreneur, i.e., actively involved in setting up a business they will own or co-own; this business has not paid salaries, wages, or any other payments to the owners for more than three months.



A positive development according to GEM 2012 is that the share of entrepreneurs with an actual business idea that they seek to execute is greater than the number of those who start a business for reasons of limited alternative employment. However, this latter motivation is more frequently cited by new entrepreneurs from Germany than compared to other countries (see appendix for further information). Indeed, trends show that the proportion of opportunity-based entrepreneurship has increased in Germany since 2009 (Sternberg et al. 2013).

1.3. Generic advantages and challenges of the German start-up eco-system

In comparison to 2011 und 2012, start-up activity in Germany has gained again in significance. In 2013, almost 870,000 people turned to self-employment, which represents an increase of 12% (95,000 more start-ups) compared to 2012. The primary cause of this rise is a considerable increase in the number of sideline entrepreneurs (2012: 460,000; 2013: 562,000). However, the number of full-time entrepreneurs remained almost stagnant at 306,000 (2012: 315,000) (KfW 2014b).

According to KfW, the wide disparity has its basis in the economic framework conditions of 2013. The pressure to set up a business on a full-time basis is relatively low as the job market continues to be positive. However, it is important to consider how positively sideline entrepreneurship is responding to the considerable rise in domestic demand, despite the generally subdued economic situation. This applies in particular to individuals who were previously unemployed⁶. Additionally, implementing explicit ideas within sideline business activity happened more often compared to 2012.

However, in the context of German start-up activity it should not be forgotten that certain factors continue to be obstacles and restrict the development of entrepreneurship. A critical observation of the relevant barriers to start-up activity has revealed that bureaucratic hurdles and delays, the strain on the family, financing difficulties and having to sacrifice benefits provided by paid employment remain the most important aspects in this regard (KfW 2013c).

The challenges and opportunities within the eco-system are highlighted by the expert judgments from the Global Entrepreneurship Monitor 2012⁷. Germany's comparative local advantages include most notably: physical infrastructure (roads, telecommunication), public funding programmes, protection of intellectual property, demand of firms and

⁶ See KfW (2014b).

⁷ See Sternberg et al. (2013).



consumer for innovation, as well as the availability of consultants and suppliers for new firms. In contrast, the conditions that were rated lower are: curricular and extracurricular entrepreneurial education, regulation/tax, knowledge/technology transfer, social norms (culture) and labour market conditions.

Table 4: Rating of Entrepreneurship eco-system in Germany (2012)⁸

| | |
|---|------|
| Physical infrastructure | 3.90 |
| Public support | 3.57 |
| Protection of intellectual property | 3.53 |
| Firms interest in new products/ services | 3.49 |
| Consultants and suppliers of new firms | 3.32 |
| Consumer interest in new products/ services | 3.39 |
| Extracurricular entrepreneurial education | 2.83 |
| Regulation, tax | 2.77 |
| Knowledge/Technology transfer | 2.76 |
| Social norms (culture) | 2.72 |
| Labour market | 2.65 |
| Curricular entrepreneurial education | 2.08 |

Source: Sternberg et al. (2013).

According to the Global Entrepreneurship Monitor, Germany has reached a good position compared to other national framework conditions (in over 60% of the indicators performing better than the average of 23 reference countries). The GEM experts recommend maintaining the active entrepreneurship promotion activities at national and federal state level as well as at local level.

On the other hand, strengthening entrepreneurial education in the field of school and university education could help to reduce the apparent start-up gap in relation to other countries (Sternberg et al. 2013).

⁸ The rating is based on the mean value of the experts' assessment of several statements regarding each framework condition on a scale of 1 (completely false) to 5 (completely true). The higher the value, the better the expert's assessment of the respective framework condition; see Sternberg et al. (2013).

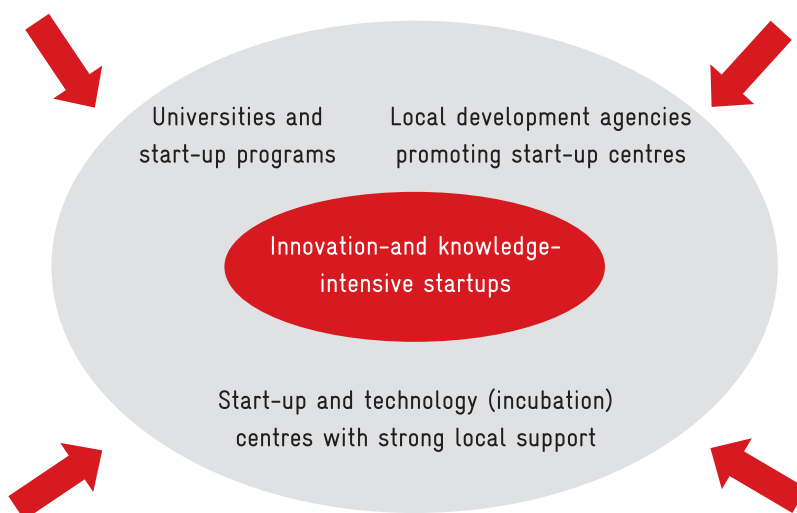
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A bird's-eye-view of the German Start-up eco-system

The term start-up eco-system is used in the context of the business and support environment that either hinders or promotes the growth of start-ups in a certain country. Start-up eco-system reports such as those issued by Telefónica Digital and Startup Genome benchmark certain factors that promote the vibrant development of start-ups in some cities. Berlin has been rated as the start-up hub in Germany; however, compared to other international cities it is only number 15 worldwide. The leading hubs are Silicon Valley, Los Angeles, Tel Aviv and Seattle.⁹

Figure 5 provides an overview of the most important stakeholders and activities involved in the start-up promotion system in Germany. An onion model is used to differentiate between the core players in the start-up eco-system, main supporting actors and activities, as well as important funding programs that support the development of start-ups.

Figure 3: The inner circle of the German start-up eco-system



⁹ Hofmann (2012)



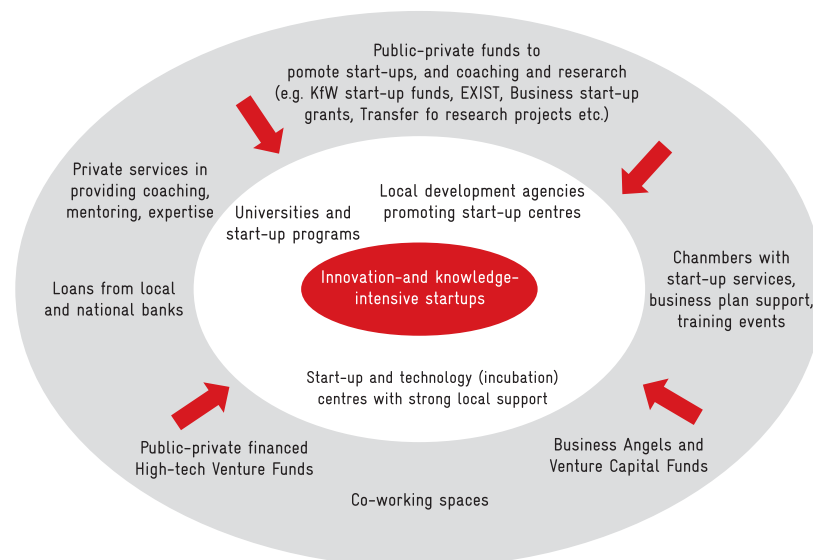
The inner layer

The core of the German start-up ecosystem consists of institutions like incubation centres, local economic development agencies, city administrations as supporters of these agencies, and universities. There are more than 340 existing technology and start-up centres; almost each larger town has a technology and start-up centre (figure 3). Most of these centres are either promoted by universities or by local development agencies (ADT: 2010). While most of the more specialised and knowledge as well as research-intensive start-up centres are part of a university, local development agencies tend to promote more generic centres oriented towards providing support for innovative start-ups from different sectors relevant for the local economy. These often also provide renting services. Hence, it is not very difficult to get access to start-up support in Germany. Apart from renting office space, the centres and their supporting organisations partly offer specialised services to spin-offs, coaching and advisory services, access to a wider network (including businesses, finance organisations and research access) as well as business idea contests and awareness building programs (see profiles).

The second layer

To a certain extent, the technology and start-up centres linked to universities and agencies form the backbone of the German start-up eco-system. However, they are embedded in a wider institutional environment and are further supported by many private, public, and private-public programs, which makes the German eco-system more diverse and dynamic. The following figure 4 and the bullet points below will point out the main important actors, programs and trends:

Figure 4: The inner and second layer of the German start-up eco system





- The **decentralised and institutionalised structure**: Not only local development agencies but also chambers as well as city administrations are often strong promoters of technology and start-up centres as well as start-up awareness activities.
- **Local savings banks** (like Sparkasse, Volksbank, etc.) play an important role in channelling national credit and guaranteeing funds for start-ups. For the majority of MSMEs they are the entrance point for getting access to loans. At the same time they are obliged to invest in local infrastructure and thus are often shareholders in local start-up and technology centres and real estates.
- **Business angel networks and venture capital funds** play an especially important role for more innovative and knowledge-intensive companies. Although the business angel and venture capital market is still in a nascent stage when compared to Germany's neighbouring countries (see also chapter 4 for more details), they play an increasingly important role in the overall start-up eco-system. There are around 5,000 to 10,000 individual investors and around 1,000-1,400 business angels in Germany. They are organized into 40 Business Angel Networks with a strong local and regional orientation (CSES 2012). Due to the relatively weak venture capital market in Germany, public-private venture capital funds (like the High-tech Start-up Fund) have been introduced by the national government and larger private businesses as financiers. These funds seek to encourage the supply of venture capital especially focusing on technology- and knowledge-intensive start-ups.
- Other important **funding schemes** are offered by national and regional governments as well as the European Union (EU). The National bank for the promotion of SMEs, the Kreditanstalt für Wiederaufbau (KfW) for instance is providing a wide range of start-up funds and credit schemes as well as coaching-voucher schemes to support start-ups in their early stages with start-capital, investment capital as well as with more soft skills like personal entrepreneurship development. In addition, there is EXIST, a well-known support program designed to improve the entrepreneurial environment at universities and research institutions in order to increase the number of technology- and knowledge intensive start-ups. These are part of the German High Tech Strategy and receive co-financing from the national government as well as from various European funds (e.g. the European Social Fund). The EXIST program also integrates business start-up grants as well as transfer of research programs through which start-ups can be supported over a period of several months to years to make their business ideas market ready (see also chapter 4).



- During the last few years a new important actor has moved from the outer to the second layer of the German start-up ecosystem. According to the Global Co-Working Census (2013) more than 230 **co-working spaces** as flexible office spaces particularly for freelancers have evolved during the last 5 years and have started to expand to rural cities. These new institutions fill a gap for new creative and flexible work formats with a strong business network orientation.
- Finally, there is a very diverse **private service market of mentors**, coaches, advisors and specialists. Start-ups can obtain access to some of these services through certain subsidized voucher schemes or through other financial means.

The second layer of stakeholders and activities partly support the inner layer but are also to a large extent independent from the activities of start-up and technology centres, universities and agencies. For example, co-working spaces are less closely linked to public finance and technology and start-up centres. They have set a new trend in Germany as well as worldwide and emerged rather independently from public sector support, based on self-organizing efforts especially by freelancers themselves. In many towns they began to open up larger joint office spaces to encourage exchange and to reduce costs through the common provision of office infrastructure for young and new businesses.

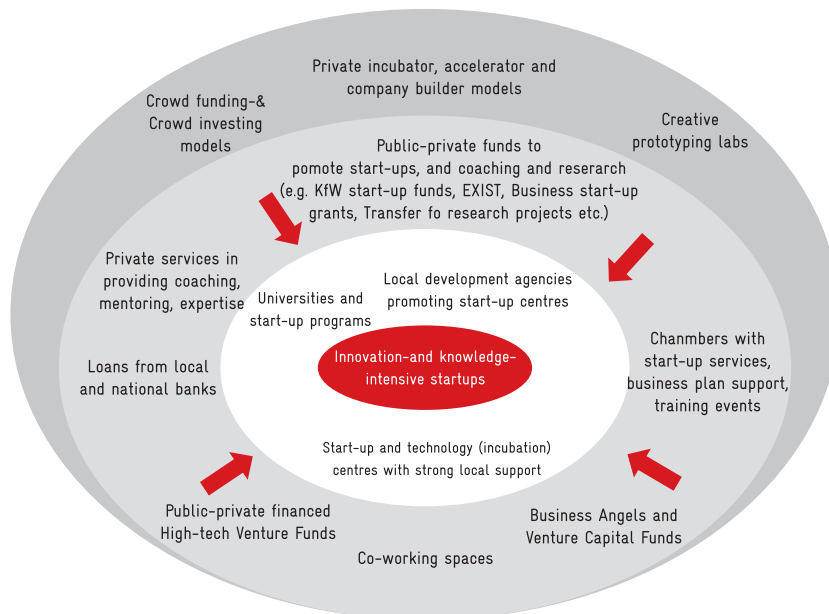
Given that the first and second layer includes all the major actors of the eco-system, prospective entrepreneurs can access all necessary support and information right at this stage.

Outer layer

The outer layer covers new emerging trends that have entered the start-up eco-system in Germany. However, it is not yet clear how the actors in this layer will shape the overall system in the future (see figure 5).



Figure 5: An overall view of the German start-up eco system



Over the last 5 years private incubators, often differentiated into company builders, accelerators and incubators (see chapter 3 for details) have been set up and continue to increase in number. They are mainly based in Berlin and a few other large cities. First estimations mention more than 40 such incubators, which are often established with the participation of larger companies (like e.g. Telecom, Axel Springer, Otto Group, Telefonica, Siemens, etc.).¹⁰ The private incubator model is widespread in the USA and is often based on a venture capital and shareholder incentive structure with a strong focus on quickly scalable digital businesses. This format might gain importance in Germany; however will majorly cover metropolitan cities.

- Another new trend emerging in Germany is that of the crowd-funding and crowd-investing models. Both approaches encourage the involvement of private individuals in investing in small start-ups. Crowd-funding clearly focuses on financing smaller projects; these are often smaller start-ups, fee-lancers, and creative people or even social business projects (average collection of 6,000 Euro). The fund collection is often carried out through internet campaigns and online platforms. In comparison, crowd-investing is often equity-based crowdfunding wherein the investors take a share of the start-up (see also chapter 4 for more details). Both models, crowd funding (with

¹⁰ See Mahr (2014)



investments of 500,000 Euros in 2011 and 3 million in 2013) and crowd-investing (from 0.5 million Euros in 2011 to 20 million in 2013) have experienced tremendous growth in the last 2 years.

- Creative labs like fab labs and maker labs are not directly related to the start-up promotion eco-system. However, these creative labs provide room for creative product development and prototyping of products. Additionally, they provide access to new technologies like 3D printers, laser cutters, CNC machines as well as to relevant software programs to develop innovative products for market or individual use. These labs have gained an increasing significance in Germany in recent years as they provide a creative and experimental space in which business ideas can grow. These creative labs are often located in specific technology centres, universities and co-working spaces but can also be found in independent locations, running on a self-sustaining business model (see e.g. Fab lab Berlin profile).

Overall it can be stated that the German start-up eco-system has a long-standing and solid institutionalised structure. New emerging trends are more private-oriented venture capital approaches and new kinds of private incubator models especially in the main metropolitan cities like Berlin, Munich and Hamburg. However, the German start-up eco-system is still mainly rooted in a decentralised support system that promotes businesses from different angles and with different kinds of institutions. It has to be explored in the next few years what role these new trends will play and to which extent they can influence the overall eco-system.

3

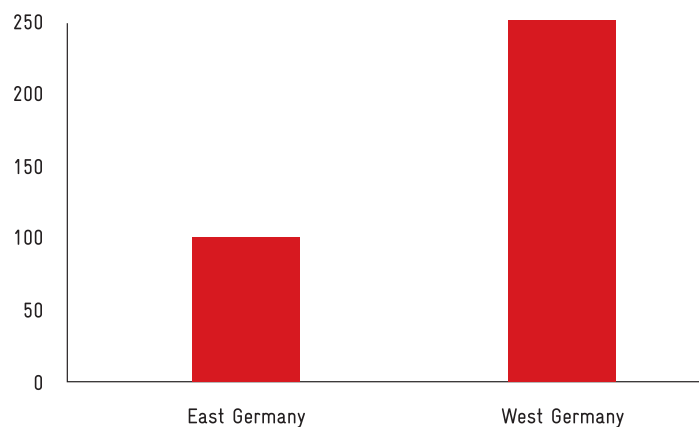
Zooming in: The incubation system in Germany and success factors

This chapter will zoom in to the German start-up eco-system and look specifically at the dominant incubation models in Germany. New trends like emerging private incubation models as well as co-working spaces and fab- or maker labs will also be covered here. After providing an insight into these different models and their orientation, the main success factors which has been identified as part of this analysis will be introduced.

3.1. Technology and start-up centres in Germany

Technology and start up centres (also often called university incubators and city incubators in English) are the most prominent incubator models in Germany. They are often called the backbone of the German Business incubation system. Nearly every city with over 70,000 inhabitants has at least 1 incubator of this kind. In Germany as a whole there are more than 330 technology or start-up centres and the number is steadily increasing. Since the beginning of the 1980s more than 240 centres have been set up in the West of Germany. Following German reunification in 1990, an additional 90 centres were created in the East of Germany (see figure 6).

Figure 6: Technology and start-up centres in Germany



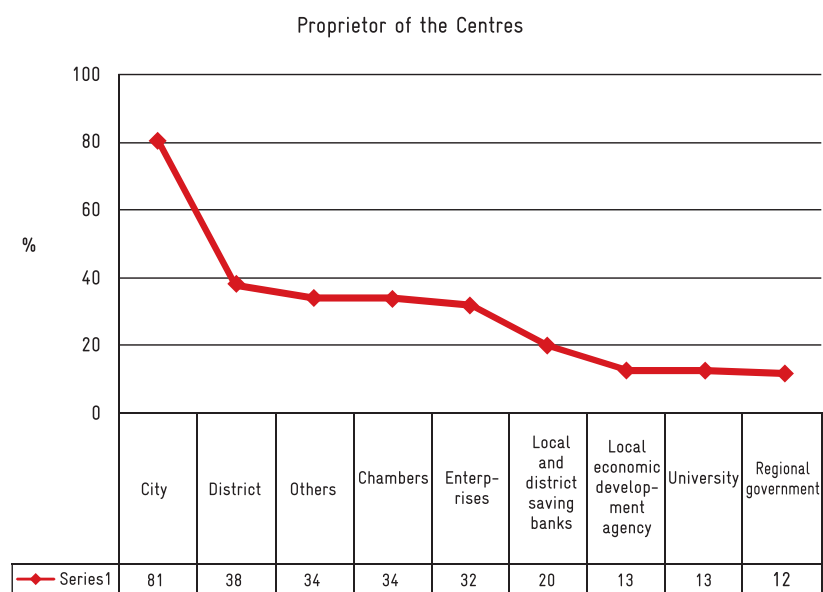


A higher agglomeration of centres can be found in specific regions like Bavaria, Baden-Württemberg and North Rhine Westphalia. These centres currently support around 13,500 start-ups with around 100,000 employees. Around 26,800 start-ups have left these centres. According to evaluations, approximately 90% of the start-ups continued their business once they had left the incubators.¹¹

These technology and start-up centres are referred as public incubator models in this document as they are supported by a network of local actors like universities, local and regional economic development agencies, local banks and city administrations. This network structure is largely based on a localised bottom-up approach according to which the centres were created. These centres were originally designed to promote business development particularly in cities and regions that were strongly affected by structural economic change processes. The first incubators hence were developed as a reaction to overcome the economic crisis and the loss of former competitive sectors (e.g. in regions and cities with dominant sectors like steel production, textile production, manufacturing and in the former communist production structures in East Germany). Thus, the initial objective of promoting incubation centres was to identify and develop new competitive advantages related to the local future potentials and existing business structures of the respective localities and regions in Germany.

This local network embeddedness of the centres also becomes clear when looking at the proprietor structure of the centres (see figure 7, ADT, p.50)

Figure 7: Proprietor of the Centres



¹¹ The numbers excluding Berlin, see ADT 2011, p. 44f.



The city and district government as well as chambers and local banks play an important role in the set-up and ownership structure of the centres. This can also be observed when looking at the supervisory boards of certain technology centres. For instance, looking at the case of the Technology Centre Dortmund, which is one of the most self-sustainable centres in Germany (see profile). The city holds 46.5%, the local credit banks 25%, the chambers 16% and the university 12.5%. This reflects the centres' strong bottom-up and network approach (see profile TZDO).

Most of these centres are organized into the "Association of Innovation, Technology and Business Incubation Centres" (ADT, see profile). The association was founded in the late 1980s to define certain standards and key tasks for the various incubators.

Box 1: Key responsibilities and objectives of public incubator centres

According to the ADT, the key responsibilities and objectives of the centres are:

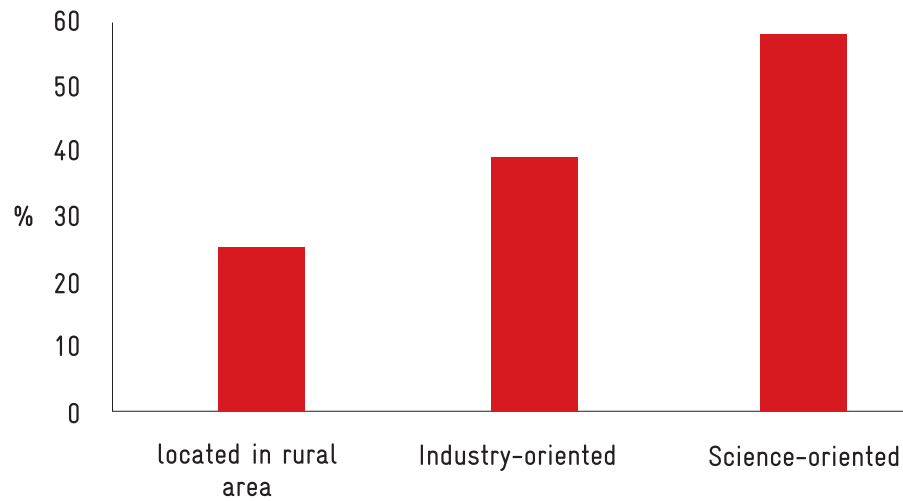
- **The promotion of start-ups** including the provision of service and coaching opportunities, the transfer of know-how by mixing companies with different technology orientation and rotation of businesses, the creation of synergies through the initiation of networks
- **Technology transfer** support to transfer ideas into marketable and innovative products, to increase regional and local competencies of entrepreneurs and their involvement in national and international research and technology transfer networks
- **Local and regional economic development** including the promotion of regional technology-intensive businesses, the attraction of new businesses and the improvement of existing businesses (like knowledge-intensive suppliers and subcontractors and services) and their skills

(source: ADT 2011)

The above listed objectives of ADT demonstrate a strong public good orientation. Most of the members of ADT are municipal or regional centres which seek to strengthen the overall economic development. Given this, their mandate goes beyond the pure promotion of start-ups but also includes the support of a continuous economic structural change in German regions and cities.



Figure 8: Centres and their environment



Source: ADT 2011, p.33

Most of the centres (around 70%) organized into the ADT would call themselves start-up as well as technology centres. Around 20% of these centres are located in rural areas, 36% are largely industry-oriented and around 50% are closely linked to research and development organisations including universities. However, it is difficult in this context to differentiate between start-up centres and technology centres in Germany as there are no clear definition boundaries. Although start-up centres and technology centres have a very similar approach, they still differ to a certain extent in their technology orientation, in the intensity of their cooperation with R&D institutions or industry and in their degree of specialisation.

Table 5: Differences between technology and start-up centres

| | Technology centres | Start-up centres |
|-----------------------------------|--|--|
| Main objective | Promotion of innovative start ups | Promotion of innovative start-ups |
| Target group of businesses | Knowledge-intensive and R&D affiliated start-ups often in specific sectors, knowledge and competence fields (e.g. biotechnology nanotechnology etc.) | Innovative start-ups from diverse fields, sectors and competencies, often with a strong service and engineering orientation but also including many different kinds of local start-ups |
| Locational focus | In most larger university cities | In most medium-sized and larger cities |



| | Technology centres | Start-up centres |
|------------------------------------|---|--|
| Geographic focus | Regional orientation | Local orientation |
| Driving force | City, local banks, various agencies and a stronger role of the university | City, local banks, various agencies, and a rather weaker role of universities |
| Finance model | Renting, management of research and applied R&D funds. These projects are often financed by EU or national Innovation and R&D promotion funds | Renting, basic services, investors |
| Main supporters and mentors | Professors, technology and applied science centres, R&D, mentor networks, local consultants and support institutions | Chambers, local and regional development agencies, local mentors and support institutions (e.g. innovation centres, training, technology transfer inst.) |

Technology centres are often also called university incubators, although the universities, as explained above, are in general not the owners of the centres.

Technology centres are usually located next to a university or in a technology park close to a university. They tend to have close links to R&D and technology transfer institutions. They also incubate many academics and former students who seek to open their own businesses. In many cases they also offer advanced services including the renting of modern infrastructure for the tenants. The access to e.g. laboratories, highly specialised technologies etc. is a very important incentive for many start-ups to join an incubator as they would otherwise have no or only very expensive access to these amenities (see profiles BioCity Leipzig, TZDO Dortmund, Weinberg Campus Technologiepark). Although providing access to these services requires high investment costs, these infrastructural advantages are decisive for the further development of the start-ups as well as for the branding of the centres which constantly seek to attract additional start-ups from the region. Many knowledge-intensive technology centres in Germany have been the straw to tip the scales in creating technology parks where former tenants as well as private businesses and research institutes have formed around the technology centres. Thus, having very sector-specific technology centres in certain cities has become a competitive advantage for these cities (see also e.g. profiles from BioCity, KIT and TZDO Dortmund).

Sustainable financial income revenue is one key success factor for technology centres. In most cases, the physical infrastructure of the centres is supported by the regional or local governments in the respective location. In some cases, the manager of the centres is financed by the university or the municipality. Income is further generated through renting of office space and renting of specialised infrastructure (like cleaning rooms,



laboratory space, access to specific technologies, etc.). Many centres are also involved in certain application-oriented research projects or start-up promotion programs (e.g. like EXIST). These funding schemes also provide certain financial support for the management of the program (see e.g. the profile of the spin-off centre Humboldt-Innovation). Larger technology centres have started to open up a technology park in which the renting and selling of space becomes an important income source for the centre (see profiles of TZDO Dortmund, BioCity Leipzig, and Weinberg Campus Technologiepark).

Start-up centres can be found in many medium-sized and larger cities. They are often not focused on a specific sector. Start-up centres thus incubate all kind of businesses. These start-ups are often focusing on the local needs and economic strength of the city. For many smaller cities it is difficult to establish a centre focusing on just one sector due to the lack of critical mass of new start-ups in one particular field. Some start-up centres may focus on a certain sector (e.g. IT, engineering, logistics etc.); however this tends to have developed naturally without the official setting of clear selection criteria. Other than technology centres which tend to select research and knowledge-intensive start-ups from highly promising sectors, start-up centres focus more on innovative businesses that have the potential to cater to local needs and use existing local advantages. Their services are less specific in nature and, apart from offering basic services such as office space, internet, telephone services, etc., start-up centres are largely oriented towards creating business linkages between industries from the same sector and supporting institutions as well as establishing networks by creating meeting and contact platforms, offering training and presentation events, business contests and marketing services.

Figure 9: Main actors and relations in the public German incubation model

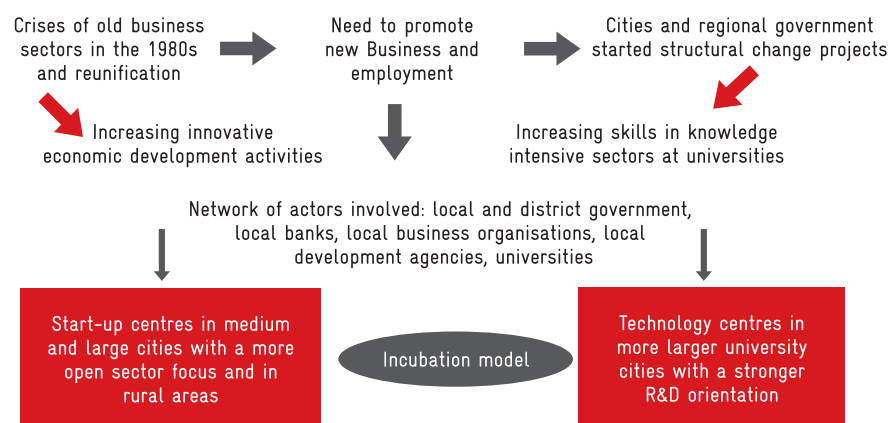


Figure 9 summarizes the development process and the establishment of technology- and start-up centres as well as the actors involved.



3.1.1. Main success factors for technology and start-up incubators

The success factors identified for technology and start-up centres in Germany are highlighted in this chapter. The following success factors have been identified and will be used in all the subsequent chapters: (1) "management procedures", (2) "selection and monitoring procedure", (3) "service provision", (4) "sustainable finance" and (5) "embeddedness in the eco-system".

Management procedure

- **Outsourcing of management:** In many centres a more professional and independent management body has been established in order to increase the dynamic of the centres and make them more independent from the public sector. Earlier many incubation centres were managed by professors (in technology centres) or public representatives (in start-up centres) e.g. from economic development agencies. However, this structure has changed and more professional and independent managers have taken over. They often have certain business experience and expertise in the sectors the centre is focusing on as well as the ability to market the centres and to search for additional funding and business opportunities.
- **Network management competencies of the staff:** In interviews the managers of the centres mentioned the following as important selection criteria for good staff: (a) being a good and communicative network manager, which includes being open minded in making contacts with different kinds of people (public and private representatives) and (b) having the ability to cross-think and interlink subjects. In recent decades many centres have promoted the development of synergies between different knowledge fields (e.g. electronics and engineering to mechatronics, nanotechnology with material efficiency, textile production with car manufacturing etc.). The staff needs to have the ability to understand basic trends in the various sectors the centre is working in but also needs to have good business acumen to understand market trends.

Service provision

- **Basic operational services as a prerequisite:** Most of the centres in Germany offer office space, internet connections, copy and postal services, meeting rooms and other basic services. However, these are prerequisite basic services incubatees generally ask for. Offering these basic services alone is not really a competitive advantage for incubators anymore as those services can also be found in normal office rental spaces or in co-working spaces.
- **Business networking services:** The offering of business networking services which seek the exchange between local value chain actors involving suppliers, buyers and start-ups has become a key competency of many incubators. This can even include



the organisation of workshops which seek to solve common problems or to identify creative solutions.

- **Facilitation of access to financial services (see next chapter):** Developing contacts with business angels and venture capitalists is another core activity that incubators are increasingly pursuing, e.g. through organizing pitch events in which start-ups can present their ideas in front of a business angel network. This service support is seen as rather innovative and is only offered in 1/3 of the centres (see e.g. profile from Weinberg Campus).
- **Linking start-ups to mentors and experts for technology advice:** Mentorship and coaching generally is supported through a network of semi-public institutions. Technology centres in particular pro-actively create linkages to applied science institutions like e.g. Fraunhofer, Max-Planck, etc. However, during some of the interviews conducted for the study it was mentioned that there is a lack of experts and mentors covering topics like analysis of markets, marketing, sales strategies, etc.
- **Pre-incubation services:** Pre-incubation services have gained significance in recent times in order to support business ideas which are still at a nascent stage and also create a pipeline of new potential start-ups for the incubators. Technology centres linked to universities often provide basic services on business plan, help to link students and young potential entrepreneurs to start-up coaches and provide them with further process information about how to start their own businesses. Although still in a nascent stage, some start-up centres provide start-up awareness events and visit schools to promote entrepreneurship. (see profile Spin-off-Zone Humboldt)

Sustainable finance

- **Rental space as a basic financial income:** The main source of income for almost all incubators comes from renting office space. During the interviews some of incubators mentioned that a minimum size of around 5,200 sqm is required to achieve a critical amount of revenue from renting. Given this, many incubators seek to expand to a technology park in medium-term and to become self-sustainable through additional private and institutional investments.
- **Revenue through service offerings for incubatees and other businesses:** Another important source for incubators in Germany to generate income is by offering various services. Income is gained especially by providing infrastructure services like laboratories or certain technologies.
- **Project finance:** As mentioned earlier, successful incubators often acquire public and private funds to implement certain projects which seek to foster for instance collaboration between different incubators and/or research institutes. Additionally, some of the interviewed incubators have access to certain start-up programs (see EXIST in chapter 4) or EU projects (see profile Spinn off centre Humboldt Innovation GmbH). Some of the incubators also offer consultancy services to other incubators abroad which seek assistance in capacity building.



Selection and monitoring procedure

- **Scouting for new start-ups:** the identification of young professionals with entrepreneurship orientation and potential as well as the identification of new business ideas emerging from new developments in the relevant business sectors are becoming increasingly important. Innovative start-up and technology centres have begun to set up pre-incubation centres and scouting models to identify potential new business opportunities (see TZDO Dortmund, Humboldt Spin-off centres or Bio City profile).
- **ADT audit systems that provide benchmarking opportunities:** The ADT is promoting an audit and evaluation system for innovation and start-up centres. Around 10% of members (30 out of more than 300 centres) follow this standard procedure. It evaluates and benchmarks the centres in different key areas for instance numbers entering the incubator, numbers exiting the incubators, survival rate, employment rate, contribution to technology transfer in the region including projects between businesses and other transfer organisations, contribution to investments and value addition compared to expenditures, as well as the overall effectiveness and efficiency of the centre as a whole (see profile ADT).
- **Simple monitoring procedures seen as critical and achieved through trustful relations and informal feedback loops:** Most centres have to provide key figures, expenditure and cost sheets to their shareholders. Additionally, incubators increasingly seek to establish a simple monitoring procedure that evaluates the satisfaction of the incubatees on a regular basis without becoming a bureaucratic constrain. However, currently this is carried out through close face-to-face contact and trustful relations between the management staff and the start-ups. This relationship provides quick feedback loops and offers the opportunity to make instant adjustments.

Embeddedness in the eco-system

- The public incubation model is the backbone of the German start-up promotion eco-system. It is very much embedded in the decentralised structure of Germany and often bottom-up involving local support and financial institutions as well as local and regional government stakeholders. Apart from the incubation itself, most of the supporting services including training, awareness and business idea events are organized within this institutional local setting.

3.2. Private incubation models

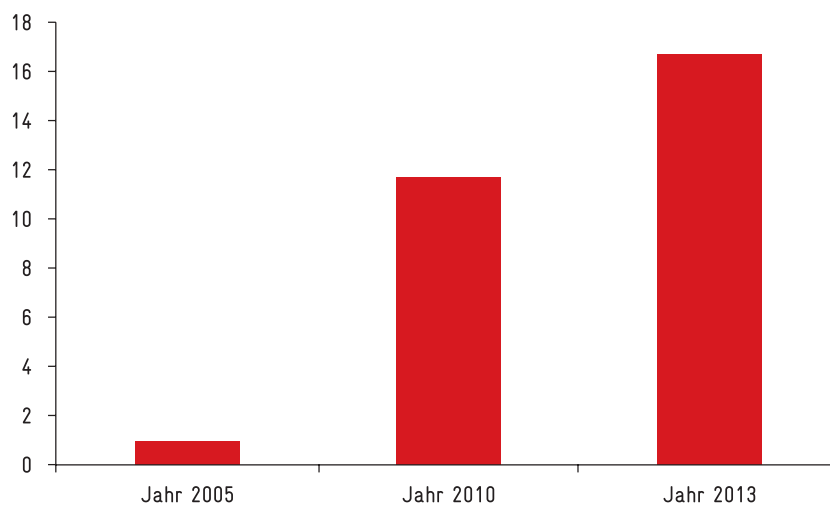
During the last few years new kinds of private incubators have emerged in Germany similar to the US model. Contrary to the public incubators the interests behind their emergence are different. While the classic German start-up system majorly builds on public institutional support, private incubation models are largely supported by private



investors, venture capitalists, large companies and private service providers. The focus is on mostly digital businesses that have the potential to quickly scale up within a relatively short period of time.

The emergence of private incubator models started just a few years ago (see figure 10).

Figure 10: Rise of private incubator models



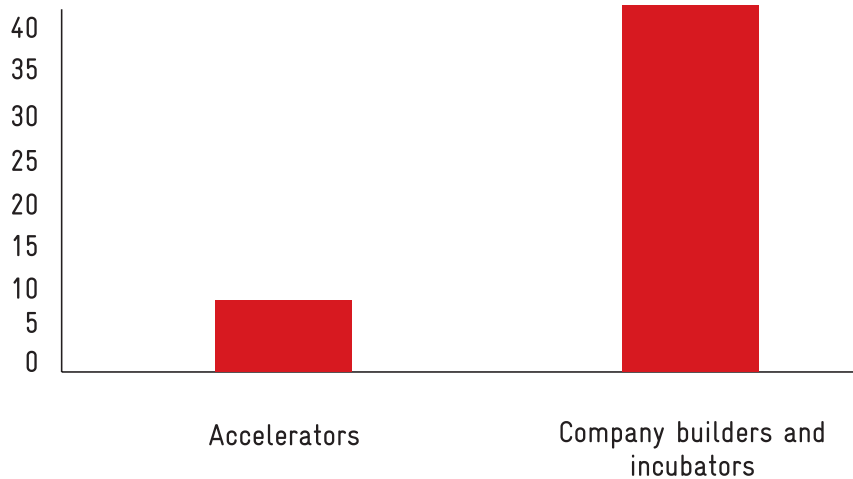
Source: Mücke und Sturm Company (2014)

One of the most famous private incubators and the first one that emerged in Germany is Rocket Internet, founded in 2007 in Berlin with a portfolio of around 50 start-ups worldwide by 2013. Rocket Internet had become successful largely by copying already existing internet businesses. However, exact numbers how many private incubators are currently existing in Germany are not available due to the fact that the market for private incubators is still constantly changing. Estimations indicate that there are between 20 and 50 private incubators in Germany (see figure 11). Commonly private incubators are classified into three different types: accelerators, company builders and incubators.

Many **Private Incubators** have emerged as part of a bigger company/organisation like Deutsche Telecom (telecommunication), Scout 24 (online sale of real estate and cars), Siemens (industrial machine technology), Axel Springer (Print-publisher), the Otto group (a retail company) among others. They generally provide similar services like public incubators such as co-working space, support in areas of engineering and product development, online marketing, business intelligence, operations, human resource and finance. The incubation period varies depending on the business model of the incubator; however ranging from 9-12 months. In exchange private incubator generally acquire a share of the start-up that can vary greatly from incubator to incubator and start-up to start-up.



Figure 11: Estimations of private incubators in Germany



Source: Mahr (2014), Gründerszene (2014)

Private Accelerators: Accelerator programs are 3-6 month incubation programs in which very young start-ups are supported intensively through a mentoring network to further develop their ideas (see profiles from Startupbootcamp and Axel Springer Plug and Play). These accelerator programs can either be directly associated with a larger company (see the profile of Axel Springer Plug and Play) or founded by private individuals (see startupbootcamp profile). The accelerator pays a compensatory payment ranging between 25,000 and 30,000 Euros for each start-up and generally provides co-working space during the acceleration time. Start-ups that take part in an accelerator programs usually give 4%-10% of their company shares to the owner of the acceleration program. The program ends in general with a "D-day", on which the start-ups present their ideas to venture capitalists. As outlined above these start-ups generally have quickly scalable business models and are mostly operating in the IT sector.

Company builders are another classification of private incubators. Company builders are generally private entrepreneurs and venture capitalist companies that are experienced in setting up, developing and managing businesses; majorly online businesses. Instead of promoting ideas of start-ups, they seek to realize their own ideas or copy well-established online companies (as Rocket Internet does). For the realization of their ideas they identify potential young experts or entrepreneurship-oriented personalities that could implement their business ideas in partnership with them. Most of the shares of these start-ups remain in the hand of the company builders (see profile Founderslink).



However, although all three incubation models are slightly different, many similarities can be found which distinguish them from public incubation models:

- **Shareholder incentive:** Although they commonly focus on the promotion of start-ups, their driving interest behind it is different. While accelerators and incubators initiated by larger companies like e.g. Telekom, Siemens or Axel-Springer are mainly interested in staying close to innovative new ventures, products and market trends, privately initiated models (like startupbootcamp, Rocket Internet, Founderslink) are focused on increasing their market share in profitable start-ups and hence their overall profit. At the same time private incubators have a very business and market-oriented incubation approach; providing learning opportunities for public technology and start-up centres (see further reflection in this respect in chapter 5.1.)
- **Focus on metropolitan cities:** All the private incubator models are mainly based in metropolitan cities which provide many additional opportunities for start-ups and at the same time a network of expertise, business contacts and venture capitalists. Medium-sized cities generally do not provide a sufficient critical mass of expertise and start-ups for this purpose.
- **Target group:** Private incubator models exclusively focus on quickly scalable businesses. They seek to promote their market integration and provide specific business expertise to enable them to get access to venture capital and hence to grow quickly. The target group is mainly internet and online-based companies which provide network, selling or service platforms; often also integrating applications for consumers. Initially, they receive funds either from the incubating business, or from a venture capitalist company (e.g. see the cooperation of Plug and Play and Axel Springer) or directly from a company builder.
- **Private mentor network:** All three private incubation models cooperate with a strong network of private specialists and mentors from the corporate world, including financial experts, marketing experts, sector specific experts that are specialised in digital development, software development, sales managers, venture capital firms, personal developers, etc. As opposed to public incubators, links to R&D institutions are very limited, and links to local public organisations such as local development agencies or associations are almost non-existent. Private incubators in Germany also look beyond the national borders and seek to identify start-ups worldwide; thus are also not embedded into the local institutional structures.

3.2.1. Main success factors of private incubators

The following section defines main success factors for private incubation models in Germany. These success factors have been defined for all three private incubation models. However, wherever required, the differences have been highlighted.



Service provision:

- **Services “to progress, not to learn”:** During one of the interviews one manager of an accelerator program stated: “The start-ups are not here to learn but to progress and accelerate in a very short period of time.” The whole structure of the private incubator models is oriented towards rapidly increasing market opportunities for their start-ups.
- **Limited incubation time:** Most of the private incubator focus on the principle “quick but focused and intensive”. Young start-ups are intensively coached in their core business areas.
- **Provision of short-term infrastructure:** During the incubation time, office and co-working space is provided by the incubators in which the start-up teams share a large office room with other start-ups.
- **Provision of accommodation and other incentives:** Most of the private incubators offer a supportive grant for each start-up to cover their accommodation costs and living expenses during the incubation time.
- **Access to a mentor network:** Generally, most of the acceleration programs offer direct coaching and mentorship through a wide network of business experts.
- **Access to venture capitalists:** Most of the incubators organize pitch events where the start-up teams have the opportunity to pitch their idea in front of venture capitalists.

Sustainable finance

- **Shareholder Value model:** Most of the private incubator models are based on a shareholder value model. They invest in promising start-ups with the aim to increase the value of the start-up. When entering into the incubators start-ups generally transfer a share of their company (between 4 and 10% in accelerator programs, higher for private incubators and even more high in the case of company builders).
- **Increase in value through other venture capital investments:** Most of the incubator models have a close relationship with venture capitalists. The presentation of promising start-ups to venture capitalists can lead to additional investments and an increase in the value of the start-up. This also reduces the risk of the incubator.
- **Financial sustainability through selling shares:** The objective of private incubation models is to promote start-ups with a high and quick growth potential. Most of the private incubators seek to sell their business shares after a maximum period of 7 years. According to managers of two accelerator programs interviewed in Berlin, around 70% of their start-ups received additional investments from venture capitalists.

Selection and Monitoring procedure

- **Detailed selection procedure for tenants and start-ups:** The selection of start-ups is often comprising of several rounds. The first round is generally conducted online. Interested start-ups need to answer a sequence of questions that mainly seek to understand the start-ups’ business philosophy. The first round is generally followed by a Skype



conversation to get a better understanding of the personalities, and the team behind the start-up. Additionally, the start-ups have to explain their idea to different mentors who then finally recommend a small number of start-ups for entering into the incubator or accelerator program (see profile Startupbootcamp). For this purpose so called pitch-days are organized where start-ups have the opportunity to present their ideas in front of different mentors. The different kinds of application rounds are seen as an important success factor in this respect.

- **Start-up team as a prerequisite:** In most of the programs individual start-ups are not eligible to be considered for the program as many incubators believe that it is the collective expertise that will drive the success of a start-up. Ideally the start-up team should include a subject-matter expert and a sales or marketing expert.
- **Scalability of the business idea:** The business idea needs to have potential to become successful in a relatively short period of time and to be attractive for venture capitalists.
- **In general there are no official monitoring processes in place** to track the satisfaction of the start-up teams and their success after exiting the incubator. However, since many private incubators are shareholders in the start-ups they are regularly monitoring the development of the company. Depending on the percentage of shares they are holding, they can also actively influence the development of the start-ups.

Embeddedness in the eco-system

- Private incubators in general are only limited embedded in the German start-up eco-system. This might change over time given the rise of private incubation models. Until now, private incubator models are mainly located in large cities, especially in Berlin. Private incubators are still not an equal substitute for public incubators as most of them only promote selected digital companies with rapid growth potential and do not seek to strengthen the overall eco-system. Nonetheless, in cities like Berlin some private incubators have expanded their business model and created linkages to co-working spaces.

3.3. New forms of start-up instruments (co-working spaces and creative labs)

There are several other new and innovative approaches in the promotion of start-ups in Germany. Many of these approaches are closely interlinked to the promotion of a creative start-up culture and the promotion of network platforms in which businesses join forces and look for common business and network opportunities. The following chapter presents different organisational formats that have emerged based on strong self-organizing forces and often privately initiated dynamics. However, these models are traditionally not classified as incubators as such but strongly support the emergence of start-ups. Within this chapter three instruments are highlighted:



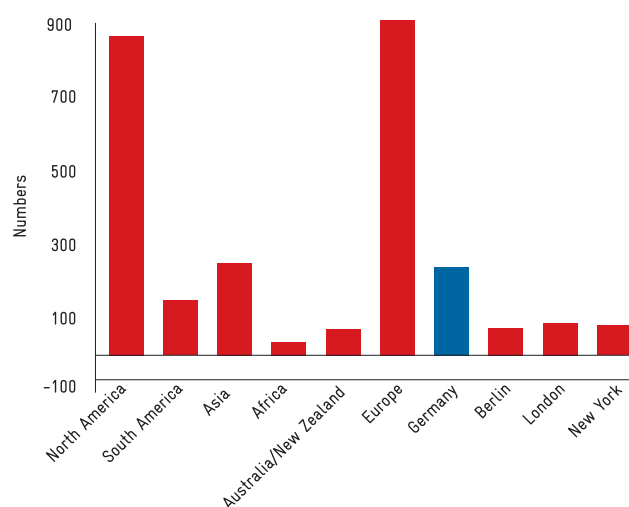
- **Co-working spaces:** These are office spaces especially for freelancers and young start-ups actively working in the creative industry as well as service- and internet related areas. The basic objective of co-working spaces is the provision of flexible office space and a dynamic and network-related working atmosphere.
- **Business hubs** are usually places that host an agglomeration of businesses that follow a specific joint business objective.
- **Creative labs** like Fabrication Laboratories (Fab Labs) or Maker Labs provide platforms for creative individuals as well as businesses or start-ups that want to design prototypes or product ideas.

There are other new kinds of start-up promotion initiatives, many of them focusing on larger German cities. Just to name a few: There are so called seedcamp weeks which seek to foster linking young investors with leading developers and businesses, or start-up weekends which support connecting start-ups from different fields to share product ideas and experiences. However, they have not been part of the deeper analysis in this paper.

3.3.1. Co-working spaces

Co-working space are office spaces, often organized within a larger office building with several desks and internet plug-in stations. Co-working spaces are generally used by younger and self-employed freelancers. They usually provide internet connection, a coffee bar, meeting rooms, and a creative and dynamic work atmosphere, as well as events and networking opportunities where businesses can meet each other and exchange ideas and contacts. It is possible to rent a desk on a daily, weekly or monthly basis and the cost involved is usually lower than renting a full-fledged office.

Figure 12: Numbers of Co-working spaces worldwide



Source: Global Co-Working Census (2013)

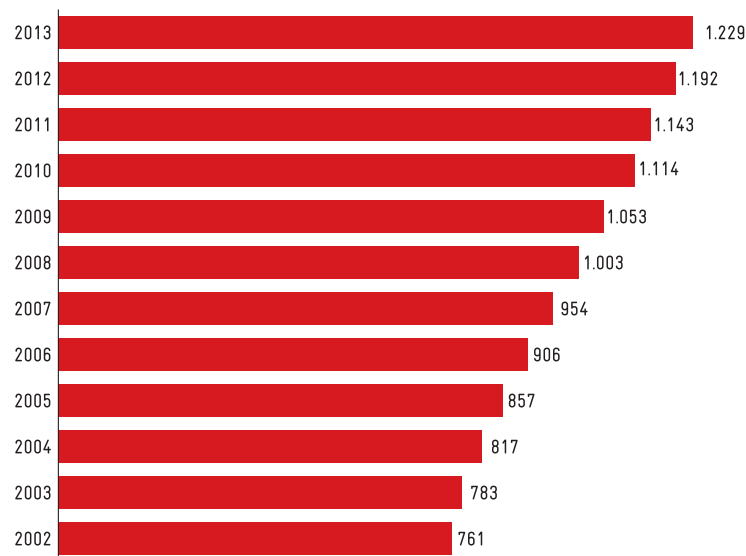


During the last four years the number of co-working spaces has tripled and reached 2,500 in 80 countries worldwide. The USA has the highest number of co-working spaces, while Germany is the leading co-working space location in Europe with 230 spaces in different cities (see figure 12). In Berlin alone there are 68 co-working spaces; the city with the 3rd highest number of spaces worldwide.¹²

Co-working spaces are a new phenomenon demonstrating a new working style for start-ups. Its number has drastically increased in the last two decades due to the rising number of freelancers (see figure 13). Internet and software freelancers as well as start-ups working in the creative industry are increasingly choosing co-working spaces as an office format. Their services are often highly innovative but in order to overcome isolation, to be part of a lively environment, to acquire the right contacts and to grow, they look out for co-working places.

The atmosphere in co-working places can generally be described as collaborative and innovative. It includes a learning culture in which exchange and learning from others is decisive for the further growth of the start-ups. The informal way of working side by side provides opportunities to make contacts, share information and ideas which can even lead to the joint development of new products. Some co-working spaces also provide different training opportunities specifically for start-ups and access to creative product laboratories.

Figure 13: Development of freelancers in Germany



Source: Statista (2013)

¹² Berlin comes after London (81 co-working spaces) and New York (71) in 2013. See Global Co-Working Census (2013).



In Germany, nearly every larger city has at least one co-working space and smaller cities are increasingly also taking up this model. Prices of rooms are in general around 10 Euros per day and up to 200 Euros per month. Most of the co-working spaces are registered at www.coworking.de in order to facilitate the search of office space for freelancer travelling in Germany.

3.3.1.1. Main success factors for co-working spaces

Management procedures

- **Stems from self-organisation:** Most of the co-working spaces in Germany were developed on the initiative of entrepreneurs or freelancers who were looking for office space for themselves (see e.g. the profile co-op). Some of them also started to organize the space as a business model (see profile Betahaus) based on the strong conviction that this kind of office format has potential as well as concrete advantages.
- **Openness and originality:** Since managers are usually young and enthusiastic, they are responsive to the business needs and try to create an environment to boost creativity. The level of bureaucracy tends to remain low and the degree of dynamism high.
- **Lean management structures:** The management structures at such organisations are lean and non-hierarchical in nature, thereby further boosting productivity, though this may often not be visible a first glance.
- **Responsiveness and need based approach:** One of the main tasks is the ability to create a certain relationship with businesses, engaging them in network platforms, being open to taking up their ideas and promoting events that emerge not only from the management itself but also from the needs of the businesses and avenues that interest them.

Service provision

- **Flexible room renting:** flexible or fixed desk space (with different prices) per day, week or month(s), as well as meeting rooms with provision for some food and drinks.
- **Recreational Spaces and meeting zones:** Co-working spaces often also provide for comfortable recreational spaces with flexible seating arrangements. These spaces also serve as meeting areas that are not straight jacketed but rather more informal and relaxed to allow people to rejuvenate, converse and feel inspired.
- **Meeting and networking events:** More often than not, these set ups also make arrangements for informal meetings between businesses, presentation platforms where new in house start-ups or external start-ups present their businesses and new ideas. These meetings serve well for exchange of ideas, contact and knowledge. A number of content or context specific events are also hosted by such spaces.
- **Start-up promotion events:** Some of the co-working spaces also get involved in start-up events organised by other stakeholders or incubators.



- **Provision of a certain cultural and discovery atmosphere:** co-working spaces often entail a certain atmosphere of discovery. The cohort of younger businesses in particular seek such vibrant and experimental places where business ideas are put into practice by individuals and where these young enterprises encounter similar cultural features and challenges.
- **Support of sector networks (in some co-working spaces):** Some co-working spaces tend to become a natural home to specific businesses like freelancers active in a particular area, for e.g. software development (see e.g. co-op) or designers.
- **Provision of additional specific services:** Some larger co-working spaces (like Betahaus in Berlin, see profiles) also provide very specific services like prototyping platforms (where the businesses can rent laser cutting and 3-D printer technology to design new products), training workshops across a multitude of areas like marketing, social media use, product development, etc.

Sustainable finance

- **Private equilibrium model approach:** Many of the co-working-spaces that exist today began with private finance. “Renting a larger working space and getting other freelancers involved”, was often the starting point. Pre-finance was provided by the founders. With the additional renting of space, expenses were recovered. Co-working spaces that developed in this way often started small and changed the location over the years with an increasing number of members (see profile co-op).
- **Business model approach:** During the last few years some co-working spaces have used the high demand for co-working space and developed several co-working spaces to generate income and employment. “Business model” means that the set-up of a co-working space is organized in such a way that it makes profit and allows for replication at other places. A few co-working spaces in Germany have started to open up satellites in other towns and even in other countries. This has been done after a careful scrutiny of market potentials and investment and identifying the most profitable locations. These co-working spaces also seek to create joint ventures (see profile Betahaus).

Embeddedness in the start-up eco system

- The co-working spaces have emerged very much at the local level. In this respect they have succeeded in capitalizing a market niche responding to the demand for flexible office space. Although the open culture and creative orientation of many co-working spaces are dramatically different from the long-established culture of the public incubation models, they often support certain start-up events. From the business culture perspective, they are more closely linked to private incubators, although this relationship only exists in some major cities like Berlin, Hamburg or Munich.



Co-working spaces have developed bottom-up as they mainly have emerged on initiative of individual business persons or groups of young businesses. Most of the founders of these co-working spaces (even the ones who use co-working spaces from a business perspective) believe in the unique culture that is provided by these working spaces. It entails the opportunity for creating synergies in a dynamic and creative working environment as well as fostering innovation through knowledge exchange. The latter often results in additional learning and even new business opportunities (see profile co-op). In some cities it can also be observed that real estate businesses and economic development agencies use the name “co-working space” to rent office space. Nonetheless, the general understanding of a co-working space is based on an intrinsic motivation of businesses to bring other small businesses together and to develop a vibrant and creative exchange of experience that can even lead to the realisation of common objectives.

3.3.2. Creative labs

Of late, a new trend has been observed in Germany. In recent times so called maker and fabrication labs (FabLabs) have emerged as creative spaces that promote innovation processes and prototyping platforms for private individuals as well as for businesses or researchers. These labs normally offer high technology solutions like laser cutting machinery, 3 D printers, CNC machines and other new technologies less accessible to individuals. The owners often provide introductory workshops for customers on how to use this machinery for the development of specific products, new product solutions or product models through the combination of technology and creativity. These prototyping laboratories have been set up over the last decade in many developed and developing countries.

There are more than 20 Labs existing in Germany, with a specific agglomeration in Berlin. Most of the prototyping laboratories call themselves FabLabs or Maker Labs although they do not derive from the FabLab movement. The original FabLab movement had a clear societal mission to “provide access to the tools, the knowledge and the financial means to educate, innovate and invent using technology and digital fabrication to allow anyone to make (almost) anything, and thereby creating opportunities to improve lives and livelihoods around the world”.¹³ The movement was initiated in 2001 by the Grassroots Invention Group and the Centre for Bits and Atoms (CBA) in the Massachusetts Institute of Technology (MIT). In 2009 the Fab Foundation took over most of the organisational work. The vision of the FabLab movement is to be able to work across sectors and regions thereby set up operations anywhere in the world. To ensure this, the FabLab model was developed with a focus on a low budget approach (around 40–50,000 Euros), encouraging public and private partners as well as machinery and technology providers to become equipment or financial sponsors to guarantee access to “prototyping for everybody”. A

¹³ See Fab Foundation 2013



network with more than 200 FabLabs has evolved around the world, and many of them were supported at some stage by the CBA or the Fab Foundation. The movement follows the FabLab charter with certain codes of conduct such as open access for the community, open source of inventions, strong exchange and cooperation between the FabLabs, personal responsibility and certain rules for commercial usage.¹⁴

In Germany, some of the so called “FabLabs” derived from this CBA movement (see FabLab Berlin profile) but many others that also use the term have instead taken on the idea and initiated prototyping platforms for specific target groups. Some are located in universities, mainly for students, (see e.g. Fablab Allgäu) or in specific technology transfer centres for researchers (e.g. in some Fraunhofer Institutes) to develop innovative market-ready products. Some co-working spaces and innovation centres are also starting to offer FabLabs as an instrument to promote prototyping for their tenants.¹⁵ Nevertheless, what most FabLabs in Germany still promote is the original idea of increasing access to technologies for a wider group of people. Most of them have also been initiated with a very strong bottom-up approach. The financial model of some twenty German FabLabs that can be found on the Internet reveal that additional financial support is provided by local organisations (university, local development agencies, local banks, etc.) as well as by other private sponsors and technology or machinery providers.

3.3.2.1. Main success factors of creative labs

Management procedures

- **Support by a private network or by research organisations:** Makerlabs are often promoted by a number of professors or students who are convinced of the potential of creative products and have benefitted from prototyping these. The founders however may be private individuals with an intrinsic motivation to promote the idea.
- **Critical mass of potential users:** A critical mass of users is necessary to develop a sustainable model.
- **Network of collaborators:** The FabLabs often have close linkages with schools, institutions offering entrepreneurship courses and faculties at universities active in this pace in order to expand their supporter base and increase their customer base.

Service provision

- **Introductory workshops and seminars on how to use the technology:** All FabLabs offer introductory workshops and seminars on the use of the high-tech machines and related software.

¹⁴ See Fab Foundation (2013)

¹⁵ See an overview of many Labs in Berlin: ProjektZukunft (2013)



Financial aspects

- **Financial basis of the FabLab model:** The FabLabs or MakerLabs have different target groups and are initiated by different organisations or NGOs. Some labs are financed by universities or technology transfer organisations. In the case of Labs following the FabLab charter, financial sustainability is generally provided through the provision of fee-paying workshops as well as through membership fees or fees to use the machines. Every user can either become a member paying a monthly user fee or can opt to pay for the individual use of the machines.
- **Contract work for clients:** Another financial basis as well as a sustainability factor of privately initiated Labs is the provision of consultancy or development work by the FabLab experts and teachers e.g. for specific businesses as well as through renting of machines to groups of businesses.

Embeddedness in the German start-up eco system

- Creative labs are an instrument that has just started to emerge in different organisational and specialised forms. Some universities, co-working spaces as well as private NGOs have used the instrument to promote creative platforms for experiments. Although the Makerlabs and FabLabs cannot be interpreted as concrete start-up promotion tools, they are spaces that provide an opportunity for start-ups and individual persons to obtain access to a creative environment and to facilities and machinery that would otherwise be difficult to access. It provides their users with additional opportunities to test and develop new individual or business products.

3.3.3. Business hubs

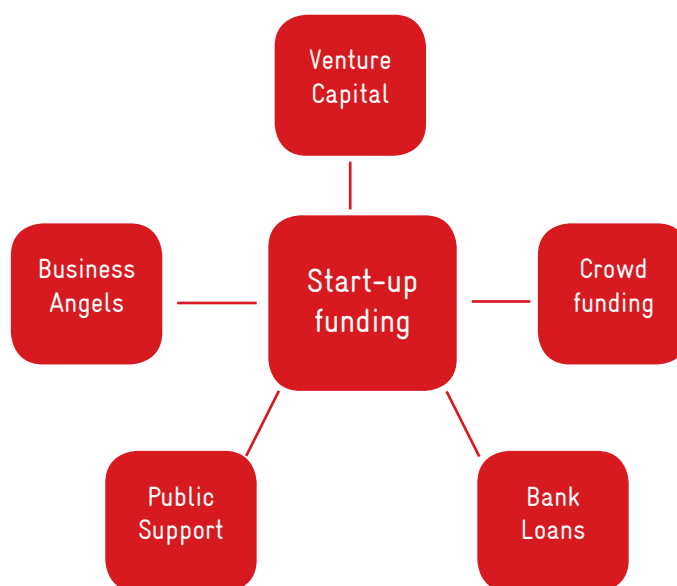
Suppliers, buyers, producers and further processors generally prefer to work in close proximity in order to reduce transaction costs and to increase competitive advantages. This cluster approach has been strongly promoted in the last 15 years in Germany and in the EU to foster synergies between businesses. However, in recent years some new cluster formats have emerged in Germany; so called "Business hubs". Their competitive advantage is that they are able to collectively attract customers by providing various services at one hub. As part of the case studies in chapter 7, one such a business hub, the "Planet Modular", is described in detail. This hub is an association of small and medium sized companies that provide expertise in trade, craft and art. By joining hands they have been able to create significant competitive advantages. "Planet Modular" is well-known in Berlin as more than 15 specialised service providers have been setting-up their business there. As this is a relatively new and unique format, no further details on common success factors are provided in this section.

4

Zooming in: The financing system for start-ups in Germany

In the German eco-system it can be distinguished between five different external funding schemes for innovative start-ups (see Figure 14). The public sector is extensively supporting the access to finance for start-ups. Public actors majorly support the access to venture capital, grants as well as cheap loans for entrepreneurs. Additionally, some Business Angel Networks also receive public support; mostly in terms of organisational assistance. A recent trend is the set-up of public-private partnerships. These models have two advantages: On the one hand they allow for a better governance of public investments and on the other hand they include private management expertise in start-up funding support approaches.

Figure 14: Funding Schemes for Start-ups in Germany



Source: Own elaboration



4.1. Business angel and Business angel networks

Business Angels (BA) are typically to be found at the beginning of the funding chain. Especially at this stage the shortfall in funding is relatively high. Additionally, the importance of Business Angels in providing follow-up investments has increased. Business Angels play an important role in supporting economic growth by contributing knowledge and capital.

Based on existing data, the BA market consists of around 5,000 to 10,000 informal investors. They invest roughly 200 - 300 million EUR every year. Out of these investors 1,000-1,400 Business Angels are organised in Business Angel Networks (BANs). 25-50% of total investments in Germany are made by Business Angels organised in these networks. Currently there are around 40 BANs. The majority of these networks are further organised in the national BAN association, BAND (CSES 2012).

Compared to countries like the US or UK, the German Business Angel market is still small in number (per million of population). Based on recent data from the national BAN association (BAND), the size of the Business Angel market in Germany is approximately 5 billion EUR, wherein only 200-300 million are realized as outlined above. However, these angels face major challenges in investing their money as start-ups generally prefer support by banks and national or regional public institutions. According to CSES (2012), especially cheap loans and subsidies provided by public institutions reduce the demand for equity capital. However, this is controversially discussed as other sources indicate high demand for equity capital in Germany. At present, investments in start-ups are relatively modest. However, when surveyed at the end of 2013 most of the Business Angels described their business situation as relatively good.

Figure 15: Business Angel Climate Index in Germany 2009-2013



Source: BAND 2014



A typical German Business Angel has the following characteristics (CSES 2012):

- Business Angels in Germany are male, their average age is around 50 years and typically they are former CEOs, Managing Directors, or entrepreneurs, often with own experience in founding companies.
- Typically, the private asset of Business Angels is higher than 5 million EUR.
- The number of projects Business Angels are involved in is on average from 5 to 7 with a holding period of 4 to 7 years.
- They prefer investing in to IT, energy and environmental (technologies), medical/health (life sciences) and service sectors.
- Average investment is typically in the range of 50,000–100,000 EUR.
- They focus on the seed and the start-up stage.

Business Angel Networks generally act as an intermediary organisation between BAs and entrepreneurs. However, these networks do not undertake direct investments. The task of BANs is to facilitate the implementation of investment processes through an efficient interconnection of Business Angels, entrepreneurs and other actors in the local ecosystem (incubators, venture capitalists, development institutions, banks, stock exchanges etc.). Additionally, BANs are responsible to enhance the public visibility of those angels active in their network. Thus, BANs provide entrepreneurs with a first contact to these investors (OECD 2011).

Business Angel Networks are active at different geographical levels (national, regional or local) and also have different focus areas. According to a study conducted by the OECD (2011), their activity frequencies vary tremendously (e.g. frequency of meetings, etc.). However, most of the Business Angel Networks employ one or more people and operate as non-profit organisations.

Apart from public support for some BANs, the networks have developed different revenue models. Some of the networks charge their Business Angels an annual membership fee. Additionally, selected networks charge fees for pre-screening applications and initiating basic due diligence. They also sometimes provide fee-based trainings for entrepreneurs on business plans and presentations. Another source of income is generated by keeping a share of funds or sponsorships that have been successfully raised from different stakeholders (e.g. public actors, etc) (Enica 2011).

As already highlighted earlier, there are around 40 BANs in Germany with a total number of 1,000–1,400 angels. The multiple ways in which BANs can be organized is reflected in another organizational form wherein the network is emerging with the support of the public sector (e.g. with the help of regional development agencies, chambers of commerce,



etc) as a regional project. Around 50% of BANs are part of these projects. Additionally, there are various examples of public private partnerships which seek to provide finance to these BANs. Furthermore, 30% of the networks are legally classified as incorporated societies which operate under the responsibility of Business Angels, VCs or banks. These networks tend to have a broader geographical focus. Another type are so called private clubs (circles of friends) with a regional or nationwide focus or sometimes a clear sector focus.

Table 6 provides a comparison of the typical advantages and limitations of Business Angel Networks.

Table 6: Advantages and Limitations of BANs

| Advantages | Limitations |
|--|---|
| Provide easier access to potential investors than an individual search | Some BANs are focusing on particular regions which limits the number of potential angels |
| Provide a pool of entrepreneurs with experience in starting and running a business which benefits less-experienced investors and entrepreneurs (some provide training) | Angel network officials are often not able to offer advice or recommendations due to legal liability |
| Stimulate demand for private equity finance through commercial and promotional activities | Many angels are very independent and reluctant to join a formal network |
| Preserve privacy of investors and protect them from unsolicited demands | Financing a network may need public support as it is unlikely to cover all cost to run a network from member fees |
| Improve the quality and reliability of information transferring between investor and entrepreneur | High dependency of performance of the network on the quality of the manager |
| Provide a forum for discussion | |
| Help to interact with business incubators and with technology commercialization officers at universities | |
| Opportunities for training, syndication and co-investment | |

Source: Modified based on Stavrinaki et al. (2010)

According to Stavrinaki et al. (2010), BANs are service networks based on trust. BANs need to offer relevant and high-quality services for both investors and entrepreneurs that seek reliable investors to support their ideas. In this regard privacy and confidentiality are of utmost importance. In order to achieve these objectives, many BANs have constituted a



code of conduct as an effective tool to assure a certain standard, transparency and trust. The European Business Angel Network (EBAN) for instance has introduced a model code of conduct for angel networks which contains the following criteria:

- Need for openness in their relations with entrepreneurs, business angels and other Networks
- Maintaining the good standing and reputation of the network
- Avoiding funds with suspicious provenance
- Need for contractual relationship between angels and entrepreneurs
- Limiting the spread of company information to the inside of the network
- Forbidding networks from investing significantly in the investee companies
- The networks should preserve their impartiality even if they have introduced a success fee
- The networks do everything to protect the confidentiality of information.

Box 2: Examples of organisational forms of BANs

Network supported by public and private sector

Business Angel Netzwerk Nordbayern was founded in 1998 based on an initiative of the Bavarian Ministry of Economic Affairs in cooperation with several private investors and sponsors. Besides being a business angel network, Business Angel Netzwerk Nordbayern is comprising of a large network of more than 10,000 entrepreneurs, managers, investors, scientists, and consultants – all interested in promoting entrepreneurship. Business Angel Netzwerk Nordbayern supports start-ups and young companies from the IT/Software, Life Science and other technology sectors located in the north of Bavaria. The service portfolio of Business Angel Netzwerk Nordbayern includes coaching, providing access to financial services, training and networking. Interestingly, the whole network is financed by sponsors like LfA Förderbank Bayern, Siemens AG, DATEV eG, LEONI AG, Sparkassenverband Bayern, Refit AG. There is no membership fee.

Network organised as a non-governmental organisation

The Business Angels Network Rheinland-Pfalz was founded in 2008 based on an initiative of the Investitions- und Strukturbank Rheinland Pfalz (ISB) GmbH, VcR Venture-Capital Rheinland Pfalz Unternehmensbeteiligungsgesellschaft mbH, Industrie- und Handelskammer für Rheinhessen (IHK), Steuerberaterkammer Rheinland Pfalz (StBK), Mainzer Volksbank e.G. (MVB), and Sparkasse Mainz. Today the network is organised as a non-governmental organisation. Any investor with sufficient financial background and experience can become a member of the network. The membership fee is 125 EUR per year for private persons and 500 EUR for institutions.



Network supported by chamber of industry and commerce

The Business Angels Netzwerk Saarland was founded in May 2000 based on an initiative of the ministry of economic affairs of Saarland, the chamber of commerce and industry and a Business Angel from the IT sector. Today the network is hosted and managed by the chamber of industry and commerce. The network supports start-ups and young companies located in Saarland in different economic sectors. However, there is a focus on technology-based start-ups. The service portfolio of the BAN includes coaching and providing access to financial investors. Some of the business angels from Business Angels Netzwerk Saarland (BANS) have initiated the BANS Beteiligungs GmbH; an investment fund that seeks to equip start-ups with the necessary funds.

4.1.1. Main success factors for the promotion of business angels and networks

Management procedure

- **Atmosphere of trust and exclusivity:** Trust is a key element in managing a Business Angel Network. The network should possess an atmosphere of exclusivity with a high level of trust. The partnership with other organisations like chambers of commerce and industry can provide the necessary level of severity required by Business Angels when it comes to the pre-selection of business ideas.
- **Competencies of the network manager:** On an average BANs have around 2 – 3 employees, often working part time. The network manager is the key resource person of the network. This position requires a high personal commitment in order to drive activities of the network. Additionally, good communication skills are necessary for dealing with the individual needs of Business Angels and other stakeholders of the network. The personal networking by the network manager and the organisation of activities at attractive locations is a key factor in keeping the investors interested in the network.
- **Access to innovative start-up projects:** BANs have to cooperate with organizers of business idea and business plan competitions in order to obtain information about interesting investment opportunities. In a few cases, BANs run their own business plan competitions, which provide them with direct access to start-ups and make the BAN more attractive for business angels.

Service Provision

- **Matchmaking Service:** The main role of BANs is to link new ventures with the business angels. To facilitate these matches, the network provides a transparent marketplace within the venture capital market. The usual tools for facilitating these pairings are matchmaking events, newsletters, matching databases, and online matching via Internet.



- **Consulting Service:** Many BANs provide consulting services to young ventures in order to make them 'investment-ready'. These services include preparing the start-ups with regard to the selection criteria developed by the angels, supporting the development of a business plan, and actively addressing investors.
- **Event Service:** For business angels, the networks provide advisory services on investment opportunities as well as knowledge on the management of investments through lectures, discussions, individual coaching, and workshops.
- **Information Service:** BANs deliver very detailed information to their members about investment opportunities in the form of newsletters, reports etc.

Financing of BANs

- **Adequate organisational form:** As highlighted above, there are several ways of organising a BAN. It is very important to opt for and implement an organisational form which allows sustainable financing of the network. Based on strong institutional support (by chambers, regional banks, local ministries etc.) a network can be managed without membership fees. There is also the opportunity to set up public private partnerships and develop a network of private sponsors mainly comprising larger enterprises.

Selection and Monitoring procedure

- **Pre-selection process:** Most BANs receive over a 100 applications every year. Therefore a well-established pre-selection process which filters the most promising investment opportunities to be presented to the business angels presumes great importance. Network managers have to be trained to manage this process of 'weeding out' adequately.
- **Quality standards:** Many BANs adopt a Code of Conduct and all members are expected to adhere to it. Doing so guarantees that only high-quality business angels are admitted to the network.

Embeddedness in the eco-system

Networking: This is a key activity of BANs. Of all the BANs who were analysed for this study expressed keen interest in cooperating with a few actors which have been outlined below

- Business Idea and Business Plan Competitions: in order to get access to new promising start-ups projects
- University-based entrepreneurship promotion initiatives: in order to allow early detection of innovative start-ups
- Local Banks providing loans for SMEs: in order to diversify the financing options for the start-ups



In some cases BANs are even heavily involved in creating and managing a larger network of important players in the field of innovative entrepreneurship promotion in a particular region. A very good example is the Business Angel Netzwerk Nordbayern. Most of the important actors (universities, research institutes, economic promotion agencies, chambers, big enterprises etc.) of the regional innovation system in North Bavaria are already member of this network. Furthermore, Business Angel Netzwerk Nordbayern is also a member of the national Business Angel Network BAND and their European counterpart EAN.

Regional focus: Most of the BANs in Germany have a regional focus as this enables them to get access to start-up projects from a particular geographical area. Face-to-face relationships are still very important here.

4.2. Public financial support schemes

EXIST is a support program of the Federal Ministry of Economic Affairs aimed at improving the entrepreneurial environment at universities and research institutions and at increasing the number of technology and knowledge-based business start-ups. It provides two different funding schemes directly to universities and research institutions. The EXIST program is part of the German government's "Hightech Strategy for Germany" and is co-financed by funding from the European Social Fund (ESF). The "Business Start-Up Grant" and "Transfer of Research" are two important parts of the EXIST program¹⁶.

The EXIST Business Start-Up Grant supports the preparation of innovative business start-up projects at universities and research institutions (see figure 16). The grant aims to help scientists, university graduates and students develop their business ideas into business plans and advance their ideas for products and services. To cover their living expenses, the entrepreneurs receive a grant of between 800 and 2,500 EUR per month, depending on their degree, for a maximum period of 12 months. In addition, they receive materials and equipment (worth 10,000 EUR for solo start-ups and 17,000 EUR for team start-ups), funding for coaching (5,000 EUR) and, if necessary, child benefit of 100 EUR per month per child. The university or non-university research institution offers them infrastructure during the pre-start-up phase and provides technical and start-up-related assistance (BMWi [2014]).

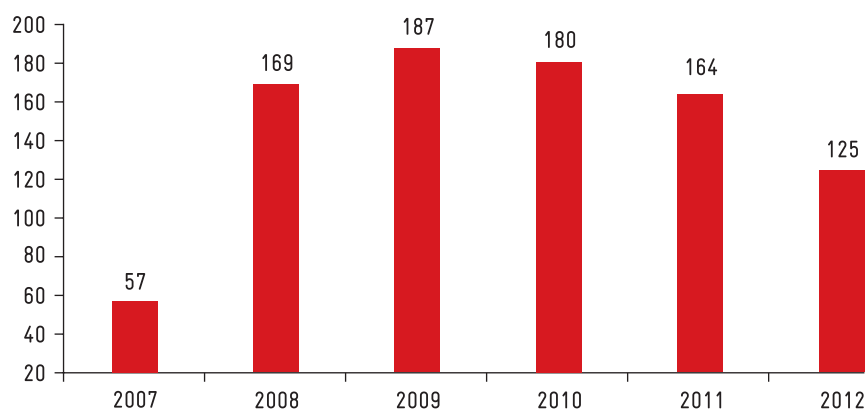
Additionally, the EXIST Transfer of Research program promotes technology-based business start-up projects in the pre-start-up and start-up stage. EXIST Transfer of Research complements the broadly targeted EXIST Business Start-Up Grants with an excellence-

¹⁶ See BMWi [2014].



oriented program for high-tech start-ups. The purpose of the first funding phase is to directly support research teams at universities or research institutes so as to enable them to provide proof of the technological feasibility of their product idea and to prepare the start-up. The funding includes staff expenses for up to three staff members and 60,000 EUR for materials and equipment. After one year, funding is available for another person with managerial skills. The maximum funding period is 18–24 months in the pre-start-up phase. During the second funding phase, the newly founded technology-oriented companies can be supported with up to 150,000 EUR to continue their product design, for instance up to the prototype realization and can solicit external funding for their company (BMW [2014]).

Figure 16: EXIST Business Start-Up Grants, number of promotions (2007–2012)



Source: Kulicke 2013a

The EXIST Business Start-Up Grant program is open to all technologies. Within the program; technology sectors with low market entry barriers are clearly dominating. This is validated by the share of software, Internet, communication technology and services alone being 68% (for more information see appendix).

The EXIST Transfer of Research was initiated in September 2007 by the Federal Ministry of Economics. A total of 138 projects have been selected for funding (average amount around 400,000 EUR) up to 2012. The main technology sectors are Biotechnology, Medical technology, Optics and Material technology (BMW 2013).

While EXIST Transfer of Research is focusing on sectors with cost-intensive development efforts, such as, for example, in Biotechnology, Medical technology, Optics and Material technology, the EXIST Business Start-Up Grant program is open to all technologies with low market entry barriers. Hence, both programmes complement each other (Becker 2011).



The EXIST program is implemented by Projektträger Jülich GmbH (PTJ), which was selected by the Federal Ministry for Economic Affairs to implement this support measure. The success of the EXIST Business Start-Up Grants led to the development of similar programmes at the state-level (see Table 7).

Table 7: Examples of start-up funding to cover living expenses in the context of federal state initiatives

| Federal State | Executing Agency | Programme | Link |
|------------------------|--|--|---|
| Sachsen | Sächsische Aufbaubank Unternehmensgründungen aus der Wissenschaft - "Seed-Stipendium" | Unternehmensgründungen aus der Wissenschaft - "Seed-Stipendium" | http://www.sab.sachsen.de/de/p_arbeit/detailfp_esf_5506.jsp?m=35798 |
| Sachsen-Anhalt | Investitionsbank Sachsen-Anhalt | Förderung von Unternehmensgründungen (ego.-START) | http://www.ib-sachsen-anhalt.de/firmenkunden/gruenden/ego-start.html |
| Mecklenburg-Vorpommern | GSA Gesellschaft für Struktur- und Arbeitsmarktentwicklung mbH | Gründerstipendium | http://www.gsa-schwerin.de/leistungen/existenzgruendung-und-schuelerfirmen/gruenderstipendium.html |
| Baden-Württemberg | Karlsruher Institut für Technologie (KIT) | Junge Innovatoren - Existenzgründungen aus Hochschulen und Forschungseinrichtungen | http://www.junge-innovatoren.de/ |
| Bayern | Ludwig-Maximilians-Universität (LMU) München | Förderprogramm zum leichteren Übergang in eine Gründerexistenz (FLÜGGE) | http://www.fluegge-bayern.de/informationen/ |
| Brandenburg | Investitionsbank des Landes Brandenburg | Gründung innovativ | http://www.ilb.de/de/wirtschaft/zuschuesse/gruendung_innovativ/index.html |
| Bremen | Bremer Aufbau-Bank | Bremer Förderprogramm für Unternehmensgründungen (BRUT) | http://www.bab-bremen.de/sixcms/detail.php?gsid=bremen172.c.2476.de |
| Hamburg | Hamburg Innovation GmbH | hep-Gründerjobs (not implemented at the moment) | http://www.hep-online.de/cms/v/Gruenderjobs |



4.2.1. Main success factors for the promotion of public finance schemes

Management procedure

- **Relatively low level of bureaucracy:** The implementing agency PTJ only takes approximately four months for decision making. This is relatively fast procedure. Furthermore, most universities responsible for the financial management of the EXIST grants have reported that a relatively lower level of bureaucracy is involved in implementation.

Service Provision

- **Attractive funding scheme for entrepreneurs:** The level of support is high enough to cover the living costs of the founder team of a start-up. While the scholarships provided in the Business Start-up Grants are lower than the salaries for young university graduates, they are still high enough to cater to their individual living expenses.
- **Exchange of best practices:** EXIST organises several conferences every year in order to foster exchange of best practices between all entrepreneurship promotion initiatives.

Selection and Monitoring procedure

- **Defined evaluation criteria and process:** In the case of the EXIST Business Start-Up Grants, independent evaluators check the proposal based on the following criteria: originality of the business idea, quality of the start-up team, innovativeness of product/service and business model, attractiveness of market and competitor situation. Interestingly, at the end of the funding period the start-up team has to send the final business plan to EXIST for evaluation to receive further feedback and guidance for business implementation. For the EXIST Transfer of Research funding scheme the procedure is even more sophisticated.
- **Large networks of evaluators:** A key challenge is the development and ongoing management of an evaluator network. Since all possible market segments and technology fields have to be covered, a relatively large number of evaluators with a high level of market and technology expertise is required.
- **Transparent selection criteria:** The EXIST programme publishes the evaluation criteria on its website. All applicants get a detailed evaluation protocol which clearly states the strengths and weaknesses of the proposed start-up project.
- **Independent impact evaluation:** The Federal Ministry of Economic Affairs subcontracts independent research institutions to run studies for impact evaluation. Here, especially indicators like number of start-ups founded, number of employees in the start-ups, etc. are considered. These evaluation reports are partly also published.



Embeddedness in the eco-system

- **Networking:** The EXIST programme is strongly linked to other entrepreneurship promotion initiatives at universities and research institutes in Germany as only these players can formally apply for the funding. In fact, EXIST is the most important funding resource for start-up projects implemented by academic actors in the seed phase.

4.3. New forms of financial support schemes – Crowdfunding and Crowdfunding

In addition to traditional sources of funding, such as loans, venture capital (VC), investment from business angels or public grants, crowdfunding and crowdfunding platforms are also increasingly offering an alternative or a complementary type of funding for start-ups. It is important to differentiate between these two types of platforms because they have different funding mechanisms, target groups, and legal structures.

The activities of crowdfunding are focused on relatively small projects of start-ups, free-lancers or creative persons (designers, musicians, film directors etc.) as well as on social business projects. The average amount invested in projects is around 6,000 EUR. However, in 2013 the highest sum for one individual project reached 218,000 EUR (FürGründer.de 2014).

The projects calling for crowd-funding are from various areas including film, music, gaming, design, journalism, fashion, web-based technologies, products for the retail sector, etc. By and large, there are no restrictions on funding a project. However, crowdfunding activities are based on trust as they are financing start-ups in a very early phase (DB Research 2013).

The rules of crowdfunding are clear and simple. As a first step, the initiator has to present the idea on an online appearance (e.g. a video and comments). Based on the decision of the network, the collective fundraising can then start. The online appearance has a limited timeframe and a clear definition of the fundraising target. The marketing activities include social networks, online forums, blogs etc. If the target is not reached within the timeframe, the amount is paid back to the investors (all-or-nothing principle).

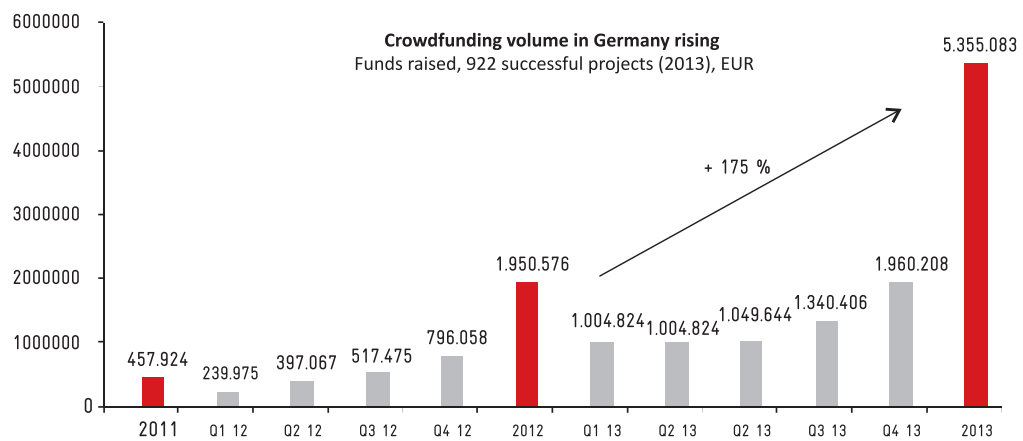
According to DB Research (2013), these are not traditional investors as they do not acquire a share of the project or business. Instead, they obtain an alternative compensation. This can involve tangible products (e.g. books, CDs, tickets for the cinema, etc.). The value usually corresponds to the size of the investment. Crowdfunding also provides the



possibility to work with sponsors interactively in the value creation process, for example by using feedback or voting tools. In this context, crowdfunding platforms also serve as innovation tools. Even after a rejection by traditional finance institutions, the grassroots funding structure employed in crowdfunding can still enable an idea to be implemented as the crowd has declared the project a promising business case. Crowdfunding activities are community-based funding instruments which aim to promote local and regional projects (DB Research (2013)).

Compared to the US market, the crowdfunding structures in Germany are still at a nascent stage. The volume and number of investments are considerably low. In 2013, a total amount of 5.4 million EUR was invested in new ideas and start-up projects via different crowdfunding platforms (Für Gründer.de 2014). In comparison, the USA shows investment amounts of around 1.8 billion US\$ in 2012, with a share of 300 million US\$ via the market leader platform "Kickstarter". However, figure 17 shows that the German crowdfunding market is growing fast (2011: 500,000 EUR, 2013: more than 5 Million). The outlook for 2014 forecasts an increase of up to 8-10 million EUR.

Figure 17: Crowdfunding in Germany

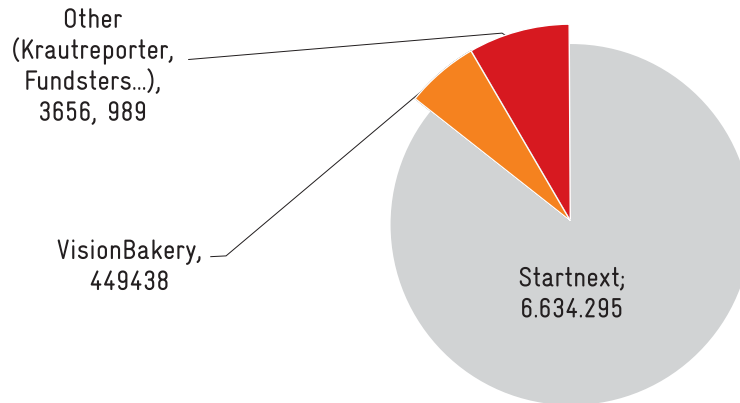


Source: FürGründer.de [2014a].

The most active Crowdfunding platforms in Germany are: Berlincrowd, Fundsters, incubator, Krautreporter, pling, Startnext, VisionBakery, Crowdrange. As shown in Figure 18, Startnext is by far the most important player in the German market.



Figure 18: Funds raised (from the start until 31.12. 2013)

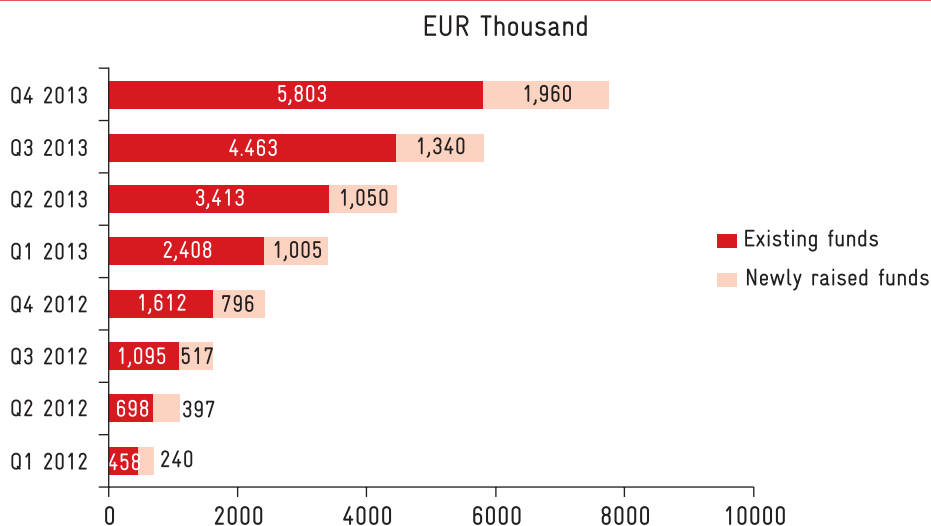


Source: FürGründer.de [2014a].

Some key data about crowdfunding 2013 in Germany¹⁷:

- 227 active projects
- 922 successfully financed projects from a total of 1,611 project applications (success rate: 57 %)
- € 5.36 Million invested (on average € 5,808 per project)
- On average 86 supporters in a successfully financed project
- € 8 million of existing funds by the fourth quarter of 2013 (see Figure 19)

Figure 19: Crowdfunding overall by newly raised and existing funds



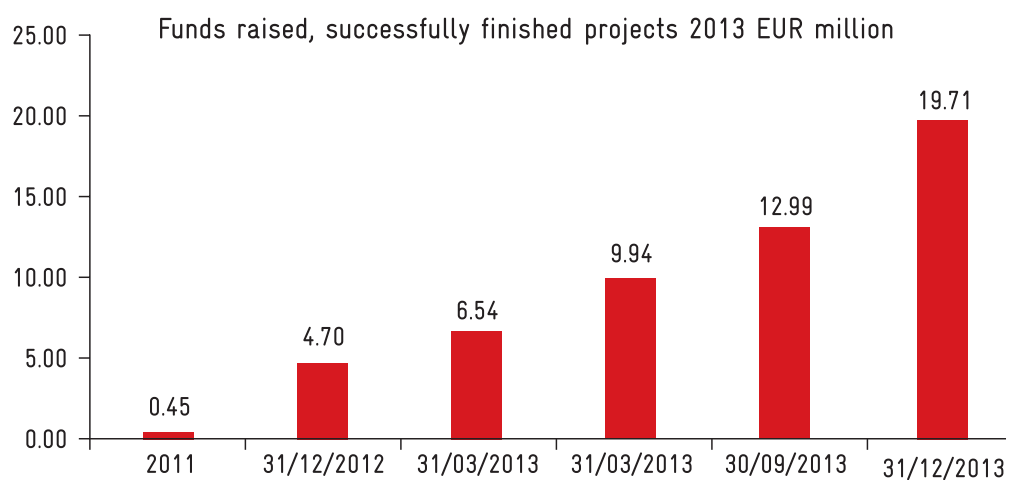
Source: FürGründer.de [2014a].

¹⁷ See FürGründer.de [2014a].



A special form of crowdfunding is crowdfinancing. Here the investors provide investments in the form of a subordinated loan to the start-up and participate in the success of the business. In the event of bankruptcy these subordinated loans will not be paid back to the investors (for legal aspects see also the information provided above in box 3). Crowdfinancing is a growing trend in Germany from only € 0.5 million in 2011 to almost € 20 million by the end of 2013 (see figure 20).

Figure 20: Crowdfinancing volume in Germany

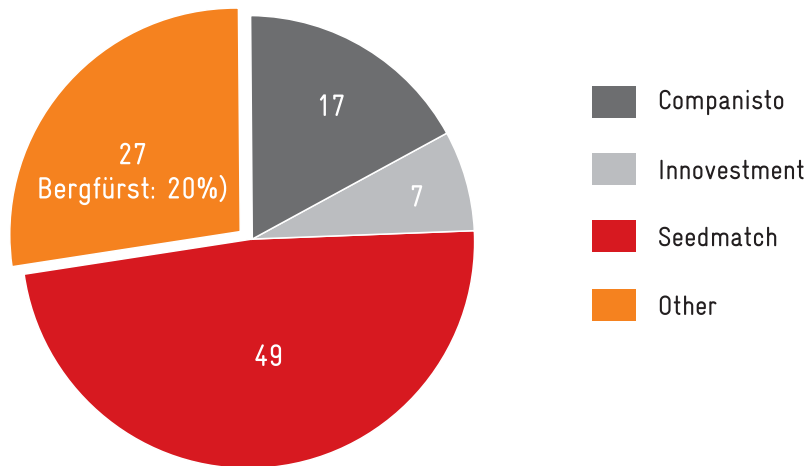


Source: FürGründer.de [2014b].

Seedmatch, with a total market share of 49% (based on invested capital) is the largest player in the German market (see figure 21). This platform has already realized more than 59 projects with a total investment of around 12.5 million EUR provided by more than 4,700 investors. Typically, start-ups can raise between € 100- 300,000 on these platforms. In exceptional cases, the amount can reach € 1 million. There is a substantial gap between the market in Germany and the US, where investments in the latter can amount to several million dollars. Seedmatch is organised as a private business with multiple functions including running the platform, managing the investor network, attracting the start-ups, etc.



Figure 21: Platform's market share 2013



Source: FürGründer.de [2014b].

4.3.1. Main success factors for the promotion of crowdfunding

The following success factors apply more to crowdfunding platforms which are more attractive to the technology-based businesses as opposed to crowdfunding platforms.

Management procedure

- **High-level of transparency:** For any information on the start-up, investors on a crowdfunding platform rely heavily on the information presented on the platform. Hence, even very detailed information like business plans must be provided.
- **Strong investor network:** Crowdfunding platforms need large networks of potential investors. For example, Seedmatch has about 24,000 registered and interested investors. For platforms like Seedmatch, management of the investor network, is the most crucial factor as the size and the quality of this network ultimately determines the investment success of the start-ups presented in the platform.

Service Provision

- **Attractive investment scheme:** In contrast to crowdfunding, the money invested in crowdfunding projects is also meant to provide the investor with a monetary share of potential profits made. In exchange for their capital investors receive, for example, shares in the company or a silent partnership without voting rights. Therefore crowdfunding platforms must be transparent and have to provide all the necessary information about the investment process and potential profits generated by supported start-ups.



- **Easy-to-use and informative platform:** The online platform should be well-structured and provide all the relevant information. Seedmatch is a very good example (see www.seedmatch.de)

Financing of crowdinvesting platforms

- **Critical mass of funded projects:** In the case of successful funding, a crowdinvesting platform can obtain a fee of 5 to 10% of the total investment. Based on this income the platform has to cover all business costs. This requires a critical mass of successful investments per year; at least 8-10 on average.

Selection and Monitoring procedure

- **Tough selection process:** Crowdinvesting platforms often undertake a rigorous selection process when deciding whether the business plan and the investment offer of a company should be published on the platform. The main criteria for selection are:
 - Attractiveness of the investment proposal
 - Suitability of the investment proposal for crowdinvesting procedure (a business model which is easy to understand without a high level of technological expertise, capital requirements between 100,000 and 1 Million EUR)
- **Monitoring success:** Information on the success or failure of the start-ups post receiving the investment is also very important. The platform has to provide information on the success of the company to the investors.

Embeddedness in the eco-system

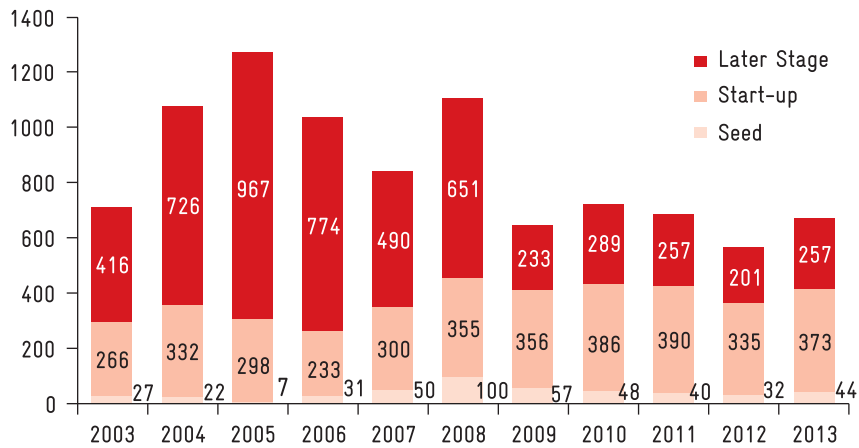
Networking: Crowdfunding platforms do not normally create formal partnerships with other actors in the eco-system as they majorly seek to attract start-up as well as potential investors. Hence, many crowdfunding platforms focus on marketing activities to become well-known in the scene.

4.4. Venture Capital Funding

In addition to conventional bank loans there also exists the option of equity financing via venture capital (VC) funds. In this case, a group of investors provides equity financing and become shareholders in the business. However, the activities of such funds especially in the important early seed and start-up phases in Germany are quite modest and have declined steadily since 2008, even though a small increase in investments can be observed when comparing 2012 and 2013 (see Figure 22).



Figure 22: Venture capital in Germany



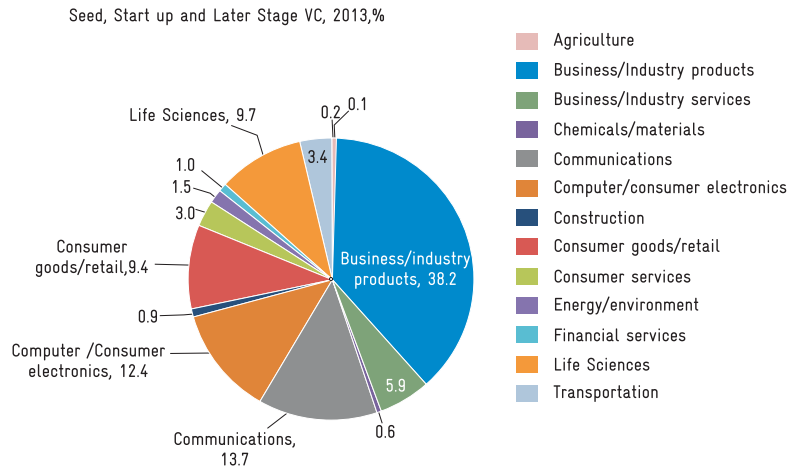
Source: DB Research 2003, BVK 2014.

There are several reasons for the weak development of the German VC market:

- Germany has never been known as a market with a well-developed VC sector. Young start-ups in particular find it difficult to raise funds from private VC funds. This may be attributed to the relatively high-level of risk involved in such investments. German investors are mostly risk averse and therefore prefer investments with lower but more secure return on investment.
- The decline in the VC market post 2008 is mostly an impact of the financial crisis. The developments in the stock market thereafter were particularly disappointing for many investors when it came to the successful launch of an Initial Public Offering.
- German VC funds have a preference for later-stage investments in companies that are relatively mature and focus on industrial B2B products (see Figure 23). Only one third of all investments go to the more risky high-tech sectors like software, telecommunications, information technologies and life science.



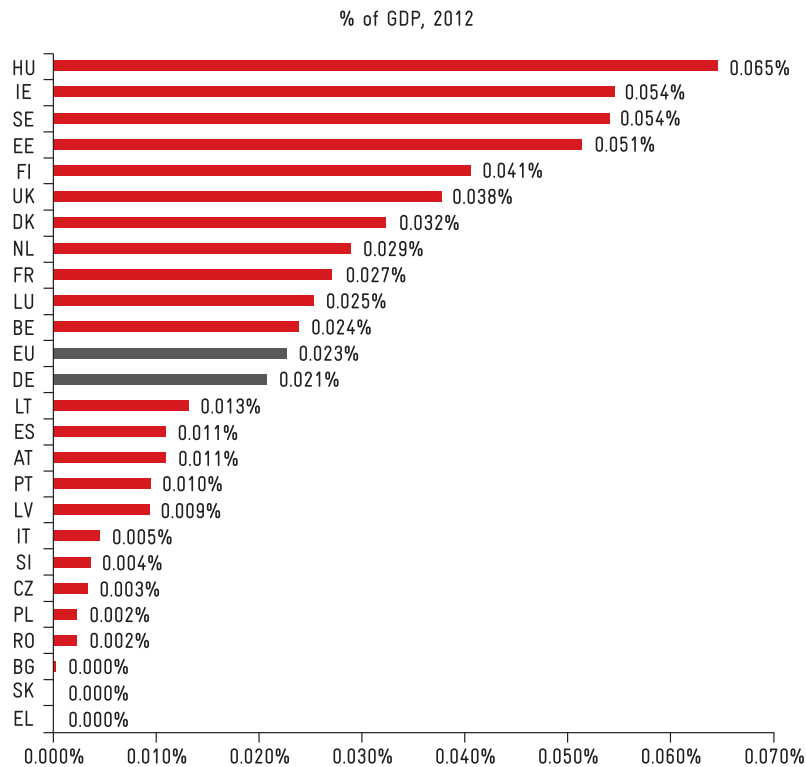
Figure 23: Venture capital in Germany by sector



Source: BVK 2014.

The reluctance to provide start-ups with venture capital is not exclusive to Germany. A glance across to Germany's neighbours reveals a picture that is equally bleak. However, Germany share in VC investment as a percentage of its GDP is even lower than the average for the EU (see Figure 24).

Figure 24: Venture Capital in Europe



Source: European Commission 2013.



The relatively weak venture capital market for start-ups was what led the German government to establish a public private initiative for setting up the venture capital fund High-Tech Gründerfonds (see profile in 2nd part of the study).

The High-Tech Gründerfonds, founded in 2005 is a public-private partnership between BMWi, KfW Bank Group and German companies. Endowed with an initial capital of 272 Million EUR, HTGF is one of the largest individual venture capital funds in Germany.

The business model responds to the private venture capital industry's demands in order to achieve a sustainable increase in the value of private equity investments and sell them at a profit. In the second round of HTGF the volume increased to 301.5 Million EUR. In addition to KfW Bank Group and BMWi, the investors of Gründerfonds II are: ALTANA, BASF, B. Braun, Robert Bosch, CEWE Color, Daimler, Deutsche Post DHL, Deutsche Telekom, Evonik, media + more venture, METRO, Qiagen, RWE Innogy, Tengemann, Carl Zeiss and SAP. Up to July 2013, the number of investments in companies was 326. The fund focuses its investments on home grown highly innovative small companies (less than 1 year old). The company must be based upon a technological innovation – significant and close to a proof of concept with in-depth technological knowledge and expertise. Some of the technology fields which receive the greatest support from High-Tech Gründerfonds are: internet and web software, medical engineering, biotechnology, embedded, mobile and systems software, communications technology, pharmaceutical medicine, industry automation, electro technique, health care medicine, energy, computer hardware, environmental technology, chemical and machinery.

The aim is to overcome the gap in early-stage enterprise finance and to enable the firm to obtain risk capital. Compared to other private venture capital companies, it is possible to generate smaller amounts for investments (EUR 100-500 thousand, initial investment), to take higher risks and to accept a lower level of growth (5-20 Million EUR, sales in 3-4 years).

Within the initial financing, the fund acquires a 15% nominal share of the company. Further funding will take place based on a long-term subordinated convertible loan. Interest on the subordinated loan will be deferred for 4 years to preserve the company's liquidity. Due to these arrangements, in the seed phase of the company, the majority of shares remain the property of the founders.

The enterprises supported by High-Tech Gründerfonds are obliged to receive formal coaching from professionals accredited by the fund. Start-ups are provided coaching in different areas, particularly in accounting and financial management. When comparing the monitoring and control that is carried out by other public financing programs for SMEs,



it is clear that the High-Tech Gründerfonds conducts stricter monitoring. This is due to the nature of the program, which is more similar to a venture capitalist scheme. This stricter monitoring is congruent with the theory of financial intermediation, which states that venture capitalists tend to assume a strong monitoring role within the company that receives the funding. The fund closely monitors the monthly and yearly financial reports of the young SMEs, particularly the Cash Flow (liquidity of the company) as well as the Balance Sheet.

The success of the High-Tech Gründerfonds also inspired some players in the different federal states to establish local public-private venture funds. One example is the Technology Founders Fund Saxony (TGFS) – an initiative of the federal state of Saxony, which is co-financed by the European Regional Development Fund (EFRE), the Savings Bank of Leipzig, Chemnitz, Dresden and the CFH Beteiligungsgesellschaft mbH (see profile in the 2nd part of the study). The fund's capital is around 60 Million EUR of which 45 Million EUR is generated within EFRE and 15 Million EUR comes from the four semi-public credit institutions. Since its launch in 2008, TGFS has supported 30 companies across various industries. The provision of venture capital by TGFS is aimed at speeding up the procedures for economic utilization of innovative ideas and technologies from universities and research institutes, in the federal state of Saxony. The fund is intended for knowledge-based and technology-oriented start-ups with growth potential. It should support start-ups in high tech segments with the aim to achieve a return that is aligned with market expectations. Within the internal operational structure of TGFS, the investment companies of Sparkasse Leipzig, Chemnitz and Dresden share responsibility for the management of the fund. The CFH GmbH (LBBW) assumes its role as an investment centre.

4.4.1. Main success factors for the promotion of venture capital funding

Management procedure

- **Independence:** The public-private venture funds enjoy a degree of independence that ensures them of control from governmental organisations, this allows them to operate autonomously and with a profit orientation. This arrangement is perceived positively by founders and external partners.
- **Financial power:** Public-private venture funds receive funding from large companies and the public sector. More often than not the contribution from the public bodies is higher. This financial power enjoyed by a venture fund is an important prerequisite for its success in the German start-up market.
- **Importance of the private partners:** The involvement of private investors allows the venture fund to position itself as a market-oriented financing partner. The existing knowledge possessed by industrial companies involved in seed and risk capital funding strongly impacts the investments strategies of these funds. They are members of the



investment committees and contribute their business experience and expertise in the decision-making process on questions such as how and where to invest.

Service Provision

- **Early-stage financing:** On an average, early-stage financing of technology-based companies is less interesting for the majority of private investors because of high risks during the start-up phase. In the venture capital segment there are only a few alternatives. The positioning of the public-private venture funds in this special segment is perceived as positive as it helps to bridge the financing gap and to build promising investment opportunities for the private sector in the later phases of financing.
- **Coaching service:** Public-private venture funds like HTGF provide access to a pool of accredited coaches who can provide comprehensive guidance along the investment journey, both as recognised references, as well as strategic and operational support, right up to the stage of investment by the VC and beyond.
- **Benefits for the private partners:** Industry investors also stand to benefit for they gain access to new technological developments and innovative business ideas. This opens up interesting opportunities for industrial partners to acquire a stake in start-ups as well as the potential for other forms of alliance, such as joint development projects, technology transfer or client/supplier relationships.

Financing of public private Venture funds

- **Market orientation:** Venture funds like HTGF have to be market-oriented, implying that their behaviour in the market must be similar to that of private venture funds. Ultimately venture funds must cover their operational costs and generate an acceptable Return on Investment for their investors through successful sales of their shares.

Selection and Monitoring procedure

- **Rigorous selection process:** Venture funds like HTGF tend to invest in technology-based start-up companies with significant growth potential. Their investment selection criteria encompasses the following considerations on part of the start-up:
- **Technological orientation:**
 - Technological innovation – significant and close to proof of concept
 - In-depth technological knowledge and expertise
 - Intellectual Property is protected or protectable, exclusively and unreservedly available, and incorporated into the company



- Market perspective:
 - Recognizable customer benefits and distinctive, unique selling features and strategic competitive advantages
 - Target market is large and/or has high growth potential
 - Financing will enable the company to achieve key milestones en route to commercialization
- Team characteristics:
 - Know-how, complementary skills, and relevant business experience
 - High degree of motivation, persistence, commitment and the will to succeed
 - Appropriate financial involvement in the company
- **Monitoring is part of the investment process:** As part of the investment procedure venture capital funds become shareholders of the business and can send one representative to the company board. Typically they attempt to acquire a minimum of 25% of the shares, which provides them with certain rights to veto board decisions that are not in their favour.

Embeddedness and role in the eco-system

Besides promoting networking between portfolio companies, investors, Business Angels and other experts, HTGF also focuses on cooperation with Public Investment Banks and the associated companies on issues pertaining to funding. The cooperation with industrial partners (see investors of Gründerfonds) extends HTGF's competencies and allows them to deliver focused support to portfolio companies through alternative funding and knowledge channels. Other partners are the regional chambers of industry and commerce, entrepreneurship promotion initiatives, universities and research institutes.

4.5. The banking sector and start-up loan-financing

In many cases, lack of equity is a real problem for start-ups and young enterprises. In such circumstances, the possibility of receiving a loan is also limited. Early stage entrepreneurs, in particular, find it increasingly difficult to obtain traditional bank loans. In order to ease this situation, some banks have developed individual programs to finance the start-up sector via small loans termed microcredit. An example of this practice is the common microcredit initiative of the Savings Bank Leipzig, City of Leipzig and the Mikrofinanzinstitut KIZ gGmbH¹⁸.

¹⁸ See Mikrokredit-Leipzig [2014].



Often, business founders and new enterprises need larger loan amounts (up to 100,000 EUR) and more relaxed collateral requirements for their bank loan. The so-called publicly owned development banks offer adequate solutions. The KfW Bankengruppe is one of the most important banks in the field of small business support.

The promotional program within the section of “Founding and expanding” of KfW are primarily directed at private individuals who want to start a business in Germany. However, the promotional program is also available to individuals who are already self-employed and to small enterprises that were established only recently (KfW [2014a]). Refer to the appendix for an overview on the financial support program of KfW.

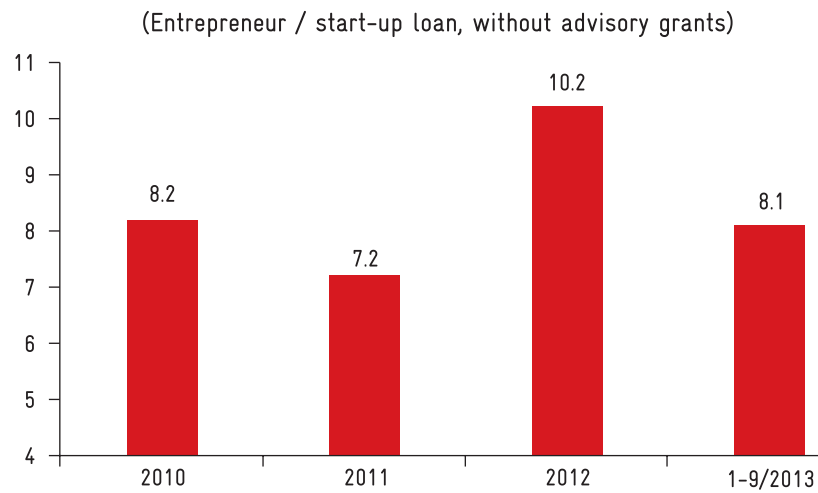
Interestingly, the KfW is cooperating closely with cooperative and savings banks in Germany in order to implement their financial support programs. In order to receive a loan, the entrepreneur has to apply via his/her ‘house bank’. The house bank bears only 20 % of the credit risk, while KfW assumes the remaining 80 %. This makes it easier for the bank to decide on the loan – provided, of course, that the business idea holds the prospect of sustainable economic success. The loan interest rate is more favourable than for a conventional bank loan; it is fixed for the entire term of up to 10 years. On request, two repayment-free years may be granted; that means the entrepreneur only pays interest and only begins to pay back the principal amount after.

Private Banks in Germany play only a minor role in start-up and small business lending. Cooperative and savings banks, in contrast, are the larger players with a strong and favourable influence. This implies that having banks (e.g. Sparkasse) that operate regionally with a decentralized organizational structure, but with no or only part public ownership is crucial to the observed lending activities in the cooperation with KfW.

The analysis of KfW’s promotional figures shows continuous support in the area of Start-up investments (see figure 25).



Figure 25: KfW Start-up investments in EUR bn



Source: KfW (2013a,b).

The discussion of success factors in the case of bank loans (as a type of start-up funding) is outside the purview of this study.

Summary of current trends and success factors of the incubation and financing system in Germany

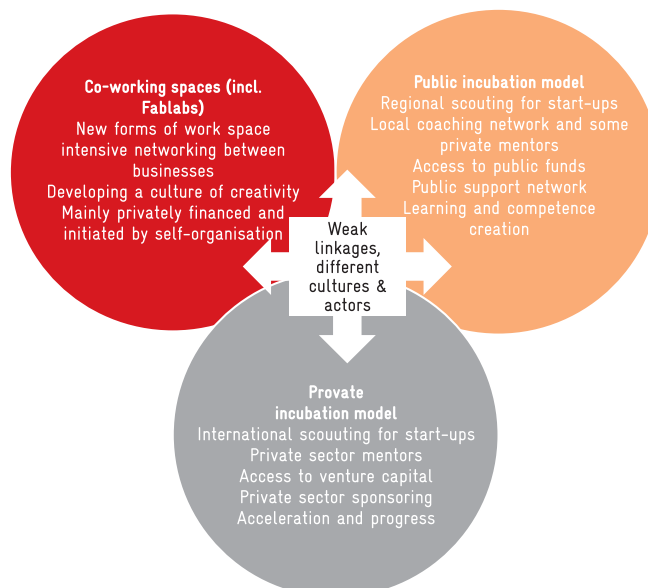
5.1. Incubation system for start-ups in Germany

In summary, it can be stated that the start-up and technology centre model is the dominant incubation model in Germany when it comes to promoting new start-ups (see figure 26). What makes this system with more than 300 centres so successful is its decentralised structure, its support from local stakeholder networks and its strong orientation towards promoting local competitive advantages. The private incubator models with a special locational focus in major cities in Germany, especially in Berlin, are just emerging and it is still difficult to judge how these new models will develop in the future. Some of the incubators have already rearranged their focus areas and the market is still relatively volatile in this respect.

The emergence of the new incubation models as well as the high numbers of co-working spaces and creative labs have emerged in response to a gap in support the support system that is not bridged by the public incubation model. The private incubation models have brought into the system new dynamics and new kinds of incubation approaches. They especially emphasize the provision of professional marketing, market-driven product development, market penetration strategies, as well as a strong focus on venture capital attraction. Unlike the public model, these new incubation models also integrate a wide network of experienced mentors, specialists and sponsors from the corporate world. The boom of co-working spaces and creative Labs is a response to the increasing number of freelancers, new working format requests and creative prototyping and innovation platforms. Public start-up centres are increasingly competing with co-working spaces when it comes to the renting of working space alone.



Figure 26: Different incubation systems and approaches



The German public incubation system is sometimes criticised for being heavily public sector driven, and not flexible or business-oriented enough. It is often highly institutionalized and therefore less flexible when responding to changes in the working culture (like co-working spaces). But on the other hand, it caters to the entire segments and is non-biased in its approach unlike the private incubator model which have a penchant for sector winners or the potentially elite start up. It is strongly supported by local institutions pursuing a common good in regard to the overall promotion of start ups and its ecosystem.

It is evident that the private and the public incubation model as well as the co-working spaces are rather loosely linked with each other (see figure 26). They also reach out to very different segments of start-ups to some extent. Hence, there are strong learning potentials between these different systems. With these new trends in the incubation system a new culture of start-up promotion has also emerged. This is clearly visible in many co-working spaces as well as in the private incubation models which focus on intensive interaction between professional stakeholders from the private sector as well as on the creation of a dynamic work environment. These new trends also boost competition between the different incubator models thereby. This can be viewed as a step towards enriching the quality of the system as a whole and making the start-up environment more diverse and attractive.

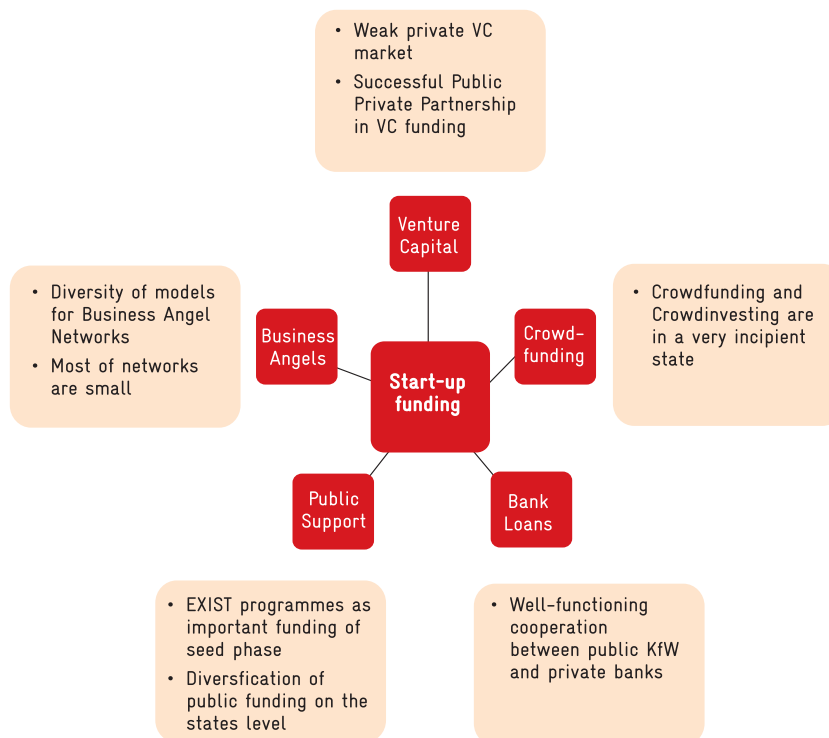


5.2. Financing system for start-ups in Germany

According to the results of the last GEM report, about 30% of all experts involved consider the financing conditions for start-ups in Germany as one of the main weaknesses in the German eco-system (Sternberg 2013). Most of the private funding schemes for start-ups in Germany are relatively weak (see figure 27):

- Private Venture Capital is more focused on the expansion phase in enterprise development
- Business Angel Networks are rather small with a limited number of investments
- Crowdfunding and Crowdinvesting are in the early stage of development compared to other countries

Figure 27: Main characteristics of the financing system for start-ups



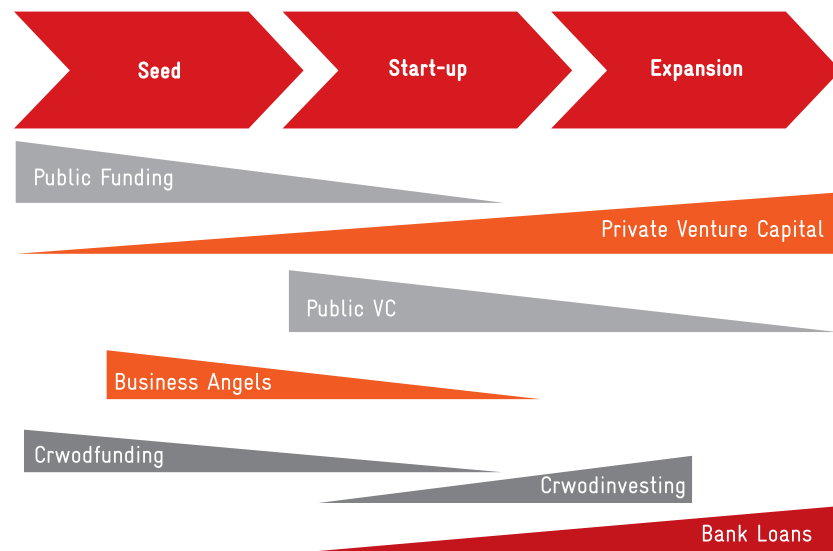
Source: Own elaboration

This is one of the main reasons why the public sector at the federal and the state level continues to implement large-scale support programmes (see the EXIST example presented in chapter IV). Most experts in Germany view this public support favourably and perceive it as an essential element of the German innovation and technology policy compensating for the weaknesses in the private financial sector in the space of start-up financing (Sternberg 2013). This support is of special importance in the seed phase of



enterprise development where only a limited number of private investors (mainly business angels) are willing to take risks in financially supporting new entrepreneurial projects (see figure 28).

Figure 28: Financing opportunities in the different stages of enterprise development



Source: Own elaboration

Private actors, like VCs and private banks, in the financial system focus much more on later stage investments, especially in the expansion phase of companies. This situation merely reflects the generally risk averse nature of the German society.

5.3. Linkage between Incubation and Financing system in Germany

As mentioned above, the start-up and technology centre model is the dominant incubation model in Germany for promoting new start-ups. Therefore, it is no surprise that these centres are highly proactive when seeking cooperation with financial service providers. In fact, one of the most important services for start-ups is match-making with financial services for start-up financing. Typically, these centres organize different types of match-making events where start-ups can present their business concepts to investors. Private and public VC funds are often as involved as business angel networks and crowdfundering platforms. The local saving banks also cooperate with start-up and technology centres in terms of joint organisation of business idea awards and match-making activities as well as providing a channel for start capital credits.

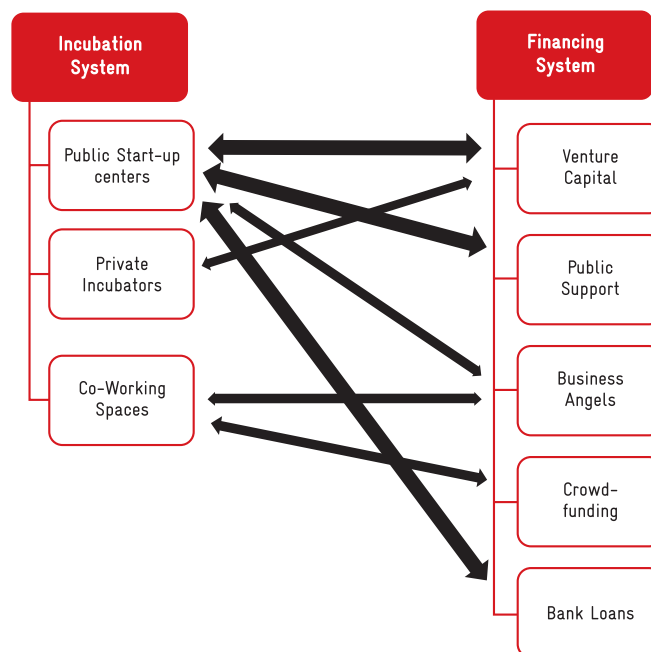


Private business incubators are more selective in their cooperation with financial service providers. This is mainly due to the inherent feature of private business incubators as not merely being providers of infrastructure and management services but also financial support for their incubatees. Here the linkage to VC funds however assumes paramount importance for later stage financing activities.

Co-working spaces are generally centred around the provision of infrastructure and management services than supporting start-ups with access to financial services. For their freelance clients crowdfunding platforms are an interesting option but success is dependent on the proactive nature of the start-ups when presenting their projects.

Figure 29 summarizes the linkages between the incubation and financing system for start-ups in Germany.

Figure 29: Linkage between the incubation and financing system.



Source: Own elaboration

Many financial service providers emphasize the important role of the incubation system in preselecting the most promising investment projects and in preparing the start-ups teams for being able to deliver the necessary financial information to the investors. Based on this both sides are able to create win-win situations in their cooperation providing a better service to their customers.

6

Consideration of learning opportunities for the Indian start-up eco-system

This final chapter will consider and point out learning opportunities with regard to the Indian start-up promotion system. This study emphasises on the incubation and business angel environment in Germany as well as on some new emerging trends. The learning opportunities mentioned here will therefore have the same orientation and focus on these particular sectors. It will also provide a first glance at the specific interests expressed by a few German partners who were interviewed for this study. There seems to be high level of interest in getting into closer contact with Indian partner organisations for a more intensive learning exchange.

Identified learning fields are related to the public as well as the private incubation models, the co-working space as well as creative lab movement and also to public private partnership models in the promotion of business angel networks and venture capital funds.

6.1. Learning opportunities from the public technology and start-up system

Learning from the decentralised incubation system in Germany: One of the strengths of the German eco-system is the very decentralised and network-driven public incubation system. Technology and start-up centres are widespread in Germany and strongly embedded in a local institutional setting with strong networks between knowledge providers, financial banks, support organisations and local and regional governments. Incubators are not set up in an isolated manner and mainly governed by one university. City administrations, local agencies and saving banks as well as chambers are taking on an important role in the set-up, promotion and supervision of these incubators. At the same time the incubators are oriented towards strengthening the local competitive advantage and image of the German cities and regions. The joint orientation towards increasing the competitiveness of new sectors in the respective locations provides on the one hand a good overview about the path dependencies of these centres as instruments to overcome economic



structural change crises. At the same time, a closer look at these settings provides an insight into many additional services that are offered around the centres, including start-up awareness creation activities, business idea contests, coaching and advisory services. The local institutions also play an important role in applying to and using national or regional funding schemes (e.g. like EXIST, KfW, national public private Venture Capital like HTGF). To gain a deeper understanding of the system of cooperation between the relevant institutions as well as the decentralised and bottom-up approach of setting up incubators could be of value for Indian partner organisations.

Professionalization of generic and specialised incubation centres over time: The experience gained in the setting up of start-up and technology centres in Germany has been part of a lengthy process. Many knowledge-intensive technology centres as well as start-up centres have had to improve their financial sustainability and their orientation. The direct provision of funds to the technology and start-up centres has decreased in Germany in recent years. This has forced many centres to rethink their financial income basis, and develop new services and marketing strategies. Looking at these learning processes over a time-period of 25 years and considering the different innovation strategies implemented by these centres provides insights about the failures and successes that are an integral part of such processes.

6.2. Learning opportunities from the private incubator models

Large corporates as incubator supporters: Private start-up accelerator programs and private incubators have been promoted by large national companies and venture capital companies as an innovation strategy with the objective of staying close to innovative new business ideas and potential new fields of future businesses. Most of the larger corporates that support the private incubation models are profiting from these insights not only by being closer to new innovations but also because they view this as a potential investment opportunity and a marketing strategy. The likelihood to promote this model in Indian cities seems rather high. In the consultations held to gain insight for the purpose of this study, managers of accelerator programs and incubators in Germany expressed keen interest in partnership investments in India.

Making use of private sponsors and mentor networks from the private sector: the mentors and sponsors that support private incubation models are very different from the ones that support the public incubation system. Most of the mentors provide specialised services and have experience in working with small and large businesses in Germany. They provide their services for free to boost their reputation and goodwill in the market. Their approach



towards start-ups is more focused on the promotion of market readiness, product adjustment and the acceleration of business growth than is in the public incubation system. Summing up, a relevant question to think through in the Indian context would be how to create mentorship networks for incubators involving the most experienced market and product experts as well as private sponsors.

Linking start-ups with venture capital investments: private incubators act as intermediaries to venture capitalists. In reality, most incubator models emphasise on scaling up quickly to be able to sell their shares once the start-up has grown. Getting additional venture capitalists on board for co-investment is an important strategy to increase the value of the start-ups. Exchange of experience in this respect between Germany and India might be of specific interest.

6.3. Learning opportunities in the promotion of co-working spaces

Promotion of co-working spaces: The co-working space movement has demonstrated a rapid increase in numbers. Most of these spaces have been created with strong self-organisational efforts by young start-ups themselves or by following a business model of providing cheap and creative working places especially for freelancers from the creative and service industry. Instead of promoting public-driven co-working space, it could be of value to analyse the potentials, and support businesses in setting up such co-working spaces in India.

Promotion of Creative labs: The creative lab movement is setting up FabLabs on a grass-root basis to provide creative and technology-driven prototyping platforms worldwide. FabLabs are emerging in many developing countries. Sometimes they are supported by private persons, universities or by certain research institutes. It would be worth considering the opportunity to promote such platforms for developing innovative products as well as for making modern technology accessible for a larger group of the creative population in the country.

6.4. Learning opportunities in the promotion of public-private models to increase business angel networks as well as venture capital funds

Promotion of business angel networks: Chapter 4 demonstrates that the business angel market in Germany is still under developed in comparison to other countries when considering the number of investors per million inhabitants. Nonetheless, there is huge potential for increasing this market. In Germany, nearly half of the business angel networks have been



created with the support of the public sector, leading to public-private partnerships with a clear geographic focus. The public-private model for promoting these networks and increasing the number of private investors for start-ups could merit closer consideration in the Indian context especially in markets where business angel networks are still weak.

Promotion of public-private venture capital funds: The role of the public sector in promoting venture capital funds in Germany is a result of the relatively weak supply of venture capital. Funds like the High Tech start-up funds (HTGF) have been developed to overcome this gap by promoting public-private partnerships in the set-up of venture capital funds. Although the majority of such funds are still subsidized by the public sector, private companies are increasingly co-investing, considering it as a potential for investment promotion in highly innovative start-ups. This Public-Private Fund model might also be worth promoting in India.

7

Case studies and profiles

7.1. Introduction to the cases

The following section of case studies represents a collection of relevant players in the incubation and start-up finance space in Germany.

The study itself is based on interviews with 20 stakeholders active in start-up promotion. While the study aims at providing an overall analysis of the incubation and business angel eco-system in Germany, the case studies documented in this paper offer more detailed information about individual organisations.

The case studies in this document include examples from:

- Associations of incubators and business angel networks (ADT, BAND)
- Public incubation models like start-up and technology centres as well as pre-incubation centres (BioCity Leipzig, TZDO, Karlsruhe, Humboldt Innovation, WeinbergCampus Halle)
- Private incubators (startupbootcamp, Axel Springer Plug and Play)
- Co-working spaces (Betahaus, Co-op)
- Creative labs (FabLab Berlin) and a business hub (Planet Modulor)
- Business angel networks (ABAN, BAN, Rheinland-Pfalz, BANS, and Angelsbootcamp)
- Technology and High-Tech start-up funds

The case studies provide generic information, specific success factors and information about how these organisations are linked to the start-up eco-system.



7.2. Case studies

German Association of Innovation, Technology and Business Incubation Centres (ADT)

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General information

The Association of Innovation, Technology and Business Incubation Centres (ADT) was founded in 1988 and is the most influential representative body of various incubation centres in Germany. It acts not only as a lobbying group but also as a proactive service provider to promote quality standards, experience exchange and cooperation between the centres located in Germany. Around 50% of all centres in Germany are a member of ADT. ADT hosts various kinds of organisations as the overarching term “innovation centres” can refer to different organisation types including start-up centres, technology centres or technology parks (see difference in the study, chapter 3.1.).

The rapid membership growth of the association since 1988 goes hand in hand with the rise of incubation centres in Germany over the last 25 years. Initially, ADT started as a working community consisting of 23 managers of incubation centres. Within three years it reached a number of 60 members and further extended their membership base with the German unification as new centres were established in the East of Germany and in smaller cities. During the last few decades, most of the ADT members went through an intensive learning process and became more specialised centres resulting from a quick growth of key technologies like ICT, biotechnology, micro-electronics, nanotechnology etc.

ADT has been able to promote a common understanding about the role of incubation centres in Germany. ADT is offering various services which seek to foster exchange of experiences. They have assisted in setting up various working groups, conduct annual conferences, support the promotion and marketing of their member centres and promote their compliance with a set of quality standards.

ADT also offers management trainings for the CEOs of the centres, and serves as an information point for possible German and EU project funds. Since 2002, ADT provides an audit-based quality label for “certified innovation centres” involving the monitoring of the management and success in the promotion of new start-ups (see in detail “selected success factors”).

The ADT is financed through the following incomes: members pay an annual fee between 700 and 1,300 Euro – depending on their size/rentable space. Additional income benefits derive from services like the quality label as well as small project funds, sponsors and conferences.

The ADT claims that its members have promoted more than 40,000 new start-ups which in turn have created 260,000 jobs. ADT states that more than 90% of the businesses that have run through their member incubator are still existing.



Selected success factors: Quality audit label for incubation centres

The main success factor of ADT is seen in the promotion of the quality audit label. The promotion of a quality standard emerged due to the obvious need for quality standards during the high growth process of the association as well as for the need to distance the centres from purely commercial-based office parks. The latter can also be found in many German cities. The ADT takes over an important role in this respect by promoting a certified monitoring procedure. To obtain the ADT quality label the incubation centres have to go through an independent audit process and need to demonstrate that they are successful in promoting regional economic development, young innovative start-ups, technology transfer between science and SMEs and have a sustainable and self-reliant management.

More specifically, the audit procedure is initiated by a 9 page-questionnaire which asks information taking into account several indicators. The following list provides an overview of the main monitoring areas and indicators:

Auditing of general minimum indicators: Number of start-ups, number of start-ups which are defined as especially innovative, age structure of the start-ups, percentage of rented space available on the day of auditing, number and quality of events organized, kind of services provided, certified cooperation with regional organisations, timeframe start-ups like to stay in the centre, financial viability of the centre including income and expenditure figures.

Specific Indicators related to the objective "start-up promotion": provision of space especially for young and smallest businesses, assurance of exchange of know-how through a mix of start-ups with synergies, and a technology mix as well as a dynamic firm rotation in the centre. This also involves the creation of contact networks with outside businesses and centres as well as the involvement of start-ups in start-up initiatives in the region.

Specific indicators related to the objective "technology transfer": demonstration and listing of innovative products and services provided by the start-ups, a strategy of the centre demonstrating the focus area and regional competencies that it will promote as well as the existence and initiation of efforts to be involve in national and international technology transfer activities.

Specific indicators related to the objective "regional economic development": involvement of the centre and the start-ups in regional networks and initiatives, support in the definition and promotion of a regional technology and sector profile, the promotion of the location to attract not only start-ups but also investors, support and consultancy in the set-up of other incubation centres in the region and internationally.

To obtain access to the quality label these indicators have to be documented and will also be evaluated by an audit team that is defined by the ADT management. In general, these are 3 independent auditors who will evaluate the documents as well as audit the centre on the premises. If the quality standards are met, the centre receives a certificate as well as a board indicating that the centre has been labelled according to certain quality criteria and the right to use the quality logo in all their public correspondence (ADT: 2013).



Bio City Leipzig & Bio-Net Leipzig Technologietransfergesellschaft mbH

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General information

In 2001, the Federal Government of Saxony initiated a program to support the establishment of new enterprises in the field of biotechnology and life sciences. 100 million Euros was invested in order to create the necessary infrastructure. Half of the funds were invested in the construction of the BIO CITY LEIPZIG, a building to accommodate start-ups and spin-offs, while another 50 million Euros was used to create 6 research departments in cooperation with the University of Leipzig.

Since 2003, the incubator of BIO CITY LEIPZIG offers individual laboratory and office facilities with modern equipment to start-ups. With its focus on start-ups working in the field of biotechnology, the incubator is especially attracting companies that seek to bring newly developed cell-based medicinal products into clinical application via clinical trials. The infrastructure is owned by the City of Leipzig and the Federal State of Saxony. The maximum time of stay for start-ups in BIO CITY is 8 years. The monthly fee for office and lab space in the incubator is below the usual market price and is only available for start-ups.

In addition to the technical infrastructure at BIO CITY, the Fraunhofer Institute for Cell Therapy and Immunology (IZI) offers support for the set-up and validation of GMP-compliant manufacturing processes. BIO CITY LEIPZIG is located in the vicinity of research facilities such as the Fraunhofer IZI, the Leipzig Translation Center for Regenerative Medicine, German Centre for Integrative Biodiversity Research (iDiv), the University Clinics and other faculties of the University of Leipzig working in this field.

The BIO-NET LEIPZIG Technologietransfergesellschaft mbH was founded to provide additional services besides office and laboratory space. BIO-NET LEIPZIG is a one-stop shop for all queries regarding any aspect of support in the field of biotechnology. Besides offering consultations for start-ups and financial advice, BIO-NET arranges contacts with National Ministries or the European Commission and initiates and implements R&D projects.

Since 2003, more than 60 enterprises have used the facilities of BIO CITY and the services of BIO-NET. At the moment, there are 35 companies renting office space. The monitoring of the performance of these start-ups is conducted by biosaxony, the association of biotechnology and life sciences industries in the Free State of Saxony, based on company surveys every year.



An adequate number of start-ups present in BIO City are supported by funding programs of the Federal State of Saxony. Experienced mentors manage these new companies. There are no strict selection criteria for new tenants as long as the entrepreneur can show a certain degree of innovation in the product or service they seek to develop. Start-ups with a promising business model in the sector of biotechnology and life sciences will be accepted and supported. Statistics indicate that new companies with disruptive innovation have the highest probability of reaching a profitable stage.

Selected success factors: Market Development Services and Cluster Management

Similar to other incubators, BIO-NET offers the usual support for start-ups like evaluation of business models, assessment of value chains and business development. One unique feature is that the interests of tenants are represented at trade fairs and conferences. BIO-NET acts as an intermediary in order to promote new products and assists in acquiring partners, investors and customers. Additional services for the facility management are car fleet management, hotel booking and public relations. Though BIO-NET does not invest in enterprises or technologies, it creates the necessary contacts with national and international investors. Assistance is provided in applying for funding programs as well as access to venture capitalists. Inexperienced start-ups will be given assistance in negotiations with potential investors. The key element for the successful management of an incubator in biotechnology is knowledge of the market and a reliable network. As product development in that sector shows high risk and is very time consuming, judging the potential of new products is crucial. Assistance in business development can therefore only be given with proper information on the market, technology and customer needs. Feasibility studies on the potential of new technologies require broad knowledge in biosciences. Of similar importance is the access to a network of potential investors, research partners and customers. Maintaining this network requires effort and should not be underestimated. BIO-NET uses several associations to sustain a vital exchange in a non-competitive environment. Keeping in contact with decision makers from other business incubators provides an opportunity for open discussions and guarantees access to best practice models.

Successful enterprises may stay in the vicinity even if the maximum time of stay in BIO CITY is reached. BioCube Leipzig, just a few meters away from BIO CITY, offers its facilities in order to maintain synergistic effects and contributes to the location development of the cluster. BioCube Leipzig offers tailor-made infrastructure to already mature companies (after several years of incubation in the BIO CITY incubator). This allows the companies to grow from the infrastructure point of view without the obligation to leave the area. They can stay in close proximity to the research institutes, which stimulates the knowledge spill-over activities.



Developing the biotechnology and healthcare cluster in Leipzig is the main goal of BIO CITY and BIO-NET. In the long run, the cluster should be developed from research orientation to production orientation with a complete local value chain. In order to do so, BIO-NET is also acting as the cluster manager on behalf of the City of Leipzig. Here one of the main tasks involves networking with all research institutes and private companies in order to foster the development and the implementation of technology transfer projects.



KIT-Hightech-Incubator

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General information

On October 01, 2009, the Karlsruhe Institute of Technology (KIT) was founded by a merger between Forschungszentrum Karlsruhe and Universität Karlsruhe. KIT combines the missions of both precursor institutions: a university from the state of Baden-Wuerttemberg with teaching and research tasks and a large-scale research institution of the Helmholtz Association conducting program-oriented provident research on behalf of the Federal Republic of Germany. As part of these missions, KIT operates within three strategic fields - research, teaching, and innovation. Due to the broad variety of research focused on technology innovations at the university (Campus South) and large research facilities of the Helmholtz Association (Campus North), KIT has a high potential for innovation and research-oriented business development.

The Innovation Department (IMA) is the service partner for the commercialization of KIT research results. At the interface of science, industry, and capital, the focus lies on linking complementary potentials by conveying expert knowledge, establishing contacts, and generating transfer and innovation projects. IMA combines tasks related to modern technology transfer like intellectual property management, technology marketing, business development, entrepreneurial education and incubation of start-ups. IMA is generally funded by KIT and is non-profit oriented.

Due to the structure of KIT, the network is broad and supportive to spin-offs. IMA maintains excellent contacts with industry through an exclusive business club that informs its members about the latest research findings and new applications. Access to financial funding can be made available through various channels. With coaches for the High Tech Gründerfonds on the team and contacts to private investors, the access to capital is facilitated. Another means of financial support can be provided through the Innovation Fund, which generates income from KIT licenses due to the business development activities of IMA. The Innovation Fund is used to finance pre-incubation validation gaps as well as to invest in shares of KIT spin-offs.

The incubator is one element of IMA's approach to technology transfer through a "One-Stop-Agency", where the process from research to business is managed and/or accompanied. The incubator was founded in 2008, when an already existing building on Campus North was made available for IMA. Initial investments were covered by the Innovation Fund. At present, there is 1250 m² of office and laboratory space available for KIT start-ups.



All laboratories are fully equipped in order to minimize the investment costs during the time of usage for the tenants. Another asset is the vibration-free floor of the wet labs. Additionally, there is a conference room, a kitchen and two meeting points to ensure a creative work environment. Only start-ups from KIT are eligible to use the incubator. In the event of a lack of space, start-ups with higher risk or KIT shares will be given preference. All services for the start-ups are non-profit oriented; the rent of all start-ups covers incurred expenses. Since 2008, ten start-ups have been accommodated. Three of them have already left the campus and are continuing their ventures outside of KIT.

Selected success factors: Spatial Proximity and One Stop Shop

The proximity to KIT and the research environment provides the basis for the incubator. All start-ups have former KIT researchers on the team and use technologies that were developed on campus. Due to this, there is a strong connection to KIT. The psychological factor of going to work to a familiar place in a new personal situation might be substantial for some former researchers. The head of IMA, Dr. Fahrenberg, believes that some team members would not have made the step into entrepreneurship without the incubator on Campus North.

IMA manages all key activities of technology transfer and is the partner for commercialization activities. IMA is already involved in developing proof of concepts and prototypes in the stage of technology validation. Support is given through expertise on how to apply for federal or governmental funds. Researchers become acquainted to the people in charge at an early stage and receive help in business development and entrepreneurial education.

Another important success factor is the mutual interest in a booming development of spin-offs. KIT generates income through licenses and is therefore highly interested in profitable management of intellectual property. All tenants of the incubator use intellectual property from KIT and pay royalties based on their turnover from sales or services.

The main success factor lies within the structure of KIT and the integrated approach of IMA. The large size of KIT, with a University and a Helmholtz Centre, holds great potential for innovation and spin-off companies. That potential is being promoted by various in-house activities like technology screening, business development, start-up coaching, networking activities and an existing, well-equipped incubator on campus. Research intense business start-ups with intellectual property from KIT are being trained, developed and incubated on campus right in the environment that the founders of those new businesses are used to. The incubator uses a holistic approach for successful academic technology transfer through start-ups.



Weinberg Campus Technology Park

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General information

Since 1990, more than one billion Euros have been invested in the formation of Weinberg Campus Technology Park (WCT) as an association to support local development for science and research intensive enterprises. WCT's aim at developing the city of Halle (Saale) by using synergies from combining science and industry. Funding is channelled into selected scientific fields in order to generate excellent knowledge and innovative technologies for high-tech applications. Weinberg Campus Technology Park accommodates a number of research facilities such as two Fraunhofer-Institutes, the Helmholtz-Center for Environmental Research, two Leibnitz-Institutes, another two Max-Planck-Institutes and a large number of natural science faculties of Martin-Luther University Halle-Wittenberg. The infrastructure is owned by the City of Halle and the Federal State of Saxony-Anhalt.

TGZ is located at WCT and was founded in 1993 as one of the first business incubators in the New Federal States of Germany. TGZ, in cooperation with Bio-Centre Halle, operates a total of 9 buildings with modern facilities for enterprises working mostly in biotechnology, biomedicine, nanotechnology, clean technology and automation. Tenants have access to office and laboratory space with greenhouses, facilities for livestock husbandry and production sites. TGZ and Bio-Centre offer a total space of 27,000 m². Over the past twenty years, more than 160 enterprises have been founded. The incubator and the highly specialized Bio-Centre provide facilities for an inspiring entrepreneurial ecosystem.

Univations GmbH Institute for Knowledge and Technology Transfer at the Martin-Luther University Halle-Wittenberg is the local partner for pre-incubation, entrepreneurial education and business model development for technology-based businesses. As a private enterprise and associated institute, Univations provides process-oriented start-up services from idea development to sustainable management. In compliance with the aims of Weinberg Campus Technology Park, the main motivation is to generate high quality jobs from the stable growth of new enterprises within the region. The growing number of spin-



offs in the form of associated institutes and start-ups founded by graduates attests to the high standing of practical research and education. Since its foundation in 2006, Univations has been located at WCT. Apart from entrepreneurial education, Martin-Luther University assigned Univations as an external service provider for knowledge and technology transfer.

Selected success factors: Technology Cluster with specialized technology-oriented Start-up Support

The cutting-edge infrastructure and the intelligent networking at the Weinberg Campus results in excellent collaboration opportunities. This includes opportunities for university and non-university research institutes and innovative companies with development capabilities.

TGZ offers competitive prices and services for new businesses to help them enter the market and the competence network on WCT. In addition to office and laboratory space, a shared telecommunication network and several meeting and seminar rooms are available. Apart from facility management, TGZ supports tenants in the organization of exhibitions and trade fairs, planning and realization of investments or the development of R&D projects. Another success factor of Weinberg Campus Technology Park is the development of technology-orientated clusters, where all important players: private companies, research institutions and public support organisations are located in the same place.

Univations provides the environment for successful start-ups from the University or non-university research institutes. One example of a barrier-free transfer of technology through spin-offs is the establishment of the founders' workshop as a pre-incubator. The facilities of Technology and Founders Center (TGZ) in the Technology Park "Weinberg Campus" include lab space, devices, and consumables, which are made available to students and scientists who need support for the development of their products or business models in the field of nanotechnology and biotechnology.

The Life Sciences Incubator as well as the nano-structured Materials Incubator is free of charge for selected projects. Students, scientists and alumni are able to develop start-up concepts in a protected environment. Conditions for participation are: a considerable amount of further technological development and development with regard to market readiness. Furthermore, an official company formation should not have yet taken place.

In the case of a promising pre-incubation phase, the step into the market is rather small, as the entrepreneur already knows the infrastructure and the psychological barrier is minimized. During the overall process, scientists and potential founders are supported by Univations Gründerservice of the Martin Luther University of Halle-Wittenberg. This



applies both to professional assistance during the technological development and to business consultancy and training during the development of adequate business models. Univations provides access to capital with its connections to business angel networks, banks and funding programs. Univations initiated the INVESTFORUM Sachsen-Anhalt, a matching platform for investors and entrepreneurs in search of financial support. The forum creates the economic framework necessary to successfully implement scientific ideas. The aim is to guide start-ups and potential entrepreneurs in the strategic planning of their entrepreneurial concepts, to offer individual consultation and connect them with potential financial backers. At two locations in Halle and Magdeburg, the forum supports entrepreneurs in designing their financial concepts and in setting up important contacts with national and international investors. The target groups are corporate founders with innovative, technology-oriented business ideas seeking a further round of financing. In this context, the forum supports investors in finding potential portfolio companies and in financing local enterprises.

The forum is in a position to advise both enterprises and investors through a close collaboration with national and international investors, regionally as well as nationally operating networks, institutions within the financial sector, chambers and innovation clusters as well as technology and business incubators. Depending on the needs of the clients, the forum offers different event formats like individual consultation, matchmaking, round tables, expert's tables etc. According to Daniel Worch, CEO of Univations, a future aim might be the establishment of an investment fund that could be managed by the technology transfer organizations of Weinberg Campus.



Technologiezentrum Dortmund (TZDO Dortmund)

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General information

The Technology Centre Dortmund (TZDO) is one of the most successful and most rapidly growing technology and innovation centres in Germany. Dortmund and the Ruhr valley which used to be industry heavy was strongly affected by the structural change and decline of the coal and steel sector in the 1980s. The TZDO was founded in 1984 to promote new knowledge-intensive start-ups with a clear specialisation in five main sectors: ICT, biomedicine, production technology, logistics and micro-system technologies (MST).

The technology centre was founded next to the University outside of the city. It has now become a large technology park with several more specialised technology centres like the software factory, the MST factory, the Centre for Production Technologies, and the Bio Medicine Centre. The Technology Park in Dortmund covers around 280 businesses with around 8,500 employees. Between 1984 and 2013 the space for incubation increased from 5,660 to more than 100.000 square meters due to the emergence of more specialised technology centres and the growing number of specialised start-ups and the investment of already established companies in the business park.

The technology centre started as a Public Private Partnership Project. Although the technology park is 100% owned by the city, the shares in the management of the technology centre are distributed among the main relevant stakeholders (46.5% City, 25% local banks, Chambers (16%), University and Polytechnic Dortmund (12.5%). The local economic development agency of Dortmund also has an important veto right on the board of managers. This assures a solid expertise and aligned local and market orientation taking into consideration the development objective of the city.

Start-ups can stay up to max. 8 years in the TZDO. The renting cost for start-ups is 10 Euros/sqm for office space. 95% of the space of the technology centres is occupied. The rate of insolvencies is below 5%. Companies have the opportunity to settle in the business park next to the technology centres after their incubation.

In addition to typical incubator services like internet, telephone service, conference rooms, room cleaning, certain capacity building activities, the TZDO offers more specialised services like:



- A pre-incubation centre where students can test their ideas and where business plan ideas are commented and checked with the expertise available in the technology park
- A specialised expertise and contact network of research and project funds
- Contacts with larger businesses and other experienced businesses in the sector/branch
- Contacts with the local banks and their financial credit offers as well as with business angels and venture capitalists
- Contacts with research and testing infrastructure like laboratories
- Links to technical expertise in the different branch fields
- Personnel consulting and mentoring by specific entrepreneurs who are located in the technology park (not only start-ups)
- Technology transfer and exchange with academic and scientific establishments in the region and interdisciplinary research centres like Max Planck, Fraunhofer and other basic and applied-science oriented centres.

Selected success factors of the TZDO: Management for sustainable growth including the establishment of additional technology centres and the creation of an investment company for the technology park

The TZDO has been able to promote a new image of the City of Dortmund as a location for applied science and start-up promotion. This image was created not only by the TZDO but also by the promotion of the local economic development agency and the City, which decided to focus the future economic development promotion on selected future clusters and on start-up promotion to increase the potential of these clusters. The TZDO played a key role in this process and can also be seen as a hub for this structural change process during the last 30 years. It has strengthened the abovementioned clusters through the continuous promotion of new start-ups and the attraction of additional businesses. 2 selected success factors of the TZDO are further elaborated on in the following section: the ability of the TZDO to grow from one technology centre into a technology park with several specialised technology centres as well as the establishment of an investment company that attracts additional established businesses to the compound.

Management for sustainable growth: The management started in 1984 with a clear focus on potential sectors. Then a continuous further specialisation in interface areas related to the main potential business sectors was responsible for the further growth process. The TZDO moved into more specialised fields like bio medicine (linking biotechnology and microsystem technologies), material flow and logistics, robotic and automation etc. After the first technology centre was successfully established, the TZDO created targeted additional infrastructure and invested in technology requirements to attract more start-ups and businesses.



Attracting investments into the technology park: In addition to promoting start-ups via the technology centres, the TZDO also started to attract larger companies into the area around the university. In 1995, a first leasing company was founded for this purpose, which was transformed into an investment company in 2009 (TZ Invest Dortmund GmbH). Their advantage is to have access to research facilities and laboratories as well as to young start-ups, qualified staff and applied science institutes (e.g. Fraunhofer). For the start-ups it provides the advantage of being close to possible knowledge spill-overs and potential clients.

Monitoring: The TZDO management was one of the founding members of the Association of Technology and Start-up Centres (ADT, see profile here) and has also helped to develop the monitoring and quality label approach that is promoted by the ADT. The TZDO goes through a rigorous evaluation process.



Humboldt Innovation GmbH (HI) and its Spin-off Pre-Incubation Centre

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General information

Humboldt-Innovation (HI) is the knowledge and technology transfer office of the Humboldt-University Berlin. As a 100% subsidiary enterprise of the University, Humboldt-Innovation acts as an interface between university and industry - between science and business. It is active in four major areas:

- Research, which covers scientific services, contract research and research co-operations;
- Training and further education covers events and conferences as well as special training for start-ups
- Marketing of the Humboldt University and its institutions and services
- Provision of spin-off support through the establishment of 2 pre-incubation centres in Berlin

The following presentation will focus on the pre-incubation approach of the Humboldt Innovation GmbH.

In 2005, Humboldt Innovation initiated 2 spin-off zones in Berlin. The spin-off zone is a pre-incubation centre in which students or early-stage start-ups get coaching support to further implement their business idea. The spin-off zones are located in the city centre and in the technology park Adlershof. 2 staff members manage each zone and one coach is responsible for assuring close contact with around 9 start-ups.

Each of 2 the spin-off zones offers around 45 work spaces with telephone, internet and printer, a large conference and seminar room for appointments with investors or customers, and a spin-off lounge. Coaching is provided by the managers who offer support in contact making, network building and in progressing with the business plan and financial and market calculation. Monthly evening meetings called "Berliner Gründl" provide the opportunity to exchange knowledge between early-stage start-ups and to get into contact with established businesses. The spin-off zones also offer support to outside coaches when it comes to specifically required expertise.

The maximum incubation time in the spin-off zones is 1-2.5 years. Most incubatees are working in IT and research-intensive areas. According to the interviewees, 80% of the companies that started their businesses in the pre-incubation centres are surviving in the



market. Since its foundation in 2005, 48 successful spin-offs and the development of over 1100 research projects have been supported. Currently around 100 early-stage start-ups are being supported in the 2 spin-off zones.

The building belongs to the university and the start-ups do not have to pay for using the office space.

Selected success factors: early service provision and coaching support as well as the use of diverse financial support

Early service provision: One of the most interesting aspects of the spin-off zones is their early support of potential start-ups. Most business ideas are not put into practice because young professionals are not supported and empowered in the initial stage to further develop their idea. The spin-off zones of the Humboldt Innovation GmbH try to close this gap by providing working space and coaching for potential start-ups. They are given the chance to get acquainted with the business reality and at the same time further develop their business idea and obtain coaching and information support from different mentors as well as other companies. One important success-related aspect of the spin-off zones is the selection of pre-incubatees. The spin-off zones receive around 70 applications per year from which 20 are selected. The most important selection criteria are the consistency of the business idea and the subjective impressions about the character and seriousness of the possible future tenant. This procedure is carried out by a professional team that has experience on the one hand with businesses and start-ups and on the other hand with the applied research reality.

Financing model: The Spin off zone works because it is financed from different sources. Most of the staff members of the spin-off zones are financed by the European Social Fund (ESF) which seeks to promote employment and entrepreneurship development at universities. The space and infrastructure is financed by the University, certain equipment is supported by the Humboldt Innovation GmbH through certain cross-funding opportunities, the early-stage start-ups are often supported through access to start-up capital funds like the EXIST fund (see further explanation of the EXIST program in chapter 4 of the study). EXIST provides seed finance for start-ups coming from universities.



Startupbootcamp Berlin

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General information

“Startupbootcamp” is a start-up accelerator program that has programs in Istanbul, Copenhagen, Amsterdam, Berlin, Tel Aviv, London and San Francisco (planned). It started its first programs in 2010 and the one in Berlin in 2012. It provides 3 month-intensive mentoring programs for 10 potential or existing digital or internet-based start-ups in areas like E-commerce, Smart Transportation and Energy and other innovative areas with a high potential for growth. Most of the selected start-ups are still in the pre-revenue stage, often still in the process of finalizing the development of their products. Each start-up gets a payment of 15,000 Euros for the 3 month-period to pay their accommodation costs and living expenses. 8% of the equity capital of the start-up goes to Startupbootcamp in return.

10 participants in the program are selected from several hundred applications. Selection starts with an internet application, with Skype interviews and pre-bootcamp selection events in which the final 20 cases have to pitch their ideas to mentors.

The selected start-up teams are then located in a co-working space where they are intensively supported in their ideas, in the development of their products, in raising funds, in defining their key customers, and in developing an upscale strategy.

The start-ups in the centre come from different countries. Only 25% are German start-up teams.

Alex Farcet, the co-founder of Startupbootcamp, defines it as “an orbit in which we accelerate the development of great ideas into business cases. Our fuel is our mentors.” The “startupbootcamp” cooperates with 138 mentors who are entrepreneurs themselves from different specialised fields and with many experiences in the business world.

The bootcamp ends with a demo day in which the 10 business founders pitch their ideas to venture capitalists and business angels with the hope of obtaining further financial and development support as well as contacts to large businesses. According to Farcet, more than 70% of the start-ups have been successful in getting additional venture capital investments at the end of the bootcamp.



Selected success factors: intensive progress-oriented coaching, strong market orientation, venture capital linkages, and involvement of private sponsors

In contrast to many public incubation centres in Germany, the accelerator program of startupbootcamp provides some relevant advantages that are important to consider. There are 4 aspects in particular that will be further elaborated on here: the intensive, progress-oriented coaching approach, the strong market and product development orientation, the access to venture capitalists, and finally the sponsorship approach through contacts with the private sector.

Intensive, short-term oriented coaching approach: As the term accelerator already emphasizes, it is the objective of startupbootcamp to provide the new start-ups, as a team of at least 2 individuals, with an intensive incubation period in which they have access to a professional team of mentors, consultants and product developers. The mentor network provides broad knowledge whereas the specialised mentors themselves have experience in different product markets as well as in the consultancy of start-ups.

Improving the market readiness of the start-up products: The objective of startupbootcamp is less focused on general entrepreneurship training or learning than on the progress of the business idea with the objective of improving its market-readiness. This also requires the consideration of key information related to the business. This includes the analysis of competitors, of scaling opportunities, of strategies about how to make the product well known in the market as well as how to create customer retention etc. During the presentation of the business idea to venture capitalists and business angels at the end of the 3 months, the start-ups need to be able not only to pitch their product idea but also to demonstrate its market opportunities and the potential of the niche they want to fill with their service/product.

Getting into direct contact with venture capitalists: Germany lacks access to venture capital, especially for start-ups. As a start-up it is already a marketing advantage to be selected for the accelerator program. It is seen as a quality distinction and provides publicity. At the same time, the intensive timeframe of 3 months preparation also provides venture capitalists with a certain trust in the readiness of the start-ups. Finally, the presentation of the start-up idea in front of a larger group of experienced and selected venture capitalists reduces the start-ups' transaction costs which would otherwise be incurred when contacting them individually. The more the accelerator programs like startupbootcamp can demonstrate the success of their incubated businesses in the longer run, the more the young start-ups will profit from the reputation and trust the program is generating in the eyes of co-financiers.



Sponsorship involvement from private companies:

The promotion of start-ups also has a social aspect. Startupbootcamp proactively approaches private businesses in sponsoring the program. Some sponsors are e.g. Mercedes, Bosch, Cisco, HERE, Castrol innoVentures, EnBW, as well as other private and venture capitalist companies that also see it as a good advertisement opportunity for themselves.



Private Accelerator "Axel Springer Plug and Play (ASPP)"

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General information

Axel Springer Plug and Play (ASPP) is a private accelerator program that started in 2013 and is organized as a joint venture by Axel Springer Verlag and the Plug and Play Tech Centre. Axel Springer is a leading publishing house in Germany, based in Berlin. Plug and Play is a leading start-up investor, which started its work in Silicon Valley and promotes accelerator programs in different countries of the world.

The accelerator program started its work on the premises of the Axel Springer Verlag in 2011. Twice a year around 8 potential digital start-ups are selected in a very competitive selection process to participate in the accelerator program. The incubation phase of ASPP also runs for 3 months during which the start-ups receive seed finance amounting to 25,000 Euros and an intensive mentoring of their business ideas by a group of around 100 experienced private and corporate sector mentors. In return, each of the start-ups provides 5% of their share of the company to the ASPP.

In contrast to startupbootcamp (see profile above), where a private group of investors started the program, ASPP is a model in which a large company opened up an accelerator program (together with Plug&Play). This model can especially be found in Berlin but also in a few other large cities in Germany. Other companies like Telecom (hub:raum), Siemens or Scout24, are actively involving in the incubation space with several interests in mind: as an innovation strategy for staying up to date with new business ideas in their field of expertise as well as the identification of investment opportunities.

The accelerator program of ASPP ends with a D-day similar to the startupbootcamp approach in which the start-ups pitch their business idea to a group of venture capitalists and business angels. ASPP itself has a follow-up fund with which it can itself invest in the most promising start ups. The business strategy is that after a maximum of 7 years the start-ups should make a profit, at least a critical number of them. Out of the 16 start-ups that began the accelerator program in 2013, 80% were supported by additional venture capital investments.

Selected success factors: the support services, the corporate and management model and the selection of incubatees

The ASPP approach demonstrates certain interesting success aspects which will be further elaborated on in the following sections.



Strong support services: The accelerator program provides many advantages for start-ups that would like to improve their business idea and get access to additional funding. One of these services is branding. Start-ups that have been selected to enter the program have a good opportunity to get access to venture capital investments because they have already passed through a rigorous selection process and earned trust in the professionalism and market orientation of their business idea. During the incubation period, the start-ups benefit from intensive and close contact with the Axel Springer Plug and Play mentor network consisting of experts from the private and corporate sector who would otherwise be difficult to reach. An additional advantage is the provision of a co-working space with all facilities (computers, internet, café services) and a grant of 25,000 Euros for the team to finance their stay in Berlin. In addition to these facilities and mentor services, the accelerator program itself offers a highly intensive and very focused preparation procedure, which, according to some comments from start-ups themselves, provides an intensive learning process geared towards becoming more market oriented, more professional in presenting the company and more successful in developing their product. The preparation for the D-day in which the start-ups present their companies in front of venture capitalists and come into direct contact with a wide range of venture capitalists and business angels is one important service in this respect.

The financing and management model is seen as another important success factor of the program. The model used at Axel Springer Plug and Play is based on co-financing between a large company (Axel Springer) and a venture capitalist (Plug and Play). Both provide the financial basis for the seed finance of the accelerator program. The approach is also based on management by financial experts. The managers of the accelerator programs are investment and business experts with experience in venture capital investments as well as business procedures and business processes and with a wide contact network consisting of professionals. Mentors are not paid for their services but instead do their coaching work for reputation-related reasons and partly also because they might themselves become investors in the respective start-ups

The selection of incubatees is an additional success factor. The applicants have to pass through an intensive selection process to be accepted. Individuals are not selected. The incubator is only selecting team's consisting of 2-3 people who have developed their idea together and who are cooperating with each other because their expertise goes hand-in-hand together and not because they are friends. According to ASPP, the ideal form for a team is one technical expert and one sales and business person. Through these selection criteria, the program seeks to reduce the danger of promoting business ideas that are too isolated and lack shared competence from the outset.



BETAHAUS: Co-working space Berlin, Hamburg, Sofia, Barcelona

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General information

betahaus is the largest and best-known co-working space in Europe. Founded in 2009 in Berlin, it now has offices in Hamburg, Sofia and Barcelona. Around 350 freelancers and start-ups are located in betahaus | Berlin. The co-working space covers 2,500 square meters of flexible and fixed office spaces, meeting and event rooms. Rental prices range from 12 Euros (1 day), 59 Euros (for 5 days) to 159 Euros (per month) for flexible office desks and 259 Euros per month for one's own desk.

betahaus especially attracts designers, creative start-ups and young businesses due to its creative environment, the strong promotion of networking between young businesses and start-ups, as well as its international and multicultural orientation. It has become a meeting and information point for young start-ups to rent flexible office space on a daily, monthly or longer-term basis. At the same time, unlike many other office spaces, the co-working space offers several workshops, seminars and public events as well as large events which provide the start-ups with the chance to increase their markets and their access to funds or other supporting organisations in the eco-system.

Selected success factors: the support services, the promotion of the co-working space as a business model and the selection of tenants

Support services: The betahaus puts a strong emphasis on networking between businesses and the promotion of an open exchange culture of experience. It cooperates with mentors and trainees on a cost-based model through which different seminars are offered including funding opportunities, online marketing strategies, bookkeeping, product strategy, lean manufacturing and customer development, social media strategy development, introduction to design software, work-life balance issues and other topics directly oriented towards the demand of the tenants. The co-working space has also established its own prototyping platform in which workshops are offered e.g. 3 D printing. betahaus also organizes events like start-up pitches and community breakfasts where tenants present their business ideas to business angels, venture capitalists and private incubators. "Idea contests" are also organized, which involve the promotion of new business ideas in a public contest form.

Promoting the co-working space as a business model: betahaus has started the co-working space as a business model that should be able to be replicated in other cities and that provides sufficient sustainable income without public support. For this purpose the



co-working space has started to open additional locations in other towns in Germany (Hamburg) and in other larger EU cities like Barcelona and Sofia. In 2013, betahaus closed a co-working space in Cologne but is now interested in opening up a new one in metros like Tokyo.

The business model requires professional basic market studies to understand the potential of opening a co-working space in certain places, the early identification of potential tenants, a professional public marketing approach and the combination of income generation not only through rents from the tenants but also through additional income-generating services. According to the management of betahaus, a minimum space of 1000 square meters is necessary to be able to connect different income generating facilities (Café working space, meeting rooms, and event areas). Workshops and seminars as well as accelerator programs are important additional income sources.

Selection of different incubatees to avoid a sector focus: In contrast to many other co-working spaces, which are interested in locating businesses from a similar sector (see e.g. profile co.op), betahaus is especially interested in assuring a wide mix of tenants. Although there is no official selection process, the management regularly looks at the structure of the start-ups located in the space and tries to attract different businesses. One important selection criteria is the openness of the start-ups and their interest in exchanging with others to assure the interactive atmosphere and open learning culture. This is mainly done through interviews with tenants before they rent an office space.



Co.up: Co-working space in Berlin

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General information

Alex Lang is a 32 year-old software expert. In 2008 he and his friend founded co.up. What today is one of the largest and most well-known co-working spaces in Berlin, with 60 self-employed tenants who rent office space on a flexible basis, started with 2 friends who decided to open their own business. They did not want to work on their own and came up with the idea of renting a larger office space where other self-employed people who also did not like to work from home or in a small office space, could rent space.

While in their first office which was roughly 60 sqm the principal idea was mainly to share the costs with others, in 2009 the founders decided to rent a larger space covering 360 sqm, located in a classic Berlin factory building in Kreuzberg; one of the multicultural and trendy suburbs of the city. The comfortable office desks are located on 2 different floors, and provide the opportunity for each member to sit at any desk. "It is the flexibility that counts", says Alex Lang. It also means that not every member comes to the space every day but perhaps uses it just a few days or only for a week.

Besides the available office desks, there is a lounge/bar, which forms the social centre of the space where people can meet and socialize. There are also 2 small meeting rooms and a larger event room available, which can be booked for special occasions. The additional services offered by the co-working space are rather basic. Co.up provides power, wi-fi connection, a laser printer, scanner, and fax. Every second week a breakfast between members of the space is organized to exchange ideas. The network and the flexible office space is extremely valuable for the members. Over time co.op has unintentionally become, a location for software and internet tech experts. A certain culture has therefore also emerged in the space. As Alex Lang admits, "A business consultant might not feel that comfortable here. Software and IT freaks have a certain culture and you can also sense it here." He also points out that it was never the intention to earn money. At present they can finance a 20-hour secretary job and do not make profit from the co-working space. Nonetheless, the co-working space and the networking with other IT specialists led to innovative product ideas. 2 years ago Alex Lang and his friend for instance started to develop COBOT software, a web-based software that manages all the administration and book keeping work of a co-working space. The further development of this software, as well as its application in several co-working spaces, has now become the main source of income generation for their business.



The cost of an office space is structured according to the number of days it is used:

- Visit for a day: 15 Euro
- Students and freelancers 2-3 times a week: 105 Euro
- Once a week for a month: 30 Euro
- Full-time: 200 Euro (40% of the members are registered this way)

Selected success factors: emergence of a business model over time and development of an IT and software community hub

At first glance it seems that the co.up Coworking-Space in Berlin is nothing special. However, its natural evolution provides many valuable insights about the way many Coworking-Spaces have emerged in Germany during the last few years. Essentially, many of them start with the idea of sharing office space and over time develop as a business model.

Business model evolution in an attractive location: When the founders started to rent their office space they had no intention of creating a business model. This is something that developed over time and with the identification of a market niche due to the high demand from freelancers for cheap office space in Berlin. Thus, the founders very much began with the idea of finding an attractive and larger office space for themselves. The interest in expanding the space and looking for an appealing location (in the middle of Kreuzberg, an attractive multicultural quarter with many young academics located in the neighbourhood) was not only to increase the financial sustainability of the office space, it also emerged out of the idea that by bringing together different experts in specific fields (IT and software development in this case) contacts and synergies could be created, which opens up new business opportunities and business cooperation potentials between tenants.

Creation of an IT and software community hub: Unlike the betahaus Coworking Space, which emphasizes the importance of having very diverse start-ups in their location, co-up has very much become an IT and software community hub with many software companies as tenants as well as potential business co-operators. They provide extra services by renting event halls to other tech groups and communities for free. Around 30 different tech and programming communities offer their workshops and meetings in this event room. In this way, different networks got to know the co-working space and it became popular in the young IT scene in Berlin. Over time, an IT and tech culture has emerged. This specialised networking aspect has led to several joint work projects between different tenants in the space.



FabLab Berlin

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General information

A FabLab (fabrication laboratory) is a small-scale workshop, in general supported by individuals and often in connection with a university. The fab lab approach was promoted in the USA in 2001 by the Massachusetts Institute of Technology (MIT) together with grassroots invention groups (see more details in the study, chapter III.2.). In Germany, around 20 Fab labs are already operational in different cities, around 10 more are currently realised. Worldwide more than 350 FabLabs have been set up, either in cooperation with a university, with larger companies or through individuals.

The FabLab in Berlin started in April 2013 as an NGO mainly based on a small group of initiators. Currently Fab Lab Berlin is in the process of founding a non-profit organization for educational activities. The founder of the FabLab is a product designer who had already started to work with digital prototyping with school classes. He saw great potential in using prototyping technologies for developing new learning methods that combine innovation stimulation and creative product development. In Germany, around 50% of FabLabs are organized in this way. Others are linked to university funding support or promoted by large enterprises or even by co-working spaces (see e.g. betahaus profile).

The services that are provided by the Fab Lab in Berlin are the provision of access to prototyping technologies like 3 D printers, laser cutting machines, software programs, CAD technology and other facilities. Once a week an open door day for start-ups and other creative individuals is offered to share product ideas and to network with others. During the week introduction courses are offered e.g. on 3D printing, laser- and vinyl cutting, CNC machinery etc.

The starting capital of the Fab Lab was 100,000 Euro. It is self-sustainable and started to create profits after 1 year of its existence. Income generation is provided through membership fees, payment of the use of the machines, machine renting for larger events as well as the organisation of introduction workshops for the use of the different technologies.

The users of the Fab Lab in Berlin are mainly professionals like architects, engineers and ICT specialists as well as creative individuals, students and start-ups who want to get acquainted with the use of different technologies to develop their own products.



Selected success factors: a dedicated founder team that is convinced about the Fab Lab philosophy and the identification of a sustainable finance model

A dedicated founding team: In chapter 3.2. it was emphasized that not every Fab Lab in Germany emerged from the original Fab Lab movement that has been promoted by MIT. The Fab Lab in Berlin is one of the original Fab Labs that is based less on strong financial and institutional support and more on membership fees and the offering of services. This first of all requires that a number of founders are committed to FAB LABS' learning philosophy. It also requires the set-up of a contact network. This contact network can involve several actors: possible university partners who are interested in promoting the approach, private sponsors who support certain events, companies that provide certain technologies. In many Fab Labs, the machinery is rented and partly also provided for advertisement purposes.

Development of a sustainable financial model: The Fab Lab Berlin has started to generate revenue after one year of existence. A network of private company sponsors provide support through the payment of participation fees in so-called 'Open Lab Days'. Additionally, the LAB is able to generate income through membership fees as well as paid workshops. In the medium term it will also be important to develop prototyping services for companies or for individuals, which will enable additional income opportunities.

According to the founder of the Fab Lab Berlin, the development of a finance strategy before the foundation of the Fab Lab was one important success factor: Wolf Jeschonnek stated in the interview: "I think it was an advantage not to depend on external funding in the beginning. Due to this fact I was forced to concentrate on network building and not on the creation of a fancy building first".



Planet Modulor as a Business Hub

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General information

Planet Modulor looks like a large retail and service shopping hall offering art supplies for architects, designers and other creative people. It is possible to buy paper, any drawing equipment, markers, cutters, etc. Additionally, various services are also provided within the premises. What looks like one company is actually a business hub with a network of more than 20 businesses, including young start-ups, which are cooperating with each other for their common good.

The core of the business hub is the retail company Modulor, which sells products. At the same time more than 20 creative service providers offer their services to the clients in the same space. These include services like printing, laser cutting, 3D printing, furniture and textile designing, etc. The common objective of the hub is to attract more customers into one building, to offer the sale of products and related services and ultimately to increase the variety of opportunities for clients and income opportunities for the businesses.

Planet Modulor was founded in 2001. During their expansion in 2005, the owners of Modulor (Andreas Krüger, Christof Struhk) asked service providers and start-ups in the creative industry working on processing of materials to move together into a larger space where retail and service provision could be combined.

In 2011, Planet Modulor opened its retail and service shop covering over 6,000 sqm at Moritzplatz in Berlin, in a reconverted former textile factory. With this concept the companies were able to increase their daily customer visits. For instance, Modulor increased its visits from around 500-800 up to 2,000 per day. This is especially the case because the hub creates additional value for the client and an attractive place to buy and at the same time further process the materials with the help of service providers located in the same premises.

Planet Modulor created a foundation with all the business members in the building. Every business pays rent for office space to the investor (Aufbau-Verlag). In addition, they pay a membership fee of 50 Euro per month plus 50 cents per sqm of rental space to the foundation.



Selected success factors: Organisational innovation with advantages for start-ups and revival of a suburb in decline through making use of the young creative business class

Organisational innovation for sellers of materials and service providers including start-ups:

Planet Modulator is not a start-up centre but it can also be defined as a young service provider enabler in the creative industry. The space integrates new start-ups as well as established service providers. They are strengthened through the joint network-hub, have many opportunities to learn from and exchange with each other and, last but not least, have the advantage of being given quick access to clients and buyers. Many young service providers are especially challenged when it comes to identifying customers as well as developing visibility for their business. Pressure to compete with online service providers and online shops makes it more difficult for young creative service providers to stay or become competitive. Prior to 2011, Modulator sold 50% of its products online whereas today Planet Modulator is able to sell 70% of their products directly in the shop and service centre. In this respect Planet Modulator should not only be seen as a cluster of businesses but also as an innovative business model that increases market opportunities for young and emerging service providers.

Revival of a suburb in decline through making use of the young creative business class:

The business and service hub model created competitive advantages not only for the businesses located in the hub, but also contributed to the revival of the surrounding suburb. Moritzplatz is located at the former border between East and West Berlin and thus in the past was a neglected and less developed area. This has changed tremendously in recent years. The area is now seen as one of the main vibrant start-up locations in Berlin, with a special focus on the creative industry. The Planet Modulator building also integrates a creativity academy, a cultural centre, the betahaus (see profile) as well as successful young start-ups like the internet-selling platform ETSY just next door. On the opposite side of the street there is an alternative urban gardening field which is used by other businesses. Art galleries have come up in the surrounding streets. Overall, Planet Modulator is one of the businesses that has contributed to the new influx of customers as well as additional creative industry investments in its own premises and in the surrounding area. With a more systemic understanding, Planet Modulator can thus also be interpreted as an innovative although indirect way to create new start-up opportunities and a creative culture.



ABAN: Accelerate Business Angels Nordhessen

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General information

Accelerate Business Angels Nordhessen (ABAN) was founded in 2010 by a group of Business Angels and Entrepreneurs. The Regionalmanagement Nordhessen GmbH is supporting the network on the organisational level. This company was set up as a public-private partnership in 2002 with the aim of strengthening and promoting the regional advantages.

The Business Angels are mainly interested in investing in innovative products and services in IT/Software, Cleantech, Mobility and medicine or health technology. ABAN gets around 200 applications (one pagers) per year. The most interesting applicants can present their business concept at the A.B.A.N. Lounge which is organized every quarter. The members of ABAN realize around two investments per year. All Business Angels who take part in the A.B.A.N. Lounge pay a membership fee of 1,000 EUR per year.

There are no fees for companies seeking capital. All information about companies that are seeking capital, their business plan etc. is treated confidentially and not passed on or made accessible to third parties.

The network uses business plan competitions to identify promising business models, especially in cooperation with Businessplanwettbewerb Promotion Nordhessen. Additionally, the characteristics and competences of the founder team are of significant importance for the investment decision.

Not everybody can become member of ABAN. New members are only accepted based on recommendations by existing members. ABAN together with Regionalmanagement Nordhessen GmbH can provide access to a network of more than 130 professional coaches and consultants who are willing to support start-ups. Furthermore, ABAN runs a small Alumni network which allows knowledge transfers between start-ups and already successful entrepreneurs.

Selected success factors: Network Management and A.B.A.N Lounge

The personal networking of the network manager and the organisation of interesting activities and attractive locations for A.B.A.N Lounge are key factors for keeping the investors interested in the network.



ABAN is supported by the regional agency of economic promotion (Regionalmanagement Nordhessen GmbH). The experience and capabilities of the network manager show a high level of commitment to successfully run the network. Furthermore, the communication skills of the network manager are important for dealing with the individual needs of Business Angels as well as founders. The Regionalmanagement Nordhessen GmbH is supporting the network at an organisational level. This notably involves cluster development strategies in Health & Tourism and Renewable Energy and the development of traditionally strong sectors, e.g. Automotive, Logistics, Rail Technology, Public transport, Mobility Management and Electric Mobility. The Regionalmanagement Nordhessen GmbH is organized as a Private-Public-Partnership between municipalities and districts, regional chambers of commerce and handicrafts, universities or savings and cooperative banks. This partnership is an excellent and reliable base of support for the Business Angel Network.

The Accelerate Business Angels Nordhessen network consists of experienced and specialized entrepreneurs. The A.B.A.N Lounge is the starting point for companies actively searching for capital. It is a regular event where young and innovative firms can present their ideas through short pitches lasting ten minutes. Immediately thereafter, the company will receive the feedback of the lounge members. The opportunity to obtain prompt feedback allows the company to detect weaknesses early on, analyze them and take appropriate measures. Founded in 2010, the lounge enables businesses to look for financing alternatives and contact possibilities. The participation for capital-seeking enterprises is free of charge. Trust is a key element in managing the lounge activities. Participation of external guests is not permitted. The network possesses an atmosphere of exclusivity where members can trust each other. Using clear regulations about confidentiality obligations, the network can assure that company data are not passed on or made accessible to third parties.



Business Angels Netzwerk Saarland (BANS)

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General information

The Business Angels Network Saarland was founded in May 2000 based on an initiative of the Ministry of Economic Affairs in Saarland, the Chamber of Industry and Commerce and a Business Angel from the IT sector. Today the network is hosted and managed by the chamber.

BANS supports start-ups and young companies located in Saarland in different economic sectors. However, there is a special focus on technology-based start-ups. BANS' service portfolio includes coaching in the start-up process and providing access to financial investors. Every month BANS organizes a so-called Jour-Fixe with business angels/managers and also runs a Founder Workshop where experienced business angels consult and guide young entrepreneurs in different aspects related to the development of a business.

BANS receives around 75 application per year. In the event that a start-up is accepted, a one-pager about the business concept is presented to the business angels via the "Investment-Newsletter". Additionally, a direct matching between start-ups and business angels is organized. They typically have 5-10 investments per year. BANS is supporting the "Business-Angels-Gründerfonds", financed by the local government based on the privatization of larger companies. Start-ups can obtain a loan of up to 25,000 EUR in the first three years from this fund. The decision to provide the loan depends on the recommendation by the Business Angel Network.

A further interesting characteristic is the BANS Beteiligungs-GmbH, founded in 2011 which consists of some business angels from Business Angels Netzwerk Saarland (BANS) that started an investment fund together. The aim is to carry out joint investments in young technology-based companies in Saarland and the wider Saar-Lor-Lux region.

Every year BANS presents an annual report to its members. There is no membership fee.

The Business Angels Network Saarland is involved in the Entrepreneurship Initiative of the Federal State Saarland (SOG). The SOG seeks to remove existing obstacles and to motivate young people by encouraging autonomous and entrepreneurial thinking. The competencies combined in the SOG via its different public and private member facilitate the support activities of the angel network.



Selected success factors: Investment Fund and Matchmaking Activities

The aim of the BANS investment fund is to invest in creative and innovative business concepts during the seed and start-up phase. In its initial phase the fund started with 175,000 EUR. The BANS Beteiligungs-GmbH will normally only acquire minority shares. One shareholder of BANS Beteiligungs-GmbH acts as lead investor and provides strategic guidance to the company. Additional private capital from the lead investor and through cooperation activities with different financing partners could increase the investment volume. BANS is also supporting the "Business-Angels-Gründerfonds", financed by the local government where start-ups can get a loan of maximum 25,000 EUR. The Business Angel Gründer Fond and the BANS Beteiligungs GmbH are exceptional examples of financial services that could be provided by business angel networks.

As part of the different kinds of meetings and networking activities, every month the Business Angels Netzwerk Saarland (BANS) organizes a so-called Jour-Fixe with business angels, entrepreneurs and managers. This is a good opportunity to exchange experiences with experts in a pleasant atmosphere. The meetings are highly appreciated and well attended by participants. The focus is on the possibilities, advantages and disadvantages of the latest business ideas and the current issues faced by start-ups. The meetings are a great opportunity for entrepreneurs to learn how Business Angel concepts and paradigms have been realized. Furthermore, it is a chance to familiarize with the functioning of the network.

During the so-called founder workshops suitable start-up ideas are developed and reviewed with the help of experienced entrepreneurs. The Business Angels Netzwerk Saarland (BANS) maintains an adequate pool of experts to discuss relevant business strategies and financing opportunities. Depending on the sector and type of company, different experts can assist with advice and support. This is also the place to discuss further cooperation activities as well as concrete supporting activities.



Business Angel Netzwerk Nordbayern (BANN)

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General information

BANN was founded in 1998 based on an initiative of the Bavarian Ministry of Economic Affairs in cooperation with several private investors and sponsors. Originally a pure business angel network, Business Angel Netzwerk Nordbayern has been supported to become a universal financing platform for growth-oriented businesses. BANN is not only a group of Business Angels, it is a large network of more than 10,000 entrepreneurs, managers, investors, scientists, and consultants – all interested in promoting entrepreneurship. BANN supports start-ups and young companies located in the north of Bavaria in the IT/Software, Life Science and other technology sectors. The service portfolio of BANN includes coaching in the start-up process, providing access to financial services, training and networking. In addition, the network offers a comprehensive training program. With the aim of supporting founders, entrepreneurs and other actors with ambitions to expand their companies, the content is focused mainly on marketing and sales, business planning, management and financing. BANN also runs a business plan competition every year, which allows direct access to new business ideas. The Northern Bavarian Business Plan Competition is one of the most successful competitions of its kind in Europe.

BANN gets around 150 applications (one pagers) per year. The most interesting applications (around 60 per year) will be presented to Business Angels (75 in the network). The members of BANN realize around 10 investments per year. BANN supports start-ups for up to five years.

Interestingly, the whole network is financed by sponsors like LfA Förderbank Bayern, Siemens AG, DATEV eG, LEONI AG, Sparkassenverband Bayern, Refit AG. There is no membership fee.

In close cooperation with Finance South East (UK) and Italian Business Angel Network (IT), in 2010 the network nordbayern started the "Ready for Equity! Academy". This institution acts as an international provider of training for Business Angels, entrepreneurs and professionals working in the early stage investment market. The Network is a very active player in entrepreneurship promotion at national and international level. Furthermore, in 2005 the network established the first Business Plan Competition in Lithuania. In the same year, on behalf of the German International Development Cooperation (GIZ), the network entered into co-operation with the National Chamber of Commerce & Industry of Mongolia to build up a national entrepreneurship network.



Selected success factors: Business Plan Competition and Supporter Network

BANN is a Business Angel network running an own business plan competition, which allows to obtain direct access to the best business ideas in the region. Since 1998, the annual Northern Bavarian Business Plan Competition has been one of the most successful competitions in Europe. Business foundation, strategic planning, financing and growth are some of the key elements within the competition framework. It targets new entrepreneurs as well as established firms. The competition is organized in three phases. Hence, the entry conditions have become progressively more rigorous. The Business Plan Competition offers a broad range of support in writing a suitable business plan, which is then evaluated at each phase by a competent jury of experts (entrepreneurs, bankers, venture capitalists, consultants, etc.). The following figures impressively demonstrate its appeal. Almost 2,150 teams participated in the first fifteen years of the Northern Bavarian Business Plan Competition. More than 600 which participated in the competition are still active in the market. By 2013, combined sales of these firms had reached almost 479 million EUR. The number of employees was around 5,350 people. 63 firms have already been taken over by larger enterprises. Moreover, almost 182 million EUR of venture and business angel capital has been invested in 145 single deals which were initiated and supported by netzwerk nordbayern. The benefits for the participants involved in the programme includes intensive training program and individual coaching activities. Furthermore, participants can use the opportunities offered by the platform, for example, the regular events and networking activities.

Most of the important actors (universities, research institutes, economic promotion agencies, chambers, big enterprises etc.) in the regional innovation system in North Bavaria are cooperating very closely with BANN. Furthermore, BANN is cooperating closely within the nationwide Business Angel Network BAND and the European counterpart EAN. In addition, the network is very actively involved in international activities to promote innovative and sustainable entrepreneurship. Because of the large network of supporters, it is able to finance all network activities. Based on the key principle “No equity, no fee” all services are free of charge. The network is financed by public-private partnerships, and is an excellent example of regional economic development. Netzwirk nordbayern is supported by the Bavarian Ministry of Economic Affairs, Infrastructure, Transport and Technology as well as a number of private businesses. The network acts as an independent and neutral agent, charging no commission or other remuneration, e.g. shares. Currently, approximately 150 Business Angels, venture capitalist organizations and public investors are listed.



Angelsbootcamp

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General information

Angelsbootcamp is a 2-day learning and exchange event for potential and experienced early stage company investors and business angels. It is an instrument of the accelerator program startupbootcamp designed to increase the number and the outreach of potential business angels who have not yet started to invest in young start-ups due to a lack of information.

According to Mike Doherty, the manager of Angelsbootcamp in Berlin, there is a huge number of people who invest their capital in the stock exchange or in real estate but have never considered investing in start-ups or feel insecure doing so due to a lack of knowledge about this market and its requirements. As he explains, "For many potential investors investing in companies seems to be too complicated and too risky. We have observed that there is a wrong perception and an insecurity on the part of young investors based on the lack of insights about how the business angel model works. Our bootcamp aims to overcome this insecurity and to increase the number of business angels".

According to the founders of the Angelsbootcamp in Berlin, there is a potential to increase the number of business angels up to 300,000 if traditional investors find out more about this kind of investment. At present only 10% of this potential is capitalized.

The Angelsbootcamp started in Berlin last year and provides a 2-day program with a special focus on new potential business angels. The first day is exclusively for new potential investors and is organised in a very interactive way. It involves learning how to approach the first steps and analyses the main success criteria for becoming an early stage start-up investor. This includes learning about deal sourcing, portfolio management and term sheet negotiations with potential start-ups. On the second day, experienced business angels join the group of participants, and exchange learnings about success and failures. This second day also includes the provision of information about legal and tax aspects when making contracts with a start-up as well as information about how to make use of running grant and investment programs for business angel support (like e.g. the European Investment Fund). Finally, the bootcamp ends with a real start-up pitch as a learning event in which start-ups present their business and business angels learn how to ask the right questions to get a deeper insight into their potential investment target.



The Angelsbootcamp has been held twice in Berlin (in 2013 and 2014) with around 25 to 30 participants. The next bootcamps for 2014 are planned in London, Bucharest and Dublin. The strategy for increasing the number of Angelsbootcamps worldwide is to start with the cities in which startupbootcamp is already present and make use of the existing network links to venture capitalists and other mentors. The further target is to expand the Angelsbootcamp events to additional cities and countries through close cooperation with local partners like venture capitalists, business angel networks and support organisations like incubators etc. At present, participation in the Angelsbootcamp costs 1,000 Euros. Experienced business angels can again participate in the 2nd day of the bootcamp after having paid once.

Selected success factors: approaching new channels for the identification of business angels, supporting a specific target group, promoting the professionalization of business angels

The Angelsbootcamp is only in its 2nd year and it is difficult to judge its success yet. Nonetheless, there are specific aspects of the Angelsbootcamp which makes it an interesting case: the way in which the bootcamp identifies a new clientele, its strong concentration on potential new business angels, as well as its focus on the professionalization of business angels.

Approaching new channels for the identification of new business angels: The Angelsbootcamp is approaching business angel networks (see examples on this chapter) to increase the visibility of the bootcamp as well as to gain access to potential business angels. Another strategy is to approach intermediary organisations that have not yet been involved in the finance of start-ups. These are wealth managers of private households and companies, investment consultants and bankers, law firms and stock exchange traders and consultants. This target group has rarely moved into start-up investment space but has a high degree of interest in identifying investment opportunities. At the same time this groups has good contacts to other potential business angels. Linking them to the business angel market provides a great chance to increase their number and impact.

Focus on the promotion of new business angels: The Angelsbootcamp very much focuses on the promotion of new business angels who are interested in becoming early start-up stage investors. It provides the opportunity for startupbootcamp to work on both ends: the promotion of young potential start-ups on the one hand, and the increase of business angels for start-ups on the other. At the same time, the Angelsbootcamp enriches the network of contacts and potential clients.



The professionalization of business angels: The management of the Angelsbootcamp is focusing on the professionalization of business angels. Although many business angel networks also provide certain capacity building events, the bootcamp focuses less on the organisation of social events and more on the provision of key insights related to becoming a business angel. For this purpose they have developed an interactive and 'learning by doing' methodology that also involves an open exchange on tips and failures in the management of company investments (like e.g. crossinvesting into different young start-ups etc). This professional focus with the integration of experienced and professional speakers provides a creative atmosphere that is highly focused and at the same time learning and market-oriented.



TechnologieGründerfonds Sachsen (TGFS)

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General information

The Technology Founders Fund Saxony is an initiative of the federal state of Saxony and is co-financed by the European Regional Development Fund (EFRE), the Savings Bank of Leipzig, Chemnitz, Dresden and the CFH Beteiligungsgesellschaft mbH. The fund's capital is around 60 million EUR. 45 million EUR is generated within EFRE and 15 million EUR comes from the four publicly owned credit institutions. Since its foundation in 2008, TGFS has supported 30 companies in many different industries. The provision of venture capital by TGFS is aimed at speeding up the procedures for economic exploitation of innovative ideas and technologies from universities and research institutes etc. in the federal state of Saxony. The fund is intended for knowledge-based and technology-oriented start-ups with growth potential. The Fund should support start-ups in the high tech segments with the aim of achieving a return (in line with market expectations). Within the structure of TGFS, the investment companies of Sparkasse Leipzig, Chemnitz and Dresden are responsible for the management of the fund. The CFH GmbH (LBBW) acts as an investment centre.

The fund is divided into two units: the TGFS Seed to finance companies' foundation and technologies, and the TGFS Start up for early stage funding. For a limited period of time the portfolio companies receive equity capital from the TGFS. The available funding is used in addition to other potential resources.

The conditions to access TGFS Seed is a maximum company age of one year (TGFS Start up: 5 years). The prerequisites for investments are the presentation of a business plan with a detailed description of product planning, sales, profitability, the future viability of the project, and the probability of an exit event.

To support the companies, the fund enters into an active partnership with up to 49% of the shares of the beneficiary for a period of 3-6 years. The amount of investment is between 200,000 EUR and 4 million EUR per enterprise. The equity participation ends with an exit event.

Selected success factors: Public Private Partnership and Strong Networking

The TGFS is an example of a regional venture capital fund at federal state level, which was set up in close cooperation between the local financial sector and public institutions. The participating finance institutions are based in three central economic regions of the federal state of Saxony. Thus, proximity to entrepreneurs and start-up companies is close. Due to the involvement of the local saving banks, there is a bridge to later-stage financing in the form of VC or bank loans.



The financial power of the fund is an important prerequisite for success in the Saxonian start-up market. Here the federal state of Saxony plays an important role in acquiring the necessary funds from the European Regional Development Fund. Additionally, the investment by the TGFS leads to co-investment by other players resulting in a strong capital base of the supported start-ups.

TGFS has to act market-oriented, focusing on a constant business development. Ultimately, it has to cover its operational costs and generate an acceptable Return on Investment for its investors through successful sales of their shares in the technology-based start-ups. Therefore, the TGFS is very active in searching for new strategic investors (e.g. larger companies) in order to sell their shares and to support the start-ups in financing the expansion phase.

As part of the support for promising start-up ideas the TGFS cooperates closely with different start-up initiatives of the federal state of Saxony (SMILE, Dresden exists, SAXEED, Gründerakademie) and Saxony's futureSAX- Idea competition. Joint activities (regular meetings, events or presentations of start-up teams) are carried out to allow an early idea screening and to facilitate exchanges of experiences and know-how. TGFS managers are invited to take part in pitching activities of start-ups organised by the different university-based entrepreneurship promotion initiatives. This allows them to come into very early contact with promising start-up projects.



High-Tech Gründerfonds (HTGF)

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General information

The High-Tech Gründerfonds (HTGF) was founded in 2005 in a public-private partnership between BMWi, KfW Bank Group and German industrial companies. Endowed with an initial capital of 272 million EUR in the first fund, HTGF is one of the largest individual venture capital funds in Germany.

The business model responds to the private venture capital industry's demands in order to achieve a sustainable increase in the value of private equity investments and sell them at profit. With the second fund of HTGF, the volume increased to 304 million EUR (total of 574 Mio EUR). In addition to KfW Bank Group and BMWi, the investors of Gründerfonds II are: ALTANA, BASF, B. Braun, Bayer, Robert Bosch, CEWE, Daimler, Deutsche Post DHL, Deutsche Telekom, Evonik, media + more venture, METRO, Qiagen, RWE Innogy, Tengelmann, Carl Zeiss and SAP. Up to July 2014, the number of investments in companies was 360. The fund is focused on investing in German small companies (younger than 1 year) with a high level of innovation. The company must be based upon a technological innovation – significant and close to proof of concept with in-depth technological knowledge and expertise. The aim is to overcome the gap in early-stage enterprise finance and to enable the firm to obtain later stage risk capital. Compared to other private venture capital companies, it is possible to take higher risks and to accept niche market players.

With the standard investment model, the fund acquires a 15% nominal share of the company. Further funding will take place based on a long-term subordinated convertible loan. Interest on the subordinated loan will be deferred for 4 years to preserve the company's liquidity. Due to these arrangements, in the seed phase of the company, the majority of shares remain the property of the founders. The HTGF is the central player in the field of financing technology-based start-ups in Germany and is considered as the most important seed investor in this market segment. Furthermore, the fund also cooperates with other European instruments of seed financing and has a strong network to the European VC world.

Selected success factors: Large network and system for investment decisions

HTGF offers important added value for their portfolio companies. In addition to the immense internal know how due to the large number of transactions across all industries and investment stages, HTGF has built up a large network within industries, VCs and private investors. The involvement of large strategic investors supported HTGF's positioning as a market-oriented financing partner. The existing knowledge of the industrial companies



involved in seed and risk capital funding defines the design of HTGF. They are members of the investment committees and contribute their commercial experience and expertise to the decision-making process. Benefits for the industry investors are access to new technological developments and innovative business ideas. This opens up interesting opportunities for industrial partners to acquire a stake in start-ups as well as the potential for other forms of alliance, such as joint development projects, technology transfer or client/supplier relationships.

Venture funds like HTGF invest in technology-based start-up companies with significant growth potential. They use a system of criteria for their investment decision:

- Technological orientation:
 - Technological innovation – significant and close to proof of concept
 - In-depth technological knowledge and expertise
 - Intellectual Property is protected or protectable, exclusively and unreservedly available, and incorporated into the company (different for ecommerce/ICT)
- Market perspective:
 - Recognizable customer benefits and distinctive, unique selling features and strategic competitive advantages
 - Target market is large and/or has high growth potential
 - Financing will enable the company to achieve key milestones en route to commercialization
- Team characteristics:
 - Know-how, complementary skills, and relevant business experience
 - High degree of motivation, persistence, commitment and the will to succeed
 - Appropriate financial involvement in the company



Seedmatch

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General information

Seedmatch is an online platform and offers crowdinvesting opportunities for business start-ups. Every investor (private individuals or companies) can invest even small amounts of money in an individual project. The aim is to realize innovative ideas and business start-up projects through the intervention of a large number of so-called “mini business angels”.

Seedmatch was launched in 2011 and, with a market share of 49% based on invested capital, is the largest player in the German market. This platform has already realized more than 59 projects with a total investment of around 12.5 million EUR which was provided by more than 4,700 investors. In the second quarter of 2013, Seedmatch generated the first 1 million EUR financing round. The form of investment used on Seedmatch is a shareholder loan (subordinated) known in Germany as a “partiarisches Nachrangsdarlehen”. Investors can acquire a stake in a company starting at 250 EUR. Usually, the investors have a maximum of 60 days to place their investments. However, this period may be extended once by a maximum of 60 days. If the funding does not go through, all the investors get their money back. The investments are managed through an escrow account.

Seedmatch is concentrating on B2C businesses with a good customer value, clear unique selling points, and an attractive investment story. The aim is to secure public interest and support. The precondition for start-up’s accession to the platform is to have a real product or service, in order to be presented to the potential investors. The start-up has to be still in the seed phase of its development. In the case of successful crowdinvesting, the platform charges a fee of 5-10% of the total investment sum. The investments have a minimum term of five years.

Selected success factors: Large Investor Community and Transparent Information Service

Seedmatch has more than 24,000 registered and interested investors and the community is continuously growing. This large investor community is Seedmatch’s main asset. On the one hand, this increases the probability of the start-ups obtaining the necessary start-up capital in the actual financing round and, on the other hand, it creates linkages to potential investors that would be willing to provide the start-ups with fresh capital in the future. Furthermore, this investor community is an important marketing channel, which creates awareness about the start-up’s products and services.



Seedmatch supports the start-ups, within its capabilities, in their efforts to attract more investors. In addition to private individuals and companies, the target groups include the established venture capital sector. The aim is to open up spaces to obtain follow-up financing. In order to achieve this, the start-up companies can use their own investor relations area on the Website as a one-to-many-channel in order to inform investors in the future and to communicate with them. Seedmatch has also established close cooperation with "CODE_n", a platform that enables open innovation at the intersection of established companies and international start-ups. It gives corporations access to the ideas and innovations of outstanding talents. Another important partner of Seedmatch is "green Alley", a launching pad for start-ups, innovators, and entrepreneurs within the green economy.

For private investors it is very important to obtain detailed and reliable information about start-ups in a transparent way. Therefore, via its online platform, Seedmatch provides all the necessary information about the investment process and potential profits that could be generated. The online platform is well-structured and highly informative.

- The registration and use of the platform is free of charge.
- The open public space promotes and facilitates the exchange of recommendations, criticism, and feedback between the investors and the young companies
- Registered investors can get access to detailed business plans of all the start-ups presented
- The platform supports start-ups via social media channels and by means of PR work
- Information about the success or failure of start-ups in the market after receiving the investment is provided

Apart from the platform, Seedmatch provides the investors quarterly and annual reports.



7.3. Interest from interviewees in cooperating with India in the promotion of start-ups

During the 25 interviews that were held for this study many stakeholders demonstrated a high level of interest in the Indian market and in institutional exchange. The following bullet points summarize some of the concrete contact interests:

- **Co-working spaces** like Betahaus in Berlin are interested in expanding their model to other countries. They are currently planning to open up a co-working space in Tokyo and also expressed interest in New Delhi and Mumbai among other locations.
- **Private incubators** like the accelerator programs from Axel Springer Plug and Play as well as startupbootcamp (see profiles) expressed their interest in identifying partners in India as well as start-ups from India.
- **Technology centres** like the one in Dortmund (see profile TZDO Dortmund) expressed an interest in sharing their experience in setting-up decentralised and embedded centres for the promotion of knowledge-intensive start-ups and the set-up of technology parks based on a sustainable and process-oriented financial strategy.
- **Business angel associations like BAND** are interested in sharing their experience in the promotion of public-private business angel networks.
- **Accelerator programs** in Germany are interested in identifying highly innovative start-ups and business ideas in India to copy certain business models and get involved in the Indian market

In general most of the stakeholders interviewed would be interested in better understanding the demand and level of development of the Indian start-up eco system. India is seen as an attractive market for sharing experience with and for identifying common business and learning opportunities.

7.4. Possible next steps to initiate learning opportunities

Some preliminary ideas for further steps are addressed in the following bullet points and can be further elaborated with the Indian partners:

- Organisation of rather generic general study tours with Indian stakeholders active in start-up promotion in Germany to get an overview of the German start-up eco-system



- More specific study tours related to specific fields (e.g. co-working spaces, technology and start-up incubators, private incubator models, business angel networks etc.)
- Match-making events and contact sharing of experts in Germany and India in regard to concrete business opportunities related to e.g. setting up private incubator models or co-working spaces.
- The introduction of the following profile chapter provides further suggestions about cases that might be valuable for the Indian reality specifically. Indeed it takes into consideration the fact that there are no examples that just simply be transferred as a blueprint but rather as useful models to be taken into account.

8

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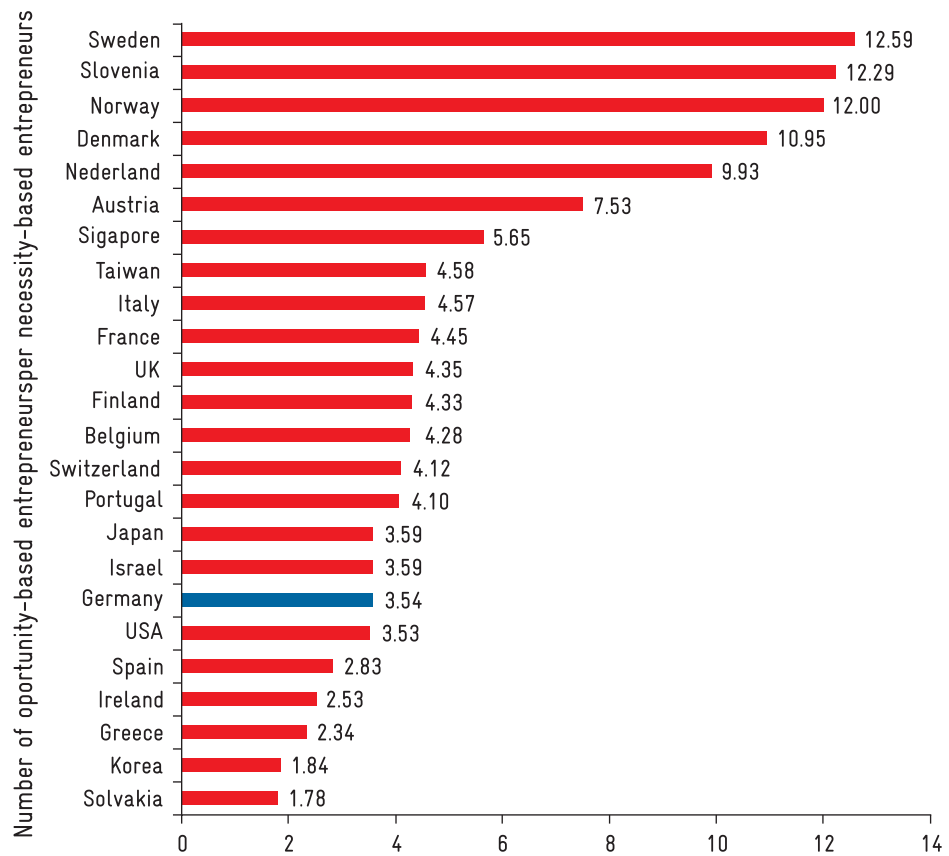
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Appendix

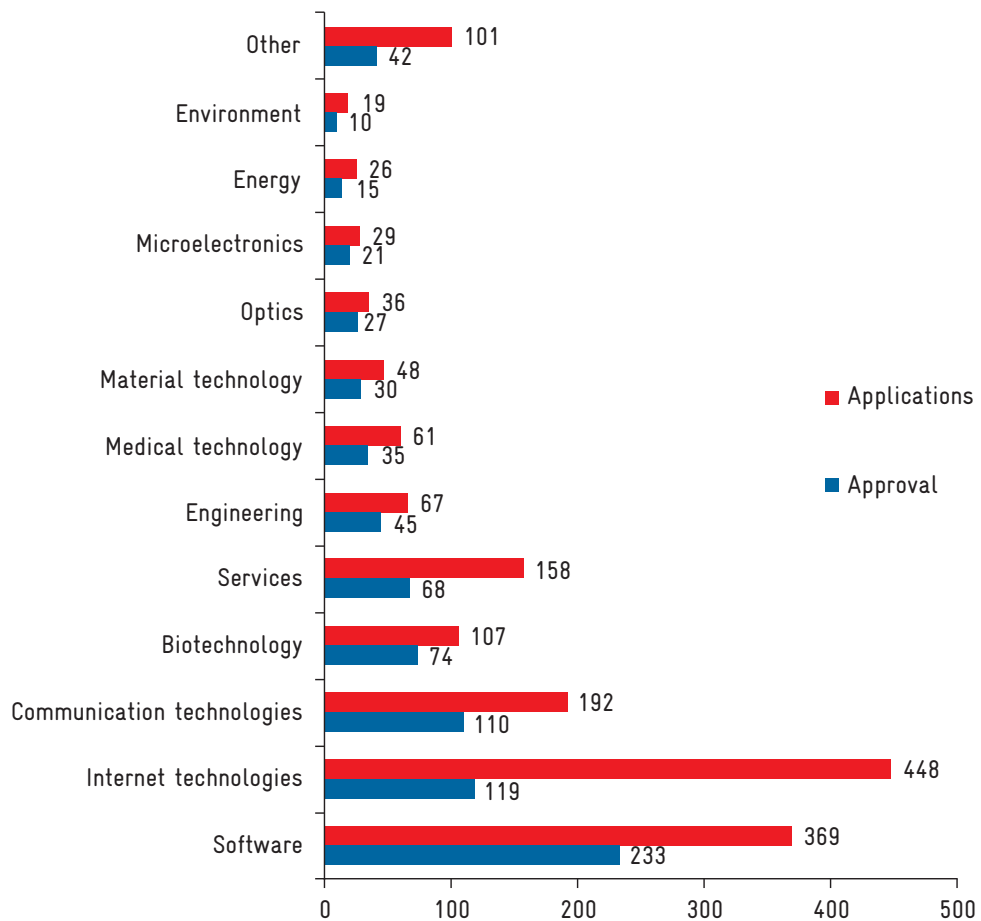
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Source: Sternberg et al. (2013).



EXIST Business Start-Up Grant technology sectors, applications and approval (Status: january 2013)



Source: Kulicke 2013a.



Table 7: Founding and expanding at KfW Bankengruppe

| ERP Start-up Loan-StartGeld | |
|---------------------------------------|---|
| For whom? | For business founders, self-employed professionals and small enterprises wvchich have been active in the market for less than three years and require little start-up capital |
| For what? | <ul style="list-style-type: none"> • For the establishment or takeover of an enterprise, for the acquisition of an interest in an enterprise, this can also be a part-time business if the plan is to achieve full-time self-employment later. • For the consolidation of a young enterprise in the first three years • Specifically: for capital expenditure and working capital |
| What promotional funds are available? | <ul style="list-style-type: none"> • Loan with a term of 5 or 10 years. Up to EUR 100,000 in total for capital expenditure and working capital, the share of working capital is limited to EUR 30,000. |
| What makes this KfW loan so special? | <ul style="list-style-type: none"> • Your bank bears only 20 % of the credit risk, KfW bears 80 %. This makes it easier for the bank to decide on the loan; provided, of course, the business idea holds the prospect of sustainable economic success. • The loan interest rate is more favourable than for a conventional bank loan; it is fixed for the entire term of up to 10 years. • On request, two repayment-free years may be granted; that means you only pay interest and start repaying later. It is recommend in cases in which the business cannot be expected to generate profits from the very start |
| Loan application | <ul style="list-style-type: none"> • With your bank |

| ERP Start-up Loan - Universal | |
|-------------------------------|--|
| For whom? | For business founders, self-employed professionals and small and medium-sized enterprises (SMEs) which have been active in the market for less than three years and have funding requirements of up to EUR 10 million. |
| For what? | <ul style="list-style-type: none"> • For the establishment or takeover of an enterprise, for the acquisition of an interest in an enterprise, this can also be a part-time business if the plan is to achieve full-time self-employment later. • For the consolidation of a young enterprise in the first three years • Specifically: for capital expenditure and working capital |



| | |
|---------------------------------------|--|
| What promotional funds are available? | <ul style="list-style-type: none"> • Loan with a term of up to 20 years, up to EUR 10 million for capital expenditure and working capital. |
| What makes this KfW loan so special? | <ul style="list-style-type: none"> • The loan interest rate is more favourable than for a conventional bank loan; it is fixed for up to 10 years, or even for the entire term. • On request, 1 to 3 repayment-free years may be granted; that means you only pay interest and start repaying later. We recommend this in cases in which the business cannot be expected to generate profits from the very start. |
| Loan application | <ul style="list-style-type: none"> • With your bank |

ERP Capital for Start-ups

| For whom? | For business founders, self-employed professionals and small enterprises which have been active in the market for less than three years and do not have enough equity. | | | | | | | | | | | | | | | |
|---------------------------------------|--|-----------------|----------------------------|-----------------|----------------------------|-----|-----|--------|-----|-----|------------------|-----|-----|----------------|------|------|
| For what? | <ul style="list-style-type: none"> • For the establishment or takeover of an enterprise, for the acquisition of an active partnership • For the consolidation of a young enterprise in the first three years specifically: for capital expenditure and working capital as well as costs of market introduction | | | | | | | | | | | | | | | |
| What promotional funds are available? | <p>KfW subordinated loan with a term of 15 years and a maximum loan sum of EUR 500,000. However, the borrower must have a minimum amount of equity. Investments in eastern Germany and Berlin receive special support.</p> <table border="1"> <thead> <tr> <th></th> <th>Eastern Germany and Berlin</th> <th>Western Germany</th> </tr> </thead> <tbody> <tr> <td>Subordinated loan from KfW</td> <td>40%</td> <td>30%</td> </tr> <tr> <td>Equity</td> <td>10%</td> <td>15%</td> </tr> <tr> <td>Borrowed capital</td> <td>50%</td> <td>55%</td> </tr> <tr> <td>Investment sum</td> <td>100%</td> <td>100%</td> </tr> </tbody> </table> | | Eastern Germany and Berlin | Western Germany | Subordinated loan from KfW | 40% | 30% | Equity | 10% | 15% | Borrowed capital | 50% | 55% | Investment sum | 100% | 100% |
| | Eastern Germany and Berlin | Western Germany | | | | | | | | | | | | | | |
| Subordinated loan from KfW | 40% | 30% | | | | | | | | | | | | | | |
| Equity | 10% | 15% | | | | | | | | | | | | | | |
| Borrowed capital | 50% | 55% | | | | | | | | | | | | | | |
| Investment sum | 100% | 100% | | | | | | | | | | | | | | |



| | |
|--------------------------------------|---|
| What makes this KfW loan so special? | <ul style="list-style-type: none">• The subordinated loan strengthens the equity base and paves the way for debt capital, which is also needed for the financing of start-up or equity base investments.• The full amount of the subordinated loan is available in full for seven years before repayment begins.• The interest rate is subsidised for the first ten years, of which the first three years are heavily subsidised.• No collateral is required for the subordinated loan. In case of liability the claims of KfW Bankengruppe rank junior to those of other creditors (subordinated liability) |
| Loan application | <ul style="list-style-type: none">• With your bank |

Source: KfW [2014].

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