

Freie Universität



Berlin

**PROFUND
INNOVATION**

Freie Universität Berlin

Networked Entrepreneurship

Results of Research on Networked Entrepreneurship for Practitioners

START-UP

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PREFACE

The way we will live tomorrow depends significantly on what we explore today. At the Freie Universität Berlin and the Charité (the joint Medical School of the Freie Universität and the Humboldt-Universität zu Berlin) new ideas are developed on a daily basis. Both institutions help students, researchers and alumni to turn such ideas into entrepreneurial reality. Since 2009 the Freie Universität Berlin and the Charité have been collaborating closely in promoting and supporting a start-up friendly university environment. In particular, the project “Entrepreneurial Network University (ENU)”, supported by the EXIST IV-program of the German Federal Ministry of Economic Affairs and Energy, highlights and augments the quality of this cooperation. The support of start-ups by the Freie Universität focuses on innovative ideas in the realm of information and communication technology as well as in the media and creative industries. Due to the cooperation with the Charité, a further emphasis is placed on the health sector.

The main goal of ENU is to establish a university-wide start-up culture, as well as to promote the commercialization of innovative ideas: researchers are encouraged to put the results of their research into practice, while students of all schools and departments of the university are encouraged to see entrepreneurship as a valuable alternative to employment. The start-up support “profund” and the technology transfer center of the Charité guide the founders from the very beginning until they successfully enter their respective market. This start-up support includes events and competitions for young entrepreneurs, the integration of entrepreneurial aspects into the curriculum of various schools and departments, and connecting prospective entrepreneurs with professionals, advisors and investors. Up until now, the start-up support profund of the Freie Universität has helped to found well over 100 companies by providing financial means, professional advice and office spaces.

The following insights into the entrepreneurial process are based on our entrepreneurship research, especially on start-up companies that were founded with the support of PROFUND INNOVATION. This brochure is intended to serve prospective entrepreneurs as a guide on how to improve performance by using and improving the network structure they have developed in the start-up process.

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RESEARCH ON THE GROWING SIGNIFICANCE OF NETWORKED ENTREPRENEURSHIP

Entrepreneurial successes like those of Microsoft, Google, Facebook or Pay Pal are oftentimes not only possible because entrepreneurs work hard on their own, but also because a network of partners plays a key role in being successful: not only suppliers and customers but also universities, venture capitalists and business angels can turn out to be highly valuable. In many cases these partners are not only drivers of innovation but are also essential investors, advisors and multipliers – and are thus indispensable for a company’s sustainable economic growth. In the context of our research these aspects are captured with the help of various research approaches:

Benchmarking “Entrepreneurship and Cooperation”

Based on a broad survey and statistical analysis, the cooperation behaviors of different start-ups are compared in their respective industry or sector.

Towards a Typology of Networked Entrepreneurship

What new forms of networked entrepreneurship are emerging? This question is treated by our qualitative research part, which sheds light on the various cooperation possibilities in the process of founding and growing a company.

Inter-University Survey

Led by the Technische Universität Berlin, founding activities in various universities in Berlin and Brandenburg are recorded systematically. For the first time, this was done in 2014 with the help of a survey concerning the start-ups founded at the Freie Universität Berlin as well as at the Charité participated in the survey.

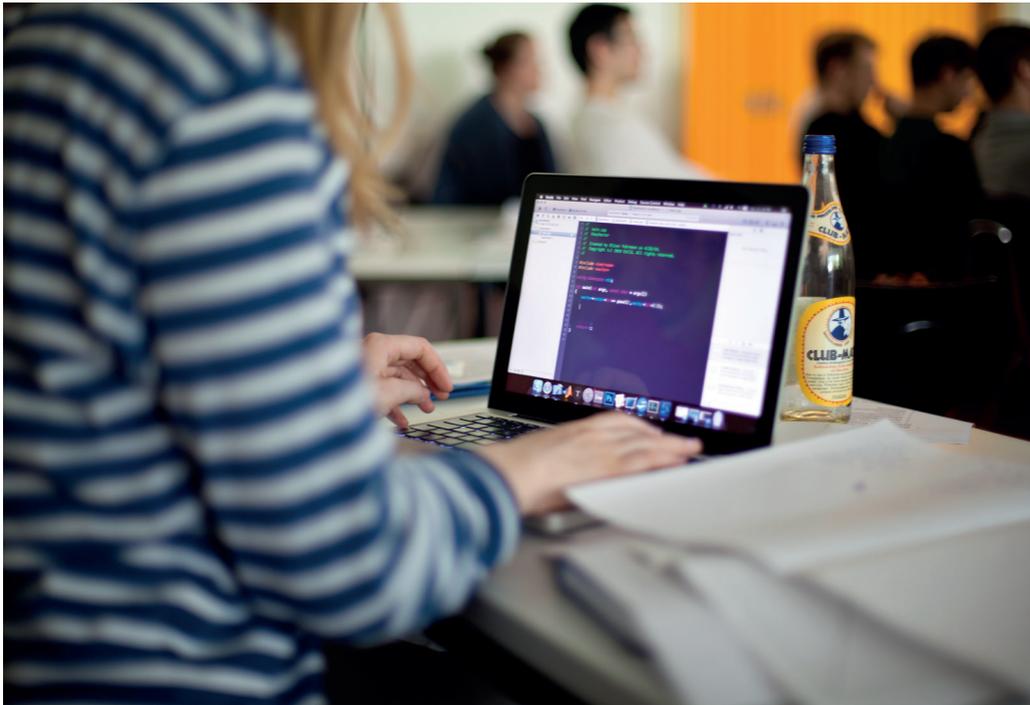
BENCHMARKING “ENTREPRENEURSHIP AND COOPERATION”

Based on its research, the Department of Management at the Freie Universität Berlin supports helps founders to identify network-oriented strategies and other innovation-promoting factors. In the project “Entrepreneurship & Cooperation”, start-ups, particularly the ones in the German metropolitan regions of Berlin, Munich and Hamburg, have been surveyed since 2013 with regard to their cooperation strategies in the founding and early growth process. This survey was also conducted in Portugal (with an emphasis on the Lisbon metropolitan area) in order to make transnational analyzes. The results shed light on which strategies are particularly successful/ promising in which groups of industry (trade, IT/ software, Internet platforms, technology-intensive industry, services).

Methodology

The survey methodology on which the benchmarking project is based was developed as part of a cooperation between the ISCTE in Lisbon and the Freie Universität Berlin. With support from both universities, start-up companies in Germany and Portugal were offered the opportunity to participate in the study. The questionnaires in Germany and Portugal were the same. The companies that indicated their willingness to participate in the study received four questionnaires. The surveys were to be completed by the CEO and up to three employees of the respective company. The questionnaire collected individual characteristics of each respondent and organizational characteristics of the company, in which the respondents worked. 4- and 5-point Likert scales (1 = „Strongly disagree“, 5 = „Strongly agree“) were used to measure the consent of respondents to the individual items. In addition, demographic data such as gender, age and experience were collected.

Based on the results of the empirical survey, a quantitative analysis to evaluate the data obtained was performed. Amongst others, exploratory factor analysis, correlation analysis and structural equation models were used.



Participating firms and descriptive results

A total of 230 start-up companies participated in the study in Germany (68%) in the study, and 64 companies in Portugal (32%). The response rate of the study was 56%, which is considered very high for such a study. Since usually 2-4 people from each company participated in the survey, a sample size of 469 respondents was achieved overall. Among the 469 participants, 138 people were from Portugal (29%) and 331 were from Germany (71%). The average age of the respondents was 33 years; 70% of respondents were male and 30% were female. On average, the participants had about 2.5 years of professional experience in the start-up company, in which they were currently active.

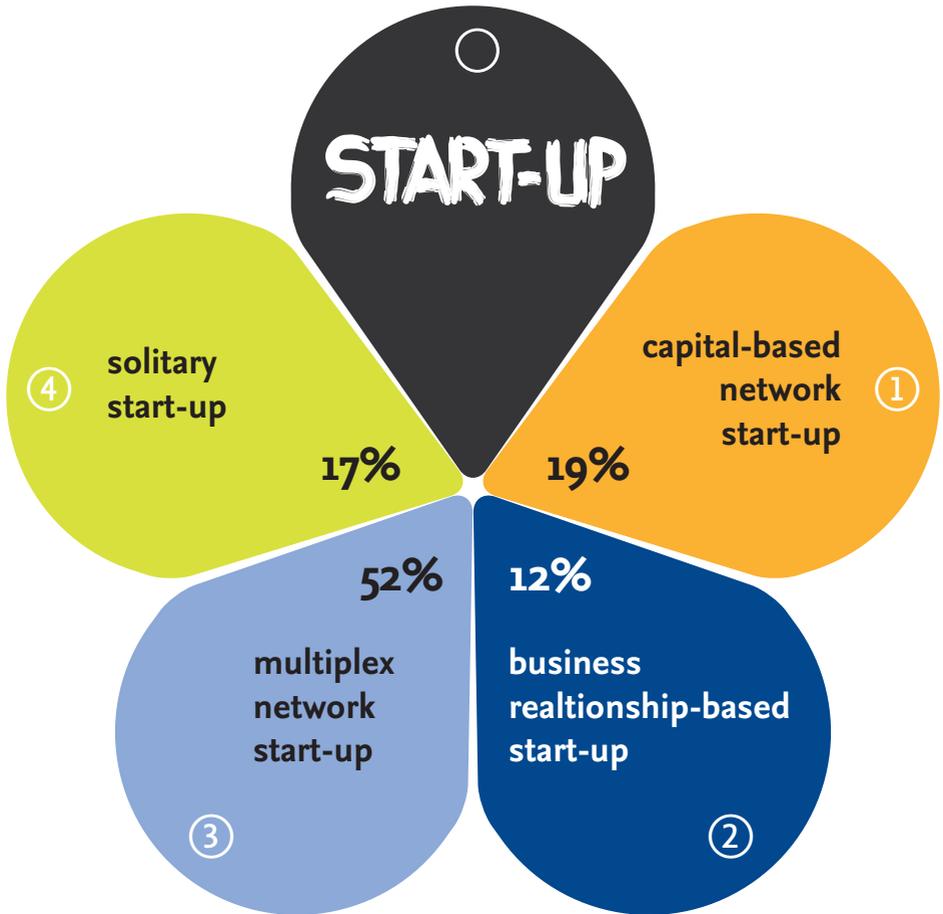
The four idealized cooperation strategies

The data collected data were analyzed statistically against the background of previous research findings in the field of entrepreneurship and the networks. Four idealized cooperation strategies were extracted from the data: (1) the equity-based network start-up, (2) the business relationship-based network start-up, (3) the multiplex network start-up, and (4) the solitary business start-up.

These four generic types differ concerning with respect to their network orientation of start-up companies in the founding process. The importance of cooperative relationships varies depending on the network strategy. Especially the relationships with suppliers, customers, competitors, investors, banks as well as non-profit organizations are especially important.

Based on this typology, the cases examined with one of these four cooperation strategies. Therefore, the significance of the financial relations and other business relations of each company examined was recorded. Overall, the share of network start-ups outweighed the share of non-network start-ups: of the companies surveyed, 83% established their enterprise in a network.

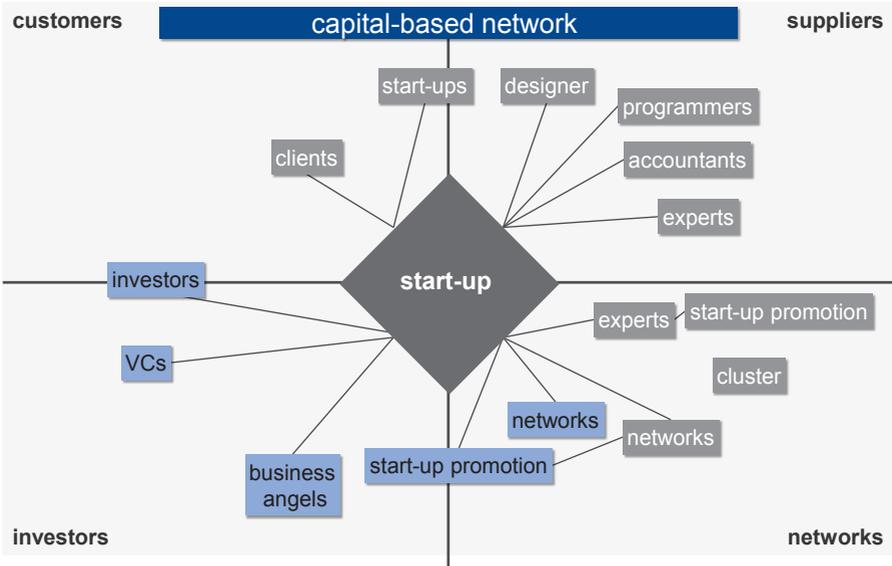
12% of these businesses focused on their relationships to suppliers and customers, 19% of the founders prioritized close relationships with investors. 52% of companies surveyed pursued a combination of building business and financial relationships and thus forced a multiplex network start-up. The remaining 17% of the companies focused on a solitary business creation. The figures show clearly that interorganizational cooperation played a crucial role in the founding process for the vast majority of the companies surveyed companies. The following figure shows – with the size of the balls circles - how large each share of the different cooperation strategies was among the companies surveyed companies. The individual network strategies are explained in the following.



Interorganisational Network Relationships play a decisive role for 83% of the investigated start-ups
n=230

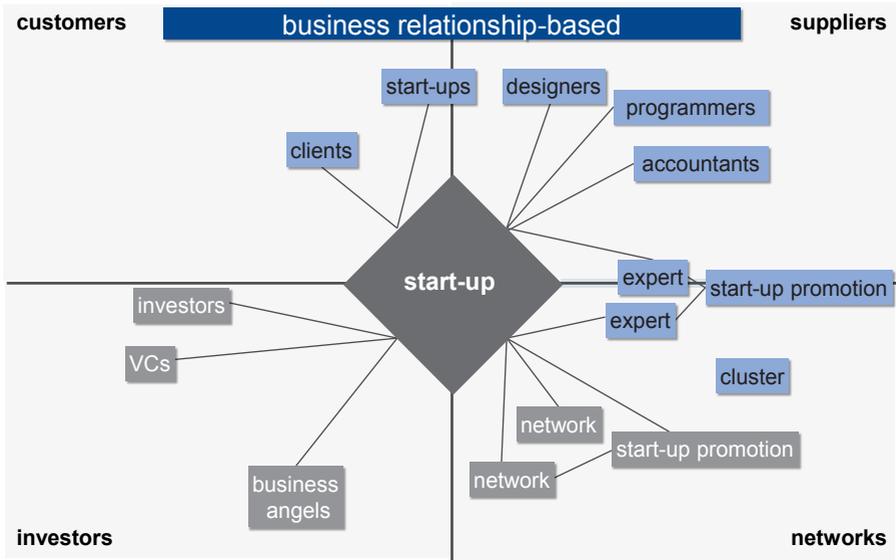
The capital-based network start-up

Innovative start-up companies often require high initial investments. In order to ensure that the necessary resources are available, early cooperation with business angels and/or venture capitalists (VCs) is often an integral part of a successful start-up building process. Therefore, financial relations play a crucial role in capital-based network start-ups during the organization-creation process.



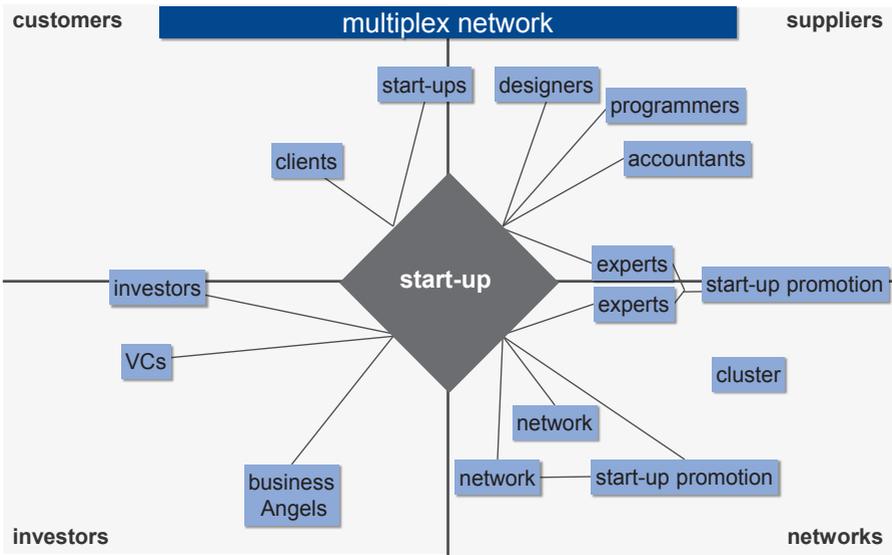
The business relationship-based network start-up

For market-newcomers it is essential to build trust to other market members in the early foundation process. Close cooperation with customers can be a decisive advantage, as they are often the first references or might act as multipliers. Furthermore, business opportunities open up a variety of possibilities to learn and to define requirements along the value chain. In the business relationship-based network start-up establishing close, trustful cooperation with various stakeholders such as suppliers, customers, as well as with other partners such as consultants, development agencies and incubators proves to be the key to a successful start-up foundation.



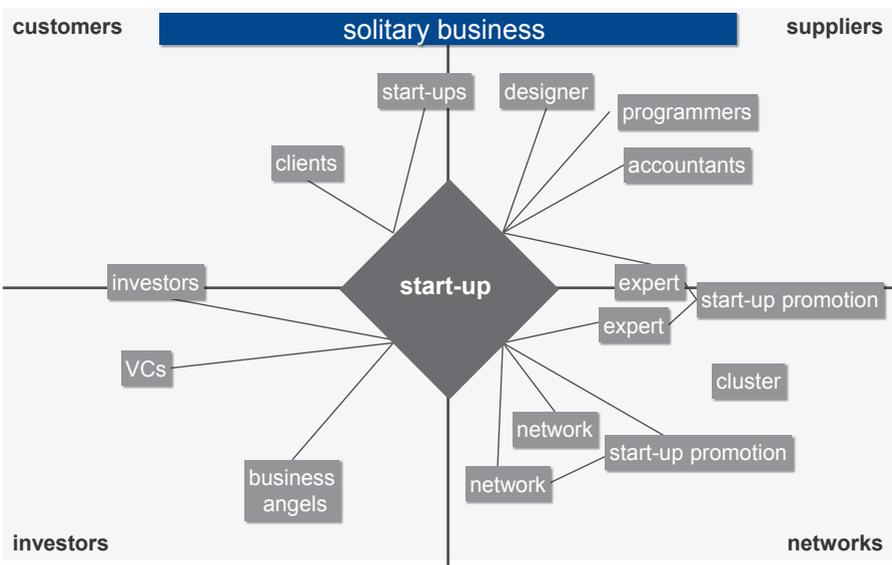
The multiplex network start-up

The type of business start-ups that has both close business relationships, for example with suppliers and customers, and strong relationships with capital providers, proves particularly effective in knowledge-based business models, which are encountered in spin-offs from universities. The multiplex network creation is characterized by the simultaneous occurrence of various relationship forms and intensities. This type encompasses relationships with investors as well as business relationships with suppliers and customers, as well as with other organizations – for example universities.



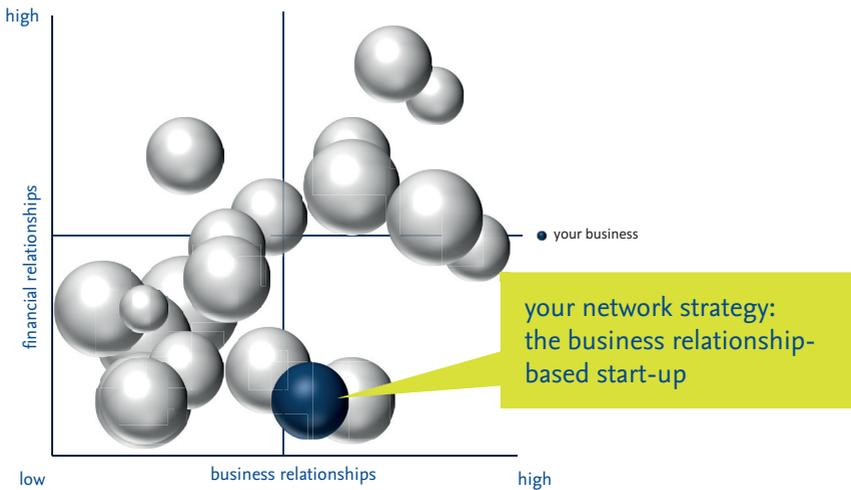
The solitary business start-up

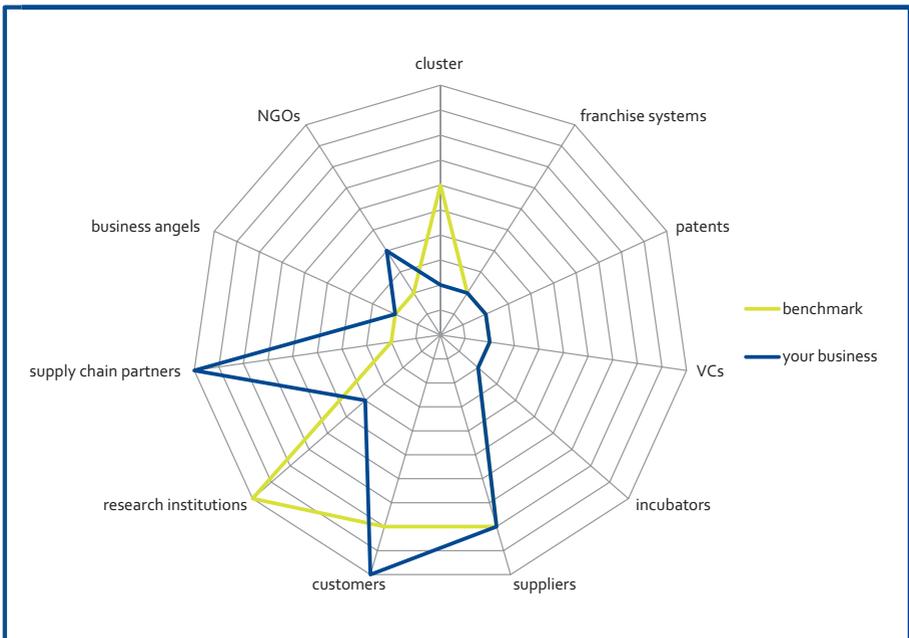
The solitary business creation describes companies without long-term cooperative relationships; thus, they form a counterpoint to networked start-ups. Solitary business start-ups are often not very resource-intensive and aspects of interorganizational learning are not at their focus either. In this category, the start-up can succeed by pursuing vertical integration, and the exchange with the environment takes place via short-term market relationships. For certain business models, the solitary business start-up may yet prove to be effective. Examples of companies that mostly start as solitary and largely without a network of relationships are start-ups in non-knowledge-based sectors. Solitary business start-ups are rather rare in the university context and therefore not the primary focus of our research.



Individualized recommendations

Each of the 230 companies that participated in the benchmarking study received an individualized evaluation of their cooperation strategy with personalized recommendations. The evaluation included the classification of their strategy using various graphics such as portfolio or cobweb evaluations. The cooperation profile was evaluated with a comparison to the benchmark company (the most successful company of a particular sector according to performance indicators such as revenue growth – see the following figures).





Please revise your relations to clusters and research institutions. These are less developed than the benchmark with similar network strategies. Also notice that your relations to customers, supply chain partners and NGOs are stronger developed than the benchmark. Strong cooperations are often profitable but can also lead to obligations and unintentional dependencies.

Analysis of your networking strategy

Contact us and let us analyze your own network strategy for free during the next round of our benchmarking-study. For more information and questions please contact Dr. Thomas Schmidt (thomas.schmidt@fu-berlin.de), available at:

www.wiwiss.fu-berlin.de/fachbereich/bwl/management/sydow/entrepreneurship.

How to participate



Send your postal address to:
[http://www.wiwiss.fu-berlin.de/fachbereich/
bwl/management/sydow/entrepreneurship/](http://www.wiwiss.fu-berlin.de/fachbereich/bwl/management/sydow/entrepreneurship/)
or
thomas.schmidt@fu-berlin.de

Get the questionnaire

Send completed questionnaire
(prepared envelope)

Receive your individual
Benchmarking Sheet (PDF) via email

INTER-UNIVERSITY SURVEY

Aside from the empirical study, which concentrated – apart from the start-ups supported by profund – on young companies all over Germany and Portugal, start-up activities from ten universities in the Berlin and Brandenburg region were recorded systematically. This was done for the first time in a cross-university survey in 2014 and will be done repeatedly. The first survey includes 840 companies. The joint initiative draws an extensive picture of the start-up culture at the universities in and around Berlin. In the survey, which was led by the Technische Universität Berlin, the following universities participated:

- Freie Universität Berlin
- Humboldt-Universität zu Berlin
- Universität der Künste Berlin
- Universität Potsdam
- Beuth Hochschule für Technik Berlin
- Fachhochschule Potsdam
- Hochschule für Technik und Wirtschaft Berlin
- Hochschule für Wirtschaft und Recht Berlin
- Technische Hochschule Wildau

The results of the cross-university survey give an overview of the structure of start-ups in the Berlin-Brandenburg region. The most important results of this survey are:

- The 721 companies that have been founded since 2013 employ about 17,000 employees (including the founders)
- One fourth of the entrepreneurs interviewed founded multiple times
- In their first year the start-up companies employ four employees on average
- During the first year the average revenue was € 130,000; together the revenue of the companies was € 1.7 billion
- 82% of the companies surveyed are already breaking even; on average, the companies were profitable from their second year onwards
- 50% of the companies were founded in the creative non-technical sector. The other half was founded in the field of information and communications technology and the technical sector

Further information on the inter-university study: www.tu-berlin.de/?152349

Link to the brochure:

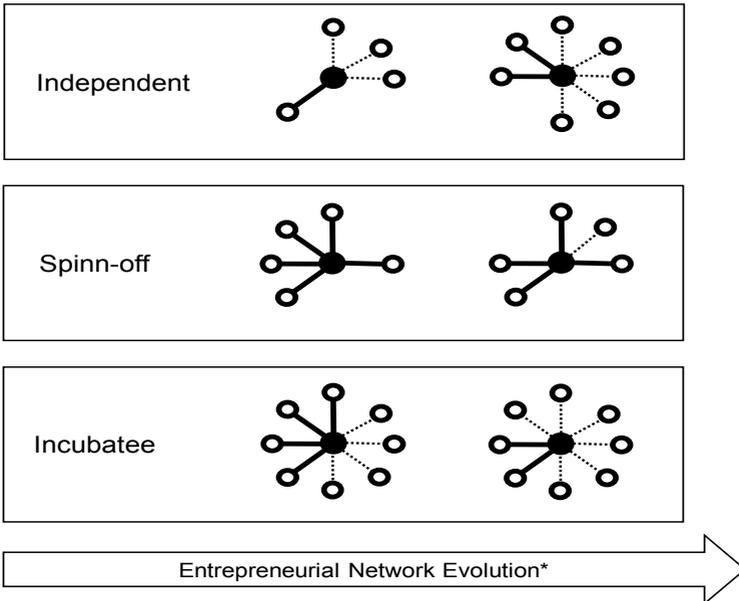
www.entrepreneurship.tu-berlin.de/fileadmin/f22_entrepreneurship/Inspiration/Umfrage/141022_Gruendungsumfrage_2014_langeVersion.pdf

USEFUL CONCEPTS FROM NETWORK RESEARCH

Strong and Weak Relationships

The concept of strong and weak links has been used to explain the creativity and innovation of interpersonal as well as interorganizational networks. Based on current knowledge, strong relations with a long and intensive history of interactions are exceptionally important for start-up companies to obtain material and financial resources. But to have new ideas and impulses, weak relations are equally relevant for the companies. So one can conclude that an intelligent combination of both types of relationship is necessary in order to have a successful start-up business.

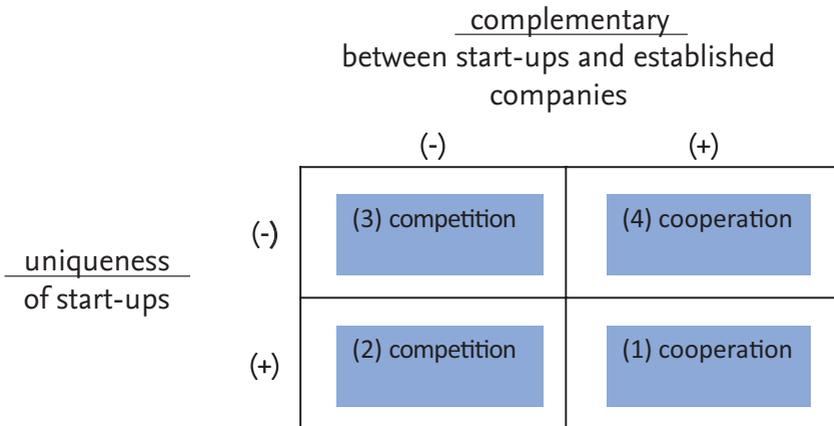
Oftentimes initial conditions play a key role in determining the mix of weak and strong network relations: it depends on whether the start-up is founded independently, as a spin-off of a large company, or from an incubator. The graphic depicts strong relationships by using bold lines and weak relationships by using a broken line.



Interorganizational Complementarity

When entrepreneurs choose and develop their cooperation strategy, they should pose two main questions: How unique and sustainable is my innovation? And in what way is it complementary to the products of established market players?

As depicted in the following graph, these two questions lead to four idealized strategies between cooperation and competition:



- (1) If you develop a unique innovation, which that cannot be copied by established companies, but which is complementary to established products, you should cooperate.
- (2) If you develop a unique innovation, which that is not complementary to established products, you should consider an innovation-driven competition.
- (3) You could also compete with established companies, if you do not have a unique innovation at your disposal. Established companies do usually have a high cost structure. You could compete with lower- priced products and aim at a new customer group.
- (4) If the complementary relation is intensive, you could also pursue a cooperation strategy without having a unique innovation.

NETWORKING STRATEGIES IN PRACTICE

The interpersonal and interorganizational networks which founders have initially, and build upon over time are a key signal increasingly evaluated by investors and other stakeholders during the start-up process. During this phase the business plan plays a very important role, because it reflects the main business idea and is supposed to convince possible partners, advisors and investors. Main factors in a business plan are information not only on about the idea but also on about the founder(s), the structure of the company, its strengths and weaknesses, and an opportunity and risk analysis. Questions and reflections concerning the network structure should run through the whole process of creating the business plan. In some industries, such information is indispensable.

The business plan should, for example, illustrate if whether you rely on a link to a university or research organization, want to build a B2B network, or are interested in having multiple suppliers. Furthermore, it is important, that you mention which what network you currently have and which network strategy you want to pursue in the long-run. It should be clear that the network structure leads to sustainable competitive advantages.

To build interpersonal and interorganizational networks Internet platforms such as LinkedIn and Xing (or specialized forums) can be useful to establish new contacts. Start-up events of all kinds are also an excellent opportunity to network. Furthermore, fairs are extremely useful to network in your industry.

RECOMMENDATION: NETWORK EVENTS EVENTS OF PROFUND ORGANIZED BY THE FREIE UNIVERSITÄT BERLIN

Business & Beer is the monthly network event for all those interested in entrepreneurship in the context of the Freie Universität. Two or three short presentations will be held and then you can enjoy some snacks while getting to know other interesting people and making connections.

www.fu-berlin.de/sites/profund/gruendungsservice/netzwerk/business_beer

Once a year during the summer party of **Network Entrepreneurship of the Freie Universität Berlin** three start-up companies compete in the final round of the start-up award of the Berliner Sparkasse.

www.fu-berlin.de/sites/profund/gruendungsservice/netzwerk/nufub/sommerfest

The **mentor program** of profund, the start-up support institution of the Freie Universität Berlin and the “Network Entrepreneurship” introduces start-up entrepreneurs to experienced entrepreneurs.

www.fu-berlin.de/sites/profund/gruendungsservice/netzwerk/mentoring

PROFUND
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FINAL THOUGHTS:

EVERY START-UP REQUIRES A DIFFERENT NETWORK CONFIGURATION –
DEPENDENT ON DEVELOPMENT STAGE AND INDUSTRY*



WHAT COMES NEXT?

With our research we wish to continue supporting entrepreneurs with sound and useful recommendations regarding their interpersonal and interorganizational networks. We are happy to receive constructive ideas, suggestions and hear about real-life experiences in the field of networked entrepreneurship and we therefore invite you to contact us:

www.wiwiss.fu-berlin.de/fachbereich/bwl/management/sydow/entrepreneurship



SOURCES

Elfring, T., & Hulsink, W. (2007). Networking by entrepreneurs: Patterns of tie formation in emerging organizations. *Organization Studies*, 28(12), 1849-1872.

Gans, J.S., & Stern, S. (2003). The product market and the market for “ideas”: Commercialization strategies for technology entrepreneurs. *Research Policy*, 32(2), 333-350.

FURTHER READING

General Literature Recommendations:

Reuer, J. J., Ariño, A., & Olk, P. M. (2011). *Entrepreneurial alliances*. Upper Saddle River (NJ): Prentice Hall.

Sydow, J., Schüssler, E., & Müller-Seitz, G. (2015). *Managing inter-organizational relations: Debates and cases*. London: Palgrave Macmillan.

Literature on relevant subjects:

Partnering with customers during the foundation process:

De Clercq, D., & Rangarajan, D. (2008). The role of perceived relational support in entrepreneur customer dyads. *Entrepreneurship Theory and Practice*, 32(4), 659-683.

Partnering with suppliers during the foundation process:

Kaufman, A., Wood, C.H., & Theyel, G. (2000). Collaboration and technology linkages: A strategic supplier typology. *Strategic Management Journal*, 21(6), 649-663.

Business model in an interorganisational foundation process:

George, G., & Bock, A.J. (2011). The business model in practice and its implications for entrepreneurship research. *Entrepreneurship Theory and Practice*, 35(1), 83-111.

You will find our current research results at

www.wiwiss.fu-berlin.de/fachbereich/bwl/management/sydow/entrepreneurship

Image Sources

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