

# Patterns of project-based organizing in new venture creation: Projectification of an entrepreneurial ecosystem

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## **Abstract**

The creation of a new venture is at the heart of entrepreneurship and shares parallels with project-based organizing: embedded in an institutional context, founders have to assemble a team that works on specified tasks within a strict time-constraint, while the new venture undergoes various transitions. Based upon a case study of the Berlin start-up ecosystem, we reveal that – shaped by their institutional context – patterns of project-like organizing have become pertinent to the new venture creation process. We identify a set of facets from the entrepreneurial ecosystems – more specifically different types of organizational actors, their occupational backgrounds and epistemic communities – that enable and constrain the process of new venture creation in a way that is typical for project-based organizing. We thus elaborate on how institutional settings enforce what has been called ‘projectification’ in the process of new venture creation and discuss implications for start-up ecosystems.

## **Key Words**

New venture creation; temporary organizations, project-based organizing, institutionalization; ecosystems; projectification

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## 1. Introduction

The continuous increase of project-based organizing or ‘projectification’ (Midler, 1995) can be observed not only in functional areas like research & development or typical project businesses such as construction, consulting, and in the creative industries. It goes far beyond that, reflecting our zeitgeist of temporal acceleration and time-boundedness, and is thus having a deep effect on management, work and society (Jensen, Thuesen, & Geraldi, 2016; Lundin et al., 2015). Projectification also influences how entrepreneurs create new ventures in terms of the expectations and rules that are set forth explicitly and implicitly by their entrepreneurship ecosystem (Ács, Autio, & Szerb, 2014; e.g. Autio, Kenney, Mustar, Siegel, & Wright, 2014). At the same time, entrepreneurs are an essential part of ecosystems: they will help to co-create interfirm networks and regional clusters and be part of them if they appropriate more value doing this than through other alternatives (Pitelis, 2012).

Given the development towards project-based organizing, which we will trace in some detail by looking at one of the leading European entrepreneurial ecosystems, it comes as no surprise that scholars have started analyzing new venture creation by applying a project-based view (Lindgren & Packendorff, 2003; Midler & Silberzahn, 2008). The process of new venture creation indeed shows various parallels to what is described as project-based organizing, known as a temporary organizational form characterized by time and budget constraints and geared towards fulfilling goals in a team environment (Bakker, 2010; Lundin & Söderholm, 1995). Similar to project leaders, entrepreneurs aim to navigate their business to success by controlling budgets, building relationships, and managing human resources (Kuura, Blackburn, & Lundin, 2014). Survival in terms of a sustainable business model and a more permanent organizational state are fundamental goals for a newly-created venture. In contrast to projects in other contexts, which are characterized by an institutionalized termination (Lundin & Söderholm, 1995; Müller-Seitz & Sydow, 2011), the temporary organizing effort of an entrepreneur ideally leads to setting up a permanent organization if the newly created venture is successfully launched. More importantly, and this includes the case of serial entrepreneurs, the entrepreneurial process itself can be characterized in terms of the typical

features of project-based organizing, including a series of distinctive sub-projects and project-like<sup>1</sup> practices such as milestone planning and budget control. Despite these parallels with regard to outcome and process and the interdependencies between the entrepreneurial process on the one hand and the management of projects on the other, research in the respective domains rarely takes these into account, nor is much learning observable across these research domains (Ferriani, Cattani, & Baden-Fuller, 2009; Lindgren & Packendorff, 2003; Midler & Silberzahn, 2008). Against this background, Kuura et al. (2014) identified a “linkage gap” between research on entrepreneurship and projectification, which we aim to address. This gap is problematic not only from the perspective of scholarly efficiency but also with regard to missing theoretical explanations for empirical observations such as the development of entrepreneurial ecosystems. Alluding to Alvensson and colleagues (2011) we challenge the assumption that entrepreneurs have agency to largely (co)create and shape their entrepreneurial ecosystems in their favor (e.g. Pitelis, 2012) by drawing on theoretical strands from project-based-organizing, specifically on how macro-level institutions on the level of ecosystems or organizational fields shape actions of organizational and individual actors..

The process of new venture creation we are interested in is taking place within an institutional context, namely an entrepreneurial ecosystem, defined as a geographically co-located hotspot of start-ups, more established businesses locally headquartered and experienced in spinning off entrepreneurs, research universities and public research organizations, as well as value networks among a those organizations (Adner & Kapoor, 2010; Clarysse, Wright, Bruneel, & Mahajan, 2014; Mason & Brown, 2014; van Looy, Debackere, & Andries, 2003). In addition, these ecosystems are characterized by various organizational actors that are critical for the development of start-ups (e.g. public and corporate incubators, venture capitalists, business angels, accelerators etc.), provide different occupational backgrounds (e.g. natural scientists, programmers), and engaged in developing an epistemic community (e.g. events within the start-up ecosystem) (see e.g. Autio et al., 2014; Sine & David, 2010). Like any innovation ecosystem (Carayannis & Campbell, 2009; Wright, 2014), start-up ecosystems are thus positioned at the interface of often only loosely coupled knowledge ecosystems on

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<sup>1</sup> The notion ‘project-like’ is used as a broader term compared to ‘project-based’, providing a more gradualist understanding and allowing the analysis of activities, whereby practitioners do not always use project language, but temporary organizing is evident.

the one hand and business ecosystems on the other (Clarysse et al., 2014). Previous research indicates that the institutional environment needs to be considered as an important factor in order to understand the process and practice of new venture creation (Tolbert, David, & Sine, 2011). Hence, we argue that the notions and patterns of project-like organizing will affect the way in which new ventures are created in such systems. In particular, we assume that entrepreneurial ecosystems suggest the adoption of project-like activities which culminate in certain patterns and forms of organizing. Thus, we analyze if and how such ecosystems enforce projectification within the process of new venture creation. With the aim of gaining deeper insight into the institutional influence on start-up processes and practices, we ask *to what extent, how and why an entrepreneurial ecosystem evokes and shapes patterns of project-based organizing in new venture creation.*

While focusing on answering this research question, we will also discuss the ambivalence of this particular projectification trend for entrepreneurship research and ecosystem policy. Our analysis is based on an explorative case study of the Berlin ecosystem, as one of the leading European hotspots of start-up activities supported by established companies, universities and research organizations, a broad range of support organizations (including business angels, venture capitalists and incubators) as well as different layers of value networks among start-ups (Clarysse et al., 2014; van Looy et al., 2003). Informed by a structuration lens (Giddens, 1984) on evolutionary and coevolutionary processes (Jacobides & Winter, 2005; Lewin, Long, & Carroll, 1999; Murmann, 2012; Nelson & Winter, 1982), we account for the agency involved in the entrepreneurial process, highlighting the fact that entrepreneurs or start-up teams, as knowledgeable agents in the process of organization-creation, are the driving force behind the development (Pitelis, 2012). In the process, these agents refer to more or less institutionalized structures – like those in and of (intermediary) organizations, interorganizational networks, industries, professions and regions, even more broadly, organizational fields, in particular to the rules and resources of these systems allowing or asking for project-like forms of organizing. Thereby, , we not only account for how the structures, rules and resources are enacted by agents and enable and constrain entrepreneurial agency but also how they are reproduced, thereby either institutionalized further or transformed (Barley & Tolbert, 1997). Within our qualitative research

design, we conducted 52 interviews with entrepreneurs, some of them serial entrepreneurs, members of supporting organizations, investors and accelerators/incubators. Additionally, we analyzed various related documents including webpages, press releases, and formal procedures and participated in numerous start-up events.

We contribute in several ways to previous research on entrepreneurial processes as well as on temporary forms of organizing. First, we develop an integrative understanding of how project-based organizing affects economic activities, being part of an institutionalization process in itself: the nature of project-based organizing, particularly its prescriptiveness and time-boundedness with regard to milestones and deliverables, informs the entrepreneurial process in favor of short-term orientation and incremental development. Second, we elaborate on differences between institutional influences in the new venture creation processes, accounting for science-based and non-science-based contexts (Pisano, 2010), which are characterized by distinctive actor-related influences. Based upon these insights we finally propose a recursive understanding of how the projectification of an entrepreneurial ecosystem unfolds like a patterned institutionalization process and how it is (re-)produced by structure and practice in an entrepreneurial setting. By highlighting the influence of start-up ecosystems in terms of shaping entrepreneurial activity towards project-based organizing, we open up a discussion on the (dis)functionality of such institutional pressures.

The paper is structured as follows: In the theory section, we introduce folds in research on entrepreneurship and temporary organizing, before illustrating our perspective of new venture creation as a structuration process shaped by institutions of an entrepreneurial ecosystem asking for project-like organizing. Subsequently, we present our methodology, drawing from the case of the Berlin start-up ecosystem. Then we present the findings of our qualitative analysis and illustrate differences between science-based and non-science-based start-ups. Finally, we discuss the implications of our findings for entrepreneurship research and policy, their limitations, and directions for future research.

## **2. Theoretical background**

### *2.1 Commonalities of new venture creation and project-based organizing*

Shane and Venkataraman (2000) describe the entrepreneurial process as consisting of the discovery, evaluation and exploitation of opportunities regarding the future delivery of goods and services. To be able to exploit these opportunities, an entrepreneur needs to build the necessary supporting organizational structures (Gartner, 1985). This process of new venture creation with its different sequenced activities including discovering opportunities, building organizational structures, and exploiting ideas (Bhave, 1994; Burgelman, 1983; Kazanjian & Drazin, 1989) shows various parallels with project-based organizing, which, however, have hardly been recognized by previous research in both domains (as an exception, see Kuura et al., 2014). For example, different sequenced activities such as target formulation, milestone-setting, hierarchical planning techniques, and cost-controlling are inherent to both project management and entrepreneurship. In start-ups, these activities are mirrored by “pitching on the opportunity” (target formulation), sequential go – no-go phases, often driven by investors (milestones), and the analogously accompanying management practices common to projects (Lundin et al., 2015). One reason why actors in entrepreneurial settings might welcome practices of project-like organizing could be that projects are often celebrated “as a superior alternative to ineffective, rigid, boring bureaucracies” (Packendorff & Lindgren, 2014).

In their 4T-framework, Lundin and Söderholm (1995) define four concepts (time, task, team, transition) to demarcate projects, as a form of temporary organization, from other organized settings. Transferred to the entrepreneurial context, these concepts can help to clarify the projectified character of new venture creation: time is normally limited (e.g. time-limited financing; importance of time-to-market); new ventures are typically created by (small) teams; the project of new venture creation also includes transitions like the development of the business model over time, and changes in organizational structures as well as product or service adaptations; and, finally, the founders execute rather unique tasks (e.g. development of a business model, product-market-fit), which are essential for the enactment of the new venture. Arguing from the perspective of entrepreneurship research and approaching the parallels in a processual way, Ajam (2011) names three crucial phases of launching a

new business: the business concept stage (utilizing project-based organizing in terms of business planning techniques, understanding of stakeholder expectations and requirements, realistic time and cost targets, risk evaluation and feasibility study); the development of the business concept stage (including project-based organizing relating to the work on financial, legal, and personal aspects); and the project delivery stage (implementation). Obviously, these phases of new venture creation appear to be highly projectified, as already becomes apparent in the commonalities of their language. One example is new product development (NPD), which draws from project-based practices and which is, at the same time, an important, more often than not decisive aspect of new venture creation (Kuura et al., 2014).

Despite these apparent parallels, the application of a project-based view on entrepreneurship, and particularly on new venture creation, is quite rare in contemporary research (Lundin et al., 2015; Packendorff & Lindgren, 2014), one reason being that ventures are not intentionally temporary. Midler and Silberzahn (2008), for instance, highlight the role of projects during start-up development, studying learning effects between projects. Lindgren and Packendorff (2003) also propose a project-based view of entrepreneurship, characterizing even entrepreneurial acts as temporary projects, focusing on the possible seriality of entrepreneurship in an individual's lifetime. In a later work, these authors describe entrepreneurship as a temporary organizing process, containing temporally, spatially and socially distinct interactions, which they metaphorically call "projects". However, Lindengren and Packendorff (2011: 52) emphasize their wish "to view entrepreneurial processes as" being a "discontinuous, discernible and disaggregated series of events" rather than squeezing them into the project management toolbox. In line with this argument, our aim is not to simply apply a project-based view and to identify projects wherever reasonable. Rather, we point to the role of entrepreneurial ecosystems and how they bring project-like notions and patterns into the process of new venture creation.

## *2.2 Institutionalization of new venture creation and practices of project-based organizing*

From the perspective of sociological institutionalism, institutions are "not just formal rules, procedures or norms, but the symbol systems, cognitive scripts, and moral templates that provide the 'frames of

meaning' guiding human action" (Hall & Taylor, 1996: 947). In our view, institutions characterize entrepreneurial ecosystems and the abovementioned conceptualization of institutions provides a solid foundation for our perspective on new venture creation as shaped by project-based organizing. Yet, we argue that processes of institutionalization are subject to the duality and recursiveness of structure and action (Giddens, 1984), implying that institutions not only guide individual and collective action, but also rely on their reproduction (and eventually transformation) with the help of agentic practices. Contemporary research acknowledges the potential fruitfulness of including a structuration perspective for the analysis of project-based organizing (Florice, Bonneau, Aubry, & Sergi, 2014; Lundin et al., 2015; Manning, 2008) as well as entrepreneurship (Sarason, Dean, & Dillard, 2006; Sarason, Dillard, & Dean, 2010), not to mention (neo-)institutionalists who increasingly draw on this (Lawrence, Suddaby, & Leca, 2009).

The process of new venture creation takes place within the institutional context of a more or less entrepreneurial ecosystem: "Institutions influence whether and how potential entrepreneurs open a business" (Herrmann, 2010: 736). In the early phases of the entrepreneurial process, for instance, founders quite often rely on continued external funding to secure the survival of the new venture and to establish a steadier and more permanent organization. A new venture thus relies, like any organization, temporary or permanent, "on one or several organizations, which found, create or necessitate its creation" (Bakker, 2010: 480). What is more, the granting of external funding is always connected to different institutionalized expectations like the existence of a founding team, the compilation of business plans, and the practice of pitching. To borrow another well-known term from institutional theory, not alien to a structuration perspective, nascent organizations need legitimacy to ensure their survival (Aldrich & Fiol, 1994; Tornikoski & Newbert, 2007) on their way to a more permanent state. To comply with institutional expectations in the start-up process is one way to achieve this legitimacy. Also, the occurrence of the phenomenon of entrepreneurship in general underlies informal societal institutions like the acceptance of new venture creation as a thriving force of economic development as well as of formal features such as property rights and financial and educational capital (Fuentelsaz, González, Maícas, & Montero, 2015). Of course, entrepreneurs are not



only influenced by institutions, they also shape institutions themselves (Sine & David, 2010). They do this either in certain moments of time as institutional entrepreneurs or institutional workers (DiMaggio, 1988; Lawrence et al., 2009), or by their everyday actions (Sydow & Staber, 2002).

Against this background, it comes as no surprise that both fields of study, project management as well as entrepreneurship, have been approached from a (neo-)institutional perspective (Dille & Söderlund, 2011; Hwang & Powell, 2005; Tolbert et al., 2011). Obviously, there are interactions taking place between the entrepreneur and business associations, venture capitalists, consumer associations, and scientific organizations as well as competitors (Herrmann, 2010; Sine & David, 2010) as part of the entrepreneurial ecosystem, producing and reproducing institutions. Thereby, it has become a commonly shared requirement that entrepreneurs have to develop a business plan – following certain specifications in content and length – to meet the expectations of investors, customers and future employees (Sine & David, 2010). Often investors also require a marketable product before investing, leading to the dilemma of early-stage capitalization. Moving within established norms (e.g. providing detailed milestone planning) provides entrepreneurs with legitimacy – confronting them with less resistance and giving them more support, e.g. from investors. Sine and David (2010: 7) therefore propose that industry and professional organizations, certification/standard-based organizations, social movement organizations and religious organizations are the “key normative actors that can affect entrepreneurial processes and outcomes”. Rules and sanctions, often imposed by powerful actors like the state, can facilitate (e.g. supporting specific organizational forms) or hinder new venture creation (e.g. credit requirements). We assume that entrepreneurial firms increasingly seek to create legitimacy by adapting to institutional requirements, including the project rationale of supporting organizations in the ecosystem like venture capitalists, business angels or governmental agencies. Institutions, in turn, provide entrepreneurs with means and resources; they even enable certain actors to become entrepreneurs and create entrepreneurial opportunities – in summary, they *support, manipulate and constrain* entrepreneurial action (Sine & David, 2010).

We analyze these processes of institutionalization, applying a structuration perspective that considers practices as ordered, recurring social activities, enabled and constrained by structures (Giddens, 1984)

and that has already been applied repeatedly, also in research on not only on entrepreneurship but but also projects and temporary organizing (e.g. Manning, 2008, 2010; Sydow & Staber, 2002). Such a conception not only permits the analysis of (re)produced practices but also focuses on dynamics and contradictions, which is helpful for an understanding of fast-changing new ventures in their institutional context, i.e. their entrepreneurial ecosystem. Our qualitative study sheds light on this institutionalization and how it shapes the entrepreneurial process in favor of project-based organizing by reinforcing project-like notions and structural properties such as time, team, task and transition (Lundin & Söderholm, 1995).

### *3. Research context and methods*

#### *3.1 Research setting*

To generate new insight into how ecosystems shape the new venture creation process in favor of project-based organizing, we chose a case-study approach (Eisenhardt, 1989; Yin, 2013). We selected the Berlin start-up ecosystem as the setting for this study because the geographical area is rich in both emerging new ventures and institutionalized actors such as investors, intermediaries and other supporting institutions that influence the process of new venture creation. Moreover, it is often said that Berlin has developed a start-up climate or culture. As already mentioned, during the last few years the German capital's start-up scene has blossomed into one of Europe's most flourishing centers for new venture creation, comparable only to London or Paris (EY, 2014; McKinsey, 2013b). In addition to the more than 100 institutions, around 20 incubators, 20 accelerator programs and several dozen co-working spaces are on offer in the Berlin area. Appendix A shows the rise of these programs in the past 10 years and Appendix B offers a more detailed overview of the emergent actors and programs within the Berlin start-up ecosystem.

#### *3.2 Data collection and analysis*

Qualitative data was collected between 2013 and 2016. Since we are sensitized by structuration theory, we analyze practices and their recursive relationship with structure from the respondents' perspective (Barley & Tolbert, 1997; Jarzabkowski, 2008; Sydow & Staber, 2002). We utilized different data

sources (see Table 1) for triangulation purposes in order to heighten construct validity and to prevent post-hoc rationalization and potential biases (Lincoln & Guba, 1985; Yin, 2013). First, we conducted 52 semi-structured interviews to date with representatives of the Berlin start-up ecosystem, among them founders (38), investors and/or intermediaries (14) such as university incubators, accelerator programs, and investment funds. We identified potential interviewees at different events and via their websites, who were contacted and then interviewed. The interviews are based on two interview guidelines, focusing on the founding process of a new venture on the one hand, and the institutional influences with a focus on project-like notions and patterns on the other. The questions differed slightly with respect to the background of our interviewees (founders vs. investors/intermediaries). The interviews took place during on-site visits or via telephone and lasted on average 45 minutes. Some interviews were conducted by two members of the research team to allow them to gather more adequate information and remember the information after the interview. All formal interviews were recorded and transcribed verbatim for subsequent analysis.

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*INSERT TABLE 1 ABOUT HERE*  
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Second, we screened a broad range of non-scholarly publications and field documents on entrepreneurship with respect to their emphasis on projects. These included press releases, newspaper articles, founders' magazines, guidelines of investors, and documents shared between founders on semi-open online-platforms. Such secondary data gave us further insight into the Berlin start-up ecosystem. The screening of these publications and documents is deemed useful as a source from which to reconstruct institutional pressures and project practices from several different angles. Third, we attended more than 30 field events, such as entrepreneurship summits, start-up pitches, workshops, conferences, meet-ups, etc. This non-participant observation gave us a better understanding of the Berlin start-up ecosystem and allowed us to complement our formal interviews with around 30 short impromptu interviews.

The analysis of our data did not occur in a linear fashion, but can be roughly divided into three stages: In the first stage, to heighten reliability (Yin, 2013), we collected all data – interview data, field notes

and secondary documents – in a case study database. Cyclical reading formed a basis to comprehend how the process of new venture creation is shaped institutionally in the Berlin area. Stage two included writing up condensed descriptions of the venture creation process in science- and non-science-based start-ups. Thereby, we focused first of all on the entrepreneurial practices that are typical of project-like organizing, employing three selection criteria: (1) Most importantly and with reference to Lundin and Söderholm's (1995) 4T-framework, we inquired about practices relating to temporariness, e.g. to organizing tasks within given time constraints, or any other of the three concepts. (2) In addition, we investigated the practices identified with regard to their prescriptive character, which is typical of professionalized project management. (3) Finally, we did the same with regard to the linearity assumption, which is also typical of project management approaches. Then, we focused on the identification of institutional influences by the ecosystem. As a result of this analytical step, we came up with a list (including narrative description) of project-like practices and a list of potential institutional influences. In stage three we went back to our 'raw data' for a systematic and combined analysis. We converted all our 'raw data' in MAXQDA. Using such a software program for analyzing qualitative data offers various advantages such as being able to reproduce the coding, providing access to all members of the research team, and easy categorization (e.g. condensing or changing categories) during the process of data analysis. The coding procedure was guided by our initial lists of practices and institutional influences from stage two. Hence, we systematically screened our data for project-like practices within the new venture creation process which are recurrent and associated with start-up development as well as institutional influences that shape this process. In the next step, we explored links between the identified institutional influences and the project-like practices (as an illustration, see Table 2). Thereby, it turned out that a contextualized interpretation of the data was crucial, i.e. that we should interpret the codes within the interview context, in particular with reference to two settings: science- and non-science-based.

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*INSERT TABLE 2 ABOUT HERE*  
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We are also aware that our interviews, especially with founders, faced the difficulty that founders tend to have a strong personality and believe in their visionary acting (e.g. Hayward, Shepherd, & Griffin, 2006). Thus, it turned out that reflecting on the influence of external institutions is quite difficult for them. We took care of this issue by interviewing different non-founders as well, such as representatives of institutional actors, and by further data triangulation.

## **4. Findings**

### *4.1 The ecosystem(s) of new venture creation*

Various institutions such as founding and support programs and intermediaries such as incubators and accelerators in the Berlin area are increasingly influencing the local process of new venture creation. Due to political (e.g. German reunification), technological (e.g. Internet technologies), economic (e.g. financial crisis) and social changes (e.g. immigration), the Berlin start-up ecosystem has been subject to various transitions since the late 1980s (I-35; I-36). The support of new venture creation by universities and other research organizations has become more professional, and various incubator and accelerator programs have located to the Berlin area since 2007 (I-36), leading to a more diverse ecosystem and increasing its ‘institutional thickness’ (Amin & Thrift, 1994). Table 2 provides an overview containing information about these institutional conditions and how they contribute to project-like organizing during new venture creation. For instance, support programs for new venture creation have become more differentiated. Whereas ‘back then, in the 1980s, the federal government supported high-tech ventures’ (I-36) – programs mostly focused on the local or national level by providing state grants, their number has not only increased since then but they are now also of a transnational nature (e.g. Horizon 2020 by the EU) (I-35; I-36). Of similar importance is the fact that universities have started to increase their professional start-up-support. In contrast to today, in the 1980s ‘there were no services for graduates’ (I-36). A further indicator for the development of the epistemic communities as part of the Berlin start-up ecosystem is the rising number of pitching events

in the Berlin area. Whereas pitching events in the 1980s and 1990s were quite formal and rare (I-35; I-36), today they are heavily institutionalized, have become a regular meeting point, and provide a strong basis for shaping the behavior of entrepreneurs. Furthermore, within the community lots of meetings and workshops are taking place, addressing various topics related to the process of new venture creation (e.g. project management techniques).

Another facet of the changed ecosystem is the increase in accelerator or similar support programs that focus on network building. In the 1980s ‘there were no networks like today’ (I-35). The programs mentioned are organized either by big established companies or by universities. They often set specific goals to founders, require the nomination and tracking of milestones (I-12; I-26), foster transition (e.g. by accelerating the founding process), and represent a unique event during the process of new venture creation. Similarly, business plan competitions confront founders with project-like requirements; i.e. they have to plan budgets, introduce their team, and work out strategies for goal-fulfillment. Although one business plan competition has existed since the 1980s (‘Businessplanwettbewerb Berlin’), the number of competitions has increased significantly during recent years. Examples of these are founding competitions by universities, competitions sponsored by established companies, and Hackathons. Often business plan competitions serve as a network multiplier for founders (I-4). In line with the increase in such competitions, different venture capitalists have chosen Berlin as their place of residence. The management of the relationships with venture capitalists often shares parallels with project-like organizing, e.g. incorporating aspects of stakeholder management and being related to goals and milestones connected to the granting of budgets. Crowdfunding has developed over the last few years as a quite novel way of raising capital for a new venture, sharing commonalities with project-like organizing such as the time-limited duration of the fundraising itself and the frequent focus of the capital payment on results.

#### *4.2 Project-like venture creation in science- and non-science-based ecosystems:*

##### *Two illustrative vignettes*

Our analysis suggests different patterns between science- and non-science-based start-ups regarding how the ecosystem influences project-like new venture creation. *Science-based ventures* rely heavily

on scientific research and intellectual property rights generated by research, characterizing them as high-tech ventures. In this subset of start-ups, close interorganizational relationships exist between the science-based new ventures and research institutes either within or outside universities. Against this background, the preservation of knowledge, e.g. by registering patents, plays an important role. Government funded pre-venture programs support science-based new ventures in their early lifetime. For instance, since 2007, students and researchers who are associated with a German university and have a science-based business idea have been able to apply for the *EXIST program*, which supports the start-up process for one year. The support program includes grants, coaching, office space and other services.

In contrast, *non-science-based ventures* are often related to digitalization, development of software-based products and services like apps or online-platforms. In fact, the so-called “Digital-Tech” cluster represents roughly 85% of the start-ups in Berlin (McKinsey, 2013a). Innovation in these ventures is not based on intellectual property rights, but rather on business model innovation and a strong focus on fast marketability and monetization, characterizing them as high-speed oriented. To substantiate our findings, we present one example of each type that is illustrative of our observations in the field. In that sense, the vignettes are rather typical than extreme occurrences and they elucidate how organizing differs, depending on the respective ecosystem.

As an illustrative case of a *science-based* new venture we look at DiagnoseOne, a start-up in the healthcare sector that is working on a tool to test the risk of apoplectic strokes in an innovative, hitherto unknown way. The use of laser technology characterizes this start-up as a high-tech venture. The idea for the test evolved between 2005 and 2006 during of one of the founders’ doctoral dissertation project in the field of medicine (I-28). The founding team was composed of this physician, a physics professor responsible (since 2006) for developing the measurement methods, and a person with a business background. In 2008 the founders took part in a business plan competition and made second place. DiagnoseOne started officially as a university spin-off in 2009. A first prototype already existed at this point in time – “they had a prototype and it worked under lab conditions” (I-28), and the first efforts were made to patent it. On a project basis, close cooperation with the university was

necessary from the beginning to develop the product further. Further project-based cooperation existed with hospitals and indeed continues to do so, e.g. for clinical research and testing. Between 2009 and 2011, DiagnoseOne concentrated on the NPD project to develop a first in-house prototype ready for series production by means of several projects. Raising capital and planning the budget were activities performed in recurrent projects (I-28): In 2009, the first money was raised from a public grant. A public-private investor specialized in high-risk projects followed, who provided further €500,000 in 2010. The next investment round in 2011 brought further investors in, financing product development and commercialization. At the end of 2014, the next investment round took place, which brought the company several million € to promote the product's entry into the European market. As investors came in, they started to exert great influence on the new venture, as the following CEO quotation shows: "With the money we have to meet our milestones. ... In negotiations with investors I have nothing to say. They decide, and they decide a lot" (I-28). In the case of DiagnoseOne, the 'milestones' are the official drug approval and the official certification of the machine. Investors also re-adjust the search for further financing. In 2012, a part of the product became officially patented and licensed, which was labelled as an "important milestone" on the company's webpage. In 2012, an external CEO was appointed, which led to a further professionalization of the company, e.g. in regard to design, goal setting and vision (I-28), including the introduction of project management techniques: "I changed the environment from a research architecture to a project management architecture" (I-28). Further in-house product development took place and in 2013 customers were consulted about necessary improvements to the first prototype, since the company values them as an important source of feedback (I-28). The CEO called this a distinct sub-project of the new venture creation process. By the end of 2012, the responsible legal authority approved a study for the prophylactic stroke-test, which is also a typical project within a science-based new venture creation process (I -28). In a project-like fashion in July 2015, one of DiagnoseOne's founders announced that the product's market entry was planned for 2016. Today, the company has eleven employees, has produced the first machines in a customer-approved design, and has selected reliable suppliers for production. The official approval for the product is still an ongoing issue.



The founders of *non-science-based* start-ups with whom we talked often referred to themselves as high-speed entrepreneurs; in sharp contrast to the more time-consuming high-tech start-ups that spin out of local universities and research institutes. Many of these high-speed start-ups in Berlin have a focus on e-commerce and online advertisement, often by adapting or even copying successful business models. It is very important for these start-ups to exploit first mover advantages and to become dominant platforms quickly in their specific markets. Not only for these ‘copy & build start-ups’ (I-44), but also for a wide range of other start-up types (e.g., in emerging fields like big data), speed is the major driver, and venture capitalists, business angels, and business incubators become major institutionalizing forces. An example of this high-speed projectification in non-science-based start-ups is SpeedItUp, a firm specialized in app development on mobile phones. Their idea was born within a Berlin-based private acceleration program that shapes the process of venture creation in project-like patterns: as typical of project-based organizing, the team dimension is very important. The first founders come from within the program and external co-founders enter the team at a later stage. During the acceleration phase, the team is in close contact with the program, “so that we sit down together regularly, reflect on the business plan and discuss how the milestones for the next months can be achieved” (I-46). SpeedItUp’s team was founded in 2012 by two managers with many years of work experience in start-ups. Like in most project organizations, there is a task-centricity, specifically, the program aims at gaining speed by allowing the founding team to focus on the core activities that are necessary to accelerate the business idea. “When a young person wants to start a business, there are so many bureaucratic and financial-legal obstacles that need to be overcome before you can start with the actual product. ... We minimize these obstacles for the founding team” (I-47). The acceleration program is highly projectified in the sense that the founding team has to focus on rapid business model development, while the start-up receives a highly structured support program from the acceleration network. As one of the co-founders of SpeedItUp reports: “Accounting, HR, recruiting, everything was managed by the acceleration program, .... so that we could focus on our core business and execute it immediately”(I-43). Crucial milestones for the acceleration of new ventures within the program are the different rounds of financing. In the beginning, the program provides seed investment, “so that the venture can start and we don’t lose much time with fundraising” (I-46). In this phase, the

most important landmarks reinforcing the project-like character of the start-up process are prototype development and the development of a concept. The acceleration schedule aims at making the new ventures ready for the Series A round within the first year (I-49). In the case of SpeedItUp, rapid business development allowed the venture to generate first customer revenue very quickly, so that they did not spend all of the seed funding, but became attractive for Series A funding within their first year (I-43). The next step, after raising Series A funding, was internationalization in the logic of this high-speed acceleration program. Today, SpeedItUp has established two further international offices and employs more than 200 members of staff.

#### *4.3 How different ecosystems shape project-like new venture creation*

The process of new venture creation is characterized by various institutional influences embedded in the entrepreneurial ecosystem that are reminiscent of project-like practices. First of all, *institutional actors* influence the process of new venture creation. The state and its agencies put various constraints on new venture creation, especially in science-based contexts: project-like practices such as developing intellectual property and getting legal permission are directly interlinked with regulations such as laws and official norms. In contrast, in non-science-based contexts these practices are less prevalent. Particularly salient for non-science-based start-ups is the fact that the dominant institutional influencers are (potential) investors like business angels, accelerator programs, investment funds or other public intermediaries providing financial support. As soon as their money is in the start-up, investors pursue their interest in high returns by influencing the start-up's strategy in terms of projectification, e.g. by milestone-setting and participating in important decisions (I-24; I-30). Furthermore, investors require a firmly established team and an agreed legal form for the company before money flows (I-26). They therefore have significant influence on the practices of team completion and establishing a legal basis, whereas such matters tend to be settled at an earlier stage in science-based ventures. Due to the necessity for continuing research and fulfilling legal requirements, science-based start-ups need significantly more capital than non-science-based start-ups, and are obliged to raise funds at an earlier stage of their development. Science-based start-ups therefore usually have various investors in their starting phase, while non-science-based new ventures are often

able to finance “themselves” by bootstrapping. Beyond this strong influence that they have via concrete financing practices, investors have different expectations of new ventures. For instance, with non-science-based start-ups they expect a prototype to exist already, and also a concept regarding a related viable business model (I-29). For science-based start-ups in particular, investors expect efforts to be necessary to patent ideas (I-30). Further investor-related expectations, quite independent of the context, are the engagement in pitching practices (I-29) and the development of a business plan (I-30). This shows how, in their role as institutional actors, investors influence the sequence and pattern of the new venture creation process in a project-like fashion. Apart from investors, cooperation partners are another source of institutional influence, especially if they play an important role during the NPD. Again, this is especially the case in a science-based context, where close relationships between the new venture and research institutes exist, the latter usually working in a project-based fashion. The practice of raising capital is also conducted in close cooperation with partners, e.g. in the university context (I-27). In contrast, in non-science-based contexts, cooperation partners can become important in a later phase or after the new venture creation process. However, as product and business model development are important in an earlier phase than in science based-contexts, customers assume an important role as influencers of the new venture creation process, setting different requirements for the product itself and the appearance of the new venture (I-17, I-21: I-22).

A further institutional influence is the *occupational background* of founding team members. The qualification of team members supports the use of project management techniques and respective framing of praxis. For instance, programmers and engineers often organize tasks in a project-like manner (I-21), since by their professional training they are well educated in project-based organizing concepts and tools (I-17). As in one of our two case vignettes, we observed cases where CEOs who were recruited later in the start-up process introduced formal project management techniques into the new venture in accordance with their former work experience (I-19; I-28). Overall, occupational background also affects project-like forms of organizing, but does not seem to have a greater impact on science- than on non-science-based start-ups.

The *epistemic community* influences new venture creation processes by sharing knowledge and reproducing what are considered to be “best practices” (I-21). Within the Berlin community, lots of events are organized, which either directly or indirectly address the use of project management tools, or even explicitly provide guidance e.g. on how to apply for international state funds. Furthermore, organizing work within projects is shared between the individuals of the community, for instance during competitions or in working as freelancers for start-ups. Again, no significant difference between science- and non-science-based start-ups appeared in our data, thus leading us to the conclusion that institutional actors predominantly account for the difference in project-like activities in the two start-up ecosystems.

Building upon these actor-specific as well as occupation- and community-based institutional influences, we can distinguish between *two patterns of new venture creation*, which exist parallel to one another.

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*INSERT TABLE 3 ABOUT HERE*  
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Table 3 illustrates these differences: the new venture creation process differs first of all in *characterization* – more high-speed oriented with large capital investments and comparatively long time horizons of investments vs. more high-tech oriented with a focus on fast market entry and rapid amortization of investments.

The *project-like practices* employed during new venture creation also differ according to the respective ecosystem. Science-based new ventures are typically influenced by regulative authorities, e.g. the need to obtain permissions that are needed ahead of market entry. Thus, the focus of the start-up is very much on the product development. As for non-science-based startups, the applied project-like practice tends to be less dependent on legal and normative influences, but driven instead by time constraints caused by pressures to make a fast market entry and achieve monetization, often enforced by investors. Against this background, the *dominant institutional influences* for science-based startups appear to be predominantly of a normative and regulative nature, transmitted by institutional actors.

Examples can be found in the patenting and product admission process of the chemical and pharmaceutical industries. Major institutional influences for non-science-based startups are the exploitative habits of investors pushing for fast marketability and monetization, as is often the case regarding IT startups. In terms of the *influencing bodies*, certain actors play an important role in both kinds of startups, yet with different manifestations (patent authorities, research institutes and long-term investors in the case of science-based startups and short-term investors, customers and accelerators in the case of non-science-based startups). In addition, occupational background and profession tend to play a role for both science- and non-science-based startups, where the scientific education and professional training that generally encompass project management approaches and tools are critical for the product development. In the case of non-science-based ventures even more than in the case of science-based ventures, communities in the local start-up ecosystem provide a melting pot of talents, investors, partners and customers (Grabher, 2002) influencing the activities of start-ups.

## 5. Discussion

### 5.1 Practices of project-like new venture creation shaped by the start-up ecosystem

Our research shows that the process of new venture creation in an entrepreneurial ecosystem has become, at least to a considerable degree, *project-like*: an entrepreneurial *team* carries out different *tasks*, and *time* plays an important role due to limited financing. The process, moreover, is underlain by various *transitions*, and the new venture creation process has an institutionalized ending: either the new venture becomes permanently established or it vanishes. In our view, the successful creation of a new venture is therefore finished when a more or less permanent organizational state is reached, i.e. once a functional organization has been created (Gartner, 1985). Therefore, the continuity of the new venture (e.g. successful market entry, sustainable income) – or its failure – demarcates its possibly temporary versus its potentially permanent nature. More importantly, the whole process of new venture creation is shaped by institutionalized practices displaying a project-like character. Different institutions within the ecosystem – institutional actors, occupational backgrounds and the entrepreneurial community itself – influence the patterned nature of this process. At the same time, the practices in this process contribute to its further institutionalization, and eventually, once project-based

organizing becomes the dominant form, turn an ecosystem into a ‘project ecology’ (Grabher, 2002; Ibert, 2004).

By answering our research question regarding to what extent how and why new venture creation is geared towards project-like organizing by the ecosystem(s), we offer the following contributions: First, we show that the process of new venture creation is characterized to a large extent by attributes that are typical for project-based organizing, as reflected in the contextualization of projects (Engwall, 2003) and the 4T-framework of temporary organizations (Lundin & Söderholm, 1995). Thereby, we highlight the fact that project-based organizing reaches far beyond the typical project management context (Lundin et al., 2015). In particular, our analysis shows that, as part of the entrepreneurial ecosystem, the epistemic communities, occupational backgrounds and different actors shape venture creation practices towards projectification (Ferriani et al., 2009; Lindgren & Packendorff, 2003; Midler & Silberzahn, 2008). The projectification is triggered and shaped by the institutional environment (Lundin et al., 2015; Midler, 1995; Packendorff & Lindgren, 2014), both, in science-based and non-science-based new venture creation projects; although different institutional influences within the ecosystem play major roles in both contexts. Our data provides several cues that help us to understand the reasons for the projectification. Most obvious are the imitation and adaption of this form of organizing that gains relevance across industries and more broadly also in society (Lundin et al., 2015). Against this background, intermediaries such as venture capitalists and incubators use project-based organizing patterns for legitimacy reasons and as a form of promising practice. In line with this argument, the project form helps intermediaries to tightly control their financial investments and the outcomes achieved, for example through milestone planning, deadlines and project budgeting. Finally, self-reinforcing effects such as the success of specific start-ups further stabilize and re-inforce project-like organizing in new venture creation.

Second, we elaborate on characteristics of new venture creation projects in their early stage in the context of temporary organizing. Specifically, we have identified attributes of science- and non-science-based venture creation processes (Pisano, 2010), which differ regarding dominant institutional influences and the very nature of the enacted project-like practices. Science-based or truly high-tech

new venture creation (like in the case of economic clusters, Powell, Koput, Bowie, & Smith-Doerr, 2002) is characterized by a longer process and greater normative and regulative influences, while non-science-based or often high-speed new venture creation encompasses a shorter process, and institutional influences are more market-oriented and favor rapid exploitation. While short-term investors and the entrepreneurial community heavily influence non-science-based ventures, entrepreneurship policy, public and legal bodies, as well as the professions of the start-up team prove to shape the new venture creation process in favor of project-like organizing in a science-based context.

Third, we contribute to a more integrative understanding of project-based organizing and entrepreneurship (Kuura et al., 2014). By using a structuration perspective, which has been applied before in both domains and takes into account both practices and their recursive interplay with structures of the ecosystem, we contribute to further theoretical underpinning of research on project-based organizing (Manning 2008, 2010). At the same time, we advocate the structurationist approach in entrepreneurship research (Sarason et al. 2006, 2010), showing how the creation of new venture project practices are enabled and constrained by structures.

### *5.2 Production, reproduction and transformation of project-like practices in start-up ecosystems*

On the basis of these empirical findings and theoretical insights, we developed a model of how the entrepreneurial ecosystem shapes the process of new venture creation towards project-like organizing (see Figure 1). Therein, ‘shaping’ is conceived as a specific form of institutionalization and describes a set of institutional influences that reaches across organizational actors, occupational backgrounds and epistemic communities, and guides practices in the process of new venture creation. The start-up ecosystem can become relevant, in that it shapes each of these specific activities in a ‘projectified’ way.

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*INSERT FIGURE 1 ABOUT HERE*  
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Entrepreneurs follow these institutional conditions or ‘scripts’ (Barley & Tolbert, 1997), as they promise to give orientation and provide legitimacy in a phase which usually suffers severely from a lack of these (Tornikoski & Newbert, 2007). These venture creation practices are guided by the entrepreneurial ecosystem, positioned like any innovation ecosystem at the interface of knowledge and business ecosystems (Autio et al., 2014). In the course of time, the project-like character of organizing the new venture becomes more obvious and is stimulated when a further professionalization of project management takes place, e.g. by means of actors such as investors, the community, or the educational background of the employees. There are non-linearities in the recursive process of shaping because institutionalization processes in favor of project-like organizing in entrepreneurial settings lead to repercussions on the entrepreneurial ecosystem. When institutional actors accelerate start-ups (*time*), determine requirements for *team* composition and *task* structuring or encourage business model pivoting (*transition*), this feeds back to the very same actors and contributes to a kind of projectification spiral with, however, different patterns in science- and non-science-based ecosystems.

### *5.3 Implications for entrepreneurial practice and policy*

To a significant extent, entrepreneurs are project managers, whether they wish to be or not. It therefore seems beneficial for them to use project management techniques reflexively, as “tools for reflective practice” (Huxham & Vangen, 2014). Project-like organizing in the process of new venture creation offers different advantages, especially for venture capitalists: it seems to provide structure and guidance to allow for controllability while managing complex and extraordinary business tasks (Packendorff & Lindgren, 2014). Against this background, it is reasonable that regional and national entrepreneurship ecosystems (Ács et al., 2014; Mason & Brown, 2014) in general and actors supporting young ventures (e.g. venture capital companies, incubators, accelerator programs) in particular have an interest in deepening their understanding of project-based organizing in order to provide structure and guidance which under no circumstances should wear out in using project management techniques.



At the same time, we contribute to a critical reflection of the institutional-contextual and temporal-contextual influences in start-up ecosystems on new venture creation in general (Autio et al., 2014) – and the influence of regional or national entrepreneurship policy in particular (Ács et al., 2014). Our results reveal that entrepreneurial ecosystems, at least if advanced as the one in Berlin, tend to shape the process of new venture creation so that start-ups are guided towards project-like practices (e.g. milestone planning techniques, short-term budget planning) which – in a similar vein to projects – are taking place in face of specific time constraints (e.g. duration of financing rounds). Thus, public policy has an influence on this development towards a ‘projectification’ of the new venture creation process by setting conditions and measures for support programs, financial grants, etc. Without doubt, the implied project-like practices can be functional, not least in terms of creating linkages within and across the ecosystem (Clarysse et al., 2014). However, aside from these functional outcomes, there might be dysfunctional consequences as well, particularly when it comes to creativity. Groundbreaking ideas or disruptive technologies can suffer from bureaucratic barriers and exaggerated structure (Amabile, 1996), not allowing enough freedom for autonomous entrepreneurial activities, as we know from research on internal venturing in corporate enterprises (Burgelman, 1983; Kanter, 1985). Following this argument, it is noteworthy that many emerging start-ups in the Berlin ecosystem look very much alike, or even copy business models, e.g. e-commerce platforms for clothes, shoes, electronics, muesli. It may be inquired whether this is due at least partially to the uniform, formatting institutional influence of the ecosystem.

#### *5.4 Limitations and avenues for further research*

Although our findings certainly exhibit specific features of projectified new venture creation processes within the Berlin area (e.g. with regard to the German early investment situation), our findings are tentatively generalizable to other contexts as well (Eisenhardt, 1989; Siggelkow, 2007), since ecosystems, despite regional differences and specifics (Grabher, 2002; Ibert, 2004), are alike along many dimensions. For example, some of the institutional influences, such as those by internationally operating venture capitalists or national government agencies, take place analogously in various ecosystems. Nevertheless, some limitations of our study should be mentioned. First, even though we

found two distinctive contexts in which somewhat differently patterned institutional influences can be perceived – scientific and non-scientific – we neither claim that they are fully mutually exclusive, nor do we argue that these processes are exhaustive, excluding alternative pathways of venture creation. Still, we propose that both processes have their own characteristic features, and that the extraction of particular practices certainly helps to understand these processes better. Second, our method of data collection and analysis involves different limitations, e.g. in terms of quantity and quality, i.e. a bias in the perception of interviewees and interviewers, despite our efforts to triangulate with data from non-participant observation and secondary sources. However, in addition to further interviews, more ethnographic data could help validate our findings, in particular with regard to a finer-grained understanding of the structuration of specific organizational practices (Jarzabkowski, 2008) applied in science-based and non-science-based startups. This may help to analyze further why or for what reasons ecosystems influence the entrepreneurial process towards short-term, project-like practices rather than long-term orientation and permanent organizations.

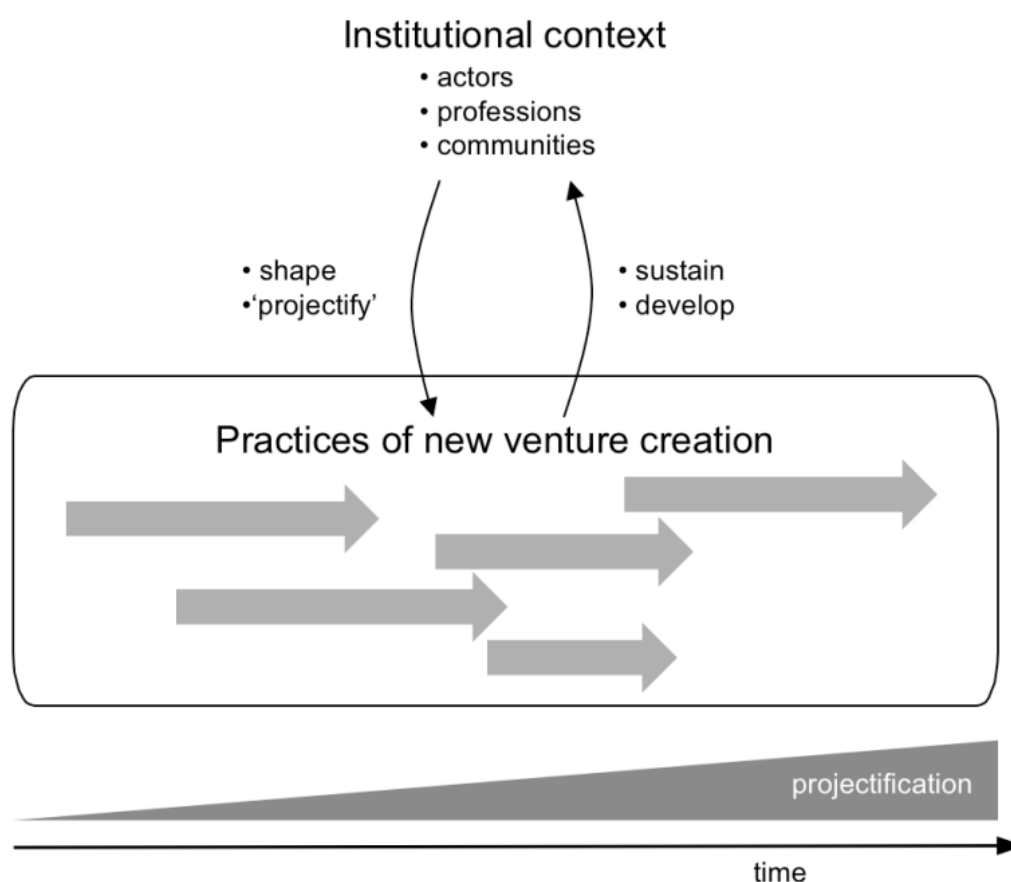
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*Figure 1: Practices of new venture creation*

Source	Description
Interviews	Science-based start-ups: 14 Non-science-based start-ups: 24 Intermediaries: 14 <b>Total:</b> <b>52 formal interviews</b> <b>30 short impromptu interviews</b>
Documents	Press releases, newspaper articles, founders' magazines, guidelines of investors, documents shared on semi-open platforms
Field events	More than 30 field events observed: Entrepreneurship summits, start-up pitches, workshops, conferences, meet-ups

*Table 1: Data sources*

Development of the ecosystem	Evidence	Resulting project-like practices	Illustrative data
<i>Differentiation of support programs at different levels (local, national, EU)</i>	Start-up support by universities, IB-Bet (local), EXIST program (national, Horizon 2020 (EU))	<ul style="list-style-type: none"> <li>- Range: short horizons (during proposal and grant), usually one time participation</li> <li>- Form: high goal- instead of process-orientation, task clearly defined, mostly team demanded</li> <li>- Content: milestones, work packages</li> </ul>	<p>We set them [the start-ups'] milestones (I-12).</p> <p>Indeed, first we received EXIST support. And now we receive support through the Profit program. I think we have used this kind of support relatively often. [... These programs] are becoming more and more frequent [...]. Taking all different support together, it was sufficient (I-28).</p> <p>In EXIST proposals, milestone planning is required and we check this one way or another . We use quarterly reports (I-12).</p> <p>I already had experiences with the EXIST stipend [...]; it was a project for one month (I-6).</p>
<i>Increasing number of pitching events in Berlin</i>	Various Meetup-events in the last years (I-35; I-36)	<ul style="list-style-type: none"> <li>- Parallels between pitching founder and project manager (experience and confidence regarding the upcoming challenge; presentation of a vision to stakeholders and employees)</li> <li>- Short-term measurability (goals, milestones, results)</li> </ul>	<p>We organize "Pitching Tuesdays". One of our aspirations is to train [entrepreneurs] for the perfect pitch, because they need it in order to find investors. There you need a really good pitch (I-26).</p> <p>Pitching is, in my opinion, one of the most important skills of entrepreneurs [...] It is a fact that you have to present to various audiences (I-9).</p>
<i>Emergence of incubators in Berlin</i>	Different types of incubators have located in Berlin since around 2007	<ul style="list-style-type: none"> <li>- One-time participation of the start-up, time-limited, task clearly defined, team demanded</li> </ul>	<p>In fact, we are active in the Health-IT-scene in Berlin and receive lots of feedback. This is very important, e.g. we are often at Bayer's incubator (I-21).</p> <p>We offer you a detailed schedule (homepage of garage incubator Berlin).</p>
<i>Emergence of accelerator programs in Berlin</i>	Different accelerator programs have located to Berlin since around 2013 (I-32)	<ul style="list-style-type: none"> <li>- One time participation of the start-up, emphasis on 'transition' (acceleration, fast change), founding team in focus during selection</li> </ul>	<p>The team is elementary (I-26).</p> <p>They [the accelerator] try to standardize, to structure (I-33).</p> <p>They promise: Come to us and in the limited time – 3 months – you can learn entrepreneurship (I-32).</p>
<i>Increasing number of business plan competitions</i>	Increase since the 1980s (I-35; I-36)	<ul style="list-style-type: none"> <li>- Time-limited</li> <li>- Preparation of time schedules derived from goals with presentation of milestones and expected results</li> </ul>	<p>Many people ask me: why should anyone participate in a business plan competition? I reply: For us it was extremely beneficial, as a venture capitalist became aware of us because they had to rate our business plan. It's about these small milestones towards success (I-13).</p>
<i>Evolution of diversified events for entrepreneurs</i>	Increase confirmed in expert interviews (I-35; I-36)	<ul style="list-style-type: none"> <li>- Project-overlapping relationships (latent vs. evident relationships)</li> <li>- Relationship maintenance (e.g. network citizenship behavior)</li> <li>- Initiation of new projects</li> </ul>	<p>Venture creation is a long process. And there I need an environment: Something like the university founding centers and their associated facilities are exceptional in this sense [...]. There, I can ask questions at a Business &amp; Beer event and talk to someone from the entrepreneurship office or just my neighbor. One of them, selling drinks now, previously sold computers. - I still take care of three left-overs. In the founding process these framework conditions are essential (I-4).</p>
<i>Increased presence of venture capitalists in Berlin</i>	Increase since 1990s, even more traditional banks now advertise founding support	<ul style="list-style-type: none"> <li>- Founders have to manage these important stakeholders</li> <li>- Project-like expectations to founders: time schedules with goals, milestones and results; clear vision and tasks</li> <li>- VCs act like external "steering committee"</li> </ul>	<p>If external money is in the company, ... there are people who tell you to step on the gas. And they define this via milestones (I-12).</p> <p>Of course investors require milestones, which have to be discussed in advance (I-19).</p> <p>We agree upon a business plan for each year which then has to be implemented (I-36).</p>
<i>Availability of Crowdfunding</i>	Establishment of respective platforms in Berlin since 2011(I-2)	<ul style="list-style-type: none"> <li>- Participation on crowdfunding is time-limited, highly results-driven</li> </ul>	<p>We tried it via crowdfunding... but they mostly help projects that address a broad consumer mass (I-6).</p>

Table 2: Influence of the ecosystem geared towards project-like practices of new venture creation

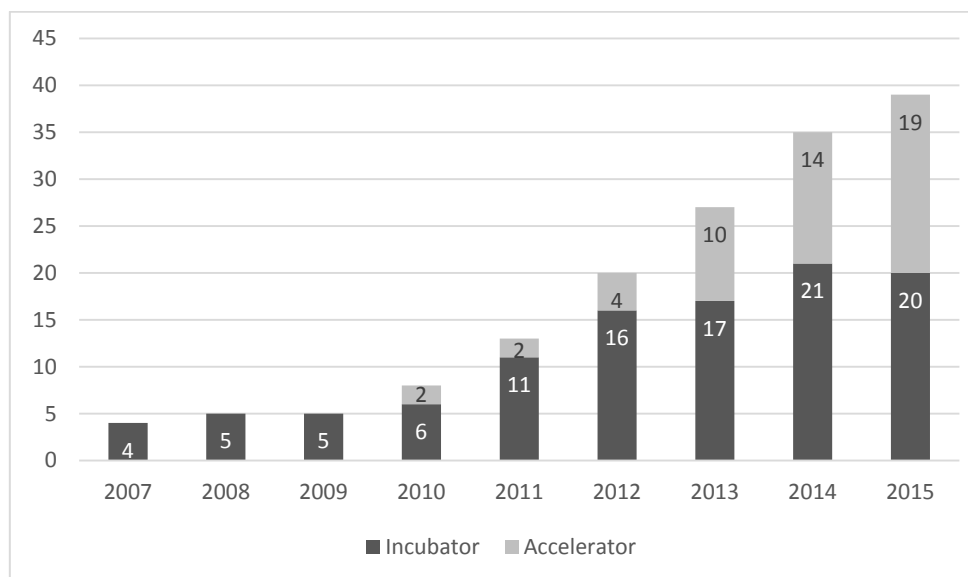


	Science-based new ventures	Non-science-based new ventures
<i>Characterization</i>	More high-tech-oriented; more capital intensive; longer process (up to 10 years)	More high-speed-oriented; shorter process (around 1 year)
<i>Kind of project-like practices</i>	More regulative-influenced practices, task focus (product development, patents)	More market-oriented practices, time focus (fast market entry, monetization)
<i>Dominant institutional influences</i>	Normative / regulatory influences	Exploitative influences
<i>Dominant influencing bodies</i>	Actors (e.g. patent authorities, research institutes, long-term investors), but also professions (e.g. engineering, biotech)	Actors (e.g. short-term investors, customers, accelerators) but also communities (the local start-up ecology)

Table 3: Different patterns of project-based new venture creation

## APPENDIX A

### Quantity of Incubators and Accelerators in the start-up ecosystem of Berlin (2007-2015)



Source: Analysis by the Investitionsbank Berlin

## APPENDIX B

### Evolution of main institutions as part of the Berlin start-up ecosystem (1983-2015)

Time	Institution (anonymized)	Institutional focus	Example quotation
1983	Entrepreneurship Center Berlin (ECB)	Science-based	
1986	New Venture Center	Science-based	
1991	Be innovative!	Science-based	Big Fish: "We identify proven business models that focus on basic needs. We quickly build companies for these business models using highly standardized and optimized processes, and then scale these companies to a leading position in our markets."
1997	Be innovative international!	Both	
2007	Science Incubator	Science-based	
2007	Big Fish	Non science-based	
2010	Get it!	Non science-based	
2011	R-Investors	Non science-based	Do it!: "We do not want to reinvent the wheel – we want you to spin it faster. Once you are chosen you don't simply "join" a program – you become part of a global family. The Accelerator is a direct connection between two major markets and provides an existing global infrastructure."
2011	Savigny Innovation Center	Science-based	
2011	RUN	Non science-based	
2012	Best founders	Non science-based	
2012	Berlin founders' school		
2012	Sustainers	Non science-based	
2012	roomIN Incubator	Non science-based	
2013	Do it!	Non science-based	
2013	Faster and better	Non science-based	
2013	YES!	Non science-based	goMarket: "You join goMarket with an idea. They help you develop, launch, and scale a company. From building a great team to ensuring you've got all the operational support you need, goMarket allows you to concentrate on what's most important: becoming a market leader."
2013	Accelerator No. 1	Non science-based	
2013	ClimatePro	Science-based	
2013	Company M Accelerator	Both	
2014	Green University Incubator	Both	
2014	goMarket	Both	
2014	SeeBetter Accelerator	Science-based	
2014	DigiCare Accelerator	Both	
2014	DigiCare Incubator	Science-based	
2014	EU Accelerator	Science-based	Transporters Accelerator: "Transporters Accelerator focuses on railway infrastructure and mobility related startups, which introduce new business models or technologies. Opening the world of railways is our goal. Each batch has a topic and your ideas should make us want you. In general we are looking for early stage startups, which are innovative and result-driven."
2014	Rocking Rabbit	Both	
2014	Electronic Incubator (EI)	Science-based	
2015	Goro	Science-based	
2015	Transporters Accelerator	Science-based	
2015	To the Moon Accelerator	Non science-based	
2015	TtM 2 Accelerator	Both	
2015	HospitalGo	Science-based	