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Article

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Conceptualization of a Cooperative Company Builder for Systematic Transfer of University Research and Innovation in the German Mittelstand

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Universities lack a systematic transfer from research and innovation projects into practice. German Mittelstand firms have limited resources to pursue explorative innovation, which is required to realize business opportunities and remain competitive. Since current collaborations do not fully unlock innovation potential, this research aims to conceptualize a company builder to bring these two parties together in an entrepreneurial ecosystem. In line with this research's exploratory nature, a multi-method analysis was followed, applying two approaches for data analysis. The company builder information was analyzed via a qualitative document analysis. Seven guided expert interviews were conducted with employees in innovation-related positions in German Mittelstand firms and the university. Findings suggest the company builder's core activity is the venture creation process, ensuring systematic access to university-relevant research and innovation and facilitating valuable interactions among the ecosystem partners. The company builder's value lies in connecting relevant ecosystem partners through a comprehensive company-building environment to exchange knowledge and expertise and meeting the partners' needs equally regarding the new venture. Thereby, it is independent of bureaucratic university structures. Future research should validate current findings with higher sample size and focus on other relevant aspects, such as generating revenue and participation requirements for other potential ecosystem partners.

Keywords: *company builder, entrepreneurial ecosystem, the German Mittelstand, ambidextrous organization*

Introduction

In recent years, firms have experienced increasing pressure to be innovative. Partly, it may be attributed to the growing complexity resulting from globalization and the rapid emergence of new technologies. These developments push organization to become ambidextrous, demanding the ability to simultaneously balance exploitative and explorative activities (March 1991). In today's fast-paced economy, it is crucial to engage in both activities to mitigate the risk of business disruption (Alpkan and Gemici 2016). For the German Mittelstand companies, in particularly, it is a major challenge to engage in explorative innovation due to

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limited resources (Massis et al. 2018). Nonetheless, the German Mittelstand is a significant driver of the German economy as they offer secure jobs and generate sustainable revenues (BMWI 2018). This characteristic stems from their ability to globally exploit the markets they are specialized in (Massis et al. 2018). Thus, Mittelstand firms are required to leverage their limited resources in a profitable manner. A potential solution to leverage their research activities and gain access to adequate talents may be cooperations with universities. A cooperation between Mittelstand firms and universities would not create a new phenomenon. Successful and beneficial university-industry collaborations already exist, which transfer research findings into business practice (Stagars 2015, Apa et al. 2020). These collaborations are primarily formed with large corporations or small-and medium sized enterprises (SMEs), which have the necessary absorptive capacity and apply a similar problem-solving method common in scientific research (Apa et al. 2020). With the German Mittelstand representing SMEs seeking to extent their innovative capacities, the Karlsruhe University of Applied Sciences (HKA) is an example for a university holding valuable scientific based knowledge for SMEs. Currently, the HKA experiences a lack of a systematic transfer of research and student innovation projects into business practice (Hochschule Karlsruhe 2019). Therefore, this research attempts to conceptualize a company builder (CB) to leverage this unused potential by bridging these two parties together. A CB would act as an intermediary connecting relevant university research, innovation, and potential entrepreneurs with Mittelstand firms to systematically transfer knowledge into practice. CBs systematically support entrepreneurial processes of new venture (NV) creation over the long term by accumulating and centrally managing knowledge and resources (Rathgeber et al. 2017). However, to the authors' knowledge, there is a gap in academic research on the engagement of Mittelstand firms in CBs. Hence, the success of existing CBs and the unique requirements of the German Mittelstand make it relevant to investigate how a CB should be designed in a scalable and transferrable manner aimed at contributing to the improvement of systematic transfers of academic research and innovative student ideas into practice and strengthening the Mittelstand firms' competitive position by enhancing their explorative innovation capabilities.

This research aims to contribute to the research on CBs, which to date has only been limitedly investigated from an academic perspective. Previous studies have focused on the types of company builders, the organizational structure of a single case case-study, and the company builders' processes. Since this research only focuses on the analysis of larger independent CB or corporate CBs, the focus on designing an independent company builder with ties to a university that meets the Mittelstand firms' requirements will contribute to closing a research gap. Based on this focus, the following research question is formulated:

> How should a company builder be designed to achieve systematic transfers from research and innovation projects into practice?

Based on two independent approaches, the answer to the research question was derived though a qualitative document analysis and expert interviews. The

qualitative document analysis targeted ten existing CBs and provided first insights into structures, services, and offerings of CBs. Subsequently, the findings of seven guided interviews identified the Mittelstand firms' and innovation researchers' requirements for the collaboration on a CB and relevant services and offerings deemed valuable for the participants. The company builder's core activity is the venture creation process that is enriched by relevant research, practical experience of experts, and entrepreneurial and organizational support towards the NV. The CB should mediate the interest of each actor (the German Mittelstand, potential founders, and researchers), provide networking activities and other events, and ensure good communication between the parties.

This paper is structured as follows. The next section introduces essential concepts and elaborates on current research findings. It introduces entrepreneurial ecosystems, assesses innovation and collaboration in the German Mittelstand, and briefly defines the company builder concept. Section three reveals the methodological approach chosen for this study. Section four presents the analysis and results concerning the primary and secondary data on existing CBs and the expert interviews. Section five highlights interesting findings and points out limitations encountered in this study, giving rise to suggestions for future research.

Literature Review

Entrepreneurial Ecosystem

Entrepreneurial Ecosystems (EE) started developing in the 1980s and are defined as a set of multiple regional actors who bring resources into an ecosystem and collaborate with each other, ultimately leading to the creation and support of NVs. Potential actors include entrepreneurs, firms, investors, universities, and others supporting entrepreneurship (Spigel and Harrison 2018). Company builders as a relatively new actor within this ecosystem (Rathgeber et al. 2017). EEs develop organically as their significant characteristics such as culture, entrepreneurs, mentor networks, and entrepreneurial wisdom emerge from entrepreneurs (Spigel and Harrison 2018). Spigel and Harrison (2018) emphasize that the development of a culture takes time and can hardly be influenced by outside actors. Therefore, other outside actors can only assist in establishing a good foundation for such an entrepreneurial culture to develop, for instance, by connecting entrepreneurs with each other (Spigel and Harrison 2018). These actors bring in resources, which typically suit the unique requirements of start-ups. These resources represent, among others, the knowledge on entrepreneurial processes, such as business planning or funding. In general, EEs develop a broad knowledge base since they connect entrepreneurial networks with a variety of different backgrounds without igniting competitiveness among participants. Hence, it enhances collaboration, particularly with respect to the adoption of similar technologies and similar challenges faced (Spigel and Harrison 2018).

Within EEs it is crucial to ensure that entrepreneurs can access resources. Usually, start-ups are not part of an ecosystem immediately due to their novelty.

Therefore, it is decisive that start-ups actively engage in developing their network to achieve a good reputation that allows them to access an EE and its resources. It requires sufficient connections and mutual trust to build a powerful network. Functioning connections are crucial for participants of the ecosystem to access existing resources. Hence, it requires time for networks and EE to develop. Besides establishing strong connections, the need for time can be attributed to the timely process of accumulating resource variety. As Spigel and Harrison (2018, p. 160) put it: "Key ecosystem resources, such as entrepreneurial knowledge, financial capital, successful mentors, and skilled workers, are created or attracted over time by entrepreneurial activity and public investment. As successful entrepreneurs exit the ecosystem, the resources are "recycled" throughout the ecosystem and can be used by others." This statement suggests that experiences remain within the ecosystem over the long run. Their accessibility depends on the resource flows, hence, on the connectivity within the EE. However, some resources can leave the ecosystem creating disruptions, such as leaving participants or interactions outside the ecosystem. The stronger and more resilient an ecosystem becomes, the better it can absorb disruptions. Experiences regarding entrepreneurial failures can be passed on as well, enabling entrepreneurs to learn from past mistakes of other entrepreneurs within the EE. It shows that an entrepreneur's participation in EEs can be beneficial as they access a variety of valuable resources (Spigel and Harrison, 2018).

Innovation and Collaboration in the German Mittelstand

The German Mittelstand is a major driver of Germany's the economic performance though high employment rates and economic value (Berlemann and Jahn 2016, BMWI 2018, Pahnke and Welter 2019). This economic importance can be attributed to many Mittelstand firms competing on a global scale (BMWI 2018). The German Mittelstand firms are categorized as small- and medium-sized enterprises (SME), which are family-owned and managed with a maxium of 499 employees (Berlemann and Jahn 2016, Klodt 2018, Massis et al. 2018, Pahnke and Welter 2019). Thus, Mittelstand firms tend to possess relatively strong equity shares with the owner or family maintaining significant influence on the strategic and operational management (BMWI 2018, Welter et al. 2015). The firm's mindset stems from being owner-managed and translates into feeling a sense of belonging to the firm (Pahnke and Welter 2019). Key attributes are a conservative attitude towards external financing, long-term orientation over generations, a high level of specialization, local ties and embeddedness, and their close relations with their employees (Berghoff 2006, Massis et al. 2018). Due to their size, Mittelstand firms deal with resource constraints, resulting in limitations in product and service developments and commercialization (Massis et al. 2018). Therefore, they focus on niche markets and stand out with their customer-centric innovativeness (Berlemann and Jahn 2016, Massis et al. 2018). This focus on specialized innovation leads to a competitive advantage, providing the opportunity to leverage expertise, capabilities, and networks to achieve high innovation output (Duran et al. 2016). Mittelstand firms pursue globalization strategies to internationally

exploit their expertise, allowing them to minimize risk and increase revenues while focusing on their core resources and strengthening their competitive advantage (Berghoff 2006, Massis et al. 2018).

Massis et al. (2018) emphasized that Mittelstand firms can overcome resource constraints by strategically engaging with their business environment, network, and ecosystem. The study of Narula (2004) found that SMEs with a certain internal absorptive capacity can benefit from innovation-related activities in their network as they understand and adopt results. In addition, Mittelstand firms have access to a local talent pool due to their established position as an attractive employer offering stable jobs (BMWI 2018, Massis et al. 2018). Employees are highly satisfied as the firm takes responsibility for the employees, the ecosystem, and promotes flat hierarchies and high employee involvement (BMWI 2018, Massis et al. 2018, Pahnke and Welter 2019). It results in low employee turnover rates, supporting the retention of know-how and tacit knowledge in the firm (Sirmon and Hitt 2003). Furthermore, another constraint is unrealized growth opportunities due to the owner's reluctance to share control and declining capital investments from external parties (Massis et al. 2018). The conservative mindset limits internationalization strategies to exports and foreign subsidies instead of exploiting opportunities with joint ventures or other financial collaboration (Massis et al. 2018). The study by Miller et al. (2013) found that a long-term orientation would create resilience that overcomes resource constraints and facilitates long-term innovation. Schlepphorst and Schlömer-Laufen (2016) observed that family-owned businesses actively engaging in research and development (R&D), improved their growth likelihood. These findings provide opportunities for traditional Mittelstand firms.

Berlemann and Jahn (2016) found that owner-managed SMEs achieve above-average innovation output, which is attributed to the owner's strong and fast decision-making (power). It contradicts the perception of Mittelstand firms as "low growth, low-tech and non-innovative" (Pahnke and Welter 2019, p. 346). However, this perception seems to be driven by a narrow perspective on innovation. The Mittelstand pursues a different approach to innovation than modern firms that are perceived as highly innovative (Pahnke and Welter 2019). For Mittelstand firms, formal R&D activities are less important due to their limited resource pool, instead they tend to focus their innovative capacity on continuing to develop their offerings (Pahnke and Welter 2019). Interestingly, evidence showed an increased risk-aversion by family-owned businesses with each generation, even when they actively engage in innovation (Decker and Günther 2017). Furthermore, the relative number of owner-managed SMEs has a significant positive impact on a region's innovativeness since more innovation activities are performed (Berlemann and Jahn 2016). In addition, Mittelstand firms establish strong connections with their stakeholders, including the local banking system, local institutions, such as school and research centers, and the local community. They interact with these stakeholders and establish mutually valuable relationships. Thereby they overcome persisting resource constraints, leverage their competitive advantage, and support innovativeness in the long run (Massis et al. 2018). This traditional long-term oriented model is increasingly challenged by today's volatile fast-changing

environment that dissolves organizational boundaries (Pahnke and Welter 2019). Competing in globalized economies is aggregated due to competition and faced-paced technological developments as their strategic disadvantage in size significantly limits their resources for R&D (Narula 2004).

University-Mittelstand Collaborations

In literature, these collaborations are referred to as university industry collaborations (UIC), providing established firms access to a considerable amount of accumulated knowledge, strong scientific research, and extensive university networks (Stagars 2015). UIC occur in several different forms. Ankrah and Al-Tabbaa (2015) differentiate between the formal and informal, and the focused/ targeted and non-targeted UIC organization. In this light, joint ventures represent the formal targeted agreement characterized through a high level of organizational involvement that both parties capitalize on while a more informal form of UIC are joint lectures (Ankrah and Al-Tabbaa 2015). Thus, UICs provide both parties the opportunity to benefit from each other's resources – firms giving universities access to their practical experiences and universities sharing their innovations and human capital, which may enhance R&D (Caloghirou et al. 2001). As UICs are primarily aligned towards innovation, they benefit larger firms more than European SMEs that do not meaningfully engage in innovation (Community Innovation Survey, in Apa et al. 2020). Universities prefer long-term collaborations with larger consortia or firms with sophisticated R&D (Caloghirou et al. 2001), although UIC significantly improve the innovative capacity of SMEs (Lasagni 2012). Therefore, they are essential for SMEs in traditional industries, which lack the absorptive capacity required to benefit from such collaborations with universities (Spithoven et al. 2011). Notably, these collaborations are organic and typically evolve and improve over time (Steiber and Alänge 2020). Absorptive capacity is a requirement to effectively leverage a firm's network and the resulting innovation, allowing a firm to leverage its position by identifying and capitalizing external knowledge and adopting it as an impactful innovation (Cohen and Levinthal 1990). SMEs with good absorptive capacity achieve more technologically impactful innovations by investments in R&D and openness, which captures and processes external created value (Messeni Petruzzelli and Murgia 2021, Cohen and Levinthal 1990, Spithoven et al. 2011). Thus, if a firm possesses a certain absorptive capacity, it can benefit from engaging in open innovation activities such as UIC (Spithoven et al. 2011). Apa et al. (2020) found evidence that SMEs involved in informally organized UICs benefit in their innovation performance. The informal exchange of tacit knowledge and establishing a mutual relationship are essential, indicating their relevance in formal collaborations as well. Another finding suggests adopting internal R&D structures supports innovation regardless of UIC. It improves the absorptive capacity by enhancing the general innovation performance and supporting knowledge transfers of more formal collaborations (Apa et al. 2020). It is in line with Messeni Petruzzelli (2011) who found that UICs between universities and firms led to complementary technological competencies and long-term, lasting relationships. In support, Messeni Petruzzelli and Murgia

(2021) identified that technological relatedness improved the technological impact of spillovers.

Company Builders

Company builders have existed since 2007 and were developed to create new ventures and establish companies, mainly by making available dispensable company internal resources (Rathgeber et al. 2017, Scheuplein 2017). CBs are defined as a type of organization more heavily involved in building, financing, and supporting start-ups with a systematic process (Peter 2018, Rathgeber et al. 2017). CBs are categorized into two types, classic and corporate CBs (Rathgeber et al. 2017). Companies facing the challenge of being innovative in the fast changing, competitive environment adapt the corporate CB type by developing strategic relevant business division or models to integrate them into the existing business (Alpkan and Gemici 2016, Peter 2018). In contrast, a company pursuing the classic CB type aims at establishing new ventures or developing business models to sell them profitably (Peter 2018).

Generally, CBs independently support the ideation processes, guide founders, and help raise funds. In return, CBs hold majority shares and control the new venture's capital and consequently, greatly influence its development beyond the initial start-up phase (Rathgeber et al. 2017). The CB aims at creating new ventures and selling them in the market with a high return on investment (Steinbrenner 2021). Compared to start-up incumbents or accelerators, CBs distinguish themselves in the time horizons they actively are involved with new ventures (Peter 2018). While accelerators provide shorter support between three and six months and incumbents six to up to five years, some CBs support more than five years. Accelerators provide start-ups with the access to infrastructures and resources. Similarly, incumbents make available infrastructures and venture creating resources to ensure economics support (Peter 2018). Beyond providing start-ups with an infrastructure and relevant resources, CBs create independent companies and get actively involved in development processes, marketing, scaling, and selling of the startup (Peter 2018). Conclusively, all three types follow the goal of venture growth and generating a return on investment, however, the CB is more heavily involved (Peter 2018).

Methodology

In the manner of Albers et al. (2013) a qualitative research approach was chosen to gain a deeper understanding of this new research field. More precisely, a multi-method qualitative analysis was conducted to answer the research question in a holistic manner. Thus, it entailed a multiple case study with ten selected German CBs and seven expert interviews, which underline the explanatory nature of this research (Niederberger and Wassermann 2015, Yin 2017).

The case study analyzed existing CBs regarding their organizational structure and offerings on the platform and was based on a qualitative internet document

analysis. Regarding the CB selection, this work identified only relevant German CBs since this research focuses on the cooperation between German Mittelstand firms and universities in Germany. The search terms used in the selection process were 'Company Builder Germany', 'Venture Builder Germany', 'Venture Studio Germany' and 'Start-up Factory Germany'. The selection process was enhanced with additional criteria to assess each CB's relevance for the analysis. Based on this selection, a sample of ten CB was constructed, encompassing six independent, three corporate, and one university backed CB. The three corporate CBs were wattx by the Viessman Group, BEAM by the Beumer Group and lastly Xpress Ventures by Fiege Logistics. The independent CBs included Rocket Internet, 1648 factory, Mantro, etventure, Fostec Ventures, and Bridgemaker. The university backed CB was UnternehmerTUM by the Technical University Munich. The primary data on the CBs was collected on the respective CB website. In some cases, additional secondary data was collected as no sufficient information on all criteria were found in the initial search. The data collected was analyzed regarding general information on the CB, the role of the German Mittelstand, organizational structures, the support duration of new ventures, the ecosystem, offerings, provided services, and resources. Regarding the organizational structures, the framework proposed by Köhler and Baumann (2015) was applied. It assessed the CB's organizational structure based on four characteristics, namely: NV ownership, decision-making, incentives, and collaboration. The collaboration characteristic was assessed with the ecosystem analysis as it focuses on the CB network and collaboration potential.

The guided expert interviews were conducted with experts to gain a primary understanding of the Mittelstand firms' expectations and requirements, the collaboration potential, and CB suitability from an academic perspective. The interviewees were contacted via LinkedIn and e-mail. The final sample size for the guided expert interviews amounted to seven in total as these were the only available after initial contact. Five experts held a job position in a German Mittelstand firm. The criteria for being considered a German Mittelstand firm were family-owned or family-managed firm, the pursuit of high equity ratio, local integration, and long-term strategic focus. Each selected expert was well versed in digitalization, innovation, and new business management. The other two experts were researchers in innovation coaching and radical innovation, respectively, and were academic employees at the HKA. Almost all interviews were conducted via video calls due to COVID-19 pandemic and lasted between 52 and 95 minutes. Only one interview took place in person at one of the firms. The interviewees consented to recording and taking notes during the conversation. Subsequently, the interviews were transcribed and used for the analysis. The interview questions were categorized in general questions on the firm and interviewee position, followed by question on the topic of innovation, collaboration, and ecosystems. Concerning innovation, it was inquired whether the expert regarded the company as innovative and what approaches to innovation the company engaged in (radical or incremental). Furthermore, it was asked how close innovation related to their core business, whether innovation took place in collaboration with external partners, and what innovation challenges were encountered. The final interview

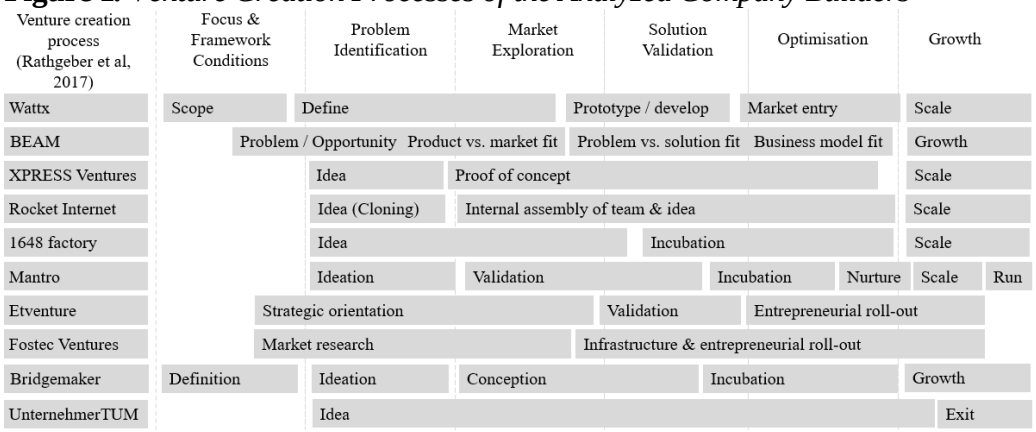
section questioned the interviewees on the CB requirements and the offerings, and a potential interest in a collaboration.

Analysis & Results of the Analyzed Company Builders

Organizational Structure

The analysis focusing on the organizational structure according to Köhler and Baumann (2015) derived the following results. The corporate CBs and the university CB appear more transparent in disclosing ownership structures (primary sourced) while the information on the independent CBs was found in a secondary search. The corporate CBs give their NS different share portions. XPRESS Ventures (2021) stated that NV founders receive the majority share ownership. Wattx holds between 25 to 50 percent of shares whereas the founding team owned at least 50 per cent of shares (Gruenderszene 2016, WiWo Gründer 2018). Beam (2020a) follows a more elaborate approach towards ownership. Founders receive between 15 and 80 percent of shares, depending on whether the NV operates in the intra-logistics industry (the core business) or the logistics industry. In the latter case, BEAM provides the founders with more than 50 percent of shares prior to the third funding stage, known as the Series A funding stage (Beam 2020a). The university-driven CB UnternehmerTUM supports the NVs through neutral partnerships, leaving the majority share ownership with the founding team (UnternehmerTUM 2021a). Derived from secondary data, the independent CBs follow two different approaches. Rocket Internet follows a hierarchical approach as it owns the NV's majority shares while the founding team receives an attractive salary next to the minority share ownership (Köhler and Baumann 2015). In contrast, Bridgemaker provides the founding team with the majority shares (Hombach 2018). Concerning the decision-making structures for the NVs, wattx (2020d) mentioned having simple and pragmatic structures to achieve independent and suitable decision-making for their NVs. 1648 factory (2021d), etventure (2020a) and mantro (2021a) left their NVs with agile decision-making structures. Only Rocket Internet stood out with its highly standardized and data-driven approach towards decision-making (Köhler and Baumann 2015). Moreover, half of the CBs centrally managed the idea- and knowledge management (1648 factory 2021b, Beam 2020b, Köhler and Baumann 2015, mantro 2021b, wattx 2020d). Most CBs focus on incentivizing by providing shares (Hombach 2018, Köhn 2019, UnternehmerTUM 2021a, wattx 2020d, XPRESS Ventures 2021). Only BEAM and Rocket Internet provide additional monetary compensation via a salary, which might stem from BEAM's close relationship with the Mittelstand firm Beumer Group and Rocket Internet's data-centric performance monitoring (Beam 2020a, Köhler and Baumann 2015).

Figure 1. *Venture Creation Processes of the Analyzed Company Builders*



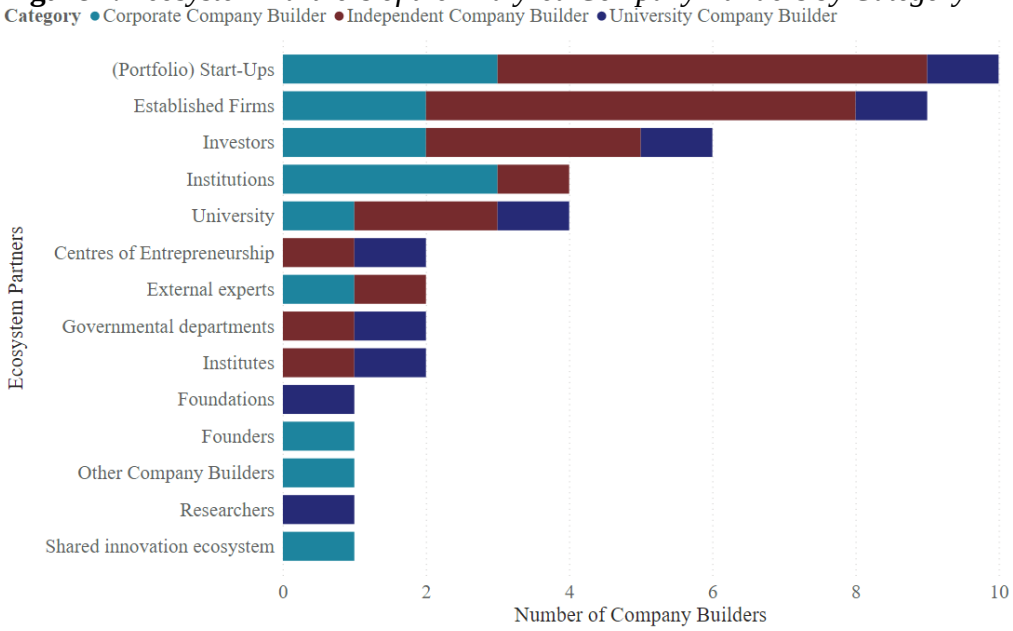
The CBs indicate a long-term support duration of three to five years or more as they seek a long-term partnership with the NVs (1648 factory 2021d, Beam 2020c, 2020d, Bridgemaker 2021b, etventure 2020a, FOSTEC Ventures 2017a, Köhler andBaumann 2015, mantro 2021b, UnternehmerTUM 2021b, wattx 2020d, WiWo Gründer 2018, XPRESS Ventures 2021). The long-term orientation is in line with previous findings as CBs tie their support to their venture creation process, including the scaling or growth phase. As seen in Figure 1, which maps the venture creation processes of the analyzed CB platforms according to Rathgeber et al. (2017), the CBs tend to continue collaborating with successfully scaled ventures by moving them into their portfolio as ecosystem partners (1648 factory 2021d, Beam 2021, Bridgemaker 2021b, etventure 2020a, FOSTEC Ventures 2017b, KI Berlin 2021, mantro 2021c, Rocket Internet SE 2021, XPRESS Ventures 2021). Only the university CB UnternehmerTUM (2021c), does not mention a portfolio of start-ups but considers NVs an integral part of their ecosystem.

Ecosystem Partners

Figure 2 shows the CBs' ecosystem partners. Next to the NVs integrated into the ecosystem as partners, all CBs collaborate with established firms. More precisely, FOSTEC Ventures (2017b) collaborates with SMEs, the corporate CB wattx focuses on Mittelstand firms (KI Berlin 2021). Unlike the other CBs, the corporate CB BEAM collaborates with their partnering institution the Beumer Group and even provides the NVs access to their B2B customers via their ecosystem (Beam 2020c). The university CB has established firms as their ecosystem partners and only offers the venture building to Mittelstand firms (UnternehmerTUM 2021c, 2021d). In addition, some CBs collaborate with universities, external experts, and researchers, which are considered essential ecosystem partners. XPRESS Ventures (2021), for instance, collaborates with legal experts to create legally sound NVs. Beam (2020b) mentors and advises NVs, which highlights their advisory network of experts supporting the NVs. XPRESS Ventures (2021) has universities and research institutes as their ecosystem partners. 1648 factory maintains close collaboration with universities,

which gives access to high-potential talent for their projects (Dortmund Startups 2020).

Figure 2. *Ecosystem Partners of the Analyzed Company Builders by Category*

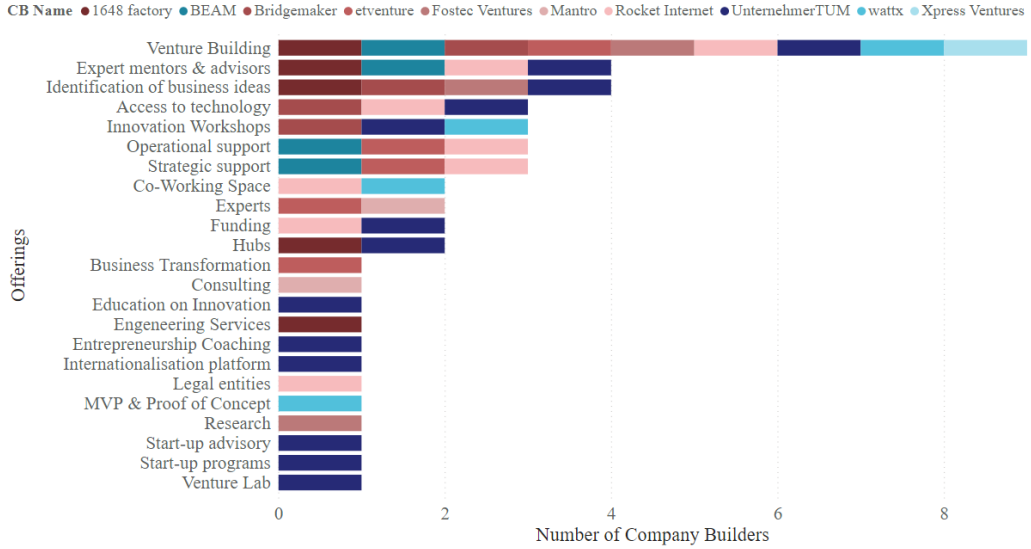


Offerings

As illustrated in Figure 3, all CB types offer venture building. The analysis shows that the CBs offer a different combination of services concerning venture building, such as identifying business ideas for the NVs (1648 factory 2021c, Bridgemaker 2021c, FOSTEC Ventures 2017a, UnternehmerTUM 2021b). In line, Beam (2020d) strategically matches ideas or identified business opportunities to suitable prospective founders. UnternehmerTUM (2021b) offers different services that provide entrepreneurial support to founders, including entrepreneurship workshops, competencies trainings, and entrepreneurship courses. Concerning the entire venture building process, Beam (2020d), etventure (2021) and Rocket Internet SE (2021) offer operational and strategic support for the NVs and potential partners. Another common offering is the access to a network of multi-disciplinary experts fully supporting the NVs (etventure 2020b, mantro 2021b) or mentoring and advising them with their skilled employees, such as senior experts in case of Rocket Internet (1648 factory 2021a, Beam 2021, Köhler and Baumann 2015, UnternehmerTUM 2021d). The CBs offer innovation workshops, which take place independently from venture creation (Bridgemaker 2021c, wattx 2020c, UnternehmerTUM 2021b). Wattx (2020c) offers this service as a measure to methodologically develop and validate a business idea. The university CB supports new product creations and strengthens the capabilities of entrepreneurs and executives regarding entrepreneurship and innovation (UnternehmerTUM 2021b). Lastly, services include the access to different additional material resources for the NVs, such as technological tools, software, and new technologies, which

assist the NVs in establishing an infrastructure for their business (Bridgemaker 2021a, UnternehmerTUM 2021c, Köhler and Baumann 2015). UnternehmerTUM (2021b) allows access to a garage equipped with machinery and software to assist NVs and start-ups. Additionally, the CBs provide a co-working space (wattx 2), a campus with a shared office space (Köhler and Baumann 2015), or innovation and focus area hubs (1648 factory 2021a, UnternehmerTUM 2021b). Conclusively, the CBs offer a variety of services that provide a systematic access to experts, their know-how and resources essential in new venture creation.

Figure 3. *Offerings of the Analyzed Company Builders*



Analysis & Results of the Expert Interviews

Innovation in the German Mittelstand

Innovation in the German Mittelstand is cloud-based software products based on subscription model (Interviewee 2), AI recognition in self-service areas in supermarkets, the smart service adoption to automate inventory management, the minimization of down-times due to remote support, and networked modular production systems, decentralized profiling system, and uniquely customized metal profiles for electric vehicles (Interviewee 2, 2021; Interviewee 4, 2021; Bizerba Innovations 2021). Adapting to new technologies as an integral part of new product development, nurturing ecosystem thinking, and meeting future needs with innovative activities embedded throughout the business, contributes to innovativeness (Interviewee 1, 2021, Interviewee 2, 2021; Interviewee 3, 2021). As a B2B business and part of the critical infrastructure, maintaining continuity is crucial (Interviewee 3, 2021). Being able to satisfy a customer's individual need and solve concomitant problems with individual product customizations developed from scratch shows a company's innovation capabilities (Interviewee 5, 2021). Within the sample of Mittelstand firms, only one company was not innovative as

the internal structure focused on past successes instead of utilizing opportunities (Interviewee 4, 2021).

Approach to Innovation

Two Mittelstand firms follow an organic approach towards innovation as innovation stems from internal activities (Interviewee 2, 2021; Interviewee 3, 2021). In contrast, in an inorganic approach suitable new technologies are acquired externally (Interviewee 1, 2021). Concerning exploitative and explorative innovation, it was considered an integral part of business by most firms. Thus, the majority engaged in both innovation activities. They dedicate business units or positions to screen new technologies and adopt them into the business (Interviewee 1, 2021; Interviewee 2, 2021; Interviewee 3, 2021). Although, balancing exploration and exploitation is an integral part of business (Interviewee 5, 2021), within the B2B environment exploitative activities and incremental innovation weight more due the necessity for continuity (Interviewee 3, 2021). From an academic perspective, the researchers emphasized that firms need to balance exploitative and explorative, and incremental and radical innovation to manage organizational ambidexterity (Researcher 1, 2021). There is evidence of the Mittelstand's tendency to innovate incrementally (70 to 80 percent) as they focus on existing business models and only have limited resources. The Mittelstand lacks a suitable way to innovate radically (Researcher 2, 2021). Regarding open or close innovation, three firms engage in close innovation close to their core business but also exerted innovation potential beyond the core business by implementing separate business units (Interviewee 1, 2021; Interviewee 3, 2021). Interviewee 2 (2021) believes innovation occurs close to the core business as it encompasses strategic software services that supported their products. Research showed firms must consider innovations close and beyond the core business to maintain a sustainable and successful business model (Researcher 1, 2021). Concerning the collaborative innovation potential, the researchers stressed the importance of collaborative innovation to better understand today's complex environment. Researcher 1 believed that collaborative innovation with universities is a source of inspiration and creativity for firms, which provides access to free thinking students, new opportunities, and diverse participants. Thus, engaging in open innovation represents a potential measure for a collaborative approach towards innovation. Researcher 1 (2021) stressed the co-creational nature of open innovation could leverage the participants' competencies. However, Researcher 2 (2021) claimed that the Mittelstand was reluctant in participating in these initiatives as they traditionally worked on their own, although offering higher efficiency and suitability and fostered radical innovation. A glance into practice showed that collaborative innovation and approaches were adapted within the firms. Interviewee 1 reported participating in accelerator programs and external open innovation initiative such as Hackethons. However, these initiatives were considered PR measures without proof of success. Interviewee 5 (2021) claimed collaborating with different partners within their network and participating in European research projects and open innovation initiates, which generate multiplication effects

(Interviewee 5, 2021). Interviewee 2 (2021) reported participating in external collaborative innovation initiatives with publicly sponsored proof of concept programs and pursuing cooperation and firm acquisitions. Engaging in open innovations appears to be a good measure for the future (Interviewee 2, 2021). Interviewee 3 (2021) disclosed predominantly investing and collaborating with start-ups and consultants, and proactively participating in initiatives such as the SAP and Microsoft innovation labs as an early adopter within the Mittelstand.

Challenges and Constraints to Innovation in the Mittelstand

The researchers held two opposing views on challenges and constraints to innovation within the Mittelstand. Researcher 1 (2021) claimed the Mittelstand has limited resources to engage in open innovation and collaboration despite a high potential in such initiatives. Contradicting, Researcher 2 (2021) pointed out the Mittelstand possessed sufficient resources but lacked the knowledge and competencies required for innovation. Both researchers argued that personnel/ human resources as the main constraint. Furthermore, resource management was not ideal, which created a risk-averse attitude towards innovation (Researcher 1, 2021). In this light, Researcher 2 (2021) referenced studies claiming smaller firms having higher employee efficiency compared to Mittelstand firms. The challenges caused through inefficient resource management and personnel was reported by the firm representatives as well. Due to lacking expert knowledge, for instance, in distribution and utilization channels, resources were not managed efficiently leading to capacity shortages (Interviewee 2, 2021; Interviewee 3, 2021). Interviewee 4 (2021) experienced the challenges from employees as the firm's incentive structure and mindset does not promote innovative thinking. Furthermore, internal structures and decision-making processes were not designed for innovation and future-orientation (Interviewee 4, 2021). Further challenges albeit manageable were achieving successful go-to-market with inventions, employee resistance, ensuring feasibility, accessibility, and value of future innovations (Interviewee 2, 2021; Interviewee 3, 2021). Lastly, Interviewee 5 (2021) viewed innovation naturally as a challenge due to the necessity of courage, willingness, and money to implement it.

Collaborations & Ecosystem

All interview expert agreed their firm/university belonged to an entrepreneurial ecosystem. Regarding the Mittelstand firms, the interview partners indicated different participation forms and tasks within the entrepreneurial ecosystems. Interviewee 1 (2021) shared they established their own ecosystem by participating in acceleration programs and acquiring start-ups. In comparison, interviewee 2 (2021) reported that they focused on establishing an internal start-up culture and participating in publicly sponsored projects. The other firms partnered with different actors like research, start- ups, and other projects (Interviewee 3, 2021; Interviewee 4, 2021; Interviewee 5, 2021).

The reasons for participating in EE were to gain mutual benefits with the partners resulting from knowledge exchange and developing solutions together (Interviewee 1, 2021; Interviewee 4, 2021). Furthermore, it provided access to a new generation of founders, process structures, and technologies, which can be transferred and leverage to the own business (Interviewee 1, 2021). Similarly, it is deemed beneficial in generating new ideas and valuable business opportunities (Interviewee 5, 2021). Interestingly, EE participation created an indirect benefit by establishing a positive reputation and networking opportunities (Interviewee 2, 2021).

From a research perspective, a university's role in an entrepreneurial ecosystem comprised three core tasks: research, education, and innovation (Researcher 1, 2021). The research task provides recent academic insights while the educational task includes transferring research findings via lectures and developing student competencies (Researcher 1, 2021). The innovation task fosters an innovative and entrepreneurial culture by integrating it into education and research (Researcher 1, 2021; Researcher 2, 2021). Thus, universities give their students valuable opportunities by leveraging the exchange with other ecosystem participants, such as firms and start-ups, and building a sound academic knowledge base (Researcher 2, 2021). In return, the university's reputation, entrepreneurship, and the acquisition of prospective students and projects is positively influenced (Researcher 1, 2021).

Collaboration with Start-ups

Within the sample, collaborations with start-ups were highly pursued and created positive and negative experiences. Interviewee 1 stated that relevant start-ups were acquired by applying a majority shareholding strategy without any exit strategies (Interviewee 1, 2021). In contrast, Interviewee 4 and 5 followed a cooperative strategy, which entailed business relationships and partnerships with relevant start-ups. Collaboration with start-ups was deemed positive as start-ups work professionally and have know-how, which diminished the firm's weaknesses and advanced its scalability through network effects, decentralization, and globalization (Interviewee 1, 2021; Interviewee 4, 2021). Furthermore, it increased firm reputation and served as motivation for existing employees to adapt innovative thinking (Interviewee 4, 2021). However, collaborations with start-ups were experienced as challenging. Externally, global start-up scouts and current approaches towards collaborations were limitedly successful due to the COVID-19 pandemic (Interviewee 1, 2021). Moreover, it was challenging to mediate the collaborating partners' requirements, needs, and goals (Interviewee 1, 2021; Interviewee 4, 2021). Lastly, the interviewees stated start-ups suffer from overconfidence, leading to falsely assessing their strengths and weaknesses due to their lack of experience (Interviewee 1, 2021; Interviewee 5, 2021). More precisely, Interviewee 5 (2021) commented "[...] there are great illusions present". From a start-up perspective, it was reported that start-ups had difficulties in finding and contacting a firm representative. Thus, Interviewee 2 (2021) shared the firm only indirectly collaborates with start-ups via publicly sponsored projects.

The researchers collaborated with start-ups in lectures and innovation teaching projects, which provides start-ups with methodological support. Nonetheless, it can be challenging as such innovation projects lack followed up after a semester of collaboration (Interviewee 1, 2021).

University – Mittelstand Collaboration

University-Mittelstand collaborations are experienced within the sample. The researchers claimed they mostly consisted of guest lectures, theses collaborations, workshops including problem solutions by students, and transferring educational formats and research findings into practice (Researcher 1, 2021; Researcher 2, 2021). It was highlighted that the access to the management of Mittelstand firms is alleviated, which in turn leads to a higher level of support for collaboration projects (Interviewee 2, 2021). Especially for research, firm collaboration is an opportunity to transfer research findings into practice and reveal the founding potential embedded in research (Researcher 1, 2021). The experts from Mittelstand confirmed collaborations with universities through guest lectures, collaborations for theses and dissertations, and participating in research and innovation projects (Interviewee 3, 2021; Interviewee 4, 2021; Interviewee 5, 2021). The Mittelstand favored the collaboration as it increased reputation, offered opportunities for talent acquisition and PR activities, and provided access to new external ideas outside firm boundaries (Interviewee 1, 2021; Interviewee 2, 2021; Interviewee 3, 2021; Interviewee 4, 2021). In addition, the exchange between scientific research and experts based on methodological knowledge and high-quality frameworks gives insights at an early stage of product development (Interviewee 3, 2021; Interviewee 4, 2021).

Although collaborations between university and the Mittelstand are common, the interviewees disclosed aspects deemed challenging. The different structures between the participants, managing intellectual property (IP) and other rights, and the high level of bureaucracy were viewed as obstacles in the fast-paced innovation environment (Researcher 2, 2021; Interviewee 3, 2021; Interviewee 5, 2021). The Mittelstand, specifically, experienced a lack of precision in tendering, a tendency of universities to pursue non-binding project, and difficulties finding relevant universities, study programs, and contact persons (Interviewee 5, 2021; Interviewee 1, 2021). It was further highlighted that the usability of research results was limited as researchers were reluctant to share their data sets, especially regarding artificial intelligence and machine learning (Interviewee 3, 2021). Furthermore, it was criticized that the project scopes were too broad, instead of focusing on developing specific services or solving concrete issues (Interviewee 3, 2021). Lastly, interviewee 4 (2021) believed students suffer from false self-assessments regarding their strengths and weaknesses. They lacked work experience, which impacted the quality of project results.

Requirements to Participate in a Company Builder

The interviewed researchers were familiar with the concept of company builders (researcher 1, 2021; researcher 2, 2021). However, more than half of the experts at the Mittelstand firms had not heard about company building prior to the interview (Interviewee 1, 2021; Interviewee 2, 2021; Interviewee 5, 2021). The remaining interviewees indicated to achieve multiple goals when participating in a CB. Firstly, it should enhance employer branding and recruiting regarding generative thinking, and promote social responsibility (Interviewee 1, 2021). Secondly, it must generate value to compensate for the time invested, such as knowledge, additional services or products, or the access to new markets (Interviewee 4, 2021). In case of acting as strategic investors, the experts expect matching with teams that solve a specific issue, which in turn creates NVs (Interviewee 2, 2021; Interviewee 3, 2021; Interviewee 4, 2021). Lastly, participating in the network should lead to exchanging ideas on innovative topics and accessing the respective innovation power (Interviewee 2, 2021; Interviewee 5, 2021). The researchers would contribute with their research, which builds the foundation of NVs (researcher 1, 2021; researcher 2, 2021). It includes to systematically follow up on research results and innovation projects as a university aims to attract students and researchers (researcher 1, 2021; researcher 2, 2021).

The experts mentioned several factors influencing their decision to participate in a CB. One crucial factor is the clear definition of expectations and responsibilities of the different parties (Interviewee 1, 2021; Interviewee 2, 2021; Interviewee 4, 2021). More precisely, it was deemed essential that a NV maintains its freedom rather than being forced into the established firm structure (Interviewee 2, 2021). A good collaboration requires a balance between benefits and the associated costs, a reliable and formal framework with assigned contact persons across projects, and sufficient support (Interviewee 4, 2021). Unsurprisingly, the appropriate match between the founding team's idea and the firm's issue was crucial (Interviewee 3, 2021). In this regard, the experts require experience, competencies, and expert knowledge in the respective business area, especially within the B2B segment and process optimization (Interviewee 3, 2021; Interviewee 4, 2021; Interviewee 5, 2021).

The desired benefits by the experts at the Mittelstand firms varied. Interviewee 1 (2021) claimed participating in a CB would only be desirable when scouting and access to start-ups at the growth stage would be offered as they only are interested in investing (Interviewee 1, 2021). The others desire access to new ideas, innovation, know-how, new methods, and access to potential founders, talent, experts, and networks (Interviewee 2, 2021; Interviewee 3, 2021; Interviewee 4, 2021; Interviewee 5, 2021). Considering networks, quality indicators incentivizing participation would be participants and ideas, an active alumni network, and the reputation of the sponsoring university (Interviewee 2, 2021). Most profoundly, the expert emphasized that the pursuit of an actual business with the intention of establishing a NV instead of mere research results should be focused on. Thus, an accurate match with prospective founders with a mature business idea with the appropriate Mittelstand firm within the CB that goes beyond research and analysis

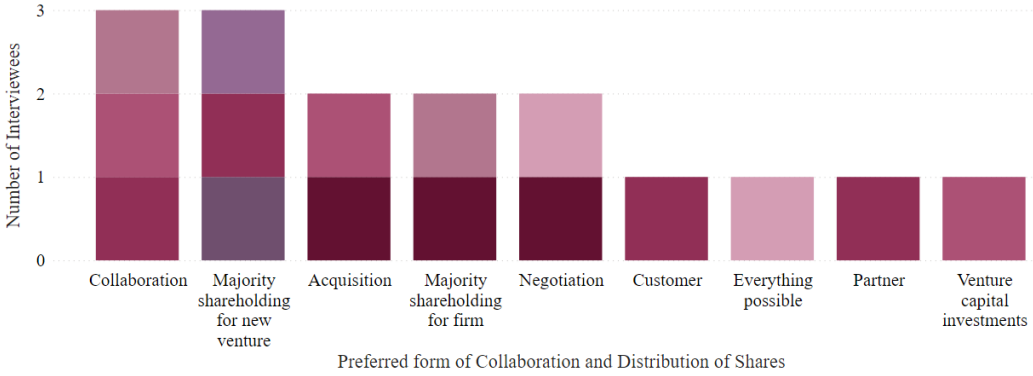
activities was the determining factor for the experts to participate (interviewee 3, 2021; Interviewee 4, 2021; interviewee 5, 2021). In comparison, the researchers desire to utilize their research results, distribute with, and market them (researcher 2, 2021). The CB's independence from universities makes participation more attractive as bureaucratic structures are avoided (Researcher 2, 2021).

The researchers and Mittelstand firms expressed some concerns regarding platform participation. Notably, the sample believed matching relevant academic insights with the company or prospective founders with the firm and identifying potential founders among students forming a well-functioning teams based on their personalities and skills would be challenging (Interviewee 2, 2021; Interviewee 3, 2021; Interviewee 4, 2021; Researcher 2, 2021). From a structural perspective, the CB's close collaboration with the university may aggravate transparent access for firms due to their different structures and processes (Researcher 1, 2021). Thus, university should not hold NV shares due to its bureaucratic and slow structures (Researcher 2, 2021). Moreover, Mittelstand firms saw a challenge in harmonizing their business processes, infrastructure, rules, and procedures with the emerging NVs (Interviewee 2, 2021). Lastly, managing IP was deemed difficult; particularly, attributing and compensating contributors or protecting data since public offerings or participating in projects of a CB may result in a competitive disadvantage (Interviewee 3, 2021; Researcher 2, 2021).

Relevant Services, Offerings, and Features of a Company Builder

The firms have different preferences for the collaboration with a NV and share distributions. Figure 4 presents the preference of each interview partner. The Mittelstand experts are depicted in pink while the researchers are shown in purple. Most prefer a collaboration form, which depends on case-specific negotiations with each NV (Interviewee 1, 2021; Interviewee 5, 2021). Both researchers emphasized the founders should receive the majority shares as they put in the effort to establish the NV and the responsibility lying with the CB to mentor the firm and protect the NV from a takeover by the firm (Researcher 1, 2021; Researcher 2, 2021). Some Mittelstand firms prefer to hold majority shares to gain a higher level of control (Interviewee 1, 2021; Interviewee 4, 2021), especially if the NV performs close to the firm's core business (Interviewee 3, 2021). One expert prefers share distribution according to the effort put into a NV, associated risks and competencies (Interviewee 5, 2021).

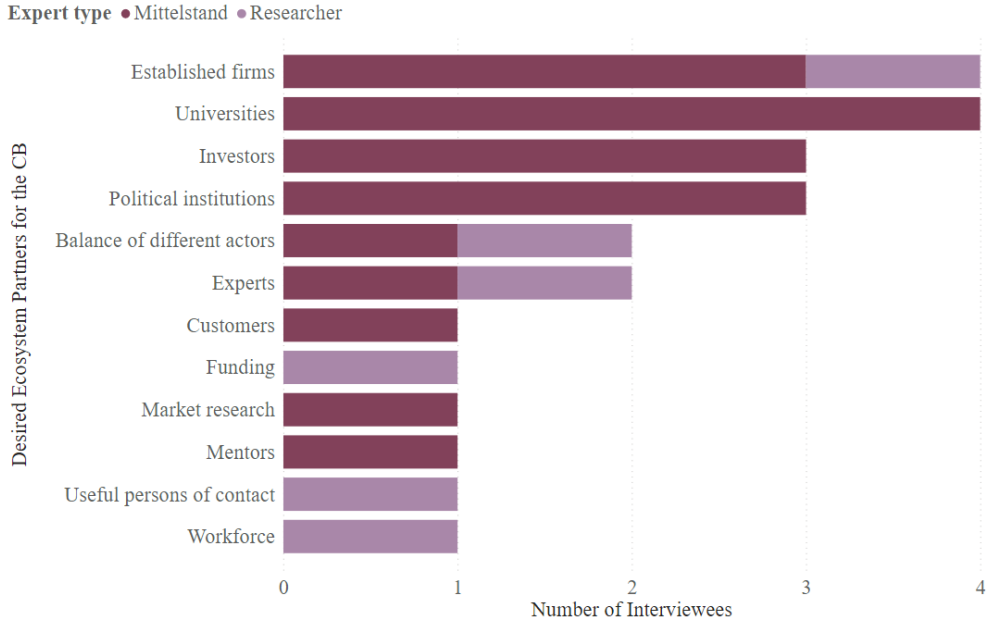
Figure 4. *Preferred Forms of Collaboration and Share Distribution of the Experts*



Regarding the collaboration duration with the CB platform and potential NVs, all experts prefer a long-term collaboration. It takes time and commitment to establish a network and to create a scalable business model (Interviewee 2, 2021; Researcher 2, 2021). Thus, the support should last until the NV can act independently, revealing collaborations are not time-dependent but depend on the goals of the project or business unit (Interviewee 1, 2021; Interviewee 2, 2021; Interviewee 3, 2021; Interviewee 4, 2021; Interviewee 5, 2021). As such, albeit regular exchange is welcomed, collaboration and participation on the CB might only last short-term over a specific project duration (Interviewee 1, 2021; Interviewee 3, 2021). In respect to support intensity, the level of support shifts over time. A NV likely requires less entrepreneurial and methodological support from academia once it established itself as a profitable business model, but increased support by the experienced Mittelstand firms to foster growth until it can manage operations independently (Interviewee 4, 2021; researcher 2, 2021; Interviewee 5, 2021). However, the support should be consistent or situational, which translate into regular meetings or panels taking place without impacting daily business or only when support is required (Interviewee 1, 2021; Interviewee 2, 2021; Researcher 1, 2021; Interviewee 4, 2021). Interestingly, it was mentioned the intensity of support may also depend on the benefits the parties receive.

Concerning the mechanisms of decision-making and processes, the experts prefer decentralized decision-making and a structured venture creation process, thereby maintaining the NV's autonomy, freedom, creativity, independence, and motivation (Interviewee 3, 2021; Interviewee 1, 2021; Interviewee 2, 2021). Thus, the CB should be a neutral party, mentor, moderator, and mediator between founders and established firms, and central network coordinator to generate value for the NV (Interviewee 2, 2021; researcher 2, 2021). Nonetheless, the Mittelstand firms want strategic influence as they are strategic investors who want a ROI; especially when the NV operates close to the core business (Interviewee 4, 2021).

Figure 5. *Desired Ecosystem Partners of the Experts*



The venture creation process should be adapted to the unique needs of each NV, should involve good project management, and phases to bundle decisions (Interviewee 4, 2021; Interviewee 5, 2021).

Looking at Figure 5 depicting the desired ecosystems partners of the experts, it is shown that a variety of actors are deemed valuable. Access to a broad network of actors is welcomed as every ecosystem partner is indispensable as their value depend on the unique requirements of a business idea (researcher 1, 2021; Interviewee 2, 2021; Interviewee 3, 2021; Interviewee 5, 2021). One researcher stresses that the ecosystem should include a broad set of experts, such as lawyers for legal questions (Researcher 1, 2021). Furthermore, a diverse set of established firms with respect to their size, industries, and regions, who contribute with their experience and by offering technological support (Interviewee 2, 2021; Researcher 2, 2021). The Mittelstand emphasized universities played an important role in the ecosystems since they provide knowledge, know-how, student ideas, their research, and projects (Interviewee 2, 2021; Interviewee 3, 2021; Interviewee 4, 2021). Political organizations and institutions predominantly contribute as a quality criterion (Interviewee 2, 2021). Regarding external investor involvement, three Mittelstand firms regard additional independent investors and venture capitalists as useful ecosystem partners (Interviewee 2, 2021; Interviewee 3, 2021; Interviewee 5, 2021), while refuted it due to their own role as strategic investor (Interviewee 4, 2021).

Table 1 reveals the CB platforms services and offerings highly desired by the experts categorized by general, resources, ecosystem, processes, and services. The Mittelstand experts are represented in each category while researchers main interest lies in the processes and services. The experts want to benefit by a good matching, the access to different resources on the CB platform, and the facilitated exchange with the different participants and the CB's ecosystem. The CB platform

should provide the methodological knowledge, such as lean start-up, design thinking, business model creation and entrepreneurial skills and tailor it to the needs of the emerging NV (researcher 1, 2021; Interviewee 2, 2021; Interviewee 4, 2021; Interviewee 5, 2021). The service of venture building is regarded as the core offering of the CB platform, which the previous data analyzed provided details on.

Table 1. *Desired Services of the Experts for the Company Builder Platform*

General	Resources	Ecosystem	Processes	Services
A good solution in as little time and effort as possible (interviewee 3, 2021)	Database of ideas (interviewee 2, 2021)	Access to alumni network (interviewee 1, 2021)	Interaction and communication to establish a relationship (interviewee 1, 2021)	Innovation coaching (researcher 1, 2021)
Access to platform (interviewee 4, 2021)	Access to ideas, founders, and researchers (interviewee 2, 2021; interviewee 4, 2021; interviewee 5, 2021)	Access to network and ecosystem (researcher 1, 2021; interviewee 4, 2021; interviewee 5, 2021).	Continuous support in new venture creation process (researcher 1, 2021; interviewee 4, 2021)	Mediation between the different partners (researcher 2, 2021)
matching idea & potential on different levels (interviewee 5, 2021)	Access to existing solutions (interviewee 4, 2021)	Funding (interviewee 5, 2021)	Digital exchange platform to facilitate collaboration (interviewee 2, 2021)	Events (interviewee 4, 2021)
			Regular structured exchange in panels (interviewee 3, 2021)	Problem space (interviewee 4, 2021)
			Controlling of activities and success (interviewee 2, 2021)	Informational newsletter on future initiatives and opportunities (interviewee 4, 2021)
			Systematic transfer of research into practice (researcher 2, 2021)	Option to build joint ventures (with other established firms) (interviewee 4, 2021; interviewee 5, 2021)
				Basic services for new ventures (interviewee 4, 2021)

Table 2. *Opinions of the Mittelstand Experts on Selected Company Building Offerings*

Interview Partner	Existing ideas/teams vs joint ideation	Innovation workshops	consulting	Expert network & mentors	Additional funding	Co-working space	Access to research	Access to technology	CB resource pool	Innovation hubs
Interview 1	Existing ideas & teams	No	No	Yes	No	Yes	Yes	Yes	Yes	Yes
Interview 2	Both	Yes	Yes	Yes	New venture's decision	Yes	Yes	Yes	Yes	Yes
Interview 3	Existing ideas & teams	Yes, only for firms	Yes	Yes	Investors instead CB fund	Irrelevant	Yes	NA	Yes	NA
Interview 4	Existing ideas & teams	Maybe	Maybe	NA	NA	Irrelevant	Yes	Yes	No	Yes
Interview 5	Both	Yes	Maybe	NA	Depends on contract	Irrelevant	Yes	Yes	Yes	Maybe

Based on the analysis of the existing CBs, Table 2 was constructed. It depicts eleven offerings, which were shown to the interviewees to assess their relevance. As shown, most Mittelstand firms prefer collaboration with existing founding teams due to the strength of start-ups in ideation (Interviewee 2, 2021; Interviewee 3, 2021; Interviewee 4, 2021; Interviewee 5, 2021), the rigid structures of established firms (Interviewee 2, 2021), and the better identification of marketable innovation potential by intrinsically motivated founders (Interviewee 3, 2021; Interviewee 5, 2021). The two firms that can generally imagine both, the collaboration with existing founding teams and a joint ideation, emphasized the

collaboration with existing teams to be more valuable for similar reasons (Interviewee 2, 2021; Interviewee 5, 2021).

Regarding providing innovation workshops three of the experts see value in this offering while one expert argued innovation workshops as a natural part of company building and should not be listed as a formal offer (Interviewee 2, 2021). Interviewee 5 (2021) highlighted the chance to enhance their creativity and inspiration through their participation in workshops and other training formats. Only interviewee 1 (2021) does not see value in innovation workshops since their firm prefers to perform these internally and source support from more established providers. Interviewee 4 (2021) sees danger in innovation workshops as they distract the founding teams from their core product and recommends this service only for established firms. Two experts favor consulting services as they are essential in respect to the methodology and are goal-oriented due to the innovative student mind (Interviewee 2, 2021; Interviewee 3, 2021; Interviewee 5, 2021). Three experts are hesitant regarding consulting and hold the CB should only consults on specific topics of expertise, like new digital trends (Interviewee 5, 2021). The CB should prove success with their venture building before competing with established consulting firms (Interviewee 4, 2021), underlying that established professional services firms might be more favored (Interviewee 1, 2021). However, the access to an expert network and mentors is favored as it is key for establishing NVs and receiving support as a founder (Interviewee 3, 2021). The CB should ensure that access and interaction with the most fitting experts is established or to offer a sounding board, symposium, or forum, which can act as an environment for communication and knowledge exchange (Interviewee 1, 2021). The opinions on the CB providing additional funding vary. Interviewee 1 (2021) showed no interest in it as they apply acquisition strategies. Furthermore, it is believed financial investors may contribute to the selection of marketable ideas, signaling what ideas are more likely self-sustaining as investors may bear more risk for the NVs than CB funds (Interviewee 2, 2021; Interviewee 3, 2021). Interviewee 5 (2021) takes on a neutral stand, pointing out the dependence on additional conditions. Thus, it is recommended to offer the NVs both options via the CB (Interviewee 2, 2021). Offering of a co-working space is irrelevant for the Mittelstand firms and depends on the NVs choice to locate (Interviewee 3, 2021; Interviewee 4, 2021). While interviewee 1 (2021) positively voted on the access to a temporary space as it is dedicated to creativity and innovation, interviewee 5 (2021) viewed it critically since innovation cannot be forced into a room.

All Mittelstand experts value the access to research under certain aspects. Research should be easily accessible either via a database, which holds relevant ideas, theses, results, and contact details (Interviewee 2, 2021; Interviewee 3, 2021). However, customized reports or pro-active matching with relevant specialists by the CB is preferrable as database research might be too time-consuming (Interviewee 3, 2021; Interviewee 4, 2021). Importantly, the NVs should not spend time writing papers that may distract them from their business (Interviewee 3, 2021).

Regarding access to recent technologies via the CB, it is considered valuable when easily accessible (Interviewee 1, 2021). It is considered a way to accelerate

the NV and should be customized to the respective business model (Interviewee 4, 2021; Interviewee 2, 2021). Most experts are positive about access to a resource pool provided by the CB. Particularly, if it consists of experts with a niche focus or students adding value to the NV or the firm (Interviewee 1, 2021; Interviewee 2, 2021). In contrast, interviewee 4 (2021) prefers to employ people when required, for instance, by offering positions for trainees or interns via the CB (Interviewee 4, 2021). Furthermore, innovation hubs can be a valuable offering for Mittelstand firms since they inspire the exchange with experts on specific issues and solution, and are goal-oriented (Interviewee 1, 2021; Interviewee 3, 2021; Interviewee 4, 2021). Interviewee 7 (2021) appeared critical and pointed out that innovation requires a certain level of interaction beyond industry interfaces.

Discussion

This study aimed to conceptualize a company builder that systematically transfers university research and innovation into the German Mittelstand. Analyzing existing company builders extracted, among others, insights into organizational structures, services, offerings, and ecosystem partners deemed essential for company builder. In a consecutive step, expert interviews were conducted to assess a customized company builder's relevance for firms and derive essential elements attracting Mittelstand firms to become ecosystem partners. It was confirmed that the entrepreneurial ecosystem consisting of university and industrial and governmental actors creates interaction and spill-over effects beneficial to the participating parties. The interviewees confirmed that the firms are long-term oriented and customer-centric to strive for continuous improvement and remain competitive. Collaborating with start-ups, universities and participating in innovation programs to create collaborative innovation is crucial for the Mittelstand to overcome resource constraints and access more external explorative activities. In this context, it was shown that choosing the most suitable partner for a collaboration is challenging for the firms and at times considered merely beneficial as a short-term PR measure. Thus, as part of a company builder's ecosystem, German Mittelstand firms can evolve their ambidextrous activities by leveraging their limited resources in well-matched innovative joint ventures and collaborations with universities and other actors. In turn, they gain access to new ideas, talent pools, and individuals with an entrepreneurial mindset backed by university research and knowledge while liberated from bureaucratic restrictions or time-consuming processes. Similarly, researchers can make use of the opportunity to transfer their insights into practice and gain a more holistic view with the practical input while disengaged from bureaucracy.

The conceptualized CB stands out by putting the systematic transfer of university research, innovation, and potential founders, derived from innovation projects at its center. Therefore, the CB's core activity lies in the venture creation process, with its success depending on connecting the right actors, accumulating relevant resources, and providing ongoing entrepreneurial and organizational

support. The CB's role as a mediator between the Mittelstand firms and the NV's founders is critical for the collaboration's success because it ensures the NVs autonomy to foster creativity and innovation and navigate the Mittelstand's influential power towards the NV. Next to the core activity, additional services and offerings aim at turning a NV into a scalable and marketable business. As such, connecting founders, experts, mentors, researchers, and alumni in (networking) events and forums, providing innovations hubs or problem spaces, and ensuring regular exchange, interaction, and good communication throughout the venture creation process in an easy and accessible manner should be provided and managed by the CB.

This exploratory study has encountered some limitations that give rise to future research. To the authors' knowledge, previous studies have not focused on the design of company builders, aimed at fostering collaboration between the German Mittelstand and universities to transfer their unique knowledge and experience in a venture-creating environment. The requirements for a company builder targeting the identified entrepreneurial ecosystem partners are based on a thorough analysis of ten existing company builders and seven expert interviews. The existing CBs were selected based on specific criteria, which might have led to the exclusion of CBs that might have added more valuable insights. These two sources revealed primary insight into a company builder customized for the German Mittelstand and universities. However, due to the small sample size of interview partners, this study should be considered a preliminary study that revealed a company builder prototype that requires further verification and validation. Based on this study's findings, future research should be quantitative and present current findings in a survey to a higher sample of the German Mittelstand and researchers. It could be analyzed to what extent the extracted organizational structure, services, offerings, and resources hold and are statistically significant to improve the CB's design. Furthermore, this study focused on the conceptualization of the CB regarding its core activity, services, and offerings. Essential aspects, such as monetization, participation requirements for potential ecosystem partners, or in what form the CB should be conceptualized (digital or physical), were not the subject of this study. Future research should identify the CBs revenue streams, entry requirements, and whether it is more relevant to be accessible digitally via a digital platform or should occupy a physical space. Finally, although the chosen researcher signaled a willingness to share their research findings, the firm representatives shared their experience about researchers being reluctant to share their research findings. Future research should put a higher focus on the researchers to assess to what extent sharing research-based knowledge and participating in a knowledge-sharing environment, such as a CB, is attractive for other researchers.

Conclusion

This exploratory study revealed that the company builder should be designed with the venture creation process as the core activity to transfer university research

and innovation into the new venture (NV) and enrich it with practical expertise and knowledge from the German Mittelstand experts. Serving all participants' needs as a mediator, the company builder must manage and represent the partners' interests in a nurturing manner towards the NV. Additional services and offerings such as networking events, innovation hubs, and expanding the entrepreneurial ecosystem with relevant partners will determine the company builder's success and attract and retain more partners. In future research, this study's findings need to be validated with a higher sample of university and Mittelstand representatives to confirm the conceptualized company builder.

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