

**Identifying and analysing the drivers of heterogeneity among ecosystem builder accelerators**

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**ABSTRACT**

In response to convergent and dynamic market developments, established firms use corporate accelerators to open their innovation processes to start-ups. Among different accelerator themes, the ecosystem builder theme introduced by Pauwels et al. (2016) holds a special role due to its broad objectives. By interviewing 20 leading experts from 16 German corporate accelerators, we first identify heterogeneity among different ecosystem builder accelerators based on differences in the process of selection, business support, and graduation. Second, we further structure the observed heterogeneity by depicting five different ecosystem builder accelerator types instead of a single ecosystem builder theme. These ecosystem builder accelerator types show important differences and similarities in terms of strategies, design elements, and processes within each of the process steps. Our findings hold meaningful research and managerial implications by 1) providing a consistent and systematic conceptual understanding about ecosystem builder accelerators, their strategies, design elements, and processes and 2) providing guidance to design and position ecosystem builder accelerators with regard to a long-term corporate strategy.

**Key Words:** Ecosystem Builder Accelerators, Corporate Accelerators, Start-up Supporting System, Open Innovation, Process perspective

## INTRODUCTION

Driven by the challenges of dynamic market environments (e.g., in the context of digitalization) and the necessity of staying innovative, companies are opening up their internal innovation processes to profit from external knowledge sources like start-ups (Enkel et al., 2009; Gassmann et al., 2010). Prevailing research demonstrates the necessity of combining external and internal knowledge especially in corporate innovation processes (Gassmann et al., 2010) to increase corporate engagement and to integrate a start-up culture characterised by speed, agility and flexibility, and risk-taking (Weiblen & Chesbrough, 2015).

Therefore, established companies have started launching corporate venture capital, corporate incubation, and corporate accelerator programmes to foster structured interaction and collaboration with start-ups (Weiblen & Chesbrough, 2015). In this context, corporate accelerators are time-limited forms of external/internal cooperation and are used for certain stages of start-ups (e.g., mature, early-, and later-stages) (Weiblen & Chesbrough, 2015). They are the next evolutionary step towards implementing start-up-supporting strategies (Cohen, 2013; Hochberg, 2016; Isabelle, 2013; Miller & Bound, 2011; Pauwels et al., 2016).

Although there is important research on the strategies, design elements, and processes of corporate start-up engagement using corporate *venture capital* programmes (e.g., Benson & Ziedonis, 2009; Bruneel et al., 2012; Grimaldi & Grandi, 2005; Weiblen & Chesbrough, 2015) and *incubator* programmes (e.g., Allen & McCluskey, 1990; Bergek & Norrman, 2008; Hackett & Dilts, 2004), few academic studies have analysed corporate *accelerator* programmes so far (e.g., Bauer et al., 2016; Kohler, 2016; Weiblen & Chesbrough, 2015).

The present study wants to address this gap by building upon pioneering investigation of the ecosystem builder as an accelerator design theme (Pauwels et al., 2016; Weiblen & Chesbrough, 2015). Acknowledging the complex requirements for ecosystem builder accelerators we question the homogeneity of this design theme and assume diverse types within the ecosystem builder theme based on different strategies and processes. In more

detail, we deem it necessary to identify and structure the heterogeneity of accelerators *within* the ecosystem builder design theme (Pauwels et al., 2016) to maintain the strategic usefulness of this open innovation approach for both incumbents and start-ups.

This article is structured as follows. The next section outlines the theoretical background of ecosystem builder accelerators leading to two underlying assumptions for our study. It is followed by the methodological procedure used to identify five ecosystem builder accelerator types. Then, we discuss the resulting implications to guide incumbents' choices for ecosystem builder accelerator to mutually benefit from cooperating with start-ups. The article concludes with an overall discussion as well as limitations highlighting future research opportunities.

## **THEORETICAL BACKGROUND OF ECOSYSTEM BUILDER ACCELERATORS**

### **Corporate Start-up-Supporting Activities**

Weiblen & Chesbrough (2015) identified three major success factors that corporations need to consider when engaging with start-ups: (1) their absorptive capacity and ability to work with numerous start-ups, (2) a clear value proposition for the start-ups, and (3) a clear strategy for the desired benefits for the incumbent corporation. Based on these success factors, they then identified four general models of corporate engagement with start-ups: (1) corporate venture capital, (2) corporate incubation, (3) platform-based start-up programmes, and (4) outside-in start-up programmes (Weiblen & Chesbrough, 2015). According to this classification of corporate start-up engagement, the corporate accelerator programme is part of the fourth model, the outside-in start-up programme (Weiblen & Chesbrough, 2015). Nevertheless, corporate accelerators evolve from corporate engagement through incubators (Bruneel et al., 2012; Pauwels et al., 2016), the underlying processes of start-up-supporting activities are associated with existing models within the incubation literature (Bergek & Norrman, 2008). These models are based on a three-step process of different antecedents: selection of start-ups (Bergek & Norrman, 2008), business support of selected start-ups (e.g., Allen & McCluskey, 1990; Bruneel et al., 2012; Hackett & Dilts, 2004; Schwartz, 2013), and

graduation (Baum & Silverman, 2004). This process is mandatory for identifying the main elements of accelerators and helps to systematize them (Bruneel et al., 2012; Pauwels et al., 2016).

### **Ecosystem Builder Accelerator**

By investigating 13 European accelerator programmes, Pauwels et al. (2016) identified three specific design themes of accelerators—the deal-flow maker, the welfare stimulator, and the ecosystem builder—based on differences and similarities in five design elements: programme package, strategic focus, selection process, funding structure, and alumni relations. The *deal-flow maker* identifies investment opportunities for potential investors and is oriented towards a corporate venture-capital programme. The *welfare stimulator* combines start-up activity with economic development and typically includes government agencies. The *ecosystem builder* focuses on a corporation's efforts to match, implement, and align start-ups for establishing a corporate ecosystem; it is thus the design theme to emphasize connection, exchange, and long-term learning in corporations for ongoing corporate development, growth, and disruptive innovation and change.

However, corporate strategies often create heterogeneous selection *among* as well as *within* corporate engagement activities (Weiblen & Chesbrough, 2015). Moreover, the heterogeneity of a selected corporate engagement strategy can also increase due to different levels of engagement resulting, for example, from corporate restrictions on engagement with external actors or limited resources for efficiently integrating external knowledge (Volberda et al., 2010). Thus, the majority of research considers the heterogeneity *between* different types of accelerator themes (Bruneel et al., 2012; Pauwels et al., 2016). Research on possible heterogeneity between different ecosystem builder accelerators and, therefore, *within* the ecosystem builder theme is scarce (Cohen, 2013; Hochberg, 2016).

To build upon this pioneering research, scholars should further structure and characterize ecosystem builder accelerators (Bergek & Norrman, 2008; Mian et al., 2016; Pauwels et al., 2016). We stress the importance of investigating the rapid developments and the increasing individualization of engagement in this area, and assume:

**Assumption 1:** There exists heterogeneity *among* different ecosystem builder accelerators based on differences in the three-step process of selection, business support, and graduation.

**Assumption 2:** The heterogeneity *within* the ecosystem builder theme leads to different ecosystem builder accelerators.

## **METHOD AND RESEARCH DESIGN**

We chose an inductive, multiple-case study design (Eisenhard & Graebner, 2007; Pauwels et al., 2016). To avoid common-method bias (Miller & Bound; 2011; Pauwels et al., 2016; Weiblen & Chesbrough, 2015), each case includes data from multiple sources: (1) expert interviews, (2) additional internal information provided by the interviewees, and (3) publicly available data.

### **Sample**

To observe heterogeneity among different ecosystem builder accelerators, we kept the external context as homogeneous as possible (Welter, 2011). Thus, we limited our sample collection to a single country (Germany). We applied the following six key factors to identify potential corporate accelerators that follow the strategic goal to build an ecosystem, provide innovation opportunities (ecosystem builder, according to Pauwels et al., 2016), and differentiate them from incubation programmes: (1) possible upfront investment (€10k–€50k) and possible exchange for equity (~5–10%), (2) time-limited support, (3) a highly competitive application process that is open to all, (4) cohorts of start-ups, (5) a focus on small teams, and (6) periodic graduation with a demo day or investor day (Pauwels et al., 2016). Overall, we identified 67 programmes and corporations and contacted them through an official letter inviting them to join the study. The final sample consists of 16 German ecosystem builder accelerators operating in various industries (Table 1 summarizes the characteristics and specifications of the sample).

**Table 1:** Sample characteristics and specifications

Case (ecosystem builder accelerators)	Founding Year	Ø Age of Participating Start-ups (in months)	Ø Financial Support for Each Start-up	Equity in Exchange	% Share of Successful Follow-on Investments (% of Internal Investment)	Batches per year (Duration in Months)
1_Car	2015	min. 6–12	flexible	none	none (none)	flexible (4)
2_Car	2015	6–12	€25,000	5%	n/a (n/a)	2 (3)
3_Bank	2014	max. 6	flexible	varying	n/a (n/a)	flexible (varying)
4_Retail	2014	3–12	€20,000 (+€100,000 convertible debt note possible)	7–10%	n/a (n/a)	1–2 (3)
5_Pharma	2013	6–12	€50,000	< 10%	n/a (n/a)	1–2 (4–6)
6_Finance	2013	min. 6–12	flexible	varying	n/a (n/a)	2–3 (max. 6)
7_IT	2010	max. 6	€15,000	None	20–60% (10–20%)	no batches
8_IT	2013	max. 6	none	n/a	60–90% (<10%)	flexible (6–9)
9_IT	2012	0–12	flexible	varying	customized (n/a)	flexible (3–6)
10_Media	2014	6–12	€50,000	5%	100% (0%)	1 (6–9)
11_Media	2013	6–18	€25,000	None	100% (0%)	2 (3)
12_Transport	2015	3–12	€25,000	None	n/a	2 (3)
13_Tech	2014	0–12	flexible	varying	n/a	flexible (varying)
14_Tech	2016	max. 6	flexible	varying	n/a	2–3 (2–3)
15_Phone	2012	6–12	€100,000–€300,000	10–15%	80–100% (0%)	flexible (varying)
16_Phone	2013	6–12	max. €50,000	5–10%	80–100% (0%)	2 (3)

## Data Acquisition

In line with Irvine et al. (2013), two independent researchers conducted 20 face-to-face interviews (30 to 90 minutes) in German and English between August 2014 and June 2016. Each interview was tape-recorded, transcribed, and completed with internally and publicly available information (McLellan et al., 2003). This resulted in 388 pages of transcripts.

## Interview Guideline

We followed a semi-structured interview guideline based on Bernard & Bernard (2012) to provide clear instructions and gain reliable qualitative data from the interviews. The guideline was translated, retranslated, and pretested in both languages. It was arranged in five sections: (1) basic programme data (e.g., number of batches); (2) questions about the selection process (Bergek & Norrman, 2008); (3) questions about business-supporting and value-adding services (e.g., provision of infrastructural services, professional business

support; Bruneel et al., 2012; Rice, 2002; Vanderstraeten & Matthysens, 2012); (4) questions about collaborative projects between start-ups, the accelerator enterprise, and other strategic partners (e.g., Benson & Ziedonis, 2009; Grimaldi & Grandi, 2005); and (5) questions about the programme's graduation process, exit policy, and long-term perspective (Baum & Silverman, 2004; Stuart et al., 1999).

## Data Analysis

The data were summarized and interpreted using the text-reduction method (Bernard & Bernard, 2012). The process applied by Weiblen & Chesbrough (2015) and Pauwels et al. (2016) was adapted slightly, and two researchers extracted the data separately. An independent researcher participated in the analysis for greater validity of the interpretations (Gioia et al., 2010). A cross-case analysis (Eisenhardt, 1989) identified patterns and revealed differences among the interviews (Table 2 shows the procedure in more detail).

**Table 2:** Overview of data analysis

<b>Step 1:</b> <b>Preparation of Data and First Steps of Analysis</b>	<b>Step 1a</b>	<b>Interviews and external data</b> (company websites, news articles about the organizations and programmes, annual reports, media coverage, and additional information provided by the interviewees ).
	<b>Step 1b</b>	<b>Recording and transcribing the interviews.</b>  <b>Merging and interpreting the main characteristics (context and case):</b> <ol style="list-style-type: none"> <li>1. Constructing a matrix for the interview guidelines.</li> <li>2. Completing the case overview with additional information.</li> </ol>
<b>Step 2:</b> <b>Identifying Relevant Statements and First Structure</b>	<b>Step 2a</b>	<b>Coding key phrases and patterns of meaning</b> iteratively (Spiggle, 1994) within several rounds.
	<b>Step 2b</b>	<b>Structuring content analysis: Identifying relevant statements</b> (Bernard & Bernard, 2012): <ol style="list-style-type: none"> <li>1. Context-related statements to interview categories of the interview guidelines (function, dimension/theory, and questions).</li> <li>2. Advanced completion of matrix.</li> <li>3. Identifying provisional codes and categories.</li> <li>4. Identifying related statements with significant difference to company and programme.</li> </ol>
<b>Step 3:</b> <b>Selection, Comparison, Definition, and Evaluation Grid</b>	<b>Step 3a</b>	<b>Cross-Case Analysis</b> (Eisenhardt, 1989): <b>Selection, Comparison, and Verification:</b> <ol style="list-style-type: none"> <li>1. Recording differences and similarities.</li> <li>2. Main characteristics merged and interpreted with respect to the context of our problem description.</li> <li>3. Repeating the process and merging results.</li> <li>4. Defining the evaluation grid with categories and elements.</li> <li>5. Entering the identified and corresponding data.</li> </ol>
	<b>Step 3b</b>	<b>Defining categories, elements, and values using three-step process</b> (Bergek & Norrman, 2008): <ol style="list-style-type: none"> <li>1. Inter-case similarities and differences.</li> </ol>

		<ol style="list-style-type: none"> <li>2. Categories and dimensions suggested by elements and constructs from each interview grid over all cases, followed by comparison and replication against one another (Yin, 2013).</li> <li>3. Finally, enter date completed in the evaluation grid.</li> </ol>
	<b>Step 3c</b>	<b>Advancement towards categories in the evaluation grid:</b> <ol style="list-style-type: none"> <li>1. Comparative analysis to cluster in various rounds (Miles &amp; Huberman, 1994).</li> <li>2. Identifying and defining category and element relationships.</li> <li>3. Pooling the different categories and elements and refining evaluation grid (Tables 2 and 3).</li> </ol>
<b>Step 4:</b> <b>Advancement towards Ecosystem Builder Accelerator Types</b>		<b>Advancement towards different corporate ecosystem builder types</b> with differently sized groups of corporate accelerators by pooling the categories.
	<b>Step 4a</b>	<b>Defining and naming the types</b> by revealed relationships of categories and elements of cases.
	<b>Step 4b</b>	<b>Identifying similarities and differences</b> between different ecosystem builder accelerator types.

## RESULTS

### Process Perspective: Selection, Business Support, and Graduation

Based on the interview data, we identified and categorized the characteristics of the three steps of selection, business support, and graduation representing also the starting-point of our typology. The categories of the *selection* process were (1) acquisition strategy, (2) exclusivity, and (3) admission screening. *Business support* was divided into (1) provision of space and infrastructure, (2) completeness of start-up support (e.g., absence or presence of different forms of counselling), (3) degree of standardization, and (4) interaction with the corporation (e.g., industry focus, direction of innovation flow). The *graduation* categories were (1) the presence or absence of predefined time schedules and (2) graduation events (see Table 3 for results).

**Table 3:** General results for the categories and characteristics of the three-step process

Process Step	Category	Characteristic	Count (% of the 16 accelerators)
<b>Selection</b>	Acquisition Strategy	Open-to-all	81%
		Focused	19%
	Exclusivity	Yes	31%
		No	69%
	Admission Screening of New Start-ups	Picking-the-winners	63%
Survival-of-the-fittest		38%	
	Provision of Shared Office Space	Yes	100%

<b>Business Support</b>		No	0%
	Provision of Infrastructural Services	Yes	100%
		No	0%
	Completeness of Start-up Support: <i>Reactive and Episodic Counselling</i>	Internal	18%
		External	13%
		Both	69%
		n/a	0%
	Completeness of Start-up Support: <i>Proactive and Episodic Counselling</i>	Internal	13%
		External	63%
		Both	25%
		n/a	0%
	Completeness of Start-up Support: <i>Continuous and Proactive Counselling</i>	Internal	44%
		External	50%
		Both	0%
		n/a	6%
	Completeness of Start-up Support: <i>Hands-on Business Assistance /Technical Assistance</i>	Internal	25%
		External	0%
		Both	25%
		None	44%
		n/a	6%
Degree of Standardization	Low	25%	
	Medium	18%	
	High	56%	
Focus on Industries	Vertical	44%	
	Horizontal	25%	
	Flexible	31%	
Integration with Core Business Corporation	Low	38%	
	Medium	38%	
	High	25%	
Direction of Innovation Flow	Outside-in	75%	
	Inside-out	25%	
Value Capture	Equity involvement	44%	
	Service fees	0%	
	None	56%	
Organizational Anchoring	Separate corporate identity	50%	
	Project-based	50%	
<b>Graduation</b>	Pre-Defined Time Schedule	Fixed-term batch	50%
		Flexible-term batch	50%
	Graduation Event	Yes	63%
		No	38%

First, for the *selection process*, we observed stronger similarities in the acquisition strategy with a focus on open-to-all start-ups (Pauwels et al., 2016). Exclusivity (69% vs. 31% of the accelerators) and admission screening (63% vs. 38%) were relevant antecedents for the assumed heterogeneity among ecosystem builder accelerators (Pauwels et al., 2016). Second, for *business support*, the positive evaluation of provision of shared office space and infrastructural support was identical in all cases; it seems to be only a necessary condition for differentiating the accelerators from incubators (e.g., Bergek & Norrman, 2016; Kohler,

2016). The completeness of start-up support with its different counselling forms showed that continuous and proactive counselling is a main driver of heterogeneity among the ecosystem builder accelerators.

The other two forms of counselling support were similar, with either no distinction between internal and external forms (proactive and episodic counselling) or a strong focus on external counselling (continuous and proactive counselling). Furthermore, standardized start-up support and direction of innovation flow are more convenient conditions, with almost identical patterns among ecosystem builder accelerators. However, the important drivers of distinction are industrial focus, integration with the corporation's core business, value capture, and organizational anchoring. Third, regarding *graduation*, both characteristics—pre-defined time schedule and graduation event—showed a heterogeneous pattern among ecosystem builder accelerators. Consequently, these results confirm assumption 1, that there exists heterogeneity among the ecosystem builder accelerators based on differences in the three-step process of selection, business support, and graduation.

### **Ecosystem Builder Accelerator Types**

Based on the derived characteristics (see Table 3) from the analysis (see Table 2), we classified the interviewed ecosystem builder accelerators into five ecosystem builder accelerator types: Start-up Accelerator (SUA), Idea-Lab Accelerator (ILA), Intrapreneurship Accelerator (IPA), Venture-Client Accelerator (VCA), and White-Label Accelerator (WLA).

The *Start-up Accelerator* (SUA) is the dominant type of ecosystem builder accelerators within our sample (consists of 6 accelerators). It continues the incubator-like investment in young ventures, focusing on profitable assets and liquidation events with a stronger, formalized support process and a relatively low risk profile due to the smaller amounts of direct financial investment.

The *Idea-Lab Accelerator* (ILA) can shape, adopt, and follow new trends from early on as part of a market enactment strategy. The ILA is a kind of hands-on activity for enabling new ideas, innovation development, and change. It focuses on very young start-ups and

applies a survival-of-the-fittest approach with fewer pre-selective barriers. This ecosystem builder accelerator type is strictly oriented towards enabling innovation from an early stage. It doesn't require seed investment or equity engagement, and its funding structure from corporations describe the ILA mechanisms to accelerate ideas and build innovation ecosystems. The horizontal focus on industries supports the ecosystem builder's strategic focus and the selection process element with more detail, including the different perspectives on the selection steps and the criteria of our support process. The ILA has a relatively low degree of formality, and it abandons the typical batch concept for a steady and flexible fluctuation, adaption, and exchange with start-ups. The graduation process is flexible, having only individual conceptualized graduation events, but its established infrastructure is suitable for building support services.

The *Intrapreneurship Accelerator* (IPA) is based on the well-known concept of recognizing and developing (radical) innovation (Pinchot, 1985). Its key characteristics are a predominantly inside-out direction of innovation flow, quick access to resources, and high-level integration with the incumbent's core business. It aims to explore talents and entrepreneurs with the acceleration of employees' start-up ideas and to enable and accelerate innovation from within the incumbent corporation to better leverage existing resources and keep up with the disruption in the respective industries.

The *Venture-Client Accelerator* (VCA) is typically set up by corporations aiming to be the (exclusive) client or project partner of a relatively mature start-up without focusing on the classical start-up-supporting activities. The VCA becomes the predominant client for the start-up, which is then integrated into the core business and given access to the necessary resources and partner networks. The VCA has a local and international strategic focus and a longer perspective of the cooperation between the start-ups and partners, depending sometimes on a more flexible time schedule.

The *White-Label Accelerator* (WLA) represents a new, flexible, individual "platform" model for corporations, and it focuses on horizontal industries to build relationships with start-ups. It is a neutral form of the ecosystem builder accelerator and is established

externally in a separate corporate entity to enable incumbent corporations to profit from the collaboration with start-ups while sparing them the complex set-up procedure. This type of accelerator is often set up cooperatively with other (consulting) organizations that specialize in developing and executing accelerator programmes, especially platform solutions (e.g., Techstars, Plug-and-Play). See Table 4 for a summary of the ecosystem builder accelerator types, associated accelerators, and representative quotes.

**Table 4:** Exemplary representative quotes from different ecosystem builder accelerators

Ecosystem builder accelerator type	Ecosystem builder accelerators	Representative quote from the interviews
Start-up Accelerator (SUA)	1_Pharma, 10_Media 11_Media 12_Transport 14_Tech 16_Phone	<p>“Our dream is that, hopefully, they will advise us in the future, saying what they are interested in, subjects they are working on themselves, and scenarios that they could imagine going after. ... Currently, we are seeking interesting teams, products, and projects and presenting them. ... Maybe in the future it will be the opposite way” (16_Phone).</p> <p>“The accelerator seems to be an advanced programme of incubators, following the same direction towards substantial relationships and collaboration with start-ups, but with a lower risk profile and a stronger formalized supporting process. Close but separated from the corporation daily business” (1_Pharma).</p>

<p>Idea-Lab Accelerator (ILA)</p>	<p>3_Bank 7_IT 8_IT 15_Phone</p>	<p>“Therefore, an accelerator is also good, because you have a test surface or a kind of test lab. ... They are seen as an additional opportunity to leverage existing assets and resources by testing small but promising market opportunities, as confirmed by the corresponding corporations. It is here where things get simply tested fast, and sometimes really simple questions are tested that we have dealt with for many years already, but nobody ever just simply tried and developed them” (7_IT).</p> <p>“Today’s start-ups are the partners and clients of tomorrow. ... The universal goal is mutual learning! ... Thus, we are of course not exit-oriented but absolutely innovation-oriented. ... The most important thing we can do for our products is R&amp;D. We bring together our techies with the companies, teams, and individuals, and then they are working together now and from time to time and beginning to understand and learn from new technologies. ... What we are doing is technologically agnostic. ... Due to the fact that we want to discover new, really new technologies, we are looking for true innovations. In this case we are absolutely open to observing and working in peripheral areas” (8_IT).</p>
<p>Intrapreneurship Accelerator (IPA)</p>	<p>9_IT 13_Tech</p>	<p>“It is about motivating the employees from within to work on their ideas, ideas that maybe do not fit into the existing plans and strategies of the company or existing divisions. Thus, in terms of the long-term strategy of the company, we enable the individual employees to develop new business ideas for the corporation ... We want to open the mind for other ways of thinking and doing and building future potential for new business models” (13_Tech).</p> <p>“The reference cases enhance the corporate ability of fostering disruption and to be open for the outside-in integration of start-ups” (9_IT).</p>
<p>Venture-Client Accelerator (VCA)</p>	<p>1_Car 6_Finance</p>	<p>“‘Venture Client’ represents the ‘natural next step in the evolution of a start-up.’ ... We are working together as their first client and a following mutual collaboration. ... This constellation allows our employees, partners, and R&amp;D to further develop their ideas and/or projects and allow for openness of the corporation to implement possible innovation mechanisms and drivers for really changing and to authorize with more speed” (1_Car).</p>

		“We are the predominant client for the start-up, which is then highly integrated into the core business and has access to the necessary resources and partner networks on a highly individualized support and collaboration” (6_Finance).
White-Label Accelerator (WLA)	2_Car 4_Retail	“We chose this way as a first step to open our innovation process for external knowledge from start-ups ... to continuously engage in the development and growth innovation of our culture and architecture-specific model, even with the help of a provider and expert in acceleration programmes ... and yes, their existing contacts to start-ups and respecting ecosystems in the first step. ... Yes, separated from our corporation. Not all employees are open for new developments” (4_Retail).

In line with prior rationales, we observed that the identified ecosystem builder accelerator types are associated with elements of the ecosystem builder theme (Pauwels et al., 2016). However, the results also support assumption 2, the idea of different types within this specific accelerator theme. While Pauwels et al.’s (2016) *design approach* identified one ecosystem builder theme, our three-step *process approach* (selection, business support, and graduation) identifies a fine-grained differentiation among ecosystem builder accelerators.

In the *selection* phase, ILAs, SUAs, and WLAs apply the open-to-all acquisition strategy with fewer pre-selective barriers. This is in contrast to VCAs and IPAs, which follow the focused, single-acquisition strategy. In terms of admission screening, ILAs and IPAs prefer a survival-of-the-fittest approach. SUAs, WLAs, and VCAs, however, follow the picking-the-winners approach, asking for a comprehensive overview of a start-up’s business plan, financial situation, and market development and for a first prototype demonstration during the online application process and pitching event. For VCA, corporations prefer experienced start-ups and entrepreneurs.

Regarding *business support*, the SUAs in our sample provide only continuous and proactive counselling from external sources. Reactive and episodic counselling is offered by the WLAs from external sources and by the ILAs and VCAs from internal sources, and no support is provided by ILAs or IPAs. WLAs and ILAs offer proactive and episodic counselling

from external sources, VCAs offer it from internal sources, and IPAs don't offer it at all. For SUAs and WLAs, continuous and proactive counselling is provided by an outsourced partner or entity, and for ILAs, VCAs, and IPAs, it is offered from within the corporation. Technical assistance is offered only by VCAs and IPAs from internal sources, confirming their different characteristics. The degree of standardization of SUAs and WLAs is relatively high; it is medium for ILAs and low for VCAs and IPAs, relating to a flexible and individual time schedule. Regarding the focus on industries, WLAs and ILAs focus mainly on horizontal industries, whereas for VCAs and IPAs, the search for new start-ups focuses on business models and technologies within the market space of the respective incumbent corporation (vertical approach). The industry focus of SUAs varies between vertical and horizontal. Integration in the core business is low for SUAs and WLAs, medium for ILAs, and high for VCAs and IPAs.

The direction of innovation flow is an important indicator for the differences and similarities of the identified types. Only the IPA is characterized by an inside-out orientation; all others focus on the outside-in direction of innovation flow and business development. Regarding value capture, SUAs and WLAs provide financing in exchange for equity to power the development and commitment of start-ups. Thus, the degree of equity involvement and operative cooperation is stronger than in all other cases of the ecosystem builder accelerator type. There, the investment logic is driven by a purely strategic approach with no financial commitment or equity exchange. Finally, an important characteristic of this process is organizational anchoring of the ecosystem builder accelerators: SUAs, WLAs, and IPAs are typically set up as separately incorporated entities or separate business units. Instead, the ILA and VCA are project based.

Considering *graduation* and its "pre-defined time schedule" characteristic, the SUA and WLA have a fixed-term batch, in contrast to the flexible-term batch of all other identified types (ILA, VCA, and IPA). Finally, the ecosystem builder accelerator types are characterized in three cases by the execution of a graduation event, but not in the cases of ILAs and VCAs. Figure 1 shows the identified types, illustrating their heterogeneity, and applicability to

diverse corporate exchange and collaboration with, and integration of start-ups. Additionally, Table 5 summarizes the five ecosystem builder accelerator types and their similarities and differences.

**Figure 1: Characterization and demarcation of the identified corporate accelerator types and their heterogeneity**

			SUA	WLA	ILA	VCA	IPA
SELECTION	1.1 Acquisition Strategy	open-to-all	focused				
	1.2 Exclusivity	yes	no				
	1.3 Admission-Screening of New Startups	picking-the-winners	survival-of-the-fittest				
SUPPORT	2.3.1 Reactive and Episodic Counselling	internal	external				
	2.3.2 Proactive and Episodic Counselling	internal	external				
	2.3.3 Continuous and Proactive Counselling	internal	external				
	2.3.4 Hands on Business Assistance / Technical Assistance	internal	external				
	2.4 Degree of Standardization	low	high		none / not given	none / not given	
	2.5 Focus on Industries	vertical	horizontal				
	2.6 Integration with Core Business Corporation	low	high				
GRADUATION	2.7 Direction of Innovation Flow	outside-in	inside-out				
	2.8 Value Capture	equity involvement	service fees			none / not given	none / not given
	2.9 Organizational Anchoring	separate corporate entity	project-based				
	3.1 Pre-Defined Time Schedule	fixed-term-batch	flexible-term-batch				
	3.2 Graduation Event	yes	no				

SUA = Start-up Accelerator; WLA = White-Label Accelerator; ILA = Idea-Lab Accelerator; VCA = Venture-Client Accelerator; IPA = Intrapreneurship Accelerator

**Table 5:** Similarities and differences between the five ecosystem builder accelerator types and the ecosystem builder theme

	<b>Start-up Accelerator (SUA)</b>	<b>White-Label Accelerator (WLA)</b>	<b>Idea-Lab Accelerator (ILA)</b>	<b>Venture-Client Accelerator (VCA)</b>	<b>Intrapreneurship Accelerator (IPA)</b>
<b>Short definition of types in the ecosystem builder theme</b>	<i>The modern classical: Advanced incubator concept for substantial relationship and collaboration with start-ups, lower risk profile, and stronger formalized supporting process.</i>	<i>The relatively neutral and adaptable hybrid: Supported and facilitated by one or more corporations with outsourced partners or proven expert providers. Creation of own ecosystems around the corporate involvement in start-up-supporting activities.</i>	<i>The hands-on active for the new: Ideas, experiential futures, innovation. Providing possibilities to shape, adopt, and follow new trends and weak signals in corporations from early on through to the enactment and beyond.</i>	<i>The exclusive but not classical engagement relationship of joint development: Corporations aiming to be the (exclusive) client or project partner of a relatively mature start-up in late-stage development, helping to specialize in a specific industry.</i>	<i>The internal entrepreneur for high-level involvement and integration: Starting inside the corporation to accelerate innovation from within and depending on the individual structure and the employees as the most important drivers and (re)sources of the accelerator type.</i>
<b>Ecosystem builder design elements:</b>					
<b>Programme package of ecosystem builder</b>	<i>Similarities<sup>a</sup>:</i> High formalization of support process, low integration in core business, separate entity	Similarities: High formalization of support process but also flexible, individual approach, low integration in core business, separate entity	<i>Similarities:</i> Medium formalization of support process, steady and more flexible fluctuation, medium degree of integration in core business, project-based	<i>Similarities:</i> Low formalization of support process, high integration in core business, project-based	<i>Similarities:</i> Low-to-medium formalization of support process, individualization, and flexibility; high integration in core business, project-based
	<i>Differences<sup>b</sup>:</i> Incubator-like direct investments in new ventures in later stages, outside-in innovation flow	<i>Differences:</i> Equity involvement, outside-in innovation flow	<i>Differences:</i> Pre-seed start-up support of programmes and early ideas, outside-in innovation flow	<i>Differences:</i> Outside-in innovation flow	<i>Differences:</i> Inside-out innovation flow

<b>Strategic focus of ecosystem builder</b>	<i>Similarities:</i> International vertical/horizontal focus on industries	<i>Similarities:</i> International horizontal focus on industries	<i>Similarities:</i> International vertical focus on industries		
	<i>Differences:</i> Local and/or international				
<b>Selection process of ecosystem builder</b>	<i>Similarities:</i> Favour new ventures in later stages with proven track record	<i>Similarities:</i> Favour new ventures in early and/or later stages but with proven track record dependant on individual type of programme, focus on teams and entrepreneurs	<i>Similarities:</i> Favour very young entrepreneurs and start-ups	<i>Similarities:</i> Favour new ventures in later stages with proven track record and fundamental proof of concept	<i>Similarities:</i> Favours screening employees' new start-up ideas and projects
	<i>Differences:</i> Focus on teams and entrepreneurs, open-to-all, picking-the-winners	<i>Differences:</i> Early stages and individuality, focus on teams and entrepreneurs open-to-all, picking-the-winners	<i>Differences:</i> Focus on teams and entrepreneurs, open-to-all, survival-of-the-fittest	<i>Differences:</i> Exclusivity of cooperation, focus on teams and entrepreneurs, focused, picking-the-winners	<i>Differences:</i> Exclusivity of cooperation, focus on individual teams/projects, focused, survival-of-the-fittest, corporate objectives
<b>Funding structure of ecosystem builder</b>	<i>Similarities:</i> Funding from corporations / Financed by corporations				
	<i>Differences:</i> Financial support or equity exchange possible	<i>Differences:</i> Supported by consultancies/agencies Financial commitment/equity exchange possible	<i>Differences:</i> Purely strategic approach		
<b>Alumni relations of ecosystem builder</b>	<i>Similarities:</i> Opportunity to build and alumni infrastructure dependant on individual type				
	<i>Differences:</i> No special focus				

<sup>a</sup> Refers to the similarities between the ecosystem builder accelerator types and the ecosystem builder design elements.

<sup>b</sup> Refers to the differences between the ecosystem builder accelerator types and the ecosystem builder design elements.

## **DISCUSSION AND IMPLICATIONS**

This study presents further evidence for the dynamically evolving landscape of ecosystem builder accelerators as indicated by the rapid growth of new kinds of accelerators and diverse models of corporate engagement with start-ups. The results support the assumptions that (1) there is heterogeneity *among* ecosystem builder accelerators based on differences in the three-step process of selection, business support, and graduation, and (2) the heterogeneity *within* the ecosystem builder theme resulting in different ecosystem builder accelerator types.

Some ecosystem builder accelerators follow a stronger specialist approach with a vertical industry focus, whereas others aim for a wide variety of start-up ideas within their portfolio. In addition, some ecosystem builder accelerators confirm that the first batch of their programmes was a learning phase and that they wanted to teach, learn, and develop further entrepreneurial spirit within their corporation to bridge the gap between both worlds (corporations and start-ups) and to enhance real corporate engagement. Besides the typical trial-and-error approach of testing processes inside the programme, the important factors for the accelerators were reputation building and accepting collaboration in the start-up ecosystem.

However, our findings also support a numerical increase and the emergence of hybrid types of ecosystem builder accelerators. Because of the varying corporate structures, and dynamic environments of incumbent corporations, accelerators may vary their start-up-supporting services or design elements (see Tables 3 and 4 and Figure 1). Moreover, the emergence of White-Label Accelerators shows that an independent ecosystem (comprising consulting firms and agencies) is forming around corporate involvement in start-up-supporting activities and is engaging in general innovation (Hochberg, 2016; Kohler, 2016; Weiblen & Chesbrough, 2015).

### **Research Implications**

Within the fragmented work on ecosystem builder accelerators, this study provides a first step in integrating and connecting existing and new research to achieve the following: (1) provide a consistent and systematic conceptual understanding about ecosystem builder accelerators, their

strategies, design elements, and processes (Hochberg, 2016; Pauwels et al., 2016; Weiblen & Chesbrough, 2015); (2) improve understanding of the new-generation incubation models with a more detailed and informed image of how to specify their ecosystem builder accelerators; and (3) extend Pauwels et al.'s (2016) study by emphasizing the heterogeneity within the ecosystem builder theme using a process-based approach to complement their design approach and to ease the positioning in the ecosystem.

### **Managerial Implications**

By reducing the complexity of the ecosystem builder accelerators and facilitating their selection, incumbents can use this open innovation strategy to access start-up ecosystems and develop them according to their strategic objectives (Weiblen & Chesbrough, 2015). In particular, corporate objectives linked to ecosystem building (e.g., growing agility of business models and strategies to enter new industries and implement new technological environments and/or generate access to the “new digital age” of business) represent the critical starting point for decision-making about the selection process and the strategic focus. Corporations can use the three-step process and the five ecosystem builder accelerator types and their corresponding characteristics as a guideline (1) to develop their start-up engagement; (2) to use, design, and position their ecosystem builder accelerators; and (3) to grow the corporation's long-term corporate strategy.

Our research shows that ecosystem builder accelerators vary in their strategic objectives; thus, companies need to understand what they can achieve with a particular accelerator. The industrial focus, integration with the corporation's core business, direction of innovation flow, and organizational anchoring are representative characteristics of heterogeneity and important drivers for the distinction of ecosystem builder accelerators. From our research, we distilled the following exemplary factors that may guide companies' decision making about engagement and collaboration with start-ups and entrepreneurs in the first step: the maturity of the idea, the possible time horizon (long- or short-term engagement and batches) in relation to organizational anchoring (separate or project based), and industry focus (vertical or horizontal).

Considering this with the existing corporate activities to push innovation yields the following implications: (1) for Idea-Lab Accelerator (ILA), corporations seek a long engagement perspective with a horizontal industry focus. It is project-based in the first step and favours very young but also mature ideas and entrepreneurs of all levels of experience with an outside-in innovation flow. (2) The Venture-Client Accelerator (VCA) focuses on later-stage, mature, and experienced start-ups within their own market space (vertical approach). It favours a high degree of integration in corporate core business but a low degree of standardization to allow flexible collaboration and an exclusive developmental relationship with the start-ups. (3) For example, a corporation fosters its employees' start-up projects at all experience levels, establishing them in a separate corporate entity or business unit, adopting a vertical focus on industries, and favouring an outside-in innovation. Here, the corporation follows the Intrapreneurship Accelerator type (IPA) and fosters individualization and flexibility in the acceleration process to push and pull innovation in the corporation. By identifying cases in each type from different industries, we conclude that ecosystem builder accelerators and types are not restricted to one industry.

## **LIMITATIONS, FUTURE RESEARCH, AND CONCLUSION**

The five ecosystem builder accelerator types (based on Pauwels et al., 2016) are a fruitful starting point for elaborating their content, characteristics, similarities, differences, and mechanisms of their engagement (strategies, design elements and processes). They generate insights into the structure and organization to set up ecosystem builder accelerators and types. However, the present study also reveals some limitations and future research opportunities.

First, because our research focuses on ecosystem builder accelerators in Germany, the research scope should be extended to other countries and explore the influence of different cultural, economic, political, and administrative contexts. Second, while the proposed typology can serve as a basis for future research, it is necessary to continuously examine, and adapt it to changing corporate structures, environments and the evolution of new types of ecosystem builder accelerators. Third, this research could be completed by new evaluation phases, providing insights into the success of ecosystem builder accelerator types and their different strategies, exploring

future transformations of programmes due to further developments and improvements, and seeking results beyond purely financial returns. Fourth, the dynamic and volatile developments in this market mean that the strategies of the observed ecosystem builder accelerator types vary and thus need to be continuously reviewed, adapted, and systematized. New accelerators and diverse models of corporate engagement with start-ups and ecosystems will likely emerge. Fifth, in addition to the company's point of view, research could also explore the views of diverse start-ups associated with ecosystem builder accelerators. And sixth, a more detailed view on the design and more detailed ways of corporate anchoring in relation to integration, interaction and exchange. We hope that this study enriches our understanding of how to make strategically informed decisions about suitable ecosystem builder accelerators and that it stimulates further research into this important topic.

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