"Exploring the benefits of corporate accelerators: investigating the SAP Industry 4.0 Startup Program"

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EXPLORING THE BENEFITS OF CORPORATE ACCELERATORS: INVESTIGATING THE SAP INDUSTRY 4.0 STARTUP PROGRAM

Abstract

Corporate accelerators are on the rise and established companies from a diverse set of industries and regions have set up such startup support programs to predominantly pursue strategic goals. The purpose of this study is to shed light on the benefits of corporate accelerators from a corporate perspective and that of the participating startups. In order to do so, this in-depth single-site case study investigates the SAP Industry 4.0 Startup Program building upon an inductive research design with explorative nature. The authors qualitatively examine a newly established corporate accelerator program of one of the world's largest enterprise software companies and provide valuable insights for both practitioners and scholars engaged in corporate accelerators. The benefits for startups participating in corporate accelerator programs can be linked to operational Go-to-Market acceleration in regards to product development, sales acceleration, as well as skill and knowledge development. Moreover, the startups receive benefits linked to strategic business development acceleration in the areas of strategy and business model improvements, pitching, financing, and strategic partner development. At the same time, corporate accelerators overall aim to increase the competitiveness of established companies running such programs by developing a product ecosystem and the brand, infusing startup culture into the organization and developing customer relationships.

INTRODUCTION

Since Y Combinator launched in 2005 as the first accelerator, this type of startup support program has quickly grown in popularity and become a global phenomenon. The latest Global Accelerator Report identifies 579 accelerator programs worldwide supporting more than 11,000 startups (Gust, 2016). Cohen and Hochberg (2014, p. 4) define an accelerator as a "fixed-term, cohort-based program, including mentorship and educational components, that culminates in a public pitch event or demo-day".

Accelerator programs, in general, apply the business model of providing funding (typically in the range of USD 15,000 to USD 30,000), mentorship, training, and office space over a period of three to six months to a cohort of up to ten startups in return for minority shares of equity – exact numbers vary by program. The financial return for the accelerator is realized upon a successful exit. Startups are supposed to improve through, for example, industry connections, product validation through constant screening, feedback within the cohort and the exposure to investors (Cohen & Hochberg, 2014; Yu, 2016).

Established companies from a diverse set of industries have utilized the general idea of accelerators as startup support programs and launched initiatives creating a specific type of accelerator: the corporate accelerator (Kohler, 2016). Various studies show that the underlying goals are different from non-corporate accelerators in that financial return is often not a primary goal and many corporates even opt for non-equity partnerships (e.g. Kanbach & Stubner, 2016; Kohler, 2016). Instead, corporate accelerators often pursue predominantly strategic goals, such as fostering corporate innovation and infusing entrepreneurial culture by bringing the startup spirit into existing corporations (Gutmann, 2019).

The corporate accelerator database lists around 120 programs worldwide for 2016 (The Corporate Accelerator Database, 2016). Even though some programs are no longer active, such a large number of programs worldwide is nevertheless impressive. Anecdotal evidence in the business press announcing the launch of corporate accelerator programs underlines this assumption that corporate accelerators remain a global, cross-industrial phenomenon. In early 2019, the German company BSH Home Appliances started with the first batch of startups in their new corporate accelerator program, and Rolls Royce announced the launch of a program for Indian deep tech startups in Bengaluru (Ganguly, 2019; Wolf, 2019).

Despite growing academic discussions on accelerators (e.g. Kupp, Marval, & Borchers, 2017), research in this field remains in its infancy. However, a crucial part of understanding the phenomenon of corporate accelerators is determining the benefits generated through these programs. Benefits are thought to arise for both parties to this type of partnership, as each side – the established company or the startup – has what the other lacks (Weiblen & Chesbrough, 2015). Only if these benefits appear, it can be assumed that the nascent corporate accelerator phenomenon will last and, perhaps, develop further.

Consequently, this empirical study focuses on two main research questions:

1) What are the benefits for startups when joining a corporate accelerator program?

2) What are the benefits for established companies when running a corporate accelerator program?

In order to shed light on these questions, we conduct an in-depth analysis of a specific corporate accelerator program from both the corporate perspective and that of the participating startups. This approach complements the existing studies with sample sizes of more than ten programs that explore the overall objectives and program characteristics, providing a broad general understanding but not a detailed view on the benefits generated (e.g. Kanbach & Stubner, 2016; Kohler, 2016).

To do so, we proceed as follows. First, we provide an overview of the extant literature on the benefits of corporate accelerators. Second, we elaborate on our methodology, including a detailed description of the case under review. Third, we present our research findings. Lastly, we discuss the findings, limitations and implications, as well as provide conclusions.

1. LITERATURE REVIEW

Our study is of an exploratory nature regarding the benefits of a corporate accelerator, building upon an in-depth analysis of one specific program. Therefore, we provide a short overview of other studies in this field to provide a general understanding of corporate accelerators. Because the phenomenon of corporate accelerators is a fairly new one, it is not surprising that the academic discussion has been limited but growing in recent years (e.g. Hochberg, 2016; Pauwels et al., 2016; Kupp, Marval, & Borchers, 2017; Hausberg & Korreck, 2018).

The existing literature uses the locus of the opportunity as a major differentiating characteristic between different organizational forms of corporate accelerators (e.g. Weiblen & Chesbrough, 2015; Selig, Baltes, & Gasser, 2018). Therefore, at

a high level, accelerators can be differentiated between those that are internally and externally oriented. Internal corporate accelerators focus on supporting innovative ideas originating within the organization, whereas external corporate accelerators focus on supporting ideas originating outside the organization. Existing studies show that most corporate accelerator programs seem to be externally oriented, which is also reflected in the fact that the majority of studies focus on these type of accelerators (Selig, Baltes, & Gasser, 2018).

Existing studies primarily address the general objectives of established companies and startups rather than the achieved benefits. According to these studies, established companies mainly aim to benefit from an externally oriented corporate accelerator program in two areas: (1) the understanding and insourcing of innovations, and (2) the achievement of intangible effects, including brand building and cultural change.

Regarding innovations, companies aim to increase their exposure to high-potential startups and their ecosystem of investors and mentors, and to gain an understanding of emerging and disruptive technology in the market (Weiblen & Chesbrough, 2015; Kanbach & Stubner, 2016). Based on this, corporate accelerators can fuel the development of products that complement the existing product portfolio, as this increases customer choice, triggers lock-in effects and thereby grows sales (Pauwels et al., 2016). Furthermore, corporates aim to engage in product development beyond their own capabilities and thereby increase their competitiveness. In fact, a corporate accelerator program is sometimes considered faster, cheaper and more flexible route than internal R&D activities (Goldstein et al., 2015).

Regarding the intangible effects, the testing and transfer of a flexible working style, along with the infusion of an entrepreneurial mindset and the culture of startups into the corporation, is a frequently desired outcome, with the intention of reducing bureaucratic inflexibility (Mahmoud-Jouini et al., 2018). This leads to increased internal flexibility and enhances the corporation's ability to push its own products and innovations

onto the market quicker (Weiblen & Chesbrough, 2015). In addition, corporate accelerators aim to change the brand positioning of the corporation and help to build an image of innovativeness (Goldstein et al., 2015). This is supposed to attract new and retain existing talent within the company (Kohler, 2016).

For the participating startups, the main objective is to develop their business to the next level by using the various opportunities provided through the different resources of the established company. This may include the company's tangible resources, such as production facilities, marketing, sales channels, distribution partners, office space and funding, but also may include intangible resources, such as access to company-internal and company-external networks, the accelerator alumni network and the branding effect (Weiblen & Chesbrough, 2015; Kohler, 2016; Mahmoud-Jouini et al., 2018). Leveraging these resources may enable startups to increase their Go-to-Market speed by gaining market acceptance and trust at a much quicker rate on their own (Weiblen & Chesbrough, 2015; Mahmoud-Jouini et al., 2018).

Summarizing the potential benefits for both parties, startups receive support to improve their products and operations, and established companies receive insights to help with their search for innovation. However, existing studies remain at a very high level and are rather vague when describing these potential benefits. Consequently, our explorative in-depth case study aims to shed light on the benefits for both sides: the established company and the startup.

2. METHOD

2.1. Research design

In order to investigate the benefits of corporate accelerators for startups and established companies, we chose an inductive research design with explorative nature. We use a single-site, inductive case study (Corbin & Strauss, 2015), which allows for an in-depth examination of one specific corporate accelerator from the relevant perspectives. According to Eisenhardt (1989), this

explorative methodology is especially useful when little is known about a certain phenomenon, as is the case with corporate accelerators. Through our direct access to key stakeholders and unique insights into corporate documents and processes, this research approach allows for an incomparable level of detail in the analysis. The selected method is a first step to generalizing findings to a broader field of theory, building on the unbiased, high-quality reporting of interview results (Gioia, Corley, & Hamilton, 2013). Nevertheless, the single-site case methodology is not meant to draw conclusions that are generally applicable to any organization and startup. Instead, certain insights might only be applicable to specific backgrounds and organizations (Corbin & Strauss, 2015). In line with Yin (1994), we selected the SAP Industry 4.0 Startup Program as a well-suited research object for three reasons: first, SAP has a long history and experience with both external and internal corporate venturing activities, second, the program was designed and set up for the first time in 2018, and we had the chance to accompany the whole process before, during and after the acceleration phase, third, the management team of the SAP Industry 4.0 Startup Program provided us with the opportunity to gain in-depth insights, granting us unique access to not only the startups and involved stakeholders, but also to internal documents access, which offered substantial support for the thorough analysis of this case.

2.2. Background on analyzed case study

2.2.1. Background on case company SAP

SAP is ranked 181st on the Forbes list of "The World's largest Public Companies" (Forbes, 2019). Headquartered in Walldorf, Germany, the company provides business applications and analytics digital commerce software, with over 400,000 customers and 88,000 employees in more than 180 countries.

As one of the world's biggest enterprise software companies, SAP has both the depth and breadth of data management experience on a massive scale. Clients have a huge amount of enterprise data assets flowing through the SAP ERP (Enterprise Resource Planning), cloud applications and business networks every day. Their enterprise resource planning applications reach 77% of world transaction revenue, they run the world's biggest business network with over USD 2.4 trillion in sales per year, and they currently have over 150 million users on their cloud applications (SAP, 2019).

Innovations play a significant role in the company: "SAP attributes their continued growth to innovation, a diverse portfolio, the ability to anticipate ever-changing customer requirements, and a broad ecosystem of partners" (SAP, 2018). There are many different, ongoing innovation activities. Figure 1 maps the various innovation, incubation and venturing initiatives at SAP along the locus
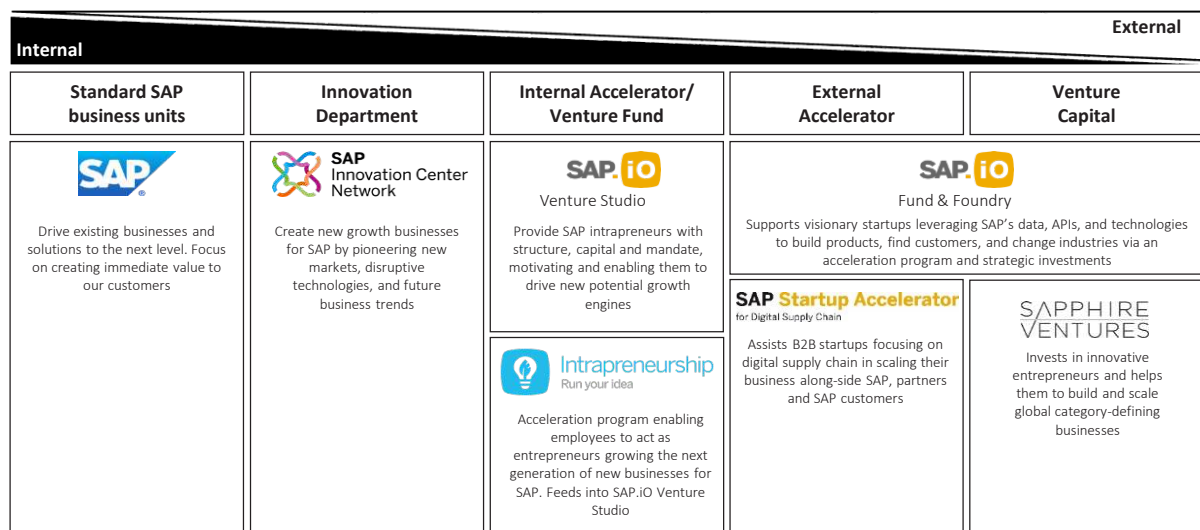

Figure 1. Different innovation, incubation and venturing initiatives at SAP

of opportunity spectrum, providing information about whether it is internal or external (see Appendix A for further detail).

With this single-site case study, we focus on (external) startup acceleration at SAP – especially through the recently established Berlin-based Industry 4.0 Startup Program powered by SAP.iO Foundry in collaboration with the SAP Startup Accelerator.

2.2.2. External startup programs of SAP

The SAP.iO Foundries are a global network of startup programs helping startups build innovative software to deliver value to customers. Foundry programs provide tailored mentorship, access to SAP APIs, SAP technologies and opportunities for exposure to SAP customers. Current Foundry locations are in major startup hubs, including Berlin, Munich, New York City, Paris, San Francisco, Singapore, Tel Aviv and Tokyo.

The SAP Startup Accelerator is a Berlin-based organization, which offers an award-winning program (SAP, 2018) that finds and assists promising startups in delivering their digital supply chain, asset management, production and Industry 4.0 solutions to market with SAP. Similar to SAP.iO Foundries, the SAP Startup Accelerator provides connections to product teams and customers, and helps with finding co-innovation opportunities without taking equity or fees from selected startups.

2.2.3. The selected case: Industry 4.0 Startup Program

Both the SAP.iO Berlin Foundry and the SAP Startup Accelerator partnered to conduct the Industry 4.0 Startup Program in May 2018. Initially, for this program, five startups should be recruited which provide products that could complement SAP's existing portfolio within the manufacturing area. An ideal outcome would imply identifying a set of customers with a need that can be fulfilled by combining SAP's product integrated with that of a participating startup, paving the way for integration and commercialization. To achieve this goal, startups were offered programatic mentorship during the entire acceleration phase, as well as support on three levels: (1) market, (2) product, and (3) financials (see Table 1).

Table 1. Offerings for participating startups

Market	Product	Financials
Access to SAP's customers Go-to-Market support Validation of offering	Support to integrate with SAP's portfolio	Access to VCs Fundraising workshops Pitch training
Programatic mentorship		

2.2.4. Selection and recruiting of startups for the Industry 4.0 Startup Program

Given the program's goal, startup selection and recruiting were limited to and focused on companies that delivered products to support manufacturing processes or products that could be tailored to provide benefits to manufacturing – all in conjunction with SAP integration. Emphasis was placed on identifying a diverse offering of trending technologies such as augmented reality for the workspace, and machine learning-based solutions. However, solution and portfolio fit played the most important role in the selection process. Initial guidelines for the selection criteria included SaaS Solutions, deep domain expertise, ownership of own IP, being an early-stage startup, a strong management team, and no conflict with the existing/planned SAP portfolio. Table 2 provides a detailed description of the selection criteria for startups in the Industry 4.0 Startup Program.

Table 2. Required characteristics of participating startups

Product	Potential	Strategic fit
SaaS Solution preferred Leverage new innovations (AI/ML/IoT/Digital Manufacturing) applied to key application segment Combination of deep domain expertise, strong technical capabilities, and a path to building a defensible moat (e.g. proprietary ontologies, new data sets) Leverage SAP Data, APIs, or platform technologies to deliver additional value to our customers IP rights belong to the startup	Early-stage Geographies with a strong SAP customer base and vibrant ecosystems Founders that have the skills and ambition/ motivation to make their startup successful in the long run	No conflict of interest with existing/ planned SAP portfolio SAP can add tremendous value to the startup in terms of market access and product development, etc.

The Foundry team processed 500 companies through desk and network research, thoroughly vetting 120 leads as strong contenders for the program. After establishing contact with the leads, 75 applications were received. From there, further
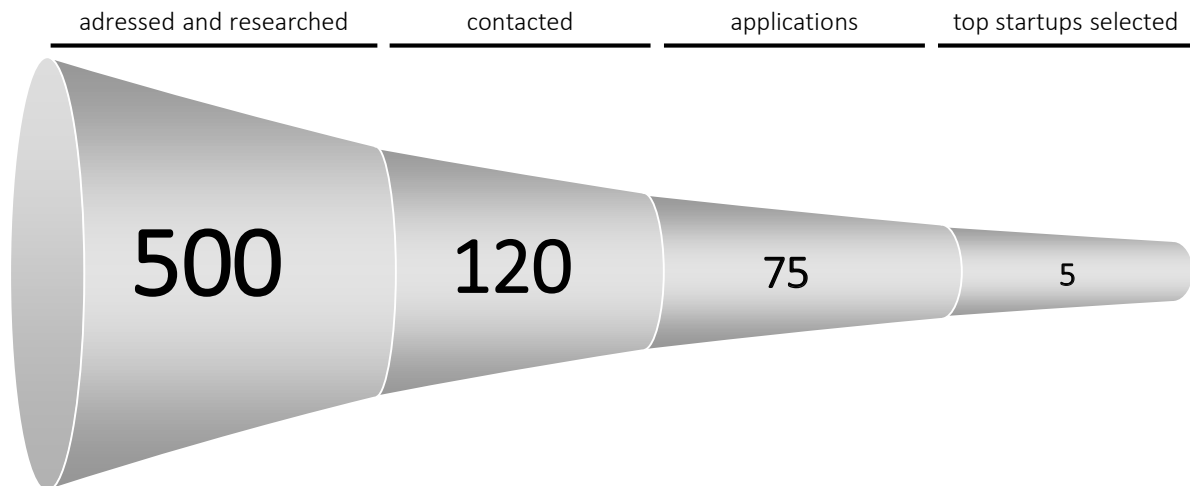
| adressed and researched | contacted | applications | top startups selected |

Figure 2. Selection process the Industry 4.0 Startup Program

vetting took place to reach a shortlist of 20 companies, which was then reduced to 10 in order to be screened via teleconference. After the 10 selected companies pitched and held a Q&A session, five were selected to join the program (see Figure 2).

2.2.5. Procedure and curriculum of the Industry 4.0 Startup Program

After notification of selection, each startup was provided with an activity schedule (curriculum) for the duration of the six-week program (see Table 3 for an overview of the main topics on the curriculum). Each startup was located on site for the first two weeks, and then three days a week for the remainder of the program to continue working closely with mentors, product teams, and participate in workshops. Mentors provided guidance and support from the SAP, customer and investor perspective. The SAP Startup Accelerator team focused on integration planning, helping to drive those development related activities. Overall, the program curriculum consisted of over 150 one-on-one mentor meetings, technical and non-technical workshops, and customer visits, resulting in over 10 planned integrations. The program culminated with a demo day in Walldorf at SAP headquarters in front of approximately 500-600 people. Each company in the program had the opportunity to pitch to and connect with a broad audience to help them navigate through the SAP ecosystem. While the program finished in July 2018, the collaboration is ongoing. Both the SAP.iO Foundry and SAP Startup Accelerator continued to work

with the Industry 4.0 Startup companies on integration work and customer introductions.

3. DATA COLLECTION

In addition to the analysis of internal corporate documents, we used semi-structured interviews for data collection in order to obtain descriptions of the real prospects of the interviewee. Based on this, we interpreted the meaning of the presented phenomena following Kvale and Brinkmann (2009). During the interviews, we focused on the two research questions:

1) What are the benefits for startups when joining a corporate accelerator program?

2) What are the benefits for established companies when running a corporate accelerator program?

Interviewees were encouraged to talk as freely as possible, as well as to give as much input as they felt was appropriate and not limit their statements to our questions, and provide examples and situations underlining their arguments. In order to encourage full openness, they were promised anonymity.

The sample is taken from the SAP Industry 4.0 Startup Program and its key stakeholders, namely founders and employees of the startups and employees of SAP.

Table 3. Overview of interviews

Company	No.	Role of interview partner	Date	Duration
SAP	1.1	Program Manager (SAP.iO)	July 20, 2018	1:01 h
	1.2	Technology Solution Architect (SAP Startup Accelerator) & Mentor (SAP.iO)	July 20, 2018	0:42 h
	1.3	Head of program (SAP.iO)	July 24, 2018	0:51 h
	1.4	Director Customer Value Sales (SAP) & Mentor (SAP.iO)	August 1, 2018	0:49 h
	1.5	Portfolio Development Manager (SAP.iO) & Mentor (SAP.iO)	August 7, 2018	1:03 h
	1.6	VP Head of Strategy (SAP) & Mentor (SAP.iO)	August 14, 2018	0:33 h
Startups	2.1	Technology Evangelist	July 27, 2018	0:42 h
	2.2	Founder & Managing Director	August 3, 2018	0:52 h
	2.3	Co-Founder & COO	August 13, 2018	0:43 h
	2.4	Founder & CEO	August 14, 2018	0:29 h
	2.5	Founder & CEO	August 20, 2018	0:38 h

In total, eleven interviews were conducted, lasting 46 minutes on average. Six of the interviewees were representatives of SAP and provided insights into the corporate perspective of the benefits of corporate accelerators. The other five interviewees were conducted with startups and their representatives, which were accelerated by SAP, and provided insights into their perspective on the benefits of corporate accelerator programs (Table 3).

The interviews were conducted via telephone or Skype. All interviews but one were conducted in English. The remaining interviews were conducted in German and subsequently translated into English. All interviewees agreed to the recording of the conversations, which were transcribed following the guidelines of Dresing and Pehl (2011).

4. DATA ANALYSIS

The main objective of this study was to explore the benefits for the startups and corporates in the context of corporate accelerator programs. To do so, we used the iterative and comparative data analysis approach by Gioia, Corley, and Hamilton (2013). To achieve the highest quality standards in inductive studies, this method built on and extended the grounded theory approach.

The data analysis for our studies consisted of three steps: first, interviews were analysed individually and 44 first-order concepts were identified, second, similar first-order concepts were grouped into 11

more abstract second-order themes, third, these second-order themes were grouped into three aggregate dimensions representing the three areas of findings identified throughout the interviews (Gioia, Corley, & Hamilton, 2013). During this process, we aimed to ensure the reliability of the coding and discussed our emerging data structure with research colleagues not involved in the study (Lincoln & Guba, 1985).

5. RESULTS

We present the findings of our analysis according to two research questions.

5.1. Results 1. Benefits for startups

RQ1: *What are the benefits for startups when joining a corporate accelerator program?*

The benefits for startups can be divided into two main areas: (1) operational Go-to-Market acceleration and (2) strategic business development acceleration.

5.1.1. Operational Go-to-Market acceleration

The first dimension of benefits for startups generated through participating in the program is related to the acceleration of the operational Go-to-Market approach. This includes product development, sales acceleration, as well as respective knowledge and skill development (Figure 3).
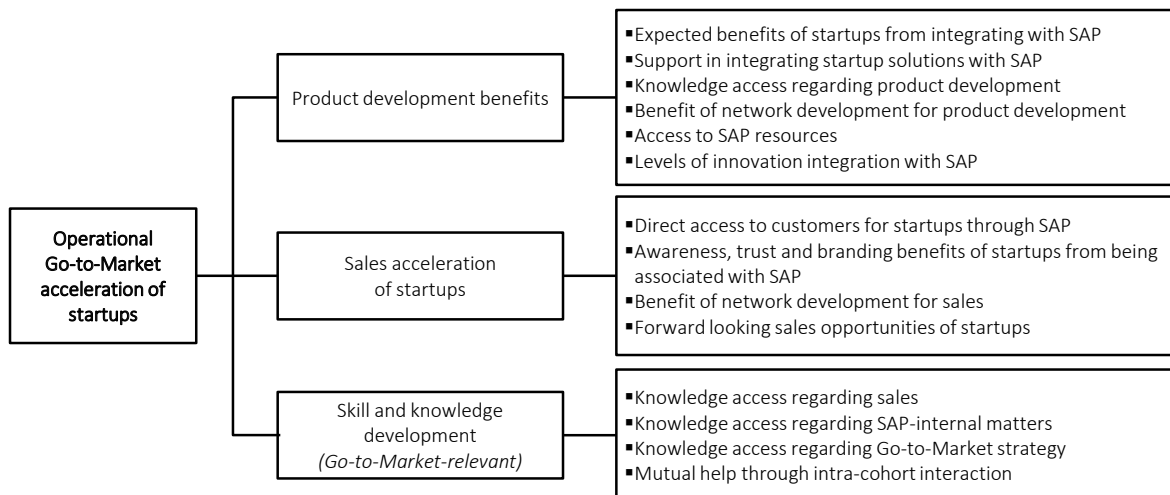
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Source: Own illustration.

Operational Go-to-Market acceleration of startups	

Product development benefits
- Expected benefits of startups from integrating with SAP
- Support in integrating startup solutions with SAP
- Knowledge access regarding product development
- Benefit of network development for product development
- Access to SAP resources
- Levels of innovation integration with SAP

Sales acceleration of startups
- Direct access to customers for startups through SAP
- Awareness, trust and branding benefits of startups from being associated with SAP
- Benefit of network development for sales
- Forward looking sales opportunities of startups

Skill and knowledge development (Go-to-Market-relevant)
- Knowledge access regarding sales
- Knowledge access regarding SAP-internal matters
- Knowledge access regarding Go-to-Market strategy
- Mutual help through intra-cohort interaction

Figure 3. Operational Go-to-Market acceleration of startups

5.1.2. Product development benefits

All startups stated that the integration with SAP software was one of the key motivations to participate in the program. Three levels of integrating the startups' products with SAP are possible: first, exchange data in both directions with an existing SAP solution, second, commercial cooperation through a partner program and product offering via the SAP App Store, third and finally, there is the possibility of considering whether to include this product in SAP holistically. To enable these benefits, the startups were given access to basic resources such as APIs, and access to technology and customers, as well as technical support. Startups highly appreciate the focus not on a proof of concept but rather on real implementation leading to tangible benefits during the program. However, this integration can only be initiated during the six-week program and will continue after it.

5.1.3. Sales acceleration of startups

A further benefit of the Go-to-Market acceleration through the program is the acceleration of startups' sales. One aspect of this is the facilitation of direct access to customers. This is considered highly relevant for the startups as there is a high overlap of the customer base. One interviewee estimated that 70-80% of their customers are also SAP customers (Interview 2.5). Without these contacts from SAP, the startups would not be able to access so many potential customers as quickly. Contacts are not randomly initiated but

rather very targeted: if a startup has a solution for a niche topic, whereas SAP has no solution nor wants to have one, then the startup is connected with the customer directly. SAP customers are also integrated into the program itself, because SAP tries to win them as mentors to help the startups.

The program also delivers benefits for the acceleration of business with new clients outside the SAP network. Through the connection with SAP, startups gain visibility and can use this as a sign of trust for new customers.

5.1.4. Skill and knowledge development (Go-to-Market relevant)

In addition to the development of the product and acceleration of sales, skills and knowledge are developed during the program, enhancing the way startups enter the market. One key aspect of learning for the startups is the Go-to-Market strategy through the access to knowledge, as well as the network. Both are facilitated through the accelerator program. One interviewee especially highlighted the increased understanding of market developments and the SAP product development roadmap (Interview 2.4). The interaction among participating startups is considered a further helpful aspect for optimizing the startups' Go-to-Market. One interviewee outlined how their company learned a lot through experience sharing, especially regarding integration with SAP (Interview 2.1).
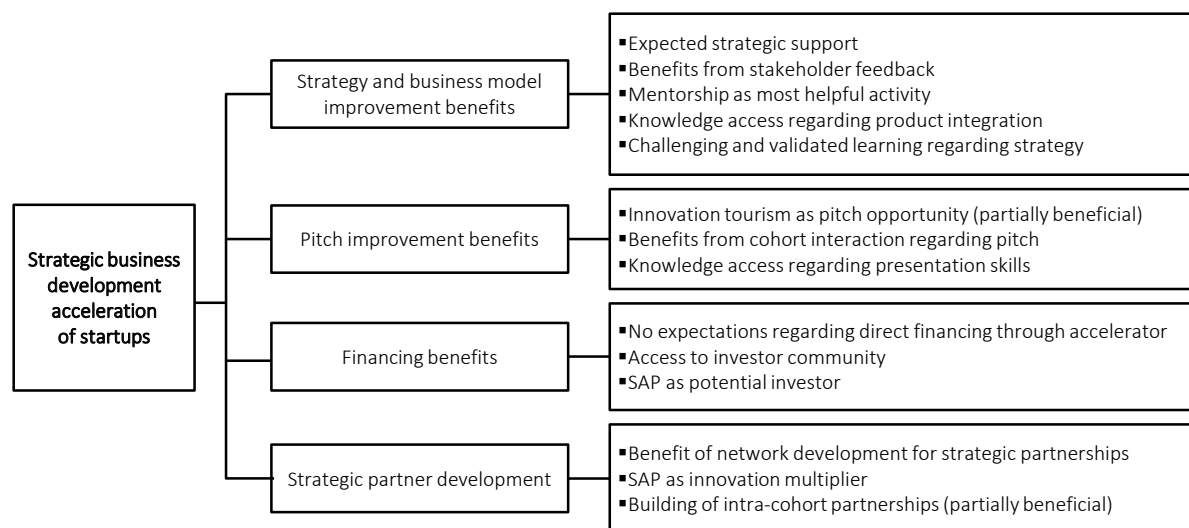
Figure 4. Strategic business development acceleration of startups

5.1.5. Strategic business development acceleration of startups

Strategic business development acceleration is the second dimension of benefits generated by the program. The benefits in this area relate to the improvement of the startup's business model, the advancement of the startup pitch, the access to financing and the development of strategic partnerships (Figure 4).

5.1.6. Strategy and business model improvement benefits

Receiving support in strategy and business model formulation to advance the development of the business was mentioned by the interviewees as a core benefit for startups. One interviewee highlighted the challenging of the business model and the sharpening of the customer value creation strategy as being very beneficial (Interview 2.4).

In this context, the direct interaction with SAP staff and customers is considered an especially important driver for this benefit. The mentorship component is valued by startups for the further feedback it offers on the strategy and business model. These sessions are 30-minute ones between the startup and an individual; either SAP, SAP partner or SAP customer. The questions asked in these sessions make startups examine their company from a different perspective to propose new

ideas for their strategic approach, making mentorship beneficial for the startups (Interview 2.3, Interview 2.4). Overall, startups value the program for its ability to accelerate the development of young businesses, especially regarding their scale-up strategy.

5.1.7. Pitch improvement benefits

Startups are provided with presentation training to improve their pitch performance. One interviewee mentioned the very high value of this coaching regarding the visualization of ideas and their communication (Interview 2.1). In addition to this targeted approach of pitch training, startups can improve their skills as a side effect of the different SAP customers visiting the offices of the program. Although they might not be a potential customer for the startup, these visitors provide the opportunity to practice their own pitch. Interviewees consider this to be a very low-risk pitch opportunity that helps to improve the pitch performance in a real-life situation in addition to the training setting (Interview 1.3, Interview 2.4).

5.1.8. Financing benefits

Receiving direct funding from SAP is not part of the corporate accelerator program. In fact, for some startups, it was not part of their focus to get any funding from SAP, because they do not want a corporate investor on board (Interview 2.2).

However, SAP provides startups with access to potential investors during the program and at the demo day, including various venture capital investors. Furthermore, for other startups, it is an option to receive funding from SAP itself or its partners in upcoming rounds of financing (Interview 2.5).

5.1.9. Strategic partner development

The program initiates strategic partnerships to further develop the businesses of the participating startups: on the one hand, directly with SAP and, on the other hand, using SAP as a multiplier. To become a strategic partner directly with SAP, the program provides the opportunity to connect with the right people and the right competencies in this large corporation. This is something that would not be easy without the accelerator program, as one interviewee highlighted (Interview 2.4). In addition, with its broad base of customers, SAP also serves as a multiplier for the startups' strategic partner development. One interviewee named the direct interaction and discussions about partnerships with SAP as a clear benefit of the program (Interview 2.3). Some startups also find strong synergies with other startups in the program and start cooperating. These strategic partnerships arise, because startups target the same cus-

tomers but with different products for different problems. Startups start figuring out synergies in approaching customers and how to best provide complementary solutions for them (Interview 2.3, Interview 2.4).

5.2. Results 2. Benefits for corporate

RQ2: *What are the benefits for established companies when running a corporate accelerator program?*

The various benefits for the corporate can be summarised as increasing the overall competitiveness of SAP. By triggering innovation to enhance the product ecosystem, using the accelerator as a branding tool, infusing startup culture into the company, and developing the customers, the company shall ultimately become more competitive (Figure 5).

5.2.1. SAP product ecosystem development

By triggering innovation to enhance the product ecosystem, SAP aims to make its own product ecosystem more attractive. As one interviewee pointed out, the integration of the startups into the SAP ecosystem provides customers with additional innovative products (Interview 1.3).
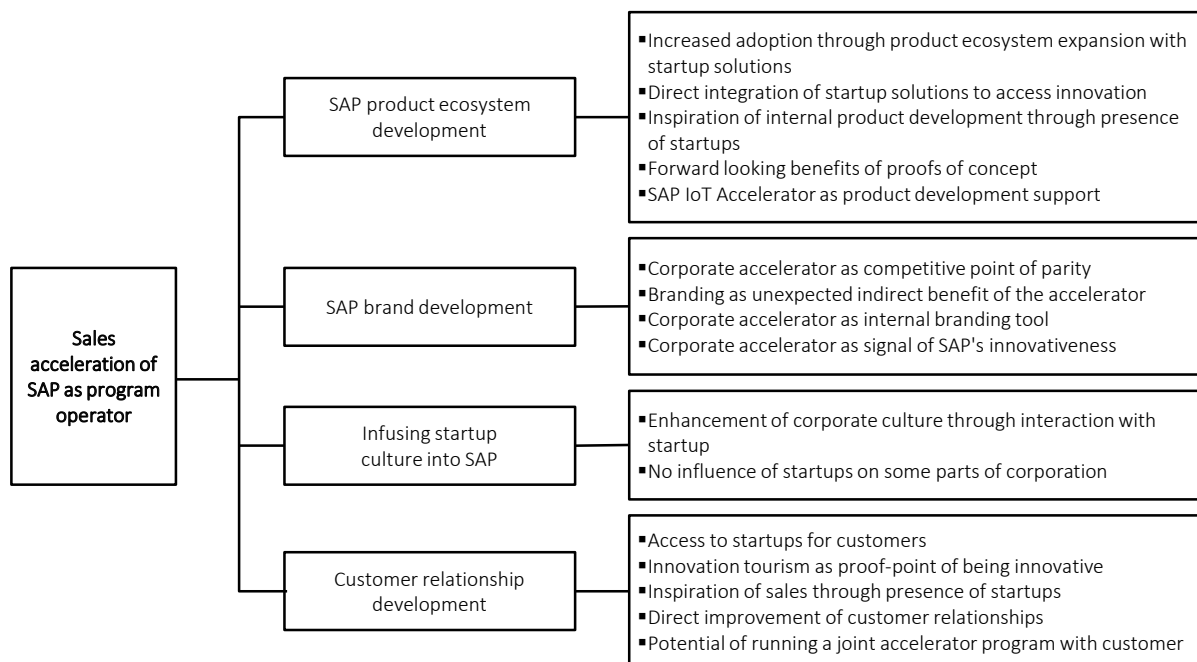
Source: Own illustration.

Figure 5. Sales acceleration of SAP as program operator

The additional products are expected to generate competitive advantage for SAP. It enables the closing of preferred supplier deals with customers, as even niche solutions can be provided by SAP. Startups help to offer solutions as broadly as possible in various areas, even in innovative industries, and the solutions can then easily interact with the SAP back-end (Interview 1.5). A decisive reason why an established company uses external innovation from startups is the timing. Smaller companies are considered faster when it comes to product development processes and therefore it makes sense for a company such as SAP to insource external innovation from the startups. Nevertheless, this does not mean that SAP disregards internal product development. Instead, the startups' innovations around SAP software are perceived as an enrichment to the product ecosystem of the corporate. In-house developers seem to be positively influenced by the presence of startups (Interview 1.1).

5.2.2. SAP brand development

The accelerator program also provides benefits regarding brand development. The image of being innovative and associated with new ideas and with startups is an important factor. Accelerator programs are perceived as being new and shiny (Interview 1.4). Therefore, internal and external brand building and marketing represent an important benefit. Although these effects are just considered a side effect as it is not the initial goal to change SAP's image (Interview 1.5, Interview 1.6), it contributes to its increasing competitiveness on the market.

5.2.3. Infusing startup culture into SAP

A cultural impact on the organization is targeted to increase sales by enhancing the flexibility of sales, product development and management. This cultural impact is achieved through the interaction with startups in the program that experience a different culture, entrepreneurial spirit and different speed of innovation. The benefit of culture infusion depends on which part of the SAP organization is involved. Those from the parent organization, such as salespeople, saw it as an opportunity to learn from the startups' innovative culture. In particular, the agile working styles and the speed of startups that are not bound to corporate administrative processes are factors highlighted by interviewees (Interview 1.2, Interview 1.4). However, it is also recognized that the culture infusion through programs like this is in some cases very limited and not the same for all employees interacting with the startups. People with experiences in working with startups felt no additional inputs through the program.

5.2.4. Customer relationship development

Through the close integration of customers, the accelerator program strengthens the relationship of SAP with its customers. Customers visiting the accelerator intend to experience innovation and bring this into their own organizations, as one interviewee pointed out (Interview 1.5). With the offering of new solutions from startups, the program further enables the client to find a solution through SAP that meets their needs (Interview 1.1). This is a service by the company to please its clients.

Customer involvement has three levels in the program: (1) the first is customer visits, in which they examine the solution, (2) the second is customer representatives who try to help a startup through a mentorship relationship, and (3) the third is customers who run a pilot with the startup's solutions. In addition, there are direct benefits regarding the sales performance through the inspiration of salespeople from the startups: one of the salespeople stated that the program provides great stories about innovative solutions and how they are developed when visiting a customer (Interview 1.4).

6. DISCUSSION

In this study, we chose an exploratory research approach to investigate the benefits of corporate accelerators for both startups and corporates in-depth. Acknowledging the fact that this phenomenon is still nascent and under-researched, we thought "carefully about how to make the report interesting, readable, and understandable from the point of view of business practitioners in addition to academics" (Eriksson & Kovalainen, 2008, p. 131).

The results of our study highlight the importance of setting up a corporate accelerator in a manner that brings benefits to the startups, the corporation and the corporation's customers. On the one hand, the SAP Industry 4.0 Startup Program was designed to accelerate the sales of SAP through (1) enhancing the product ecosystem development (Kanbach & Stubner, 2016), (2) augmenting brand development, (3) infusing startup culture into the corporation (Weiblen & Chesbrough, 2015), and (4) improving the customer relationship development (Mahmoud-Jouini et al., 2018). On the other hand, the SAP Industry 4.0 Startup Program was also designed to deliver benefits to startups by (1) accelerating their Go-to-Market approach on an operational level through product development (Pauwels et al., 2016) and sales acceleration, as well as skill and knowledge development, and (2) accelerating their business development on a strategic level through strategy and business model improvement, pitch training, financing benefits and strategic partner development.

Furthermore, as this deep dive into the SAP.iO Foundry demonstrates, the design characteristics of a corporate accelerator program need to be tailor-made to the corporate's needs, focus and re-source-base. In order to accomplish its strategic goals and reduce the inherent risk of collaboration with startups, the SAP.iO Foundry focuses on collaborating with startups with a proven record of accomplishment within a solid growth stage. With the zero equity approach and the aforemen-tioned benefits, the SAP Industry 4.0 Startup Program is attractive to startups in this focus area.

Moreover, it is important for practitioners to take the necessary effort necessary within the selec-tion process to identify and onboard specific startups to a corporate accelerator program. To have five top startups selected to the SAP Industry 4.0 Startup Program, the team addressed and re-searched 500 startups, which constitutes a 1% conversion rate from identification to participation. We recommend establishing a thorough screening and evaluation process based on a stage-gate approach with clear criteria for selecting or rejecting startups. In Table 2, we outline the required characteristics of participating startups in the SAP Industry 4.0 Startup Program regarding prod-uct, organization and strategic fit which are analyzed during this process. Practitioners can benefit from these benchmark criteria, however, they might need to adapt them with regards to their in-dividual program.

With a duration of six weeks, the program under review is relatively short. Especially for such short time-spans of acceleration, it is key to provide a transparent and detailed trajectory for the acceleration of growth and business opportunities. The exemplary curriculum of the Industry 4.0 Startup Program (Table 3) provides valuable insights for practitioners to set up corporate acceler-ator programs.

Turning the innovations from the corporate accelerator program into lasting business impact can only be accomplished when they are embedded into an end-to-end innovation management system and a holistic corporate venturing strategy (Gutmann, 2018). Thus, practitioners need to guarantee that the innovations can be scaled up after the acceleration phase. Due to the difficulty of measur-ing the direct link between the effort to be made and the benefits gained in the long run, it remains questionable how the cost-benefit ratio of setting up and maintaining a corporate accelerator can be quantified in the long run. We encourage future researchers to address this topic by investigat-ing how to quantitatively measure the success of corporate accelerators.

Nevertheless, the findings presented from this in-depth single-case study come with limitations. We urge future researchers to examine the benefits of corporate accelerators on a larger and broad-er scale, as we assume they might vary (1) by different regions, (2) by different industries, (3) de-pending on the underlying objective, and (4) by the proposition of the corporate accelerator.

CONCLUSION

Investigating the SAP Industry 4.0 Startup Program – as part of SAP's corporate accelerator program – sheds light on the benefits of such programs. Our findings provide valuable insights for both scholars and practitioners engaged in corporate accelerators. Some statistics of the analyzed program show that the topic of corporate accelerators arouses high levels of interest in different stakeholder groups: there were 75 processed applications, 100+ attendees at the Kickoff Event in Berlin, 50+ participating mentors contributing to 174 mentor sessions and 900+ registrations for the demo day at SAP's headquarters in Walldorf.

Overall, the SAP Industry 4.0 Startup Program is a success for SAP for three main reasons. First, there was positive engagement from SAP customers, as many of them visited the Foundry and were inspired by how SAP is working with startups. Thereby, startups were also able to drive lead generation through their interaction with these numerous SAP customers. Second, there is a deep SAP integration discovery underway with ongoing co-innovation discussions between SAP and startups, as well as 10 integration projects, which have been identified and planned so far. Third, the SAP Industry 4.0 Startup Program was strongly supported by SAP executives, with one board member visiting the foundry and another board member delivering a keynote at the demo day. Furthermore, executive sponsors continue to be engaged with the startups all the way through the demo day.

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APPENDIX A

Table A1. Overview of innovation, incubation and venturing activities at SAP

Name	Focus/business model	Description
innoWerft	Startup-incubator	Independent startup incubator as initiative of SAP, a research institute and a local municipality Provision of network, financing and coaching
SAP Co-Innovation Lab	Physical locations, expertise and other resources to support co-innovation projects	Collaboration of SAP, its partners and customers Development of idea-phase projects Physical locations with working space, cloud infrastructure, coaching, legal support and expert knowledge
SAP Data Space	Innovation space and co-working space; restaurant (open for the public) Integration of SAP Startup Accelerator	SAP Startup Accelerator as partner and possible next step for recruited startups Showcasing SAP innovation to the public, especially potential startups
SAP Innovation Center Network	SAP-related innovation department/innovation lab	Startup-like environment to further develop existent solutions and new solutions Collaboration with customers Enhancement of products already in use Development of new products Interdisciplinary team setup with end-to-end product development responsibility
SAP Intrapreneurship [internal accelerator]	Accelerator for SAP-internal business ideas	Acceleration program enabling SAP employees to act as entrepreneurs and initiate their business idea Feeds into SAP.iO Venture Studio

Table A1 (cont.). Overview of innovation, incubation and venturing activities at SAP

Name	Focus/business model	Description
SAP Startup Accelerator [external accelerator]	Co-innovation program and accelerator Focus on innovation around the internet of things (IoT)	Development of B2B startups with focus on internet of things Connecting customers and startups Recruiting of startups from SAP.iO for further development
SAP Labs	Global R&D locations	Customer-centric research and development locations in high tech clusters worldwide Scattered around the globe to ensure proximity to the customer, talent and clusters Execution of projects as pilot tests for new products New product development and ideation
SAP Leonardo Center	Workshop and showcase locations around the globe	Integration of customers and partners into physical experience of innovative technologies Showcasing of SAP Leonardo (IoT product portfolio)
SAP Next-Gen	Innovation community for sustainable development	Mainly focused on disruptive and sustainable innovation with the use of SAP Leonardo (IoT product portfolio) Approach to move forward on 17 United Nations Sustainable Development Goals with SAP products SAP interacts with customers, universities, startups, venture firms, experts and other partners
SAP Startup Focus Program [external accelerator]	Non-equity startup development program (incubator/accelerator) Focus on product ideation around SAP HANA (data platform product)	Granting of access to technology platform, SAP HANA Support in development of minimum viable products and marketing Pitch to external and SAP-internal investors and startup programs for further development
SAP University Alliances	Collaboration program with universities Means of recruiting talent	Granting of access to SAP software to enable university students and staff to work on joint projects
SAP.iO Fund & Foundry [venture capital fund and external accelerator]	Venture capital fund (early-stage) Globally dispersed foundries functioning as incubators and accelerators	Granting of access for startups to SAP customers, data and technology Product building and market definition Collaboration with SAP Startup Accelerator Focus on innovation in the field of SaaS (Software as a Service), digital manufacturing, machine learning and AI (Artificial Intelligence) for the manufacturing industry
SAP.iO Venture Studio [internal accelerator/venture fund]	Venturing and acceleration of mainly SAP-internal innovation	Follow-up program of SAP Intrapreneurship program Provision of capital, organizational framework and access to customers and technology
Sapphire Ventures [external VC fund]	Venture capital fund (expansion stage and late-stage startups) Fund of funds (early stage VC funds)	Enabling companies to access SAP network of customers and partners Independent venture firm with high-profile investments (e.g. LinkedIn) Spun off from SAP in 2011 SAP as limited partner