Venture Client Model: A Systematic Literature Review

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Abstract: Established companies are increasingly opening their innovation systems to stay ahead of the competition. In this context, collaboration with innovative and agile start-ups are gaining continuously more importance. In the past established companies often used common corporate venturing methods such as incubators, accelerators, or corporate venture capital for collaboration. Compared to these methods the venture client model is relatively new and was invented by BMW employees in 2014. Using the venture client model, established companies become early clients of the start-ups even it is still a venture to do so. Together they carry out a pilot project to develop a proof of concept and validate it under real conditions. If successful, they enter a long-term collaboration to integrate the start-up's solution into products, processes, or business models of the established company. The aim of this paper is to sum up the current literature and set a foundation for future research on this topic. Therefore, we conduct a systematic literature review. As a result, we provide a definition of the venture client model, describe characteristics, present advantages from the perspective of established companies and start-ups. In addition, we summarize the state of research regarding strategy, process, and organizational structure and for the venture client model. In terms of strategy, future research should elaborate defining elements of a strategy as well as ways to integrate the venture client model into the corporate innovation-ecosystem. Focusing on the process additional research is needed on a venture client reference process and its integration into the corporate's core processes. Referring to the organizational structure a reference architecture for a venture client unit as well as its positioning within the organization (e.g., innovation management or corporate strategy) should be further investigated.

Keywords: Venture Client Model, Start-up Supplier Program, Corporate Start-up Partnership, Corporate Venturing, Open Innovation

1. Introduction

As technology continues to advance and customer needs evolve, markets are becoming more dynamic and competitive than ever before. This increases the pressure on established companies (EC) to be more innovative and adapt faster to disruptive changes. To identify and realize innovation opportunities faster and more frequently companies are increasingly turning to open innovation paradigms (Gassmann *et al.*, 2010). They benefit from using external sources as a pathway to new ideas, technologies, business models, and markets (Vanhaverbeke *et al.*, 2012). One concrete way to leverage external innovation is to collaborate with start-ups, also known as corporate venturing (CV) (Kuratko *et al.*, 2009). Start-ups use emerging technologies, reinvent existing business models, and are more agile and flexible (Trimi & Berbegal-Mirabent, 2012). However, traditional CV methods, such as corporate venture capital and corporate accelerators, are not suitable for quickly integrating the start-up's technologies into the company (Gutmann, 2018). The Venture Client Model (VCLM) addresses this gap in the corporate venturing toolbox. Using the VCLM EC become early customers of start-ups and apply their technology to products, processes or business models in a joint pilot project (Prats *et al.*, 2017). In corporate practice, it is already being used by various companies (Gimmy *et al.,* 2017). In contrast, there is only fragmented knowledge about the VCLM in the literature. Therefore, the aim of this paper is to summarize the current literature and identify research gaps. The research questions focus on strategies (Which strategic questions need to be answered?), processes (Which process steps and activities need to be performed?) and organizational structure (How is an organizational unit designed?) for the VCLM. To answer these questions a systematic literature review (SLR) is conducted. The paper unfolds as follows: Section 2 places the VCLM in the CV-literature and explains it in more detail. Section 3 describes the research methodology. It is followed by the presentation of the results in section 4 and corresponding research agenda in section 5. The paper ends with discussion and limitations as well as an overall conclusion.

2. Background

2.1 Corporate Venturing

CV refers to the collaboration between EC and start-ups (Siota et al., 2020). EC are increasingly using various CV-methods and expanding their venturing repertoire to benefit from start-up collaborations (Prats *et al.*, 2017). Start-ups provide access to new ideas, the latest technologies, novel business models and talent (Prats *et al.*, 2017). The organizational agility and flexibility, speed in the innovation process and the niche knowledge of start-ups can complement internal R&D efforts, foster profitable growth, and put companies ahead in competition (Brigl *et al.*, 2016). The number of CV-methods has grown rapidly in recent years and continues to evolve.

Figure 1 provides an overview and comparison of the different CV-methods using three characteristics – time to get results, capital required and start-up development stage. While the traditional CV-methods require more capital to achieve quick results with mature startups, the VCLM breaks this logic. The required capital is significantly lower compared to CV methods that involve similar late stages and development phases, while results can be achieved in a shorter period. Therefore, it is a very good add-on for the CV of companies. However, since it is comparatively new, further investigation is needed as its one of the latest methods and there are different approaches for Venture Clienting which are still in development.

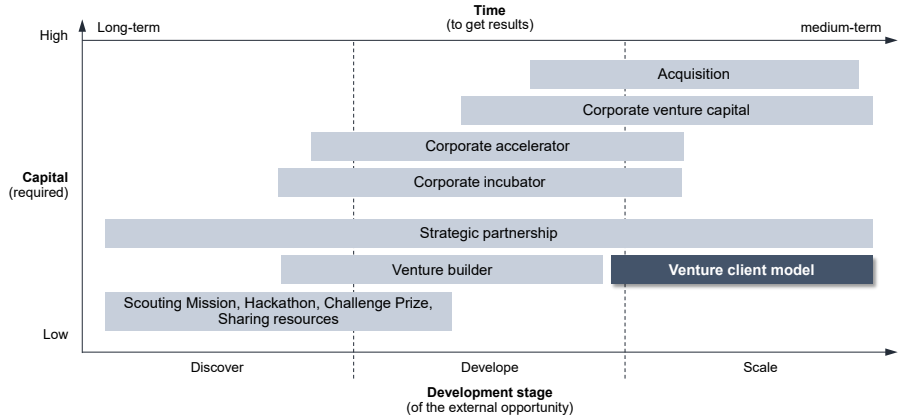

Figure 1: CV-methods in comparison – adapted from Siota *et al.*, 2020

2.2 Venture Client Model

The VCLM was coined by Gregor Gimmy and Matthias Meyer in their former roles as managers at BMW (Gimmy *et al.*, 2017), (Gutmann *et al.*, 2020). After receiving the approval from R&D executives in 2014 they launched the BMW Start-up Garage – the world's first Venture Client Unit (VCLU) – in 2015 (Gimmy *et al.*, 2017), (Siota *et al.*, 2020). Since then, the VCLM has been adopted by EC like Continental, Lafrage Holcim or Telefonica (Gimmy *et al.*, 2017), (Kurpjuweit & Wagner, 2020). Additionally, some EC joined forces to perform the model in VCL clusters. One example is the Stratosfare-initiative, which organizes the VCLM for the innovation cluster it's OWL and some large companies in the region OWL (OstWestfalenLippe) in Germany (Stratosfare, 2023). These EC use the VCLM to improve competitiveness by integrating the start-up's solution (technology, product or service) into their products, services, processes or business models (see *Figure 2*) (Gimmy *et al.*, 2017), (Kurpjuweit & Wagner, 2020). To validate integrability they purchase a small sample of the solution without taking equity or IP and test it under real conditions (Gimmy *et al.*, 2017). By doing this they become a paying client of the start-up even it is still a venture – a Venture Client (VCL) (Gimmy, 2022).

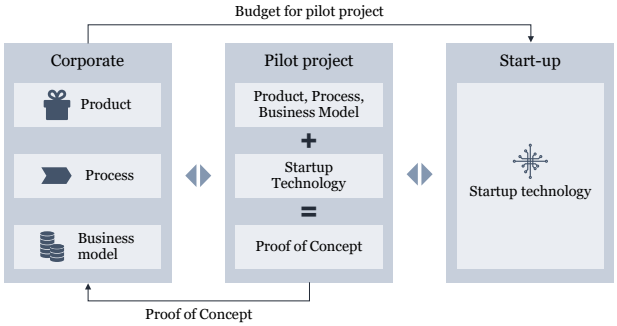

Figure 2: Functionality of the VCLM

Compared to other CV methods the VCLM offers different advantages for EC and start-ups. As the collaboration usually does not exceed a duration of six months, time to get results is relatively short (Kurpjuweit & Wagner, 2020), (van der Meer *et al.*, 2021), (Veit *et al.*, 2021). Low fix costs for running the model are also beneficial for EC (Gimmy *et al.*, 2017). Additionally, they profit from the model's scalability as the VCs (e.g. business units, production, human resources or IT) provide necessary resources, like budget or project staff, to conduct the pilot project (Gimmy *et al.*, 2017). Low risk and the possibility for customization are also advantages mentioned in the literature (Kurpjuweit *et al.*, 2020). By making start-ups their suppliers, EC provide them the resources "they need the most: […] customers and direct revenue […] to finance their product development"(Siota *et al.*, 2020). Receiving access to specific industry and technical knowledge as well as customer feedback also supports the product development (Gimmy *et al.*, 2017), (Enkel & Sagmeister, 2020), (Corvello *et al.*, 2021).

To unlock these benefits EC need a framework to set up the VCLM with their company. According to Peter strategy, process and organizational structure are important aspects, which needs to be considered when setting up a start-up collaboration (Peter, 2019). Therefore, we derive the following research question:

1. **Strategy:** Which strategic questions need to be answered when setting up the VCLM?
2. **Process:** Which process steps and activities need to be performed for the VCLM?
3. **Organizational structure:** How is an organizational unit designed which is responsible for performing the VCLM?

3. Research Design

The aim of the present paper is to summarize the current literature and derive gaps for further research. An SLR is particularly suitable for this as it "provide[s] a comprehensive [over]view of knowledge formed in existing literature" (Williams Jr. *et. al.*, 2021). Following a defined and transparent process replicability and the avoidance of different biases is ensured (Pati & Lorusso, 2018). To conduct the SLR we applied the process according to WEBSTER AND WATSON (Webster & Watson, 2002). We started the development of the search strategy through a trial search with the keywords "venture client" and "venture client model" and iteratively added synonyms out the information found in the trial search literature and prior research. The literature search was conducted with the following search string:

((“venture client*” OR “start-up supplier” OR “start-up supplier” OR “new venture supplier” OR “start-up program” OR “start-up program”) OR (“startup” OR “start-up” OR “new venture”) AND (“corporate*” OR “corporation*” OR “enterprise*” OR “business*” OR “organi?ation*” OR “incumbent*”) AND (“cooperation*” OR “co-creation*” OR “cocreation” OR “partnership*” OR “alliance*”) OR (“corporate ventur*”) OR (“corporate accelerator*” OR “company accelerator*”))

The following review phases were performed independently by the two main authors. The results were discussed in case of differences. For the literature search we entered the search string into the database "SCOPUS" and identified 888 papers. After filtering by year (2013-2023), document type (article, conference paper), subject area (Business, Management and Accounting, and Economics, Econometrics and Finance) and language (english), 267 papers remained. These papers were reviewed on title-basis. Papers whose title did not focus on the topic of Corporate Start-up Partnerships were excluded. Additionally, papers dealing with venture capital investments or inside-out CV programs where excluded, leaving 73 papers. The same procedure was performed on abstract basis, leaving 41 papers. In the next part, the remaining papers were read on full text-basis. Papers that did not cover the topic of VCLM were excluded. We identified 11 relevant papers covering the

VCLM. A forward and backward search on the remaining papers lead to a discovery of 5 new papers (see *Figure 3*).

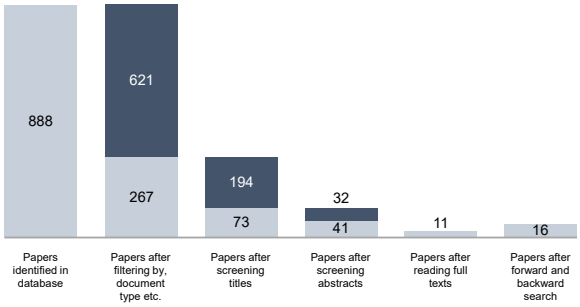

Figure 3: SLR scanning and selection process

For data analysis, all articles were read twice and all relevant information regarding the research question was loosely structured in a mind map and arranged into thematic clusters. These clusters were iteratively improved and further elaborated. For this purpose, they were critically examined and, if necessary, divided, or new clusters were made. As a result of this iterative process, we derived a definition of the VCLM, its advantages as well as insights about VCL strategy, process, and unit.

4. Results

From the SLR 16 papers were identified, which are related to the VCLM (see Figure 4). Three of these papers deal exclusively with the VCLM. Another three briefly describe the VCLM as part of a CV-taxonomy. Additional three papers provide insights about corporate-start-up-collaboration, which are also applicable for the VCLM. For instance, GUTMANN AND LANG describe a collaboration process for venture units "such as [...] venture client units" (Gutmann & Lang, 2022). The papers remaining implicitly mention the VCLM by describing crucial characteristics such as outside-in open innovation with start-ups, without investment and based on a paid pilot project to solve business challenges.

Category	Paper	Title
Venture Client Model (explicitly)	Faria et al., 2018	Venture client: Analysis of the mining lab program
	Gimmy et al., 2017	What BMW's corporate VC offers that regular investors can't
	Gutmann et al., 2020	Start-ups in a corporate accelerator: What is satisfying, what is relevant and what can corporates improve?
Corporate Venturing	Gutmann, 2018	Harmonizing corporate venturing modes: An integrative review and research agenda
	Siota et al., 2020	Corporate Venturing: Insights for European leaders in government, university and industry
	Veit et al., 2021	Revising the taxonomy of corporate accelerators: Moving towards an evolutionary perspective
Start-up-Collaboration	Corvello et al, 2021	Antecedents, processes and outcomes of collaboration between corporates and start-ups
	Gutmann & Lang, 2022	Unlocking the magic of corporate start-up collaboration
	Corvello et al., 2023	Start-up collaboration units as knowledge brokers in corporate innovation ecosystems: A study in the automotive industry
Venture Client Model (implicitly)	Enkel & Sagmeister, 2020	External corporate venturing modes as new way to develop dynamic capabilities
	Kurpjuweit, 2018	Partnering with new venture suppliers: A dynamic capabilities approach
	Kurpjuweit et al., 2020	Selecting startups as suppliers: A typology of supplier selection archetypes
	Kurpjuweit & Wagner, 2020	Startup supplier programs: A new model for managing corporate-startup-partnerships
	Moschner et al., 2019	Toward a better understanding of corporate accelerator models
	Onetti, 2021	Turning open innovation into practice: Trends in European corporates
	Van der Meer et al., 2021	Innovation Labs: A taxonomy of four different types

Figure 4: Publications identified by the SLR

4.1 Venture Client Strategy

In the literature, there is no definition of a venture client strategy (VCLS). Nevertheless, the literature names aspects that can be assigned to a strategy. GUTMANN AND LANG describe a vision as a critical success factor for working with start-ups (Gutmann & Lang, 2022). FARIA ET AL. name the overall objective of the VCLM as another important aspect (Faria *et al.*, 2018). For example, one of Nexa Resources objectives was to increase competitiveness of their plants by reducing production time and costs (Faria *et al.*, 2018). To align the VCLM to the vision and the overall objective several strategic questions need to be answered:

- **Type of innovation:** Do we want to use start-up solutions to innovate our products, processes or business models (Gutmann & Lang, 2022)?
- **Focus of innovation:** What are search fields for innovative start-up solutions (i.e. sustainability) (Gutmann & Lang, 2022)?
- **Business impact:** Do we want to solve problems with short-term impact for our core business or develop new business opportunities with long-term impact (Gutmann & Lang, 2022)?
- **Branding:** Should we establish a new brand for our VCLU to increase internal and external visibility (Kurpjuweit *et al.*, 2020)?
- **Pull or push:** Do we want to scout start-ups for known problems with a clear demand from a corporate division (pull) or introduce start-ups to corporate divisions to identify unknown problems (Moschner *et al.*, 2019)?
- **Batch or continuous process:** Should we work in batches or establish a continuous process (van der Meer *et al.*, 2021)?

Responsible for developing the VCLS are top-level executives and employees from the VCLU. (Gutmann & Lang, 2022)

4.2 Venture Client Process

To collaborate successfully with start-ups EC must implement a well-structured process (Gutmann & Lang, 2022). From the SLR six different processes were identified, which are related to the VCLM (see Figure 5).

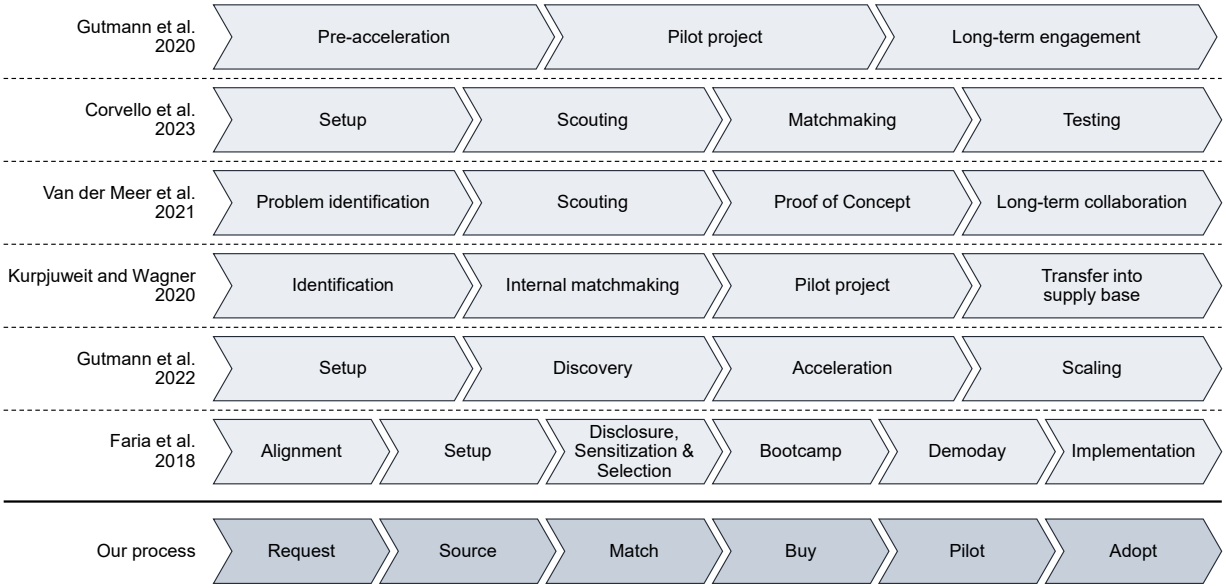

Figure 5: Different venture client processes

They differ regarding content and granularity. In terms of content most processes have need identification, start-up-scouting, matchmaking with the VC, conduction of the pilot project and long-term collaboration in its core. However, some of the authors exclude edge processes or include additional process steps like KURPJUWEIT AND WAGNER or CORVELLO ET AL. With respect to granularity, processes with three, four and six process steps are described. GUTMANN AND LANG even present a twelve-step process for venture units by dividing each of its four main process steps into three subprocess (Gutmann & Lang, 2022). Based on these findings we derive six-step venture client process (VCLP), which will be described in detail.

4.2.1 Request

The aim of this phase is to define a need for start-up technologies within the EC. Therefore, EC either use pull- or push-approach, or both. Using the pull-approach, the VCL is requesting a start-up solution for a known problem (Moschner *et al.*, 2019). Within dedicated meetings VCL and VCLU describe relevant problems. These descriptions is subject to a refinement process resulting in a well formulated problem statement (Corvello *et al.*, 2023), (Kurpjuweit & Wagner, 2020). Using the push-approach, the VCLU is introducing a start-up to the VC. If the start-up is relevant to the VC, a previously unknown technology need is identified.

4.2.2 Source

Providing start-ups for the technology needs is the aim of the scouting process. It is divided into two process steps – scouting and pre-assessment. The result is a long list of start-ups, meeting the previously defined technology needs and pre-assessment criteria (Gutmann & Lang, 2022).

EC have two options for scouting start-ups. They either scout actively or passively (Kurpjuweit & Wagner, 2020). Using the first approach EC actively identify and contact start-ups. Exemplary scouting-tools are desk research or external scouts (Gutmann & Lang, 2022). As these tools require substantial personnel and financial efforts, EC aim for implementing passive scouting (Kurpjuweit *et al.*, 2020). In this case start-ups initiate the contact. Therefore, clearly formulated technology needs serve as a foundation. They must be communicated directly or indirectly to the start-ups. The direct way of communication includes corporate-owned websites or social media channels (Gimmy *et al.*, 2017). Sharing information about the need for start-ups with external partners represents the indirect way of communication. These partners like accelerators or venture capitalists are intrinsically motivated to provide suitable start-ups as a reference customers for their start-ups are beneficial for them as well (Kurpjuweit & Wagner, 2020). In addition, the communication of technology needs is necessary to implement an application form to provide start-ups standardized access to the EC (Corvello *et al.*, 2023).

Criteria used to assess start-ups "differ substantially from evaluation used for established suppliers" (Kurpjuweit & Wagner, 2020). They are more similar to those applied by venture capitalists (Kurpjuweit *et al.*, 2020)**.** The number of criteria used for the start-up assessment differs. While some corporates use six criteria, others created lists of 30 criteria (Kurpjuweit & Wagner, 2020). However, GUTMANN AND LANG recommend to use a reduced number of criteria (Gutmann & Lang, 2022). Evaluation criteria can be divided into two dimensions. The first dimension addresses criteria to assess the maturity of the company itself (e.g. legal and financial situation or start-up team). The second dimension assess the technology-fit (e.g. resolution of a specific display) (Siota *et al.*, 2020). Whereas criteria for assessing company-maturity usually do not differ by scouting-requests, criteria for technology-fit are mostly individual.

Usually, the VCLU is responsible for the start-up-scouting. In case of active scouting this includes desk research and coordination of external partners like scouts. Realizing the passive approach activities like providing start-up needs to accelerators or venture capital fonds and setting up a digital application form for start-ups must be executed (Kurpjuweit & Wagner, 2020). Therefore, responsible employees need to be familiar with common scouting-tools, well connected within the start-up ecosystem and have experience assessing start-ups. (Kurpjuweit & Wagner, 2020)

4.2.3 Match

The objective of this process step is to match the VCL with the best fitting start-up for their challenge. Therefore, in the first step a shortlist of start-ups is created using predefined criteria (Gutmann & Lang, 2022). **Error! Reference source not found.** provides an overview of criteria and corresponding requirements mentioned by the literature.

Criteria	Requirement	Source
Start-up stage	Early stage; later Stage; mid/later-stage	(Gimmy *et al.*, 2017); (Onetti, 2021); (Kurpjuweit & Wagner, 2020)
Product or service maturity	Functional prototype; ready for pilot project; almost market-ready; high	(Gimmy *et al.*, 2017); (Veit et al., 2021); (Kurpjuweit & Wagner, 2020); (van der Meer *et al.*, 2021)
Business model maturity	Proven; scalable	(Enkel & Sagmeister, 2020); (Kurpjuweit & Wagner, 2020)
Track record	Received VC-Investment or completed accelerator	(Gutmann *et al.*, 2020)
Size of start-up team	Two to four; full-time management- and engineering-team	(Kurpjuweit & Wagner, 2020); (Siota *et al.*, 2020)
Team background	Serial entrepreneur	(Gimmy *et al.*, 2017)
Legal situation	Legal entity	(Siota *et al.*, 2020)
Financial situation	Financial resources for at least six months	(Kurpjuweit & Wagner, 2020)
Strategic-Fit	Existing	(Gutmann *et al.*, 2020)
Degree of innovation	Higher than established suppliers	(Faria *et al.*, 2018)

Figure 6: Evaluation criteria and corresponding requirements

The VCLU then holds bilateral meetings with the start-ups to obtain detailed information. Based on this, a decision is made which start-up will pitch its solution to the VC. This final pitch can be stand-alone or part of a larger pitch-event (Corvello *et al.*, 2023), (Kurpjuweit *et al.*, 2020). Throughout the process, different people are involved. The VCLU organizes meetings and pitches with the start-ups and evaluates them (Kurpjuweit *et al.*, 2020). The evaluation of the start-ups is also carried out by the need owner on the VC-side (Corvello *et al.*, 2023). During the final pitch a manager, who is responsible for the required budget, attends (Kurpjuweit & Wagner, 2020). Additionally, the evaluation committee may include people from purchasing, business development, R&D or top-management (Kurpjuweit & Wagner, 2020).

4.2.4 Buy

The objective of the buying process is to set the foundation for a successful pilot project. In general, this process should be fast, standardized and start-up-friendly to keep the complexity of established legal and purchasing processes away from the start-up (van der Meer *et al.*, 2021). It contains three separate process steps including setting up a non-disclosure agreement (NDA), defining the pilot project and creating a purchase order (Gimmy *et al.*, 2017). Starting with the NDA EC should use a standardized template to accelerate the process (Onetti, 2021). As start-ups lack required resources to understand commonly used NDA in detail, the template should be short and simple (Kurpjuweit, 2018). After both parties have signed the NDA, they continue defining the pilot project. At first start-up and VCL agree on the scope of the pilot project defining objective, result and corresponding key performance indicators (Gutmann & Lang, 2022). As there is still an information asymmetry between the VCL and the start-up regarding its solution, larger pilot projects are divided into multiple subprojects. Thereby the VCL reduces risks as continuation of the pilot project is evaluated after each subproject (milestone). Start-ups get paid separately and up-front for every subproject (Kurpjuweit, 2018). GUTMANN ET AL. describe that Telefonica's VCLU pays its start-up-collaborators 25.000 € for a pilot project (Gutmann *et al.*, 2020). However, as the price of the pilot project depends on the start-up's efforts developing and testing the proof of concept (PoC), it is highly individual. To finance the pilot project EC can rely on different options. Usually, it gets financed by the VCL (Kurpjuweit *et al.*, 2020). In other cases the VCLU provides additional budget or even bears all costs to motivate the VCL to start the collaboration (Kurpjuweit, 2018). Just like the price the duration of the pilot project is highly individual. It lasts from a few weeks up to four months. Additionally, the project definition includes defining the project team and assigning roles and responsibilities (Gutmann & Lang, 2022). The final step includes placement of the purchase order. Therefore, the EC sends a request for proposal (RfP) to the start-up. Ideally, this happens based on a RfP-Template to accelerate the process. Afterwards, the start-up creates a proposal, which gets accepted by the EC. Lastly, the EC places a purchase order using a pre-formulated template (Corvello *et al.*, 2023). The start-up gets an official supplier number (Gimmy *et al.*, 2017).

Besides the VCL and the VCLU, purchasing-, and legal-department are involved in this process step. The VCLU accompanies the whole process, taking care of the NDA and supporting the VCL with the project definition

(Corvello *et al.*, 2023). While the legal-team is involved in contractual issues, purchasing managers handle the process of placing the purchase order (Onetti, 2021), (Kurpjuweit & Wagner, 2020).

4.2.5 Pilot

The objective of the pilot project is to validate the potential of a long-term partnership between the start-up and the EC (Siota *et al.*, 2020). Therefore, pilot projects contain two essential elements: PoC development and testing (Kurpjuweit & Wagner, 2020). The PoC development focusses on customizing the start-up technology and integrating it into the VCL's product, process or business model (Kurpjuweit & Wagner, 2020) (Corvello *et al.*, 2023). Thereby the EC can provide different resources to the start-up. This includes specific industry-knowledge access to production- and test-facilities or IT-systems (Kurpjuweit & Wagner, 2020). The PoC gets tested under real conditions (Kurpjuweit & Wagner, 2020). Its aim is to validate the PoC for technical feasibility and desirability (Corvello *et al.*, 2023), (Siota *et al.*, 2020). Additionally, business cases can be created to ensure viability (Kurpjuweit & Wagner, 2020). After developing and testing the PoC it gets evaluated by a pre-defined committee to decide whether and how the collaboration should be continued (van der Meer *et al.*, 2021) As pilot projects are highly individual evaluation criteria are project-specific. However, evaluating "the prototype's maturity and the applicability of the [solution]" as well as the quality of the collaboration is commonly used. (Kurpjuweit & Wagner, 2020)

The VCL is responsible for conducting the pilot project (Gimmy *et al.*, 2017). The core team usually involves people from the VCL, the start-up and the VCLU (Corvello *et al.*, 2023). Team members from the VCL are often experts (e.g. engineers or supply chain specialists), responsible for the product, process or business model the start-up solution is applied to (Veit *et al.*, 2021). In some cases, it can be necessary to extend the core team by e.g., IT-experts. Integrating these experts spontaneously into the project is one responsibility of the VCLU. Furthermore, its employees organize other kinds of resources like test-infrastructure and manage the pilot project by preparing kick-off-, milestone- and conclusion meetings. The committee evaluating the pilot's success is company specific. While in some cases senior managers from the VCL evaluate the PoC other EC extend the committee by the head of the VCLU or R&D- and purchasing-managers (Kurpjuweit & Wagner, 2020).

4.2.6 Adopt

In case of a successful pilot project EC and start-ups aim for a long-term collaboration. Therefore, they have different options, which can be structured using three categories (see Figure 7).

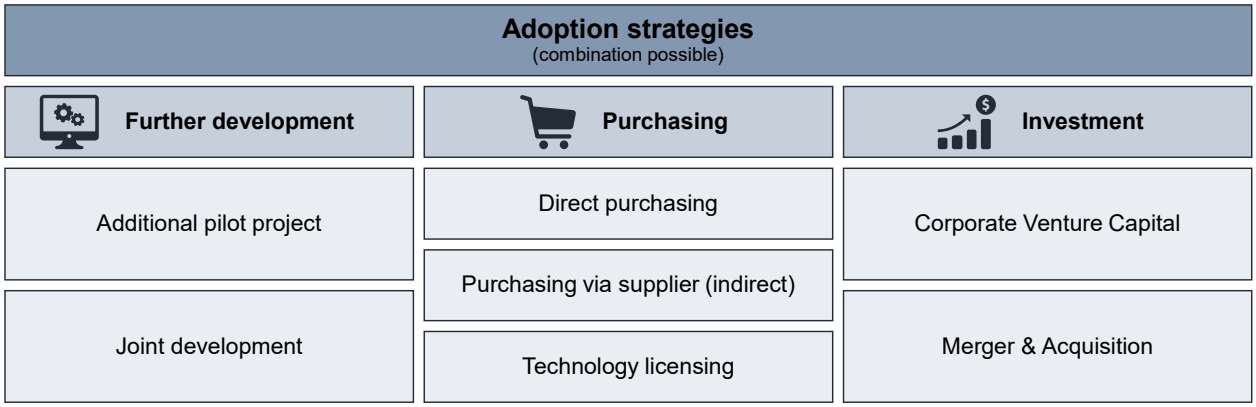

Figure 7: Adoption strategies within the VCLM

Further development: If the start-up solution is not mature enough to be purchased, EC can either conduct an additional pilot project or work together with the start-up in a joint development project. In comparison to the pilot project, the joint development project does not focus purely on validating the technical feasibility but aims to develop a market-ready solution. (Kurpjuweit & Wagner, 2020)

Purchasing: If the start-ups solution is ready to buy EC have different options to integrate it into their products, processes, or business models. They can either buy the solution directly from the start-up or purchase it indirectly, when the start-up delivers its solution to one of the established company's suppliers (Enkel &

Sagmeister, 2020), (Corvello *et al.*, 2021). Additionally EC have the opportunity to just purchase the right to use the start-ups IP (Kurpjuweit & Wagner, 2020).

Investment: If the start-up solution and its IP is strategically relevant to the EC it also has the possibility to invest into the start-up (Corporate Venture Capital) or acquire it (Merger & Acquisition) (Siota *et al.*, 2020), (Veit *et al.*, 2021). In some cases, corporate venture capital investments can be combined with further development or purchasing activities.

According to the different adoption strategies the process of adoption is highly individual. The literature does not provide a step-by-step process for each strategy. However, GUTMANN & LANG provide a three-step process that structures the adoption phase. Transferring the responsibility for the project from the VCLU to the VCL is the starting point of this process. Followed by the "scale" phase the VCL has to assign a team with corresponding "resources […], scaling goals and performance measures" to ensure that the project "stays a fixed part of the corporates business" in the third phase (Gutmann & Lang, 2022). The responsibilities for the adoption differ according to the different adoption strategies.

4.3 Venture Client Unit

Setting up and running the VCLM involves a wide range of strategic and operational tasks within the organization. These tasks can be carried out by staff from existing departments in addition to their day-to-day work, or by start-up managers from a dedicated VCLU (Kurpjuweit *et al.*, 2020). This depends on the number of pilots per year and the importance of the model within the company. If more than one person is responsible for executing the VCLM, the corresponding tasks must be divided between them. Therefore, different approaches are described in the literature. VAN DER MEER ET AL. distinguish two roles (van der Meer *et al.*, 2021). The first person has an excellent internal network as well as comprehensive industry knowledge and is responsible for identifying internal problems. The second person is scouting for start-ups and monitoring the pilot projects. In contrast, KURPJUWEIT AND WAGNER describe a relationship manager who is responsible for the entire process excluding the adoption process (Kurpjuweit & Wagner, 2020). Where the VCLU is connected to the organization varies (Gutmann & Lang, 2022). Examples include research and development, business development or technology management & forecasting (Kurpjuweit, 2018), (Kurpjuweit *et al.*, 2020), (Enkel & Sagmeister, 2020). The literature also provides further recommendations for the design of a VCLU. To work successfully with start-ups, the VCLU must be as agile as the start-ups themselves (Corvello *et al.*, 2023). Flat hierarchies and decoupling from the core organization help to speed up business and decision-making processes (Kurpjuweit, 2018), (Enkel & Sagmeister, 2020). At the same time, however, it is important to ensure that a strong network is established with the core organization to identify problems and transfer start-up solutions to the company (van der Meer *et al.*, 2021).

5. Research agenda

Based on the SLR-results, various potentials for future research arise. On the one hand, these potentials are directly related to the research questions addressed in the SLR. On the other hand, further potentials are highlighted that result from challenges associated with the VCLM.

Strategy: The literature describes different strategic questions that need to be answered when designing a company-specific VCL-approach. However, there is no definition of a VCLS or the design elements it covers. In addition, further research should investigate how the VCLM can be integrated in the corporate innovation-ecosystem (e.g. corporate venture capital) (Kurpjuweit & Wagner, 2020).

Process: Based on the literature, a six-step VCLP was derived, explained, and assigned with corresponding responsibilities. Nevertheless, there is still potential to further detail the process and explore its integration into the corporate's existing process, especially when it comes to the adoption.

Organisational structure: The SLR reveals different possibilities to embed the VCLU within the organisation (e.g. R&D). Furthermore, the tasks and roles within the VCLU can be divided differently. Therefore, it is necessary to examine how EC can build the optimal organizational structure for their objectives.

Culture: Employees of EC often refuse to work with start-ups. They do not see start-ups as serious collaborators and external innovations (not-invented-here) (Gutmann & Lang, 2022). If both parties collaborate in a pilot project different cultures lead to several challenges (Onetti, 2021). Overcoming these cultural differences offers potential for further research.

Start-up-intelligence: To increase the efficiency of the VCLP, companies need supporting software. In practice, dedicated software-solutions for start-up-collaboration or CRM-tools are used. They function as a start-up-database and support evaluation and general project management. Requirements for such software solutions for VCL do not exist.

Implementation of the VCLM: FARIA ET AL. and GUTMANN AND LANG describe the process of setting up the VCLM in a company in a rudimentary way (Faria et al., 2018), (Gutmann & Lang, 2022). To enable companies to implement the VCLM, there is a need for a systematic process model.

VCL cluster: Initiatives such as "Stratosfare" organize the VCLM for a group of EC. This phenomenon has not been investigated yet. It is necessary to study how these VCL clusters work and can be built up.

6. Discussion and limitations

This paper summarizes the state of research with a special focus on strategies, processes, and organizational structures for the VCLM. Comparable work does not exist in the literature. However, there are three publications that show mentionable intersections with the present work. GIMMY ET AL. describe main characteristics of the VCLM, but neglect corresponding strategy, processes, and structure (Gimmy et al., 2017). GUTMANN AND LANG address this gap by providing insights on start-up-collaboration-process and the implementation of venture units (Gutmann & Lang, 2022). Unfortunately, it lacks in-dept analysis of the process and VCLM-specific aspects. KURPJUWEIT AND WAGNER contribute more detailed process-knowledge by explaining the process of the "startup supplier program" (Kurpjuweit & Wagner, 2020). Exceptions count for the process steps "Request" and "Buy".

The analysis has two limitations. First, the research field "VCLM" is still very new. Few publications shed light on the subject resulting in a limited data base. Secondly, there is no common understanding of the term "VCLM". Some authors describe incubators, start-up supplier programs or start-up procurement, with characteristics similar to those of the VCLM. It is therefore possible that other publications describe the VCLM and have not been included in this analysis.

7. Conclusion

In this paper, we conducted an SLR. The aim was to summarize the state of research regarding strategies, processes, and organizational structures for the VCLM to derive directions for future research. The SLR identified 16 papers, of which only three exclusively focused on the VCLM. As a result, relevant aspects of a VCS were identified, an overarching VCLP was described and detailed, and differences in the organization structures for the VCLM were highlighted. There is potential for future research not only in relation to strategy, process, and organizational structure, but also in relation to culture, start-up-intelligence, and building VCLU and VCL clusters.

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