



Research article

The corporate entrepreneurial and innovation processes for business sustainability: A critical overview and conceptual process model development

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Abstract: Entrepreneurship is a process that transpires over time. Every entrepreneurial journey is a unique process that is difficult to replicate in the exact way it happened. Entrepreneurial activities in an existing organization can, over time, form a specific staged process that allows a more structured way from generation to implementation of new ideas. Through its supporting structure, corporate entrepreneurship channels ideas through a process that helps people stay focused, systematic, and efficient in value creation. Entrepreneurship and innovation activities in this process are undeniably linked; however, the two disciplines do not address them uniformly. Therefore, the research describing the corporate entrepreneurial and innovation processes is not aligned. In this study, we aimed to analyze entrepreneurship and innovation process approaches comparatively in an existing business context and to propose the triple-bottom-line corporate entrepreneurial (conceptual) process model for innovation and business sustainability. We provided insight into the dynamics of the entrepreneurial process in the existing business over time: A roadmap to evaluate the enablers and the critical elements for the innovation to transform and sustain. We proposed a harmonized stage model of the corporate entrepreneurial innovation process, where stage output artifacts mark the progression of the process, making it measurable. We provided conclusions from the literature review, a generalized model, and propositions on critical aspects of the entrepreneurial innovation process to happen, transform, and sustain.

Keywords: corporate entrepreneurial process; corporate innovation process; corporate entrepreneurship; intrapreneurship; entrepreneurial journey; sustainable innovation; sustainable entrepreneurship

1. Introduction

Innovation and entrepreneurship in tandem are considered the drivers for a company's long-term success (Hölzle, 2022; Ortigueira-Sánchez et al., 2022; Brem, 2011) and business sustainability (Albitar and Hussainey, 2023; Zhao, 2005), as well as meeting societal expectations (Schaltegger and Wagner, 2011). Corporate entrepreneurship (CE), also referred to “as a strategic approach in achieving a competitive advantage, is considered the key attribute for internal innovation performance” (Tseng and Tseng, 2019:108), offering an effective solution to dealing with challenges and growing demands in the external environment. CE pushes organizations to adjust, adapt, and redefine themselves by enhancing employees' innovation abilities and continuously generating successful sustainable business (Liu et al., 2023; Malibari and Bajaba, 2022; Turner and Pennington, 2015).

The topic of sustainability in the social and environmental sense, the so-called triple-bottom-line (Belz and Binder, 2017; Cohen and Winn, 2007), has become equivalent to commercial interests. Research on sustainable CE and innovation has been a trend for the last 10–15 years (Provasnek et al., 2017; Seebode et al., 2012; Bos-Brouwerset, 2010). Although these areas are discussed in conceptual (e.g., Provasnek et al., 2017) and empirical studies (e.g., Muñoz et al., 2018), understanding the content, embeddedness and integration of intra-corporation entrepreneurial and innovation processes is in the initial phase. Therefore, a more general approach to entrepreneurship and innovation processes can help search for answers to sustainability.

Leveraging innovation in all stages of the entrepreneurial process helps keep an organization balanced and guides how to lead those processes as a strategy toward a successful, sustainable business (e.g., Santos-Vijande et al., 2022). Defining the process for innovation and business sustainability helps understand how the complexity of business challenges is managed through innovation to achieve entrepreneurial goals. It provides details about the activities in the process through which an innovation is developed and transferred into a revenue-generating product, process, or service. Examining it as the innovation and sustainability value chain (Le, 2022; Dana et al., 2020; Hansen and Birkinshaw, 2007) helps expose the weaknesses that slow the process or fail to deliver the desired results. The process features of idea-collection, selection, and management with critical attention to stages and timing throughout the entrepreneurial journey are poorly articulated by researchers on CE. The journey concept is “too often ignored by economic theory” (McMullen, 2015: 662). The literature on process models of corporate internal entrepreneurial (intrapreneurial) activities, which could be a basis for the journey approach in CE (Mets, 2022), is insufficient (Sakhdari, 2016).

The term innovation journey is often used in field studies, although mainly in a metaphorical sense, but also as a time series of certain developments at the corporate level (Childs and Jin, 2018) or decision trajectories in product development, technology and social fields (Oeij et al., 2019). Various attempts have been made to link the journey in addition to time with the dimension of complexity (Coyne and Van de Ven, 2024), rarely in the context of managed processes within a corporation. Although the process and journey of innovation and entrepreneurship are mentioned simultaneously, they have not been linked as overlapping research constructs of intra-corporate processes.

The situation is somewhat better in the general entrepreneurship literature regarding the entrepreneurial journey as a temporal course of the entrepreneurial process. In other words, the

entrepreneurial journey is defined as a derivative of the entrepreneurial process – the dynamic appearance of the entrepreneurial process (Mets, 2022). There is no same conclusion regarding the relationship between the innovation process and the journey yet. The entrepreneurial journey concept evolves from a metaphorical meaning to an object/construct of research. McMullen and Dimov (2013) raised the issue of the entrepreneurial journey as a research construct. Mets (2022, 2015) and Mets et al. (2019) developed a framework for mapping and measuring the entrepreneurial journey. The first empirical (case) studies (Mets, 2021, 2018; Trabskaia and Mets, 2021) show the applicability of the entrepreneurial journey concept, especially in the study of the process of starting a new venture. To draw the journey's trajectory, the entrepreneurial journey's progression indicators: activities, events, stages, and markers-artifacts triggering the start or end of a sub-process need to be identified and noted (Mets et al., 2019).

Although attempts have been made to link entrepreneurial and innovation processes (Rummel et al., 2022; Brem, 2011), there is a gap in understanding the synchronicity or sameness and dynamics of these two processes within the corporation, despite the need to manage these processes (Van de Ven, 2017). A failure in the cognitive foundations of CE processes can cause inaccuracy in addressing the respective processes in management training, practical applications and policy design (Paladino, 2022). Our study is a step towards developing a basis for overcoming these gaps.

We aim to analyze comparatively entrepreneurship and innovation process approaches in an existing business context and propose a structured conceptual dynamic process model of the corporate entrepreneurial process for innovation and business sustainability.

We develop the corporate entrepreneurial process model from the dynamic perspective of the entrepreneurial journey. A measurable and descriptive model clarifies the content of the processes during the entrepreneurial journey and contributes to understanding these processes and how to manage them. Therefore, a comparative analysis of multiple sources supports the proposal of a new conceptual streamlined model for the corporate entrepreneurial and innovation process. Following the description of each phase of the journey, we propose the critical aspects for the entrepreneurial innovation process to happen, transform, and sustain.

A synthesis based on the literature review, companies' 'life stories' (e.g., Muñoz et al., 2018) and internal documents focuses on the role of the corporate entrepreneurial processes and addresses the following questions:

1. What is the compatibility (structure and content) of the entrepreneurial and innovation processes in the corporation?
2. How do corporations ensure the sustainability of entrepreneurial and innovation processes?
3. How does the model consider the journey progression and time factor in the approach to the corporate entrepreneurial innovation process?

Searching for and finding answers to the questions raised above the literature review allows us to perform the tasks that summarize this article:

1. Create a streamlined, harmonized, sustainable corporate entrepreneurial innovation process model.
2. Formulate propositions for sustainable corporate entrepreneurial innovation process.

The article is structured as follows: the introduction followed by a conceptual and theoretical background, a methodology approach, a critical literature review, the development of a model and propositions, and finally, a conclusion with recommendations for further research. An outcome of this article is the conceptual process model, supported by the results of a critical literature review,

expanding on how the entrepreneurial and innovation process sustains over time as a necessary factor to support business sustainability. As such, the article creates the prerequisites for a joint approach to the dynamics of the entrepreneurial and innovation process in the journey context.

2. Conceptual and theoretical background

2.1. Linking entrepreneurial and innovation processes

Kahn's (2022) essay on the relationship between entrepreneurship and innovation recently sparked a lively debate. In his writing, he finds that entrepreneurship and innovation are not the same phenomena and that universities mislead students by teaching them together. He points out the fact that in innovation, the focus is on the offer; in entrepreneurship - a new venture. These two areas are distinguished by the radicality of change and the different nature of risk and funding. In terms of knowing the difference in the phenomenon, Kahn is breaking in through an open door, at least from the researchers' point of view. In their review, Landström and co-authors (2016) state that the fields are treated as different. Kahn is seconded by Hölzle (2022), who believes that the fields should not be opposed but instead find a common ground. Paladino (2022) refers to the connections between entrepreneurship and innovation and how to teach them. Neither the participants in the discussion nor recent literature reviews (Urbano et al., 2022; Schmitz et al., 2017; Sakhdari, 2016; Landström et al., 2015) and empirical studies (e.g., Schönwälder and Weber, 2023) provide an answer to the relationship between corporate entrepreneurial and innovation processes. Therefore, we start with the basics.

Entrepreneurship is understood as (a process of) launching new economic activity or venture creation and business development (Davidson, 2016). The process begins with the opportunity (as an artifact (Berglund et al., 2020)) identification for value creation, which sets the innovation process into motion. The innovation process produces a novel idea that, through entrepreneurial activities, is commercialized to the market. The two processes are linked to integral entrepreneurship components (Rummel et al., 2022; McFadzean et al., 2005), acting as a process and the corresponding innovation outcome (Volery and Tarabashkina, 2021; Brem and Borchard, 2013). Thus, it can also be considered an epicenter of organizational sustainability (Schönwälder and Weber, 2023; Zhao, 2005). Following this thought, an organization pursuing an innovative culture and success in the marketplace should have the right mix of entrepreneurial and innovative people to create and lead ideas to commercially viable outcomes (Schröder et al., 2023; Brem, 2011; McFadzean et al., 2005).

The entrepreneurial process, the temporal realization of which is addressed as an entrepreneurial journey, describes what an entrepreneur does and how he does it (Mets et al., 2019). It is an emergent process of a series of events over time. The desire for profit defines the purpose of the journey, where producing value for others becomes the vehicle for producing value for themselves (McMullen and Dimov, 2013). The entrepreneurial function drives the economy's growth (Brem and Borchard, 2013).

The entrepreneurial journey is a roadmap that describes a context in which creative ideas are recognized for opportunities and transitioned through an iterative learning process and the phases of the innovation process. Creative ideas get nurtured into promising ideas (idea draft) and receive acceptance and resources as they move from initiation to value creation (Volery and Tarabashkina, 2021; Russell, 1999). Initially, less relevant ideas repeat the iterative learning process and gain significance unrecognized during the initial introduction. A process where creative ideas get

continuously nurtured to develop a persistent flow of innovation is a critical premise for the sustainability of the innovation process (Hübel et al., 2022; Russell, 1999).

The concept of entrepreneurial journey duration is intriguing. The journey can describe the evolution of an organization throughout its existence, a historic accounting metric, or the lifecycle of a single product within that journey. Since each new product has its journey, McMullen and Dimov (2013) define the entrepreneurial journey as being completed upon realizing a profit or loss from that product. However, applying the concepts of maturity and artifacts (Mets et al., 2019) as a dimension and milestones to measure the progression of the process creates an option for implementing the innovation process approach. Here, the results and the learning from a completed journey simultaneously contribute toward business growth: generating profit through commercialization and re-using the knowledge through creativity for a new idea generation. Therefore, measuring individual journeys offers specific information not only about the product progression but also about the maturity level of the business, in other words, how the information collected over time was applied and exploited.

Innovation is the process of a successful implementation of creative ideas, added value, or a degree of novelty to the organization and its stakeholders through the development of products, services, processes, or methods (Volery and Tarabashkina, 2021; Brem and Borchard, 2013; McFadzean et al., 2005; Woodman et al., 1993). The innovation process includes the following phases: idea generation, idea development, concept development, product development, and commercialization (Rummel et al., 2022; McFadzean et al., 2005). Key to this definition is the commercialization stage, which defines the implementation of the creative idea as successful, fulfilling the requirement of a process of the entrepreneurial journey (Brem and Borchard, 2013). As a process, “innovation activities need managing for the best use of resources and the expected outcome” (Brem and Borchard, 2013: 8). Innovation as a process can best succeed in an open-minded business environment. While CE is considered the environment nurturing innovative culture, the larger companies grow, the less flexible they become in adjusting their well-established routines, and that is despite the advantage of a higher level of resources and a lower level of business risk (Brem and Borchard, 2013, Wolcott and Lippitz, 2007). Companies practicing corporate innovation tend to be dynamic and prepared to recognize business opportunities faster while embracing the changes arising in the process (Kuratko et al., 2014).

Innovation is a tool of entrepreneurship (Brem, 2011; Zhao, 2005; Schumpeter, 1934) to create wealth. “Innovation coupled with the ability to think and manage strategically are key factors that distinguish and elevate the entrepreneurial firms from a small business venture” (Beaver and Prince, 2002).

CE is a process through which individuals in an established firm pursue entrepreneurial opportunities to innovate, leveraging the parent company’s assets, capabilities, and resources (Schönwälder and Weber, 2023; Wolcott and Lippitz, 2007). CE aspires to stimulate innovation from the internal organizational viewpoint by aligning potential opportunities with the resources to exploit them (McFadzean et al., 2005). It is considered a form of strategy that promotes the environment and behavior within the organization, making the continuity of successful innovation possible. CE reinforces organizations’ ability to acquire the necessary capabilities to create and implement innovative ideas (Schröder et al., 2023; Kuratko et al., 2004). CE can be shaped by creating a new venture or strategic renewal. “Corporate entrepreneurship can be used interchangeably with intrapreneurship” (McFadzean et al., 2005).

Processes within CE encompass all levels of the organization and are complicated due to the constant change and coming from long-term effects that are difficult to trace back (Bloodgood et al., 2015). The critical role of developing and sustaining entrepreneurial activities is in the hands of middle (sustainability) managers, who are responsible for understanding the strategy, acquiring the necessary skills, and fostering entrepreneurial behavior. Their actions impact the promotion or stifling of the internal entrepreneurial environment (Schröder et al., 2023; Kuratko et al., 2004). Positive perception and support of the executive management fuel CE activities and provide feedback on the effectiveness of the processes in shaping the direction of the entrepreneurial journey.

2.2. Elements and structure of the entrepreneurial innovation process

Although many innovation researchers use the terms ‘innovative entrepreneurship’ and ‘entrepreneurial innovation process’ (e.g., Wang et al., 2023; Elenurm, 2013; Park, 2005), the overlapping or common structure of entrepreneurship and innovation in the corporation is little reflected. The justification for combining two disciplines through the same phenomenon/concept requires identical structure, constituents and sustainability of the entrepreneurial and innovation processes.

External changes are the most common events for provident opportunity recognition by organizations triggering structural, systems, or procedural transformation. The external impulses trigger changes in internal processes, and ignoring the signs can quickly lead to off-course drifting (Coyne and Van de Ven, 2024; Kuratko et al., 2004). The delay in responding to the technology change or market demand reflects the organizations’ inability to act entrepreneurially. Transformational changes in organizations over time are represented in stages. Each stage consists of a set of activities, a mechanism, that transforms through the stage, ending with a temporal artifact. These activities are not linear and can happen parallel, concurrently, or overlapping. Stages can have iterations or return to the previous stage. Information gathered from each stage increases the confidence of the preceding stage (Cooper, 2017, 2008). Feedback loops and time dependence describe the dynamics of the CE and are a mechanism of organizational learning (Bloodgood et al., 2015). They are a form of a network and interactions between the participants of each phase in the innovation process. These loops can also form an innovation-generating subsystem through self-motivated, creative individuals (Volery and Tarabashkina, 2021; Russell, 1999).

In order to make the entrepreneurial and innovation process measurable and operational, it is necessary to divide the whole process into parts and identify the features that allow them to be distinguished. Measurability also means the ability to monitor a process’s progression – making the process measurable as a journey. An entrepreneurial journey is “an emergent sequence of events in which an event is both path-dependent on prior processes and contingent on contemporaneous processes” (Selden and Fletcher, 2015: 604). Thus, events are activities, choices, and decisions that happen sequentially, form an outcome, and describe what happens within the journey.

Several authors (Shane, 2003; Bhave, 1994; among others) have used the grading of such an entrepreneurial process, but few have marked the output features of these stages. Sarasvathy (2003), later Selden and Fletcher (2015), is one of the first to point out the artifacts that arise during the entrepreneurial process. Based on the general approach to the process model, Mets (2022: 380) formulated criteria for the stages of an entrepreneurial process and the criteria for their characteristics:

(1) A stage is the smallest integral part of a process, including mental and physical resources, activities, and feedback loops.

(2) Due to the activities and resources involved, the outcome is a new artifact, the input to the following stage.

(3) The stage is executed in its artifact part, i.e., after the end of the stage, it (its artifact) activates the next stage.

(4) Intra-stage activities can be cyclical and internally or locally feedback-driven.

Stage describes the maturity state of the entrepreneurial process regarding the outcome – Venture Launch rather than the temporal scale or sequence of actions. Furthermore, the requirement of continuity of the process must be noted. Any necessary support activity of the process and the object's environment is not part of the main process. Feedback signals when the stage's output (artifact) does not meet a certain expectation/standard, and there is a need to make a corresponding change in the previous stage and to repeat the (sub)process. A similar approach is used in the 'stage-gate' model in innovation (Cooper, 2017, 2008; du Preez and Louw, 2008) and business planning (Barringer and Gresock, 2008).

Stages reach completion upon passing a checklist at the checkpoint/gate, consisting of deliverables, specifications, and the decision: Go forward/back to incubation; hold for future use or stop. The gates are defined as decision points between stages and mitigate future costs by eliminating or holding the non-viable and less attractive ideas and concepts. The ability to "fail fast" helps focus on high-impact opportunities (Cooper, 2017, 2008; Reinertsen, 1999). The ideas on hold are stored for refinement and evaluation (du Preez and Louw, 2008). These decision points evaluate the feasibility of a process step and communicate back the captured learnings (Bloodgood et al., 2015).

3. Methodology approach

3.1. Method of literature review

In order to achieve the aim of the article, it is necessary to critically analyze the current approaches to innovation and entrepreneurship process models. Although the processes have strong similarities (e.g., Kahn, 2022; Brem, 2011), the comparative or combined studies of entrepreneurship and innovation processes are poorly represented in the literature (Landström et al., 2015). Therefore, we seek to bridge this gap by covering a literature search starting from 1990.

The searches started in the Web of Science (Clarivate) and Scopus (Elsevier) databases using the words "entrepreneur", "innovate", "process", and "model" in the title, abstract and keywords. In addition, the search engine Google Scholar helped us search for related publications. Whether the publication addresses the process as a whole and not just a part was decided based on a preliminary abstract analysis, followed by an introduction and conclusion analysis. Publications that did not use a process approach were left out. Furthermore, we excluded the studies and models that did not structure the overall process.

We eliminated the extracted publications (mainly articles: ~250), which involved screening the title and abstract, introduction and conclusion, and complete reading of articles and other sources relevant to the research goal. Commonly used terms for entrepreneurship, innovation, and sustainability formed the base for search keywords: "corporate entrepreneurship", "corporate innovation", "corporate entrepreneurial process", "corporate entrepreneurship process", "intrapreneurship", "sustainable entrepreneurship", "sustainability innovation", "sustainable innovation". The main criterion for the final selection of comparable models was representing both -

the entrepreneurship and innovation processes as a sequence of individual sub-processes, events, and activities. Feedback on (sub-) processes and consideration of environmental impacts are critical in these models. For similar models by the same author(s), we preferred those published in a journal article.

The first data scanning instruments were search engines of databases and Google Scholar. We first familiarized ourselves with the found articles by browsing and reading. Then, as we saw fit (necessary), we utilized the search function of the Acrobat software. Our aim did not require a formal bibliometric analysis. We found out the interrelationship between concepts, models and their components from the literature. To our knowledge, there is no software for figure-text co-analysis. Therefore, in addition to identifying different concepts and methodologies, we needed to bring the text and drawings together and analyze their content, which we did as manual work.

3.2. Comparison of models

McMullen and Dimov (2013) focus on constructing the entrepreneurial process running over time as a research methodology. This research focuses on events within the entrepreneurial journey and uses a process-oriented approach to explaining the dynamics of the journey. In the event-driven approach, the unfolding of the journey is explained through the events in the temporal order. The process approach is used “to understand the development process among change events” (Van de Ven and Engleman, 2004: 345). Understanding the contribution of events to a particular outcome and the timing of the events is critical in explaining the development and changes in the entrepreneurial journey. Therefore, the process explanation focuses on the timing and order of specific events (McMullen and Dimov, 2013).

Describing the dynamic complexity of the entrepreneurial process in the context of corporate entrepreneurship requires a systems approach (Arnold and Wade, 2015). The systems approach links the goals of different subsystems with the whole organization, allowing organizations to sustain and grow in a dynamic environment. In order to achieve comparability of the models, it was necessary to use the generalization of sub-processes and the differentiation of more significant parts of the process to achieve the correspondence of these development trajectories from the initial idea to opportunity exploitation. Explanation: For example, in feedback processes, the same activities may occur repeatedly, but the logic of their sequence generally remains similar. It was essential to achieve consistency and sequence of sub-processes and activities of comparable models at a comparable level of generalization. The primary method for comparing models is ‘pattern matching’ (Trochim, 1989), which is usable, besides models and empirical data, for generally comparing entrepreneurship and innovation models, particularly their parts.

Criteria for the search focused on a sequential entrepreneurial process with defined outcomes/artifacts identifying each stage. In addition, identifiable value creation elements (components) within an entrepreneurial journey include idea or/and opportunity creation, development and exploitation, venture launch and commercialization. Therefore, selected models represent a) initiation and management of the innovation process, b) corporate/intrapreneurial, or c) entrepreneurial process stages. A sub-process with input and output defines the term “stage” (Mets, 2022). The purpose of corporate entrepreneurship is to initiate and manage innovation processes. This premise guided the selection of models compared in this paper.

In the first stage of model selection, deciding which model to choose was necessary. Life cycle models from startup to exit (e.g., Picken, 2017; Duobiené, 2013), where the first stage of business

creation (startup) is too general, were immediately excluded from the selection. The situation is more complicated with models with four or more stages, from the idea to the market launch. They often lack the output of a specific stage/sub-process regarding an artifact, which can also be assumed. For example, Nicoletti (2015) offers a seven-stage model (“the 7 Ds”) with 29 rules/activities. The issue is implementing the criteria above (Mets, 2022). It turns out that some of the seven stages can be reduced to sub-stages within a more general stage due to their connections: the two stages, Discover-Design, can be generalized to Idea development, where Design can be partially interpreted as a (standard) process management activity and as such does not create an independent artifact of an innovative object (product/service/process).

3.3. *Synthesis of own model*

The research model and propositions are based on a literature review, comparing literature models and the business process flows in some companies in the USA and Estonia. Creating the necessary generalizations is based on a systematic approach to entrepreneurship and innovation processes and their components. The systems thinking (Arnold and Wade, 2015) and pattern matching approach allow us to link the analyzed models to the framework of our goal.

The collected information supports identifying critical stages in the process based on the purpose concerning the entrepreneurial and innovation journey. The modelling started with observing the data, defining the object, and systemically organizing the learning to construct a dynamic view. Then, subprocesses and functions were distinguished to understand their part in the process. Finally, interactions between the stages, outcome validation and checkpoints were defined.

4. **Critical literature review**

4.1. *Findings*

Difficulties involved in the research of the corporate entrepreneurial process lie in the dynamics of the entrepreneurial process. The feedback-driven and the non-linear process are constantly exchanging knowledge. That knowledge gets used for improvements or changes in contextual characteristics. These changes create moments in time that are difficult to fix on the journey. Understanding the timing and reasons for the journey’s start and end, divergence, and convergence describes and defines the developments in the CE process. One aspect that will stay unchanged in the corporate entrepreneurial process is generating profit (McMullen and Dimov, 2013). It is a forward-moving momentum of value creation, a pervasive force in organizations (McMullen and Dimov, 2013; Kuratko et al., 2004; among others). The changes happening along the way are the signs of entrepreneurial activities and the ability of an organization to learn and be innovative – the philosophy of the corporate sustainable entrepreneurial journey.

Some models (Calisto and Sarkar, 2017; Turner and Pennington, 2015 and others) in the literature describe the corporate entrepreneurial process based on the variance approach, which focuses on the mutual connection between variables instead of the dynamics of the journey that describes what entrepreneurs do (McMullen and Dimov, 2013). In addition, several researchers are focusing on a specific attribute in the process, like the role of management (Kuratko et al., 2014; Selden and Fletcher, 2014) and networking (Leyden and Link, 2015; Turner and Pennington, 2015) or critical functions (Ho

et al., 2022; Brem, 2011). Various models of the entrepreneurial process emphasize the importance of environmental, managerial, structural, and cultural variables and the influence of entrepreneurial characteristics, capabilities, and knowledge. Several authors present dimensions and their interactions to consider in a model (Urbano et al., 2022; Vogel, 2017; Ireland et al., 2006; Zhao, 2006; McFadzean et al., 2005; Shaw et al., 2005).

Many authors cover the importance of management on organizations' internal entrepreneurial resources in opportunity-seeking behavior, linking organizational types with innovation and firm performance (Dana et al., 2020; Calisto and Sarkar, 2017). Their research and typology contribute toward knowledge of the interactions of entrepreneurial and intrapreneurial behavior and its impact on the CE process.

A framework by Turner and Pennington (2015) introduces knowledge-sharing and organizational learning as the means of driving entrepreneurship and innovation inside a complex structure of an organization, which they call organizational networks. They show how the innovation process through a formalized knowledge-sharing structure can improve the effectiveness and efficiencies of CE processes. The research explains the information processing within the firm well and focuses on motivation, opportunity, and ability as variables facilitating the CE process.

Selden and Fetcher (2015) conceptualize the entrepreneurial journey as “an emergent hierarchical system of entrepreneurial artifact-creating processes.” (p. 603). They use this concept to describe entrepreneurial events in the context of artifact emergence as interrelated subsystems within the overarching hierarchy. Each level creates a functional artifact to the subsequent level, the endogenous dynamics of the entrepreneurial journey. The concept contributes to a new way of understanding the dynamics of the entrepreneurial journey, providing insight into the “contextual significance of prior artifact emergence for entrepreneurial events”.

Research literature offers solutions for various problems in the organization's innovation processes, focusing on a specific area. Whether it is a problem with the idea generation or selection process, issues with the implementation, or lack of knowledge in marketing the product, they all have a problem with managing the innovation process. A new idea management lifecycle model by El Bassiti and Ajhoun (2013) defines critical stages in the process and activities necessary for successful innovation from an idea to a value-adding product. The authors summarize the idea management process as generating new concepts by applying prior knowledge and collective intelligence in a specific context. Then, it transforms an idea into a product, process, or service, offering suggestions for techniques and technologies supporting the activities. The model is well suited to describe the phases in the innovation process and adds value, especially in learning about the front end of the process.

Griffiths-Hemans and Grover (2006) focus on the stages of the idea fruition process, also known as the fuzzy front end: idea creation, idea concretization, idea commitment, and the individual inputs and organizational factors influencing the level of creativity, concretization, and commitment.

Reviewed publications lack a holistic view of the corporate entrepreneurial process. Consensus in defining the entrepreneurial process and stages involved comes up in several research papers. However, the research gets less informative when searching the journey (approach) and how it evolves.

4.2. Selected models for analysis

The models summarized in this overview were selected based on p. 3.2 and 3.3 methodological approaches. In addition, the most commonly used stages of compared models served as a basis for

developing the structure for the comparative overview Table 1.

Among the authors, Bhave (1994) introduced one of the early versions of the venture creation process models (1), which are also suitable for the CE process (see Table 1). He divided the process into three stages: Opportunity stage, technology setup and organizational stage, and exchange stage. This process model focuses on the opportunity development stage based on externally and internally stimulated opportunity recognition and serves as a tool for early indications of potential issues. He introduces sub-processes in the opportunity recognition process. The model skips the idea generation and development concept, twining it into externally stimulated opportunity recognition.

Shaw et al. (2005) (2) extend the model by McFadzean et al. (2005) into a two-tier model and focus on the entrepreneurial lens as a focal attribute in identifying and managing the entrepreneurial process. With its approach to environment and feedback loops, the model resembles the application of Rothwell's (1994, 1992) "Coupling" Model of Innovation (Third Generation) at the corporate level. The activities within the process are well described but need further clarification on how the implementation process transitions between stages, including decision points and artifacts. An otherwise relevant model diagram depicts the feedback process on a time scale (like in figures by McFadzean et al. (2005)). This fact testifies to the flawedness of the model and lack of analysis because a so-called 'time machine' does not exist.

A comprehensive view of the entrepreneurial process (3) by Brem (2011), partially inspired by the previous model (2), consolidates the most impactful aspects. The linking of innovation and entrepreneurship in the corporate entrepreneurial process serves as a basis of the model. The focus on innovation is on the front end of the process, which gradually transitions to entrepreneurship. The model visualizes the process structure, emphasizing the influence of external changes and internal organization. The process components are idea management, opportunity recognition, researching opportunity, idea development, commercialization, and diffusion, supported by specific skills performing the required tasks. The author places attention on personal roles in organizational functions. The importance of creativity and organizational learning (Politis, 2005; Levitt and March, 1988) in the idea generation phase gets little attention. Decision-making on the feasibility of an idea finds its place toward the end of the process. Therefore, the transitioning from one phase to another and interactions throughout the process remain unclear.

The entrepreneurial process model (4) by Mets et al. (2019) structures venture creation through functional stages. The model integrates the close relationship between the process and the entrepreneur in the entrepreneurial journey, unfolds the purpose of each stage, and shows the progression through the interim outcomes – markers-artifacts. The process consists of the following stages: Propositions (storage), idea development, concept development, and business development, ending with venture launch and opportunity exploitation. Each stage is displayed using the concept of a silo to label the combination of physical and mental shapes with the respective stages.

Table 1. A comparative overview of the entrepreneurial and innovation process models by stages based on the methodological approach.

#	Author	Stages according to sources							Process type
1	Bhave (1994)	-	Opportunity recognition	Opportunity refinement	Technology Organization	Setup & Exchange stage		E-p	
2	Shaw et al. (2005)	Storage	Idea generation	Opportunity recognition	Development of Idea	Commercialization/ of opportunities	Implementation	CE & Innovation	
3	Brem (2011)	-	Idea management	Opportunity recognition	Research opportunity	Idea development	Commercialization/ Diffusion	Innovation & CE	
4	Mets et al. (2019)	Propositions (storage)	Idea development	Concept development	Business development	Venture launch/ Opportunity exploitation		E-p	
5	Bloodgood et al. (2015)	Entrepreneurial insight	Opportunity recognition	Opportunity assessment	Opportunity Legitimation	Opportunity implementation		CE	
6	Belz & Binder (2017)	-	Recognizing problem: 1) ecological 2) social	Recognizing opportunity: 1) ecological 2) social	Developing double bottom line solution	Developing triple bottom line solution	Funding and Creating or a sustainable enterprise	SE	
Generalized pattern		Intra-Resources	Idea Generation	Idea Validation	Development	Execution		CE & Innovation	

Note: E-p – Entrepreneurship; CE – Corporate Entrepreneurship; SE – sustainable entrepreneurship

Source: authors' elaboration

Bloodgood et al. (2015) (5) approach the corporate entrepreneurial process from the systems dynamics perspective, presenting the influence of the end-to-end opportunity process activities on corporate entrepreneurship. The activities that form the corporate entrepreneurial process are opportunity recognition, opportunity assessment, opportunity legitimation, and opportunity implementation. The authors, describing the impact of direct and indirect feedback in connecting the activities of the continuous process and the relationships between them in the time-centric view, show how the new knowledge, while providing insight, increases the complexity within the process. According to the authors, the model needs further focus on interim outcomes and learning from them.

From the point of view of sustainability, the Belz and Binder (2017) model (6) is characteristic of this approach based on the recognition of an ecological and social problem and an opportunity and the subsequent finding of a solution. Solving the ecological and social problem is initially represented as a separate double-bottom-line (business-ecological or business-social) process chain integrated into a merged triple-bottom-line solution. Although the authors provide empirical examples of two parallel process chains (to reduce the complexity of the problem), this may not be the rule. Both problems may not occur together or at the same time. Also, compared to a startup, a corporation may have the capacity for complex issues. In its essence, the model is similar to the above.

Although we tried to position the process models by their substantive description, the representation of the stages in the sequence shown in Table 1 turned out to be partly subjective. The reason is the partial overlap of elements of different models and concepts. This concerns, for example, the relationship between opportunity, idea and concept in the context of sub-processes/stages. Although they are process models, not all formulate the artifact resulting from a specific stage. The relationship between commercialization and, e.g. production preparation/development is also confusing (cf. models (1) and (2)). At this point, it is appropriate to apply knowledge of company processes in general. The product/service can be sold when the corresponding technology, production and logistics have been developed. Consequently, the corporation cannot skip the respective stage. Behind the different stages (Commercialization, Opportunity implementation) are also the necessary preparations/developments, which have not been noted in the specific study but are conceivable.

Artifacts are presented separately in a model (4), which lists the following as output from the first stage (Propositions): Intention/Perceived opportunity, New venture idea/Filtered opportunity, Business concept/Opportunity confidence and Venture launch/Opportunity exploitation (Mets et al., 2019). The last output should be understood as introducing the sub-process of Business operations/Sales, which equals Exchange on the market (model (1)). In addition, using the dimension of process maturity and artifacts as its milestones metrics, model (4) enables measuring the progression of the feedback-driven process (as mentioned above – time scale is not suitable for that). Maturity is perceived until the entrepreneurial and innovation journey is completed (reaching the market).

The review of entrepreneurial process models concludes that the most common components of the process structure are idea generation and discovery, opportunity recognition, idea/concept development, idea exploitation, business development/commercialization, and venture launch and sales. The pattern of the entrepreneurship and innovation process (Table 1) was developed by generalizing the purpose and content of the stages, on the one hand, and on the other hand, trying to apply the criteria given in sub-section 2.2. In addition to the generalized corporate entrepreneurial innovation process structure, we must consider the environmental framework factors to design a streamlined model, which we will do in the following section.

5. The development of a model and propositions

Selected conceptual CE process model prototypes had the precondition options to link the feedback-driven process and time dimension, or that already did so. Of course, despite reviewing and analyzing the literature and former model examples, making such a choice is somewhat subjective. The process-oriented innovation and entrepreneurship framework by Brem (2011) and the functional stage model of the entrepreneurial process by Mets et al. (2019, 2013) lay the foundation for visualizing the entrepreneurial process. Both models offer a reasonable interpretation of the most critical variables, context, and interactions in the entrepreneurial process to evaluate the journey. It starts with an idea. The concept of idea management is “the process of recognizing the need for ideas, and generating and evaluating them” (Vandenbosch et al., 2006: 263). Since both models emphasize the importance of external environmental factors, organizational context, and team characteristics, we assume their presence in the proposed conceptual model. Idea management holds control (instruments) in implementing an ongoing innovation process (Gerlach and Brem, 2017; Brem and Voigt, 2007). It is a process in the corporate structure to initiate, develop, and implement initiatives of the employees, covering the decisions about innovation and development of the innovation process (Brem and Borchard, 2013).

The innovation process includes various tasks that can happen concurrently or in parallel. Sometimes, the tasks are overlapped (Brem and Borchard, 2013). The outcome (artifact) of each stage in the process is a progression marker or milestone and metric of growing Opportunity confidence (proposed by authors, Figure 1), increasing the feasibility of venture creation. In addition, it has its own cognitive and technical components (Mets et al., 2019), involves collaboration and is accompanied by learning. In corporate entrepreneurship, innovation occurs at different levels of an organization, creating a process of organizational renewal. Activities in this process driven by the organization’s continuous improvement goals require purposeful value-adding innovations (Bloodgood, 2015).

The model (based on the selected criteria and generalized pattern) development (Figure 1) begins with identifying the following critical phases/stages of the innovation process: Intra-Resources, Ideation (idea generation and validation), Development (product/service design, testing, production preparation and production), and Execution (product launch and placement). Given the importance of idea management, the two related stages are integrated into the Ideation phase. The previous stage’s output – the artifact (in the sequence: General Goals, Idea, Concept, Business-readiness and Sales) triggers the next stage according to sub-section 2.2. The premise of the entire process is particular internal tangible and intangible resources (Intra-Resources), which change/improve during the process. All stages are influenced by feedback from each other and by both external and internal environmental factors. The Ideation phase scopes the idea, the Development stage defines the product, and the Execution stage builds the business. Thus, the process is a series of incremental stakes, where the value of contributions and commitments increases in each stage (Cooper, 2017, 2008). In addition, communication is a critical function of knowledge exchange and continuous learning initiated by the feedback between stages. Furthermore, it connects sub-processes (different process parts) with the whole (Bloodgood et al., 2015). Finally, checkpoints are integrated validation and output measurement functions (Cooper, 2017, 2008).

The introduction of Opportunity Confidence as a qualitatively descriptive dimension of the entrepreneurial innovation process allows the stages/phases of the process to be treated as a journey

over time. Furthermore, during the journey, Opportunity Confidence is perceived by the parties involved and becomes real when the goal (on the market) is realized. This approach corrects an error in some previous (graphical) images of the feedback-driven process.

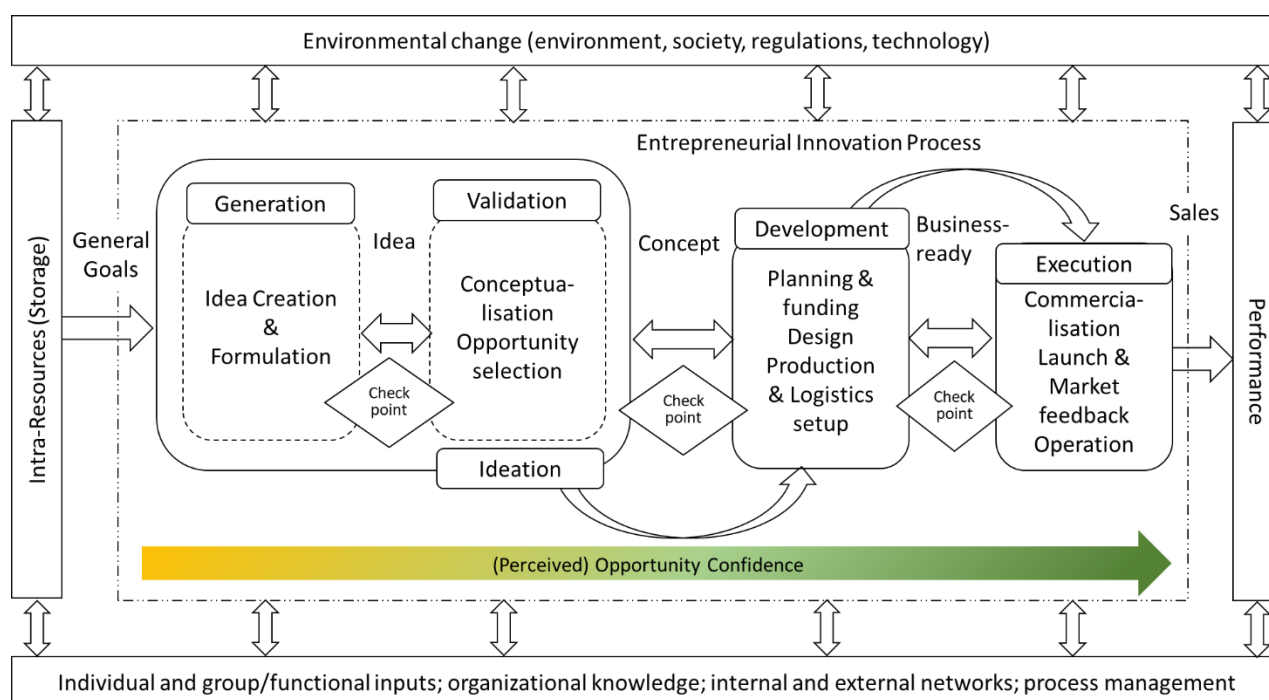


Figure 1. Conceptual process model of the corporate entrepreneurial innovation process. source: authors' elaboration.

We make generalized propositions based on the generalized entrepreneurial and innovation process model pattern.

Proposition A: Regardless of the triggering factors, the entrepreneurial and innovation processes in the corporation are identical and the same in all phases, being interchangeable in meaning: Entrepreneurial innovation process or innovative entrepreneurial process.

Proposition B: The corporation integrates the complex triple bottom-line entrepreneurial and innovation process into a comprehensive generalized process under complexity management.

Proposition C: Opportunity confidence dimension marked by milestones-artifacts measures the progression of the feedback-driven entrepreneurial innovation process in subjective and objective contexts.

To answer the question of the embeddedness of the entrepreneurial innovation process, we should consider process management in the corporation more generally. For this purpose, specific standard procedures have been implemented (according to the corporation's manual). Thus:

Proposition D: A successful entrepreneurial innovation process model is embedded within the standard process management regulations and the corporation's structure and is flexibly managed and implemented.

To observe the internal developments of the entrepreneurial innovation process, we need to delve into the content of its stages. We start from the Intra-Resources (Storage), the so-called zero stage, which contains the previous, e.g., prior knowledge (Shane, 2000), and the storage of the new resources

created and accumulated within the process. It includes tangible and intangible assets and the intentions on which the General Goals are based.

The Ideation phase consists of stages from the Idea Generation to the (business) Concept and the decision to proceed to the Development stage. The Ideation phase includes activities supporting idea discovery, generation, and formulation and focuses on stimulating the idea generation for a sustainable flow of innovation. The Ideation phase concludes when a new concept is developed and selected according to the strategic fit and feasibility. This phase is guided through a less structured and inspirational idea management process involving the activities considered the front end of innovation, constituting the most significant impact on the success of the innovation process (Koen et al., 2001). Essentially, “idea management is a subprocess of innovation management with the goals of effective and efficient idea generation, evaluation, and selection” (Brem and Voigt, 2007). Furthermore, integrated idea management (Arfi and Hikkerova, 2021; Brem and Voigt, 2007), combining internal and external idea sources for new ideas, increases the capabilities of the innovation process and assures the capture and consideration of all ideas.

Idea Generation is the first stage, capturing ideas from employees or external networks (Volery and Tarabashkina, 2021; El Bassiti and Ajhoun, 2013). Combining imaginative skills and existing knowledge starts the generation of new concepts and the creativity phase. Creativity is the ability that can be considered the seed for innovation. Ideas in this stage are starting and not checked for contextual fit (Volery and Tarabashkina, 2021; Russell, 1999). “Ideas are elusive, but in the hands of entrepreneurs, they become powerful as well as profitable” (Mintzberg et al., 1998:125). Entrepreneurship is a creative process (Shane et al., 2003). While some researchers define creativity as a possible bottleneck (Brem and Borchard, 2013) in the technology innovation process, it is essential to emphasize the significance of this stage. “Creativity is the process through which invention occurs” (Brazeal and Herbert, 1999). Creativity is a multidimensional process that involves adaptability to changes and new ideas. It entails flexibility with ideas and possibilities and the ability to transform ideas into reality (El Bassiti and Ajhoun, 2013). Creativity enables the use of existing knowledge, unlocking old concepts and perceptions (McMullen and Dimov, 2013), fueling the generation of original ideas (Shaw et al., 2005). This phase is the most accessible option for the employees in the organization to participate in the innovation process and contribute to value creation through creative behavior and collaboration with others (Volery and Tarabashkina, 2021; Woodman et al., 1993).

The spark for an idea gets initiated from several external and internal opportunities. Brem and Voigt (2007) call this a structural process of utilizing employee creativity for the organization’s benefit. An essential incentive for boosting idea generation is the effective use of information about the company goals, the competitors, the markets, or unsolved business matters (du Preez and Louw, 2008). Creation of an innovative idea - creativity is inherent in both the corporate entrepreneurial and innovation processes and cannot be distinguished from each other in this phase. Thus:

Proposition 1a: Creativity ignites entrepreneurial innovation from motivation, cognitive factors, and existing knowledge to generate innovative ideas.

Proposition 1b: The creativity process transforms the ideation of creative individuals into the outflow of creative ideas.

A creative idea requires formulation for introducing it to the organization for support and resources to enable its continued development. Devised ideas have been screened for their contextual fit and have a profile of purpose, resources, and connection to the existing ideas and innovations. This

stage aims to form an opinion of the idea involving a wider group of stakeholders who assess the odds of future success and screen the ideas for concept development.

The concept development phase shapes and transforms the devised idea into a workable prototype (du Preez and Louw, 2008). This phase defines the concept, the value proposition, the production, and the execution (du Preez and Louw, 2008). A higher level of interaction and collaboration occurs in this phase to communicate follow-ups on the required information, skills, and resources to solve emerging problems (Mets et al., 2019, 2013; McFadzean et al., 2005). A comprehensive feasibility study and market testing, including beta-test (e.g., Mets, 2021), are critical following the concept development to ensure the lineup of the ideas with the most potential for venturing.

The final step in the ideation stage is the selection process, where the concepts are assessed for feasibility, strategic fit, and intended opportunity. Ideas with the most added value get the green light to proceed with the development, and the less attractive ideas get stored for future exploitation or abandonment. The reasons for cancelled ideas are worth noting to capture the knowledge collected throughout the process. The gained experience contributes to future ideas, potentially leading to new opportunities (Van der Veen and Wakkee, 2002) and broadens the knowledge on how to get there (Politis, 2005). The judgment is based on specific criteria and scrutinized for the details to eliminate potential failure and unnecessary future costs. Success in this phase increases the probability of successful venturing.

Proposition 2: The intrapreneurial process of communicating the collective experience, knowledge, networks, and learning increases the probability of identifying and the confidence to act upon entrepreneurial opportunities.

Proposition 3: Dynamics of idea management appear in the activities, choices, and decisions (events) that depend on the (interpretation of) knowledge (outcomes) of previous stages, where the use of new knowledge stimulates a higher level of change than the use of preexisting knowledge.

The business development stage transitions the conceptualized idea through evaluating, designing, developing, testing, and producing the desired product, process, or service. Preliminary licensing agreements, supplier contracts, and other necessary arrangements that enable the organization to develop and sell its products should be in place. Ideas in this stage can be sold to a venturing organization or pursued internally (El Bassiti and Ajhoun, 2013). The starting point for the activities in this stage is whether to develop an idea internally. Activities in the development stage, directed through the innovation management process, are structured and include project planning, design management, and product development. The ideas appropriated to development have management support, dedicated funding, and resources.

The planning phase begins with team formation and skills and competencies acquisition. The innovation management method implements the development process and combines skills and capabilities for the specific goal of innovation within the organization. In this phase, a project plan with a timeline is set and coordinated among team members (Brem, 2011). Feedback from internal and external stakeholders becomes increasingly frequent as the process progresses and gains interest and involvement from the organization's members. Success in the development stage relies heavily on the motivation, capacity of a team and resources available; a higher confidence level increases the likelihood of the innovation to succeed (Bloodgood et al., 2015).

Proposition 4: The exchange of diversified experience and learning leads to the knowledge of efficient and effective means (technology and judgments) for opportunity exploitation.

The design and testing phase can be time and resource-consuming due to the constant evaluation and refinement of the innovation for market and product compliance. Balancing the alignment and adapting to constant change can be challenging and require patience and flexibility. Measuring critical factors, the success of innovation development depends on here and is vital because delays or resource shortages can cost the opportunity and discourage entrepreneurial behavior. With defined decision points, the Stage-gate model from Cooper (2017, 2008) is an excellent process to follow in this phase. It forces testing into a more rigid sequence of steps, ensuring the required protocol gets followed (du Preez and Louw, 2008). The frequency of recurring activities in this stage, the “build-test-feedback-revise” loops (du Preez and Louw, 2008), continuously improve the competencies, producing new skills from the captured knowledge. The concept of spiral development (Cooper, 2017, 2008) allows continuous incorporation of gathered feedback into the design until the innovation specifications get finalized. The design and testing of innovation can be considered the most knowledge and interaction-intensive phase of the innovation process. Experiences gained here can have a long-lasting effect on the effectiveness of future developments and the intentions for future venturing opportunities. “Organizations can learn as much, if not more, from failure as from success” - Joseph Lampel (Mintzberg et al., 1998). The outcome of this phase is the unveiling of a designed and tested innovation that looks and functions as perceived and meets the requirements for production. Innovations that do not fully meet the quality specifications or fail consumer testing in this phase go back to prior stages to be evaluated and further refined.

Proposition 5: The higher the opportunity confidence in the entrepreneurial journey, the superior the certainty in the transitional decision-making between stages and the entrepreneurial self-confidence to thrive and be engaged in the process.

The innovation moves to the production phase once its functionality passes testing in actual operations and production costs are finalized. The refinement process continues here until satisfactory results are reached and the innovation has transformed into a product ready to be passed through the go-live step and introduced to the market.

Go live, the last step of the development stage, concludes the idea transformation through various stages into innovation: a new product, service, or process. The go-live phase passes the fully vetted new product with appropriate documentation to the business to determine the best exploitation method.

The execution stage is the final critical step in the entrepreneurial process. In this stage, all efforts are expected to come to fruition, the successful implementation of innovation and the beginning of value creation. It is a consecutive step in the idea management process, where a successful development gets incorporated into daily operations (Schönwälder and Weber, 2013; Russell, 1999). A new product can be introduced through a new business model or market using a limited launch option. Initial smaller production runs are a less risky way of assessing consumer product acceptance without causing unnecessary costs and overproduction. New value execution management oversees the phase, where detailed forecasts and goals get set for performance measures. Once the product launches, close execution monitoring is necessary for a timely judgment and accurate response to market feedback. Minor issues can be adjusted on the go, while more complex issues get circled back to the production or design teams for corrective actions. This phase also serves a valuable function in communicating consumer reactions, measuring the performance of the innovation, and informing the business about potential risks and opportunities.

A limited launch or trial period ends with a post-launch review process, where the viability of innovation is defined based on the analysis of actual results (Cooper, 2017, 2008). Innovations passing

the viability test are deemed successful and placed in service for exploitation. Innovations not meeting the threshold of success metrics require a further review to determine the reason for the deficiency to avoid their recurrence. Finally, the step of product placement in the market deems the innovation successful and concludes the journey of the idea transformed into a value.

Proposition 6: Each stage within the journey offers new information and artifacts on the products, processes, technology, and market, concurrently renewing, thus contributing to the sustainability function of the entrepreneurial innovation process.

Proposition 7: Entrepreneurial innovation process incorporated with core (standard) business processes define sustainability through continuously improved performance.

The last proposition also considers the embeddedness and sustainability of the integrated corporate entrepreneurial and innovation process. The sought innovation affects changes in the innovation process. A clear focus on a specific type(s) of innovation sets the organizations on a path to a higher rate of successful implementation (Xie and Zhu, 2020; Kuratko et al., 2014). The change can be a process or an outcome. The change process direction defines the outcome as innovative (forward) or stagnant/ (backward) (Brazeal and Herbert, 1999).

6. Conclusion and recommendations for further research

With this article, we accepted the challenge: “[W]e should not aim for two different centers or estranged disciplines of entrepreneurship and innovation but rather take a joint perspective centering on the challenges of creating and bringing the new to the world” (Hölzle, 2022: 474). As a result of the critical literature review, we conclude that the joint approach to the entrepreneurship and innovation process is represented exceptionally modestly. There is also no joint approach and comparative analysis of the structure of these two processes and journeys, although they coincide within the corporation. Approaches to the innovation journey remain generally abstract and not open as a research construct. This article serves the purpose of structuring the internal entrepreneurial and innovation process of CE to mark these feedback-driven processes as equally interoperable and in a temporal sequence as the streamlined entrepreneurial innovation process.

The present study summarizes the major results in three groups:

I. The Corporate Entrepreneurial Innovation Process (CEIP) model harmonized in content and functionality.

II. Generalized propositions of main features of the CEIP.

III. Specific propositions of intra-process features of the CEIP.

Defining the critical aspects of managing and sustaining the innovation process in the existing business context and integrating those in the proposed conceptual model expands our understanding of each stage’s purpose in the sustainable CE process. It helps direct the activities and move the process toward the desired (sustainability) goal. CE aims to promote entrepreneurial behavior within an organization as a resource for innovation. To sustain the innovative vision long-term, an organization integrates the processes enabling individuals to innovate and pursue entrepreneurial opportunities. One of the most critical features of the CE compared to the (entrepreneurial) venture creation process is that the entrepreneurial process is ‘embedded’ in the corporate governance structure in the form of organizational rules and culture. The CE (entrepreneurial) process is also integrated with the innovation process and belongs to the key processes of the corporation. That means – the entrepreneurial innovation process becomes the standard business process of the corporation. The

continuity of those processes is the basis of a long-term sustainable business. A vision of sustainability for an organization defines the path for innovation of products and services and the need for competencies (Schröder et al., 2023).

The proposed conceptual model identifies three stages of the idea management process in the CE journey: Ideation, development, and execution, with the respective management processes guiding activities in each stage. The ideation stage facilitates the idea-generation process in the CE journey, where new concepts combined with creative skills fructify the “soil” for innovation to happen. This step is considered the start of the innovation process. An outcome of the ideation stage is a validated idea: A prototype and a commitment to developing the selected ideas. Next, the development stage takes a validated idea through the designing, testing, and producing process of an innovation/invention—the outcome of this stage is a new value. Finally, the execution stage launches the new value on the market and fine-tunes the performance for the highest rewards. We found that the progression of the CE journey can be successful only through an effective communication process and cross-functional collaboration.

We created a model of a corporation’s structured entrepreneurial innovation process and formulated the artifacts-milestones that mark the progression of the process. Formulating artifacts for our model spreads the concept of entrepreneurship as design science (Berglund, 2022) to CE and innovation studies. With these results, the article is only halfway to integrating the CE and innovation process studies. Further research should open the applications of all reasonable dimensions of the CE and innovation process in time, for example, as in the case of the entrepreneurial (startup) process and journey (Mets, 2022). This perspective would mean conducting both conceptual and empirical research.

Describing the progression of a process means a dimension or metric that generalizes a sequence of individual events in terms of the interim and final results. The concept of Technology Readiness Level - TRL (Phadke and Vyakarnam, 2017) or maturity (Mets, 2022) is partly an example of such an approach. The future empirical study involves companies of different sectors to allow data diversity for comparative analysis and essential elements in drawing conclusions used in the model.

Use of AI tools declaration

The authors declare that they have not used Artificial Intelligence (AI) tools in the creation of this article.

Acknowledgements

The authors would like to thank the editors and two anonymous reviewers for their valuable comments and suggestions which improved the paper considerably. The authors declare no financial support.

Conflict of interest

All authors declare no conflicts of interest in this paper.

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