JOURNAL OF BUSINESS CHEMISTRY

Vol.22, Iss.2, June 2025
URN: urn:nbn:de:hbz:6-43998532877
DOI: 10.17879/43998520885

Practitioner's Section

Andreas Dreiling[a]

The Impact of Artificial Intelligence on Innovation Speed in Startups

Innovation is a crucial factor for the success of companies, particularly start-ups, in maintaining their position in the market. Consequently, these companies must be prepared to incorporate new technologies into their business activities. One such technology is artificial intelligence (AI). AI is undergoing rapid technological development, yet the integration of AI into innovation management is still barely researched.

This paper examines the traditional "one-size-fits-all" approach to innovation processes and presents novel and versatile innovation processes. It considers the remaining commonalities of these processes and their potential for optimization through AI.

The importance of innovation as a success factor for startups is discussed. It emphasizes how innovation can help to overcome uncertainties and increase competitiveness. In the following, a framework is presented that deals with an AI-augmented innovation process and the potential obstacles during integration. It utilizes the ability of AI to improve the innovation process itself.

1 Introduction

One of the most discussed topics in media, political discourses and academia is artificial intelligence (AI). AI is the capacity of a system to interpret data fed into it and assist humans in decision-making and problem-solving.(Haenlein & Kaplan, 2019) It also has the potential to facilitate positive economic change. Current research indicates that AI can enhance productivity, innovation processes, international trade and economic growth. Despite the considerable public interest, the development of AI technologies is still relatively unknown. As interest in AI continues to grow, the lack of data makes it difficult to eveluate the development and integration of AI technologies and their economic impact (Buarque et al., 2020).

The objective of this paper is to examine the influence of AI on the innovation speed in start-ups. This topic is of significant interest to scientists, entrepreneurs, investors and those engaged in innovation management. For start-ups, innovation represents a crucial factor for success, enabling them to thrive in a market characterized by uncertainty and intense competition.

This research analyzes the current literature to identify the gaps within the research for the integration of AI into innovation processes. Subsequently, a framework for an AI-augmented innovation process is developed. This framework clarifies how a successful implementation can work.

The initial chapters provide an overview of current research on innovation in start-ups and exhibit why innovation is a critical success factor to them. To understand how AI can assist humans within the innovation process, it is essential to comprehend how these systems operate. Consequently, the fundamental core elements that facilitate collaboration are discussed.

[a] Institute of Business Administration at the Department of Chemistry and Pharmacy (IfbM), University of Münster, Leonardo Campus 1, 48148 Münster, Germany

ISSN 1613-9623

Vol.22, Iss.2, June 2025
URN: urn:nbn:de:hbz:6-43998532877
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Subsequently, the traditional view of innovation processes is presented and it is discussed how variable these processes are due to their dependency on their environment. Despite this variability, several commonalities are still identifiable. Furthermore, two frameworks are introduced. Combining commonalities, frameworks and AI results in an AI-augmented innovation process. Finally, a conclusion about the framework's influence on the speed of innovation and a hypothesis for future investigations is presented.

2 Main Part

2.1 Start-Ups

According to Aulet & Murray (2013), the characteristics of a start-up can be described as follows. A start-up is characterized by a high degree of innovation, which relates to technology, internal processes or business models, among other things. In addition, start-ups strive for rapid growth and have a strong will to enter global markets. These types of companies often lose money first and are therefore dependent on investments. If the business model is subsequently successful, exponential growth is to be expected. These characteristics distinguish start-ups from small and medium-sized enterprises, which tend to focus on addressing a local market. They are not dependent on innovation to survive or grow on the market. In comparison to start ups these companies typically grow linearly (Aulet & Murray, 2013).

After founding, most start-ups are exposed to a so-called „Death Valley" phase. This is the phase in which young companies must establish themselves and their products to realize regular profits and sustain themselves (Hudson & Khazragui, 2013). This phase is characterized by a low survival rate (Hyytinen et al., 2015). For this reason, it is important to look at the possible success factors. One of these factors, which is discussed in this paper, is the power and speed of innovation.

2.1.1 Innovation as Success Factor

Previous research indicates that certain entrepreneurial factors and activities are more likely to result in a successful business start-up than others (Kim et al., 2018),(Tomy & Pardede, 2018). While in general the ability and willingness to persevere in these activities may be necessary for a successful start-up, it is not sufficient on its own. Because persistence may lead to a focus on the wrong activities (Fritsch et al., 2006).

The extent to which innovation is a success factor for young companies has not been widely studied in the literature. However, there are some industry-specific studies and a few general statements that innovation is a success factor for start-ups.

In their research, Kim et al. (2018) were able to identify critical success factors for design start-ups. Entrepreneurship, technology, economics and innovation were identified as success factors and each was assigned five further attributes. Of these, the five attributes of innovation are particularly relevant for this work. The first is entrepreneurial motivation and the resulting philosophy and goals of the company. Secondly, progressive thinking is mentioned which is based on a flexible corporate culture and open-minded employees. Another important point is the self-development of employees. Here, employees engage in activities designed to enhance their own learning and development, thereby contributing to the overall success of the business. The commercialization of ideas is of particular importance to develop new business ideas and integrate them successfully into the market. Finally, a „marked-oriented opportunity switch" is mentioned, which states that companies must adopt a flexible business model and must continuously develop their products or services and adapt them to the market (Kim et al., 2018). These attributes are crucial for establishing an innovative atmosphere that fosters the entrepreneurial success of design start-ups by stimulating innovation processes.

In their work, Tomy and Pardede (2018) identified uncertainties that must be considered when predicting the success of a technology start-up. These competitive uncertainties result from the lack of knowledge about the actions and behavior of the competition. They arise from the inability to recognize the competitive strategies for the competitors' product and service offerings.

The origins of these uncertainties are divided into the external and internal environments. Within the external environment, technological uncertainties refer to the speed of innovation as an uncertainty. Innovation speed refers to the time required to move from the initial concept to the commercialization of the product. The ability to survive as a start-up hinges on the ability to develop an innovative first product and to maintain the power of innovation. The speed of innovation must be faster than that of the competition. Furthermore, knowledge development within R&D is also essential for a robust innovation system (Alkemade et al., 2006). The application of process innovation methods follows a protocol for the development of new products,

ISSN 1613-9623

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delivery of quality, responsiveness to customer needs, project management and innovation.

Within the internal environment, the innovation process as such is defined as a resource of uncertainty. New technologies alone are not innovations. The necessary knowledge must be applied to combine this technology with market needs to create a profitable opportunity (Tomy & Pardede, 2018).

In contrast, Sevilla-Bernando et al. (2022) make an industry-independent statement about the importance of innovation as a success factor for start-ups. A culture of learning and development is the basis for sustainable growth and continuous innovation of the company (Sevilla-Bernardo et al., 2022).

2.2 Artificial Intelligence

To support the innovation process with AI, it is essential to understand how it works. AI is capable of understanding human communication and generate content that can be interpreted by humans. The following builds the necessary understanding of AI for this paper based on Bahoo et al., 2023.

The application of **machine learning** is essential for the comprehension of the structural and functional characteristics of algorithms, which can be employed to facilitate the acquisition of knowledge from data and the formulation of predictions.

Another area of machine learning is **deep learning** which enables computers to recognize complex patterns and correlations within large amounts of data.

Natural language processing (NLP) endows the machine with the capacity to read and comprehend the language spoken by humans.

The concept of the **artificial neural network (ANN)** is based on the idea of simulating the way the human brain analyzes and processes information. It has the capacity for self-learning, which enables it to achieve better results over time.

Text mining is the process of converting unstructured text into a structured form with the aim of identifying meaningful patterns and new insights.

Data mining, also known as big data, is a technique that allows machines to search through large amounts of information and recognize correlations. It forms an interface between AI, machine learning, statistics and database systems.

This brief summary does not include all the elements that an AI needs to function properly. However, this overview is sufficient to recognize the complexity of the composition of different core functions which enables AI to work sensibly and logically. The core of these functions is that the AI was developed to understand and support humans, for example by supporting an innovation process.

2.3 Innovation

Innovation extends to all levels of a company and can take place both in management and among employees. Furthermore, it can be applied to products and services.

2.3.1 The Versatility of the Innovation Process

The traditional view of the innovation process allows it to be divided into the following steps: Generating or finding ideas, selecting ideas, development and market launch. However, these processes are much more individual if the

Table 1: The eight innovation processes.

#	Type of innovation processes
1.	Traditional process: from idea to launch
2.	Anticipating sales: the tailor-made approach (open order)
3.	Anticipating sales from a given client specification (closed order)
4.	Process started by a call
5.	Process with a stoppage: waiting for the market
6.	Process with a stoppage: waiting for advance of technology
7.	Process with a stoppage: waiting for the market and for the advance of technology
8.	Process with parallel activites

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contingency theory is taken into account. According to the theory there is no best way to organize a corporation, lead a company or make decisions. It considers environmental conditions, organizational structure, management style and technological or market-oriented factors. Salerno et al. (2015) summarized these in their work into eight different innovation processes (Table 1; Figure 4-10). Each of these processes has its own motivations and project contingencies (Salerno et al., 2015).

2.3.2 Emphasizing the Similarities

By analyzing the eight different innovation processes (listed in the appendix), the authors showed that the traditional linear „one-size-fits-all" process ignores many important external conditions as mentioned in the contingency theory. The resulting novel innovation processes itself are not relevant for this paper, but the similarities among them. These manifest themselves in three phases which can be described as idea, selection and development, but they vary in their sequence. These three phases build the early stage of an innovation process and will be very important for the integration of AI into the innovation process which will be discussed in the next chapters.

2.4 Integrating AI into the Innovation Process

2.4.1 Technology Acceptance Model

The Technology Acceptance Model (TAM) (Figure 1) was introduced in 1986 by Davis et al. as an evolution of the Theory of Reasoned Action (Fishbein & Ajzen, 1975). TAM is a framework in which the **perceived of usefulness** and **perceived ease of use** of a new technology is influenced by various external factors. Perceived usefulness indicates the extent to which the user believes that the new technology will improve his or her own performance. Perceived ease of use, on the other hand, refers to whether the user feels that a great deal of effort is required to use the new technology. An initial high level of effort followed by a steep learning curve can still be perceived as user-friendly.

This model puts these two criteria into relation to explain the usage behavior of new technologies. These external factors influence whether users accept a new technology and their attitude toward it. Figure 1 shows the complete framework. However, the former description is sufficient for this paper.

Empirical studies have demonstrated that for a new AI-based technology to be effectively introduced, the technology must provide sufficient benefits for the user and improve performance in terms of perceived usefulness and perceived ease of use (Agrawal et al., 2019).

The external components that influence these two factors can be explained with the help of the Technology-Organizational-Environmental (TOE) framework, which will be discussed in the following section.

2.4.2 Technological-Organizational-Environmental Framework

The TOE framework was developed by Tornatzky and Fleischer (1990) to examine the introduction of various IT products and services at company level. By incorporating technological, organizational and environmental variables, the TOE framework has become widely accepted. It analyzes technology adoption, technology benefits and value creation from technological innovations. The model is also free of restrictions within sectors or company size. It provides a holistic picture of the acceptance of the technology by users, its implementation, the prediction of potential challenges, its impact on value chain activities and much more (Gangwar et al., 2015),(Baker, 2011).

The **technological factors** pertain to the way technologies are supported within and outside the company. The capacity to integrate new technologies and the suitability of current technologies for the company are also considered.

The **organizational factors** consider the existing

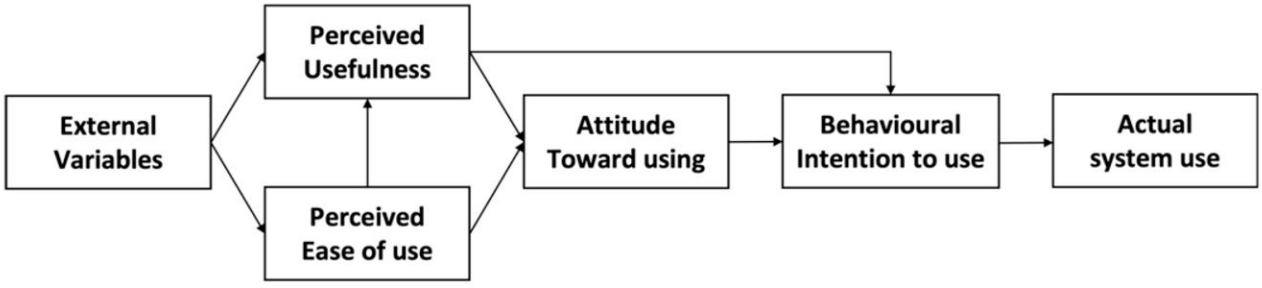

Figure 1: Technology Acceptance Model (TAM). (Davis et al., 1989)

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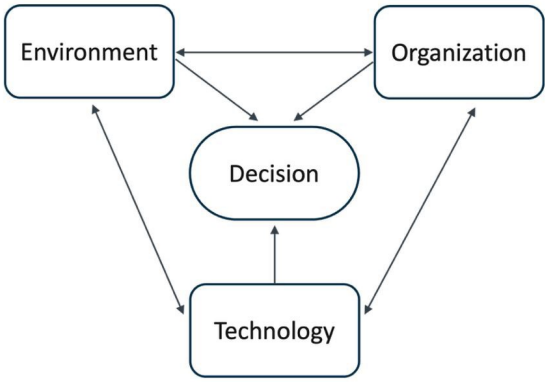

Figure 2: Technological-Organizational-Environmental (TOE) framework (Tornatzky and Fleischer, 1990).

characteristics and resources of the company. Leadership and management communication are also considered. During the decision process, the size of the company and the available resources are also taken into account.

The **environmental factors** pertain to the question of whether the introduction of new technology will enhance the company's competitiveness or operational efficiency. Government regulations and industry trends also exert a significant influence on the acceptance and speed of adoption of new technologies (Na et al., 2022).

2.4.3 AI-Augmented Innovation Process

The integration of AI within innovation management introduced a new era of AI-augmented innovation processes. This has led to a significant transformation in the way companies work, with a greater focus on creativity and problem-solving. In particular, the early stages of innovation have been revolutionized by the integration of AI with the introduction of new tools that facilitate exploration, brainstorming, prototyping and development. The user-friendly nature of modern AI tools enables a broader user base to participate in specific innovation processes without any special prior knowledge. For instance, these tools can be utilized to generate preliminary prototypes of a digital product without the necessity for the user to possess extensive programming expertise. This eliminates the significant discrepancy between the concept and a tangible initial prototype. Bilgram & Laarmann's (2023) research provides an overview of the phases of the innovation process in which AI enhances efficiency. The generation of ideas and the prototyping phase are of particular significance. The integration of AI tools not only accelerates the whole innovation process, but also has a positive impact on costs, the innovation speed and the efficiency of workflows within a company (Bilgram & Laarmann, 2023).

A practical example of AI-augmented innovation can be found in the chemical industry. Evonik anticipates that AI will significantly accelerate innovation over the next 5–10 years, particularly through applications such as molecular property prediction, which reduces experimental costs and speeds up product development. Additional use cases include supply chain automation, process optimization, and predictive maintenance, supported by large, high-quality industrial datasets. These developments demonstrate how AI facilitates more efficient, data-driven innovation processes in complex industrial environments (Kanzler, 2024).

The work of Kakatkar et al. (2020) examines the significance of analytics performed by AI tools in the context of decision-making and strategy which are crucial elements of the early exploration phase of the innovation process. The performance-enhancing effects of AI on innovation processes can be substantiated by empirical case studies. Kakatkar et al. (2020) describe several real-world applications in which AI contributed to measurable improvements in both speed and quality of innovation-related tasks. In one case, an innovation team working on identifying lead users and relevant problems in the semiconductor industry completed their analysis in four weeks. According to the authors, a purely manual approach would have required between 16 and 20 weeks for the same results, indicating a substantial time saving. In another case, AI algorithms achieved an accuracy rate of 75 % when classifying consumer needs based on large volumes of user-generated content. This allowed for a broader and more systematic exploration of the problem space than would have been feasible using traditional qualitative methods. Moreover, in the evaluation of product ideas, a random forest model developed by the team was up to 23 % more accurate in predicting expert ratings than the average crowd-based assessment. These findings illustrate how AI can accelerate the front-end of innovation, reduce analytical effort, and enhance the

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reliability of decision-making processes.

The authors identify the potential of AI to provide more profound insights into market trends, user behavior and technological advances. This potential can assist in the identification of opportunities and threats within the market. Thus, AI analyses assist companies in generating innovative ideas and evaluating them, supporting the entire innovation process. AI-supported processes yield secure innovation strategies based on extensive data and market orientation (Kakatkar et al., 2020).

2.5 Framework - Implementing an AI-Augmented Innovation Process

The factors obtained from the literature can be used to propose a framework that focuses on an AI-augmented innovation process (Figure 3). The left side of figure 3 is based on the fact that start-ups have to recognize innovation as a success factor and prioritize it accordingly. To create awareness of potential barriers to implementation in companies, this framework is based on the two previously introduced TAM and TOE frameworks.

As mentioned before, TAM covers two factors: perceived usefulness and perceived ease of use. Because these are influenced by external factors, the TOE framework is also applied. It considers technological, organizational and environmental factors that can influence the adoption and thus the implementation of the new technology. This builds the TOE-TAM branch in the top center of the figure.

If innovation is recognized as a success factor and the TOE-TAM branch of the framework is considered, an AI-augmented innovation process may occur. As previously discussed, the innovation process takes different paths depending on its circumstances.

Despite the variability within the process steps and their sequence, commonalities are identified. These similarities are reflected in the three phases: Ideas, Selection and Development and form the early phases of the innovation process. This is displayed in the bottom center of the figure. The result is an AI-augmented innovation process in the center of the figure. The newly created process can assist in making the early phases of an innovation process more efficient and effective as shown by the different results on the right side. The newly created framework (Figure 3) can assist in making the early phases of an innovation process more efficient and effective as shown by the different results on the right side. This is particularly evident when analyzing how AI contributes to the core phases of innovation.

In the **idea generation phase**, AI facilitates the detection of

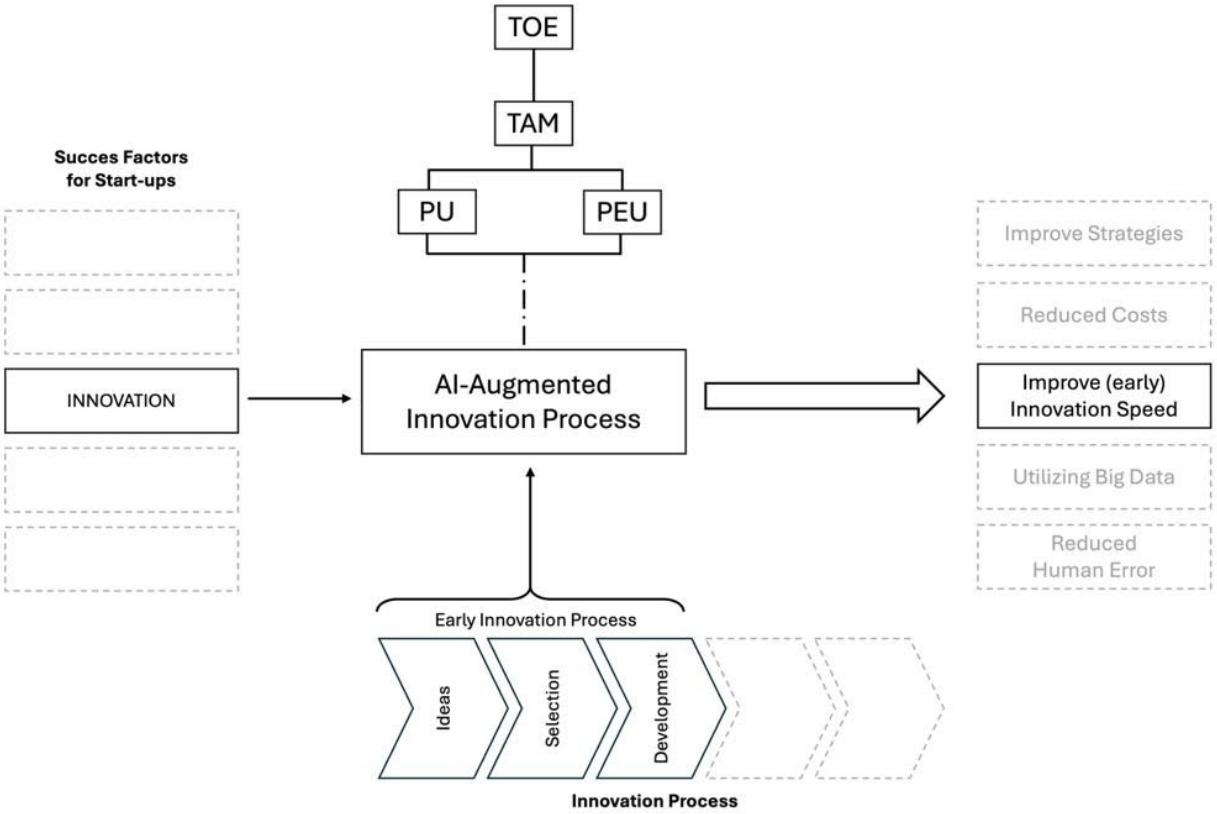

Figure 3: Proposed Framework for implementing an AI-augmented Innovation Process in Start-Ups.

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emerging customer needs and market gaps through large-scale analysis of digital data sources. For instance, Kakatkar et al. (2020) found that AI tools identified consumer needs from 1.75 million online posts with 75 percent classification accuracy.

In the **idea selection phase**, AI-based models can improve decision quality by predicting concept performance. The same study showed that a random forest algorithm predicted expert evaluations up to 23 percent more accurately than community-based assessments.

In the **development phase**, AI supports faster prototyping and early testing. As described by Bilgram and Laarmann (2023), low-code AI tools enable even non-technical users to convert concepts into tangible prototypes more efficiently. These examples illustrate how AI enhances innovation speed, reduces resource requirements, and increases decision accuracy across all phases.

3. Conclusion

It is of great consequence for young companies to identify innovation as a factor conducive to success. Innovation contributes to increasing competitiveness, overcoming uncertainties and to the sustainable growth of the company. Once innovation has been identified as a critical success factor, the innovation process itself can be adapted. The literature indicates that innovation processes diverge from the traditional „one-size-fits-all" approach. In reality, the processes are individual due to their different structures. Despite the different sequences within the process, however, idea generation, selection and development were identified as commonalities. These phases usually form the beginning of the entire innovation process. The literature indicates that AI can play a supportive role in these phases, exerting a significant impact on the quality, quantity and speed of the process.

To successfully integrate AI into business activities, the technology faces a number of challenges. These challenges are described by the TOE and TAM frameworks. The TAM refers to the personal benefit and perceived ease of use and puts these in relation to each other in order to predict the behavioral intention to use. These two factors are influenced by external variables which can be identified using the TOE model. The TOE framework shows that a company requieres the ability to integrate AI tools reasonable and that they must be compatible with existing technologies and company activities. Furthermore, the company needs a communicative innovation management with good leadership skills. Also, the size and available resources must be considered for decision-making. Finally, the potential increase in competitiveness or efficiency of business activities through AI must be considered. Government regulations and trends within the market also influence whether and how quickly a new technology is integrated.

Once AI has been successfully integrated into the innovation process, the result is an AI-augmented innovation process. These AI enhancements can support the early phases of the innovation process, resulting in a significant acceleration of innovation.

The aim of this thesis was to investigate the influence of AI on the speed of innovation. This objective was successfully achieved and can be proposed as proposition (P1).

P1: *Considering the framework provided, using an AI-augmented innovation process may lead to a positive impact on the innovation speed of a start-up.*

Additionally, other factors were identified that positively influence the innovation process. These include reducing the costs of the innovation process and the number of human errors. AI is also able to process large amounts of data, which can improve innovation strategies (Yams et al., 2020).

3.1 Outlook and Discussion

The current state of knowledge for AI-augmented innovation processes is extremely limited due to a lack of literature. Often, only industry-specific studies have been carried out which is why it is difficult to make general statements. In this thesis, a newly created framework was used to form a hypothesis that implies a positive influence on the innovation process. **P1** is to be empirically examined with the help of field studies conducted in start-ups.

When interpreting this work, it is essential to consider the rapidly evolving landscape of AI and AI-related research. The dynamic nature of this field makes it challenging to assess the current state of art and the extent of AI development.

Further research should also determine whether the use of AI raises ethical concerns (Hagendorff, 2020). Additionally, the potential decrease in human creativity through the use of AI tools may be considered in this context (Hughes et al., 2021).

Furthermore, an important point to consider, particularly for start-ups, is the cost dimension associated with the adoption of AI technologies. In contrast to established firms, start-ups typically operate under tight financial and personnel constraints. However, the integration of AI often requires significant investment in IT infrastructure, access to high-quality data, and skilled personnel. These requirements

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URN: urn:nbn:de:hbz:6-43998532877
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present substantial challenges that many young firms are unable to meet (Wamba-Taguimdje et al., 2020). As a result, cost barriers can limit the ability of start-ups to fully exploit the potential of AI within their innovation processes.

Viewed through the lens of the Technology–Organization–Environment (TOE) framework, this challenge highlights the close interconnection between technological and organizational factors in the start-up context. Technological readiness, such as access to appropriate tools, must be aligned with organizational capability, including leadership competence and agile workflows, to ensure successful implementation. While large enterprises benefit from structural and financial advantages, start-ups compensate through flexibility and a strong innovation orientation. These strengths can be leveraged through scalable and cost-effective AI solutions. Modular, cloud-based tools and low-code or no-code environments offer accessible entry points, enabling start-ups to implement AI strategically despite limited resources.

4. References

Agrawal, A. K., Gans, J., & Goldfarb, A. (2019). The Economics of Artificial Intelligence: An Agenda.

Alkemade, F., Hekkert, M. P., & Suurs, R. (2006). Strategic expectations management for emergent sustainable technologies.

Aulet, W., & Murray, F. E. (2013). A Tale of Two Entrepreneurs: Understanding Differences in the Types of Entrepreneurship in the Economy. SSRN Electronic Journal. https://doi.org/10.2139/ssrn.2259740

Bahoo, S., Cucculelli, M., & Qamar, D. (2023). Artificial intelligence and corporate innovation: A review and research agenda. Technological Forecasting and Social Change, 188, 122264. https://doi.org/10.1016/j.techfore.2022.122264

Baker, J. (2011). The Technology–Organization–Environment Framework. In Information Systems Theory (S. 231–245). https://doi.org/10.1007/978-1-4419-6108-2_12

Bilgram, V., & Laarmann, F. (2023). Accelerating Innovation With Generative AI: AI-Augmented Digital Prototyping and Innovation Methods. IEEE Engineering Management Review, 51(2), 18–25. https://doi.org/10.1109/EMR.2023.3272799

Buarque, B. S., Davies, R. B., Hynes, R. M., & Kogler, D. F. (2020). OK Computer: The creation and integration of AI in Europe. Cambridge Journal of Regions, Economy and Society, 13(1), 175–192. https://doi.org/10.1093/cjres/rsz023

Fishbein, M., & Ajzen, I. (1975). Belief, attitude, intention and behaviour: An introduction to theory and research (Bd. 27).

Fritsch, M., Brixy, U., & Falck, O. (2006). The Effect of Industry, Region, and Time on New Business Survival – A Multi-Dimensional Analysis. Review of Industrial Organization, 28(3), 285–306. https://doi.org/10.1007/s11151-006-0018-4

Gangwar, H., Date, H., & Ramaswamy, R. (2015). Understanding determinants of cloud computing adoption using an integrated TAM-TOE model. Journal of Enterprise Information Management, 28(1), 107–130. https://doi.org/10.1108/JEIM-08-2013-0065

Haenlein, M., & Kaplan, A. (2019). A Brief History of Artificial Intelligence: On the Past, Present, and Future of Artificial Intelligence. California Management Review, 61(4), 5–14. https://doi.org/10.1177/0008125619864925

Hagendorff, T. (2020). The Ethics of AI Ethics: An Evaluation of Guidelines. Minds and Machines, 30(1), 99–120. https://doi.org/10.1007/s11023-020-09517-8

Hudson, J., & Khazragui, H. F. (2013). Into the valley of death: Research to innovation. Drug Discovery Today, 18(13–14), 610–613. https://doi.org/10.1016/j.drudis.2013.01.012

Hughes, R. T., Zhu, L., & Bednarz, T. (2021). Generative Adversarial Networks–Enabled Human–Artificial Intelligence Collaborative Applications for Creative and Design Industries: A Systematic Review of Current Approaches and Trends. Frontiers in Artificial Intelligence, 4, 604234. https://doi.org/10.3389/frai.2021.604234

Hyytinen, A., Pajarinen, M., & Rouvinen, P. (2015). Does innovativeness reduce startup survival rates? Journal of Business Venturing, 30(4), 564–581. https://doi.org/10.1016/j.jbusvent.2014.10.001

Kakatkar, C., Bilgram, V., & Füller, J. (2020). Innovation analytics: Leveraging artificial intelligence in the innovation process. Business Horizons, 63(2), 171–181. https://doi.org/10.1016/j.bushor.2019.10.006

Vol.22, Iss.2, June 2025
URN: urn:nbn:de:hbz:6-43998532877
DOI: 10.17879/43998520885

Kanzler, S. (2024). A conversation about artificial intelligence at Evonik: Interview with Dr. Steffen Kanzler. https://doi.org/10.17879/64988379140

Kim, B., Kim, H., & Jeon, Y. (2018). Critical Success Factors of a Design Startup Business. Sustainability, 10(9), 2981. https://doi.org/10.3390/su10092981

Na, S., Heo, S., Han, S., Shin, Y., & Roh, Y. (2022). Acceptance Model of Artificial Intelligence (AI)-Based Technologies in Construction Firms: Applying the Technology Acceptance Model (TAM) in Combination with the Technology–Organisation–Environment (TOE) Framework. Buildings, 12(2), 90. https://doi.org/10.3390/buildings12020090

Salerno, M. S., Gomes, L. A. D. V., Silva, D. O. D., Bagno, R. B., & Freitas, S. L. T. U. (2015). Innovation processes: Which process for which project? Technovation, 35, 59–70. https://doi.org/10.1016/j.technovation.2014.07.012

Sevilla-Bernardo, J., Sanchez-Robles, B., & Herrador-Alcaide, T. C. (2022). Success Factors of Startups in Research Literature within the Entrepreneurial Ecosystem. Administrative Sciences, 12(3), 102. https://doi.org/10.3390/admsci12030102

Tomy, S., & Pardede, E. (2018). From Uncertainties to Successful Start Ups: A Data Analytic Approach to Predict Success in Technological Entrepreneurship. Sustainability, 10(3), 602. https://doi.org/10.3390/su10030602

Wamba-Taguimdje, S.-L., Fosso Wamba, S., Kala Kamdjoug, J. R., & Tchatchouang Wanko, C. E. (2020). Influence of artificial intelligence (AI) on firm performance: The business value of AI-based transformation projects. Business Process Management Journal, 26(7), 1893–1924. https://doi.org/10.1108/BPMJ-10-2019-0411

Yams, N. B., Richardson, V., Shubina, G. E., Albrecht, S., & Gillblad, D. (2020). Integrated AI and Innovation Management: The Beginning of a Beautiful Friendship. Technology Innovation Management Review, 10(11), 5–18. https://doi.org/10.22215/timreview/1399

ISSN 1613-9623