

Revitalizing established Industrial Companies: State of the Art and Success Principles of Digital Corporate Incubators

Matthias Hille¹, Matthias Lederer², Dominik Forster¹

¹ Institute of Information Systems, University of Erlangen-Nürnberg, Nürnberg, Germany
{matthias.hille, dominik.forster}@fau.de

² ISM International School of Management, Department Economics & Quantitative Methods
matthias.lederer@ism.de

Abstract.

In order to compete with radical digital ideas, more and more large companies are founding corporate incubators. These small and agile companies are designed to accelerate disruptive innovation and transfer it to the parent company. However, it is obvious that the design and work in these newly established units are often efficient and the return of ideas cannot be effectively realized. This paper has collected a list of 131, partly non-public, incubators and evaluated them according to classic design parameters for companies (e.g., location, industry, etc.). In addition, success factors for digital corporate incubators (such as the design of the innovation process) were collected for deriving success principles.

Keywords.

Corporate incubators, innovation management, start-up management, innovation lab, new business development

1 Introduction

A lot of “traditional” and established industries are facing quick changes with possibilities of digitalization [1]. It is accepted in literature and business practice, that disruptive innovation is hardly carried out in long-existing and large-sized companies, which often rely on fundamental approaches within their Research and Development (R&D) departments [2]. This leads to a common trend: With the help of special organizational units, internal entrepreneurs or external startups, established companies try to force digital innovation [3].

Many established companies (e.g. Siemens, Lufthansa, Bayer) have set up incubators, which operate mostly independent from other business units [4]. The term “corporate/business incubator” is frequently used for incubators, which are connected to a company [3]. Research on corporate incubators is a relatively new area and

14th International Conference on Wirtschaftsinformatik,
February 24-27, 2019, Siegen, Germany

incubators in companies have not been categorized [5]. The effectiveness and results of business incubators are controversially discussed, and success factors are not defined or even known [6]. Often parent companies interfere too much [7] or give too little budget as well as wrong resources [8]. Successful examples show that even supposedly small factors such as the location or the legal form can have a major impact on success. The outcome of the innovation and venture creation process has high uncertainty and needs flexible management [9]. Incubators and accelerators are, especially in business and technology-driven countries, highly needed [10].

The motivation for this work-in-progress contribution is to answer the following research questions (RQ):

RQ1: What types of corporate incubators do currently exist worldwide?

RQ2: What are the environmental preconditions of successful incubators?

2 Methodology

A combination of approaches was used following the mixed methods by [11] to identify patterns in hidden research field data.

1. **Identification:** In the first step, the authors created a list of currently implemented corporate incubators using a general desk research. Available sources such as the Deutscher Aktienindex (DAX), published case studies, documented interviews, as well as book chapters, were used to collect and further investigate incubators. Another approach was interviewing managers of corporate companies at international fairs, and in personal meetings about their current activities. Fragmented lists of incubators (e.g., list by [8]) were consolidated. The generated list seems to be the currently largest dataset on corporate incubators available and will be part of the poster presentation.
2. **Coding:** All incubators identified were further analyzed by internet research. Metadata (e.g. name, parent company, etc.), as well as relevant parameters (e.g. preconditions as budget, location, number of employees), were documented. These factors result from a literature review on fragmented success factors of incubators in scientific databases.
3. **Analysis:** Since the extension of the dataset is an ongoing research of the authors, the dataset as well as the interviews conducted with many incubators, a qualitative content analysis based on [12] was performed so far.

3 Preliminary results

Some statistics on the dataset and derived success will shortly be introduced. The four different categories of incubators shown in Figure 1 are based on the work from [10] and [5] and was adapted with the results from performed interviews and statistics. The, in literature, used category names are combined with the knowledge of several interviews to *Independent*, *Corporate-integrated*, *Communal/State* and *Academical incubators*.

3.1 Relative Distribution

Based on the list of 131 collected incubators, statistical analyses were possible. For several areas of interest, clear industry trends are visible.

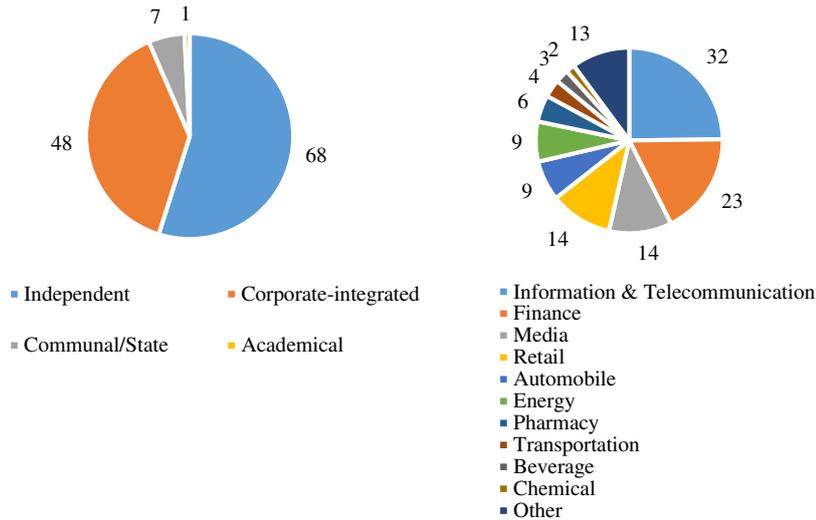


Figure 1. Incubator types

Figure 2. Industry fields of incubators

Figure 1 visualizes that most of the listed incubators are independently founded as separate company. Some are part of the formal parent organization (corporate-integrated). Only a small amount of analyzed incubators are communal/state (7) or academical (1) incubators. The high number of independent is an expected result as the research for incubators focused on corporate/business incubators. This is a reasonable result as communal/state driven incubators and academical incubators are not profit-oriented; they support local economics or regional institutes and cooperation with companies. Most incubators identified are in Germany and the USA. Within industries large companies establish incubators whose market offers are extensively digitized (Figure 2). Furthermore, incubators are found in those industries where significant changes are expected by radical technological progress.

3.2 Environmental preconditions of successful incubators

Besides the statistical analysis, four main design areas were identified during qualitative interviews based on [12], which can have a positive influence on corporate incubators, when they receive attention during the strategic setup. The interviews were performed with structured questionnaires and the answers were analyzed in the three steps *Clustering*, *Extraction* and *Aggregation* based on [13].

1. **Strategic focus:** Incubators need a clear strategic orientation in order to be able to prioritize and decide on a project. It was mentioned by managers of

incubators that existed more than 2 years have a lot of tasks from the existing parent company instead of focusing on entirely new business opportunities.

2. **Intervention phase:** To successfully focus on few but relevant and promising projects and business models, it is necessary to have criteria how possible projects are evaluated. Similarly, to principle 1 the most responsible managers of incubators mentioned in interviews that they had to establish an evaluation framework to validate and prioritize new ideas.
3. **Preferred exit-path:** For several interviewees, the spin-off exit path was especially the favoured exit-path for disruptive innovations in the 10% area. Especially for incubators from industrial companies, the exit path was mentioned in direct interviews as important.
4. **Corporate integration:** The transfer of projects into existing corporate structures needs proper configuration as problems can occur during the transfer. A success factor is to define the transfer into corporate departments with all stakeholders in the corporate structure. Some interviewees mentioned that the transfer must be defined during the initial configuration.

4 Implications for further research

This work in progress provides a comprehensive dataset on digital corporate incubators worldwide. The analysis of the success factors is in an initial stage and needs more work to be based on a broader information basis. As shown in 3.2 the invention phase is, of course, important for corporate incubators, but the exit path and the corporate integration is also of interest. The results and methods from this research in progress can serve as a general foundation for discussions with other participants of the research area at the conference. The generated list of incubators and examples that were evaluated more in detail can be used for further research with adaptations based on the discussion and remarks from the conference. The researched incubators have a strategic focus on corporate integration and independency as this is one key for medium- and long-term success. Regarding a low amount of white papers and industry studies more innovation labs are switching focus from corporate projects to company building.

References

1. Mertens, P., Barbian, D.: Digitalisierung und Industrie 4.0–Trend mit modischer Überhöhung?. *Informatik-Spektrum* 39, 301-309 (2016)
2. Branstad, A.: A study of management tasks and stakeholders in a hybrid corporate incubator. *European journal of innovation management*, 13, 294–312 (2010)
3. Becker, B., Gassmann, O.: Gaining leverage effects from knowledge modes within corporate incubators. *R&d Management* 36, 1–16 (2006)
4. von Zedtwitz, M.: Classification and management of incubators: aligning strategic objectives and competitive scope for new business facilitation. *International Journal of Entrepreneurship and Innovation Management*, 3, 176–196 (2003)

5. Gassmann, O., Becker, B.: Towards a resource-based view of corporate incubators. *International journal of innovation management* 10, 19–45 (2006)
6. Kanbach, D. K., Stubner, S.: Corporate Accelerators As Recent Form Of Startup Engagement: The What, The Why, And The How. *Journal of Applied Business Research* 32, 1761–1776 (2016).
7. Schuh, G., Vogt, F., Lau, F., Bickendorf, P.: Concept of Innovation Transfer from Corporate Incubators. In: 2017 Portland International Conference on Management of Engineering and Technology, pp. 1-11. PICMET, Portland (2017).
8. Heinemann, F.: Corporate Accelerators: A Study on Prevalence, Sponsorship, and Strategy. Technical report, Massachusetts Institute of Technology (2015)
9. Stegmann, P., Zec, M., Matthes, F.: Assessing the Potential Value of Software-Support for the Venture Creation Process, in Leimeister, J.M.; Brenner, W. (Hrsg.): Proceedings der 13. Internationalen Tagung Wirtschaftsinformatik (WI 2017), St. Gallen, S. 1417-1428 (2017)
10. Spath, D. (Ed.): Mehr Innovationen für Deutschland: wie Inkubatoren akademische Hightech-Ausgründungen besser fördern können. Springer-Verlag. (2012)
11. Johnson, R. B., Onwuegbuzie, A. J.: Mixed methods research: A research paradigm whose time has come. *Educational researcher* 33, 14-26 (2004)
12. Mayring, P.: *Qualitative Inhaltsanalyse*. VS, Wiesbaden (2010)
13. Mayring, P., & Fenzl, T.: *Qualitative Inhaltsanalyse*. In N. Baur & J. Blasius (Eds.), *Handbuch Methoden der empirischen Sozialforschung* (pp. 543–556). Wiesbaden: Springer Fachmedien Wiesbaden. (2014)