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THE UEBERMORGENWERKSTATT: CUSTOMIZABLE INNOVATION IN A CO-CREATIVE ENVIRONMENT

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Abstract: *To overcome challenges of too rigid innovation structures and a lack of access to resources and know-how in innovation projects, companies should utilize context-specific innovation structures while co-creating innovative solutions with different groups of external actors. The Uebermorgenwerkstatt is seen as a combination of a flexible co-creation process frame and a supporting physical environment where innovation projects are realized. This concept is created based on a theoretical review and integration of innovation management and co-creation. The core idea is to suggest for each of the phases of a particular innovation project – idea generation, idea acceptance and idea realisation - a certain combination of different actors from industry, academia and market, and activities (focus group discussion, creativity workshop, design thinking, lead user project, etc.). This suggestion should be based on an evaluation of the company-internal, company-external, and innovation-specific factors which is performed in the planning phase of a particular co-creation project. The result is a customized process that increases the probability of a successful innovation.*

Keywords: ***Innovation management, Customizable innovation, Co-creation, Co-creative environment***

1. INTRODUCTION

It is common understanding that innovation processes should be tailored to suit an organization's unique requirements [1]. Still, companies' innovation processes tend to be inflexible and can hardly provide adequate support for diverse innovation projects [2]. Beyond that the majority of organizations lack resources and know-how for professionally implementing innovation projects [3].

On the other hand, innovation can be seen as a co-creation process within social and technological networks in which actors integrate their resources to create mutual value [4]. By allowing access to a larger pool of need and solution information, co-creating innovative solutions with experts from the private sector, students and researchers [5], lead users [6], user communities or the general public [7] can be suggested as a possible solution to overcome this deficiency.

The aim of this paper is to propose a process frame that can be customized to support the unique requirements of diverse co-creation innovation projects. This process frame should be embedded in the *Uebermorgenwerkstatt*, a co-creative environment envisioned to be created at Fraunhofer IAO in Stuttgart, Germany.

Section 2 reviews the current literature on innovation management and co-creation. It is followed by Section 3, which briefly explains the applied methodology. Further, the concept of the *Uebermorgenwerkstatt* is described in Section 4, following its elements: relevant context factors for innovation projects, innovation process phases, available activities, and groups of actors which can be combined to form a unique process frame. In Section 5 further research and managerial implications of this concept are highlighted, followed by concluding remarks.

2. LITERATURE REVIEW

2.1. Innovation management

The continuous development and launch of new or improved solutions targeted at the market - products and services, production processes, or altered business models – the key purpose of corporate innovation management - are seen as vital for the long-term survival of organizations. In contrast to the high significance of continuously developing and marketing new solutions, however, it has been found that only between 23 and 50 percent of SMEs in Germany have implemented an organizational frame for systematically handling corporate innovation activities [8]. Partly this finding may be due to the fact that a common understanding or even a standard approach to managing corporate innovation does not yet exist, as any corporate innovation management system needs to be extensively adjusted to fit company-specific conditions [1].

Innovation management in its wider sense is defined as the realization of all the activities that lead to innovative capacity and, thus, to innovation [9]. On the other hand, corresponding to a rather narrow interpretation of the term, innovation management can be defined as the systematic planning, implementation, as well as control and monitoring of innovation activities [10]. Despite the inherent characteristic of innovation processes to involve high degrees of uncertainty and ambiguity, companies that aim to regularly realize innovation projects are recommended to implement a

suitable organizational frame which provides structure and guidance to innovation projects. A certain degree of structure enables organizations to learn and improve corporate innovation performance with regard to the time, cost and quality objectives of innovation activities.

As firms face very different conditions as to their innovation activities, innovation processes and structures should be adapted to the specific conditions faced by an organization to facilitate for the best possible performance [1]. Addressing this issue, Ortt and van der Duin have suggested the concept of *contextual innovation*, which implies a contingency approach to innovation and suggests that it has become mainstream for companies to have several company-specific innovation processes which are tailored to the requirements of different types of projects [2]. However, once established, these company-specific frames cannot be easily adjusted. Even if companies have implemented a number of different innovation processes targeted to the requirements of different project types (e.g. developments related to new markets, new technologies, or new processes, incremental improvements or developments of a more radical nature), these might not meet the very specific requirements of diverse innovation projects [2].

2.2. Co-Creation as an Engine for Innovation

By adopting open innovation companies have recognized that product development performance can no longer be determined only by internal R&D functions but also depends on the contributions of a broad range of external players, from individual users to large research institutes [11]. Pull systems open the process to many diverse participants whose input can take product and service offerings in unexpected directions that serve a much broader range of needs [12].

Co-creation is defined as a continual feedback loop and collaboration with all stakeholders in a value network throughout any given process of designing, developing and implementing meaningful products, services, organizational and strategic changes [13]. Across innovation processes it allows the flow of knowledge over organizational boundaries, exploiting internal knowledge in more diversified markets, as well as identifying and absorbing external knowledge to support the internal innovation process [14]. Co-creation as an active, creative and social process [15] generates value for all parties involved which is fundamental for a company's competitive advantage. Additionally, innovation itself can be seen as a co-creation process within social and technological networks in which actors integrate their resources to create mutual value [4].

To support co-creation, companies should empower and challenge contributors to create ideas and solutions, providing them with forums, blogs, idea competitions, workshops, innovation toolkits or communities for social product development [16]. It can be more effective and efficient to encourage a diverse group of people outside the company, or the discipline, to seek innovative solutions [17]. At the same time, companies should invent, experiment with, and implement new business practices and competences to engage co-creators in their value co-creation processes [18].

3. METHODOLOGY

The paper focuses on integrating concepts of innovation management and co-creation in the model of the *Uebermorgenwerkstatt* - an organizational frame which provides customized support for collaborative development projects. It is based on a theoretical review of these two concepts, with the special focus on contextual innovation management and innovation process phases on one side, and co-creation activities and actors on the other.

4. THE CONCEPT OF THE UEBERMORGENWERKSTATT

The *Uebermorgenwerkstatt* comprises the organizational frame for realizing co-creation projects which is embedded in a physical space envisioned to be established at Fraunhofer Institute for Industrial Engineering IAO in Stuttgart, Germany.

Combining all elements of the Uebermorgenwerkstatt that will be described in this section, the following illustration offers an overview of the complete model of the co-creative environment (Fig. 1).

4.1. Project preconditions

While co-creation projects can be considered as one certain type of innovation projects that benefit from a specific process, they equally differ from each other in several characteristics [19]. Thus, in order to develop a customizable frame for realizing co-creation projects within the *Uebermorgenwerkstatt*, the authors selected a set of relevant context factors to determine project conditions in the planning phase. These context factors are mainly based on the concept of contextual innovation, as proposed by Ortt and van der Duin [2], and can be divided into three groups: company-external factors, company-internal factors and innovation-specific factors.

Company-external factors include the most important elements outside a company influencing the composition of the optimal organizational frame as well as the course and success of innovation projects. These comprise market type [20] [21] (business-to-business, business-to-customer) and industry dynamics [22] [23] (low, high). Further, *company-internal factors* include the most important elements that influence innovation projects inside a company, such as company size [24] (small and medium-sized, big company), maturity of innovation management [25] (reactive, structured, in control, internalized, continuously improving), innovation strategy [10] (pioneer, fast follower, late follower, imitator), and organizational culture [26] (proactive innovator, passive innovator, reactive innovator, coincidental innovator). Finally, *innovation-specific factors* include elements that characterize the planned innovation itself. They can be divided into innovation object [10] (product innovation, process innovation, organisational innovation, business model innovation, social innovation), degree of newness [27] (incremental innovation, market innovation, technological innovation, radical innovation), and innovation source [28] (market-pull, technology-push).

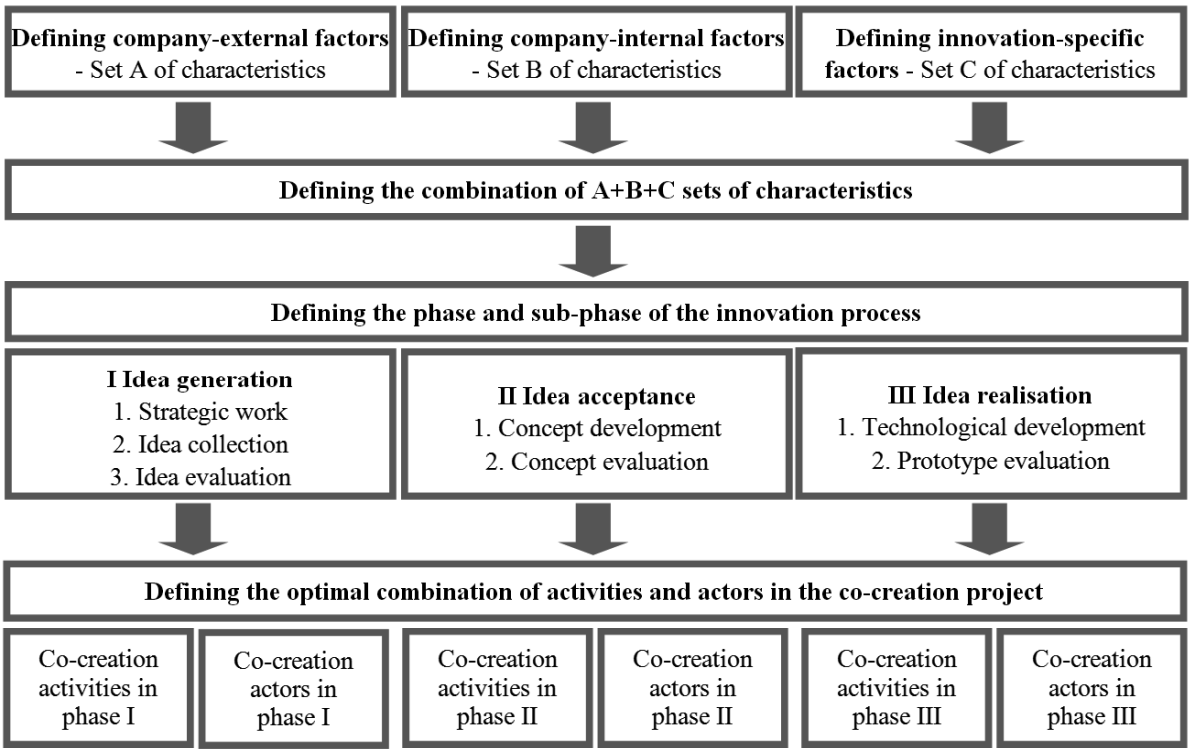

Fig. 1. Overview of the model of the Uebermorgenwerkstatt

These factors form the within and outside the company environment and are to be evaluated in the planning phase in order to determine the composition of the optimal organizational frame for any co-creation project.

4.2. Generic innovation process frame

Based on the identified preconditions of a certain project the phases and sub-phases of the overall innovation process which should be completed are selected. The generic model of the innovation process suggested by Thom serves as a basis for the model. Three distinct phases are distinguished [29]: (1) *idea generation*, covering the selection of search fields deducted from the overall or innovation strategy – strategic work, as well as the collection and generation of ideas; (2) *idea acceptance*, comprising concept development and concept evaluation; and (3) *idea realization*, involving technological development of new solutions and prototypes evaluation, followed by product launch to the market. This process serves as basic organizational frame for allocating the different activities and actors which are suggested to be combined in co-creation projects.

4.3. Activities and actors in co-creation

In the next step both the activities and the actors are to be involved which are considered most suitable according to the unique set of preconditions should be selected for each specific sub-phase.

Actors who will be involved in *Uebermorgenwerkstatt* activities are divided into seven distinctive groups that come from three different areas of society: (1) *industry* – cross-functional company staff and experts from other companies; (2) *academia* – students, scientists and researchers; and (3) *market* – lead users, users from target groups (communities), and public (the crowd). Each co-creation project within the *Uebermorgenwerkstatt* will hopefully be supported by the government, as the fourth crucial element of the quadruple helix [30].

These actors from the industry, academia and market will be involved in twelve different activities to be performed within the *Uebermorgenwerkstatt*: interviews, customer visits and monitoring, focus group discussions, creativity workshops, design thinking, lead user project, conjoint analysis, online contest, in-lab contests, online evaluation, configurators and technical feasibility analysis [31].

This concept should be embedded in a supportive physical environment, that means a modifiable space that can be adjusted to fit the specific requirements of the different activities to be performed.

Table 1. gives an overview of co-creation actors and activities which can be combined in the course of co-creation projects performed in the *Uebermorgenwerkstatt*.

5. DISCUSSION

Depending on the initially identified combination of relevant company-internal, company-external, and innovation-specific factors of these collaborative projects, certain combinations of available co-creation activities (focus groups discussions, design thinking workshops, creativity workshops, interviews, online idea contests, etc.) and different co-creation actors (experts from the industry, students, researchers and scientists, lead users, user communities or the general public) are suggested to be selected in each phase of a particular co-creation project.

Table 1. *Summary of actors and activities in different innovation process phases within the Uebermorgenwerkstatt*

		Actors							**Phases**						
		Industry		Academia		Market			Idea generation			Idea acceptance		Idea realisation	
		Cross-functional company staff	Experts from other companies	Students	Scientists and researchers	Lead users	Users from target groups	Public	Strategic work	Idea collection	Idea evaluation	Concept development	Concept evaluation	Technological development	Prototype evaluation
Activities	Interviews with Users and Experts			x	x	x	x		x						
	Customer Visits and Monitoring						x		x						
	Focus Group Discussions	x	x	x	x		x	x	x	x	x	x	x		x
	Creativity Workshop	x	x	x	x		x	x		x	x				
	Design Thinking Workshop	x	x	x	x		x	x	x	x		x		x	
	Lead User Project					x			x	x	x	x	x		
	Conjoint Analysis						x	x				x			
	Online Contest			x	x		x	x		x		x			
	Online Evaluation	x	x	x	x	x	x	x			x		x		x
	In-Lab Contest	x	x	x	x		x					x		x	
	Product Configurator							x		x					
	Technical Feasibility Analysis	x	x										x		x

The key benefit of this concept is seen in helping innovation managers consider relevant context factors of innovation projects, take into account their influence when selecting different activities and actors, and make a more systematically-based decisions as to which activities to apply and which actors to integrate in a given situation in order to maximize the probability of completing a successful co-creation project.

Supported by empirical data on correlations between the different context factors, the application of different activities and actors, and innovation project success, the concept will enable practitioners in the field of innovation management by providing insights in new ways of organizing innovation and using co-creation

Once implemented, tested, and improved the approach might be considered to be transferred to different settings, implemented and run by consortiums of several companies, governmental organizations, or research organizations [31].

6. CONCLUSION

The concept of the *Uebermorgenwerkstatt* offers a customizable organizational frame for planning and realizing co-creation projects, by determining an optimal combination of collaborative innovation activities and actors are suggested for each project according to its unique context factor combination. Like this it is meant to overcome companies' central challenges of too rigid innovation structures and a lack of access to resources and know-how for realizing co-creation-projects.

Considering this work is conceptual in its nature and not yet supported by empirical research on real co-creation projects, it has its limitations. Empirical data is needed to define the correlations between the different context factors, the application of different methods and actors, and innovation project success. Possibilities to allow for iterations between the different phases should be considered in order to facilitate multiple feedback and learning loops which are crucial in innovation projects. Additionally, companies' potential response to this kind of initiative has not been measured to this point. The concept certainly has strong theoretical implications as it connects contextual innovation management and co-creation in a meaningful way that may help to spur both innovation practices and the advancement of the respective discipline. Therefore, this concept can serve as a useful base to inspire further research.

7. REFERENCES

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