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Eclectic-Procedural Innovation Management Approach with Regard to Community Management Within the German-Language Gaming Industry

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ABSTRACT

The gaming industry faces several challenges, such as inefficient development processes, shorter product lifecycles, dynamic knowledge, high staff turnover, and heterogeneous IT structures. To address these issues, this paper proposes an eclectic-procedural innovation management approach that integrates knowledge management methods and processes for the optimal cybernetic systematization of innovation management elements within the German-language gaming industry. Drawing on the human, organizational, and technological (HOT-Fit) model, this approach aims to enable gaming companies to analyze, assess, and optimize innovation management using agile and adaptive methods. The concept also involves modifications to the matrix organization and emphasizes the importance of open innovation, community management, and promoter functions. The eclectic approach offers several benefits, including greater efficiency in innovation processes, reduced risks, the exploitation of knowledge and innovation potential, and the preservation of innovation power. However, a shift in mindset is required to systematically implement this approach in a process-oriented manner, focusing on improving organizational skills and adapting to the changing landscape of the gaming industry.

Keywords: Gaming Industry, HOT-fit, Knowledge Management Methods, Innovation Processes, Innovation Management, Knowledge Management, Community-of-Practice, Organizational Skills.

INTRODUCTION

An eclectic-procedural innovation management approach with a focus on community management within the German-language gaming industry is very important with a view to entrepreneurial connectivity, innovation, and future viability [1; 2; 3]. It highlights the importance of integrating knowledge management with innovation management to optimize innovation processes and ensure sustainable entrepreneurship in the industry [4]. The approach seeks to improve efficiency, reduce risks, exploit knowledge and innovation potential, and preserve innovation power through all phases of innovation processes, considering both employees and prosumers within an open innovation framework [1; 2; 3; 5].

Empowering Innovation in The German Gaming Industry: Integrating Knowledge Management and Community Engagement

Innovation processes are knowledge-intensive processes that often fail in the economy because the corporate knowledge required to implement them is not optimally preserved, distributed, used, and constituted [6]. In this context, the gaming industry could rely on an approach for the optimal cybernetic systematization of innovation management elements and associated individual phases of innovation processes by means of knowledge-management methods and processes [7; 8]. Although focused and eclectic, this approach would also seek modifications to the matrix organization within the gaming industry [9; 10]. Such modifications are often seen within the open-innovation approach, which fully conditions both community management and promoter functions due to company-intrinsic customer integration [10; 11]. The primary aim of this eclectic approach is to allow gaming industry companies to analyze and assess innovation management in a targeted manner and to optimize this management through the integrated use of knowledge management with an agile and adaptive method. The concept assumes the human, organizational, and technological model (HOT-Fit), especially in a contextualized balance [12].

Federal President Horst Köhler stated in a 2006 speech that “skills, knowledge, inventiveness, and creativity are the most important resources of our country” [13]. These individual buzzwords were then picked up in 2011 by leading economic players such as Henning Kagermann, Wolfgang-Dieter Lukas, and Wolfgang Wahlster during the Hannover Fair, and they were succinctly defined and identified for the first time under the economic program name “Industry 4.0” [14]. The lively interest that ensued led these stakeholders to submit a comprehensive recommendation for action on the future project Industry 4.0 to the Federal Government in October 2012 [14]. The knowledge-economic driving forces of our time, which have materialized in the emergence of the eclectic systematization of internationalization, informatization, and individualization, have been substantiated in this recommendation as a topic of major interest with respect to the competitiveness of low-wage countries; still, this does not explain the symbiosis of knowledge and innovation management as a solution paradigm [15; 16; 17; 2; 3].

However, various studies show that the innovative power of small and medium-sized media enterprises (SMEs) is a critical success factor for the competitiveness of Germany [18]. Current trends, such as e-sports in the gaming industry and its significance for marketing per se, offer challenges to both knowledge management and innovation management [19; 20; 21]. For this reason, Vahs and Burmester [22] explain that innovation projects continue to expose small and medium-sized media companies to high risks and that only 12% of research and development (R&D) projects are economically viable at all 23; 24]. Especially within the gaming industry, sustainable entrepreneurship in the current work reality is hindered by the inefficiency of development processes, shorter product lifecycles and innovation cycles, especially in content-heavy products such as game and software development, the dynamics of knowledge, increasing staff turnover, impending loss of knowledge, and heterogeneous IT structures, in addition to the effect of CPS/CPPS in terms of prosumerism [25; 26; 27].

Yet, separating current life from work reality with reference to the HOT-Fit model proves increasingly difficult, as there are very significant interdependencies [28; 29; 30]. From a media-sociological standpoint, CPS/CPPS has considerably changed so-called appropriation formation (i.e., intercultural understanding in terms of knowledge acquisition and development as the media-literary discursive context in which media appropriation is embedded); collaborative distribution; and the related use, distribution, and preservation of knowledge, as evidenced by the cyber-physical Java API modifications since 2008 [31; 32; 33]. This transformation as media-didactic cyber-physical multimodality (i.e., understood as a hodological, ludological, optoacoustic, and synchronized Internet of plausible web semantics) has constituted the Websemantic Web 3.0, the so-called interactive network, the swarm intelligence, and the reciprocal community of practice (CoP) [34; 35; 36; 37; 2; 3].

At its core, the Internet space consists of participatory and reciprocal user-generated content; instead of "I am in the network community," there is now "I do with the network community." This emergent transformation often manifests as a "not-invented-here" syndrome within the corporate culture and the organizational and technical environment, which is innovation-inhibiting and, therefore, must be overcome at a strategic and tactical level [38]. This necessity has been established by Prof. Senge's 5-options model – in particular, with the help of systems thinking, personal mastery, mental models, building shared visions, and team learning – in the Web 3.0 space [39; 40]. This model is especially prevalent now, with the participation of prosumers in the framework of the best-practice sharing method; with the core factors of extrinsic dimension effects such as technological discontinuity, globalization, mobility society, social change, and the transformation of the security, excitement, autonomy, and sexual system (Zurich model); and with a holistic problem-exploratory overcoming of life-determining existence (economic, technological, and social) [41; 42; 43; 44].

From a cyber-physical standpoint, those production systems (i.e., CPS/CPPS) have had the following IT schemas since 2008 [45; 46]: Better run-time environments, ping times, platform independence, and systemized real-time encoding and decoding, in turn, offer the following features:

a) heuristically object-oriented IT setting, which in terms of usability, sociability, and learnability is communication-positioning iterative, re-adaptive, intervention-oriented, collaborative, responsive, ludological, sensory, and optoacoustical [47; 48; 36];
b) robustness and security, which are basic features in the context of recommending, customer reviews, and blockchain systems [49];
c) hardware and software engineering in terms of neutral portability [50];
d) performance enhancement, with economies of scale (i.e., performance capabilities as regards the quality-category validity dimension [51], and
e) the netnographical interpretability of data and content, since there is a parallelisable, scalable, and dynamic evaluation of data dependencies [52].

Banafa [53] proves that this is the foundation for a web architectural infrastructure often called 'polysemous' using big data, blockchain, or the Internet of Things (IoT). The term 'polysemous', however, expresses these multiple concepts per se, overcoming the problem-exploratory challenges of real-time decisions [54]. In essence, an algorithm, in the form of a given set of

steps, solves an entire problem in cyber-physical fashion and makes relevant feedback plausible. Architecturally, customer review and recommendation systems play a key role here because they aim to overcome life-determining existence management by means of heuristic and exploratory complexity reduction [55]. Rodriguez-Hendriquz et al. [56] and Liu et al. [57] affirm that the latter, in turn, uses cryptographic algorithms to encrypt and decrypt information, particularly with regard to the evaluation of communication and audience-impact dimensions.

While in earlier eras proven virtue immanence was seen as a social value, it can now be stated that emergences, understood as knowledge-economic transformations and the related question of the ability to innovate, have become economic and self-conceptual values as regards life-determining existence management, and they now appear entrepreneurially relevant [58]. Especially with a focus on the economic and social sustainability of SMEs, as in the German-language gaming industry, a connotative paradigm shift is thus required for knowledge and innovation management to be systematically implemented as a cybernetic model in a process-oriented manner [59; 60; 61].

In view of these economic challenges, ever more approaches are dealing with the eclectic systematics of integrating both disciplines. This growth suggests that, from a teleological standpoint, knowledge management is not an end in itself but should support corporate goals in a purposeful manner that can be assessed [62]. Whilst economic goals (sales, turnover, profit, and value-added), psychographic goals (attention, acceptance, understanding, trust, competence, quality, customer loyalty, affinity, preference, and behavioural change), operational goals (achievement of initial goals as a condition: activation, attention, contact establishment, traffic generation, and access), and programmatic goals (achievement of long-term goals as purpose: building potential, value creation, preference, realisation of interests, and conative and affective behavioural and relationship change) were already the subject of this research, the question of innovation power as the goal of knowledge management regarding networked knowledge in the gaming industry is definitely a relatively unexplored subject worthy of further in the scientific secondary literature, as well as substantiation in a problem-exploratory manner [63].

In the gaming industry, the prerequisite for an eclectic approach is the hypothesis that innovation strategies are knowledge-intensive processes, that can be progressively improved through targeted knowledge management [64; 65; 66; 1]. The approach supports all phases of innovation processes, from the problem-exploratory start to creative solution design and evaluation to successful market introduction through knowledge identification, knowledge acquisition, knowledge development, knowledge distribution, knowledge usage, and knowledge preservation [67; 68].

Mertins et al. [69] substantiate that all relevant modules are based on a criteria catalog of possible ontological-dialectical methodologies, adapted to company specifics in the context of the knowledge management maturity (KMM) model according to the HOT-Fit model. The actual analysis follows targeted strategic implementation and operationally diffusive market

penetration, based on the current processes of the existing infrastructure. This approach puts into context the following material benefits:

a) the greater efficiency of all innovation processes and faster diffusive market introduction of innovative products through iterative knowledge reuse [70];
b) lower risks in all phases of innovation processes through greater transparency and relevance feedback across markets, customers, technologies, and competitors [71];
c) the exploitation of the knowledge and innovation potential of all employees and consideration of customer (stakeholder) integration models – that is, the prosumer, as part of the open innovation approach – in the innovation process through structured knowledge exchange through community management and promoter functions [72], and
d) the preservation and expansion of the innovation power also with changing and terminating employees or other external knowledge generators in the context of personnel or prosumer fluctuation [73].

At this point, it is nonetheless paramount to take a propaedeutic account of the fact that the well-known Ansoff matrix—also referred to as the product-market matrix—focuses on a static competitive orientation. Moreover, in the context of open and user innovation (i.e., in a framework of customer integration approach models that increasingly come into play in a content economy, such as the media and games economy), this matrix is limited in application [74; 75; 76].

The importance of a communication-positioning approach is also reflected in the polysemous importance of knowledge management in a transnational comparison [77]. Although the focus is on improving organizational skills at all corporate levels through better use of knowledge resources, the EU is more concerned with knowledge measurement, the United States with knowledge management, and Asia with new knowledge generation [77]. Only this disparity can explain that …

a) a codification vs. personalization approach [77],
b) a technological vs. more humane approach [77],
c) and a market vs. resource-oriented approach in the space of a product- and process-oriented approach has been long-established in the industry [77],

However, the transformation of the knowledge-economic drivers into an eclectic structural process-oriented system (internationalization, informatization, and individualization) requires a meta-control and design of new framework conditions, as well as the promotion of knowledge carriers to allow for a systematic and responsible scope with personal and public knowledge. In turn, this transformation is possible only with a modified (i.e., cyber-physical and integrative) communication approach, which the Ansoff approach fails to offer in any shape or form [78; 79; 80]. The four possible potentials and risks in the context of product-market combinations – in particular, positioning the approach in relation to existing ones – thus deserve a defining discussion at this point.

Meffert [81], Bruhn [82; 83] Esch et al. [84], Kroeber-Riel and Gröppel-Klein [85], and Zentes et al. [86], among others, pursue more communicative positioning in the context of problem

exploration (e.g., under the uses and gratifications approach for the heuristic simplification of the life-determining existence relative to the corresponding target group); by contrast, Ansoff [88], Green and Tull [89], Homburg et al. [90], Kotler et al. [91], Trommsdorff [92], and Porter [93] tend to be more competitive in their positioning, and they follow a scientifically and abductively falsified AIDA model [1; 2; 3; 94]. The Ansoff [88] approach is both instrumental and operational due to the modified marketing mix, the 8 Ps, and the participating consumer (prosumer). In view of the open-innovation approach, the Ansoff approach cannot be simplified by implementing companies, in particular by means of community management and the promoter function, and thus the approach proves hard to control and evaluate. Unsurprisingly, companies find themselves in a tendentially unstable situation due to CPS/CPPS and the knowledge-economic drive for transformation regarding Web 3.0.

This situation also explains why representatives such as Meffert [82] and Bruhn [83; 84] consider a problem-oriented communication position (e.g., with regard to open and user innovation and customer integration approaches) to be more advantageous [95].

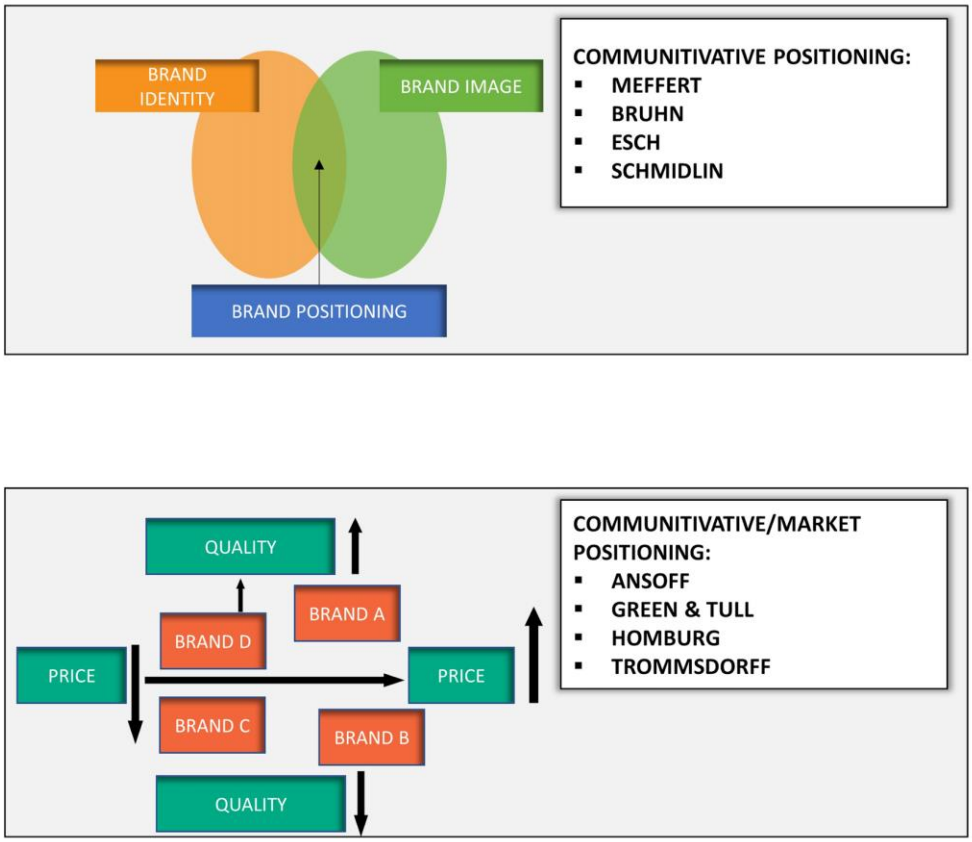


Figure 1 Brand and Competitive market positioning,
Source: Author's own design.

Transformed emerging markets will be increasingly transformed by knowledge-economic driving forces and the typified product formation in the respective markets; this condition is not inherent to the structural process system. For this reason, marketing needs a paradigm

shift. This shift is all the more important if, in a novel and sustainable teleological purpose-means combination, an innovation should sustainably reach specific psychologically, socio-demographically, and geographically determined target groups, thus leading to novel, progressive, and life-determining existential management by disrupting the displacement of existing purpose-means combinations. Only then would there be a disruptive dimension that could be defined as a normative innovation dimension.

Table 1 Positioning and contextualization, Part 1

Bruhn Meffert		Marketing	Typical elements	Example
Analysis Problem exploratatory-situation analysis	**A**nalysis	Analytical Marketing	• Market research • Big Data/Analysis • Information, knowledge, prognosis	Consumer behavior Customer preferences Netnography **Positioning**
Planning Goals, Strategies	**S**trategy	Strategic (teleological) Marketing	• Goals, target groups, values • Sustainable growth strategies – problem-exploratory dependent • Competitive strategy - prosumers dependent	Portfolio **Positioning**
Realisation Instruments	**T**actic	Operative Marketing	4 P's + 4 P's	Break-Even-Analysis Brand steering wheel Packaging
Controlling Evaluation	**E**valuation	Marketing Evaluation (ex ante, inter, ex post)	KPI's Balanced Scorecard	Results Monitoring and controlling

Source: Author's own design.

Table 2 Positioning and contextualization, Part 2

Kotler Meffert	Marketing-Mix (only 4 Ps)	Instruments	Brand	Packaging	Break-Even
Product Product and performance/service policy	**P**	Quality, Program, Service Brand, Design, Packaging	✓	✓	✓
Price Price and contracting policy	**P**	Pricing strategies Price differentiation Break-even	✓		✓
Promotion Communication policy	**P**	Classic Non-Classical (inventive/innovative)	✓	✓	
Place Distribution policy	**P**	Aquisitorial Distribution Physical Distribution	✓	✓	✓

Source: Author's own design.

For this reason, the gaming industry should start with an innovation management system that, depending on the media company or segment within the industry, can certainly be defined as polysemous but goes far beyond R&D. Furthermore, idea management, in the sense of the so-called "innovation funnel", specifies the idea-generation perceptive subject design and represents only a small component of innovation management [96].

In fact, however, in comprehensive innovation management analogous to knowledge management, innovation strategy, innovation process, and innovation culture should be planned and controlled by means of a holistic innovation system, taking into account, in particular, any intra-cultural and cultural factors. Furthermore, it is important to distinguish

a) whether the announced innovation must merge technology push (technology offers new means) and demand-pull (demand seeks to fulfill new purposes),
b) whether only a novel and sustainable (disruptive) teleological purpose-means combination constitutes true innovation, and
c) Strecker's [97] substantiation of which dimensions of innovation should receive attention: that is,
   - content dimension: What is new?
   - intensity dimension: New in what way?
   - subjective dimension: New for whom?
   - process dimension: Where does innovation begin?
   - normative dimension: Is new also successful?

The section below provides a content overview of support for all innovation-process phases by the knowledge management method. It is followed by a specification of individual module formations. Furthermore, approach details are described by means of the development of knowledge on the subject as related to idea design, and they are finally substantiated by means of a summary.

A Cybernetic Approach to Innovation and Knowledge Processes

Since innovation management is multi-layered and tends to feature both trans- and interdisciplinarity, it is initially reduced to a heuristic, ideal-typical innovation process and is thus transferred. To define an easy-to-use practice model for the gaming industry on an ontological-dialectical and media-industry-wide level, knowledge processes are systematized in a cybernetic process overview and applied to the innovation process model along the innovation funnel. Resulting interfaces are defined as modules and, in turn, made plausible via their contextualization. The following table provides an example of such a model:

Table 3 The cybernetics of innovation and knowledge processes as an eclectic model.

	Diffusive and problem-explorative impulse	Ideative constitution and/or conception	Ex ante, inter and ex post-evaluation and selection	Inventive Realisation
Knowledge identification	Knowledge maps of customers, technologies, and competitors	Knowledge-based diversity management	Identification of expert knowledge through benchmarking	Skill management based on project information systems
Knowledge acquisition	Research service provider, for example, GfK, Nielsen	Creative agency, for example, Scholz & Friend, Jung von Matt	The consulting company, for example, Mc Kinsey/KMPG/IBM	Advertising agency, for example, BBDO Germany or Worldwide
Knowledge development	Open space workshops in R & D	Creativity Technology/Design Thinking, for example, 6-3-5-Method	Conjoint analysis	Knowledge-oriented prototyping
Knowledge sharing	Communities in Lifesize (2019) or GoToMeeting (2019)	Ideas and conception platform	Interdisciplinary evaluation team for intranet-based online evaluation	Reuse of project documents in innovation management
Knowledge utilisation	Mobile and multimodal assistance system for kick-off documentation and communication	Assistance system for the description of ideas	Knowledge-oriented risk management system	Feedback-oriented production
Knowledge retention	Wiki system as a knowledge database	Knowledge-oriented ideas and concept database	Knowledge-oriented rating database	Documentation of best practice workflows

Source: Author's own design.

The table lists all modules found in a gaming industry company that are individually transferable and implementable to build an optimal innovation management system. While horizontally the phases follow each other in sequence, modules are described vertically in

context. Due to the interdependencies listed there, these should be considered separately. Moreover, the delimitation between modules, which refer to the respective knowledge processes in detail, is not completely clear-cut. HOT-Fit model factors should, therefore, be differentiated per module. Furthermore, the KMM model must be implemented in a contextually complementary fashion to extend innovation management. Only in this way is an evaluation of the ante-, inter- and post-evaluation possible with regard to the degree of maturity within innovation or knowledge management. The model serves both for cybernetic systematization and for efficient as-is analysis in the context of the game economy enterprise. Therefore, game development companies can establish a focused and gradual expansion of knowledge-based innovation management.

MATRIX MODULES ACCORDING TO INNOVATION PROCESSES

At this point, the individual modules of the model are substantiated as a possible solution approach according to the problem-exploratory innovation-process phases on the basis of the transfer examples mentioned in the table. In particular, however, the problem areas of communication must be considered.

Diffuse and Problem-Exploratory Push in Knowledge Management

This phase encompasses the analysis of environmental factors such as the management of knowledge of relevant markets, competitors, new problem-exploratory customer needs, and new technologies [98; 99]. Notably, this analysis should follow a heuristic approach to provide relevant feedback since this knowledge is often opaque in its complexity. Accordingly, the presence of external polysemic connotations for the respective environmental factors requires a heuristic reduction of essentialist complexity. Important factors include knowledge itself but also meta-knowledge of relevant sources of information, in particular by means of cyber-physical swarm intelligence and reciprocal CoP and research methods such as search engine evaluation competence [100]. Related problem-exploratory topics must also be determined by means of community management and promoter functions (specialist promoter, power promoter, process promoter, and relationship promoter) within the scope of issue management. From a corporate standpoint, competitive intelligence, as well as technology scouting, is essential for ante-, inter-, and post-evaluable monitoring and control. In short, regardless of the promoter function, it is all about overcoming all resource and leadership issues in a company, such as assigning responsibility to produce ideas, overcoming intrinsic and extrinsic limitations, and resolving conflicting corporate or community situations. This focal point explains the content implementation under consideration in this research subject by means of customer review and recommendation systems, since the netnographic root of this content is often already embedded therein and since the quality of idea generation emanates increasingly from the prosumer, with regard to entrepreneurial measures and activities [101].

These aspects deserve special attention, given that transformed knowledge exists, inter alia, in the form of discursive intertextuality, which is in turn characterized by how the dependency of various media products or media content is interpreted through a representative homologous reception in the space of Web 3.0 (i.e., through explicit references to each other or in the pre-existing associations of recipients). Usually, the quality of reception, both within the current life and work realities, marks a socio-cultural orientation pattern, namely in relation to the

definition of reality [102; 103]. Accordingly, the first task at a gaming industry company should be to create a netnographic transparency of available knowledge [102; 104; 1; 2; 3]. This transparency can likewise be encoded and decoded in real-time by means of CPS/CPPS in the form of so-called knowledge and technology maps [105]. On this netnographic basis, it must be decided whether additional knowledge about competitors is acquired from market researchers or patent attorneys. In particular, research service providers such as Gesellschaft für Konsumforschung [106], Nielsen Media [108] offer services to carry out complex research into new technological trends. Knowledge development in the start-up phase can be supported in R&D by different methods, such as open-space webinars [107]. In this innovation-process phase, knowledge distribution can also be optimized. Google searches are often unsystematic for gaming industry companies.

Knowledge management approaches can help promote the exchange of research results (e.g., from customer review and recommendation systems). In this respect, Cassell et al. [109] and Lee et al. [110] propose an interesting approach with their CPS/CPPS 'Lifesize' [111] or 'GoToMeeting' [112], where persistent and netnographic search results can be evaluated, commented upon, and exchanged in a community. This option also represents the distinctions companies make between social mining and netnography.

The variety of cyber-physical applications for information, identity, and relationship management using Web 3.0 has long been discussed across disciplines [113]. This discussion is largely consistent with the theory of consensus, which states that the principle of group intelligence as the 'wisdom of crowds' constitutes the reciprocal CoP on the Internet and intranet. In turn, user-generated content as a co-creation of formation, allocation, and organization requires group decision-making processes, in particular in the sense of the Zurich model for social motivation, producing supposedly better results than those of individual decision-makers. Customers are systematically involved in problem-exploratory product development (i.e., in the sense of the open-innovation approach, the active participation and influence through customer review and recommendation systems), such as in the context of social commerce (i.e., in the sense of the social navigation approach), as well as cryptographically-automatable assessment of evaluations and recommendations (i.e., in the sense of social filtering). This involvement implies both indirect and direct communication among prosumers, namely with very considerable evaluations for companies. The use of Web 3.0 cyber-physical applications' potential for in-house and cross-organizational intelligent, cryptographic, and AI-based collaboration and information work is discussed under the technical terms Enterprise 2.0, 3.0, and 4.0 [114; 115]. However, the use is not stringent, in particular in the gaming industry, as shown by the licensing of major AI developers, such as IBM Watson [116], Amazon AWS [117], Google CCS [118], and so forth.

Current needs in application-oriented research within the German-language gaming industry arise in particular in the development, application, and evaluation by means of professional cyber-physical cryptographic methods of automated, semi-automated, and general AI self-managed and trained processes of information activities. This explains why the need for community management and promoter function deployment within the framework of customer relationship management (CRM) should be considered on the basis of the present

research subject, specifically customer integration models and customer review and recommendation systems [119; 120; 121].

Therefore, the knowledge-economic transformation of driving forces (internationalization, informatization, and individualization) requires communication-positioning and the individualization of marketing, sales, and service in order to sustainably consolidate profitable customer relationships through problem-exploratory product and process differentiation. Successful customer relationships within the gaming industry are possible only if effective knowledge management and innovation management activities are integrated – as an eclectic-cybernetic system – into the corporate CRM system. The relevant knowledge of the participatory prosumer is characterized by "knowledge from customers", "knowledge through customers", and "knowledge for customers" [122]. "Knowledge from customers" targets the problem-exploratory heuristic mastering of entity-determining existence (i.e., with the aid of product developments or product solutions). A game developer or game hardware vendor cannot gain as much experience from internal (beta) testing as all its customers would by testing the strengths and weaknesses of the product in practical use. "Knowledge through customers" within the gaming industry helps to improve customer relations both conatively and emotionally. The limitation of the bounce rate, for example, due to a lack of consideration of media-psychological redundancies in novices or as borne out by experts, strengthens the economic core dimensions of the respective company [123; 124]. "Knowledge for customers" can have a positive effect in the ideation and invention development process, but can also be diffusive with regard to the normative innovation potential, in which order processing has a positive effect [125].

Knowledge utilization regarding the problem-exploratory impulse can be implemented either in a customer-integrated or customer- or technology-oriented fashion [126]. Wiki systems can also be used as CPS or CPPS to store knowledge for the start-up phase, which can also be regarded as an exploratory summation of the community of practice (CoP) and must be specified as a semiotic resource [127; 2; 3]. The reason lies in the fact that media products or content, not least due to their polysemic structure, identify specified materials that are in turn suitable for various uses beyond the actual reception [128].

For example, these are used to communicatively negotiate identities as an interpretation community with similar genre preferences [128]. Social mining evaluations are considered quantitative procedures (i.e., as the application of text mining processes in the context of CPS/CPPS), such as the evaluation of web content mining, social networks, web structure, and web usage mining (e.g., heuristic and ludological) by means of sentiment analysis to consider a hodological optimization of the user interface with a focus on the user experience; however, netnographic procedures are considered to be cultural-scientific, sociologically qualitative procedures [129; 130]. In terms of design triangulation for netnographic analysis and the evaluation of the grounded theory approach, theories and investigators, along with methods of ethnography, are applied to Web 3.0, such as the participant's observation of users with focus groups [131; 132]. The aim is to view the interpretive method by combining different methods, such as participant observation, interviewing, and conversation analysis, in fieldwork on Web 3.0 netnography to gain an understanding of a specific cultural context or target group.

Plausibility checks can be carried out from archive data, interaction data, and field notes (e.g., using MaxQDA) [133].

Basically, a hybrid construct, namely one built from quantitative and qualitative procedures, offers design triangulation, as shown by the needs of the evaluation software available on the market, such as IBM SPSS Modeler [134] or SAS Media Analytics [135]. However, the challenge still lies in content-analytical evaluations of positive or negative connotations.

Knowledge Management Within the Idea-Generation Value Chain

Here, the primary challenge in the gaming industry lies in using the creative potential of all employees and prosumers through methods of knowledge management. Although the preservation of ideas is supported by the classic in-house suggestion system, the ideas of outgoing employees and prosumers are mostly completely lost to the companies (i.e., the game developer or publisher) [136]. However, this knowledge not only applies to the ideas themselves but also to the experience of deploying appropriate methods, such as those within already-constituted interpretive communities, which, through design thinking as a creative technique, turns it into problem solving in an exploratory and discursive fashion upon reception [137; 138].

First of all, in the context of knowledge identification for idea generation, it is necessary to create transparency about idea-relevant knowledge. This task can certainly be captured in the interface between promoter function and community management and, as such, in the task of diversity management [137]. Knowledge acquisition involves the appointment of creative agencies to avoid selectivity due to perceptual deficits. The module Knowledge Development for Idea Generation employs creativity techniques such as design thinking. Many of these ideation techniques require elevated knowledge of analogous contexts, complementary products, and other areas [136; 137]. Skill management within the framework of the promoter function and community management, among other things, also with regard to the CRM, systematically supports methodical knowledge about idea formation as a value-added commodity, which is often lacking in companies but is essential for business cybernetics [139]. Knowledge distribution can take place via cyber-physical CoP idea platforms, supporting the constitution of associations and connotative analogies. Here, the use of knowledge as such is still optimized since the description of ideas requires extensive knowledge of the problem-exploratory customer and prosumer use, restrictions, laws, and so forth. For this reason, the consideration of PESTEL factors with regard to knowledge storage for idea generation is essential for companies within the gaming industry and should always be carried out within the framework of a concept warehouse [140]. Heuristic and flexible access to ideas should be enabled for all stakeholders as part of a customer integration model and platform. For this reason, a heuristic adaptation or modification of the CPS/CPPS is key to increasing the retention time of CoP as a hybrid community of internal employees and externalized prosumers and, therefore, curbing the possible bounce rate of knowledge generation [141; 142].

This adaptation can succeed through a communication-positioning approach, which iteratively considers both the hodological and ludological media-didactic communication matrix and, therefore, heuristically leads to a conative-affective emotional value-added of the parties—that

is, to relevance in meaning, behavior, and preference-oriented identification with regard to the problem [128]).

Knowledge Management for Ex Ante-, Inter-, And Ex Post-Evaluation and Inductive Selection

For this phase, there are a number of methods, such as the established scenario technique; the evaluation and selection of promising ideas, however, represents a particularly knowledge-intensive and critical phase in this context [143]. This phase concerns both criteria and indicators to be observed, such as implementation risk, cost structure, and the evaluation itself, as well as any alternatives and comparative values. In knowledge identification, the task at hand consists of finding all knowledge carriers that can contribute to the evaluation of a problem-exploratory idea. External consultancies can be engaged in far-reaching investment decisions within the gaming industry. Patent attorneys are also relevant in this phase, for example, to ensure the legal protection of ideas. New knowledge arises again in the actual criteria evaluation.

As part of knowledge distribution, many experts from different disciplines should be able to share their knowledge for the evaluation, including externalized experts from the community of prosumers. However, the use of knowledge or the transfer of previous experience is difficult. As part of a knowledge-based risk management system, it would not only be possible to draw on the statistical values of various risks but also on qualitative experience [144]. The preservation of knowledge takes place when experiences are collected about which criteria and indicators were correctly assessed (i.e., which were relevant for determination purposes).

Knowledge Management and The Innovative Implementation Option in The Gaming Industry

The implementation of innovative concepts requires excellent knowledge of the gaming industry. In general, this knowledge must include technical challenges in development and production as well as marketing and distribution for the launch of inventive products, as well as legal issues, such as property rights in the context of political and international legal provisions; in the latter case, for example, challenges arise because copyright law is not uniform worldwide, as evidenced by the pending case against YouTube [145] at the ECJ [146]. In particular, the marketing-mix knowledge of the 8 P's (product, price, placement, promotion, personnel, process, physical facilities, and the key participating customer) for target customers should be carefully systematized.

Knowledge identification, or the corresponding skill management, in a gaming industry company is about configuring project teams that cover all the necessary skills. Here, company-intrinsic criteria catalogs with differentiated descriptions can help, such as experiences in dealing with special technologies, but also portals, such as in Xing [147] and others. Transparency about potential partners and their competencies also plays an important role. Particularly in marketing, the involvement of communication and advertising agencies with special experience can be valuable, as studies show that the quality of innovation marketing has a major impact on innovation success. Experimental procedures, such as design thinking, the heuristic problem-exploratory trial and error method, and the corresponding knowledge

development, per se, are indispensable in the implementation of inventive concepts by companies in the gaming industry [148]. However, knowledge-oriented prototyping enables problems to be identified at an early stage, checked under the uses and gratification approach for customer and target group needs, and then strategically adjusted [149]. Gaming industry companies can rely on the normal business-process-oriented instruments of knowledge distribution. In a specialist publication, the author specifies an approach whereby documents arising from the operational project business are provided to innovation management to boost the transparency and relevance of new concepts and technologies, along with their reuse levels [1; 2; 3]. For knowledge utilization, companies can rely on abstract process models, for example, development and market introduction models for inventive products and best practice workflows. In the implementation phase, preserving the experience gained (e.g., best practice workflows and lessons learned) proves paramount in avoiding deficits in similar product categories. In the gaming industry, project reviews should be performed particularly after idea generation, invention development, and diffusive market introduction strategies.

As such, reviews seek to determine, from a technical and procedural perspective, any solutions identified for life-determining existential management problems and causes and any solutions that have proven disruptive, so as to constitute normative innovation. In another specialist publication, the author thus describes an approach for knowledge- and process-oriented innovation management, whereby a criteria catalog is built with innovation processes and then stringently extended with new experiences to allow for further differentiation in the future. Furthermore, the knowledge required in the process steps is thereby structured and systematically provided to the company.

Transfer of Knowledge Development for Idea-Generation in The Gaming Industry

Creativity techniques are important cybernetic instruments of integrated knowledge and innovation management, especially in content-heavy industries such as the gaming industry. In this case, transfers should be made using the HOT-Fit model. The transfer allows – for reasons of complexity, such as the addition of innovation management to knowledge management – the spinoff of dialectical methodologies to become necessary in a complementary way. Accordingly, the HOT-Fit model becomes the modified HOT-Fit (M) model.

Table 4 HOT-Fit (M) model for the knowledge management module and the implementation option in the German-language gaming industry.

Human	Organisation
• Competencies: Optimal selection by knowledge • Psycho- and sociogram: Diversity concept	• Process: Process description; • Structure: transdisciplinary, interdisciplinary, functional or process-organised teams, incl. customer integration models (open and user innovation)

Technology	Methodologies
• Software: Over 30 different products • Hardware: individual solutions	• Problem-exploratory solution strategies: Over 30 • Generation of ideas: Over 170 Creativity techniques, control via community management - promoter importance

Source: Author's own design.

The Human Factor in The Knowledge Management Module and The Implementation Option in The German-Language Gaming Industry

The creativity techniques most frequently used in gaming industry companies usually require interpersonal collaboration, dialogic skills, and even counter-cultural competence [150]. Regardless of their knowledge level, not everyone can work well in groups with others and reach their full potential in terms of entrepreneurial goals [151]. Thus, analysts and problem solvers may well fall silent in the presence of other employees, failing thereby to contribute constructively to optimal problem solving and brainstorming. By incorporating personal knowledge (through knowledge management methods) and personal traits (diversity), companies can select the most suitable methods for individuals and groups from the enormous pool of methods used in creativity techniques.

THE ORGANIZATIONAL FACTOR IN THE KNOWLEDGE MANAGEMENT MODULE AND THE IMPLEMENTATION OPTION IN THE GERMAN-LANGUAGE GAMING INDUSTRY

The organization area deals primarily with the structural and procedural organization of creativity techniques [152]. Depending on the selected method, the idea generation processes of the corresponding creativity technique must be defined, and the tasks and hierarchies of the respective participants must be clearly described. Interfaces to parallel areas, goals, and formal guidelines for the results must also be defined. The type of group composition, whether interdisciplinary, procedural, or functional, can be customized according to segment, business type, and innovation subject.

The Technology Factor in The Knowledge-Management Module and The Implementation Option in The German-Language Gaming Industry

Market potential remains for software support for creativity techniques. Nonetheless, there are currently about 30 different software products that support the idea generation process through database connections and manuals and, therefore, support computer-assisted idea generation for special creativity techniques. The necessary hardware to systematically implement creativity techniques can be implemented on a company-specific basis. Intranets and the Internet, as well as established desktop solutions, can provide proper connectivity.

The Methodology Factor in The Knowledge-Management Module and The Implementation Option in The German-Language Gaming Industry

Alvastad et al. [153] substantiate that there are over 170 different creativity techniques, which generally describe dialectical methods whereby ideas can be determined via exploratory problem-solving. These are defined in detail in methods for actual idea generation, in the form of explorative problem solutions suitable to reach certain goals, and methods for problem

definition, in the sense of inductively systematic problem specification. From a consensus theory standpoint, these are referred to as systematic-discursive, intuitive-creative, and combined methods, which combine problem definition and idea-generation design in a cybernetic way.

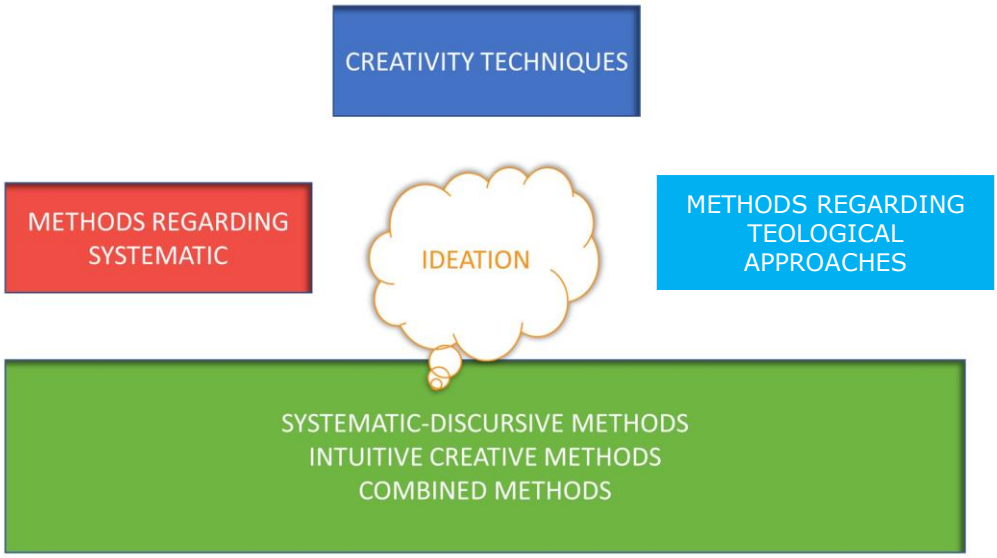


Figure 2 Methodology regarding the modified HOT-Fit model.
Source: Author's own design

The proper choice of creativity techniques can make the cybernetic evolution of knowledge more efficient, progressively improve the quality of ideas in terms of innovation and diffusion feasibility of inventions, and help apply the knowledge and motivation of employees and participating prosumers optimally within the framework of customer integration models, according to their professional training [154; 2; 3].

Media-Sociological and Appropriation-Based Transfer Effects of Digital Games on The Open Innovation Process Within the German-Speaking Games Industry

Through the integration of knowledge and innovation management within the cybernetic corporate communication matrix and the addition of dialectical methodologies, especially considering company-intrinsic customer integration models (i.e., contextualized with regard to the HOT-Fit model, now in a modified form as a HOT-Fit (M) model), a systematic and simultaneously practicable implementation is substantiated for the first time regarding this research topic [155;156; 157; 158].

Numerous individual modules already exist in game industry companies [159]. Modern communication structures and network solutions have inevitably enabled the reciprocal, collaborative CoP infrastructure, with which some elements of integrated knowledge and innovation management can be operationalized with little effort [160].

However, a preliminary systematization of corporate cybernetics is necessary for this purpose. Thus, structurally procedural systematization constitutes excellence in operative implementation, providing cybernetic and discourse analysis for the isolation of patterns, practices, and institutions within a company involved in the ideational and innovative production of specific knowledge and representations, thus producing purposeful suggestions and improvements—and above all, instructions for optimal implementation [161]. This enhancement is possible through profound promoter functions and integrated community management. This basis forms the discourse-analytical and communication-positioning measures of the integrated knowledge and innovation management explained here, using the modified HOT-Fit (M) model presented here. In terms of corporate culture, a not-invented-here syndrome should not aim to diffusively integrate coerced structures cybernetically into a games industry company that might limit or block employees and externalize ideational participants in their creativity and ingenuity [162]. Rather, the existing games industry's corporate world must be taken up as a subject position to complement missing modules and, dialectically and methodologically, to optimize corporate culture [163]. The subject position here means the company-specific setting of discursive connotations, from which a media product or media content makes sense, has purpose, and has value, considered from a teleological point of view [128].

Therefore, it makes sense that participating gamers, or prosumers, within the games industry are explored as a source of ideations and inventions regarding focused normative innovation within this research subject [164]. The method of the initiating and active company represented in this design triangulation research subject (i.e., against the background of the manufacturer-active paradigm) must, however, be shown as obsolete in epistemological terms, as it is based on the falsified AIDA model. Rather, the participating prosumer, in this case, the casual gamers being researched within the German-speaking games industry, can make a value-adding entrepreneurial contribution through their participation. In this context, MacCallum-Stewart [165] substantiated the customer-active paradigm as a progression of activity within the company.

As part of his studies, Hippel [166] identified a series of indicators that diffusively stimulated problem-exploratory ideations and inventions. In addition to the traditional areas, such as the initiating company, the manufacturers, and the suppliers, there would be another stakeholder group with the customer, which would be an ideational content supplier [167]. Depending on the segment of the games industry, up to 80% of explorative ideas can be attributed to the customer [64;168]. However, these evaluations are also to be evaluated by the respective game segment and industry in a determinative and differentiable manner.

Consequently, as part of the customer-active paradigm within the games industry, the customer must be viewed as a participatory initiator of an innovation process, per se, through CPS/CPPS, such as social networks and communities, in the form of ratings and recommendations constituting and delivering content ideations in a problem-explorative manner [167; Bartl, 169; 170; 1]. This creates an improved and exploratory satisfaction of needs that is both perceptive and receptive, meaning that ideational concepts can be developed that are in touch with the latest trends, in the sense of optimizing the decisive factors in survival capacity, such as

improved usability, sociability, and learnability [82]. If the prosumer becomes active on his own initiative without taking advantage of the infrastructure of a game-based company, then it is conceivable that the customer, with the completion of a prototype, will make his opinions known by means of rating systems [171]. This explains why the integration of community management is so important here as an interface within the CPS/CPPS. Subsequently, this idea can be developed more intensively and pursued by the games industry [26]. Hence, a prototype can ultimately be converted into a marketable product.

The benefits of the open innovation approach as an entrepreneurial customer integration model are that a user approaches a problem-solving process in a more relaxed, unprejudiced, and explorative manner [167]. In this case, development processes come about that do not conform to the usual procedures and thus methodologically initiate a form of design thinking [172]. This non-conformity allows solutions to emerging problems to be found faster than when tackled by a gaming company as part of a market research effort. Ultimately, however, the games company will be able to use these diffusive impulses, which it receives from the participating customer in relation to new developments and prototypes, to then turn them into marketable products, namely inventions for market penetration [173]. Furthermore, in the context of a people business, such as the games industry content business, a prosumer who has an idea often has identical genre preferences as part of his network, both in terms of infrastructure and the necessary information from the community [174; 175]. This information becomes transparent and relevant in the context of customer review and recommendation systems, namely within existing CPS/CPPS, so that the games sector company should consider these systems and integrate them as part of its participation [176]. Because the participant already has a transformed, socio-culturally positively valued representation through both their existing educational or occupational appropriation formation as well as the emergent, knowledge-economic driving forces, the entrepreneur can transfer the information gathered via netnographic research very well to their own ideational and inventive company environment [132]. This complements the cybernetic level of the games industry solution space. In this way, the user, here the gamer as a prosumer, has an essential task: accompany the entire development and production process and always demonstrate significant activity [177]. This task, in turn, requires both community management and the embedding of promoter functions since the product is developed and produced within the games industry with the help of this lead user [178].

The CPS/CPPS, as it is used in addition to the well-known social networks YouTube and Facebook, especially within customer review and recommendation systems and on important sales and gaming platforms – such as Steam [179], Stadia [180] ("Stadia was shut down on January 18, 2023"), GOG [181], the Epic Games Store [182], Green Man Gaming [183], Gamesplanet [184], GamesRocket [185], and Humble Store [186] – records valid influence and motivational information on the target group. Understandably, these lead users should be defined as within communication-positioning innovation communities that have enabled the collaborative CoP with reciprocal formation through information technology and web architecture [187]. As a rule, the lead user, therefore, takes action, while a games industry company reacts to those activities by means of a targeted approach to future collaboration 1]. The influential and motivational relevance of the innovation process within the games industry

also becomes clear regarding the so-called 'Let's Plays Communities', which comprise the most powerful genre on YouTube [145], second only to music. In spite of media sanctions due to articles 15 and 17, the live platform Twitch [188] is eminent within gamer communities [189]. Sociologically, methods such as the customer-integrated open innovation model always result in a so-called social change pattern, as a result of which the social space of communities is transformed not just by CPS/CPPS; rather, in an emergent manner, communities are also constituted as a dimension of action in terms of games industry cooperation as CoP [190|. Seemingly extrinsically dependent aspects such as usability, sociability, and learnability not only portray the representation of reality in a heuristic, technological way but embed it in an augmented way [191]. Such aspects include, in this context, the socialized community of interpretation in the space of Web 3.0, here as a group of recipients who in turn share specified and identical genre preferences with each other and who also have identical grids of understanding of media products and an identical intertextual multimodal scope of media settings regarding form, practice, and relevance. This is the basis for future Web 4.0 settings. From a media-sociological point of view, it should, therefore, be stated that communities as a dimension of action thus represent a space of social work, education, and cultural progress and of social policy, policy practice, and organizational development [192].

The HOT-Fit model, without a concept and method for participatory and customer-integrated process design and structural process-oriented concept development in the games industry, thus requires a paradigm shift in the form of the methodological extensions identified in this research as the HOT-Fit (M) model. This need justifies why relevance should be fed back into the space of the respective game industry companies: With the help of promoters and community managers, competencies and knowledge of a theoretical, conceptual, and methodological nature should be available for approaches to community orientation, social change, and power-critical diversity perspectives. In particular, this includes experience in the conception, implementation, and monitoring of self-determined, community-based processes, for example, in social movements within existing CPS or CPPS, but also in aspects of emancipatory self-organization or policy practice, lobbying, and advocacy [193]. While in the sense of the uses and gratifications approach, the aspect of learnability is often not considered contextually, it is recommended to be aware of the emergence of participatory, community-oriented, and empowering forms of teaching and learning, such as critical service learning as a community manager and promoter of a games industry company, as a result of the transformation of media-sociological appropriation formation [128]. The indicators of gamers as participating customers as well as of customer review and recommendation systems using CPS/CPPS have led, in terms of knowledge economics, to the transformation of entrepreneurial communication-positioning marketing, even beyond the games industry [194].

Can games be used for corporate communication even beyond the games industry?

GAMES: COMMUNICATION PERSPECTIVES FROM SCIENCE AND INDUSTRY

In recent years, the online gaming market has experienced rapid growth, leading to the hybridization of games as events in the social sphere. This growth has been influenced by community-oriented Web 3.0 spaces and the mediatization of games as e-sports. As the gaming industry adapts to these changes, it must consider the potential impact of other economic

sectors and develop strategies for effective communication. This text explores the various options for communication-positioning within the gaming industry, including in-game advertising, casual sponsorship of games, gaming events, and e-sports.

Introduction

In recent years, the national and international online games market has recorded organically rapid growth, which also constituted hybrid event formations due to the use of CPS/CPPS, such as the mediatization of games as e-sports. While the collaborative influence of community-oriented but network-based Web 3.0 spaces has been discussed above, the question arises as to how the changed hybridization of games as an event in the social sphere of contemporary everyday reality as an out-of-home leisure reality is communicationally positioned by the games industry and could be positively influenced by other economic sectors. In addition, for the purpose of the didactic transfer of added value for the reader, reference is made to the author's conceptual communication and media concepts in the appendix. There are different options with regard to the communication-positioning mix. Certain developments show potential, such as the hybridization of traditional and innovative instruments and their implementation with regard to the copy strategy, starting with in-game advertising through casual sponsoring games, from gaming events such as LAN parties to e-sports, the latter being defined in a very polysemic and conflictual way in terms of education and cultural policy [195; 196; 1).

Current cyber-physical and AI-supported technologies enable the contextual specification of historically, sociologically constituted, and newly received patterns of communication and interaction under the segmentation domain applied games. Contextualism entails a basic orientation through studies, "which is manifested in the understanding that no cultural product and no cultural practice can be grasped outside the context in which they stand" [128]. Since, in addition to the erotic industry, the games industry determines the inventive developments of the internet, the conceptual hybridization of brand entertainment and e-sports should be explored within global target groups, especially those aged 10–40 [197; 1]. No medium shapes the iconographic image worlds of contemporary media cultures as much as video games, especially within the current, international everyday reality of leisure, in particular the e-sports gaming segment.

The image-aesthetic presentation formations with regard to opto-acoustic interface design generate an emotional value added for both the recipient and the player, namely through a conative-affective first and third-person perspectivity, leading to audibility, visibility, and ability to be experienced, as well as dispositive ideology mediation, with identical gene preferences among the players in the space of the computer game, so that the brand performs as a concept. Performative and hodological interactivity as a reflective act of being in the space of the game on the part of the gamer, in the sense of a value-oriented perceptual constitution, not only represents a simplified image of the representation but also constitutes, by technicity and intermedial re-adaptive interactivity in real-time (i.e., by means of CPS/CPPS and AI), an encoding and decoding of "playful knowledge transfer" in a modified and augmented being-space [198; 199]. The goal-oriented organization of interaction processes, in the sense of a strategic orientation, by means of the design of re-adaptive, opto-acoustic interface design also

transforms the driving forces of the knowledge-economic transformation, the eminently emergent—that is, with regard to informatization (computerization), internationalization, and individualization. This organization therefore requires a strategic orientation, essentially characterized by a technological network-based interaction process with regard to the target group [200]. On the one hand, the re-adaptive-optoacoustic interface design of a computer game frames the staged, mediatized, and genuine event in a polymedial manner; on the other hand, it fulfills the cyber-physical production space with an emergent structure. In contrast to film, no fixed (i.e., immanent) expiration pattern is pursued regarding the purposes of branding; rather, it is determined by the co-creation formation (i.e., by the participation of the player and the variables of AI). Brand positioning and integrated communication in a game are emergently determined by re-adaptivity, intermedial interactivity, chronological narration, and hodological performativity [198].

Moreover, communication-positioning collaborative communitarization, in the sense of CoP, establishes the best possible community for the respective individual gamers within a utopification strategy as realization of interests and common media articulation in terms of understanding. Communication goals, such as economic, psychographic, operational, and programmatic goals, can therefore also be achieved in the space of virtual-ludological, optoacoustical, and re-adaptive-intermedia game rooms by means of sponsorship and network marketing [60; 201].

Media-Sociological Discourse Transformation and The Gaming Market as an Opportunity for Entrepreneurial Communication Positioning

The gaming market, particularly the e-sports segment, presents new opportunities for entrepreneurial communication positioning as it undergoes a media-sociological discourse transformation [202]. This transformation is driven by informatization, internationalization, and individualization, resulting in the hybridization of life, leisure, and work realities in a cyber-physical space. The shift in subjectivity and the role of media products and content within this new context create unique challenges and possibilities for marketing and branding. As such, it is essential for businesses to consider customer-integrated approaches and the role of the interpretive community when developing their marketing mix.

Discourse Transformation in The Present:

The effects of knowledgeable economic and structural process forces also require an emergent transformation of the reality of leisure. While these realities of the past have always represented themselves as part of the present reality of life (i.e., as the everyday world of everyone, but opposed to the private sphere of work reality), the economic-knowledge effects in terms of informatization, internationalization, and self-conceptional individualization have led to broader opportunities for development in this primary space of leisure perception, namely in the form of cyber-physical based identity and life circulation, as in the space of Web 3.0, which also unfold continuously within the working reality. In this working reality, there is feedback of relevance that exceeds the individual's reception, socializing as a semiotic resource within it, and subsequently socializing forms of socio-cultural constructions, in that identities semi-negotiate these multimedia-based appropriation formations semiotically |1; 2; 3]. This reception is not only a heuristic hedonistic act of consumption of sports, games, media products,

and media content, but conditional appropriation per se, including media, psychology, and media didactic and active mediation processes between existing medial and local discourses: a collaborative communication metric within the constituted space by a secondary orality that goes beyond the "bardic function" [203; 204]. The appropriation-formative hybridization of life, leisure, and work reality, which registers a mixture of different socio-cultural contexts, leads to new connotative constitutions, especially concerning self-conceptional identity formation, since knowledge as appropriation, also in work reality as a discursive and positive representation, is now emergent. Therefore, culture, taking into account the enculturation and inculturation aspects, is increasingly socialized based on cyber-physics and therefore is not imminent but is eminent, both as a whole of a way of life and as its specified system of meaning, now in the form of a total eclectic system of connotations. Stylistically, there is a bricolage effect in the context of recreational, living, and working reality since objects with already predominant and sedimented connotations are embedded in a new cyber-physical system of meaning; in ludological form, semiotic resources are transformed [1; 2; 3].

This typological formation is particularly noticeable in the e-sports segment. This also leads to the transformation of individualized subjectivity. While subjectivity is also constituted discursively through the connotation that the individual gives teleologically to his actions and the eclectic nature of society as a result of the forces driving economic knowledge, there is no autonomous subject beyond discourses. For this reason, the handling of media products and media content, a ludology-based user interface design and user experience factor, cannot alone be plausibly hedonistic because the pleasure of media content, which is in turn cyber-physically embedded in media hardware, is not to be understood as an effect per se. The hedonistic formation therefore first arises, as in the e-sports gaming area, through the self-performance of the recipient, whereby it is "controversial in terms of media sociology to what extent or when pleasure is directed against ideology and power" [128].

Conclusively, in the etymological sense of the specific thematic context, discourses increasingly utilize CPS/CPPS, and language practice is multimodal mediation practice, including AI and database-based regulatory options for communication, which will produce and constitute deterministic knowledge and representations in a value-added manner. The discourse space is thus more media-didactically intuitive and more mischievous, most likely augmented in this metric in the context of the virtual and offline habitats. This justifies why a marketing mix without the customer-integrated consideration of the participating interpretive community, in the sense of discursive customer integration, has minimal corporate intrinsic and extrinsic leadership influence. This lack of influence applies, in particular, if the product and market portfolio are more media-intensive.

Google Stadia (2019): Game Economic-Heuristic Cross-Media Alignment Model:

The explicit discourse transformation and the necessary strategic-entrepreneurial adaptation modification make it plausible why Google [205], one of the most powerful cloud and AI developers and providers, has been strategically integrating the Google Stadia [179] game platform in the existing Webspace 3.0 since the end of 2019 final January 2023; however, the hardware dependence on the part of the target group, in terms of such powerful game products, for the first time completely repeals. The goal of Google Stadia [179] is the heuristic

simplification of access to the world of high-end games and the cross-media hybridization of media content and hardware. Similar to Netflix [206], Google Stadia [179] offers very high-resolution game content (i.e., 4K ultra-high definition [UHD] resolution) and high-contrast dynamic art (HDR) artifact reduction at 60 frames per second (FPS) via the Internet, but also on different and platform-independent devices. 8K resolutions and a high dynamic range rate of 120 FPS are already announced for the future. The heuristic principle is particularly evident in the fact that no installation, patching updates, or hardware upgrades among gamers are necessary. The target audience is free from having to buy expensive gaming PCs or game consoles. In particular, this freedom from hardware restrictions extends the target audience's bandwidth but brings leading hardware developers such as Sony (Playstation) and Microsoft (X-Box) into strategic entrepreneurial peril.

When streaming current games, Google does not want to set an entrepreneurial limit. Google Stadia [179] is to be integrated directly into the YouTube community, not only to provide more interaction in cooperation with the video portal but to make customer integration models and the augmentation of online commerce in particular more playful and more ludological. So, one should be able to stream games in the future without loss of performance and even get into crowd play in online matches at the touch of a button. Saved games are shared with friends via a feature called "state share," and the Google Assistant helps solve problems with how-to videos and community-based solutions (i.e., through CoP). The only thing the gamer needs is a Chrome browser, the Stadia app, and an Android TV or a Chromecast USB stick. Thus, one could play high-end games with sophisticated graphics and good sound quality on almost any device without sacrificing quality, no matter the performance of the device: for example, on a PC, notebook, smartphone, tablet, or smart TV. The gaming world will, therefore, come even more into the current reality of life and work, online and offline, globally, and cross-media augmented, and it will thus become more holistic [1].

The principle seems to strike high waves before the appearance that even forms a German competitive situation. For example, Medion [206] and Deutsche Telekom [208] have announced plans to enter the cloud gaming business later this year. Whether the services can be established as successfully as Google Stadia [179] or Microsoft X-Cloud [209], however, the target group of the communities has doubts. Google [205] has a plan to address a billion-user audience, as it would consider 200 million users to be insufficient. However, the business idea failed, and the service was discontinued in January 2023 [179]. In this context, Google Stadia [179] failed for several reasons:

a) it faced stiff competition from well-established gaming platforms like Microsoft's Xbox, Sony's PlayStation, and Nintendo's Switch, which had a strong user base and extensive game libraries.
b) Google Stadia's subscription model and reliance on cloud gaming limited its appeal to gamers with high-speed internet connections, excluding potential users with limited or inconsistent internet access.
c) Google Stadia struggled to attract and retain top-tier game titles and exclusive content, which diminished its attractiveness to gamers. Finally, the overall lack of marketing, user engagement, and developer support contributed to the service's inability to gain sufficient traction, ultimately leading to its discontinuation.

Games as Digital Media and Effect Transfer:

Digital game media are, in the current reality of life, inseparable from everyday life, including leisure and work. In Germany alone, over 34.1 million people over the age of 14 play video games [1]. Even among older people, the popularity of (casual) games is reflected in their free time [1]. Due to sampling errors, an examination for the sake of evidence and validity is mandatory within this research.

Progressive and normatively innovative development is emerging, along with the proliferation of electronic games, especially in the emergent and transposed options of a synchronized and multimodal communication matrix and in the hybridization of games and leisure reality through the e-sports phenomenon. Regarding e-sports, Mueller-Lietzkow [210] explicates the "competitive playing of computer or video games in single or multiplayer mode" [211].

Determinatively, it can be specified that electronic games can be characterized as cyber-physical games that are due to an inventive implementation of micro-process-controlled settings, namely CPS/CPPS. These micro-process-controlled settings, developed from the games industry, which in particular require IT architecturally with regard to the DIN EN ISO 9241 [212] a user interface design (UI) to develop user experience (UE/UX) at all do not remain fixed in the space of game products. but are also used as communication mantras in everyday customer communication, such as ticket systems at the airport and train stations, CAD systems, such as in dentistry, the CEREC system, smartphones, tablets, increasing systems in the field of automotive developments, or the increasingly used in everyday life voice-controlled systems Amazon Alexa [213] and Google Home [214]. The UI core dimension is the heuristic principle of determining the existence of one's existence (usability, sociability, and learnability) in the sense of DIN EN ISO 9241-11 [212].

In addition, the concretized classification of games, i.e., computer games (PC-based), video games (console-based), and mobile games (mobile phone, PDA, and mobile consoles), also differentiates the respective game genres. Linguistically, more precisely, all game genres correspond to simulations because, receptively, the act of media consumption and the media design can be understood as a media event in the closer sense. This multimodal, medially constituted event, which is not tangible in the real sense as a media representation of a real existing event, as traditionally understood only in its media-mediated, discursive constitutional processes on the part of the user, in which appropriation formation between local and medial discourses is constituted and experienced in a multi-sensory way, is currently experiencing a technological and socio-theoretical-praxeological transformation that will form the basis of Web 4.0. Through the augmented hybridization of online and offline life reality in the form of cyber-physical VR and AR game products, the different classification criteria require a critical discussion since cyber-physical API effects generate transmission effects for the user, which both have scope for designing a single habitat and therefore cannot be defined as an amplifying media event, which depicts reality only heuristically. The hodological operation of the respective media terminals and the decoded-synchronized design of the media contents in real-time also give rise to a differentiated view from an appropriation-based and praxeological point of view. While the hodological operation of the respective game products in the form of both the game content (genre) and hardware (console vs. PC) differ greatly, it can be seen that the

cyber-physical production systems (CPS/CPPS) are increasingly overcoming these barriers, and platforms will overcome this phenomenon [1]. The classification options due to different hardware are thus overcome. Nevertheless, the game genre, per se, implies that performance-oriented formations are also based on motor formations such as these (e.g., de facto, in the e-sports segment).

CONCLUSION

Considering the urgent necessity of cooperation between PR and (brand) community management, the identical goals and overlapping responsibilities of these two separate disciplines within a company seem to raise the question of where exactly their differences lie. Basic deductive research indicates that the only major difference within the issue management process is one of wording, as far as PR is concerned. Codes that determine that the PR manager's qualification must be such that he or she can take sole responsibility for the wording of communication.

If we again consider the aims and responsibilities of the two disciplines, formal training in the subject of community management seems to be of value since such an extrinsically oriented, communicatively discursive positioning resource is integrated within the company. Since community management is responsible for all interactions with customers and the community, this is essential for the successful development of dialogue with the target group in question. By raising the qualification requirements in the area of community management, a more efficient process in the company's issue management can be promoted, and the company's community management can act autonomously in terms of necessary preventive measures. In the present situation, both disciplines are highly dependent. PR and community management should also be more closely connected scientifically, since, especially in the creative media industry, goals and responsibilities overlap to a large degree, differing only in terms of their relevant specific stakeholder groups.

In summary, the limits of this research subject must be considered |1; 2; 3]. The author explicates and identifies the various points with reference to the German games industry. In the games industry, due to the transformation of the buyer into a prosumer and the numerous customer review and recommendation systems in effect, it is becoming absolutely necessary for companies to develop active community management.

It is also found that games must be regarded as a digital value-added commodity. In particular, extending the focus to include various types of companies and products could provide further insight into the necessity of community management for companies. Coordinating the development of communities on the basis of different channels with the company's own representatives could provide information by which to decide whether companies should invest in separate community management to strengthen customer bonding as well as relationships with these stakeholder groups.

Community management and corporate knowledge management in the gaming industry share several common aspects. Both involve the effective organization, storage, and dissemination of

information to improve communication, collaboration, and decision-making within their respective spheres.

a) Information sharing as co-creation content: Both community management and corporate knowledge management focus on fostering an environment where information is easily shared among members or employees. This can include sharing game development updates, addressing player concerns, or discussing industry trends.
b) Collaboration as a Community-of-Practice (CoP) Approach: In both areas, collaboration is key to achieving success. Community managers facilitate collaboration between players, developers, and other stakeholders, while corporate knowledge management enables employees to work together efficiently, pooling their expertise and resources.
c) Continuous learning: Both community management and corporate knowledge management prioritize learning and adapting to new trends, technologies, or challenges. This could involve staying updated on player preferences, industry innovations, or exploring new ways to enhance the gaming experience.
d) Iterative feedback loops (ex ante, inter and ex post): Both fields value the importance of feedback loops, using them to improve products or services. Community managers gather feedback from players, while corporate knowledge management involves collecting feedback from employees to refine internal processes, tools, and resources.
e) Building and maintaining relationships: Both community management and corporate knowledge management emphasize the importance of building and maintaining strong relationships, whether with players, developers, or employees. This can lead to increased loyalty, higher engagement, and improved overall satisfaction.

However, while innovations have always secured companies' market power, recently this relationship has required an emerging culture in the company that demands speed, flexibility, and creativity. The boundaries between idea, plan, and implementation are fluid, and the imagined future is already beyond the first ideas.

The cyber-physical program-structuring principle of commercial games, which consists of different smaller units, forms the total flow (Flow) to which one can contribute as a user or join (Hepp, 2012:275). The current cyber-physical technology, such as the Java API, allows one to make historically and newly interpreted patterns of communication and re-adaptive interaction under the guiding principle of applied ludology accessible to many more, in particular entrepreneurial areas of application. Put more simply, a ludo-based communication matrix provides playful knowledge transfer, which leads in particular to self-controlled media didactic usability and sociability formation to increase the length of stay in the space of Web 3.0 and thus requires community-constituent aspects, which in turn benefit the entrepreneurial innovation process in the form of open and user innovation features.

This justifies why entrepreneurial and outward-looking customer communication utilizing PR alone is not suitable for the target group and even leads to entrepreneurial risks. This instead requires target-group-oriented, functional community management, including promoter functions.

In summary, corporate knowledge management and community management in the gaming industry have goals about working together, sharing information, continuing learning, feedback loops, building relationships, building better gaming experiences for players, and creating a more efficient work environment for industry professionals. This is the only way to ensure the entrepreneurial connectivity, innovation, and future viability of this sector [1].

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