

Chapter 15

Innovation Communication as an Integrative Management Capability in Digital Innovation Ecosystems

Nicole Pfeffermann

Abstract Dynamics in communication and innovation environments, such as new online communication channels, new corporate innovation tools, and access to and availability of information via digital technologies world-wide, are catalysts for the expanding interest of communication as an underpinning success factor in innovation management. From a theoretical perspective, the literature, however, has not fully acknowledged management of innovation communication as a new management function in corporate communication and has fallen short of comprehensively explaining the *How?* of managing innovation communication as a strategic capability for effective idea generation to idea conversion in the open innovation economy. This chapter provides a new approach: Innovation communication as an integrative management capability from a strategic management perspective. After presenting a literature review on communicating innovations and corporate communication management, a new understanding of innovation communication as a dynamic capability from in corporate communication management research is provided. Second, the direct and indirect effects of innovation communication—as an integrative management capability—on company value are illustrated and propositions are set up to further develop theory. Finally, a conclusion provides implications and a brief outlook on future research directions.

N. Pfeffermann (✉)
University of Bremen, Bremen, Germany
e-mail: ni_pf@uni-bremen.de

N. Pfeffermann
ISEIC Consulting UG, Bremen, Germany
e-mail: np@iseic-consulting.com

15.1 Communication in Digital Innovation Ecosystems

The Social Web and new digital technologies have changed information exchange worldwide. The simultaneous consumption of content on multi-channels and active, on-demand stakeholder involvement in interactions with organizations alter communication behaviour and knowledge transfer. Related to innovation management, the depletion of information asymmetries due to the ubiquitous availability of information and rapidly changing knowledge via digital technologies among people world-wide lead to knowledge-empowered stakeholders, who are consequently, a valuable knowledge source. Hence, crowd-powered innovation has become a new corporate innovation tool that engages knowledge-empowered stakeholders in knowledge creation and transfer processes. For instance, contents and collaborative communities are two crowd-powered innovation tools (Boudreau and Lakhani 2013, p. 64). Company leaders have thus become “community organizers” (Gouillart and Billings 2013, p. 71) in digital innovation ecosystems. Ecosystems are “the collaborative arrangements through which firms combine their individual offerings into coherent, customer-facing solutions” (Adner 2006, p. 98). Many Fortune 500 companies, such as P&G, Microsoft, Dell, and Johnson & Johnson, have integrated social media channels and community & co-creation platforms in their innovation portfolio to actively build up and interact in digital innovation ecosystems. Some examples include the global initiative “care inspires careTM” by Johnson and Johnson (2013), the P&G Co-Creation Channel – the “new crowd-sourcing community platform running multiple open innovation contests” by Procter and Gamble (2013) or the idea platform “mystarbucksideas.com” by Starbucks (2013).

In this context, *innovation is understood as progress at a corporate level to survive in changing environments and to achieve competitive advantage*. Crowd-powered innovation & co-creation via open exchange and collaboration in online (business) communities is then an effective corporate innovation tool to address market needs and effectively engage knowledge-empowered stakeholders, such as employees, customers, and partners/suppliers, in an open innovation process. For instance, a brand community is involved in new product development, for instance, the case “Vorwerk Thermomix Research Community” (see book [Chap. 24](#) in this book).

The use of various social media platforms and crowd-powered innovation in innovation management, however, leads to new challenges in communication management. Communication management is no longer just a task of marketing and corporate communication in the traditional logic, but rather a central task in marketing, corporate communication, idea/innovation management, and corporate development and all involved parties—based on a digital business design. The fragmentation in marketing and corporate communication, involving “silos” mainly related to different communication fields (employee communication, finance communication, product communication, etc.), can no longer exist. Instead, management practice shows that cross-functional activities and

cross-border thinking are key for successful open innovation and communication in digital innovation ecosystems (Keyword: *Open Innovation-Communication View*). For instance, Dell has implemented an integrative social media board and open platform “to listen, learn and engage with [their] customers” including social media policy and guidelines (Dell 2013; see also Henning-Thurau et al. 2012). SAP has launched the press release that communication and marketing have been melded into one management function (SAP 2013).

“What interests me is new paradigms in communication ...” says TED Founder Richard Saul Wurman

Interview by Samantha Murphy 2013/06/04

In management practice, therefore, there is a growing need for new, integrative corporate communication management approaches related to innovation and cross-border thinking, i.e. re-thinking and re-designing corporate communication management for innovation on cross-functional, cross-organizational and *cross-industrial levels* (Vatier 2013).

15.2 Need for a New Management Function in Corporate Communication

15.2.1 Communication of Innovations: A Review

Communication of innovations is of expanding interest to business and science (e.g., Hofbauer et al. 2009; Huck 2006; Mast and Zerfaß 2005; Mast et al. 2005, 2006; Mohr et al. 2009; Zerfaß and Ernst 2008; Zerfaß and Möslein 2009). This is true nowadays in particular due to the increasing demand for innovation and corporate innovation approaches, the breadth of enterprises’ innovation portfolios, the ubiquitous availability of information, knowledge-empowered stakeholders, new business models and digital business transformation.

Three main streams of research can be identified in the field *communication of innovations*:

- (1) Marketing of innovations/innovation marketing in marketing research;
- (2) Communication in marketing diffusion research;
- (3) Innovation communication in corporate communication research linked to innovation management research.

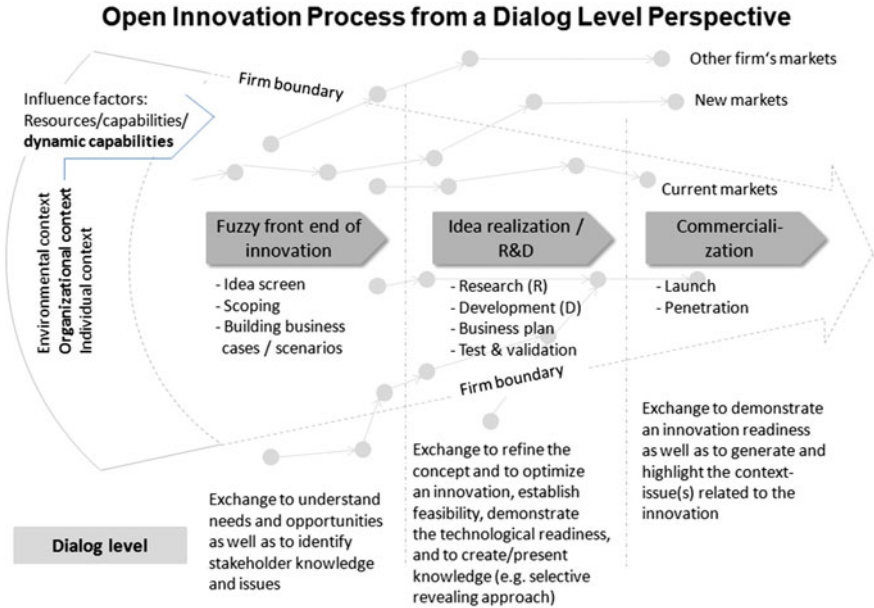
First, research in marketing including consumer behaviour and psychology encompasses scientific investigations regarding the antecedents and consequences in marketing of innovations. Marketing is an essential part in the innovation process (Crosby and Johnson 2006). Communication can inform consumers about the advantages and characteristics of an innovation by using mass media and individual communication throughout the adoption process (Hofbauer et al. 2009). Theoretical findings and managerial implications provide essential information

concerning strategies and mechanisms to introduce innovations successfully. Marketing of innovation includes both the commercialization of radical innovations, technologies and services (e.g., Mohr et al. 2009; Sandberg 2008; Sowter 2000) and strategic innovation marketing (e.g., Talke 2005; Trommsdorff and Steinhoff 2007). Various useful definitions are provided in the literature, for instance, ‘innovation marketing encompasses all market-oriented activities of innovation management—that is, all strategic and operative decisions for marketing new products’ (Steinhoff and Trommsdorff 2011).

Second, ‘diffusion research seeks to understand the spread of innovations by modeling their entire life cycle from the perspective of communications and consumer interactions’ (Peres et al. 2010, p. 91). Several innovation diffusion models have been introduced mainly in the marketing diffusion literature (e.g., Mahajan et al. 2000; Peres et al. 2010) related to specific industries, adopter groups or steps in the adoption process (e.g., Arndt 1967; Hesse 1987; Mahajan et al. 1990, 1995; Pae and Lehmann 2003; Rohlfis 2001). Currently research interest has shifted in its focus from the forecasting focus to the managerial diagnostic focus in order to provide answers in marketing management (Peres et al. 2010). Three social influence factors are mentioned as drivers of communication in innovation diffusion: (1) word-of-mouth communication (e.g., Martilla 1971; Mazzarol 2011), (2) network externalities (e.g., Rohlfis 2001; Tomochi et al. 2005), and (3) social signals (e.g., van den Bulte and Stremersch 2004; Berger and Heath 2008). These social influence factors, referred to as *interdependencies among consumers*, ‘affect various market players with or without their explicit knowledge’ (Peres et al. 2010, p. 91) and thus have to be considered in marketing of innovations. Future research in this field requires the consideration of online communities, web services and complex types of product-services categories in innovation diffusion (Peres et al. 2010).

Third, researchers have focused on innovation communication¹ and its impact on the innovation process from idea to launch as a part of corporate communication and constitutive element in innovation management (e.g., Huck 2006; Mast and Zerfaß 2005; Mast et al. 2005, 2006; Zerfaß 2009; Zerfaß and Ernst 2008; Zerfaß and Möslein 2009; Zerfaß et al. 2004). Three communication fields are as follows: (1) internal communication; (2) external communication; and (3) *public relations* (innovation journalism: Nordfors 2009). *Innovation communication* is defined as “symbolic interaction between organizations and their stakeholders about innovative products, services, technologies, and ideas” (Mast et al. 2005, p. 4; Huck (2006, p. 3) repeats this quote). Zerfaß (2009) defines innovation communication as a systematic initiation of communication processes with internal and external stakeholders to support technical, economic and social novelties through (a) the interest-led construction, revision, and destruction of socially dependent conceptual patterns and communication resources, including

¹ Innovation communication was mentioned the first time by Johnson, J. D. and Chang, H.-J. (2000). Internal and external communication, boundary spanning, and innovation adoption: An over-time comparison of three explanations of internal and external innovation communication in a new organizational form. *The Journal of Business Communication*, 37, 238–263.



Source: adapted from Daschkovska et al., 2010; see also Brem, 2008

Fig. 15.1 Open innovation process from a dialog perspective

professional promotion, and (b) by stimulating content-related catalysts for the development of novelties. The object of communication is primarily the innovation itself, but in many cases it is also the organization behind the innovation (Zerfaß 2009, p. 42 translated into English).

The first and second research streams focus primarily on market-related activities, first, to attract consumer attention and, second, to facilitate an innovation’s adoption process by driving social influences. In contrast, the third research area conceives communicating innovations from idea to launch as a constitutive element in innovation management (Zerfaß 2009) and as a part of corporate communication management (Zerfaß et al. 2004).

In the open innovation view (Chesbrough 2003, 2006; Chesbrough and Appleyard 2007), companies have to be flexible in outsourcing and find new ways to respond to increasing changes in market structures and technologies (Chesbrough and Appleyard 2007). In this view, ‘successful companies will be those that transform information into value-creating knowledge, and [...] use this knowledge to innovate and capture additional profit’ (Davenport et al. 2006, p. 17). The construct open innovation can be understood as ‘... the use of purposive inflows and outflows of knowledge to accelerate internal innovation, and expand the markets for external use of innovation [...]’ (Chesbrough 2006, p. 1). Based on this current approach to innovation management (for different understandings of open innovation see Chap. 3, in this book), the diagram (Fig. 15.1) shows an open innovation

process and the dialog level perspective with several communication management tasks throughout an open innovation process (based on Daschkovska et al. 2010).

In order to enjoy sustained success, however, enterprises have to manage several open innovation processes at the same time and over time. Thus, they have to coordinate various communication processes, tools and activities related to a broad range of types of innovations and collaborative arrangements to attract, inform and engage knowledge-empowered stakeholders and to address resource markets, communication markets, and sales markets (in the real economy and net economy/digital channels). Moreover, these valuable interactions need to support the innovation process from idea to launch and beyond. Hence, efficient corporate communication management related to innovation is crucial to manage various communication activities in digital innovation ecosystems.

15.2.2 Corporate Communication Management: A Review

Increasing competition in communication markets, developments in media consumption and new communication channels, are a catalyst for the expanding interest in corporate communication management (Argenti 2007; Donsbach 2006; Töhlke et al. 2001).

According to Hübner's review (Hübner 2007), corporate communication management primarily represents a process to build up stakeholder relationships. Corporate communication can be understood as "a management function that is responsible for overseeing and coordinating the work done by communication practitioners in different specialist disciplines, such as media, public affairs, and internal communication" (Cornelissen 2008, p. 5). It is "...a management function that offers a framework for the effective coordination of all internal and external communication with the overall purpose of establishing and maintaining favourable reputations with stakeholder groups upon which the organization is dependent" (ibid.). This *function-oriented perspective* has also been adopted by other scholars in corporate communication management research, including Bruhn (2006), Argenti (2007), van Riel and Fombrun (2008), and Belasen (2008). Bruhn (2006) defines integrated marketing communication as "a process of analysis, planning, organization, implementation and monitoring that is oriented toward creating unity from diverse sources of internal and external communication with target groups to convey a consistent impression of the company or the company's reference object" (Bruhn 2006, p. 17; Bruhn 2008, p. 15; Bruhn 2009). The result of managing this process is a "uniform image" contributing to the company's credibility (ibid.). In contrast, Hübner's behavioural perspective (2007) defines corporate communication as a company's ongoing negotiation process with its stakeholders so as to achieve legitimation. He describes this discourse as a process "to bring peers together...in order to create strategic thinking in an ongoing communicative and collaborative process" (Hübner 2007, pp. 165–166).

In sum, the literature, however, has not fully acknowledged management of innovation communication as a management function in corporate communication and has fallen short of comprehensively explaining the *How?* of managing various communication processes, tools, and activities related to innovation for efficient corporate communication management in the open innovation economy. Moreover, a new management approach is missing to understand how corporate communication management related to innovation management and marketing can positively facilitate both idea generation to idea conversion and beyond and to build up a strategic, dynamic capability to interact with knowledge-empowered known and unknown stakeholders in innovation communities as well as strengthen a firm's resource set for innovation in the long-run—all of which are critical success factors in the open innovation economy.

15.3 Innovation Communication as a New Management Function from a Strategic Management Perspective

Innovation communication emerges as a new cross-functional management function in *corporate communication from a strategic management perspective* due to dynamics in communication and innovation caused by changing environments in the *open innovation economy and digital information age*. Many organizations, independent from size and industry, are currently struggling with the question “How can research transfer results from academic research into marketable ideas and, in general, transfer ideas into successful products and services be designed?” The global innovation 1,000 Study 2012 by Booz and Company shows that only 25 % of respondents (innovative companies) agree that they are effective in both idea generation and idea conversion. Hence, capabilities in innovation communication will bridge this gap between innovative ideas and their commercialization.

First of all, innovation communication management (ICOMM) implies two basic assumptions: (1) Companies invest in strategic open innovation and thus in fostering innovation capability and innovation portfolios so as to compete in current and future digital innovation ecosystems; (2) Companies interact with knowledge-empowered stakeholders across organizational boundaries throughout the open innovation processes, from idea generation to idea conversion, and, in other words from idea and knowledge transfer of marketable ideas and beyond to create new knowledge for innovation.

Innovation is defined as ideas, concepts, prototypes, policies, practices, objects, programs/initiatives, models, design, issues, technologies, services, products, etc. that are perceived as new by individuals (based on Rogers 2003).

Communication is defined as a process in which messages are sent by a sender to receiver(s) through channels and its receiver(s) decode/s information using an individual's senses and give/s feedback (e.g., Argenti 2009; Zaremba 2003) in a

| Innovation Communication Management (ICOMM) | | | | | | | | | |
|---------------------------------------------|------------------------------------------|-----------------------|------------------------|----------------------------|-----|--------------------------|----------------------|-----------------------------------|-----|
| Areas/ Departments | Marketing & corporate communication | | | Idea/Innovation management | | Corporate development | | | |
| | Marketing communication / Branding | Finance communication | Employee communication | Public Relations | ... | Management communication | Change communication | Strategic/ Strategy communication | ... |
| Communication fields | Print communication | | | | | | | | |
| Communication channels | Online / digital communication | | | | | | | | |
| | Face-to-face communication | | | | | | | | |
| Markets | Network communication / partner channels | | | | | | | | |
| | Sales markets | | | Communication markets | | | Resource markets | | |

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Fig. 15.2 Innovation communication management—a functional perspective

‘constant mutual influence of communication participants’ (Miller 2005, p. 6; see also Bittner 1985; Burgoon and Ruffner 1978; de Vito 1997). In this *transactional conceptualization of communication* related to complex systemic environments, an ‘... organization as an entity [...] must link internal departments and be linked to its environment’ (Zaremba 2006, p. 60).

ICOMM represents a new way of orchestrating new innovation communication tools and traditional communication tools of various communication fields related to innovation to effectively communicate *for* innovation. ICOMM generates benefits from synergy effects among a broad range of communication channels related to sales markets, communication markets, and resource markets, as illustrated in Fig. 15.2. Finally, as a cross-functional management function in corporate communication, ICOMM integrates the main areas of: marketing & corporate communication, idea management and innovation management, and corporate development including different communication fields related to innovation, such as an integrative view of social media and community management to present innovation, which involves several internal departments to benefit from social media effects. ICOMM addresses sales/consumer markets, communication markets, and resource markets over four main channels: print, online/digital, face-to-face, network/partner.

15.3.1 Innovation Communication Capability

The *How?* of managing innovation communication is crucial to achieve an impact. For instance, crowdfunding via digital platforms can represent an effective way for creative industry entrepreneurs or startups to raise money to execute their creative ideas/business ideas; however, presenting the idea and manage information exchange to positively influence viral communication and action is not a trivial process. Not all communication strategies, tools, and activities can lead to recognition, innovation adoption or idea exchange in vibrant innovation communities. The *How?* in *efficiently and effectively managing communicating for innovation to create value*, such as reputation and *knowledge networks*, therefore, makes the difference and varies among companies, creative professionals, and startups. For instance, selective revealing of *knowledge* as a strategic mechanism can effectively be used to enhance collaborative innovation in terms of re-shaping collaborative arrangements and improving market and technologies access (Alexy et al. 2013).

Consequently, **the ability to manage innovation communication on a cross-functional level is a strategic capability in the open innovation-communication economy influencing the outcome of strategic efforts** to achieve competitive advantage, for instance, being effective in both idea generation and idea conversion.

From the strategic management perspective, *dynamic capabilities* (Teece 2007; Schreyögg and Kliesch-Eberl 2007; Teece et al. 1997) influence a corporation’s value creation by the impact on its resource base, which in turn represents a source

of competitive advantage (Ambrosini and Bowman 2009). “A **dynamic capability** is the capacity of an organization to purposefully create, extend, or modify its resource base” (Helfat et al. 2007, p. 4). If ICOMM is understood as a dynamic capability, ICOMM can purposefully create, extend, or modify an organization’s resource base, such as its information and knowledge management, stakeholder/customer relationship management, and idea management.

Based on relevant literature, a conceptual definition (for types of definition see Pozzi 2001) of the ICOMM construct is as follows:

ICOMM is a dynamic capability to manage transactional procedures for *transmitting information* between the organization and its stakeholders (community, innovation networks, partners, customers, employees, government, etc.) in terms of

- (1) Introducing ideas, concepts, prototypes, policies, practices, objects, programs/initiatives, models, design, issues, technologies, services, products, etc. or a combination of them, referred to as clusters, which are perceived as new by receivers;
- (2) Generating and highlighting *context-issues* for (1), referred to as framing topics;
- (3) Presenting *innovation capability*; and
- (4) Considering *interrelation, time, and openness* used to increase *company value* by *intensifying corporate innovation reputation, building up new stakeholder knowledge schemata, modifying existing ones, and improving its management of strategic assets* (adapted from Pfeffermann 2011).

In order to ensure construct clarity in management research (Suddaby 2010) for improving management theorizing and achieving consensus which affects efficient communication among scholars and decreased barriers to collaboration (Pfeffer 1993), the key constructs embedded in the conceptual definition of ICOMM—i.e. the eight dimensions of ICOMM—are defined in Appendix A.

Openness is key in the *open innovation economy*. Therefore, strategic openness as one dimension of ICOMM should be described in detail to present an example for managing innovation communication considering openness (for managing innovation communication see also Chap. 13, in this book):

Enlarging the corporate growth zone (adapted from Luckner & Nadler 1997, 1995)

Risk and uncertainty are influence factors for resistance and defending comfort zones, and can therefore impede innovation. ICOMM helps companies to get out of their comfort zones and to strategically extend their growth zones in terms of driving connectivity/collaboration, innovation, and learning/self-reflection/knowledge creation and knowledge adoption to strategically influence knowledge networks. ICOMM’s focus then is on accelerating innovation and breakthrough

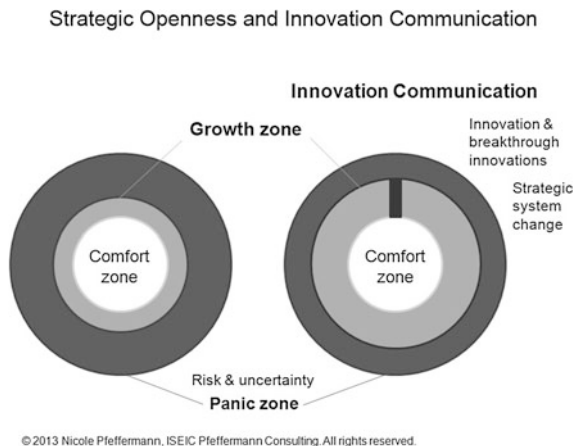


Fig. 15.3 Innovation communication—Growth zone

innovations, as illustrated in Fig. 15.3. As a result, companies and economic systems reach new dimensions of growth and new business opportunities for long-term market success.

Understanding and positively balancing promotion- & prevention-focused motivation

“One of the greatest benefits of understanding how promotion and prevention focus work is that it will give you a genuine, evidence-based window into strengths and weaknesses—the kind that translate into demonstrable differences in performance” (Halvorson and Higgins 2013, p. 35).

Promotion-focused motivation is in general more conducive to creative ideas including out-of-the-ordinary ideas. This is explained by the fact that promotion-focused individuals—i.e., creative, innovative, risk-taking, “thinking outside the box” people—are much more comfortable with taking chances and open to more possibilities. They enthusiastically support ideas. In contrast, prevention-focused people—i.e. efficiency-oriented, low-risk takers—like ideas that are foolproof and most of the time their critical mindset hinders the creation process. “When successful companies fail to innovate, what looks like complacency is often really a prevention-focused strategic defensiveness—a desire to protect the company’s gains by avoiding risks” (ibid., p. 36).

The most effective companies are those who respect input from both creative thinkers (promotion-focused) and critical, analytical thinkers with a view on details and accuracy (prevention-focused) in different stages of an innovation process in order to be both effective in idea generation and idea conversion. In this context, strategic openness of ICOMM covers understanding and balancing promotion- and prevention-focused individuals to successfully innovate and be *open* across boundaries for new business opportunities. Innovation communication is also a prerequisite for improving strategic openness in terms of understanding both types so as to positively influence promotion and prevention motivation when

appropriate. Innovation communication tools can bridge the gap, for instance, by using scenarios (scenario planning) to visualize future gains to address promotion-focus, while (see also Pfeffermann and Breuer 2013), on the other hand, using framing as a tool to provide a ‘frame of reference’ for prevention-focused individuals. Strategic innovation communication planning implies designing innovation communication tools for both types of motivational behaviour (see “innovation communication toolbox” by Pfeffermann, in this book).

15.3.2 *Effects of Innovation Communication on Company Value*

The conceptual definition of innovation communication calls theorists to think about the direct and indirect effects of innovation communication on company value to further develop and test theory.

The *overarching research hypothesis* states: The more effective ICOMM as an organizational dynamic capability is exploited, the more ICOMM will contribute to company value (CV).

Figure 15.4 illustrates the direct and indirect effects of innovation communication (ICOMM) on company value [measured by Economic Value Added (EVA)]. Beginning from the left-hand side, ICOMM has four main effects on value creation (see conceptual definition), which are divided into two direct effects and one indirect effect: the *building and modifying* function (the *knowledge creation* direct effect—LEARN), the *improving* function (the *management of strategic assets* direct effect—INNOVATE), and the *intensifying* function (the *corporate innovation reputation* indirect effect and dependent mediator variable—CONNECT). In order to explain the positive effects of the three main functions of ICOMM on company value CV/EVA arrows are drawn from the left-hand side to the right-hand side.

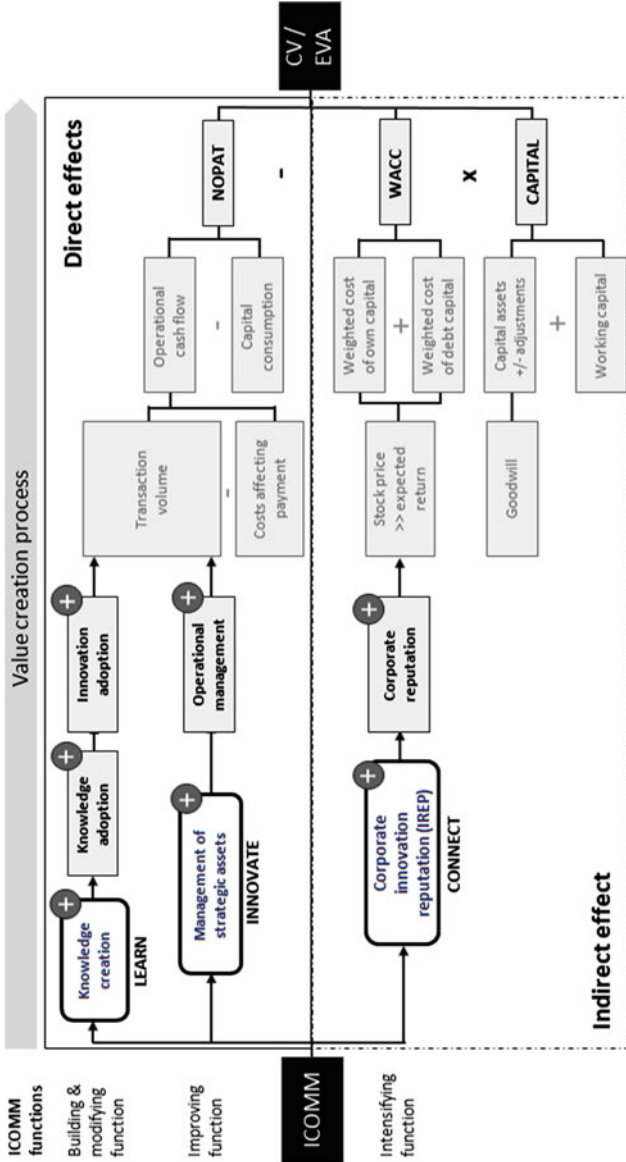
The following propositions can be made based on the conceptual definition and a literature review, as detailed in Fig. 15.4 from left to right:

→P1 (general proposition): The ICOMM dynamic capability of managing innovation communication has a positive impact on company value through knowledge creation, management of strategic assets, and reputation enhancement

→P2: ICOMM positively influences knowledge creation by building up new stakeholder knowledge schemata or modifying existing ones; this leads to knowledge adoption and innovation adoption that directly affects company value [measured by Economic Value Added]

→P3: ICOMM positively influences the management of strategic assets by improving management of strategic assets, such as information management, innovation management, and stakeholder relationship management, which leads to advancement of operational management that directly affects company value [measured by Economic Value Added]

Effects of Innovation Communication Management (ICOMM) on Company Value (CV) / Economic Added Value (EVA)



Source: By the author

Fig. 15.4 Effects of innovation communication on company value

→P4: ICOMM positively influences intensifying corporate innovation reputation (IREP), leading to corporate reputation, which indirectly affects company value [measured by Economic Value Added]

15.4 Conclusions and Outlook

New mobile and web technologies drive smart marketing and innovation concepts, such as mass customization and crowd-powered innovation, to engage knowledge-empowered stakeholders in corporate innovation. Company leaders have thus become “community organizers” in managing communication related to innovation with various stakeholders in the open innovation view. The broad range of communication activities as well as information systems, however, has to be managed in order to facilitate both effective idea generation and idea conversation and to build vibrant innovation communities. The *How?* of managing communication related to innovation is thereby crucial to achieve the desired impact. There is, hence, a necessity for new corporate communication management approaches related to innovation and cross-border thinking, i.e., re-thinking and re-designing corporate communication management for innovation on a cross-functional management level.

This book chapter provides a **new corporate communication management approach from a strategic management perspective: Innovation Communication Management Capability**. Innovation communication management (ICOMM) can represent a new integrative management capability to plan, execute, monitor, and evaluate information transmissions related to innovation and context-issues of innovations considering interrelatedness, time, and openness to accelerate innovation (e.g. digital business transformation, new products and services), corporate reputation, and management of strategic assets (e.g., collaborative innovation, knowledge networks); which in turn leads to value creation. ICOMM focuses on a corporate innovation portfolio or just an innovation process from an entrepreneurial perspective. This approach explains the *How?*—the understanding of innovation communication as an organizational ability with eight dimensions—for managing communication for innovation in digital innovation ecosystems to achieve the desired impact, such as being both effective in idea generation and idea conversation. Moreover, this approach can be applied for collaborative networks to understand innovation communication management as a meta-level capability on a network/cluster level.

Implemented as an integrative management capability, innovation communication drives value creation through strategic openness, among others: (1) Enlarging a corporate growth zone, and (2) Understanding and positively balancing promotion- and prevention-focused motivation.

How does ICOMM affect value creation? This book chapter also provides an illustration including propositions of how ICOMM directly and indirectly affects company value through its *building & modifying function* (knowledge creation),

improving function (management of strategic assets) and *intensifying function* (corporate innovation reputation).

To conclude and at the same time present an outlook for future directions in management practice and research, ICOMM needs to become a top priority for managers in innovation management, communication management and corporate development. It is not about what you do, but rather how you do it. The ability to manage innovation communication can influence the impact of communication in the *open innovation economy*, which in turn might lead to competitive advantage and business growth.

A smart communicator for innovation (organization or entrepreneur) is able to both: (1) Inspire and carry on innovation dialogues with various stakeholder groups to both create knowledge (LEARN) and enhance reputation through trustful relationships—the “right” connections—(CONNECT); and (2) Build up and re-configure a resource base for innovation (INNOVATE), for example, for digital business transformation, successful business startup, and sustainable innovation success. To begin, a new innovation communication plan and innovation communication guidelines can be developed as a common standard for an open innovation process, where collaborative partners have different communication policies/behaviour, use different communication tools and channels. Second, over the long-term, re-structuring corporate communication management and re-designing processes based on standards are necessary to manage ICOMM as a strategic capability (for management tools of innovation communication see also [Chap. 13](#), in this book).

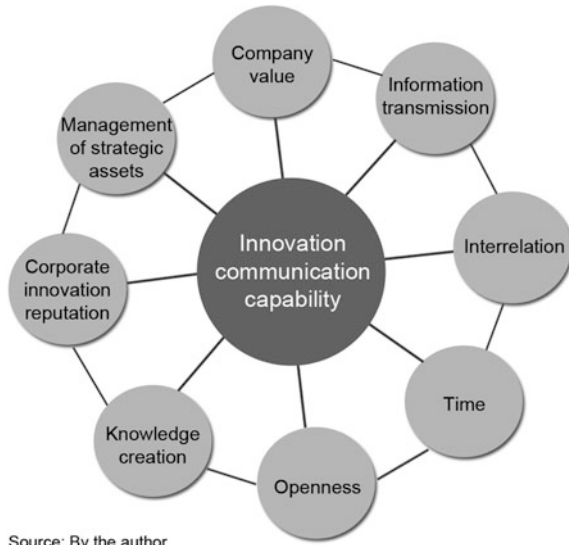
Providing an outlook on future research, the new ICOMM theory can be further developed by generating and testing hypotheses and measuring the status quo in management practice. For instance, using a mixed method approach from a pragmatic view in terms of conducting qualitative interviews to explore new issues and an online survey to get quantitative results; finally comparing both analyses.

A.1 15.5 Appendix A

The eight dimensions of ICOMM, understood as key constructs to develop and test theory and, thus, measure ICOMM in management practice, illustrated in [Fig. A.1](#) and described below-state:

Information transmission is defined as an organizational ability to transfer information between organizations and *stakeholders* in terms of introducing ideas, issues, concepts, prototypes, practices, objects, or combinations of these, which are perceived as new by receivers; generating and highlighting *context-issues* related to innovation (= framing topics); and presenting *innovative capability* considering interrelation, timing, and openness.

Fig. A.1 Eight dimensions of innovation communication capability



Source: By the author

Stakeholders are groups related to a company, for instance, financial analysts, customers, suppliers, media, or investors (Freeman and McVea 2005; Freeman 1999). First developed in the mid-1980s by Freeman (1984), the stakeholder approach is linked to strategy for strategy formulation and implementation (Freeman and McVea 2005).

A *context-issue* is defined as a “frame of reference” of an innovation or innovation cluster, which integrates the innovation or cluster into a topic of concern to grasp stakeholders’ attention and to lead to a better understanding of an innovation (Huck, 2006).

Innovation capability reflects human capital, social capital and the cognition of managers involved in the creation, use and integration of market knowledge and innovation resources in order to match and create market and technological change (adapted from Bruni and Verona 2009). This calls for an organizational ability for innovative thinking and behaviour, such as fostering breakthrough innovations, developing new products and technologies, and changing mindsets for new business opportunities and growth.

Interrelation is defined as the ability to manage several interrelated managerial tasks, communication processes, communication tools, and communication activities as follows. The Interrelation among tasks, processes, tools, and activities of innovation communication:

- Taking place at the same time and over a period of time;
- And innovation/idea management taking place at the same time and over a period of time (interface of communication management and innovation management);

- And organizational communication (corporate communication and marketing) taking place at the same time and over a period of time;
- And information management (IT management) taking place at the same time and over a period of time;
- Considering different communication channels and three types of markets [resource markets, sales markets, and communication markets].

Time refers to *at the same time and over a period of time*; i.e. this dimension encompasses the ability to plan, coordinate, execute, monitor and evaluate time-related information transmission considering the linkage among past-related, present-related and future-related information at the same time and over a period of time.

Openness is defined as the ability to plan, coordinate, execute, monitor and evaluate the use of purposefully knowledge creation across *boundaries* (e.g. firm's boundaries, cultural and disciplinary boundaries, mindsets, and comfort zones) to accelerate innovation in terms of constant, active interactions with stakeholders (innovation dialogue).

Boundaries are defined as internal and external rules, limits or borders, which organizations are attempting to overcome in the open innovation view. In the open innovation view (Chesbrough 2003; 2006; Lichtenthaler and Lichtenthaler 2009) "successful companies will be those that transform information into value-creating knowledge, and [...] use this knowledge to innovate and capture additional profit" (Davenport et al. 2006, p. 17). The construct "Open Innovation" can be understood as "... the use of purposive inflows and outflows of knowledge to accelerate internal innovation, and expand the markets for external use of innovation..." (Chesbrough, 2006, p. 1). Studies on openness and interaction, which investigate networks of relationships between organizations and external environment, show the impact on firm's performance (e.g., Shan et al. 1994; Ahuja 2000; Rosenkopf and Nerkar 2001).

Knowledge creation is defined as the ability to plan, coordinate, execute, monitor and evaluate learning of organizations and individuals for innovation and change. *Learning* means revising existing knowledge and building new schemata (Miller 2005). A schema, interrelated with other schemata, will be activated and developed if, for instance, stakeholders have made their first experiences with a new product or received information about it that they perceive as a new situation. New information or experiences change and develop existing knowledge domains into a complex schemata system (e.g., Bruhn 2009; Miller 2005; Brewer and Nakamura 1984). Hence, knowledge creation leads to knowledge adoption to positively influence innovation adoption.

Corporate innovation reputation is defined as the stakeholders' collective positive judgments of a company's innovativeness over time (based on Barnett et al. 2006), which is addressed in this dimension by the ability to plan, coordinate,

execute, monitor and evaluate processes, tools and activities of innovation communication to strengthen corporate innovation reputation. The interrelation between innovation communication and corporate innovation reputation leads to the construct of credibility. For instance, consumers do not only pay attention to messages, but also to the credibility of the source of the message. Higher credibility leads to higher acceptance of a new product (Maathuis et al. 2004). Moreover, the definition of corporate reputation consists of both (1) the stakeholder relationship perspective in the creation of trustful stakeholder relationships (the enterprise's behaviour towards stakeholders in the past, present and expected future) and (2) the information transmission perspective (the degree of informative transparency). Information transmission is crucial for enhancing trust/credibility and stakeholder satisfaction and, hence, corporate reputation (de la Fuente Sabate and de Quevedo Puente 2003). As far as innovation communication is concerned, of the three communication objects information transmission plays a central role in establishing trust and stakeholder satisfaction, and leads to a strengthened corporate innovation reputation.

Management of strategic assets is defined as the planning, coordination, execution, monitoring, and evaluation of operationally managing specific resources and capabilities aimed at creating, extending and/or modifying a unique resource base of an organization for achieving competitive advantage. A company coordinates and implements its strategic assets in concert with other specific resources and capabilities, which leads to the inherent value of strategic assets (McGee et al. 2005). In fact, innovation communication has to manage other specific resources and capabilities including other strategic assets of a company. Such strategic assets might include the resource 'management techniques' that might consist of information management, innovation management as well as reputation management. Other strategic assets might be innovative capability or marketing capability; for examples of capabilities see Appendix B.

Company value is defined as *Economic Value Added* (EVA), which means the net operating profit after tax (NOPAT) minus the sum of capital (CAPITAL) and weighted average cost of capital (WACC) (Schaefer 2002; Stern et al. 1995). Constituting one of a company's dynamic capabilities, the cross-functional dynamic innovation communication capability is unique to an enterprise or a collaborative network in terms of the designing in the eight dimensions of ICOMM to increase company value considering dynamics in the value creation process (see Fig. 4).

A.2 15.6 Appendix B

Table B.1 Definitions of organizational communication competence and marketing capability (sorted in chronological and then alphabetical order and is not to be understood as a complete review)

| Type | Definition | Source |
|------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|
| Marketing capabilities | ‘The marketing capabilities include product development, the process to develop and manage product and service offerings; pricing, the strategy to extract the optimal revenue from firm’s sales; channel management, the course of action to establish and maintain the channels of distribution that effectively and efficiently deliver value to end-user customers; marketing communications, the ability to manage customer value perceptions; selling, the activity to fulfill customer orders; market information management, the practice to acquire and use market knowledge; marketing planning, the ability to create marketing strategies that optimize the match between the firm’s resources and its marketplace; marketing implementation, the process to transform marketing strategy into realized resource deployments.’ (p. 153; based on Vorhies and Morgan 2005) | Akdeniz et al. (2010) |
| Marketing capability | ‘... marketing capability to be firm’s ability derived from two prominent components: marketing planning ability and marketing implementation ability.’ (p. 850) | Chang et al. (2010) |
| Marketing capability | ‘Marketing capability is defined as the integrative process, in which a firm uses its tangible and intangible resources to understand complex consumer specific needs, achieve product differentiation relative to competition, and achieve superior brand equity.’ (p. 319; based on Day, 1994). | Nath et al. (2010) |

(continued)

Table B.1 (continued)

| Type | Definition | Source |
|---------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------|
| Dynamic marketing capabilities | 'Dynamic marketing capabilities reflect human capital, social capital and the cognition of managers involved in the creation, use and integration of market knowledge and marketing resources in order to match and create market and technological change.' (p. 103) | Bruni and Verona (2009) |
| Marketing capability model | '... we focus on capabilities that are consistent with both Day's (1994) marketing capability model [...]' = market-sensing capability; CRM capabilities, and brand management capabilities (p. 285) | Morgan et al. (2009a) |
| Two interrelated marketing capability areas | 'Two interrelated marketing capability areas have been identified: capabilities concerning individual 'marketing mix' processes, such as product development and management, pricing, selling, marketing communications, and channel management (e.g., Vorhies and Morgan 2005), and capabilities concerned with the processes of marketing strategy development and execution (e.g., Morgan et al. 2003). These capabilities may be rare, valuable, non-substitutable, and inimitable sources of advantage that can lead to superior firm performance (e.g., Vorhies and Morgan 2005). Further, as knowledge-based processes that become embedded over time, such capabilities may be difficult for competitors to imitate (e.g., Teece et al. 1997).' (pp. 910–911) | Morgan et al. (2009b) |
| Architectural marketing capabilities and marketing capability integration | '... to simultaneously model the ways that product-market strategy influences specialized and architectural marketing capabilities and marketing capability integration.' (p. 1321) | Vorhies et al. (2009) |

(continued)

Table B.1 (continued)

| Type | Definition | Source |
|----------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------|
| Marketing capabilities | Marketing capabilities are divided into inside-out capabilities, spanning capabilities, and outside-in capabilities. (based on Day 1994) ‘Marketing capabilities—such as skill in segmentation, Organizational Capabilities Information Technology Capabilities and Strategic Types 9 targeting, pricing, and advertising—enable the organization to take advantage of its market-sensing and technological capabilities and to implement effective marketing programs.’ (pp. 8–9). | Jones and Tollin (2008) Song et al. (2008) |
| Marketing-mix capabilities | ‘... the capabilities used to orchestrate marketing-mix capabilities and their resource inputs involving market information management and marketing strategy development and execution.’ (p. 82) | Vorhies and Morgan (2005) |
| Marketing planning capability | ‘... marketing planning capability, we focus on specific elements fundamental to the overall marketing planning process.’ (p. 372) | Slotegraaf and Dickson (2004) |
| Organizational communication competence along three dimensions (and an overview of several conceptualizations/definitions) | ‘... conceptualize organizational communication competence along three dimensions: competence assessment criteria, competence levels, and ecological systems. Such a conceptualization acknowledges the cognitive and behavioural components of communication competence, the developmental nature of communication competence, and the embeddedness of communication competence at various levels of analysis.’ (p. 833) | Jablin and Sias (2004) |
| Architectural marketing capabilities | ‘Architectural marketing capabilities are defined in the literature as the processes by which firms plan appropriate combinations of available knowledge and other resources to deploy into their marketplace(s) and execute these planned resource deployments, transforming them into realized value offerings for target market(s).’ (p. 293) | Morgan et al. (2003) |

(continued)

Table B.1 (continued)

| Type | Definition | Source |
|-----------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|
| Two types of marketing capabilities | ‘We identified and assessed two types of marketing capabilities: specialized capabilities regarding the specific marketing mix-based work routines used to transform available resources into valuable outputs [...] and architectural capabilities regarding the marketing strategy formulation and execution work routines used to develop and coordinate specialized capabilities and their resource inputs...’ (p. 106) | Vorhies and Morgan (2003) |
| Marketing capability | ‘... marketing capability is defined as integrative processes designed to apply the collective knowledge, skills, and resources of the firm to the market-related needs of the business, enabling the business to add value to its goods and services and meet competitive demands.’ (p. 19) | Weerawardena (2003) |
| Four functional export marketing capabilities | ‘... we focus on four functional export marketing capabilities: pricing capability, product development capability, distribution capability, and communication capability.’ (p. 36) | Zou et al. (2003) |
| External marketing capability and internal marketing capability | MAC = Marketing Capability ‘... External MAC is a function of the extension of a firm’s network positions and weak ties, and of such more individual competencies like the networking ability of key managers (or the owner-manager in micro firms), and their ability to develop valid cognitive maps of interrelated nets.’ ‘... second MAC is labelled Strategic marketing capability. It is composed of two principal sub-capabilities, (1) market targeting and positioning capabilities, and (2) relationship developing capability.’ (p. 20) | Ayv ir and M ller (1999) |
| Marketing capability | ‘Marketing Capability. A firm with a strong marketing capability—exhibiting superiority in identifying customer’s needs and in understanding the factors that influence consumer choice behaviour—will be able to achieve better targeting and positioning of its brands relative to competing brands.’ (p. 8) | Dutta et al. (1999) |

(continued)

Table B.1 (continued)

| Type | Definition | Source |
|-------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|
| Marketing capabilities | ‘... marketing capabilities are the integrative processes designed to apply the collective knowledge, skills and resources of the firm to the market-related needs of the business, enabling the business to add value to its goods and services, adapt to market conditions, take advantage of market opportunities and meet competitive threats (Day 1994).’ (p. 4) | Vorhies (1998) |
| Marketing capability (inside-out, outside-in, and spanning processes) | ‘... marketing capability represents both the upstream or outside-in processes as well as the downstream or inside-out and spanning processes in regard tp business processes.’ (p. 73) | Tuominen (1997) |
| Inside-out capability, outside-in capability, and spanning capabilities | ‘Capabilities can be usefully sorted into three categories, depending on the orientation and focus of the defining processes [...]. At one end of the spectrum are those that are deployed from the inside out and activated by market requirements, competitive challenges, and external opportunities [...]. At the other end of the spectrum are those capabilities whose focal point is almost exclusively outside the organization. The purpose of these outside-in capabilities is to connect the processes that define the other organizational capabilities to the external environment and enable the business to compete by anticipating market requirements ahead of competitors and creating durable relationships with customers, channel members, and suppliers. Finally, spanning capabilities are needed to integrate the inside-out and outside-in capabilities.’ (p. 41) | Day (1994) |

(continued)

Table B.1 (continued)

| Type | Definition | Source |
|-----------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|
| Organizational communication competence | Conceptual definition of organizational communication competence consists of 13 related categories based on telephone interviews listing: friends; personal manner; successful behaviours; good leadership skills; understanding human nature; motivation; professionalism; organizational involvement; organized; feedback; interaction skills; effective verbal style; demonstration of knowledge (pp. 524–529) | Wellmon (1988) |
| Marketing capability | ‘The marketing capability of a firm is a multi-faceted phenomenon. It is a complex combination of the human resources or assets, market assets, and organisational assets of a firm.’ (p. 187) | Möller and Anttila (1987) |

Source By the author

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