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Building Knowledge-creating Value Networks

BETTINA BÜCHEL, *IMD, Lausanne*
STEFFEN RAUB, *HEC Geneva and HEC Lausanne*

Our research has shown that the most valuable activities in knowledge management focus on creating knowledge networks that extend beyond the traditional concept of communities of practice. 'Business Opportunity' and 'Best Practice Transfer' networks have been shown to directly contribute to the creation of value within firms. In order to foster these value creating networks, we propose a four stage process illustrated by examples of the companies that we have investigated in detail.

Keywords: Knowledge Networks, Value Creation, Best Practice Transfer

Introduction

With increasing pressure on top executives to deliver results, they may not consider it important to allow knowledge workers to meet informally in networks. Although most businessmen would acknowledge that today's business environment is fueled by a resource called knowledge, some still perceive knowledge networks as just another flavor-of-the-month management fad. Communities of practice, too, another 'in thing' in knowledge management have been dismissed by managers as a 'maverick' activity that is beyond their control and of no real benefit to the organization. Perhaps they should not be so hasty.

Effective knowledge networks increase innovation and improve organizational efficiency, but they can have even greater benefits if they are structured and receive management guidance. Our in-depth research with 16 companies has led us to a more differentiated picture of knowledge networks, of which individually motivated communities of practice are only one form. Whereas communities of practice primarily focus on the informal gathering of individuals based on shared interests and therefore may seem like more 'unmanageable' endeavors, best-practice and business-opportunity networks, which have more organizational support, contribute directly to the bottom line.

A number of success stories illustrate the experience of corporations. A best-practice network of service technicians at Xerox has built up a comprehensive knowledge base that provides valuable support whenever one of its members is faced with a tricky repair problem. By accessing the pool of shared expertise on repairing specific problems, the network of technicians has reduced repair time, cost of spare parts and dramatically boosted customer satisfaction. Salespeople at Siemens ICN have generated substantial amounts of new business by sharing successful solutions in a worldwide group of sales experts, one of 345 such networks. Holcim, the world's second-largest cement producer, uses knowledge networks in a variety of contexts to improve its operating efficiency and become a 'faster-learning organization.' Deutsche Bank relies on knowledge networks to track employee satisfaction and prevent the departure of key individuals.

These examples, taken from a variety of companies, countries and industries, have a common lesson: knowledge networks have the potential to support knowledge-intensive organizations in increasing efficiency, boosting innovation and maintaining employee morale. The success of knowledge networks is encouraging. Why is it, then, that so many executives still have difficulty coming to grips with the concept? The perceived need to control a network's activities from A to Z may be one reason. However, by creating a productive environment and relinquishing *some* control, managers seriously committed to knowledge networks can provide a fertile context for these groupings of organizational members to help an organization respond to market pressures. The willingness to take some risks and embrace this paradox will be key to success.

What do Knowledge Networks Deliver?

We conducted a survey of members of the Geneva Knowledge Forum, a group of leading multinationals that meet several times a year to discuss recent trends

in knowledge management and to exchange benchmarks and best practices.

Members of the Geneva Knowledge Forum	
DaimlerChrysler	Motorola
Deutsche Bank	Novartis
ERC Group	Siemens
Hewlett-Packard	Swisscom
Hoffmann-La Roche	Swiss Re
Holcim	UBS
Kuoni	Wintherthur Versicherung
Merck	Xerox

The results of the survey suggest that the major benefits of knowledge networks are to be found in three areas: improved efficiency, increased innovation and employee satisfaction.

On a scale from 1 to 7 (1 = 'not at all important'; 7 = 'very important'), how important are the following benefits of networks to organizations?	
Boost product and/or process innovation	5.93
Improve employee motivation and satisfaction	5.26
Increase operating efficiency	4.63

Strengthening Employee Satisfaction and Loyalty Through Network Activity

The spontaneous and informal aspect of networks highlights the importance of the individual level outcomes they generate. Organizational members decide to participate in a network because they see it is in their individual interest to do so. Individual outcomes may reside at a number of different levels. First and foremost, the thrill of participating in an exchange of ideas with like-minded colleagues who share a common interest and skills may be seen as a major boost to organizational members' motivation and satisfaction at work. The feeling of belonging to a group and the particular value of recognition by peers who are perceived as competent judges of one's own ideas and performance may come to reinforce this benefit. In addition, the possibility of honing existing skills and developing new ones through participation in network activities is an obvious plus for individual performance and may improve the likelihood of rapid career advancement. Networks may serve as a 'shop window' for talented employees. Thus, network membership not only contributes to the development of an organizational member's skills portfolio but may also facilitate the showcasing of individual performance towards an audience that is 'ready to promote.'

Networks at Deutsche Bank focus on this particular aspect. The company learned its network lesson the hard way. In 2000, the acquisition of Bankers' Trust prompted an exodus of key investment bankers — taking accounts with them. However, top managers were less concerned by the loss of accounts than by the loss of knowledge, which they feared could potentially have even more severe consequences. After all, the managers who quit the organization had an in-depth understanding of key procedures and they knew best how to manage their customer relationships. In 2000, Deutsche Bank decided that merely tracking turnover was not sufficient, so it made explicit efforts to develop an indicator to measure the commitment of key individuals to the company. The reasons individuals left the bank proved the point that best-practice networks are one of the most important tools for tying highly qualified managers to the organization.

Improving Efficiency Through Reuse of Knowledge

Beyond this individually-driven benefit, networks can also deliver value by reusing existing company knowledge. Xerox is an example of this. Service technicians at Xerox faced an increasingly difficult job: they had to gain experience with a growing number of new models, get to grips with the added complexity of network-integrated photocopiers and find solutions to tricky intermittent errors. A technical network, dubbed 'Eureka,' created a breakthrough in service performance. In 2000, the network converged around a knowledge base with more than 30,000 tips on products. Consulted from the customer's site, it provides essential tips and tricks when a technician encounters an unusual problem. The result: a 10 per cent reduction in service time per case, a substantial decrease in very long or abortive service operations and significantly higher customer satisfaction. In 2000, the system was perceived to have a great deal of untapped potential: Xerox executives forecasted worldwide savings of US$50 million per year in spare parts and service time through a worldwide rollout of Eureka. By 2002, they achieved US$ 150 million savings.

Fostering Innovation Through Leveraging Knowledge

Rather than focusing on existing knowledge, business-opportunity networks can act in more proactive ways, for instance by leveraging on existing knowledge and using this to explore new markets. Since networks are composed of organizational members who share a strong interest in a particular topic and frequently work at the cutting edge of current knowledge, a frequent result of their interaction is the creation of entirely new knowledge — a new solution

to an existing problem, a new technology, a new product or an entirely new business.

Siemens Information and Communication Networks (ICN) was prompted to experiment with networks when it had the daunting task of providing highly integrated solutions with an increasingly significant service component to a diverse customer base in more than 160 countries. In the old 'product business' — one that Siemens ICN had mastered to perfection — innovation used to be a centralized process and learning happened in a 'broadcasting' mode from headquarters to the company's periphery. Faced with the challenges of the new 'solution business,' Siemens ICN recognized that the old procedures were leading nowhere. Learning had to happen in a dynamic network and successful solutions needed to be transferred in real time. Today, ICN's state-of-the-art ShareNet solution does just that. It forms the backbone of a worldwide network of salespeople who regularly share their experiences and insights. As a result, Siemens ICN generated cost savings and revenue increases through joint business development enabled by ShareNet amounting to nearly DM 50 million (€25 million). This figure is forecast to increase to €250 million in the near future. An interesting feature of the ShareNet story is that what had initially been developed as an internal solution became a product sold to other companies. This illustrates that networks can directly contribute to the growth of an organization.

Understanding Different Types of Knowledge Networks

Based on our observations of networks within companies of the Geneva Knowledge Forum, knowledge networks extend beyond the more widely used concept of communities of practice. Communities of practice have been described as 'groups of people informally bound together by shared expertise and passion for a joint enterprise' (Wenger and Snyder, 2000, p. 139). This neglects the organizational support that networks can benefit from and the value that they can contribute to the organization and not just to individuals. In our research, we have identified knowledge networks of four types along two dimensions: networks that primarily focus on individual benefits vs those that focus on organizational benefits; and networks that are self-managed vs those that are supported by managers (Figure 1).

Hobby and Professional Learning Networks

Both of these networks conform to the traditional concept of communities of practice. They focus on individuals. *Hobby networks* are based on individual interests, e.g. tennis, skiing, etc. and usually do not receive extensive management support. Individual satisfaction is at the forefront of these networks with the underlying idea that individuals satisfied at work are more likely to produce expected results.

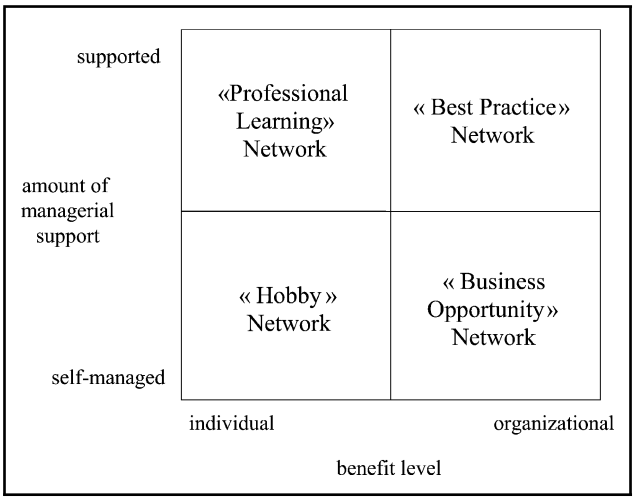

Figure 1 Four Types of Knowledge Networks

Professional learning networks extend beyond hobbies by building the individual skill base. If their importance is recognized, they will receive management support. Knowledge transfer in these networks is spontaneous and ongoing, a natural by-product of work and mutual support (Lave and Wenger, 1991). The value of knowledge to be transferred is determined not by an 'official decree' but by the potential user/recipient who declares an interest in the transfer. Although the prime benefit may lie with the individual, these networks have been said to lead to higher productivity based on individually acquired knowledge.

Best-practice and Business Opportunity Networks

These are the types of networks that we see directly contributing to the bottom line. Networks focusing on the transfer of best practices work towards organizational benefits and are more often than not supported or even mandated by management. *Best-practice networks* are essentially institutionalized forms of knowledge sharing in organizations. They do, however, differ from the more traditional model of best-practice transfer. Whereas best-practice transfer has traditionally been regarded as a unidirectional process from a (superior) source unit to a recipient unit supervised by a high-level 'transfer coalition' (Szulanski, 1996), best-practice networks are characterized by multi-directionality: each member and each unit can, in principle, learn from all the others. Responsibility for a successful process lies with each and every network member involved in the transfer. Although the success of traditional knowledge transfer is measured in terms of a close replication of source knowledge in the recipient unit, networks concentrate as much on problem-solving and cre-

ating new knowledge as on the transfer of existing knowledge.

Business opportunity networks are business-driven, entrepreneurial networks, which are potentially the most innovative and attractive from a growth perspective. A group of individuals genuinely interested in creating the next new product or service requires room to develop an idea that does not necessarily fit in the existing business model. Unlocking existing business potential, these networks thrive on breaking company rules until the day comes when financial resources and therefore management support are needed to support ramping up the new business opportunity. The following figure summarizes the key differences between the four types of knowledge networks in terms of emerging interest and outcome with the focus here on best practice and business opportunity networks (Figure 2).

Building Knowledge Networks in Four Stages

Although more and more companies recognize the importance of knowledge networks, they have yet to discover how to build them. Which process leads to the establishment of a successful knowledge network — one that contributes to the bottom line? Our close observation of a large number of successful networks in the Geneva Knowledge Forum and other multinational companies suggests that executives need to pay close attention to four key stages. Knowledge networks need to be *focused* on strategic business/corporate priorities, a *network context* needs to be created, *network activities* have to be routinized, and *network outcomes* must be leveraged. Each of the four stages must be carefully addressed in order to reap the full benefits of a network (Figure 3).

Stage One: Focusing the Knowledge Network

Like every new concept, knowledge networks are regarded with a certain degree of suspicion — mainly due to the fact that they are less controllable. Our experience shows that networks enjoy a high reputation and deliver the best results when their activities are closely aligned with the strategic priorities of the business or corporate context they are operating in. Links between members of the network are created around these priorities.

Aligning with 'Burning Issues'

One possible step towards close alignment is to make sure that knowledge networks form around topics that are at the heart of the business — so-called burning issues. Holcim, headquartered in Switzerland, is a case in point. Holcim's vision is built around the goal of becoming a 'faster-learning organization' by fostering knowledge-sharing activities at all levels of the company (Büchel and Probst, 2001). Top management was disappointed with the efficiency of the company's operating equipment, one of the key variables for measuring operational success in a cement manufacturer. Rather than taking unilateral action, one of the top management team executives with technical responsibility entrusted the issue to a network established around technical competence.

Members of this best-practice network analyzed the problem and proposed that both technical and social skills were necessary to ensure the right people were connected with each other to solve the underlying technical problems. The network's recommendations led to the establishment of circles of technical experts which were asked to share their technical expertise with low-performing cement plants in the Holcim empire.

One of the success stories of networks in action at DaimlerChrysler concerns the 'Tech Clubs'

	HOBBY NETWORK	PROFESSIONAL LEARNING NETWORK	BEST PRACTICE NETWORK	BUSINESS OPPORTUNITY NETWORK
INITIATION	• value of knowledge (practice) defined by potential users/recipients	• value of knowledge (practice) defined by potential users/recipients, yet validated by management	• value of knowledge (practice) officially sanctioned • area of knowledge transfer defined by management	• value of knowledge driven by business • opportunity-driven knowledge creation
OUTCOME	• focus on member satisfaction	• focus on improving skill level of network members	• focus on organizational efficiency • replication/institutionalization of existing knowledge • 1 + 1 = 2	• creation of new knowledge • innovative products or services • 1 + 1 = 3

Figure 2 Networks Revolutionize Knowledge Transfer

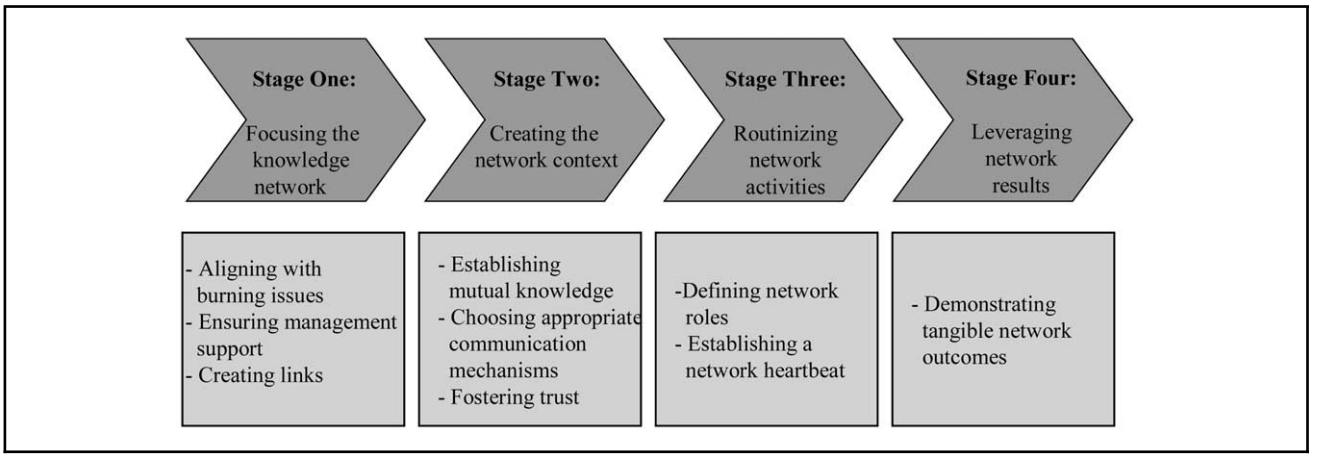

Figure 3 Four Stages of Network Development

developed at Chrysler in response to challenges that arose from the company's move to a car-platform structure. Although the platform concept yielded significant benefits in terms of cycle time and R&D cost, it also created problems: lack of coordination in supplier relationships, multiple versions of essentially identical parts, communication gaps, lessons learned that did not travel and individual expertise that quit the company. Organized along major disciplines in the product-development process (e.g. body, chassis, power train, energy management), the Tech Clubs successfully tackled these problems, promoted the sharing of lessons learned across different car platforms and documented their results in the so-called Engineering Books of Knowledge (EBoK), each representing DaimlerChrysler's state-of-the-art knowledge on specific engineering issues. Close alignment of this best-practice network around efficient platform management ensured the continued attention and support of top management. In addition, attendance at Tech Club meetings was high because employees saw the value of the network activity for their own job. Today, DaimlerChrysler manages 140 networks of this type.

Ensuring Management Support

There is a direct link between the focus of a network and its ability to obtain management support. For networks that are developed around burning issues, time spent on and participation in the network are more likely to be appreciated than questioned. As evidence from the various cases we observed shows, the use of best-practice networks for sharing and leveraging organizational knowledge tends to be impossible without explicit management support. This does not necessarily mean having the attention of the top management team for each network. It does mean, however, identifying a senior management champion who genuinely believes that the specific network will build skills that are relevant to the organization. This belief then translates into nurturing existing relationships between network members or fostering the establishment of new links between people.

Managers have a number of different levers for encouraging participation in networks. They may decide to budget a certain number of man-days for network participation as an explicit procedure to build skills and knowledge for their business. They may also contribute resources to sustain the proper functioning of networks, e.g. resources for building a communication and information technology infrastructure, for hosting events or for covering travel and other expenses occasioned by network activities. Holcim ensured management support for its best-practice networks by asking each executive committee member, in addition to his regional responsibility, to chair a network such as, for instance, the technical services network, responsible for the technical performance of its 129 manufacturing facilities.

Creating Links

The seed for network activity is formed when links between its potential members are established around a burning issue. Contrary to conventional wisdom, identifying people with a certain expertise in the organization is not always a trivial task and its complexity rises exponentially with size. 'If only Dupont knew what Dupont knows' is typical of the lament increasingly expressed by executives in large (multinational) firms. Thus, establishing links between potential members of a network allows them, as a first step, to know of each other's existence and (shared) interests. As a result, they should be able to make a rough assessment of the possible benefits of network membership as well as of the likelihood of achieving a critical mass of network members.

Again, being focused on a burning issue clearly facilitates the initial establishment of network links. Consider the experience of Siemens' chief knowledge officer Günther Klementz. He set up the first face-to-face meeting for all business unit managers to discuss the use of consultants at Siemens. With more than €250 million spent annually on consultant fees, many executives at Siemens had independently been seeking ways to reduce costs, increase the quality of

service and improve the contracting process. This shared interest in an important issue formed the basis for membership and involvement of key players in the network. As the best-practice network started establishing guidelines for contracts and specifying quality standards for the use of consultants, the interest of other managers increased.

Stage Two: Creating the Network Context

Knowledge networks essentially form a parallel structure that exists alongside the more traditional boundaries of functional departments, product groups or business units. In order for them to be recognized as environments for productive activity in the organization, the network coordinator must take care to create a network context that enables the sharing of knowledge. This includes laying the groundwork for effective cooperation within the confines of the network by fostering trust.

Establishing Mutual Knowledge
One of the early challenges for a nascent network is to understand the variety of contexts in which the different organizational members — often from different locations — are working. Knowledge that is to be shared in a network may be difficult to understand without additional knowledge about the context in which it was generated and in which it holds true. Applying this knowledge in another situation requires understanding of the differences between the 'sending' and the 'receiving' contexts (Szulanski, 1996). In other words, 'mutual knowledge' is required. Mutual knowledge can be characterized as shared experiences or close mutual understanding of the respective contexts of individuals.

> *"'If only Dupont knew what Dupont knows' is typical of the lament increasingly expressed by executives…"*

Another of Holcim's networks, the 'electricians' circle,' is a case in point. Focused on sharing experience between shop floor electricians in Holcim's plants around the world, the network got off to a slow start. Knowledge transfer just did not happen. The network's activities finally got off the ground when network leaders decided to hold rotating three-day meetings in different plants, including extensive plant visits and presentations on the problems encountered in each location. Understanding firsthand the different contexts in which their colleagues operated allowed the network members to create mutual knowledge. This allowed them to make sense of different work environments, identify shared problems and communicate solutions and individual experiences in a meaningful way.

Members of the Seed Oil business-opportunity network at Dow Chemical created mutual knowledge around a shared document. The 'chicken feet' template — so named because of its distinctive shape — was stored at a central site remotely accessible by everyone. It laid out the strategic goals of the project, the next steps to be completed to achieve these goals, hypotheses to be tested in the field and new findings that verified existing hypotheses. During each telephone call or teleconferencing meeting, the 'chicken feet' template was used to help the team understand what progress had been made and what the next steps were.

Choosing Appropriate Communication Mechanisms
Choosing between alternative forms of communication is key throughout the life of a network. Contrary to conventional wisdom, providing access to a maximum number of communication technologies, such as intranet, e-mail, Net meetings and teleconferences, should not be the prime occupation. Instead, the focus should be on the smart choice of different communication means, i.e. the degree to which they are adapted to the particular challenge of the communication situation.

Different communication mechanisms vary in their ability to foster trust, resolve complex issues or facilitate rapid interaction. Effective knowledge networks consciously choose different media for different purposes. In the early stages of network development, face-to-face meetings of potential network members dominate. This reflects the need to become acquainted, sensitize network members to the importance of contextual differences and develop trust. In subsequent communications, other media, such as e-mails or teleconferencing, become more prominent.

Research on virtual teams, which holds a variety of important lessons for knowledge networks, has shown that successful virtual teams select media according to task complexity and task interdependence. Complex tasks – as characterized, for instance, by the number of issues to be discussed, the amount of contextual information included as well as the crossing of cultural, organizational or professional boundaries — require 'richer' media allowing for immediate feedback through multiple senses, e.g. body language or tone of voice. Similarly, a higher level of task interdependence — i.e., tasks that depend on the fulfillment of other tasks before they can be carried out – should translate into the use of richer media and a higher frequency of interaction (Maznevski and Chudoba, 2000).

The experience of the R&D network at Dow Chemical supports these findings. Members of the business-opportunity network had face-to-face meetings to address strategically complex and multi-dimensional

issues, and these were interspersed with telephone calls and e-mails for operational clarifications and information exchange. Ensuring that the face-to-face meetings were rotated between the locations of the different network members helped each participant gain a better understanding of the different contexts in which work was being carried out.

Fostering Trust

The old adage 'knowledge is power' certainly applies in the context of knowledge networks. In order to overcome the hoarding of information, trust is necessary to pass on tacit knowledge from one network member to another. Building trust can therefore be considered the foundation of knowledge generation within networks. Accepting the contributions and suggestions of other network members requires trust in each individual's expertise. In addition, given their similarities in terms of interests and skills, network members are likely to interact in more competitive situations outside the network. Thus, sharing one's expertise with other network members requires trust that shared knowledge will not 'be used against oneself.'

Trust in networks is built through repeated rounds of interaction that allow network members to make judgments about the trustworthiness of others. However, trust in networks should not be taken for granted, as illustrated by an R&D network within Dow Chemical. When members of this business-opportunity network who were working from different locations talked to each other, they primarily used e-mail. Interpersonal conflicts emerged as a few key people thought that commitments were not implemented. Only when they met face to face to get to know each other and established an understanding of each other's skills and behaviors were they able to build trust. Creating a good first impression and establishing a maximum level of trust upfront is a key success factor for effective networks in order to ensure that trust is built on predictability of behavior (Jarvenpaa and Leidner, 1998) and not on fear of being punished.

Stage Three: Routinizing Network Activities

Given the rather loose links between members of a network, our experience shows that a certain degree of routinization of the network's activities is an important step toward effective exchange and continued engagement by its members. Maintaining a steady pace is vital. In addition, in some firms, networks still have to fight against the image of a 'debating society.' In order to justify their own existence and demonstrate their contributions, networks need to be able to show their results on an ongoing basis.

Defining Network Roles

As in any group in an organization, networks require a set of differentiated roles to develop over time. In the most effective networks we observed a pattern of four typical roles that were systematically used to provide a backbone to the network (Figure 4).

The network *coordinator* plays a pivotal role in most communities. Coordinators are the chief organizers, event hosts, troubleshooters and fundamental sources of energy in a network. The coordinator assesses the health of the network on a regular basis and acts as a catalyst connecting network members. As one network coordinator in Xerox put it: 'I try to identify the burning issues and focus on acting as a networker.' When Xerox started setting up networks for its technology research department, each network was led by a generally recognized engineer who served as the network coordinator and typically spent an annual total of three to four weeks on maintaining the network.

The coordinator is assisted by a *support structure* that can take different shapes. In its simplest form it may be an administrative assistant handling the network's operational activities. The assistant's functions may include organizing and posting information generated by network members, acting as a librarian who maintains the network's databases and intranet site as well as scheduling and organizing network meetings. With this sort of support, the coordinator can devote more time to network development rather than having to do network maintenance, an activity that is especially crucial in the early stages of network development. Firms with substantial experience in handling networks often assign the support role to functional specialists. At Holcim, for instance, the corporate human resource and corporate training departments as well as the corporate IT team participate actively in developing networks. They provide ongoing support and coaching to nascent networks in terms of information and communication technology and effective organizing mechanisms.

Highly effective networks rely in most cases on one or more *editors* to validate the content of network work. The Xerox Eureka network has a team of leading specialists who periodically review the network's knowledge base. At Siemens a global ShareNet editor provides support to local ShareNet managers while at the same time ensuring a global synthesis of the large number of local contributions.

Lastly, a *sponsor* role allows effective networks to benefit from top management support. The sponsor, although not part of the network, maintains contact with it, largely through the coordinator, reviews network activities, contributes to keeping them aligned with business/corporate strategy and makes sure appropriate support is available when needed.

Establishing a Network 'Heartbeat'

Unlike more standard varieties of work units, networks usually have to deal with more ambiguity as to their goals, their work processes and the commit-

NETWORK ROLES	MAIN RESPONSIBILITIES	WHO SHOULD BE IN CHARGE?
COORDINATOR	• identifying and linking members • organizing, troubleshooting and energizing	• highly motivated individuals • interested in particular topics • from any part of the organization
SUPPORT	• providing specific resources (e.g. IT and communication media) • assisting coordinator and network members • offering continuous coaching	• corporate staffs (e.g. HR, training, IT) • dedicated staff for larger communities
EDITOR	• validating content • synthesizing and integrating	• content experts
SPONSOR	• providing resources and recognition • guiding long-term strategic alignment	• top management

Figure 4 Who Breathes Life into a Knowledge Network?

ment of their members. A temporal rhythm imposed on the network can generate a much-needed element of stability and bring some routine into network activities. Much as a regular heartbeat allows a sportsperson to perform at a steady level, a network 'heartbeat' has been shown to make a difference in terms of team performance (Maznevski and Chudoba, 2000). The network heartbeat may consist of regular face-to-face meetings or a combination of several contact patterns. In one of the effective R&D business-opportunity networks we observed at Dow Chemical, a regular heartbeat consisted of NetMeetings every Monday from ten to twelve. The key point is that a steady predefined rhythm drives the network's activities, not the other way round.

Stage Four: Leveraging Network Results

Although maintaining momentum for the networks themselves is important in sustaining knowledge creation, it is equally important to transfer the developed knowledge into the wider organization.

Demonstrating Tangible Network Outcomes

To be able to transfer the results of a network, it needs to show that its' outcomes serve the organization. The story of Siemens' ShareNet illustrates the wide ramifications that network work can have for a company. Initially created as a 'professional learning' network by a small group of people in the Information and Communication Network division to help share knowledge internally across locations, the network developed into a business-opportunity network when the resulting electronically based tool, ShareNet, was leveraged into the medical device division. The existing product was adapted to the needs of the medical profession, resulting in the launch of KS@Med as an internal platform for knowledge sharing. Although some modifications were necessary — for instance, the content structure of KS@Med had to be adapted — large parts of ShareNet, such as the 'share and succeed' incentive philosophy, were exact copies of the ICN ShareNet.

The success of ShareNet proved so pervasive that Siemens eventually decided to spin it off as a standalone business. Under the leadership of co-CEOs Christian Kurzke (ex-Siemens VP and inventor of ShareNet) and Olivier Raiman (developer of the Xerox Eureka platform), a new company — agilience.com — now markets ShareNet as one of its core products. The product is hailed as a C-business solution (C standing for collaborative) supporting knowledge exchange in extended enterprises. Siemens sold and transferred its intellectual property rights in ShareNet in exchange for a minority equity stake in agilience.com.

Network members have the responsibility of actively transferring their knowledge to the wider organization. For networks working on burning issues, active marketing may not be necessary as management has an interest in the outcome of their work. For groups where the immediate urgency of their results is not as apparent to management, active marketing of the outcome to other members of the organization will be higher on the agenda.

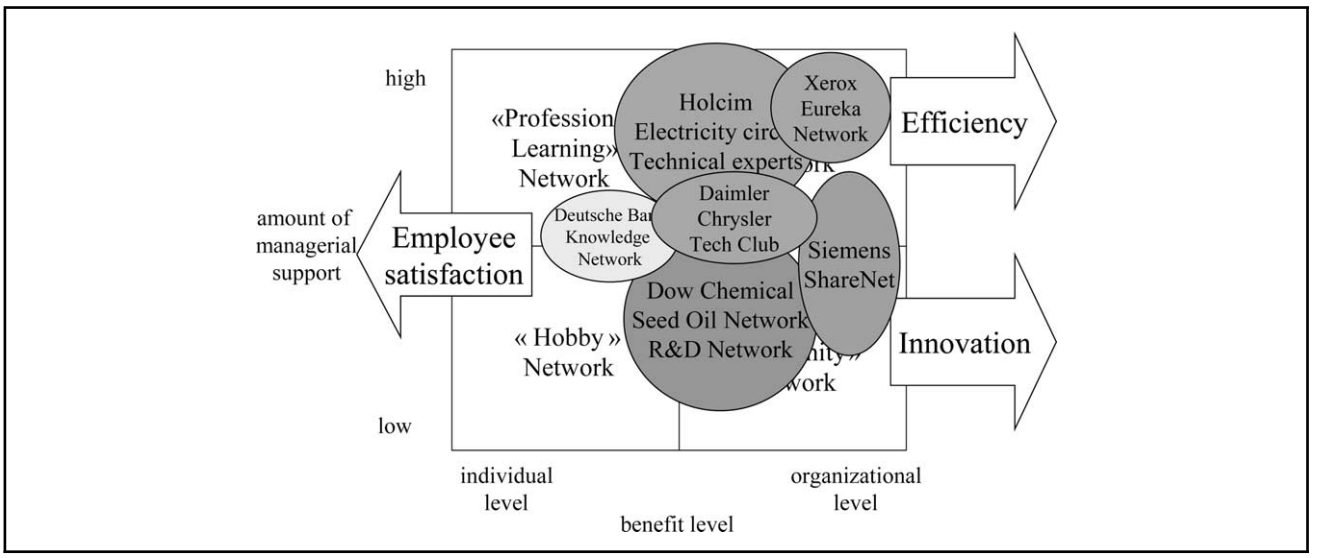

Figure 5 Focusing on Networks that can Produce Tangible Outcomes is Important

Adding Value is Most Important

Throughout these four stages of building networks, it is important to understand what it takes to enable networks to deliver the expected results. Looking at the various activities through the four stages, we asked 25 executives from the Geneva Knowledge Forum to rank the importance of the activities and the level of difficulty of implementation. The results are as follows:

Importance of the Activity*	Activities	Ease or Difficulty of Implementation†
6.37	Demonstrating tangible network outcomes	5.32
6.37	Fostering trust between members	4.95
5.68	Ensuring management support	4.47
5.32	Understanding each other's work context	4.42
6.37	Creating links between potential members	3.79
5.26	Establishing a regular meeting rhythm	3.68
5.37	Focusing on organizationally relevant issues	3.47
5.63	Choosing appropriate communication mechanisms	3.37
5.94	Defining network roles (e.g. coordinator)	2.89

**Ranking is based on a 1–7 scale, where 1 = 'not at all important' and 7 = 'very important'*
†Ranking is based on a 1–7 scale, where 1 = 'very easy' and 7 = 'very difficult'

The most important factor and the most difficult to implement was demonstrating tangible outcomes. Networks may increase efficiency, boost innovation and maintain employee loyalty, yet these results cannot be guaranteed. Executives from companies that we interviewed have implemented a number of different networks, yet the primary focus has been on networks that can quickly lead to a tangible outcome (Figure 5).

Focusing on demonstrating tangible outcomes is important. To achieve this, control may not always be necessary. Since networks are at least partially based on self-selection, mutual support and multi-directional exchange, they are more difficult to guide than traditional organizational forms. But this does not mean that they cannot benefit from managerial direction. Managers can sensitize their members to strategically important issues, make it easy for them to meet, support their activities and leverage their results.

In a nutshell: fostering networks means managing the context rather than all the details of the process. This may involve relinquishing control and accepting some rather unorthodox individual demands, in the expectation of organizational results that will more than outweigh the investment. This potential for an even more significant contribution is based on the organization's ability to continuously innovate by developing new skills and knowledge, in short: the process of capability building itself. Although focusing on the more short-term results of innovation and increased efficiency is a precondition for success, over the long term, knowledge networks lead to the accumulation of tacit knowledge and organizational routines, which are difficult to imitate or replicate and thus may form a basis for sustainable competitive advantage – provided management is willing to take some risks.

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BETTINA BÜCHEL, *IMD, 23 chemin de Bellerive, Lausanne CH-1001, Switzerland. E-mail: buchel-@imd.ch*

Dr Bettina Büchel is Professor of Strategy and Organization at IMD, Lausanne. She has written numerous case studies on organizations world-wide, and four books on organizational learning, comparative HRM, joint venture management and communication technology-enabled knowledge organizations. Her research focuses on learning and knowledge management, communication technology employment and strategic alliances.

STEFFEN RAUB, *Mon Rêve, 1117 Féchy, Switzerland. E-mail: steffen—raub-@hotmail.com*

Dr Steffen Raub is Assistant Professor at HEC, University of Lausanne and Adjunct Professor at HEC, University of Geneva. He is co-founder of the Geneva Knowledge Forum and author of Managing Knowledge *(with G. Probst and K. Romhardt, Wiley and Sons). His current research focuses on process moves enacted by successful knowledge managers.*