Paradoxes and Prerogatives in Global Virtual Collaboration

Case study findings from several corporate environments suggest that successful virtualization does not depend on the degree of technological sophistication. It’s how the tools are used that matters.

Increasing virtualization of the work environment is requiring people to manage relationships, share knowledge and expertise, and coordinate joint activities in entirely new ways. Collaborative technologies make virtualization possible. These technologies range from electronic meeting systems and videoconferencing to newsgroups and calendaring systems (see box). Even such traditional technologies as the telephone and email play a critical role in supporting virtualized work environments.

Organizations that use collaborative technologies expect to share resources, manage relationships, and bring dispersed skills and knowledge to bear on joint projects that span global operations. Yet employees complain they are not motivated to use the technology, do not have the time or skills, or do not see rewards for participating. Why is reality so distant from the ideal?

We address this question using data from case studies collected over the past two years via interviews, participant observations, electronic transcripts, and informal conversations. The data represents multinational companies using collaborative technologies for a variety of tasks and degrees of virtualization. The results suggest both paradoxes and lessons learned about global virtual collaboration.
The Paradoxes

Collaborative technologies in virtual environments enable better face-to-face meetings. Geographically dispersed work groups can draw upon collaborative technologies to support rapid formation and continuing development of relationships, common goals, and communities of interest. The senior leadership team at Shell Services International comprises 18 globally distributed people who make decisions on strategic issues of high impact at three in-person meetings per year. They use simple technologies such as telephone conferencing and email for ongoing collaboration between meetings. A document management system for sharing briefing materials proved too difficult to use and update because team members traveled so much. Other technologies would be tested as they became more generally accepted.

The Central and Eastern European node within Shell Europe Oil Products (SEOP) Retail Network relies on a core retail team and an extended team of planners, engineers, and other staff. Occasional face-to-face meetings are meaningful from ongoing virtual collaboration seen as essential for accomplishing detailed tasks. Team members are trained in trust building, communication etiquette, agenda sharing, and timely response. NetMeeting is viewed as ideal for communicating management decisions to the rest of the team and for sharing documents. It also alleviates the need to travel long distances to meet. Email, phoning, and scheduling software supplement this environment for sharing knowledge and experience.

Cultural differences increase the resolve to connect in virtual collaborations. The need to exchange knowledge and the task-focused design of many collaborative technologies creates an environment where people can deal with cultural differences to a much greater extent than expected, or perhaps in a way that is different from traditional venues. Virtual asset teams at Shell Exploration and Production are distributed teams of experts brought together for a single purpose—such as developing a new technology—and they disband when the project is completed. Each asset team is provided with training on defining shared objectives, agreeing on roles and responsibilities, and starting an expertise network. Alta Vista Forum is used to access and share data, and email and phoning provide communication among dispersed members. The environment helps team members focus on common goals and bring diverse skills to bear on joint projects. Virtual collaboration between European and Latin American team members revealed instances of misunderstanding due to cultural differences in perception. Although these differences occasionally impeded communication, the structured approach of the technology ensured high task focus.

Cultural differences are seen as a challenge at Monitor Company, a worldwide consulting firm that forms ad hoc strategy teams commissioned by clients. Their Knowledge Network is built with Lotus Notes and provides access to information services, document sharing, and email. These collaborative technologies deliver fast responses to clients by enabling the right mix of people and knowledge matched to specific client problems.

Simple and adaptable technologies enable more complex virtual collaboration. Virtualization means rapid change, high diversity, and distributed resources. Flexibility is more important than ever and successful technologies combine simplicity with adaptability. Solvision embodies this idea, since it exists only as a virtual organization communicating solely through collaborative technology. Rather than a physical office, this consultancy provides each employee with a laptop, GSM phone, and an ISDN connection to communicate with each other and clients. The company’s intranet runs Livelink, which provides access to profiles, agendas, project information, and knowledge communities. Consultants and clients may physically meet at Solvision’s Grand Café to establish social contact.

Even in traditional work environments, simple collaborative technologies enable more complex activities to be carried out. Through Arthur Andersen’s Knowledge Xchange System—which uses Lotus Notes on the company’s internal worldwide network—all employees have access to over 2,000 databases. These databases contain information about projects, methods, tools, technical specifica-
tions, contacts, and best practices. Consultants use email (primarily from client sites) to communicate and databases to customize services. In-house developers collaborate on innovative products using email and application-sharing programs. Senior managers and partners use videoconferencing for meetings with U.S. headquarters and other international offices.

Communities arise outside explicit technology design. Truly networked organizations find that people go beyond explicit designs for communication to create fortuitous links. These unexpected communities of diverse knowledge can foster innovation. A knowledge management and organizational memory information system at Cap Gemini Ernst and Young makes it possible for people to connect in entirely new ways. Consultants can move freely through the organization, forming hybrid projects and switching expertise among departments, thanks to the knowledge marketplace on the company’s state-of-the-art intranet. Questions can be posted on specific issues to which people within the firm generally answer. The virtual space on the knowledge marketplace is divided into consultant-defined subjects known as “marketspots.” When someone posts a question or an answer in a marketspot, its members receive an email message. The consultant can also see short biographical data about other consultants within the marketspot. Consultants can locate colleagues who have marketspot experience, enabling them to connect on the basis of their expertise. In this way, special interest communities have emerged within the organization and brought the diverse skill and expertise of its globally distributed consultants to bear on specific projects.

The Prerogatives
These experiences show virtual collaboration matters. Collaborative technologies present opportunities for sharing knowledge and skill, for mobilizing resources toward joint efforts, and for providing more innovative and customized products and services. It is a prerogative for those able to master global virtual collaboration to tap into the value of their emerging virtual communities, manage and build on their core competencies, and draw upon networks of personalized interorganizational relationships.

Virtual communities have implications for the creation of knowledge in virtual organizations. Communities of minds evolve in virtual spaces and act on social networks to create communities of practice. Virtual collaboration supports the creation of communities of practice where people work together to achieve joint goals. These communities comprise individual experts, groups, and even organizations that can access each others’ valued information and resources. An organization may tap into the assets of other organizations by mobilizing its own members or directors who belong to these other organizations. Politically active organizations gain access to politically relevant resources through members and directors. By cultivating diversified ties to large numbers of community organizations capable of supplying resources, an organization’s or a group’s dependence on a single source is significantly reduced. Furthermore, collective action through communities of practice takes place by formally allocating people and resources to tasks and providing mechanisms for coordination. Collective action can be mobilized through virtual spaces supported by electronic communication and group decision support systems.

The main challenge facing modern organizations is recognizing and maximizing core competencies. While core competencies may be codified within corporate databases and organizational systems, they are most often dispersed in different parts of the

Lessons Learned
• Management motivation has a direct effect on virtual collaboration.
• Collaborative roles emerge, but must be made more explicit.
• Tasks that benefit most from virtual collaboration are those requiring knowledge sharing, structure, and detailed teamwork.
• Cultural diversity can enhance the value of virtual collaboration.
• Training is important for successful virtual collaboration and successful training programs put work practices at the forefront.
• Technology is a device, not a driver, of virtual collaboration.
organization, lie within the minds of different employees, and are created through personal interaction. Sharing this personalized knowledge is supported by collaborative technologies. For example, virtual collaborations about how to solve a particular product defect are recorded and become part of the organization’s memory, to be referenced later by other employees facing similar situations. Used this way, virtual collaboration enables the creation and maintenance of knowledge networks through which people in different parts of the organization cooperate and consult with each other to provide knowledge-intensive services.

We are witnessing a progression from networks supporting formal interorganizational relationships such as strategic alliances, to a world in which the key value of virtual collaboration is the personalization of interorganizational relationships. Nonroutine, interorganizational relationships are facilitated, and routine relationships are changed, when decisions made in virtual workspaces are seen to be legitimate. This has implications for the provision of customized services provided jointly by a number of organizations.

Moving Forward

The accompanying box lists guidelines for reaping the benefits of virtual collaboration in the face of the paradoxes discussed here. The following strategies are also essential for successful collaborations:

- Develop and communicate norms across remote and diverse units.
- Develop and sustain shared goals within diverse groups.
- Identify and support interaction of like-minded individuals or special interest groups across traditional boundaries.
- Foster exchange of personalized knowledge.
- Expand boundaries of knowledge beyond the organization’s walls.
- Mobilize distributed resources quickly.
- Match people and other resources to rapidly changing needs.

Collaborative technologies can provide enduring and empowering prerogatives for virtual collaboration by fostering the emergence of virtual communities, enabling core competencies to be maximized, and personalizing interorganizational relationships. Serving the needs of team members is the starting point for these payoffs from global virtual collaboration.

Sajda Qureshi (squareshi@fac.fbk.eur.nl) is an assistant professor of Information Management at Erasmus University, The Netherlands.

Ilze Zigurs (zigurs@spot.colorado.edu) is Mutual of Omaha Chair of Information Science and Technology at the University of Nebraska at Omaha, NE.