# Trust in Virtual Enterprises

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## INTRODUCTION

For a virtual enterprise(VE) to be competitive and successful in a dynamic environment characterized by constantly changing customer demands and technological innovations, it must be capable of rapid adjustment in order to reduce the time and cost needed to deliver to the customer a quality product. The success in the agile competition naturally depends on the effective operation of the VE.

Trust has been recently regarded as the foundation of the digital economy (Keen, 2000; Stewart et al., 2002). The e-business environment is characterized by:

a) the impersonal nature of the online environment;
b) the extensive use of communication technology as opposed to face-to-face transactions;
c) the implicit uncertainty of using an open technological infrastructure for transactions; and
d) the newness of the transaction medium.

Given these attributes, trust development in VEs presents significant challenges because it is difficult to assess partners' trustworthiness without ever having met them (McDonough et al., 2001). Moreover, as the life of many virtual teams is relatively limited, trust must quickly develop (Jarvenpaa & Leidner, 1999). Yet, trust development is deemed crucial for the successful completion of virtual team projects (Sarker et al., 2001). The objective of this chapter is to identify the essential conditions for trust building in VE and to evaluate the likely impact of trust on the operations and management of VE. The study raises a number of issues to be explored by future research.

## BACKGROUND

Trust encompasses constructs as diverse as ethics, morals, emotions, values, and natural attitudes. Further, trust spans interdisciplinary fields, including philosophy, computer science, economics, and organizational behavior. Consequently, there is a myriad of definitions of trust. Since the dyadic view of familiarity-based trust does not readily correspond to the reality of the VE environment, which involves a large number of potential partners, the author proposes to define trust as the expectation by one member of ethical behavior on the part of the other member in a joint VE project. This definition emphasizes the importance of trust in organizational relationships and includes the idea of a joint undertaking, implying that there is a level of understanding of shared business goals and practices between the partners. Another factor that is implicit in the definition is the role of ethical behavior. Any change in ethics will cause a change in actions and thus influence trust. Finally, the definition implies that the VEs will undertake jointly to contribute to the final outcome.

According to traditional studies, trust builds incrementally and accumulates over time. VE business relationships, however, are characterized by project-oriented relationships that may entail no past history nor any plan for future association. In these temporary relationships, time is a vital but often elusive component in the trust building process. This does not mean, however, that trust cannot be apparent in temporary groups. On the contrary, McKnigh et al. (1998) have shown that trust in initial relationships can often be high. Further, Jarvenpaa & Leidner (1999) argue that trust is maximally important in new and temporary organizations, because it acts as a substitute for the traditional mechanisms of control and coordination.

Creating a VE takes more than just information technology. A study on issues of information technology and management concluded that there is no evidence that IT provides options with long-term sustainable competitive advantage. The real benefits of IT derive from the constructive combination of IT with organization culture, supporting the trend towards new, more flexible forms of organization. Information technology's power is not in how it changes the organization, but the potential it provides for allowing people to change themselves. Creating these changes, however, presents a new set of human issues. Among the biggest of these challenges is the issue of trust between partner organizations in the VE (Wong & Lau, 2002). The following section identifies the essential conditions for trust development in a VE.

## ESSENTIAL CONDITIONS FOR TRUST DEVELOPMENT

From the literature, the essential conditions for trust development in VE may be summarized as follows:

a) Common Business Understanding

Researchers such as Wigand et al. (1997) and Fuehrer & Ashkanasy (2001) note that an important element in any business cooperation is the establishment of common business understanding. An earlier work suggests that there are three specifications necessary for the establishment of a common business understanding in the virtual context. The first is a clear product specification: the design, quality, and functionality of the product or service. The second is a specification of the level of cooperation, which requires agreement about deadlines, liability, prices, profit allocation, and staff and resource input. The third is a formal specification of agreements between the virtual partners. In a virtual organization, these specifications need to be communicated clearly between the partners in order to achieve a common business understanding. There is always varying uncertainty between members, however. Therefore, the need to guard against opportunistic behavior varies between the partners (Wicks et al., 1999). This depends on the risk that the member is prepared to sustain as a potential loss, and also upon the partner‘s fear of opportunistic exploitation and the uncertainty of their behavior.

The three specifications (production, cooperation, and agreements between partners) can be achieved by negotiating relational contracts that guide the formation, operation, and dissolution of the virtual organization, thereby facilitating an increase in the level of collaboration-enabling trust. VEs, like other organizations, create fiscal and legal issues that must be clarified, but they lack a formalized legal framework (Fuehrer & Ashkanasy, 1998). Therefore, it is incumbent on the organization‘s members to develop their own guidelines for the operation of the enterprise. Such agreements may include clarification of members‘ tasks and responsibilities, agreement on contracts, allocation of funds, potential liability, and how members will contribute their expertise. In this sense, clear guidelines, spelled out in an early stage of the partnership, serve to reduce misperceptions and to foster the establishment of trust.

Other mechanisms to establish a common business understanding in VEs include development of an organization handbook, design of a mutual Internet site, chat room technology, and the use of team addresses for e-mail. A specific example is Livelink, a software selected by Siemens to enable the creation of a common business understanding through a standard computer interface.

The concept of common business understanding, therefore, shares similarities with organizational identity, which may be described as a set of distinctive and enduring traits that members associate with their organization. Scott and Lane (2000) have proposed further that identity is determined in part by the nature of stakeholder networks. Common business understanding, however, is more akin to Barney‘s broader concept of identity: “the theory organizational members have about who they are” (Barney et al., 1998, p. 103). In this respect, the author agreed with Gioia, Schultz, and Corley (2000) that organizational identity is not necessarily a stable phenomenon, but mutates to suit the prevailing environment. In the virtual context, therefore, a common business understanding may be defined as a transient understanding between network partners as to what they stand for, the nature of the business transactions that they engage in, and the outcomes that they expect—–their “vision.”

Scott and Lane (2000) emphasize that a common business understanding requires the creation of a shared vision, together with communication of mutual aims through a clear definition of the roles and expectations within the team, especially in the early stages of the partnership. In this respect, the process is typically initiated by agreement on a symbolic logo or design for a product or service, since understanding each member‘s role, together with group identification, determines critical behaviors such as willingness to cooperate with others, and willingness to engage in mutual goal setting. The VE partners thus rapidly need to establish group identity and an awareness of mutual needs and expectations, along with the clarification of tasks and responsibilities. In traditional partnerships, awareness and identity are in part shaped by the legal framework that regulates organizational relationships, as well as by networks, artifacts, and the organization chart (Scott & Lane, 2000). In the case of the VEs, however, mechanisms outside of the domain of traditional organizations need to be put in place to establish a common business understanding, which constitutes an important precursor of trust formation (Jarvenpaa & Leidner, 1999).

These examples illustrate how the creation of a sense of shared meaning, member identification, and mission identity, especially in an early stage of the partnership, facilitates collaboration at an individual level and the operation and productivity of the VE as a whole. As such, a common business understanding provides an essential condition for the development of trust within the organization. In effect, a common business understanding provides the virtual organization‘s members with an opportunity to share their perceptions of the organization‘s defined features, and creates a feeling of ownership and trust.

b) High Ethical Standards

Three factors uniquely characterize the virtual organization’s position in regard to business ethics. First, VEs are rarely guided by pre-existing codified laws in which values and standards are written into legal systems