

Trust in Virtual Organizations

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INTRODUCTION

Based on the results of the information and communications technologies (ICTs), a new “digital” economy is arising. This new economy needs a new set of rules and values, which determine the behavior of its actors. Participants in the digital market realize that traditional attitudes and perspectives in doing business need to be redefined. In this dynamic and turbulent environment that requires flexible and fast responses to changing business needs organizations have to respond by adopting decentralized, team-based, and distributed structures variously described in the literature as virtual, networked, cluster, and *resilient virtual* organizations. One main aspect of this approach is that organizations in this environment are networked, that is, interlinked on various levels through the use of different networking technologies. Today, besides the Internet, new solutions are offered: wireless networks.

Collaboration and cooperation are main characteristics of virtual organizations, so the contacts among the users, the human beings, have outstanding importance. A very important element of this human contact is trust. In a networked organization, trust is the atmosphere, the medium in which actors are moving (Castelfranchi & Tan, 2001). Trust is the basis of cooperation, the normal behavior of the human being in the society. The ability of enterprises to form networked systems depends on the existing level of trust in the society and on the capital of society (Fukuyama, 1995). As the rate of cooperation is increasing in all fields of life, the importance of trust is evolving even faster.

In this new organizational environment new methods and techniques of trust building have to be developed, as the conventional rules cannot be applied. According to different experiments, the level of trust between cooperating virtual teams is highly influenced by the type of communication and the duration of contacts.

BACKGROUND

Definition of Virtual Organization

A virtual organization (VO) is a geographically distributed organization whose members have a long-term com-

mon interest or goal bind, and who communicate and coordinate their work through information technology. VO refers to a temporary or permanent collection of geographically dispersed individuals, groups, organizational units—which do or do not belong to the same organization—or entire organizations that depend on electronic linking in order to complete the production process. They are usually working by computer e-mail and groupware while appearing to others to be a single, unified organization with a real physical location. The virtual corporation, virtual, real-time enterprise covers mainly the same terms as VO.

A networked organization has multiple leaders, many informal links, and many interacting levels. The links are the various coordination and “agreement” mechanisms. In a network, high degrees of informal communications (both face-to-face and over electronic networks) achieve success where formal authority and communications in hierarchical organizations often fail. Mutual links and reciprocity across the links are what make networks work. The dominant factor, the collaboration means working together. Effective collaboration means working together efficiently and effectively. A key feature of virtual organizations is a high degree of informal communication. Because of a lack of formal rules, procedures, clear reporting relationships, and norms, more extensive informal communication is required. Formal communication is noninteractive, impersonal, and involves use of media such as reports and structured meetings.

Based on the scope of the work, the projected length of time spent in the virtual work, types of projects, the range of involvement, and the number of personnel involved as criteria four distinct VO types can be differentiated according to Palmer and Speier (1997): permanent virtual organizations, virtual teams, virtual projects, and temporary virtual organizations.

VOs can be handled as a subgroup of the so-called “virtual communities.” Making a short comparison between VO and virtual community, there are several basic differences, so it is worth to make clear these variations. The first significant difference is that VOs are business-/production-oriented organizations with a closed/limited number of people, production units (firms). These units are working together for a longer period to fulfill the goal of the organization, people may know each other personally, the background organization gives a guarantee for a basic

trust level, and a hierarchy exists. The motivation for the people is external.

Virtual communities are fully open (or with slight limitation), mutual interest connects the members; there are no strong connections, motivated by themselves in participation, and without any hierarchy. Since virtual communities are places where computer-mediated communication (CMC) takes place, they involve social exchange of information and social support.

Communication Technologies for VOs

As the basis of VOs are the interdependent, separate production teams/units, the cooperation and collaboration are of vital importance. The structure, the communication systems, and the collaborating people/teams/organizations that define today's organizations characteristics must be harmonized to accomplish complex, demanding tasks. The collaboration is done through different media according to the actual demands of the tasks. The conventional tools are the telephone, fax, and writing letters. On the next level are the computer network-based solutions, for example, e-mail, ftp, and telnet. A higher quality of communication media is the Web-based communication solutions. Through Web pages, secure, easy, and fast communication can be realized.

A new way of connection is the application of different wireless technologies for communication in virtual organizations. Wireless technology means mobility, namely individuals are available independent of location and time. This mobility is an important attribute of today's organizations.

This mobility can be achieved by using different types of wireless networks as satellite communication, wireless wide area networks (WWAN—different types of mobile phone systems, e.g., GSM, GPRS, UMTS, and iMode), wireless local area networks (WLAN, such as Wi-Fi—also called mobile Internet [IEEE standard 802.11a/b/g] and wireless personal area [or Pico] network [WPAN—e.g., Bluetooth, IrDA2]). These networks can be connected, so the user can be reached really at any place through a type of wireless connection.

An important service of mobile phones is the multimedia messaging service (MMS). The multimedia element differentiates MMS from other messaging offers by integrating the ability to send and receive photos, images, and even video clips by camera phones. This message type is significant also in trust building.

WWAN solutions are spreading quickly also in enterprise communication solutions. Developers and service providers offer compact mobile phone-based packages for enterprises that make possible receiving e-mails and browsing company databases from anywhere.

DEFINITIONS AND FORMS OF TRUST

The expression “trust” is used by many disciplines, so there are numerous definitions of the term fulfilling the demands of the actual theory or application. In everyday life, without trust, one would be confronted with the extreme complexity of the world every minute. No human being could stand this, so people have to have fixed points around them: one has to trust in family members, partners, in the institutions of a society and between its members, and within and between organizations' partners. The diversity of approaches is one reason that trust has been called an “elusive concept to define” (Gambetta, 1988).

The structure of trust in digital communication according to Francis Fukuyama (1995, 45) claims that “Trust is the expectation that arises within a community of regular, honest, and cooperative behavior, based on commonly shared norms, on the part of the members of that community.”

According to Luhman (1979), trust can be viewed as a cognitive and social device able to reduce complexity, enabling people to cope with the different levels of uncertainty and sometimes the risks that, at different degrees, permeate our lives. Without trust, an individual would freeze in uncertainty and indecision when faced with the impossibility of calculating all possible outcomes of a situation. Engaging trust automatically can reduce the number of decision nodes that are being analyzed and facilitate the decision-making processes. From a social perspective, trust permits the necessary knowledge sharing of delegation and cooperative actions.

In spite of the numerous different definitions of trust, there are “core” factors that can be found in most of definitions. Willingness to be vulnerable/to rely; confident, positive expectation/positive attitude toward others; and risk and interdependence as necessary conditions are the components that are included in most definitions of trust (Harrison, McKnight, & Chervany, 1996).

Trust appears in different forms. According to different authors (e.g., Luhman, 1979), trust has forms such as the following:

1. **Intrapersonal Trust:** Trust in one's own abilities; self-confidence basic trust (in others)
2. **Interpersonal Trust:** Expectation based on cognitive and affective evaluation of the partners; in primary relationships (e.g., family) and nonprimary relationships (e.g., business partners)
3. **System Trust:** Trust in depersonalised systems/world that function independently (e.g., economic system, regulations, legal system, technology); re-

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