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An Overview of Models for Assessment of Organization Virtuality

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A virtual organization is a network of legally independent organizations and/or individuals that produce products and/or services based on a common business understanding. This new organization structure is posited as radical departure from the traditional, hierarchic, bureaucratic and co-located mode of organizing that dominated the twentieth century. In contrast, the characteristics of the new, virtual organization forms are seen to be dynamic, networked, distributed, digital, flexible, collaborative and innovative. The challenge, however, is to determine which organization as a subject employs virtual form and which not. The answer to this question is decidedly complex as most organizations have forms that are somewhere in between; therefore, it is usually only possible to determine how virtual one organization is on certain aspects. In the other words: what is the level of its virtuality? Several models for the assessment of organization virtuality have been developed by many different authors. The purpose of this paper is to investigate and present all the published models of virtual organization that are publicly available in the world literature. The strengths and weaknesses of all models found are presented, together with their mutual relations.

Key words: virtual organization assessment, virtual organization models, organization virtuality, virtuality assessment

1 Introduction

The virtual organization is a modern organizational construct that allows corporations to face new challenges in a hyper-competitive environment. It could be seen as the opposite of a traditional organization (Bavec, 2003). There are three main characteristics that separate one from the other. Virtual organizations do not have a physical presence but exist electronically on the internet; they are not constrained by legal definitions of types of companies; they are formed in an informal manner as an alliance of independent legal entities. As discovered by many researchers, virtual organizations are the form that many traditional organizations are transforming themselves into; some intentionally by reorganization and some spontaneously, driven by technology.

In this paper, the term virtual organization encompasses profit and non-profit virtual organizations when virtual enterprise, virtual corporation and virtual company belong to the profit virtual organizations. Virtual enterprise or virtual corporation is network of companies, virtual company is network of teams and virtual team is network of people. On the other hand, traditional organization is a business subject that could be a company, institute, institution or public institution (Vila, 1994) that applies traditional, hierarchic, bureaucratic and co-located mode of organizing.

Regarding their impact on the world, the virtual organization presents two different faces. One reveals an ability to enhance the efficiency and effectiveness of management and to achieve greater flexibility of action. The other shows the dissolution of traditional relationships in the course of realizing these desirable ends (Mowshowitz 2002). It is most clearly evident as an innovation in business management, especially within corporation and in e-Commerce. In short, the virtual organization is a disturbing agent of social change and thus provokes ambivalent responses.

A widespread, stereotypical image identifies a traditional organization with a physical place, where people work close to each other. In this ideal organization, working time is standard, relationships have a long-term orientation, and decision rights belong to the owners and are delegated along a univocal and well-defined hierarchy. Even culture is considered to be largely shared among members.

DeSanctis, Staudenmayer and Wang (1999) observe that organizational virtualization is a process affecting four aspects of organizational life:

1. *Space*; the space dimension refers to the extent of spatial dispersion of employees across different locations.
2. *Time*; the time dimension pertains to temporal dispersion; in other words, the degree to which employees operate asynchronously and the duration of relationships.
3. *Boundaries*; the boundary dimension refers to organizational dispersion: the degree to which organizational processes extend the boundary of the focal organization.
4. *Culture*; the culture dimension relates to cultural dispersion: the extent to which an organization consists of employees from different cultures.

Organization virtuality is, therefore, very well defined and understood. Its prerequisites are clear and all the aspects

intelligible. The challenge emerges when we want to observe a particular real-world organization and determine whether it is virtual or not. The emergence of all the presented models is actually the result of attempts to assess organization virtuality.

Some inconsistency in the use of specific terms may be found in the descriptions of different presented models. Those are left intentionally in order to keep the models authentic and not to modify original meaning.

2 The Switching Principle

The Switching Principle is the first assessment model of organization virtuality found in literature. The majority of the researchers agree that Mowshowitz invented the term and set the first definition of a virtual organization. According to Mowshowitz (1999), switching is the key feature of virtual organization. It is the assignment of a new satisfier to a given requirement. Theoretically, switching is warranted whenever an advantage can be gained by changing the assignment of a satisfier to a requirement. "Advantage" can mean lower cost, better quality, improved reliability of supply, etc. Switching calls for soft rather than hard wired connections between the parties in a transaction, and can be used effectively in a wide range of business activities from assembling products to structuring an entire enterprise.

It is perhaps easier to see how production or assembly tasks can be modeled in terms of switching, but the architecture of a business can be modeled in the same way. Take the case of a network of cooperating firms located in different places, an arrangement that is often equated with a virtual organization. Such networks may be established to enhance the business opportunities of individual members. The network arrangement helps member firms to join forces to form a consortium to bid on projects. A certain type of design or manufacturing project may be undertaken by consortium X at one time and by consortium Y at another time. "Switching" in this context means assigning a new subset of member firms to a project type. This switching mechanism is presented in Figure 1.

The possibility of switching undoubtedly adds to organization and managerial flexibility. The question is just how realistic it can be. Specifically, the basic idea of virtuality is that switching can be done relatively fast and without significant additional cost. Assigning a new satisfier to a requirement may cause changes in accounting systems and databases, necessitate the drawing up of contracts, etc. These are the direct costs of switching. There are also indirect costs that arise from management of a virtually-organized task. These indirect costs include the management resources dedicated to analyzing requirements and scanning the marketplace for satisfiers. It becomes difficult to implement all traditional risk analyses, so trust becomes an important decision factor. Switching can be effective only if satisfiers can be substituted with ease. This calls for weak human bonds between the parties to a business transaction.

From the Switching Principle model, it can be assumed that the level of virtuality correlates with the ability to implement the switching principle; i.e. virtuality is not an all-or-nothing-proposition. The essential defining characteristic is the virtually-organized task. Some tasks within an organization can be appropriately organized in a virtual way and others not. It is not a question of an organization being virtual or not being virtual, but rather the extent to which management makes use of switching as a tool.

As the Switching Principle is one of the first models of virtual organizations – if not actually the first, as it comes from the inventor of Virtual Organization expression – is logically somewhat under-defined. Although it focuses on a main critical characteristic of a virtual organization, it neglects some the other characteristics. Nevertheless, the Switching Principle has been implemented in most of the later models.

3 The Model of Business Networking

Klüber's (1998) model is a typical representative of models preferred by the IT experts as they see virtual organizations through implementation of Internet technologies like Electronic Commerce (e-Commerce), which is becoming widely understood in the business-to-consumer market due to earlier market awareness of success stories like Amazon.com. New challenges lie ahead in extending e-Commerce business models. One area is the extension of simple e-Commerce shop

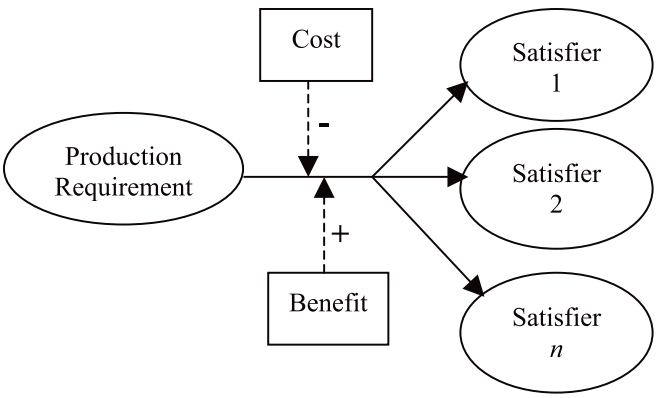

Figure 1: Virtual Switching Mechanism

solutions to offer more integrated e-Business solutions, including e-Services. While lacking the required capabilities within one company, networks and alliances are becoming an attractive means to achieve that. A prerequisite to reap potential benefits is to define an adequate business model that enables decision makers to decide upon these new opportunities. That is the Model of Business Networking.

This model is more general, but incorporates important features of virtual organizations that are highly relevant to management. The Model of Business Networking, as presented in Figure 2 has the following elements:

1. A *Business Bus* is a set of standards that supports the exchange of information, products and services among business partners. It is a logical space where (complex) services and products are flexibly and efficiently exchanged on previously established standards. Its purpose is to define a set of standards that enable easy connections. The standardized infrastructure of the internet is extended to exchanging business information, services and knowledge. The concept builds on the increasing availability of modular e-Services and standards for processes, data, and interfaces.
2. A *Business Port* is an application or service that gives the company the ability to interface with a large number of partners based on standards. Several solutions for Business Ports exist on the market (e.g. SAP Business Connector) and are expected to develop with the diffusion of XML-related standards. These applications or external services build the layer that manages different syntax and semantics based on the standards defined by the Business Bus. It can be seen as customized layer to connect the internal and external IT worlds with high levels of security, performance and service.
3. *E-Services* are Internet-based applications and services offered as individual products to solve a specific business need; they seamlessly integrate with the customer's (business or private) processes. They derive their value from digital value creation and may include physical elements and/or other e-Services. From the internal perspective of an e-Service provider, this includes the selection of standards of the Business Port and the provision of the e-Service.

According to the Model of Business Networking, Integrators and Aggregators are essential elements of networked and virtual organizations. They provide different business services: knowledge, coordination, processing, information and transaction services. They often behave without strict organizational boundaries between business partners. The Business Buses and the Business Ports describe inter-organizational relations and interfaces that mainly define the information structure of virtual organizations.

The level of implementation of the three elements of the Model of Business Networking as well as the presence of Integrators and Aggregators in the virtual organization processes can, therefore, be used for analyzing virtual organizations. However, care needs to be taken when applying this model for assessment of virtual organizations as it does not consider some of the crucial aspects of such organizations.

4 The TEMPLET Model

The TEMPLET model (Meister, 2000) is a purpose built tool that permits organizations to assess their capability to become a virtual enterprise. The guiding principles behind designing process were that the model should be:

1. simple, transparent and easy to change throughout the development process,
2. detailed enough to allow an organization to identify areas for improvement, and,
3. applicable to a variety of industries and organizations.

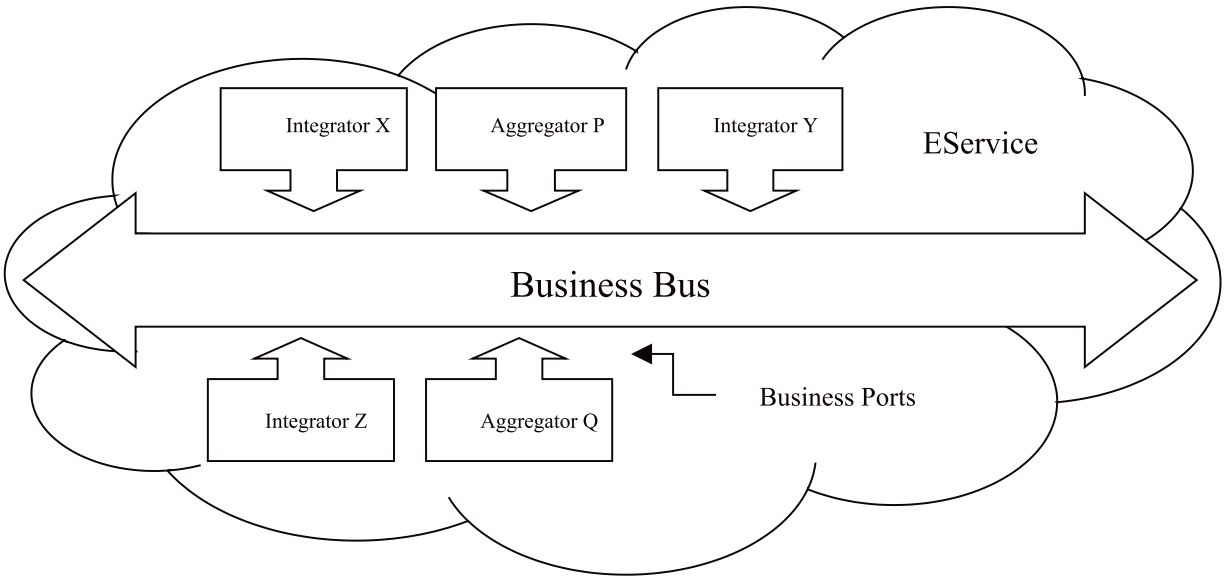

Figure 2: Business Networking Model

The TEMPLET model is a hierarchical model with four major elements: technology, information management, process and organizational.

1. *Technology capabilities* are the infrastructure capabilities required to exchange information with suppliers, partners, subcontractors and customers electronically.
2. *Information management capabilities* are the information representation capabilities required to interpret and manage the electronically exchanged information effectively.
3. *Process capabilities* are the maturity and adaptation levels of the business processes that are linked electronically in the collaboration.
4. *Organizational capabilities* are the flexibility and creativity of the people and organization participating in the electronically linked collaborative venture.

An organization's virtual enterprise capability is a function of those four elementary capabilities. The model is not simply additive in that extremely high capability for one element does not compensate for low capability in another. Indeed, one of the aims of the TEMPLET model is to highlight those areas of competence where an organization needs to develop. The organization's ability to transform virtuality capability into success would be moderated by factors such as industry norms, rate of technological change and other macro-organizational factors. Figure 3 illustrates these relationships:

The development of the TEMPLET (Total Environment for Managing Product, Life-cycle information and the Enterprise's people, processes and Technology) model was undertaken by TEMPLET Inc., an independent organization, based in Canada. The model focuses on virtual enterprises only. In contrary to the other models, the TEMPLET model evaluates organization's capability to become virtual organization. The model assumes that an organization's virtual enterprise capability partially predicts the likelihood of virtual enterprise success.

5 The Three Dimensional Model: virt. cube

According to Scholz (2000), the development of virtual corporations can be perceived as a complex move along three axes:

1. Core Differentiation,
2. Soft Integration,
3. Virtual Realization.

This theoretically-derived conceptualization leads to the virt.cube model (Figure 4) which shows the existence of various types of virtual organizations.

1. *Core Differentiation* is a characteristic of the virtual organization, described by the other authors as Core Competencies (Bleecker 1994; Bavec 2002). Scholz labeled the first dimension of his model "core differentiation" to indicate that not every attempt to differentiate automatically leads to a core competence. If a company splits into smaller parts and if these parts do not gain markets for their products and services, this kind of differentiation does not serve to move into the direction of becoming a virtual company, because the company remains unattractive for virtual partners. In short, core differentiation is a task for strategy and business policy. Taking the current state of organization theory, this task can be solved by analyzing the product mix and concentrating on selected parts.

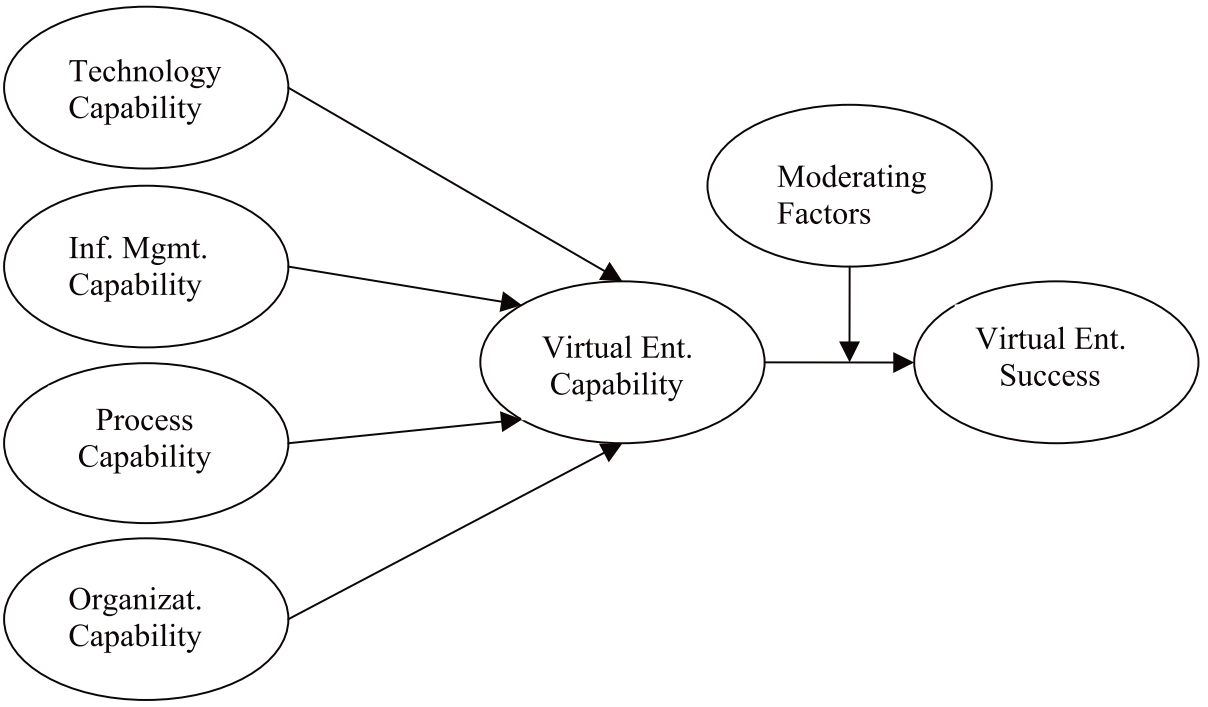

Figure 3: Relationship between the TEMPLET model and virtual organization success

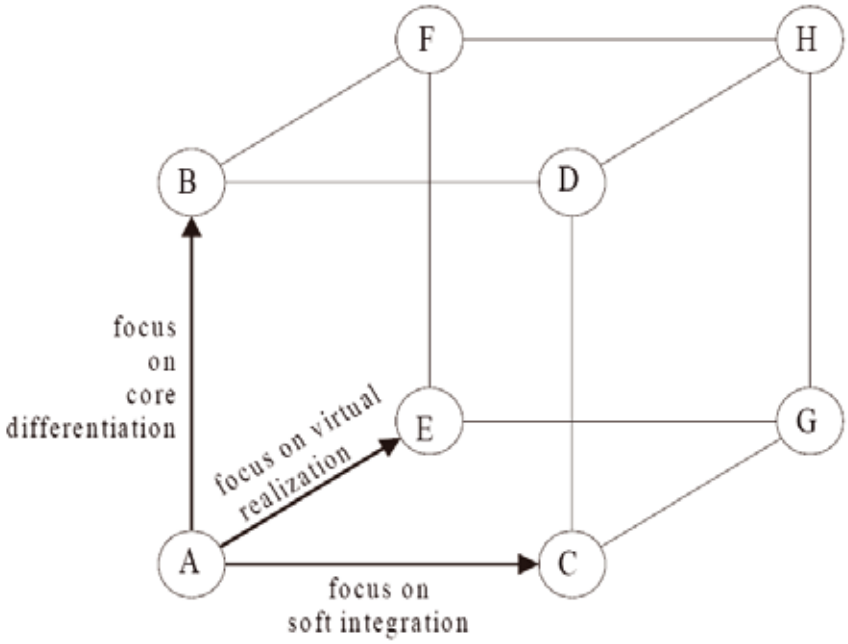

Figure 4: The virt.cube

2. *Soft Integration* is about executing the task of integration. Scholz refers to four promising concepts:
   a. Co-Destiny,
   b. Shared Vision and Shared Goals,
   c. Fairness and Trust,
   d. Culture of Virtuality.

   However none of these mechanisms of integration is structural; they all cover "soft" factors. Dealing with them and bringing them into managerial form is the real challenge.
3. *Virtual Realization* as a technological dimension. Information Technology is the dominant way to accomplish both the core differentiation and the soft integration and, in this way, serves to realize modular system building. Therefore, virtual corporations are strongly linked with IT and particularly with the concepts of virtual reality and cyberspace.

Obviously, the models exhibit more and more characteristics of a virtual organization as they evolve and as virtual organizations actually begin to appear in a real-world. Again, this model is missing some crucial elements of a virtual organization like *Switching*, and does not sufficiently emphasize the importance of the standardization of IT tools.

6 Modeling with Radar Chart

Bavec (2002) presented a case study, an assessment of a government agency. He selected the Customs Administration of Slovenia and attempted to determine whether the agency implemented any features of Virtual Organization. For assessment, he tried to use the Switching Principle and the Model of Business Networking, but he was not satisfied with the result. The models actually confirmed that the agency clearly demonstrates features of contemporary organizations with an efficient utilization of the Internet and even more hidden elements of virtual organization, but he wanted to perform further analysis. In the absence of proven methodologies and indicators for the assessment of organization virtuality, he selected seven basic characteristics of virtual organizations proposed by Mertens et al. (1998):

1. Boundary Crossing,
2. *Complementary Core Competencies,*
3. *Geographical Dispersion,*
4. *Changing Participants,*
5. *Participants Equality,*
6. *Electronic Communication,*
7. *Sharing of Knowledge*.

Bavec ranked each characteristic from 1 to 100 and plotted them on a Radar Chart (Figure 5). The result is a clear visual interpretation of the seven selected aspects of virtual organization. The level of virtuality could be read at a first glance. The problem with this model is that it does not define how to assess each individual characteristic and how to measure the attained levels. Therefore, each researcher could obtain different results when using same input parameters. There are a few crucial elements missing, including the prerequisites for the existence of a virtual organization, like Switching, e-Commerce and standardization of IT tools.

7 The Organizational Relational Model

The Organizational Relational Model was proposed by Migliarese and Ferioli in 2005. They suggest that the organi-

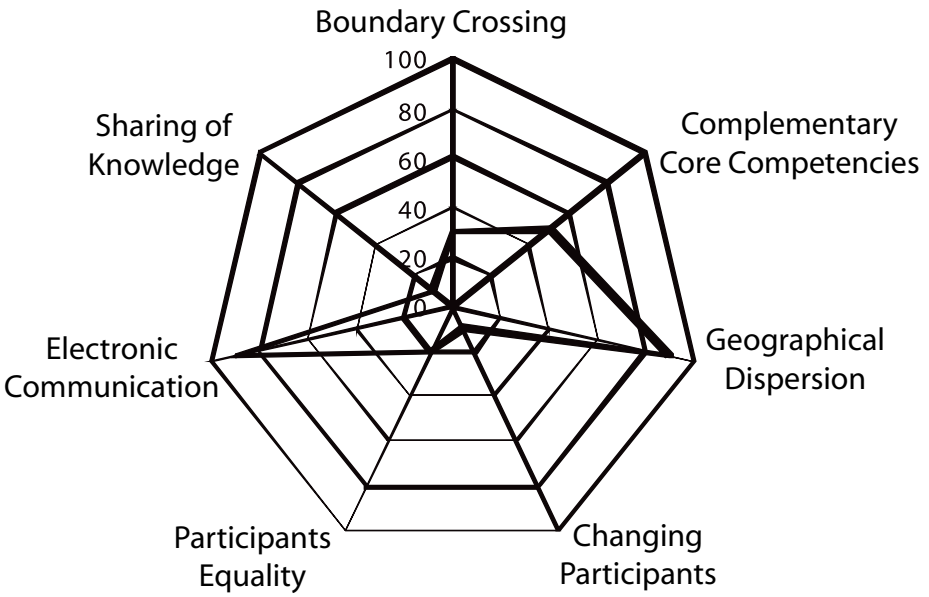

Figure 5: Virtuality assessment with Radar Chart

zational relationships can be described through four axes (Figure 6):

1. The *Tools* supporting relationships: inter-personal contacts (periodic meetings, personnel rotation etc.); group management techniques; IT instruments, etc.
2. The *Goals* shared by organizational actors: for instance, in a client-supplier relationship, the two actors collaborate to achieve quality improvements or to accomplish a common project; without this shared goal, the relationship becomes a simple market exchange;
3. The *Rules* regulating the behavior of actors within the relationship: relational norms define the accepted behavior. They can be tacit or explicit;
4. The *Cultural Background* associated with the relationship: the common assumption reduces the need for negotiation and information exchange (Organizational Culture).

The impact of virtualization on Organizational Relationships can be considered with reference to each of the four axes of the model (Table 1):

1. In virtual organizations, new *Tools* for communication or exchange of information are introduced. These tools are the channels through which new and different relationships can be developed. Compared with tools in traditional organizations, they support relationships which are much more flexible.
2. The structure of interests changes when relationships are perceived as brief and members belong to different organizations/individuals. Members' working lives are no longer tied to the destiny of the organization. Authority cannot be used as a means to align *Goals* as in traditional organizations. Goals must be carefully negotiated in order

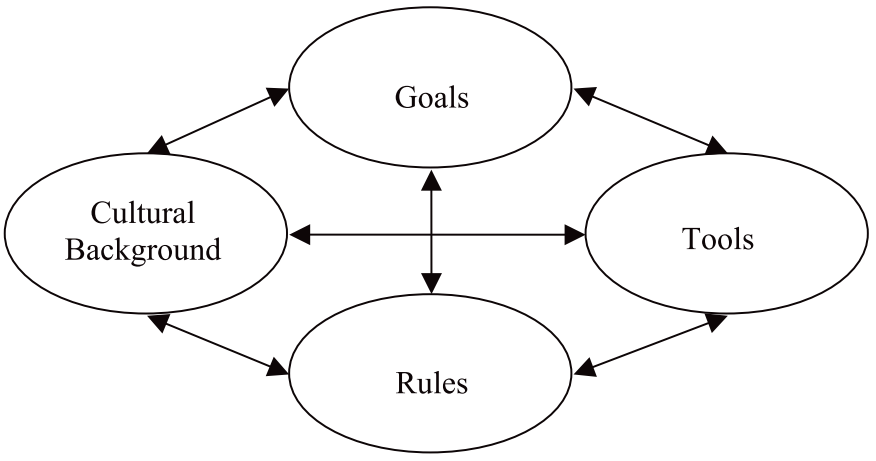

Figure 6: The four axes of the Organizational Relational Model

Table 1: Ideal types of organizational relationships in traditional and virtual organizations

	Traditional Organization	***Virtual Organization***
Tools	Rigid	Flexible
Goals	Imposed	Negotiated
Rules	Institutionalized	Ad Hoc
Cultural Background	Homogenous	Heterogeneous

to consider all the relevant and legitimate interests and to avoid future conflict.

3. A new system of *Rules* has to be developed by a set of partners who do not know each other. In traditional organizations, rules are developed through a long process of trial and error, during which members adjust to each other. In virtual organizations, an ad hoc system of rules must be developed and made operative, with reduced possibilities of making experiments.
4. Different *Cultural Backgrounds* have to be mixed. Languages, cognitive schemes and values compatibility must be evaluated when the virtual organization is formed and their interaction has to be managed throughout its lifecycle.

The Organizational Relational Model is very well defined and indicates crucial elements of a virtual organization. It only lacks a few more elements and an instrument to measure each individual characteristic.

8 The ISSAAC Model of Virtual Organization

While developing his model of virtual organization, Travica (2008) followed an idea that the model should be:

1. Able to determine which organization is virtual and which is not,
2. Able to assess the breadth and depth of virtualization,
3. Accompanied by clearly stated assumptions and definitions,
4. Suitable for guiding research and explaining the core aspects of any virtual organization form.

He selected six basic characteristic of virtual organization, similar to Bavec, only with different attributes that seem more sophisticated. He called his model ISSAAC after the initial letters of its six dimensions: Interoperability, Special Product, Switching, Anchoring, Aggregation, and Cybernization. Based on case studies the author conducted, this depiction of the model shows the possible direction of relationships (as shown in Figure 7), a detail that was absent in author's previous publications of the model.

1. *Interoperability* refers to the synchronization of operations with partners involved in a virtual organization. This includes the domains of communication and co-operation. The technological basis of Interoperability was generated with cross-platform computing, system inter-connectivity and open source software. All that clearly indicates all the elements of the Model of Business Networking.
2. *Special Product* refers to non-standard characteristics of the goods or services, delivered by individual members or jointly. Travica believes that deliverables of virtual organizations differ from mass-produced ones in being customized, specially ordered, niche-fitting, rapidly developed, or based on a unique combination of competences (Complementary Core Competencies in Bavec's model) and that Special Product reflects the end-purpose of a virtual organization and sets it apart from the network organization, routine outsourcing and distributed teams. Following the principle that any system is defined by the type of its output, Special Product can be considered a filtering condition in the preliminary identification in a group of observed organizations.
3. *Switching* refers to an organization's or individual's alternating of their membership in different virtual organizations according to Mowshowitz (2003), as described in The Switching Principle.
4. *Anchoring* focuses on the relationship between the technological condition and organizational strategy, management, organization of work, organizational values and practices, and political aspects. Even if information and communications systems are open to collaboration with external partners, virtualization is unlikely unfold if these have no appropriate match in the organizational conditions that would facilitate interoperability, aggregation, and switching. In other words, an organization with underdeveloped Anchoring is unlikely to become more virtualized in other respects.
5. *Aggregation* refers to networking electronically with other organizations and individuals to form a virtual organization. While this dimension reflects the network character, the term "aggregation" is preferred in order to signify a looser coupling between organization members. One facet of Aggregation is the flexibility of organizational boundaries.
6. *Cybernization* refers to an organization's functioning in the space that is created by information systems and electronic information flows. Cybernization reflects the necessary role of information and communication systems. This dimension helps to explain the relationship between the virtual organization and the network organization. A network organization that has moved most of its business processes into cyberspace or that relies importantly on electronic linking can be qualified as a virtual organiza-

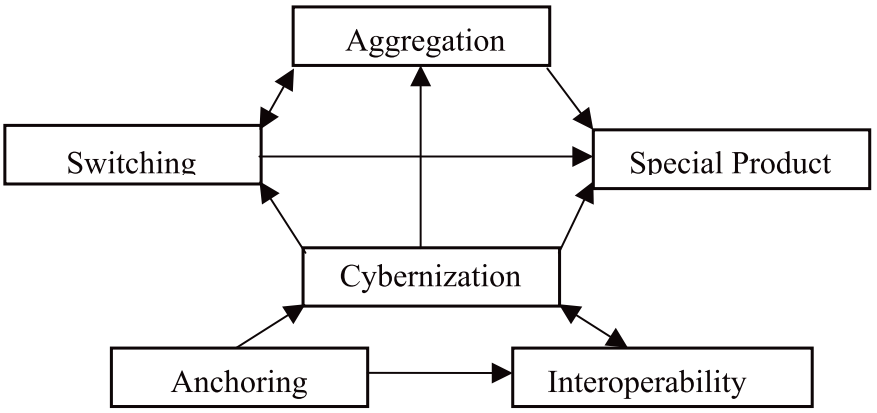

Figure 7: The ISSAAC Model of Virtual Organization

tion. Conversely, a network organization that predominantly rests on processes conducted in physical space and on physical links remains in the category of network organization.

This model successfully defines the major attributes of a virtual organization, but unfortunately does not provide a clear response to first two goals set by the author. Nor has it defined how to assess each individual characteristic or how to measure the levels, as with the ISAAC model.

9 Comparison, analysis and recommendations for practice

Table 2 compares main parameters of the models presented. The comparison analysis leads to the following conclusions and recommendations for practice:

1. Any presented model could be used for assessment of organization virtuality,

Table 2: Comparison of the models

Model	Focus	Strengths	Weaknesses	Recommendations for practice
The Switching Principle	Switching only	Simple and straightforward	Very basic and difficult to use for assessment	Practical for simple virtual / non virtual classification
The Model of Business Networking	Information technology implementation	Practical for IT experts	Neglecting all other aspects	Useful for IT oriented companies that want to improve virtuality
The TEMPLET Model	Virtual capabilities	Simple and transparent, but detailed enough	Emphasis on technology only	Applicable to improve tech. aspects of virtuality
The Three Dimensional Model: virt.cube	Visual conceptualization	Visualization	Missing crucial elements	Difficult to use in practice and uncertain
Modeling with Radar Chart	Assessment of individual characteristics	Well specified and defined with visual representation	Missing classification and interpretation of the results	Recommended for detailed assessment, classification needs to be added
The Organizational Relational Model	Organizational relationships	Well defined, indicates crucial elements	Missing some elements, under defined measurement	Difficult to use for assessment in practice
The ISSAAC Model of Virtual Organization	Individual characteristics and their relationships	Properly defined elements with relationships	Missing classification, no visual representation	Thorough and practical, visual representation or classification needs to be added

2. Different models should be used for different purposes, based on recommendations,
3. All presented models could experience further enhancement,
4. It is reasonable to develop a new model that would comprehend the findings of this paper and bring new value,
5. The new model should include best features of presented models,
6. The new model should contain classification and interpretation of the results,
7. The new model should provide clear visual representation,
8. The new model should be practical and suitable for research. It should contain all necessary elements to deliver repeatable results.

10 Conclusion and further research

Far from being heralds of the End of Organization, virtual organizations seem to be extremely complex systems where organizational aspects play, more than ever, a critical role.

Virtualization can be understood as a process driven by advances in information and communication technology, but even more by changes in the competitive environment. These changes involve both resources and competitors and can be summarized as an overall increase in market turbulence. Organizations need to become more flexible and rapid in reacting to threats and opportunities. The main feature of virtual organizations, then, is the use of technological and organizational tools to relax some traditional constraints on their activities and to allow dynamic partnerships. The intention of the models shown in this paper is to identify those constraints in order to assist particular organizations in eliminating them and to present ways to improve their virtuality and thus flexibility and competitiveness.

This paper is a background for the ongoing research that attempts to develop a new model for assessment of organization virtuality. The model should take into account all the benefits of presented models and in addition complement their inability to deliver reproducible final result itself – the level or organization virtuality. The leading design principles of the emerging model are the ability to clearly identify virtual organizations and to precisely define the levels of their virtuality. The model should include clear graphical representation of the levels attained by the individual aspect of virtuality and an organization as a whole.

References

Bavec, C. (2002). An assessment of the organization virtuality with three different reference models. *Informatica*, 26(4), 347-352.

Bleecker, S. (1994). The Virtual Organization. *The Futurist*, March-April 1994, 9-14.

DeSanctis, G., Staudenmayer, N. & Wong, S. S., (1999). Interdependence in virtual organizations, *Trends in organizational behavior,* 6, 81-104.

Ferioli, C. & Migliarese, P. (1996). Supporting organizational relations through information technology in innovative organizational forms. *European Journal of Information Systems,* 5(3), 196-207.

Klüber, R.A. (1998). Framework for virtual organizing. Proceedings of the Virtual Organization Net-Workshop, 27-28 April 1998 (pp. 93-106). Bern, Switzerland: Simowa Verlag.

Meister, D. (2000). Assessing an Organization's Preparedness for the Virtual Enterprise: The TEMPLET Model. Proceedings of the 33rd Hawaii International Conference on System Sciences, 4-7 January 2000 (pp. 6064-6074). Maui, Hawaii: IEEE Computer Society. DOI 10.1109/HICSS.2000.926885.

Mertens, P., Griese, J. & Ehrenberg, D. (1998). *Virtuelle Unternehmen und Informationsverarbeitung*. Berlin: Springer.

Mowshowitz, A. (1999). The switching principle in virtual organization, *eJOV*, 1(1), 7-18.

Mowshowitz, A. (2002). *Virtual Organization: Toward a Theory of Societal Transformation Stimulated by Information Technology*. Westport, Connecticut: Quorum Books.

Mowshowitz, A. (2003). The Virtues of Virtual. *Ubiquity*, 4(11), 1-1. DOI 10.1145/777950.777951.

Scholz, C. (2000). The Virtual Corporation: Empirical Evidences to a Three Dimensional Model. Proceedings of the Academy of Management Conference, 7-9 August 2000 (pp. 372-384). Toronto, Ontario: Academy of Management.

Travica, B. (1999). ICAAAC Model of Virtual organization. Proceedings of American Conference on Information Systems. August 13-15 1999 (pp. 120-135), Milwaukee, Wisconsin: AMCIS.

Travica, B. (2008). *The ISSAAC Model of Virtual Organization: Encyclopedia of Networked and Virtual Organizations.* Hershey, Pennsylvania: IDEA.

Vila, A. (1994). *Organizacija in organiziranje*. Kranj: University of Maribor, Faculty of Organizational Sciences, Moderna organizacija.

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Pregled modelov za oceno virtualnosti organizacij

Virtualna organizacija je mreža neodvisnih organizacij in / ali posameznikov, ki proizvajajo izdelke in / ali storitve in temeljijo na skupnem medsebojnem poslovnem razumevanju. Ta nova organizacijska struktura je postavljena kot popolno nasprotje tradicionalnemu, hierarhičnemu, birokratskemu in enolokacijskemu načinu organiziranja, ki je prevladoval v dvajsetem stoletju. Model virtualne organizacije ima tako naslednje karakteristike: dinamičnost, omreženost, geografsko razpršenost, digitaliziranost, prožnost, sodelovanje in inovativnost. To je razumljivo, toda izziv je ugotoviti, katera organizacija kot subjekt uporablja virtualni model in katera ne. Odgovor na to vprašanje je še bolj zapleten, saj ima večina organizacij nekašen vmesni model, zato je običajno možno le oceniti, koliko in po katerih kriterijih je določena organizacija virtualna. Z drugimi besedami, kakšna je njena stopnja virtualnosti. V literaturi obstaja več modelov za oceno virtualnosti organizacije, ki so jih razvili različni avtorji. Namen tega prispevka je, da razišče in predstavi vse objavljene modele za oceno virtualnosti organizacije, ki jih je moč najti v svetovni literaturi. Predstavljene so prednosti in slabosti posameznih modelov ter njihova medsebojna povezava.

Ključne besede: ocenjevanje virtualnih organizacij, modeli virtualnih organizacij, virtualnost organizacije, ocena virtualnosti