CHALLENGES FOR SMEs ENTERING INTO THE VIRTUAL ORGANIZATION PARTNER NETWORK

Kangilaski, T.

Abstract: *In engineering business environment, where SMEs are tending to compete with each other and sometime with industries, the Virtual Organization (VO) is increasingly indispensable. The current article analyses the aspects that should be taken into account by a company entering into the VO Partner Network.*
Key words: Virtual Organization, VO's maturity

1. INTRODUCTION

A fundamental attribute of the domestic and global economic environment is the stimulus towards liberalisation. As a result of such developments as globalization, the fusion of business and IT, the introduction of new technologies, the novel business models, the enterprises are confronted with an increasing variety of options to deal with an ever faster changing environment. This results in a demand for innovative companies and companies being able to adapt themselves quickly to these environmental changes and willing to proactively exploit these challenges on the companies' management to make the right decisions when the situation needs it.

Currently, independent organizations are often no longer capable to provide the desired products or quality. The need for flexibility can only be guaranteed by small flexible organizations which can react promptly to the customer's demands or wishes. The customer wants individualized products. These products can only be produced through the cooperation of multiple specialists / organizations.

Planning supply chain in such a situation is a challenge for companies for cooperation with partners requires higher organizational maturity in the context of enterprise architecture management.

Cooperation between independent SMEs should take place in the form of a network type of virtual organization.

Virtual Organization (VO) can be defined as a temporary alliance of SMEs that come together to share skills and resources in order to better respond to business opportunities, and which cooperation is supported by computer network [1].

The current article has structured as follows – in chapter 2, the concept of VO is explained, in chapter 3 the VO maturity model is proposed, in chapter 4, the VO lifecycle is analyzed. Then, in chapter 5, basing on described background, two main challenges for a new company entering into the VO is analyzed.

2. VIRTUAL ORGANIZATION

Virtual Organization is a principal network of companies. As SMEs have little direct control over their environment, they are depending upon relationships with both individuals and organisations. These networks are based on the idea that SMEs need contacts and cooperation with other firms in order to solve problems, to learn from other's experience and to compete with larger firms [2].

Thus, in order to be able to quickly respond to market needs and to not having to invest too much time to build up necessary network competencies and processes for each new business opportunity, in many

cases of companies with ongoing network intentions a core network is built-up. These networks are mostly long term strategic alliances.

Companies creating such Partner Networks can be viewed as the network Focal Players (Fig.1). The core network is a pool of several companies seeing benefits in joining forces and competencies and applying these for different network operations over a longer period of time - even though some players might be naturally leaving and others joining. The network presents a stable and trustful basis for realizing the individual business opportunities.
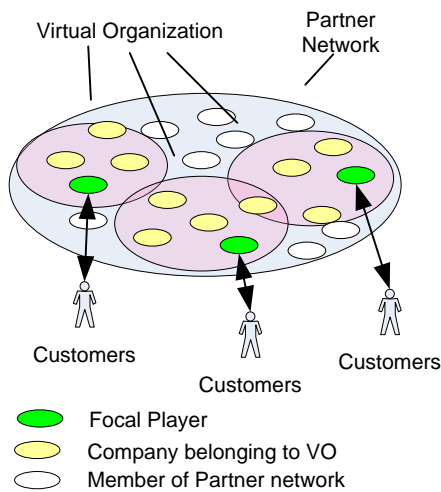

Fig. 1. Virtual Organization

During developing the network, at least two strategise should be considered - necessary competencies are either brought into the network by the companies or are established in collaboration. These competencies include technical skills, which are necessary to share between companies as core competencies, as well management skills essential to identify complementary competencies or to combine them. In addition, general rules and processes should be established, for instance, how the upcoming opportunities are shared among companies or how benefits are distributed. Time consuming trust building, which is another essential element in collaborations, should also be

developed within these core networks [3] [4].

In addition to the strategic alliances, there are also goal-oriented networks, which can be considered as extensions of the strategic alliances when needed competences / resources are missing or are not reachable.

In goal-oriented networks, the core principle of such virtual organizations is the fast combination of the core competencies and resources of the companies for a business opportunity.

To conclude, the set up of such consortium and the building of trust and common working practices are time consuming – occasionally too time consuming for some opportunities. Therefore, a more long-lasting cooperation or strategic alliance between the numbers of companies is significant. The companies define specific ground rules, roles, blueprint processes, legal agreements and/or a common ICT infrastructure. The companies in the network are then prepared to quickly react to a new opportunity, to form needed VO-s geared towards the project requirements and successfully deliver. Trustful cooperation is supported by the fact that a company failing to keep its promise would be quickly excluded from subsequent business opportunities [5][6].

From customer point of view it is important to have one entry point and one company being liable for an order. In most cases the VO Focal Player will take that responsibility.

3. VO's MATURITY

Organizational maturity is a widely researched topic. There exist a lot of models that have been developed in various disciplines and are focusing on several dimensions of an enterprise [7]: the European Interoperability Framework (EIF), the Extended Enterprise Architecture Maturity Model, the Levels of Information Systems Interoperability, the NASCIO Enterprise Architecture Maturity Model, the Organizational Interoperability

Maturity Model, INCOSE Systems Engineering Capability Assessment Model (SECAM) Model Description, Cana Bells Trillium, Capability Maturity Model (CMM), ISO 15504, 12207, 15288 , ISO 9000, ISO/IEC 20000, ITIL, COBIT, ToGAF, and others.

Even as the every single organization has its own organizational maturity, the Partner Network has its own.

According to our analyses, there are four Partner Network maturity levels (Fig. 2):

1. Maturity A - Entrance Level
2. Maturity B - Intermediate Level
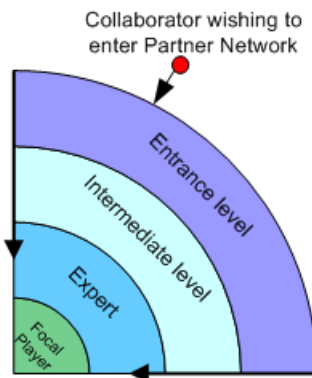3. Maturity C - Expert Level
4. Maturity D - Focal Player

Fig. 2. Maturity levels for Partner Network

3.1 Maturity A - Entrance Level

The Company, being invited to the Partner Network by some existing Member, will have to enter to the Entrance level of Partner Network. The Company will be registered as a Member, it should update both its business processes and ICT systems, and adapt communication channels to Member Net information exchange requirements.

The new role, which the company must create, is Network Communication Manager. As a Member, the company cannot be a passive or isolated actor in network – it should exchange information with other Members, thus it is mandatory to understand many aspects of the Network, for example: what kind of skills, competences, resources available in Member Network, who are the focal players, which is the network working

culture in ongoing projects, which communication principles and channels there are.

3.2 Maturity B - Intermediate Level

Companies in Intermediate Level will need to take a more active role to be taken in different VO projects, therefore the Broker role is needed. This role should identify new collaboration opportunities both inside and outside the member network. The significant component here is once more the appropriate internal and external communication and exact messages in right time. Based on that information, the company will improve its reputation in Partner Network, and the succeeded projects will enlarge its possibilities to be invited to the further projects / organizations.

3.3 Maturity C – Expert Level

Company, reaching that maturity level, will act as a VO creator. Such a company will have its own strategic Partner Network and must have very proper knowledge about the others Partner Network Members and must have firm connections with them. The company has its own team analyzing the Partner Network, identifying the necessary competencies and capacities, selecting an appropriate set of partners and structuring the new VO-s.

3.4 Maturity D - Focal Player

Focal Players in Partner Network are forming the foundation. These companies will dominant in Partner Network, they will have develop / agree / influence main cooperation principles, policies, ICT solutions. These companies are a reliable entry point for customers needing services. At the same time, they have above described competences, such as very tight cooperation with other Partner Network Member Focal Players, excellent knowledge about skills, competences, resources and their availability, ongoing projects. Focal Player is also responsible for network analyses – although during the

planning of the Partner Network, the firms' collaboration has been simulated, iIt may occur that some of the firms do not contribute in the network; despite their interest in the partnership, they may concern themselves with protecting their core competency and Focal Player here generally involves.

Therefore, the Focal Player acts as Partner Network Mergerer, analyzing the Network competences, proposing to invite new Members, creating the goal oriented VO-s etc.

4. VO's LIFECYCLE

When the Partner Network is built up, the Focal Players start to search of new business opportunities. The business opportunity identified by Focal Partner or by Partner Network Member will the cause the necessity to start the project. Based on its competence, the Focal Player will analyze the business opportunity to find out whether it is worthwhile to launch a new project after which the Focal Player will team Partner Network Members for the project. This includes business planning which leads to the development of a integrated business model including business concept (processes, communication, skills, resources, etc), financial model (flow of funds, responsibilities, compensation of participation). When the companies are formed and VO is created, the actual operation which may range from design to manufacturing will start. The successful carrying out of the operation leads to the desired business impact, after which – unless there is a directly succeeding order – the project is terminated. The termination means the ending of the unique constellation of companies and their employees to make space for the next upcoming business opportunities [5].

The core principle of VO is the fast combination of the core competencies and resources of different companies for a business opportunity. It is important to emphasize that the VO's challenge is the Partner Network coverage – in most cases the Partner Network does not includes companies through the whole value chain, i.e. from the raw material manufacturer to the retail companies. As the raw material production/procurement is the first step in every production process and most of the time raw material producer is not part of collaborative network, the raw materials are mostly purchased under market conditions. This will lead to the situation where Partner Network companies responsible for providing raw materials will remain between an uncooperative supplier and internal network partners with high expectations concerning reliability and trust [8]. It must be considered as a known risk, which could be minimized only to analyze VO raw material demand and their supplier relations at an early stage.

5. COMMUNICATION AS A MAIN ENABLERER FOR A NEW MEMBER

As known, the SMEs are dependent on larger industry players, their works or projects. It means that SMEs are regarded as only "piece-workers" to do tasks with little opportunity to add value – they tend only to be present in a project only during their part of the activity. This discontinuity of involvement is a particular challenge for the industry in relation to the adoption of the right business models and modes of project operation [9].

On the bases of all these, it is considerable change to start to cooperate in VO and to grow to the Focal Player, which takes responsibility for all value chain and especially, when borders between partners soften ever more because of companies' growing maturity, more intensive communication, greater commitment and better trust building.

When a new company is invited to participate in Partner Network, it will be mostly involved to the VO as a VO Collaborator (VOC), while the importance

of communication availability is the highest factor for successful projects.

The two main topics which the new VOC should solve through formal and informal communication (inc. company internal and external communication), are:

- to keep organizational maturity at the level required by Partner Network;
- to avoid other VOC-s' too high expectations and to build trust trustworthiness.

5.1 Keeping organizational maturity at the level required by Partner Network

Analyzing maturity, the organizational maturity and network maturity should be handled separately. The primary focus for the company should be its own organizational maturity (see paragraph 3), which is managed quite frequently through the enterprise architecture management disciplines (e.g. TOGAF, FEA, DoDAF, PEAF, etc).

It is important that the new VOC organizational maturity is close to the level of its cooperation partners. When communication is effective between partners at the same maturity level or one of them being at level higher, it has some backstrokes if the maturity levels have a much greater gap.

When the business processes (including critical meetings), roles and responsibilities are not settled between partners then appears ineffective communication tending to reduce the quality of the delivered message. As the communication is strongly ICT centric, it may be complicated to the VO team members, that messages are misunderstood as e-mails may contain slang and informalities, technical jargon, unconditional use of capital letters, setting the level of importance as urgent, incorrect distribution lists. The last one has its serious impact if a virtual team member can send messages to everyone in the team, then it may overload someone's mailbox, and some other important information may get lost or will not be read in time.

Combination of organizational maturity and VO maturity will determine that the effective communication will probably be between companies being at the same or neighbour VO maturity level. At the same time, the external companies' communication is not narrowed by VO maturity level, their communication is just limited by companies' organizational maturity (Fig. 3).
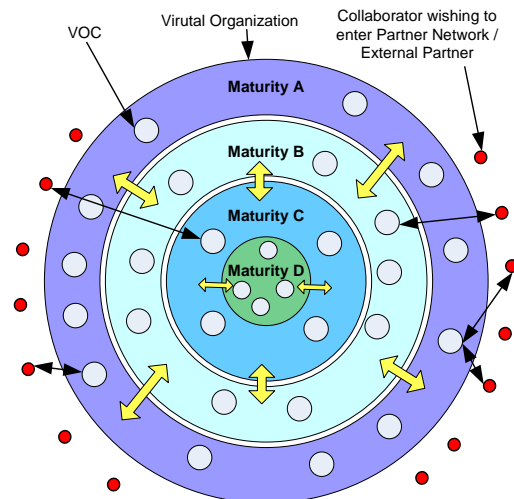

Fig. 3. Communication and maturity connectivity in VO

When cooperation starts, the new VOC in Partner Network will be positioned at the lowest maturity level A, which however will limit its business opportunities and possibilities. The successful projects will develop the new VOC to a higher maturity level and it will have abetter position in Partner Network

5.2 Avoiding other VOC-s' too high expectations and to build trust trustworthiness

The other partners' expectations may be too high when cooperation begins. Even if the activities and tasks are assigned according to the partners' competencies and interests there may be lack of trust, as a company may consider other company as competitor in some aspects in marketplace and therefore the companies may not reveal all privileged information to each other.

The only solution here is agreed roles, business processes, continuous process tracking and frequent communication between partners. From legal point of view, it is reasonable for partner companies to sign formal non-disclosure agreement as it supports building professional trust relationships.

6. CONCLUSION

Globalization and the economic transformation taking place in the world economy, bring new opportunities and challenges for the domestic SMEs. The form of Virtual Organization will dominate in today marketplace. SMEs' alliance modes of operations promote business process innovation and allow SMEs to compete in new ways getting better reward for their work and gaining greater financial strength, which in turn will give them the financial capability to advance and develop their products and services.

From a new company point of view an entrance into the Partner Network and into the VO is a rather complex, not only because of missing trust and possibility to remain in isolation but also because properties like resource capacity and processing time cannot be known with certainty etc.

From Focal Player point of view, contrarily, the selection of partners is critical issue in the formation of VO. The problem is particularly difficult due to the uncertainties related to information, market dynamics, customer expectations and technology acceleration.

The current article explains the background of VO and analyzes some challenges that a company being invited to the VO should take into account.

7. ADDITIONAL DATA ABOUT AUTHOR

Taivo Kangilaski; Senior Researcher; Tallinn University of Technology, Department of Computer Control; Ehitajate tee 5, A-II-319; 19086 Tallinn, Taivo.Kangilaski@dcc.ttu.ee.

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