

NETWORK ORGANIZATIONS

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Modern organisations are confronted with enormous challenges. The need to continuously adapt to changing environments is the main challenge for modern organisations. In order to adapt to the requirements of modern environments more easily and more rapidly, organisations become connected into networks. A networked organisation is becoming a favourite form of a modern organisation. This paper describes the basic features of networked organisations and their diverse forms. Special attention is paid to the presentation of management processes in networked organisations.

1. INTRODUCTION

Our modern environment is becoming more and more complex. In addition, its dynamics are intensified. Organisations, both profit and non-profit, must continuously analyse the events in the environment and adapt to changing circumstances. In recent years, researchers in the field of organisation and management have observed the increase in the number of new concepts, which represent challenges to both experts and managers.

A need for a quick reaction to the rapidly changing environment has stimulated the development of a series of new organisational concepts, which include the following components:

- dynamics and
- openness

No doubt that the so called »organisational networking« represented one of the best known organisational concepts by the end of the nineties. We can maintain that the diffusion and the significance of networked organisation forms

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will increase in the future. The inter-organisational linking, which will have a different form and extensiveness than we know today, will come to the front.

2. DEVELOPMENT OF NETWORKED ORGANISATIONS

2.1. Definition

In the technical literature, the term »networking« may be found in several fields, such as IT, linguistics, psychology, sociology, etc. Also in the field of organisation we speak of networking at different levels and in different areas. Organisational networking includes, according to some authors, various forms of inter-organisational cooperation, such as strategic business connections, cooperations, cooperational connections between suppliers, intercompany networking cooperation, joint ventures, virtual enterprises, networking organisational structure, etc. On the level of cooperation within the organisation, we find such forms as self-organisation and team organisation (Gerum, Achenbach and Oplet, 1998, p. 266; Moldaschl, 1998, p. 19; Mohrman, Galbraith and Lawler III., 1998, p. 77).

As evident from the above stated forms of inter-organisational networking, network organisation can be found at two levels:

- First level: cooperation and linkage between individual organisations;
- Second level: organisational form of the organisation itself and/or form of organisational structure.

In practice, there are several forms of network organisation. They are classified according to several criteria. They may be classified according to the form of origin. For instance, Sydow (1993) distinguishes between concepts and notions originating from the organisational and managerial practice (e.g. strategic alliances, joint ventures, etc.), and concepts and notions originating from scientific research. Regardless of its mode of origin and its form, organisational networking has the following common characteristics (Winkler, 1998, p. 2):

- a special form of intercompany cooperation;
- cooperation between individual actors (individuals, groups, organisations, and groups of organisations);
- inter-coordination of work flow by means of both hierarchical and market relations;
- interdependence;
- participating organisations may be economically independent;

- complex interrelations in various areas (IT, human resources, technology, finances, etc.);
- dynamic as well as stable linkages;
- basic characteristics: decentralisation, heterarchy, power dispersion, and decision-making competence.

As we have already pointed out, it is necessary to distinguish between organisational networking on inter-organisational as well as intra-organisational level. Thus, one of the fundamental criteria for classification of organisational networking is the grouping into inter-organisational and intra-organisational networking.

2.1.1. Inter-organisational networking

In the technical literature, inter-organisational networking is in the front of interest. The author Sydow (1993) has defined inter-organisational networking as »goal-oriented organisational form pursuing the realisation of a specific competitive advantage. It interlinks independent companies that are economically connected and have a relative stable interrelations.« (Winkler, 1998, p. 2).

Inter-organisational networking may be subdivided on the basis of the criterion of networking stability. The author Kavčič distinguishes the following forms:

- Stable networks originating from the logic of functional organisational structure and consisting of a series of independent companies. They execute individual components of the total task of manufacture of a product or performance of a service. The companies have strong connections with the holding companies on the basis of agreements.
- Internal networks are established by a company within the company as a legal entity. The logic of the internal network requires the formation of an internal market within the organisation.
- Dynamic networks consisting of short-term or even one-off connections of otherwise autonomous companies. The so called »virtual organisations« may be defined as an example of dynamic networking (Kavčič, 1994, p. 952- 955).

As a criterion of distinction of inter-organisational networking in this subdivision, the degree of integration stability and the form of inter-cooperation are exposed. As a dynamic form of organisational networking with a limited duration, a virtual organisation is considered to be the most important. A virtual

organisation has been defined by the authors as a specific example of a networked organisation (Mohram, Galbraith and Lawler III, 1998, p. 76).

The term »virtual« originates from the Latin word "virtus", meaning virtue, virility (i.e. virtuous use of strength) (Verbinc, 1997, p. 758). Nowadays, the term is used to denote:

- ability to operate
- imaginary, fictitious elements
- existing potential or capability (Verbinc, 1997, p. 758; Krystek, Rede and Repegather, 1997, p. 3).

When designating the organisational networking, the term "virtual" is used in the meaning of imaginary. With this term we designate a rather loose and temporary form of inter-organisational networking. A gradual disappearance of internal organisational boundaries with the environment is in the foreground.

The idea of a virtual enterprise has its roots in the organisational concept developed by Miles and Snow in 1984. In the paper »Fit, Failure and the Hall of Fame«, the authors described an organisational concept which they called "dynamic networking". On the basis of their idea, the authors Hopland, Nagel, Davidow and Malone developed the so called concept of »virtual enterprise« (Keen and Knapp, 1995, p. 205; Schraeder, 1996, p. 23-24; Hodge, Anthony and Gales, 1996, p. 225).

An enterprise is no longer a material but a virtual unit. The goal of a virtual enterprise is to surpass limitations of time and space, as well as the conflicts between decentralisation and centralisation. This is clearly defined in the so-called process view of organisation. Here, it is not the structure that we are interested in, but the flow of the total process or chain of added value among individual organisational units incorporated into virtual enterprise (Osterloh and Frost, 1996, p. 112).

2.1.2. Intra-organisational networking structures

On the level of intra-organisational networking, networking structures have been defined as informal forms (Moldalschl, 1998, p. 20) which, in most cases, are based on the autonomy of teams working on the basis of a project-type approach and creating a structure similar to "adhocracy". To date, the concept of network organisation has not become operative due to a high level of coordination. In the present time, IT makes these forms of networking possible

(Morgan, 1997, p. 52; Bullinger and Warnecke, 1996, p. 208; McCoy, 1996, p. 36).

We will focus below on the presentation of extensiveness of inter-organisational networking, i.e. on the presentation of inter-organisational level in drafting and designing of the forms of inter-organisational networking.

2.2. Characteristics of inter-organisational networking

The inter-organisational connectivity is not a novelty. In practice, it has developed from a simple form of a business connection to a very complex multi-layer cooperation. Complex organisational networking is due to:

- the development of information and communications technologies;
- increased significance of time as a competitive factor;
- the increase in competitive struggle (globalisation), which results in the need to combine various resources of the organisations;
- the increase in research and development costs;
- the disappearance of boundaries of national economies and development of a global market.

These factors have helped the inter-organisational networking to become more and more complex and multi-layer. Therefore we are not surprised that certain organisations, e.g. company A and company B – cooperate in the production (service) programme X, and at the same time compete with one another in the programme Y (Beck, 1998, p. 271).

There has not been a unified definition of a networked organisation in the technical literature. As mentioned above, networked organisation include a wide range of diverse forms of inter-organisational networking. In addition to the above-mentioned modes of classification of organisational networking, the basic criteria of distinction also include the use of the mode and form of coordination in the network. The most frequently used linkage instruments in the inter-organisational networking are:

- market and
- hierarchy.

Individual authors state that “cooperation” is the third form of coordination. Connecting on the basis of cooperation requires cooperation, on equal terms, of all organisations incorporated in the network. A typical example of a market regulating arrangement is, for example, business cooperation on the basis of a standard purchase/sale contract. As a typical example of the use of

hierarchy in the inter-organisational networking is the cooperation between a parent company and its subsidiary. Between these two kinds of inter-organisational networking, there are such connections as e.g. joint ventures, etc. (Bullinger and Warnecke, 1996, p. 454). In the modern inter-organisational networking, coordination is based more on market mechanisms than on uniform management.

The characteristics of integration connections in the modern inter-organisational networking are:

- flexibility;
- shift away from hierarchical relations in the sense of domination of a certain organisation;
- emphasis on key capabilities of individual organisations;
- existence of organisational elements of permanence and temporality ;
- presence of cooperation and competition (i.e. principle of “competition”, Beck, 1998, p. 271).

Regardless of the trend of inter-organisational networking towards decentralisation, a certain system of inter-coordination is to be created within each networking. We have in mind the management, which directs the development and operation of the network. In the modern networking, connecting is based on market instruments, such as cooperation. Most authors agree that the advantages of inter-organisational networking result from its polycentric and heterarchical structure.

3. ORGANISATION AND MANAGEMENT IN NETWORKED ORGANISATIONS

3.1. Introduction

When establishing and maintaining business networking between two or more organisations, the management has to perform two basic sets of activities. The first set of activities includes specific activities associated with the formation and maintenance of networking. The second set of activities includes activities associated with the standard managerial functions, such as planning, organisation, management and control. The activities associated with the introduction and maintenance of organisational networking include (Ritter and Gemünden, 1998, p. 261):

- Establishment of network connections. The beginning of the formation of inter-organisational networks is the phase of search for potential partners. The companies maintain diverse connections with the environment. It is,

however, not necessary that network connections are formed on the basis of the existing business contacts. The networking may be the result of a systematically directed search for potential business partners for a specific form of cooperation.

- Exchange among partners. This activity includes the contribution and exchange of products, services, financial means, know-how, information, experts, etc. The exchange is intended to meet the needs of all partners in the network.
- Coordination. The purpose of this activity is to coordinate and harmonise operations of the partners in the network. The coordination of interaction of organisations in the network is the main task in the operation of the network. Individual organisations in the network are not expected to have, at all times, completely identical idea of further goals of development, fully concerted interests, and completely equal capabilities. In order to reach the necessary degree of internal harmonisation, it is necessary to introduce coordination processes to establish the necessary interharmonisation.

Important characteristics of inter-organisational networking are polycentricity and heteroarchicity. In other words, characteristic features of inter-organisational networking are decentralised decision-making and common agreement on the ways and forms of:

- setting of goals (strategies) of development and operation,
- realisation of set goals (strategies),
- implementation of intercoordination.

It should be pointed out that in spite of polycentricity and heteroarchicity in inter-organisational networking, the holders of functions in management processes are to be clearly defined, both on internal and intra-organisational level. The limits of competencies and responsibilities in the implementation of processes of harmonisation of goals and coordination of operation of the network are to be clearly defined (Schraeder, 1996, p. 85).

3.2. Management processes in networked organisations

Management processes in networked organisations run on the level of network and in individual organisations. The complexity of management processes requires clear delimitation and interharmonisation. To facilitate identification and understanding of management processes, the following subdivision is applied:

- management processes of formation of inter-organisational networks, and

- management processes of securing development and operation of inter-organisational networks.

3.2.1. Management processes of formation of inter-organisational networks

The main part of management processes of formation of inter-organisational networks is the identification of:

- goals and
- forms of network cooperation.

The identification of strategy of inter-organisational networking must originate from the strategy of organisation (Mohrman, Galbraith and Lawler III., 1998, p. 79). The other part of management processes includes the identification of:

- the form of inter-organisational networking and
- the role to be taken over by individual organisations.

The form of inter-organisational networking is closely associated with the identification of goals of inter-organisational networking. When incorporating into inter-organisational networks, the management shall answer the following questions:

- What are the basic goals, purposes and strategy of formation of inter-organisational networks?
- What are the company's advantages and risks of integration into inter-organisational networks?
- What are the advantages of the network as a whole?
- What will be the position of our company in the network (expert or integrator of the total network)?
- What are the alternatives?

A special attention is to be paid to the selection of partners for the formation of a network. The first step in this process is the knowledge and understanding of the strategic orientation of partners. A good knowledge of reasons for integration into networks may spare us unpleasant surprises. There are also cases when individual organisations engage in inter-organisational networking with the view to obtain information on their partners. This enables them to have a better control over and to exert pressure on prices, etc. Therefore, the key to the selection of partners lies in the knowledge of their

strategic implications for integration into networks (Mohrman, Galbraith and Lawler III., 1998, p. 86).

Upon the selection of partners, the form of networking is to be chosen and the division of roles among organisations in the network agreed (conclusion of a contract). The role taken over by an organisation depends on the capability as well as the purpose and the objectives of integration. Thus, priority is given to the selection of organisations and the way of playing the role of integration, as well as the definition of the place and role of other organisations in the network.

The basic criteria for the selection of the role of coordination in the network are (Mohrman, Galbraith and Lawler III., 1998, p. 101):

- knowledge of the entire process and/or chain of added value,
- experience,
- capability to acquire necessary resources for operation of the network,
- available resources,
- credibility of an organisation,
- key abilities of individual organisations,
- management resources,
- readiness to accept the role.

It should be pointed out that the efforts made by the management in the execution of processes of integration are often underestimated (Schraeder, 1996, p. 83). Therefore, the selection of managers and other collaborators in the inter-organisational networks is extremely important.

Managers who are engaged in directing, organising, and managing integration processes in the inter-organisational networks must have the following knowledge and capabilities (Krystek, Rede and Reppgather, 1997, p. 174):

- capability to integrate,
- mastery of goal-directed management,
- sensibility for various organisational cultures,
- expertise in the field of network operation,
- ability to participate,
- capability to motivate,
- mastery of constructive conflict management,
- communications and presentation of knowledge and skills,
- mastery of information management.

It is also important that individuals holding key positions in inter-organisational networking, have the following knowledge and skills (Krystek, Rede and Reppegather, 1997, p. 178):

- expertise and functional knowledge,
- knowledge of communications and skills,
- cultural adaptability,
- adaptable and constructive conflict control,
- participative orientation,
- orientation in horizontal and lateral professional and personal development,
- entrepreneurial behaviour,
- independence and sense of responsibility.

The selection of individuals holding responsible positions in the network may largely contribute to the reduction of conflicts, which is one of the most sensitive areas of operation of the management. There are many areas of conflict in the network. Therefore, the setting of principles, methods and instruments for the resolution of conflicts is one of the main tasks to be accomplished by the management in the formation of networks. The procedures and the levels of resolution of conflicts are to be clearly defined.

We see from experience that the principle of delegation to a higher level is applied in the resolution of conflicts. If conflicts cannot be resolved at the organisational level from which they originate, the resolution is to be delegated to a higher level (Kovač, 1997, p. 19). There is, however, some danger that all conflicts are gradually delegated to the highest level, thus overburdening the management that is in charge of coordination within the network.

3.2.2. Management processes of securing development and operation of inter-organisational networks

In each inter-organisational network, a managerial system is to be formed that will assume the role of coordination within the network. The managerial system in charge of coordination includes the performance of management function on a traditional level. Undoubtedly, there is a difference between the performance of management function in the traditional organisation and the managerial system in charge of coordination in a networked organisation. The differences are:

- the managerial system in charge of coordination within the network exists only as long as the network exists;

- the competencies of the management in charge of coordination within the network are not comparable to the competencies of the management in the traditional organisation;
- the management processes of coordination within the network may be allocated to several holders.

Notwithstanding this extensiveness, it should be pointed out that the management processes are associated with a certain form of organisation, which is to be designed for the needs of operation of the network as a whole. Basically, we distinguish three forms of the managerial system in charge of coordination (Mohrman, Galbraith and Lawler III., 1998, p. 88-91):

- the process of coordination is executed by one partner;
- the process of coordination is executed by several partners;
- autonomous mode of networking.

The first form is undoubtedly the most frequent mode of execution of processes of coordination. The last form, i.e. autonomous mode of networking, is applicable in the first phase of formation of inter-organisational networks.

Strategy is the most important management tool in the development and operation of inter-organisational networks. It is the starting point of functioning of the management. Other activities of the management are concentrated around it. Up to a certain level, the strategy of networking results from the strategy of individual organisations in the network.

The formation of the starting points of an umbrella strategy is not an easy task. It is necessary to identify those connecting points around which the process of formation of umbrella strategic orientation may be executed. A common strategy is a guideline for the management's behaviour in the network, in particular when performing the following main tasks:

- allocation of resources within the network and
- evaluation of achieved business results.

In a traditional organisation, the manager's task is to allocate financial, material and human resources to various assignments. Also in a networked organisation, allocation of resources is one the most important tasks of the management. The difference between the two organisations is that in a networked organisation, the allocation of, in particular, human resources, technology, autonomy and aid to individual assignments is carried out (Schraeder, 1996, p. 80).

Regardless of heteroarchicity of networking, the management's task is to establish a complete and uniform system of responsibilities. To implement this task, individual managerial techniques, such as management by objective (MbO), are applied (Krystek, Rede and Reppegather, 1997, p. 165). In most cases, individual organisations and managers assume competencies and responsibilities resulting from key organisational capabilities and/or abilities.

A very sensitive area of operation of the management in networked organisations is the formation of uniform elements of organisational culture. The process of formation of organisational culture in a networked organisation is not carried out in the same way as in a traditional organisation. In a networked organisation, the degree of differentiation of organisational structure is very high, with the explicit presence of individual subcultures (Krystek, Rede and Reppegather, 1997, p. 159).

This means that the formation of a uniform organisational culture that would be accepted by all networked organisations cannot be expected. We may, however, speak of common elements of organisational culture. The basis for identification and consolidation of common elements of organisational culture are the starting points of individual organisations that can be made uniform. In most cases these starting points are openness and client orientation.

The basic outlines of a common organisational culture in an organisational network may be formed only through common projects, products and/or services. The common elements of organisational culture may greatly contribute to the achievement of set goals of inter-organisational networking, in particular in the area of resolution of conflicts, which is one of the most sensitive areas of operation of the management. There are many areas of conflicts in a network. Therefore, careful defining of principles, methods and instruments for the resolution of conflicts is one of the main tasks to be accomplished by the management in the formation of inter-organisational networks.

3.3. Organisation of networked organisations

When designing organisation of inter-organisational networks, establishment of mutual processes and elements of a common organisational structure is in the forefront of activities. The main objectives of the formation of inter-organisational networks are:

- introduction of efficient inter-organisational processes required for the accomplishment of common tasks, and

- formation of common elements of organisational structure required for the execution of management processes of coordination.

The process extensiveness of organisation is an important element of inter-organisational networking. Hence, the optimisation of the total process of manufacture of products and/or performance of services from the point of view of time, costs and quality is the most important task in the formation of organisational networks.

It is, however, essential to achieve optimum results, both from the point of view of individual partial processes as well as from the point of view of the process as a whole. The prerequisite for optimum running of the whole process within the network is the standardisation of certain elements and parameters of the process.

When designing process structure, most difficulties arise at the juncture between individual subprocesses implemented by organisations in the network. In order to mitigate these difficulties, elements of the secondary organisational structure, such as process team (Krystek, Rede and Reppegather, 1997, p. 47) may be included.

The formation of structural extensiveness of inter-organisational networks is associated with contradictive requirements. On the one hand, a relative permanence of structures is required. These structures are the basis for the establishment of the management system in charge of coordination processes. On the other hand, the networks are, by their nature, decentralised, flexible, and temporary organisational forms. Hence, elements of stable and temporary structural forms interlace in the network structures.

4. CONCLUSION

Regardless of their size and corporate objectives, organisations in a modern business environment have more and more difficulties in adapting timely to changing circumstances. They also have difficulties in achieving a competitive advantage. Due to the need of concentration of individual kinds of resources, the formation of network structures is an appropriate solution. Organisational interlinking on the basis of loose and temporary pooling of resources with the purpose to achieve a competitive advantage is the basic feature of inter-organisational networking.

Due to increased globalisation and intensified competitive struggle, companies and other organisations are to be capable of meeting requirements of

the changing environment. It is not only the question of cost and time, but also the question of capability of meeting diverse requirements of clients in different global markets. In addition, the role and the importance of non-profit organisations are changing. The stress is laid on higher internal efficiency, i.e. achievement of better results by use of the same or smaller volume of resources.

Also large international companies have difficulties in following new trends with their organisational infrastructure. The result is a networking fever in all branches and areas. Small and mid-sized companies are not capable of following this trend with their organisational potential. In addition, the financial power of an enterprise is not the decisive factor of market control. The decisive factor will be the ability of an organisation to create temporary cooperation alliances that will be capable of quick reaction to the needs of clients and of placing required products on the market.

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MREŽNE ORGANIZACIJE

Sažetak

Suvremene se organizacije suočavaju s iznimnim izazovima. Potreba za stalnim prilagođavanjem promjenjivoj okolini najznačajniji je od njih. Kako bi se što lakše i brže prilagodile zahtjevima suvremene okoline, organizacije se povezuju u mreže, a mrežna organizacija postaje omiljenim suvremenim organizacijskim oblikom. U ovom se radu opisuju temeljne karakteristike mrežne organizacije i njenih raznolikih pojava oblika. Pritom se posebna pažnja obraća managerskim procesima u mrežnoj organizaciji.

