

Mrežne organizacije - novi vzorec 21. stoletja

Network organizations - a new paradigm of the 21st century

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Globalizacija in hiter tehnološki razvoj terjajo, da organizacije razvijajo konkurenčnost na svetovni ravni. To je velik problem, predvsem za majhna in srednje velika podjetja, ki imajo omejeno razpoložljivost virov; to so ljudje, denar, razvojno-proizvodne zmogljivosti ali znanje. Zaradi tega je nujno, da se osredotočijo (specializirajo) na izbrana področja poslovnih dejavnosti, kjer imajo možnost razvijanja in doseganja svetovne konkurenčne zmožnosti. Preostale izdelke ali storitve, ki so potrebni za opravljanje sedanje ali načrtovane poslovne dejavnosti, pa poiščejo zunaj lastne organizacije, na svetovnem trgu. Splošno lahko rečemo, da tehnološko napredna podjetja iz razvitih držav iščejo v večini primerov proizvodne partnerje s ceneno delovno silo za opravljanje dejavnosti z nižjo stopnjo dodane vrednosti. Organizacije iz tehnološko manj razvitih regij pa velikokrat iščejo poslovne partnerje za razvoj in prenos novih tehnologij v prakso lastnih podjetij. Seveda je v primeru organizacij iz razvitih in manj razvitih držav ter regij mogočih več motivov za iskanje poslovnih partnerjev zunaj lastne organizacije. Predvsem gre za tiste organizacije, ki se želijo razvijati s stalnim prenavljanjem na vseh področjih poslovanja. Pri tem se organizacije soočajo s potrebo, da na novo opredelijo organizacijo in organiziranost svojega poslovanja. Zamisli, ki jih teorija ponuja, izhajajo iz teorije mrežne organizacije, projektnega vodenja in poslovnih grozdov.

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(Ključne besede: mrežne organizacije, projektno vodenje, poslovni grozdi, vrednostne verige)

Globalization and rapid technological advances require organizations to develop competitively at the world level. This poses great problems, particularly for small and medium-sized companies, which have limited resources in terms of personnel, money, development, production capacities and knowledge. Therefore, it is very necessary for them to focus on selected areas of business activities where they are likely to develop competitiveness on the world market. Other products or services required to perform their current or anticipated business activities can be procured outside their own organization in the open market. Generally speaking, the technologically developed companies from developed countries in most cases try to find production partners with cheap manpower to perform their activities with lower added value. The organizations from technologically less-developed regions try to find the business partners for the development and transfer of new technologies into practice in their own companies. Of course, for the organizations from developed and less-developed countries and regions there can be several reasons why they try to find business partners outside their own organization. Here, we are concerned with the organizations wanting to develop by constantly innovating in all areas of their business activities. Organizations also face the need to redefine the way they set up their business activities: The concepts, offered by theory, issue from the theory of network organization, project management and industrial clusters.

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(Keywords: network organization, project management, industrial clusters, value chains)

1 ZNAČILNOSTI EKONOMIJE
ENAINDVAJSETEGA STOLETJA

1 CHARACTERISTICS OF THE 21ST CENTURY
ECONOMY

1.1 Značilnosti novega ekonomskega reda

1.1 Characteristics of the new economic order

Hiperglobalisti trdijo, da živimo danes v svetu brez meja [31]. S to trditvijo se lahko strinjamo ali pa

Today, the hyperglobalists claim, people are living in a world without borders [31]. We can agree

tudi ne, vendar, neizpodbitna resnica je, da se v sodobnem svetu vedno bolj soočamo s svetovno konkurenco pred lastnimi vrati. Bodisi da gre za ponudbo različnih izdelkov ali za konkurenco pri zaposlovanju delovne sile. Iz tega lahko sklepamo, da bodo državne meje vedno manjša ovira v mednarodnem poslovanju podjetij. Pri tem ne gre samo za spremembo ekonomskega reda, temveč tudi za velike svetovne kulturne spremembe. Značilnosti sprememb, ki se skrivajo pod dežnikom novega ekonomskega reda, so (sl. 1):

- globalizacija izdelkov in storitev,
- hiter tehnološki razvoj,
- nova svetovna delitev dela,
- spremembe na področju lociranja gospodarskih dejavnosti,
- spremenjene perspektive zaposlovanja,
- novi svetovni finančni sistem in
- na znanju temelječa ekonomija.

Hiter tehnološki razvoj ni povzročil samo hitrega razvoja novih izdelkov in storitev, temveč tudi to, da se je s pomočjo novih tehnologij, predvsem na področju informatike, telekomunikacij in transporta, svet zmanjšal. Seveda se svet ni fizično zmanjšal, dramatično pa so se povečale in pocenile in se še nadalje večajo in cenijo možnosti komuniciranja, fizične dostopnosti ter informacijskega obvladovanja sveta. Ena izmed najpomembnejših, generičnih tehnologij je medmrežna (spletna) tehnologija, ki je omogočila začetek nastajanja novega ekonomskega reda, prav tako kakor je tehnologija parnega stroja omogočila razvoj industrijske dobe.

with this point or not; however, it is an incontestable fact that in the modern world we increasingly face world competition on our own doorstep. Here, on the one hand, we are concerned with the offer of different products and, on the other hand, the competition in employing the manpower. It can be concluded that national borders will be a smaller and smaller obstacle to companies' international business operations. Here, it is not only the change of the economic order, but also great global changes in culture that are in question. The changes hidden under the umbrella of the new economic order are characterized by (Fig. 1):

- the globalization of products and services,
- rapid technological developments,
- a new global division of work,
- changes in the location of economic activities,
- changed prospects of employment,
- a new global financial system,
- an economy based on knowledge.

The fast technological development has brought about not only an expansive and rapid development of new products and services, but it has meant that due to new technologies, particularly in the areas of information science, telecommunications and transport, the world has become smaller. Of course, the world has not become physically smaller, but the possibilities of communicating, physical accessibility and control of the world by information have been dramatically increased and reduced in price – and are still being increased and reduced in price. One of the most important, generic technologies is internet technology, ensuring the outset of the new economic order like steam-engine technology ensured the development of the industrial age.



Sl. 1. Značilnosti sprememb, ki se skrivajo pod dežnikom novega ekonomskega reda
Fig. 1. Characteristics of the changes hidden under the umbrella of the new economic order

Na področju svetovne delitve dela se že nekaj zadnjih desetletij spoprijemamo s spremembami vzorca klasične delitve dela, ki je temeljila na predpostavki, da gospodarsko napredne države razvijajo in ustvarjajo industrijske izdelke, medtem ko države iz manj razvitih delov sveta zagotavljajo surovine in pomenijo trg za prej omenjene izdelke. Ta potek spreminjanja se je začel počasi razvijati že takoj po drugi svetovni vojni. V današnjem razvitem svetovnem gospodarstvu imamo opravka že s zahtevnimi in prepletenimi položaji, pri katerih se soočamo z razčlenitvijo gospodarskih postopkov in prestavljanje posameznih delov širom po svetu. Pojavljajo se nove gospodarsko hitro se razvijajoča področja, ki skupaj s starimi središči razvitih držav tvorijo novo zahtevno prepleteno celoto svetovnega gospodarstva. Med posameznimi področji se krepijo poslovne povezave, podprte s sodobno informacijsko-komunikacijsko in transportno tehnologijo. Vzpostavlja se nova delitev dela, ta temelji na gospodarstvu, ki ga usmerja znanje. Države in področja, ki bodo imele dovolj znanja, da bodo razvijale svetovno konkurenčno ponudbo, se bodo gospodarsko uspešno razvijale, medtem ko se bodo tiste, ki jim to ne bo uspelo, morale zadovoljiti z gospodarsko podrejenostjo.

V zvezi s tem se dogajajo tudi spremembe na področju postavljanja gospodarskih dejavnosti. Sodobna podjetja postavljajo posamezne dele svojih gospodarskih dejavnosti v tistih delih sveta, kjer je razpoložljivost potrebnih virov in stroškovna sestava poslovanja najugodnejša. Dosežki na področju razvoja informatike in telekomunikacij ter razmeroma cenen transport omogočajo sodobnemu podjetju, da lahko razvija mrežo svoje gospodarske dejavnosti po vsem svetu.

Novi svetovni finančni sistem temelji na finančnih tokovih usmerjenih iz svetovnih finančnih središč, ki so medsebojno povezani, saj sprememba na enem koncu povzroči tudi spremembe pri drugih. Zaradi novih tehnologij finančne izmenjave ne poznajo meja in se lahko v trenutku izvedejo iz enega na drug konec sveta.

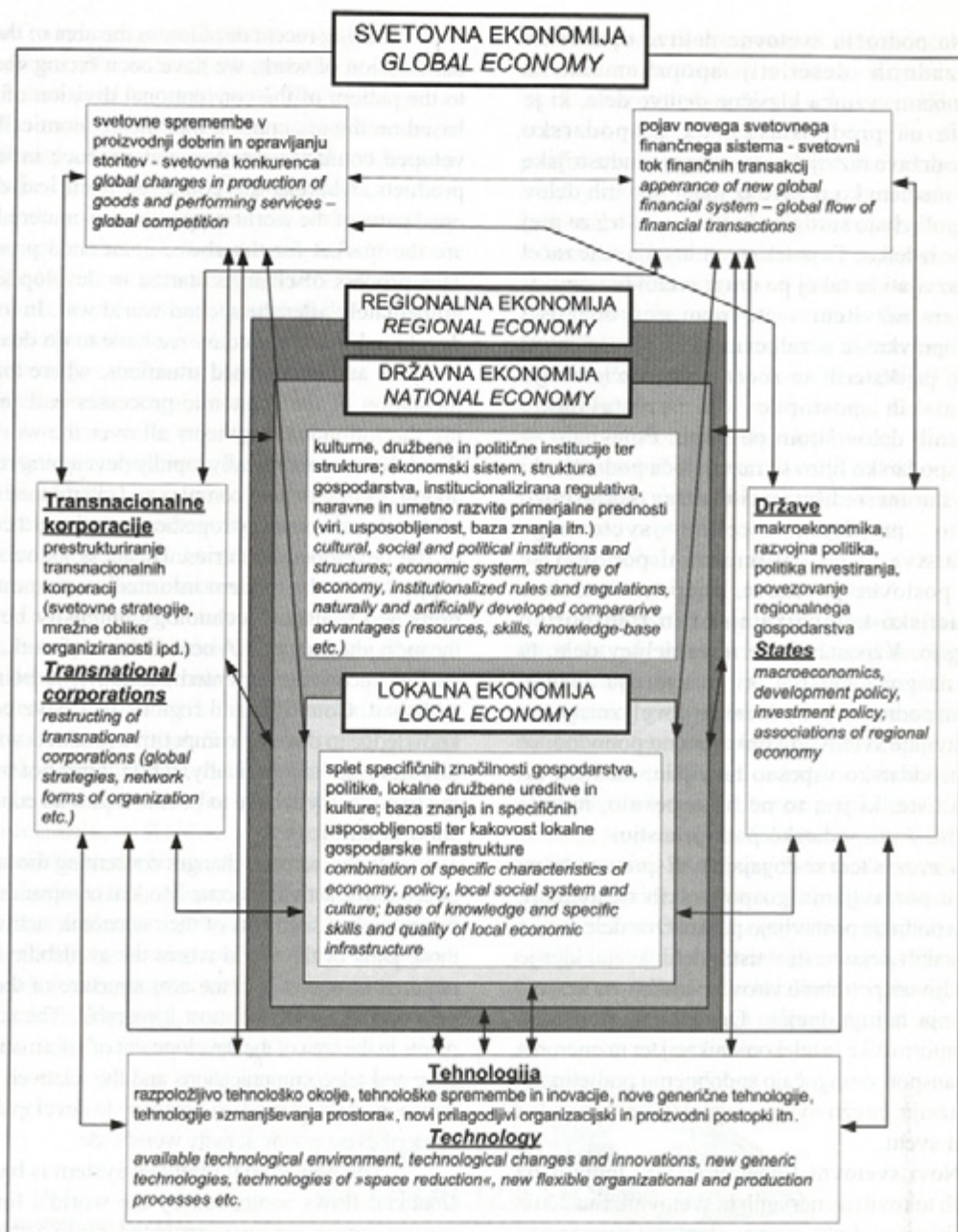
Gospodarska kriza enega dela sveta lahko hitro povzroči destabilizacijo drugega dela sveta. Če hočemo ali ne, svet postaja vedno bolj povezan. Slika 2 prikazuje globalizacijske pojave kot sistem medsebojno povezanih logičnih celot, ki pomenijo dejavnike in gibala ekonomije enaindvajsetega stoletja.

During recent decades, in the area of the global division of work, we have been facing changes to the pattern of the conventional division of work based on the assumption that the economically developed countries develop and produce industrial products, whereas the countries from less-developed parts of the world supply the raw materials and are the market for the above-mentioned products. This process of changes started to develop slowly immediately after the second world war. In today's developed world economy we have to do deal with complex and intertwined situations, where the segmentation of the economic processes and relocating the individual segments all over the world are faced. New, economically rapidly developing regions appear, forming a new, complex and intertwined whole of the global economy together with the old centres of the developed countries. Business associations, supported by the modern information, communications and transport technology, intensify between the individual regions. A new division of work, based on the knowledge-oriented economy, is being established. Countries and regions that have enough knowledge to develop competitive products will rapidly develop economically, while those not managing to do that will have to be satisfied with economic subordination.

In this respect, changes concerning the location of economic activities occur. Modern companies locate the individual segments of their economic activities in those parts of the world where the availability of the required resources and the cost structure of the business operations are the most favourable. The achievements in the area of the development of information science and telecommunications and the relatively cheap transport enable a modern company to develop the network of its economic activity worldwide.

The new global financial system is based on financial flows controlled by the world's financial centres, which are interconnected, since a change at one end causes changes at the others. Due to new technologies these financial operations know no borders and can be carried out from one end of the world to the other in the matter of a moment.

An economic crisis in one part of the world can cause the destabilization of another part of the world. The world is becoming more and more interdependent. Figure 2 shows the globalization processes as a system of interconnected logical units representing the factors and prime movers of the 21st century economy.



Sl. 2. Ponazoritev globalizacijskih pojavov kot sistema medsebojno povezanih logičnih celot [31]
Fig. 2. The globalization processes as a system of interconnected logical units representing the factors and prime movers of the 21st century economy [31]

1.2 Novi načini organiziranja poslovnih dejavnosti

Sodobne tehnologije omogočajo, da lahko postavimo del proizvodnje ali izvajanje določene poslovne funkcije kjerkoli po svetu. Sodobna podjetja neprestano analizirajo svoje poslovne dejavnosti, analizirajo svetovni trg in iščejo

1.2 New ways of organizing business activities

Modern technologies enable us to locate a part of the production or the execution of a certain business function anywhere in the world. Modern companies permanently analyze their business activities, analyze the global market and search for business opportunities

poslovne priložnosti za izboljšanje poslovanja lastnega podjetja. Pojavljajo se nove oblike mrežnega organiziranja poslovanja podjetij, ki organizirajo posamezne poslovne dejavnosti v tistih delih sveta, kjer je s poslovnega vidika najugodnejše. Bodisi da gre za ceno delovne sile, specialna znanja, surovine ali kaj drugega. Oblikujejo se meddržavne proizvodne mreže (MPM), na katere oblikovanje in razvoj vplivajo razvitost poslovnega okolja vključenih držav, področij, državni ter regionalni vladni predpisi, družbeno-kulturne razmere in podobno. Svet postaja vedno bolj prepletena mreža, ki jo sestavlja niz različnih MPM in vanj vključenih specializiranih gospodarskih osebkov, ki delujejo na različnih delih sveta. Analize geoekonomskega zemljevida kažejo, da so lahko poslovne dejavnosti porazdeljene ali zbrane, vendar z veliko željo organizirati takšne dejavnosti v okviru geografsko lokaliziranih grozdov [31]. Grozdi imajo lahko eno izmed naslednjih dveh splošnih lastnosti, in sicer so:

- splošni ali
- specializirani poslovni grozdi.

Nastanek in razvoj splošnih poslovnih grozdov temelji na predpostavki, da ima človeško delovanje težnje po združevanju in oblikovanju urbanih okolij. Koristi se kažejo v urbanem gospodarstvu, katerega koristi so delitev stroškov cele vrste storitev. Večja koncentracija in obseg povpraševanja tvorita hitrejši razvoj ustrezne poslovno-razvojne infrastrukture ter druge izobraževalne in kulturne ponudbe, ki se v primeru razpršitve subjektov povpraševanja po tovrstnih storitvah ne bi razvila ali pa bi se počasneje razvijala. Tovrstni grozdi lahko nastanejo kot rezultat naravnega razvoja neke države – področja ali kot rezultat uresničevanja razvojne politike določene države ali področja.

V nasprotju s splošnimi poslovnimi grozdi pa nastajajo specializirani poslovni grozdi (SPG) v tesni povezavi z določeno gospodarsko panogo ali odsekom. Podjetja in organizacije, ki delujejo znotraj takšnega grozda se nagibajo k tesnejšemu poslovnemu sodelovanju in povezovanju. Znotraj takšnih SPG najdemo vse od podjetij, bank, izobraževalnih in raziskovalnih ustanov ipd. Tovrstno povezovanje ima običajno ugoden vpliv na povečevanje inovacijske zmožnosti vključenega gospodarstva ter večanje njegove poslovne uspešnosti. Cilj SPG je povečati svetovno konkurenčno zmožnost vključenega dela

to improve the business operations of their own company. New forms of network organization of the companies' business activities appear, organizing the individual business activities in the parts of the world where this is most favourable from the business point of view, whether the price of the manpower, special skills, raw materials or something else is in question. Transnational production networks (TPNs) are formed, whose formation and development are influenced by the stage of development of the business environment of the included countries, regions, national and regional government rules and regulations, socio-cultural conditions and the like. The world becomes an increasingly intertwined network consisting of a series of different TPNs and specialized economic entities included in them and working in different parts of the world. Analyses of the geo-economic map show that the business activities can be distributed or concentrated, but the tendency is to organize such activities in the frame of geographically localized clusters [31]. The clusters may have one of the following two general properties, i.e., they can be:

- General industrial clusters
- Specialized industrial clusters.

The formation and development of the general industrial clusters is based on the assumption that human activities tend towards agglomerating and forming urban environments. The advantages are reflected in the urban economy, whose benefits are the division of the costs of a series of services. Greater concentration and the extent of the demand bring about faster development of the relevant business-development infrastructure and educational and cultural offers that would not develop or would develop more slowly in the case of the dispersion of the subjects of the demand for such services. Such clusters can be the result of the spontaneous development of a country/region or the result of the implementation of the development policy of a country/region.

In contrast to the general industrial clusters the specialized industrial clusters (SICs) are the result of close association with an economic branch or sector. The companies and organizations working within such a cluster tend towards closer business cooperation and association. SICs may include companies, banks, educational and research institutions, etc. Such associating usually has a favourable effect on the growth of the innovation capability of the economy included and on the increase of its business success. The objective of the SIC is to increase the global competitiveness of the included part of the economy in the selected area of its activi-

gospodarstva na izbranem področju njegovega delovanja ter celotnega, s tem povezanega, geografskega področja.

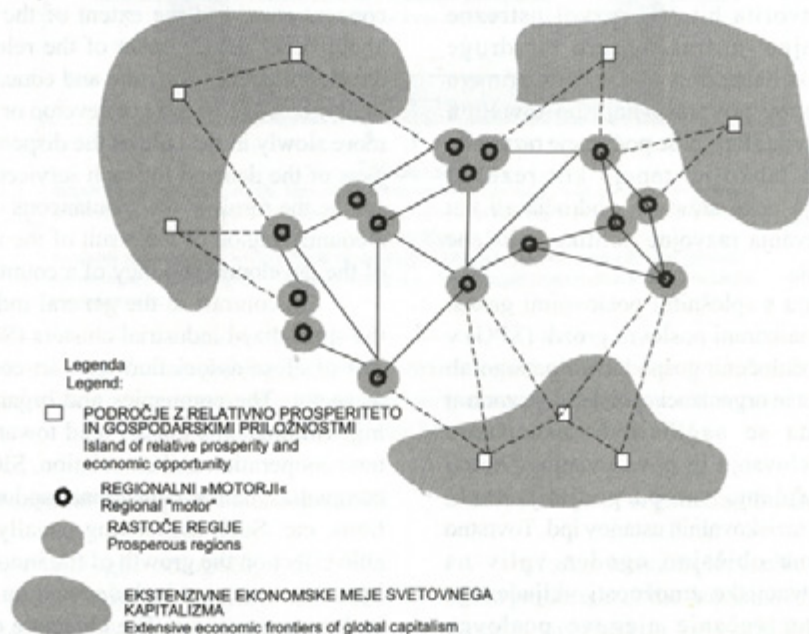
Poslovni interes je eno izmed temeljnih gonil za nastanek in razvoj SPG. Pobudnik nastanka in razvoja posameznih delov SPG je lahko eno ali več podjetij, ki želijo tako zagotoviti boljše razmere za razvijanje lastne konkurenčne zmožnosti. Prilastkov, ki vplivajo na nastanek, večanje in razvijanje določenega SPG je več, in sicer:

- naravne danosti ali kritičen obseg ključnih dejavnikov, potrebnih za razvoj SPG (znana specifična znanja in usposobljenosti, izdelki, storitve, obvladovanje tehnologij itn.)
- posnemanje uspešnih podjetij,
- povečan obseg povpraševanj,
- pojav novih potreb in povpraševanj,
- raven znanja in usposobljenosti človeških virov, vključenih v to panogo ali dejavnost,
- razvitost regionalnega inovacijskega okolja, povezanega s to panogo ali dejavnostjo,
- stopnja razvitosti kulture podjetništva in poslovnega sodelovanja,
- stopnja razvitosti regionalne podjetniške infrastrukture,
- stopnja medčloveškega in medorganizacijskega zaupanja,
- stopnja razvitosti organizacijske kulture poslovnega okolja SPG,

ties and the entire geographical area concerned.

Business interest is one of the basic prime movers for the formation and development of a SIC. The incentive for the formation and development of the individual segments of the SIC can be given by one or several companies wanting, in this way, to ensure better conditions for developing their own competitiveness. There are several attributes that have an effect on the formation, growth and development of a certain SIC, for example:

- Natural conditions or a critical extent of the key factors required for the development of the SIC (existing specific knowledge and skills, products, services, mastering of technology, etc.).
- Imitation of the successful companies.
- Increased extent of the existing enquiries.
- Appearance of new needs and enquiries.
- Level of knowledge and qualifications of human resources active in that branch or activity
- Degree of development of the regional innovation environment relevant to that branch or activity.
- Degree of development of the culture of entrepreneurship and business cooperation.
- Degree of development of the regional entrepreneurial infrastructure.
- Degree of trust in relations between people and organizations.
- Degree of development of the organizational culture of the SIC business environment.



Sl. 3. Shematski prikaz geografije svetovne ekonomije [31]

Fig. 3. Diagrammatic representation of the geography of the global economy [31]

- stopnja podpore lokalnih in državnih organov ter
- stopnja usklajenosti in sodelovanja državnih vlad pri podpori razvoja meddržavnih regionalnih SPG.

Svetovno ekonomijo sestavljajo torej organizacijske in geografske mreže. Organizacijske mreže obsegajo prepletenost omenjenih MPM, medtem ko geografsko mrežo sestavljajo splošni in specializirani poslovni grozdi, locirani v posameznih regijah sveta. Slika 3 je značilen prikaz geografije svetovne ekonomije.

1.3 Potreba po spremembi poslovanja podjetij

Vse te spremembe, ki jih prinaša sodobno poslovno okolje, moramo znati izkoristiti v svoj prid, sicer nam lahko povzročijo veliko težav. Dinamika sprememb se ne zmanjšuje, temveč povečuje. Slika 4 prikazuje nekatere od osnovnih značilnosti sodobnega poslovnega okolja ter s tem povezane ključne dejavnike uspeha. Slednji se nanašajo na značilnosti poslovanja, ki jih najdemo v podjetjih in organizacijah, ki uspešno poslujejo v novih razmerah poslovanja.

Stalne spremembe in negotovost sta temeljni značilnosti novega ekonomskega reda. V zadnjih letih se vsepovsod veliko govori in piše o spremembah. Kljub temu pa se spremembe v praksi, v večini primerov, ne izvajajo tako hitro kakor bi želeli. Zakaj? Predvsem zaradi tega, ker je izvajati spremembe v lastnem okolju velikokrat težavna naloga. Najlažje je biti oportunist in se prepustiti tokovom. Vendar ti tokovi običajno ne vodijo k ciljem, ki jih tako radi

- Degree of support for the local and state authorities.
- Degree of coordination and cooperation of the state governments in supporting the development of interstate regional SICs.

Thus, the global economy comprises both organizational and geographical networks. The organizational networks cover the intertwining of the TPNs, whereas the geographical network is represented by the general and specialized industrial clusters located in the individual regions of the world. Figure 3 illustrates the geography of the global economy.

1.3 The need to change the business activities of companies

All these changes, brought about by the modern business environment, must be used profitably, otherwise they can cause many difficulties. The dynamics of the changes does not decrease, rather it increases. Figure 4 shows some of the basic characteristics of the modern business environment and the relevant key success factors. The latter relate to the characteristics of the business activities met in the companies and organizations successfully operating in the new business conditions.

Constant changes and insecurity are the basic characteristics of the new economic order. During recent years the changes have been discussed and described everywhere. In spite of that, in most cases the changes are not implemented in practice as fast as desired. Why is this? Particularly, due to the fact that implementing the changes in one's own environment is often a difficult task. It is easiest to be opportunist and to let things go. However, this attitude does not

■ Značilnosti / Characteristics

- ✓ Svetovna konkurenca / Global competition,
- ✓ Hiter tehnološki razvoj / Fast technological development,
- ✓ Stroškovno učinkovita delitev proizvodnih kapacitet / Cost effective allocation of production resources,
- ✓ Poslovno sodelovanje in prevzemi / Business cooperation and takeovers,
- ✓ Okoljski problemi / Ecological problems,
- ✓ Socialna trenja / Social tensions,
- ✓ Hitre spremembe / Quick changes,
- ✓ Nestabilnost / Instability

■ Ključni dejavniki uspeha / Key Success Factors

- ✓ Identifikacija ključnih pristojnosti / Identification of key competences,
- ✓ Specializacija / Specialization,
- ✓ Tehnološka odličnost / Technological excellence,
- ✓ Vrhunska kakovost / Top quality,
- ✓ "Zunanje izvajanje" in "mreženje" / "Outsourcing" and "networking"
- ✓ Nadziranje postopkov podjetja / Company processes control,
- ✓ Nadzor nad stroški / Cost control
- ✓ Prilagodljiva organizacija podjetja / Flexible enterprise organization

Sl. 4. Svetovno poslovno okolje – značilnosti in ključni dejavniki uspeha
Fig. 4. Global business environment – characteristics and key success factors

optimistično zapišemo v različne razvojne dokumente in se običajno nanašajo na mednarodno uveljavljanje in povečanje konkurenčne zmožnosti lastnih podjetij, gospodarskih odsekov, industrij, regij, držav itn. Vzrokov za opisane probleme je več. Naštejmo nekaj od njih:

- pomanjkanje informacij,
- pomanjkanje potrebnega znanja in usposobljenosti,
- neinovativno okolje,
- napačna prepričanja in navade,
- odsotnosti prave motivacije,
- odsotnost podjetniškega duha itn.

Če analiziramo, kaj je skupnega vsem tem problemom ugotovimo, da so to problemi, ki jih mora znati reševati sodobno vodenje. Pri tem imamo v mislih pojmovanje vodenja, kot dejavnosti in stroke ter vodenja kot ljudi, ki izvajajo te naloge.

2 MREŽNA ORGANIZACIJA IN POSLOVNI GROZDI

2.1 Mrežne organizacije

Organizacijsko sestavo opredeljujemo kot vsoto načinov, kako neka organizacija členi svojo dejavnost na posamezne poslovne dejavnosti ter kako jih usklajuje. Organizacijska struktura je sredstvo, s katerim vodenje, z organizacijskega vidika, uresničuje svoje poslovne cilje. Postopek oblikovanja organizacije temelji na analizi strateških ciljev ter poslovnega okolja organizacije. Na podlagi tako pridobljenih spoznanj se postavi ustrezna organizacijska sestava, katere ustreznost je treba stalno preverjati. V današnjem času hitrih sprememb se kmalu lahko zgodi, da sedanja organizacija ne ustreza več dejanskim potrebam organizacije.

Klasična organizacija poslovanja je temeljila na visoki stopnji sestavljenosti in podprtosti s podrobno opredeljenimi pravili za delo. Sodobna organizacija, ki mora zadostiti potrebam nestabilnega in hitro se spreminjajočega okolja, temelji na bolj ohlapnih elementih vodenja, kakor so poslovni cilji, strategije in vrednote. Slika 5 prikazuje ustreznost obeh modelov vodenja in organiziranja glede na stopnjo nestabilnosti in negotovosti v poslovnem okolju organizacije. Seveda je slika 5 samo poenostavljen prikaz različnosti obeh modelov. Vedeti je treba, da ostaja v določenih primerih določitev opravil še naprej pomemben prilastek potrebne organiziranosti poslovanja sodobnega podjetja.

usually lead to the goals optimistically written down in various development documents and is usually related to the international establishment and growth of the competitiveness of one's own companies, economic sectors, industries, regions, states, etc. These problems arise for several reasons, some of them being:

- lack of information,
- lack of required knowledge and qualifications,
- a non-innovative environment,
- wrong beliefs and habits,
- absence of the correct motivation,
- absence of an entrepreneurial spirit.

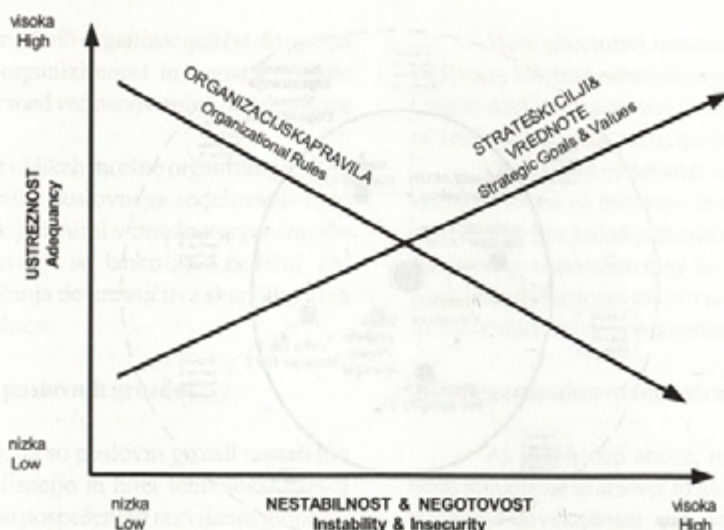
When analyzing what these problems have in common it can be seen that these are the problems that modern management must know how to solve. Here we mean management as an activity and science and management as personally performing the tasks.

2 NETWORK ORGANIZATION AND INDUSTRIAL CLUSTERS

2.1 Network organizations

The organizational structure is defined as the sum of the ways that an organization breaks down its activity into individual business operations and how it coordinates them. The organizational structure is a means by which the management realizes its business targets from the organizational point of view. The process of the formation of the organization is based on the analysis of the strategic targets and the business environment of the organization. The findings help to outline a suitable organizational structure whose adequacy must be verified continuously. At the present time of rapid changes it is likely that the existing organization will no longer comply with the actual needs of the organization.

The conventional organization of business activities was based on a high degree of structuring and was supported by detailed rules and regulations for work. The modern organization, having to meet the needs of the unstable and rapidly changing environment, is based on undefined elements of management, such as business targets, strategies and values. Figure 2 shows the adequacy of both models of management and organization with respect to the degree of instability and insecurity in the business environment of the organization. Of course, Figure 2 is only a simplified representation of the differences between the two models. It must be borne in mind that in some cases the determination of the tasks still remains an important attribute of the required organization of the business operations of the modern company.



Sl. 5. Primernost modelov vodenja in organiziranja, glede na stopnjo stabilnosti poslovnega okolja
 Fig. 5. Adequacy of the models of management and organization with respect to the degree of stability of the business environment

Osnove teorije organizacije podjetij industrijske dobe, ki so jo postavili Max Weber, Frederick W. Taylor, Henry Fayol in njihovi sodobniki, temeljijo na birokratskem modelu organizacije in organiziranja poslovanja. Glavne značilnosti takšne organizacije so razvrstitev, relativna zaprtost in togost. Takšna organizacija je bila ustrezna za podjetja industrijske dobe, saj je bilo poslovno okolje razmeroma stabilno. Danes, ko se spoprijemamo s potrebami hitrega razvoja in zmožnosti stalnega prilagajanja, pa je takšna organizacija neustrezna. Kot odgovor na to težavo se v zadnjem času pojavljajo različne oblike mrežne organizacije.

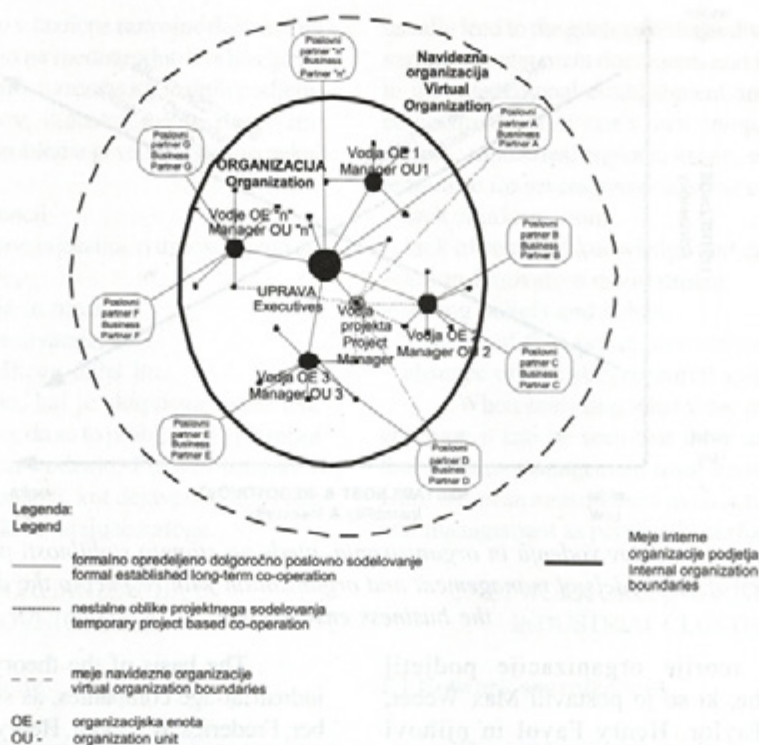
Mrežne organizacije lahko označimo kot zapletene prilagodljive sisteme brez osrednjega razvrstilnega nadzora z več vzporedno delujočih enot [17]. Mrežne organizacije imajo zmožnost hitrega prilagajanja brez potrebe po vzpostavitvi toge razvrstilne oblike upravljanja. Mrežno organizacijo lahko uporabimo za organiziranje dejavnosti lastne organizacije ali skupine poslovno povezanih organizacij. V primeru lastne organizacije gre za vzpostavitev različnih uporab navidezne organizacije, medtem ko gre pri skupini poslovno povezanih organizacij za skupen interes sodelovanja na določenem poslovnem področju. Glede na stopnjo formalne povezanosti ločimo naslednje oblike mrežnih organizacij, in sicer:

- trdne mrežne organizacije in
- mehke mrežne organizacije.

The basis of the theory of organization of industrial-age companies, as set forth by Max Weber, Frederick W. Taylor, Henry Fayol and their contemporaries, is the bureaucratic model of the organization and the organizing of business activities. The main characteristics of such an organization are hierarchy, relative locking up and rigidity. Such an organization was appropriate for the companies of the industrial age, since the business environment was relatively stable. Today, when the needs for rapid development and the capability of permanent adaptation are faced, such an organization is inappropriate. In answer to this problem various forms of network organization have recently appeared.

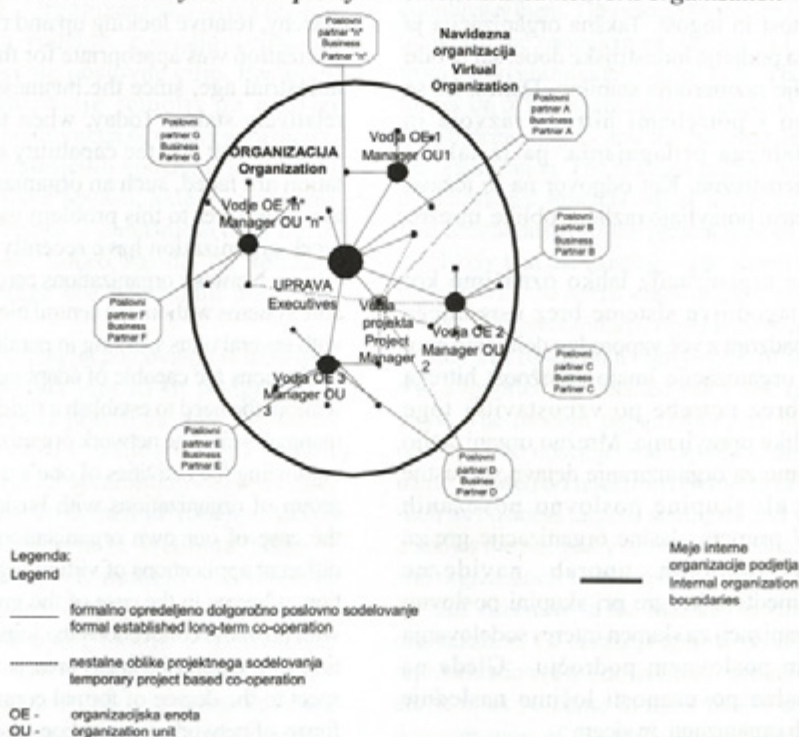
Network organizations can be defined as adaptable systems without the central hierarchical control and with several units working in parallel [17]. Network organizations are capable of adapting themselves quickly without the need to establish a rigid hierarchical form of management. The network organization can be used for organizing the activities of one's own organization or a group of organizations with business connections. In the case of our own organization the establishing of different applications of virtual organization is in question, whereas in the case of the group of organizations with business connections the joint interest in cooperation in a certain business area is concerned. With respect to the degree of formal connection the following forms of network organizations are distinguished:

- well-structured network organizations,
- open network organizations.



Sl. 6. Ponazoritev primera trdne mrežne organizacije

Fig. 6. Illustration of the example of a well-structured network organization



Sl. 7. Ponazoritev primera mehke mrežne organizacije

Fig. 7. Illustration of the example of an open network organization

Pri trdnih mrežnih organizacijah (sl. 6) gre za notranjo mrežno organiziranost in trajnejše oblike formalnih povezav med več neodvisnimi sodelujočimi organizacijami.

Pri mehkih oblikah mrežne organizacije (sl. 7) gre za nestalne oblike poslovnega sodelovanja med organizacijami, vključenimi v mrežno organizacijo. Interesi za sodelovanje so lahko zelo različni. Od poslovnega obveščanja do uresničitve skupnih tržnih ali razvojnih projektov.

2.2 Organizacija poslovnih grozdov

Videli smo, da so poslovni grozdi nastali kot odgovor na globalizacijo in hiter tehnološki razvoj ter s tem potrebo po pospešenem razvijanju globalne konkurenčne zmožnosti gospodarskih dejavnosti v okviru posameznih držav ali področij. Poslovni grozdi predstavljajo geografsko opredeljene povezave med predstavniki (sl. 8) gospodarskih dejavnosti, razvojno-raziskovalnih ter izobraževalnih ustanov, vlade, finančnih ustanov ter ustanov za podporo in razvoj poslovnega sodelovanja (PRps). Ta opredelitev velja tako za splošne kakor za specializirane poslovne grozde, ki smo jih omenili v poglavju 1.2.

Sodobne države iščejo in dejavno sodelujejo pri razvijanju perspektivnih gospodarskih dejavnosti. Običajno gledanje makroekonomistov na podjetje kot "črno škatlo", ki se razumno odziva na spremembe v tržnem okolju ter s tem v zvezi osredotočanje na makroekonomske probleme, je zamenjalo osredotočanje vlad na mikroekonomske raven. Skrb sodobnih vlad niso posamezna podjetja, temveč dolgoročno usmerjanje na večanje konkurenčne zmožnosti poslovnih grozdov, ki jih sestavljajo tako podjetja kakor razvojno raziskovalne

Well-structured network organizations (Fig. 6) feature internal network organizing of the organizations and lasting forms of formal connections between independent participating organizations.

Open forms of network organization (Fig. 7) are unstable forms of business cooperation between the organizations included in the network organization. The interests in cooperation may be very different, ranging from passing business information to the realization of joint commercial or development projects.

2.2. Organization of industrial clusters

As mentioned above, industrial clusters have been introduced in answer to globalization, rapid technological development and, consequently, the need for the accelerated developing of the global competitiveness of economic activities in the frame of individual countries or regions. Industrial clusters represent geographically defined connections between the representatives (Figure 8) of economic activities, research-and-development and educational institutions, government, financial institutions and institutions that support the development of business cooperation (SD bc). This definition relates to the general as well as the specialized industrial clusters mentioned in section 1.2.

Modern countries seek and actively take part in developing prospective economic activities. The traditional macroeconomists' view of the company as a "black box", rationally responding to changes in the market environment, and consequently focusing on macroeconomic problems has been replaced by the focusing of governments on the microeconomic level. Modern governments do not pay much attention to the individual companies, but to long-term orientation towards the growth of competitiveness of industrial clusters consisting of companies as well as research-



Sl. 8. Partnerji v poslovnih grozdih
Fig. 8. Partners in industrial clusters

ustanove ter organizacije, ki zagotavljajo finančna sredstva za financiranje razvoja podjetij v grozdu. Grozdi so običajno vezani na določeno področje, ki je lahko znotraj ene države, lahko pa pokriva ozemlje tudi več držav. Poglavitni cilj tovrstnih vladnih podpor je vzpodbujati specializacijo, poslovno povezovanje in sodelovanje ter konkurenčno delovanje znotraj grozdov. Pomemben namen je podpirati sodelovanje majhnih in srednjevelikih podjetij z velikimi podjetji. Poslovni grozdi nastajajo in se razvijajo s pomočjo ustanov za podporo in razvoj poslovnega sodelovanja (PRps), ki jih lahko ustanovijo državne ali regionalne vlade ali pa tudi kar sama podjetja.

V teoriji obstaja več definicij pojma "poslovni grozd". Skupni imenovalec vseh definicij pa je:

- povezanost,
- mreženje in
- specializacija.

Predvsem pa predstavljajo poslovni grozdi priložnost za majhna in srednjevelika podjetja, ki morajo prav tako kakor velika podjetja razvijati svetovno konkurenčno ponudbo. Pri tem se spopadajo s problemom kritičnega obsega zmogljivosti lastnega podjetja, lastnih razvojnih zmožnosti, trženjskih možnosti, znanja in še bi lahko naštevali. Odgovor na rešitev opisanega problema je specializacija, iskanje ustreznih poslovnih partnerjev, povezovanje in ustvarjanje navideznega podjetja znotraj poslovnega grozda. Z navideznim podjetjem rešimo problem proizvodnih stroškov, obsega poslovanja in razvoja, medtem ko je mednarodna prepoznavnost in uveljavljenost poslovnega grozda v veliko pomoč in podporo pri trženju podjetja in njegovi vidnosti na svetovnem trgu. V poslovni grozd vključena podjetja oblikujejo vrednostne verige stalnih ali projektnih poslovnih povezav med posameznimi v grozdu sodelujočimi podjetji in organizacijami. Grozd je običajno odprt sistem, tako da so te poslovne povezave tudi s podjetji in organizacijami zunaj njega. Poslovne povezave nastanejo na osnovi:

- navpičnih,
- vodoravnih in
- sosrednih strategij poslovnega povezovanja.

Strategija navpičnega poslovnega povezovanja temelji na specializaciji in povezovanju podjetij, in sicer od proizvajalca materiala ali surovine pa do izdelovalca končnega izdelka. Strategija vodoravnega povezovanja temelji na specializaciji in povezovanju podjetij, ki delujejo v okviru iste

and-development institutions and organizations providing the financial means for financing the development of companies in a cluster. Usually, the clusters can be restricted to a certain region, which may be located within one state or it may cover the territory of several states. The basic target of government support is to stimulate specialization, business associating and cooperating and competitive behaviour within clusters. An important target is to support the cooperation of small and medium-sized companies with big companies. Industrial clusters are formed and develop with the assistance of institutions for the support and development of business cooperation (SD bc), which may be established by national or regional governments or simply by the companies themselves.

In theory, there are several definitions of the term "industrial cluster". The common denominators of all these definitions are:

- connecting,
- networking,
- specialization.

Industrial clusters are an opportunity, particularly for small and medium-sized companies, to develop their competitiveness like big companies. Moreover, they face the problem of a critical extent of the capacities of their own company, development capabilities, marketing possibilities, knowledge and the like. The solution to the described problem is specialization, searching for appropriate business partners, connecting and creating a virtual company within the industrial cluster. A virtual company solves the problem of production costs, the range of business activities and development, whereas the international renown and the establishment of the business cluster promote the company's marketing activities and how it is perceived on the world market. Companies as a part of the industrial cluster form the value chains of the permanent and the project business connections between the individual companies and organizations taking part in the cluster. Usually, the cluster is an open system so that there are business connections also with companies and organizations outside it. Business connections are formed on the basis of:

- vertical strategies of business connections,
- horizontal strategies of business connections,
- concentric strategies of business connections.

The strategy of vertical business connections is based on the specialization and connection of companies from the maker of the material or raw material to the producer of the final product. The strategy of horizontal connecting is based on the specialization and connect-

panoge ali področja gospodarskega delovanja. Strategija sosrednega povezovanja pa temelji na povezovanju s specializiranimi podjetji in organizacijami, ki zagotavljajo podporne storitve in izdelke, za učinkovitejše in uspešnejše izvajanje določenih poslovnih dejavnosti operative in razvoja podjetij, vključenih v grozd.

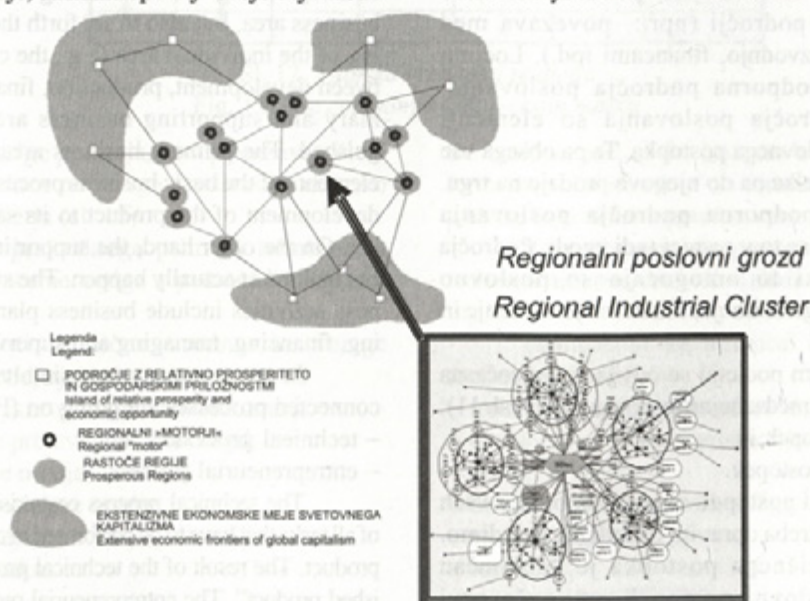
Pri razvijanju lastne mreže poslovnih povezav vzpostavljajo podjetja prej omenjene trde in mehke oblike mrežne organizacije, ki deluje znotraj poslovnega grozda. Slika 9 je poskus značilnega prikaza primera organizacije takšnih mrež znotraj poslovnega grozda. Koordinacijo takšnega poslovnega grozda izvaja izbrana ali za to posebej oblikovana ustanova za podporo in razvoj poslovnega sodelovanja (PRPs).

V poslovnih grozdih se hitreje razvija tudi namensko inovacijsko okolje, ki ponuja boljše razmere za hitrejši razvoj dejavnosti podjetij ter poslovnega grozda kot celote.

3 SPECIALIZACIJA IN RAZVIJANJE LASTNE RAZVOJNO-PROIZVODNE MREŽE

3.1 Matrika vrednostne verige podjetja

Člene vrednostne verige podjetja predstavljajo posamezna področja poslovanja, ki jih podjetje potrebuje, da lahko opravlja svojo dejavnost.



Sl. 9. Značilen prikaz primera organiziranja poslovnih mrež podjetij znotraj poslovnega grozda
Fig. 9. Illustrative representation of an example of organizing business networks of companies inside the industrial cluster

ing of companies active within the frame of the same branch or area of economic activities. The strategy of concentric connecting is connecting with specialized companies and organizations providing support services and products for more efficient and more successful execution of certain operational and development business activities of companies included in the cluster.

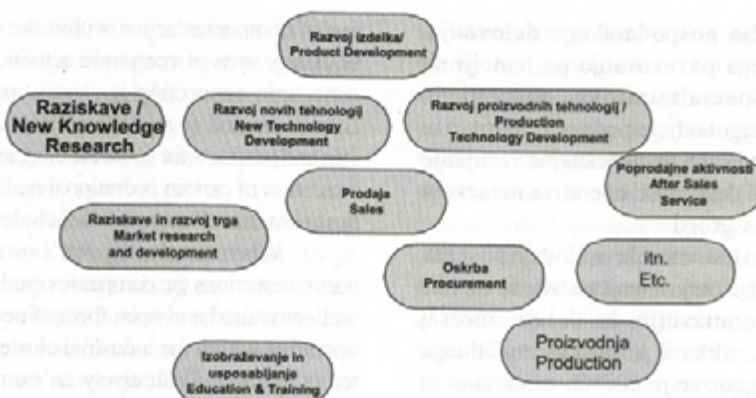
When developing one's own network of business connections the companies establish the mentioned well-structured and open form of network organization operating within the industrial cluster. Figure 9 is an attempt to show illustratively an example of organizing such networks inside the business cluster. The coordination of such an industrial cluster is performed by a selected or purposely formed institution for the support and development of business cooperation (SD bc).

Industrial clusters facilitate a faster development of the specific-purpose innovation environment offering better conditions for the faster development of the companies' activities and the industrial cluster as a whole.

3 SPECIALIZATION AND DEVELOPING ONE'S OWN DEVELOPMENT-PRODUCTION NETWORK

3.1 Matrix of the company's value chain

The value-chain links of the company are represented by the individual business areas that the



Sl. 10. Področja poslovanja kot členi vrednostne verige podjetja
 Fig. 10. Business areas as the elements of companies' value chain

Posamezno področje poslovanja opredeljuje logično celoto strokovnih nalog, ki jih mora podjetje izvajati. Področja poslovanja se nanašajo na razvoj, trženje, oskrbo, proizvodnjo, finance, in podobno. Naloga vodenja podjetja je, da razpozna in opredeli vsa področja poslovanja, ki jih podjetje potrebuje ter zagotovi njihovo ustrezno izvajanje (sl. 10).

Vsebinska, organizacijska in organiziranost delovanja posameznega področja morajo biti prav tako kot izdelek in proizvodna tehnologija predmet stalnega prenavljanja. Ni problem samo postaviti pravo vsebino, organizacijo in organiziranost delovanja posameznega področja poslovanja, temveč tudi medsebojno povezanost med posameznimi področji (npr.: povezava med razvojem, proizvodnjo, financami ipd.). Ločimo osnovna in podporna področja poslovanja. Osnovna področja poslovanja so elementi temeljnega poslovnega postopka. Ta pa obsega vse od razvoja izdelka pa do njegove prodaje na trgu. Medtem ko podporna področja poslovanja omogočajo, da se to v resnici tudi zgodi. Področja poslovanja, ki to omogočajo so poslovno načrtovanje, organiziranje, financiranje, vodenje in nadziranje.

V vsakem podjetju se odvijata dva sočasna postopka, ki sta medsebojno tesno povezana (sl. 11):

- tehnični postopek in
- podjetniški postopek.

Tehnični postopek obsega zaporedje vseh nalog, ki jih je treba opraviti, da izdelek naredimo. Rezultat tehničnega postopka je "dokončan izdelek". Poslovni postopek omogoča prvi postopek, njegov rezultat je prodan izdelek in "realiziran dobiček". Prvi postopek pomeni tehnični del, drugi postopek pa poslovni del

company needs to perform its activity. The individual business area defines the logical frame of professional tasks that the company has to perform. The business areas relate to development, marketing, supply, production, finances, etc. The company's management is responsible for identifying and defining all business areas that the company needs, and to ensure they perform correctly (Fig. 10).

The contents, organizing and organization of the functioning of the individual area must be subject to constant innovation, just like the product and the production technology. It is not the only problem to set forth correct contents, organization and organizing the functioning of the individual business area, but also to set forth the interconnecting of the individual area (e.g., the connections between development, production, finances etc.). Primary and supporting business areas are distinguished. The primary business areas represent the elements of the basic business process ranging from development of the product to its sale on the market. On the other hand, the supporting business areas make that actually happen. The supporting business activities include business planning, organizing, financing, managing and supervising.

In any company two simultaneous, closely connected processes are going on (Fig. 11):

- technical process,
- entrepreneurial process.

The technical process comprises the sequence of all tasks that have to be performed in order to make the product. The result of the technical process is the "finished product". The entrepreneurial process makes the first process possible, its result is the sold product and the "realized profit". The first process represents the technical part, whereas the second process represents

Elementi podjetniške vrednostne verige orodjarskega podjetja:

- raziskave in razvoj poslovnih znanj,
- razvoj novih tehnologij poslovanja,
- trženje in prodaja,
- oskrba proizvodnje,
- proizvodnja,
- predaja orodja naročniku,
- poprodajne dejavnosti.

Tehnična in poslovna vrednostna veriga morata biti usklajeni ter predmet stalnega iskanja novosti in uvajanja inovativnih rešitev, ki so osnova za dvigovanje konkurenčne zmožnosti podjetja.

3.2 Matrika vrednostne verige poslovnega grozda

Vrednostna veriga poslovnega grozda se nanaša na opredelitev medsebojno povezanih specializiranih dejavnosti, s katerimi podjetja in organizacije vstopajo v poslovne povezave z drugimi osebki poslovnega grozda, s katerimi sodelujejo pri izvedbi lastnega izdelka. Slika 13 je prikaz primera poslovno nepovezanega podjetja, ki opravlja vse poslovne dejavnosti znotraj lastnega podjetja ter visoko specializiranega podjetja, ki izvaja v lastnem podjetju samo določene poslovne dejavnosti, preostale pa zagotavlja prek poslovnih povezav z ustreznimi poslovnimi partnerji. Na sliki pa imamo prikaz tipologije poslovnih povezav, ki nastajajo med podjetji

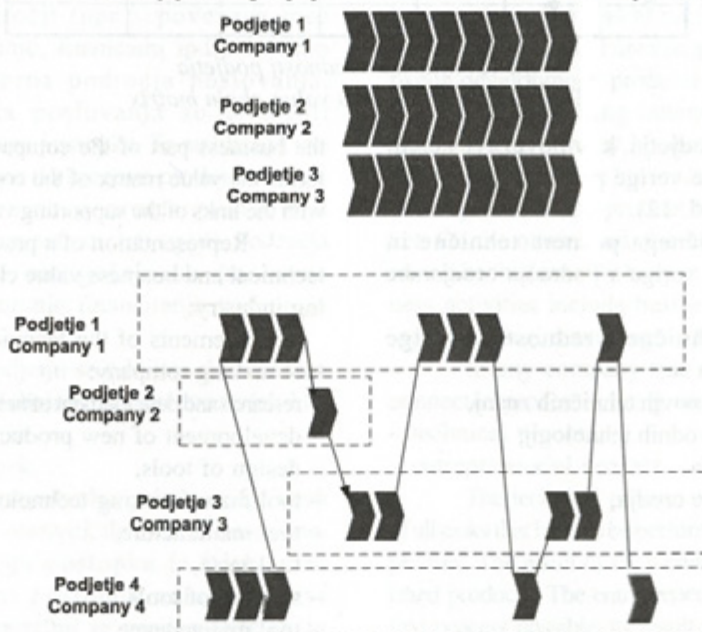
The elements of the entrepreneurial value chain of a tool-making company:

- research and development of new business knowledge,
- development of new business technologies,
- marketing and sale,
- supplies for production,
- production,
- client's taking-over of tool,
- after-sales activities.

The technical and business value chain must be coordinated and subject to constantly introducing novelties and innovative solutions, which are a prerequisite for increasing the company's competitiveness.

3.2 Matrix of the value chain of an industrial cluster

The value chain of the industrial cluster refers to defining the interconnected specialized activities with which the companies and organizations enter into business connections with other business-cluster entities taking part in the completion of the product. Figure 13 illustrates the example of a company without external business connections, performing all the business activities inside its own company, and a highly specialized company performing only certain business activities within the company, while the others are performed through business connections with relevant business partners. It can be seen that very different situations are in



Sl. 13. Vrednostna veriga nepovezanih in povezanih podjetij in organizacij
Fig. 13. Value chain of unconnected and connected companies and organizations

in organizacijami poslovnega grozda. Vidimo, da imamo lahko opravka z zelo različnimi situacijami, od mehkih do trdih oblik poslovnega povezovanja, predmet povezovanja je lahko vsak člen poslovnega postopka, ki pomeni člen vrednostne verige podjetja. Glede na vsebino poslovnega sodelovanja se oblikujejo stalne poslovne povezave, ki so temelj za izvajanje integriranega in neprekinjenega poslovnega postopka, pri katerem sodeluje več podjetij ali pa nestalne – projektne poslovne povezave.

Pri poslovnih grozdih prav tako ločimo:

- osnovne in
- podporne povezave

Prikaz praktičnega primera členov verige osnovnih povezav s področja orodjarske industrije:

- razvoj novih tehnologij in materialov,
- trženje in prodaja,
- snovanje in konstruiranje,
- nabava,
- računalniške analize in simulacije,
- specialne proizvodne storitve,
- preproste proizvodne storitve,
- proizvodnja materiala in polizdelkov,
- izdelava standardnih delov,
- montaža in testiranje,
- izdelava polizdelkov za končnega kupca,
- vzdrževanje orodij pri kupcu,
- razdeljevanje ter
- storitve.

Posamezni člen osnovne vrednostne verige pomeni potencialno specializacijo in samostojno dejavnost podjetja.

Vrednostne verige osnovnih povezav med podjetji in organizacijami poslovnega grozda nastanejo skladno z razvojno strategijo poslovnega grozda. Ta običajno temelji na tvorjenju v poglavju 2.2 omenjenih navpičnih, vodoravnih in sosrednih poslovnih povezav.

Podpore in usmerjanje razvoja vrednostnih verig poslovnega grozda zagotavljajo člani podporne vrednostne verige, ki zagotavljajo pogoje uspešnejšemu poslovnemu povezovanju podjetij in organizacij, in sicer tako da usmerjajo osnovne člene vrednostne verige, ki jih tvorijo podjetja in organizacije poslovnega grozda. Člene podporne vrednostne verige sestavljajo naslednje poslovne dejavnosti:

- trženje poslovnega grozda,
- podpora postopkom specializacije organizacij in poslovnega povezovanja,

question, from open to well-structured forms of business connections; any part of the business process as a part of the company's value chain can be the subject of outsourcing. According to the contents of the business cooperation permanent business connections as a basis for the execution of the integrated and continuous business process in which several companies take part or temporary-project business connections are formed.

In industrial clusters the following connections are also significant:

- primary connections,
- supporting connections.

The following is a practical example of the links in a chain of primary connections in the tool-making industry:

- the development of new technologies and materials,
- marketing and sales,
- conceiving and designing,
- purchasing,
- computer analyses and simulations,
- special production services,
- simple production services,
- production of materials and semi-finished products,
- manufacture of standard parts,
- installation and testing,
- manufacture of semi-finished products for the end user,
- maintenance of tools on the buyer's premises,
- distribution,
- services.

The individual link of the primary-value chain represents potential specialization and the company's independent activity.

The value chains of primary connections between the companies and organizations of the industrial cluster are formed in accordance with the industrial cluster development strategy. The latter is usually based on forming vertical, horizontal and concentric business connections, as mentioned in Section 2.2.

The support and orientation of the development of industrial cluster value chains are ensured by the supporting value-chain links that create conditions for successful business connections of companies and organizations by orienting the value-chain primary links formed by companies and organizations of the business cluster. The supporting value-chain links consist of the following business activities:

- the marketing activities of the industrial cluster,
- supporting the processes of the specialization of organizations and business connecting processes,

- podpora izvajanju skupnih razvojnih projektov,
- izobraževanje in usposabljanje,
- štipendijski skladi,
- razvoj sodelovanja z regionalno oblastjo in nosilci gospodarskega razvoja,
- informacijski sistem.

Podjetja - organizatorji poslovnih mrež znotraj grozda, skupaj s sodelujočimi podjetji in drugimi ustanovami organizirajo poslovne verige, s katerimi zagotavljajo kupcem optimalno vrednost ponujanih izdelkov in storitev.

Ustanove za podporo in razvoj poslovnega sodelovanja (PRps), ki so vodenje poslovnega grozda morajo skrbeti za usmerjanje, motiviranje in podporo poslovnega sodelovanja in povezovanja. Skladno s tem morajo zagotavljati in razvijati ustrezno podporno vrednostno verigo za to potrebnih specializiranih storitev.

Glavno izhodišče vsakega dela v vsakem sodelujočem podjetju ali organizaciji poslovnega grozda mora biti "vrednost za končnega kupca". Da bi bil grozd poslovno uspešen, mora vsako podjetje ali organizacija v verigi prispevati največji delež svoje vrednosti.

- supporting the execution of joint development projects,
- education and training,
- scholarship funds,
- developing cooperation with regional authorities responsible for the development of the region,
- information system.

In conjunction with the participating companies and other organizations, the leading companies, the organizers of business networks within the cluster, organize the business chains, thereby ensuring the optimum value of the products and services offered to the buyers.

The institutions for the support and development of business cooperation (SD bc), representing the industrial cluster management, must take care of orienting, stimulating and supporting the business cooperation as well as connecting. Accordingly, they must provide and develop a suitable supporting value chain of specialized services, required to that end.

The basic driving force of each work in any participating company or organizations of the industrial cluster must be "the value for the end user". For the cluster to be successful each company or organization in the chain must contribute the maximum share of its value.

4 LITERATURA

4 REFERENCES

- [1] W.S.Birbaum William. (1990) If your strategy is so terrific, how come it doesn't work, *Amacom*, New York.
- [2] T.Grundy, L. Brown (2002) Strategic project management, *Thomson Learnig*, London.
- [3] D.Hahn (1991) Strategic management-tasks and challenges in the 1990s, *Long Rang Planning*, Vol. 24, No.1, Pergamon Press, London.
- [4] A. Hax, N. Majluf (1996) The strategy concept and process, *Prentice Hall*, New Jersey.
- [5] C.W.L. Hill Charles, G.R. Jones Gareth (1995) Strategic management theory, *Houghton Mifflin*, Boston.
- [6] D.J. Hunger, T.L. Wheelen (1995) Strategic management, *Addison-Wesley*, New York.
- [7] A.S.Judson (1990) Making strategy happen, *Basil Blackwell*, Oxford.
- [8] D. Lock (2000) Project management, *Gower*, Hampshire.
- [9] H.Macmillan, M.Tampoe (2000) Strategic management, *Oxford University Press*, Oxford.
- [10] J.J. Phillips, T.W. Bothell, G.L. Snead Lynne (2002) The project management scorecard, *Butterworth-Heinemann*, London.
- [11] Jaklič M. et al. (2004) Zaključno poročilo: Evalvacija ukrepov za spodbujanje razvoja grozdov v Sloveniji v obdobju 2001-2003, *Inštitut za konkurenco in sodelovanje, Ekonomska fakulteta, Univerza v Ljubljani, Ljubljana*.
- [12] P. Raimond, E. Colin Eden (1990) Making strategy work, *Long Rang Planning*, Vol. 23 No. 5, Pergamon Press, London.
- [13] H.C. Riekhof (1993) Hearsforderung fuer die strategische Planung, *ZfFO*, Vol.63, No.5, Giessen.
- [14] G. Saloner, A. Shepard, J. Podolny (2001) Strategic management, *John Wiley & Sons*, New York.
- [15] J.L. Thompson (2001) Understanding corporate strategy, *Thompson Learning*, London.
- [16] Archer N.P. (2004) Project management in network organizations, *PM Research Conference, PMI*, London.
- [17] Brodyerick C.S. (1996) The 7 universal laws of customer value, *Times Mirror*.

- [18] Beukerma L., Coenen H. (1999) Global logistic chains, *Globalization and Labour Relation*, Cheltenham.
- [19] Drucker P. (2002) Managing in the next society, *St. Martin's Press*, New York.
- [20] Fuld L. (1995) The new competitor intelligence, *John Wiley & Sons*, New York.
- [21] Godin S. (2002) Survival is not enough, *The Free Press*, New York.
- [22] Gould D. (2006) Virtual organization, daveg@seanet.com, on web published paper.
- [23] Hisrich R. et al. (2005) Entrepreneurship, Sixth Edition, *McGraw Hill Irwin*, Boston.
- [24] Harvard Business Essentials: Entrepreneur's Toolkit (2005) *Harvard Business School Press*, Boston.
- [25] A. Marsh & McLennan Company: Future automotive industry structure 2015 (2004) *MERCER Consulting*.
- [26] Oesterle H. et al. (2001) Business networking, *Springer*, Berlin.
- [27] Jordan J., Michel F. (2000) Next generation manufacturing, *John Wiley & Sons*, New York.
- [28] G. Peyton Richard (2004) Toolmakers cluster of Slovenia, TCS-LENS feasibility study, *World Tech Inc., McLean, VA*.
- [29] Economics, making sense of the modern economy (1999) *The Economist*, London.
- [30] Tapscott D. (1998) Blueprint to the digital economy, *Mc Graw-Hill*, New York.
- [31] Dicken P. (2003) Global shift, *The Guilford Press*, New York.

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