

Global Knowledge Market and New Business Models

Prof. Dr Brane Semolic

Abstract

Paper deals with the emerging global changes which demand an introduction of new competencies for organizations and individuals. How to motivate present and future clients to stay loyal? How to create innovative business environment and motivate the most creative people to work with us and help us co-create innovative desirable products and services for demanding global markets? Utilization of classical organization and management principles is not sufficient anymore. We are heading towards knowledge based corporate culture where intrinsic satisfaction of all involved parties is a key driver for a long term business success. Innovative products, global entrepreneurship and the ability to design and maintain a unique portfolio of regional and global value chains, supported by different forms of collaborative organizations, is becoming one of the core competencies of contemporary organizations. We are trying to learn and copy natural systems and processes and use them in a process of organizing our businesses. Such an example is the creation and development of business ecosystems. The heart of such systems are process based networked organizations.

Key words: globalization, innovative value chains, business networks, business ecosystems, knowledge management, process based organization

1 Emerging Global Changes

Present globalized business environment requires different competencies from both, organizations and individuals. In order for a conventional organization to succeed, the productivity of its individuals and organizational units within the company used to be important. In the organizations of the 21st century, this success depends increasingly on interpersonal and inter-organizational productivity (including cooperation with companies, other organizations and individuals outside one's own company) with an agile workplace at its core. People working in an agile workplace, often titled "knowledge workers", need to be flexible and to partake in and co-create the real or virtual business environment of the company's business network. The individual knowledge worker's general competencies relate to:

- Specialized knowledge and skills for an individual work area,
- a wide horizon of business and technological literacy,
- work in multidisciplinary project teams,
- competencies of working in a multicultural environment,
- competencies of adaption to fast changes and
- project management and leadership competencies.

The post-global business environment thus requires competencies that are substantially different from those typical of the industrial age of the 20th century and which we still unfortunately see in the practice of numerous companies.

The product value creation process was driven by suppliers in the industrial age (Figure 1). Significant for the industrial culture was the absence of customers' inclusion in product development processes. The most important issue for this phase is an ability to produce quality and competitive products. Many modern organizations are in the development phase of the transaction culture. The main characteristic of this phase is a creation of wealth by business transactions. Organizational excellence is one of the main drivers in this stage for the last twenty years. The business excellence is in search of organizational excellence, where extrinsic organizational rewards are often still more important than real intrinsic personal satisfaction of all organization's stakeholders. Nowadays, when we are entering the knowledge based economy, real intrinsic personal satisfaction becomes one of critical success factors of global competitiveness. Inclusion, collaboration, co-creation, customer satisfaction and "win-win" approaches are the main characteristics of this phase and organizational culture. The key factors in this development stage are the people involved. Competent and highly motivated people (internal and external) can provide results which reach beyond owners, managers or client expectations. This can be reached by utilization of personal excellence and satisfaction of all involved parties.

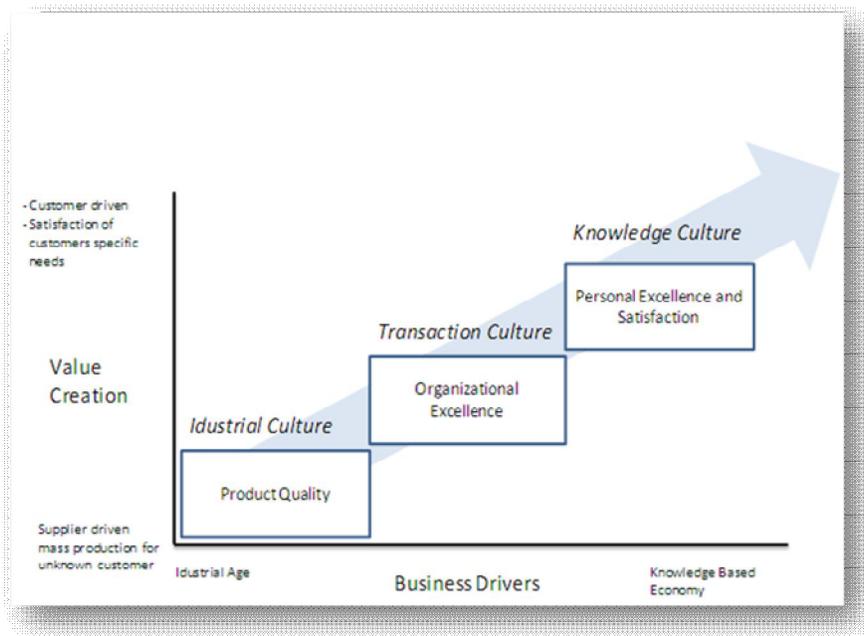


Figure 1: Value migration of business drivers

2 New Age Organization Characteristics

In today's' post globalized world, organizations are facing constant competition from both regional and global markets; demanding to increase their pace to innovate, produce and provide at higher quality with a higher degree of customizability of their products and services. In order to secure sustainable competitiveness, the leading organizations have recognized the need to shift from classic organizational structures to being more diverse and distributed internally as well as externally, mainly depending on collaboration as a basis for competitive advantage in innovation (Mertins 2003, Firestone 2002, Tapscott 1999). For organizations, this change is driven by directed and sustainable collaboration with their complementing entities holding relevant knowledge. This concept of work is supported by the idea of an open innovation environment (Chesbrough, 2003) which says that nowadays organizations needs to collaborate with their business partners and all other relevant stakeholders, to secure permanent inflow of new information, ideas and proposals to support the internal innovation processes.

That fact changes and produces new forms of economic and non-economic activities, whose main features are increasing responsiveness to customer requirements - users, increasing

responsiveness and flexibility of business units, increasing labor flexibility, the ability to quickly respond to changes in global markets, capacity building and project team working. It is a process of changing values, which are crystallized into the formation of a new organizational post globalized culture, based on a value chain development, outsourcing and flexible network organization (Figure1).

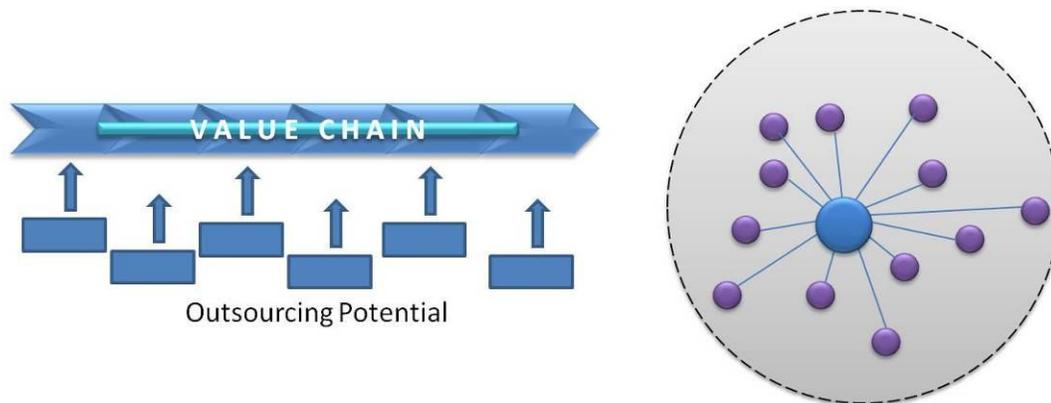


Figure 1: Migration of corporate culture towards value chains based network organizations

The permanent access to the global premium knowledge resources is becoming one of the key elements of a business success. A global market does not care, if you are a small or a big company / organization. What counts are affordable premium products and services only? We need the new breed of business models and leadership in order to achieve this. The »magic key words« are organization's leaders with a global mind set, key competences, global competitiveness, outsourcing, sustainable collaboration, trustful business networks, personal excellence and satisfaction supported by new leadership styles.

The Figure 2 shows an illustration of the global market mesh with different business networks, driven by various regional and/or global business integrators.

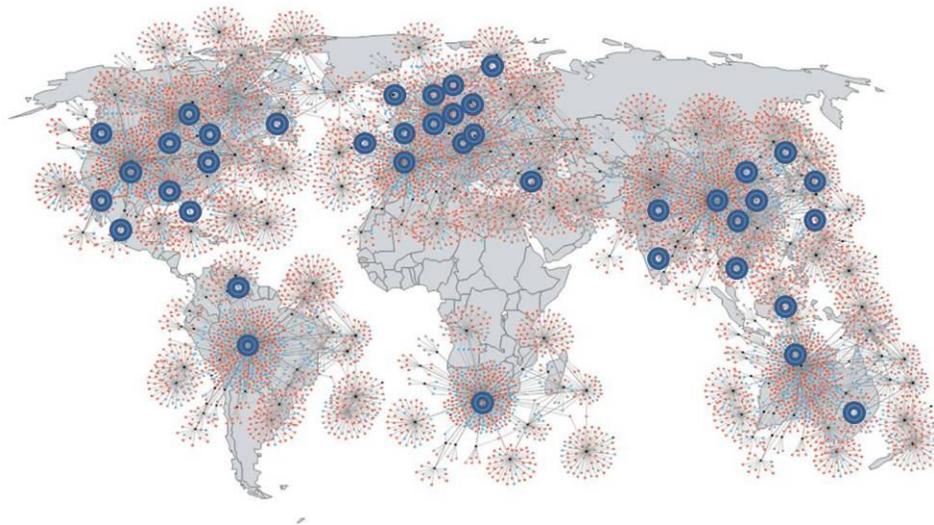


Figure 2: Illustration of the global market mesh with different business networks, driven by various regional and/or global business integrators

The global and regional business integrators are presented by different organizations and entrepreneurs, who are providers of various global industrial products and services. Such products are developed and produced by support of outsourced and value driven international supply chains. These organizations and entrepreneurs are initiators and organizers of such international value chains and related business networks.

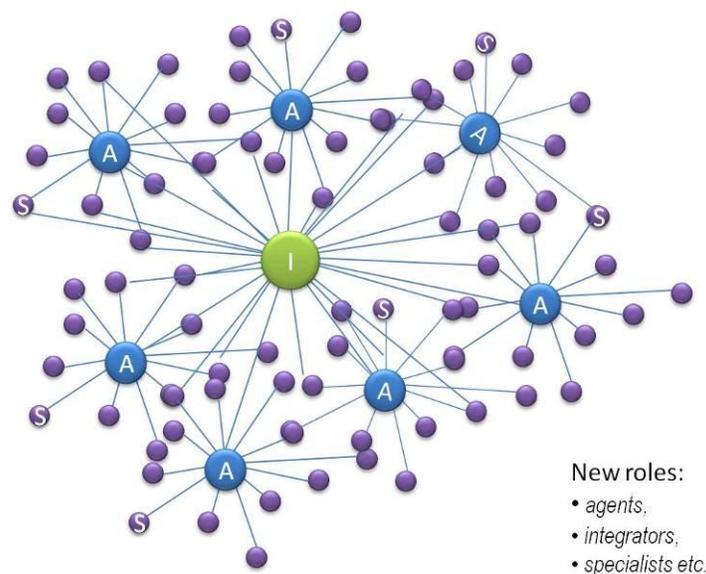


Figure 3: Different roles in positioning of organization in a business network

We can see different roles of an organization or entrepreneur in such network organization. It can be integrator, agent, specialist, standard supplier etc. The position depends on global innovativeness, entrepreneurship, leadership and availability of adequate resources and support from components of business ecosystems.

3 Business Ecosystems

3.1 What is Business Ecosystem?

The term »ecosystem« comes from biology. Biological ecosystems are divided into five main types or categories. They are grasslands, forests, agro ecosystems, freshwater systems, and coastal ecosystems (WRI, 2000). Ecosystems are the productive engines of the planet-communities of species that interact with each other and with physical setting they live in (WRI 2000). They are dynamic and adaptive systems, reflecting all changes and finding new levels of temporary equilibrium. Because an ecosystem must always be prepared to respond to outside and inside changes, there must be a variety of distinct species to ensure that at least part of them can cope with any new situation. (WRI 2000, Peltoniemi and Vuori, 2005)

James Moore was one of the first authors who initiated the term »business ecosystem«. He said that business ecosystem, like its biological counterpart, gradually moves from a random collection of elements to a more structured community (Moore, 1993). According to Moore business ecosystems condense out of the original swirl of a capital, customer interest, and a talent generated by a new innovation, just as successful species spring from the natural resources, sunlight, water, and soil nutrients.

Finnish researchers Peltoniemi and Vuori made extensive research about ecosystems and found that, perhaps more than any other types of network, biological ecosystems provide powerful analogy for understanding a business network. Peltoniemi and Vuori define business ecosystem as a dynamic structure which consists of an interconnected population of organizations. These organizations can be small firms, large corporations,

universities, research centers, public sector organizations, and other parties which influence system (Peltoniemi and Vuori, 2005).

We can find the various types of business ecosystems in praxis. They can be generated by different organizations, complex projects, open innovation collaboration platforms etc. The components of business ecosystem collaborative value space (Figure 4) are collaborative products and services, inclusion of professional virtual communities, supported by collaborative networks and platforms, presence of collaborative initiatives, projects, programs and adequate governance and leadership. This needs to generate a value for all involved stakeholders and to be a motivation for sustainable collaboration on specific areas of common interest.

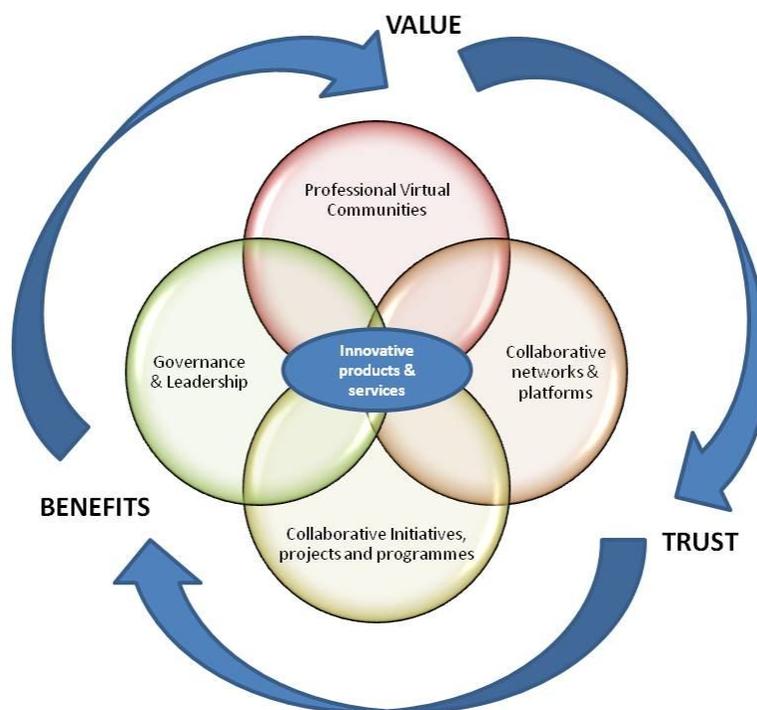


Figure 4: Business ecosystem collaborative value space

Herewith the example of such business ecosystem on the business case of NETLIPSE program is presented.

3.2 Business Ecosystem - NETLIPSE Business Case

An efficiently delivered and operated European transport network is essential if the European Union is to ensure their economic and sustainable competitiveness. The TEN-T is the European Union's Transport Infrastructure Framework. Initially adopted in 1990, it now includes Priority Projects on 30 international axes plus wider transport projects. These projects are targeted to improve the economic efficiency of the European transport system and provide direct benefits for the European citizens. The priority projects, mostly rail and inland waterway schemes, will contribute by creating a more sustainable transport system and help fighting against climate change.

In May 2008, Vice-President of the European Commission, Mr. Jacques Barrot, presented the first progress report to the Informal Transport Council on the implementation of the TEN-T priority projects. In it, he praises the Member States and Community Institutions in their efforts to accelerate the delivery of the priority projects. Project delivery and effective realisation being a challenge of the past programming period, Barrot also promised to step up efforts in encouraging Member States to not only coordinate their transport policies by exchanging best practices, but also by identifying early obstacles to funding and solving cross border constraints.

One of the key goals of NETLIPSE Network is to improve the level of project management of large infrastructure projects (LIPs) on a European level.

The NETLIPSE (NET-work for the dissemination of knowledge on the management and organisation of LIPs in Europe, www.netlipse.eu) network development phases:

- **PHASE 1:** Initial research phase (2006-08) financed by 6th EU Framework Programme (research of 15 LIP business cases),

- **PHASE 2:** NETLIPSE network development phase (2008-10):

- Development of LIP Assessment Tool (IPAT) and
 - NETLIPSE community expansion and development,
- **PHASE 3:** Global expansion, collaborative research, development of new products and services (2011 -....)

In the first phase NETLIPSE was focussed on gathering best practices and lessons learnt in the management and organisation of LIPs in Europe. Fifteen (15) LIPs were researched by regional knowledge teams, consisting of experts in the field of project management (representatives from the scientific, project management and client organisations). The Figure 5 illustrates working environment of NETLIPSE collaborative networks exploration, search for good practices, technology transfer opportunities and new solution search.

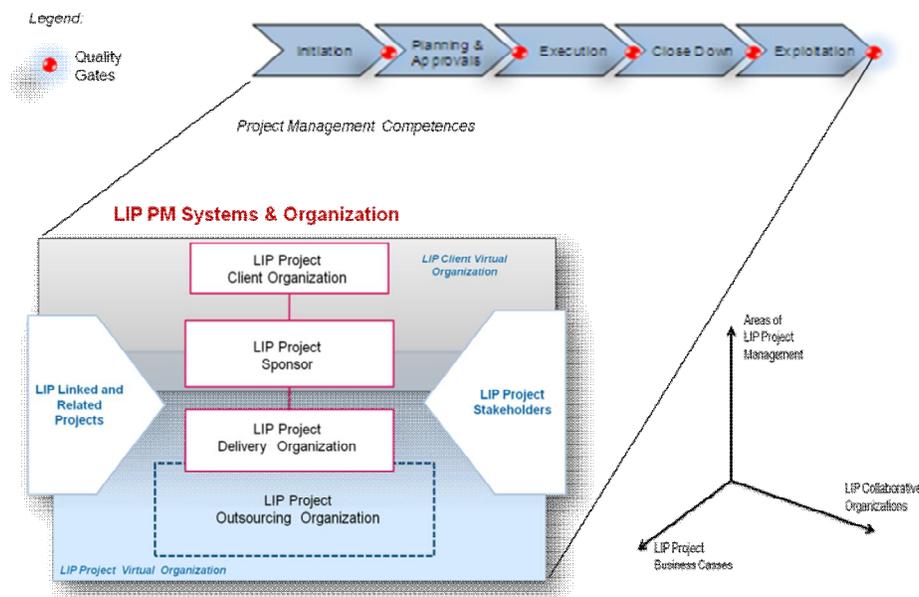


Figure 5: Working environment of NETLIPSE open collaborative network

In the second phase 2008-2010, the NETLIPSE network has run under the TEN-T Annual Programme and now consists of partners from governmental institutions, knowledge institutes and private organisations from 15 European countries,

organisations managing and sponsoring the 15 researched projects and other interested organisations involved in sponsoring and realising LIPs in Europe. At the bi-annual Network Meetings representatives from more European member states have participated. Figure 6 illustrate system and components of NETLIPSE Network governance.

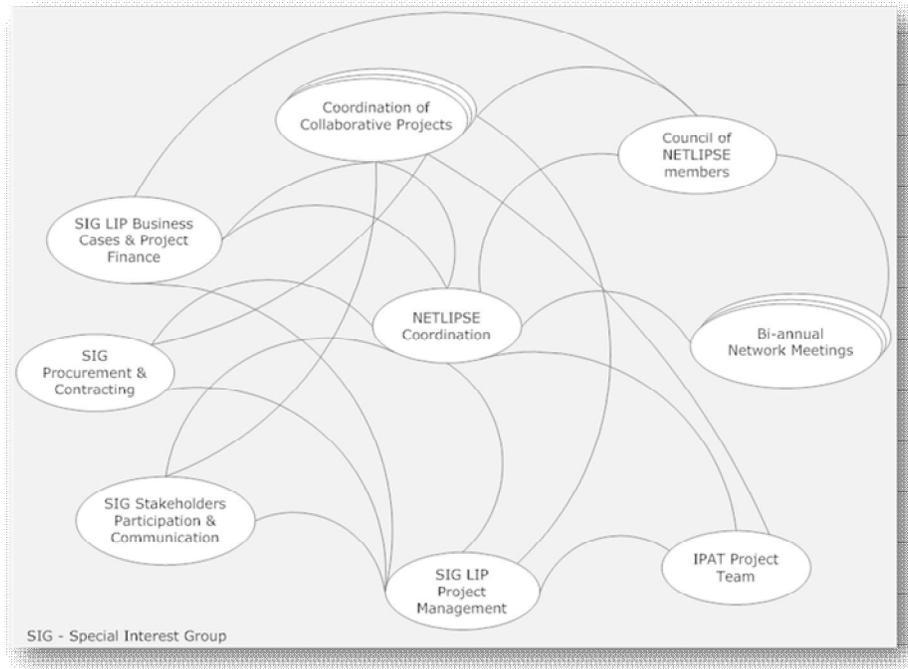
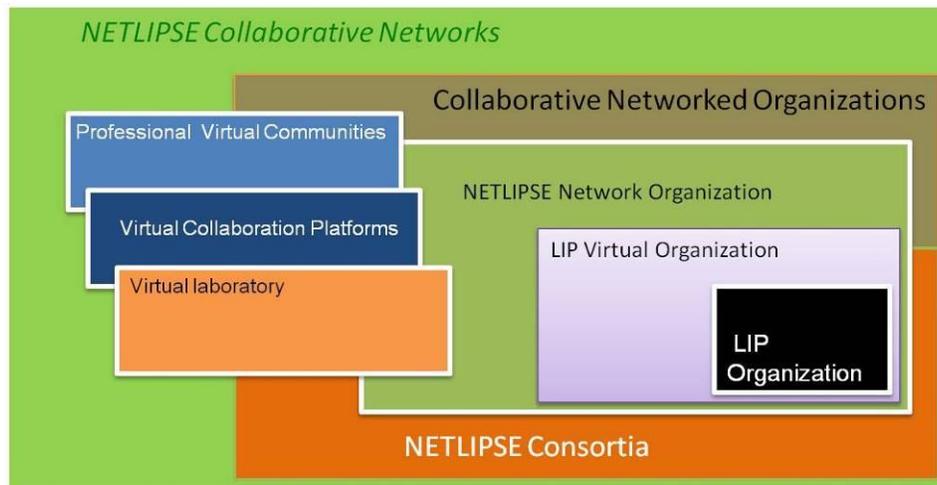


Figure 6: Working environment of NETLIPSE open collaborative network

The business ecosystem of NETLIPSE collaborative networks (Figure 7) is presented by involved LIP organizations with their collaborative partners (together they are presenting LIP virtual organizations), organized in NETLIPSE consortia and supported by different professional virtual communities, involved in different virtual collaborative platforms and in included living laboratory.



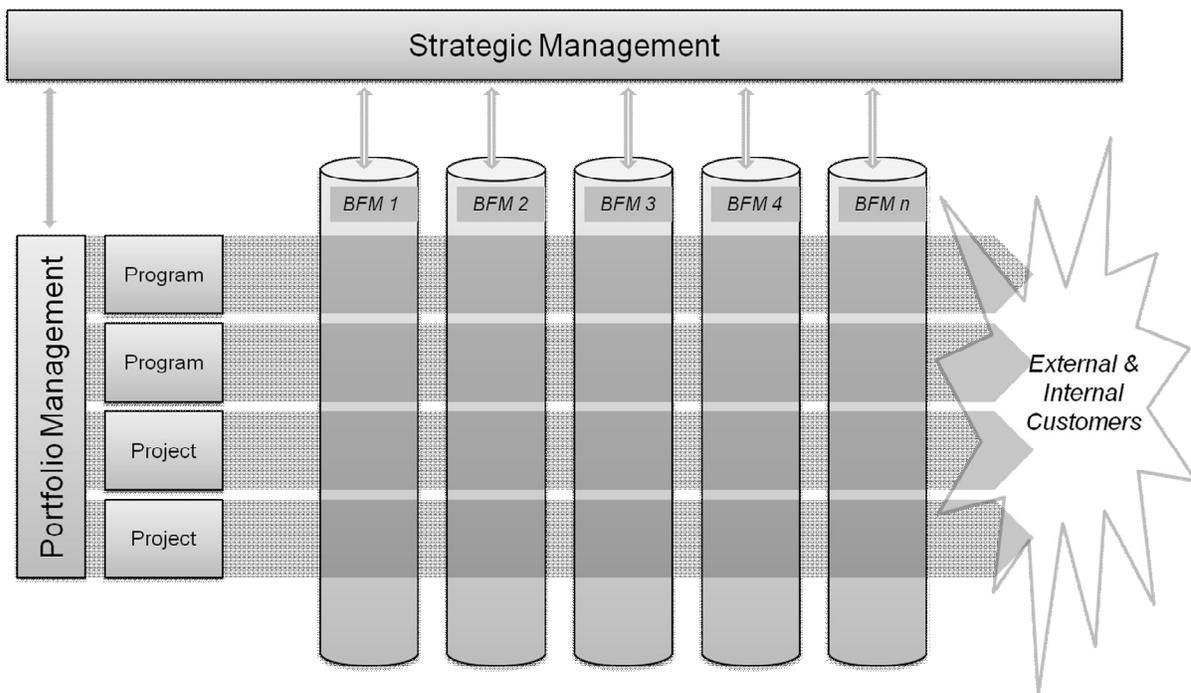
Used and adopted Camarinha – Matos concept of collaborative networks

- LIP (Large Infrastructure Project) Organizations:
- client organizations,
 - LIP delivery organizations

Figure 7: The business ecosystem of NETLIPSE collaborative networks

4 Corporate Organizations

Modern organizations are very often integral parts of a global supply and value chains. The classical functional organization does not give the proper support for such working environments and their needs. The answers are in different modalities of networked, process based organizations. Figure 8 below shows components of governance system of a value chain in such networked and process based organization.



BFM 1 – Business function management

Figure 8: Components of Governance System of Value Chain in Networked and Process Based Organization

Superior strategic leadership has become an important competitive tool and is the basis on which leading organisations provide services or goods better than their competition can, resulting in enhanced value-add and high volatility is experienced both in the internal and external environments of organisations (Steyn, 2010). Steyn says that globalization and the information age have also impacted heavily on the way that organisations are led and managed. Knowledge and knowledge workers are becoming the most important resource in the 21st century knowledge based organization. This statement is underpinned by the following facts:

- Globalization and intensified international competition have lead to decrease market needs for low skilled workers in developed countries. However, this fact is relevant for all knowledge based organizations, no matter from where they are coming from;

- Technological change and emerging new technologies need skilled workers with continuous improvements and learning capacities;
- Growing potential of information technologies and telecommunications creates opportunities for improvements of interpersonal and inter-organizational collaboration and productivity. This gives organizations opportunities to create different modalities of value chains and differentiate themselves on the markets by creation of unique business models;
- Changes in organization behavior need more knowledgeable workers and inflow of permanent improvements and novelties to organization's products and processes. Organizations with the high involvement of knowledge based working places need open-eyed knowledge and technology literate creative workers with the attitude of self-initiative, self-motivation, collaboration, openness and willingness for permanent changes.

Needs for permanent improvements of existing competences and inflow of new technologies and connected competences are critical elements for a global competitiveness. The critical success factors and related processes are illustrated in Figure 9.



Figure 9: Critical Success Factors of 21st Century Organization Behavior

The critical role in these processes is played by organization's management. Globalized and technology advanced business environment requires from managers, beside industry specifics, also the following general competences:

- to be technologically literate and visionary – to understand technologies and see future trends,
- to understand organization's portfolio of technologies which are needed for organization's value chains performance and take care for its harmonic and sustainable development;
- to understand new business models and business eco-systems and be able to find and develop the competitive position for the organization which is responsible;
- to ensure permanent inflow of new knowledge, technologies and ideas; and
- To be a leader – have a capacity for the creation of a highly positive energetic business environment for knowledge and other workers (internal and external) and creation of high performance teams and organization as a whole.

Investment into the human capital is not prestige or corporate bonus for managers and employees anymore; it is becoming a need for corporate survival on the global market.

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ABOUT THE AUTHOR



Prof. Brane Semolic, PhD

*Head of LENS Living Lab- International living laboratory,
Celje, Slovenia*

Professor, University of Maribor, Slovenia



Brane Semolic, PhD, is currently head of LENS Living Lab - international R&D living laboratory and professor at the University of Maribor in Maribor, Slovenia and Cranefield College, Johannesburg. He is President of the Experts Council of Project Management Association of Slovenia (ZPM), and Chairman of the IPMA (International Project Management Association) Research Management Board. He is also a member of the EU Enterprise Policy Group – Professional Chamber and Issue Manager of the SIG (Special Interest Group) Project Management in EU program NETLIPSE (Knowledge Management of Large Infrastructure Projects). Brane Semolic has a BSc in Mechanical Engineering (technology), and a BSc, M.Sc. and Ph.D. in Economics and Business Administration (project management and informatics) from the University of Maribor.

Professor Semolic has 35 years of working experience as an expert, researcher, consultant, manager and project manager in industry and for the Slovene government. He spent four years as Counselor to the Ministry of Science and Technology, Republic of Slovenia (1990 – 1994) and has been a member of the International Association for Project Management (IPMA) since 1982. He was previously a Professor at the Faculty of Mechanical Engineering, Faculty of Electronics and Computer Sciences, Faculty of Civil Engineering, and Faculty of Logistics (University of Maribor); Dean of GEA College (Global Entrepreneurship Academy) in Ljubljana; Lecturer in the “European Project Manager” postgraduate education program (joint program with University of Bremen); Co-founder of the EU education program “European Master in Project Management”; IPMA Vice president (international events and R&D); President of the Slovenian Project management Association (ZPM); First IPMA foreign assessor in the PM Certification Program in Serbia and Montenegro; Project manager of the 14th IPMA (International Project Management Association) world congress in 1998; and President of scientific committee of 1st joint ICEC & IPMA Global Congress on Project Management and Cost Engineering in 2006. He has published more than 400 works on project management and other topics. He was awarded as ICEC (International Cost Engineering Council) Distinguished International Fellow in 2008.

Professor Semolic can be contacted at brane.semoli@siol.net. Additional information about the LENS Living Lab can be found at <http://www.3-lab.eu/>.