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**THE INFORMATION AND COMMUNICATION
TECHNOLOGY AS A FACTOR OF BUSINESS
NETWORKS DEVELOPMENT**

**ИНФОРМАЦИОННО-КОММУНИКАЦИОННЫЕ
ТЕХНОЛОГИИ КАК ФАКТОР РАЗВИТИЯ
БИЗНЕС-СЕТЕЙ**

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Key words: business networks, modern business organization, global competition, supply chain management, Living Labs.

Ключевые слова: бизнес-сети.

Abstract. The role of information and communication technology as a key factor of business networks development and their role in global competitiveness were analyzed in the article. It was concluded, that information and communication technology development is not only a prerequisite for networking and essential for innovative development, but is an important factor for global competitiveness.

Аннотация. В статье рассматривается роль информационно-коммуникационных технологий как ключевого фактора развития бизнес-сетей и их роль в глобальной конкурентоспособности стран. Сделан вывод о том, что развитие информационно-коммуникационных технологий является не только предпосылкой для развития сетевой экономики и основой инновационного развития, но и важным фактором глобальной конкурентоспособности.

The theory of networks began to develop quite a long time ago. For example, the development of graph theory, which is an integral part of it, dates back to 1736, when the German and Russian mathematician Leonhard Euler solved the "problem of Koenigsberg bridges". Although the term "graph" was introduced by the Hungarian mathematician Dénes Kőnig 200 years later (in 1936) (Бурков 2004: 4). Further, the theory of networks developed as an interdisciplinary theory, including sociology, economic and mathematical methods, digital technologies and communication, ergonomics, marketing, management, logistics and supply chain management.

At present, networks are becoming a characteristic feature of the new economy, which is associated with: the proliferation of digital and Internet technologies, mobile phones, new operations-management tools, based on the rapid progress of computer processing and analysis methods (Кастельс 1999, Дерябина 2014, Радаев 2008); the sharply increase in dynamic of environmental changes (Ман 2004); high level of interdependence and uncertainty (Ман 2004); increased competition in foreign

markets (Hamel, Prahalad 1994); rapid technological change (Hamel, Prahalad 1994); reducing the cost of interaction (Hagel, Singer 1999); the need to integrate many people's efforts, various scientific disciplines, owners of variety resources, including knowledge resources (Дерябина 2014).

Collaborative business networks provide the following advantages:

– they permit to survive and thrive in a rapidly changing environment, since they are more flexible, work better in a changing demand (Miles, Snow 1992), to reduce the uncertainty of its constituent economic entities (Castells 2001);

– the economic efficiency of activities at the territorial and sectoral level is increased due to transaction costs reduction with the growth of the network size (Третьяк, Румянцева 2003), the optimization of the management model (Новиков 2003), the formation of social capital in the form of accumulated mutual obligations (Радаев 2008), trust and business reputation, access to partner resources and achieving the synergistic effect from their use (Юлдашева, Катенев, Полонский 2016). Firms involved in networks are able to coordinate an important part of the business without increasing in-house costs associated with the growth of the company (Шерешева 2014);

– innovation activity and efficiency of innovation activity on the territorial and at the industry level are growing due to access to external complementary resources, better coordination of the innovation process (Третьяк, Румянцева 2003), accelerating the incorporation of knowledge and using them in the most profitable market segments (Петропавлов 2007); the formation of a specific innovation space as a space of mutual understanding and consensus (Дерябина 2014). Networked organizational forms makes an economy's ability to self-development on the basis of continuous updates, ie make economic growth innovative-oriented and more sustainable (Смородинская 2015);

– they allow the product creation that has the highest possible and economically justified value for consumers by speeding up the response of enterprises to changing market conditions (Вертакова 2009) and the emergence of new opportunities found in the interaction with customers (Шерешева 2014).

Figure 1 presents factors and results of collaborative business networks development.

In this way, information and communication infrastructure is a prerequisite for networking and essential for innovative development. It includes hardware and software, telecommunications networks, as well as innovative resources.

There are different types of indexes, which are used for measuring the preparedness of nations for the networked world; among them are the Networked Readiness Index (NRI), the E-Government Development Index (EGDI) and the Information and Communication Technology (ICT) Development Index (IDI).

The research has shown (Слонимская 2016: 120) that every of the indexes which are used for measuring the preparedness of nations for the networked world closely correlate with the GCI. The highest correlation we can see between GCI and NRI (correlation coefficient is 0,929).

So we can conclude that ICT development is not only a prerequisite for networking and essential for innovative development, but is an important factor for global competitiveness. It is important to know what contribution individual components of NRI make to GCI in order to choose the priority directions of ICT development. This problem can be solved if the components of the NRI index are chosen as factors, and the result is GCI.

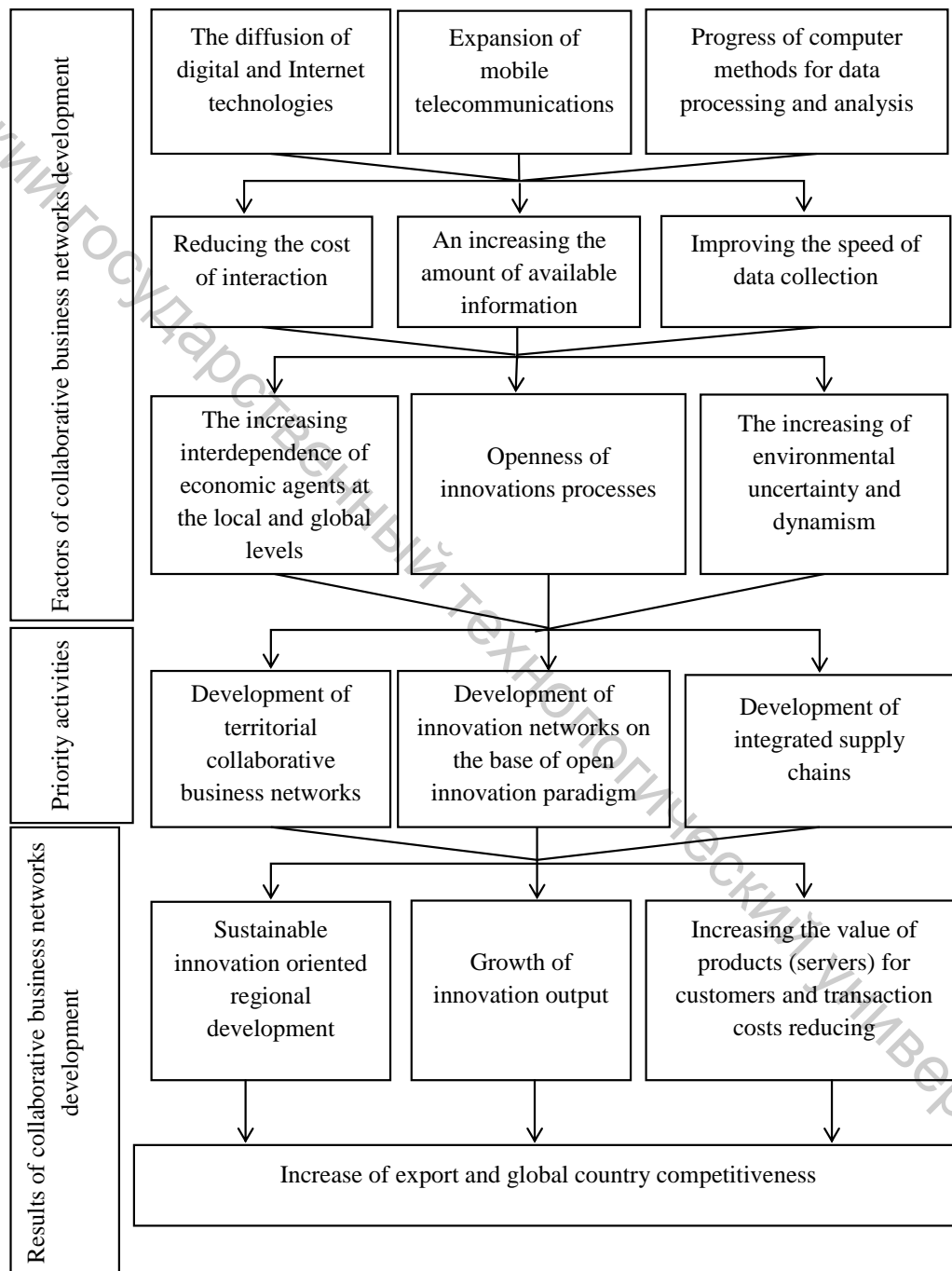


Figure 1 – Factors and results of collaborative business networks development

Source: Author's own elaboration

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ADVANCED COMMUNICATIONS TECHNOLOGIES AND SERVICES IN E- COMMERCE

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Key words: communication, information, a model, the Internet, a site, a consumer.

Abstract. A socially conditioned process of data communication and perception in terms of interpersonal and mass communication on different channels using a variety of communication tools is taken as the basis of communication.

The object of the research is the textile industry of the Belarusian State Concern for Production and Retailing of Light Industry Goods “Bellegprom”.

The objective of the present research is to analyse the quality of the website content and the level of the feedback from customers-visitors.

The study formulated the following criteria for the evaluation of the website:

– website quality assessment (content quality: modern, outdated, a simple site);