ISSN : 2349-4212

INTERNATIONAL JOURNAL OF

TRENDS IN BUSINESS ADMINISTRATION

Indexed by:

ROAD Crossref Universal Impact Factor IMPACT FACTOR SEARCH

International journal of trends in business administration ISSN: 2349-4212
2021 year Volume 11 issue 1
Universal impact factor 7.828
Founder and Publisher **academic journals PVT LTD**
Published science may 2011 year. Issued Quarterly.
Internet address: http://academicjournalonline.org/index.php/ijtba
10/25 Thamotharan Street, Arisipalayam, Salem, India
Principal Contact
Academic Journal Online
info@academicjournalonline.org

Editorial board

1. Mallesh Thumalla
2. Edwin Prem Kumar
3. Farha Deeba Hassan
4. Sangeetha T.R.
5. Abdul Wahid Naureena
6. Sangeetha Natarajan
7. Faisal Amjad
8. Muhammad Tariq
9. Nadeem Abbas
10. Mr. Iftikhar Ahmad
11. Usmanova Mukhlisa

International journal of trends in business administration ISSN: 2349-4212
2021 year Volume 11 issue 1
Universal impact factor 7.828

DIGITAL ECONOMY IN THE ENTERPRISES OF THE FUEL AND ENERGY COMPLEXES

Asimova F.A. Zagidullina K.R.

Tashkent State Technical University named after I. Karimov

Abstract. Today, digitalization is practically becoming synonymous with competitiveness and opens up access to the markets of the future. Digitalization allows the management of more complex power systems, contributing to the development of a wide range of new technologies, including distributed generation.

Keywords: digital economy, fuel and energy complex, economy, development of the fuel and energy complex.

Introduction. One of the main trends in the development of a society that is on the verge of an industrial order is the introduction of digital technologies. Forming the vanguard of technological know-how, the enterprises of the fuel and energy complex are most actively implementing digital solutions in their production facilities.

The qualitative shifts taking place in the world are noticeably reflected in the economic life of the planet, causing serious changes in industry, agriculture, transport, finance and international trade exchange. The changes did not pass by the energy sector and its most important components - the oil, gas, coal and electric power industries.

The digital economy is the result of the transformational effects of new general-purpose technologies in the field of information and communication. It has affected all sectors of the economy and social activity, for example, retail, transportation, financial services, manufacturing, education, healthcare, media and so on. This has implications far beyond information and communication technology. In addition, the Internet empowers people in new directions, enabling them to create and share their ideas, spawning new content, new businesses and markets.

The term "digital economy" can be deciphered as "an economy in which digital

computer technology is used in the implementation of economic activity" (that is, we are talking about an economy based on digital technologies). The term was first used in Japan in the mid-1990s, and in 1995 Don Tapscott's The Digital Economy: The Promise and Danger in the Age of Network Intelligence was published, one of the first to explore how the Internet can transform business.

By its very nature, the digital economy undermines traditional notions of:

– business structure,

– interaction of organizations,

– receiving services, information and goods by consumers.

We see a new form of economic activity that connects people, organizations and machines in a conditional hyper connection of users, enterprises, devices, data and processes. As a result, we get changed business models with the emergence of new products, services, increased utility and the construction of a new management culture.

A developed digital economy is: the work of the future. People regularly work remotely from different offices, from home or at a local coffee shop. The level of IT infrastructure and connectivity must match that of the physical office.

The company must be flexible and attract the best in competence employees, and not those who live closer to the office. Along this path, you can't do without the management of a vibrant talent ecosystem and the inclusion of next-generation digital business processes. This approach proves to be effective even when an entire department of professionals is spread across different locations and time zones.

Consumer orientation. In the digital economy, all customers (both B2B and B2C) seek to interact with the business when they want and in the most convenient way for them. In addition, customers want to interact with brands through continuous, multi-channel, direct, contextual and personalized experiences.

Digital supply networks. The world's middle class is expected to more than triple by 2030. At the same time, the growth of basic business resources is projected to be one and a half times slower. The answer to this mismatch lies in how enterprises

securely share data in real time to ensure next-generation commercial applications thrive.

Digitizing “everything” creates new intelligent digital “grids of networks”. They are changing the way commerce is managed, optimized, shared, and deployed. Check out these case studies to reinforce your understanding of the benefits of digital supply chains.

Internet of Things (IoT, Internet of Things). As sensor prices continue to decline, we are on the cusp of an era where everything can be connected: people, businesses, devices and processes. The Internet of Things is bringing the physical and digital worlds together.

“Connecting all things in the world to the Internet” technology brings every asset to the digital realm, dominated by software.

When an organization can “understand” (read and process data) its physical and digital assets in real time, it can operate with precision previously unimaginable. This creates the path to the most cost-effective enterprise.

In the coming years, digital solutions will completely revolutionize our familiar world. Companies and countries that recognize the inevitability of future changes in time and will be able to take advantage of their opportunities will become valuable providers of innovative solutions and receive an incomparable advantage over other players, including at the international level. Moreover, this applies not only to such sectors traditionally sensitive to digital changes as media and telecommunications, retail and finance, but also, in particular, energy. Investments from the fuel and energy complex in such technologies as robotization, the Internet of Things, Big Data, artificial intelligence and blockchain are already growing today. At the same time, the rate of dissemination of disruptive technologies indicates that some of them will reach their peak of commercial implementation much earlier than previously thought. For example, the global market for distributed energy technologies is growing rapidly: generation of small capacities, demand management, storage, energy efficiency, etc.

With the scaling and replication of digital solutions for the industries of the global fuel and energy complex, even greater opportunities and economic benefits will open up. In the oil and gas industry, digital technologies will be able to more effectively monitor and optimize oil and gas assets and production facilities along the entire value chain, from the well to the gas station. In the production sector, this will increase the total volume of recoverable reserves, primarily unconventional oil and gas, and reduce the cost of their development. In the coal industry, the widespread introduction of new digital solutions will prevent the onset of failures and accidents at production facilities, reduce the risk of injury and, in general, optimize the production process from mining to supplying coal to the consumer.

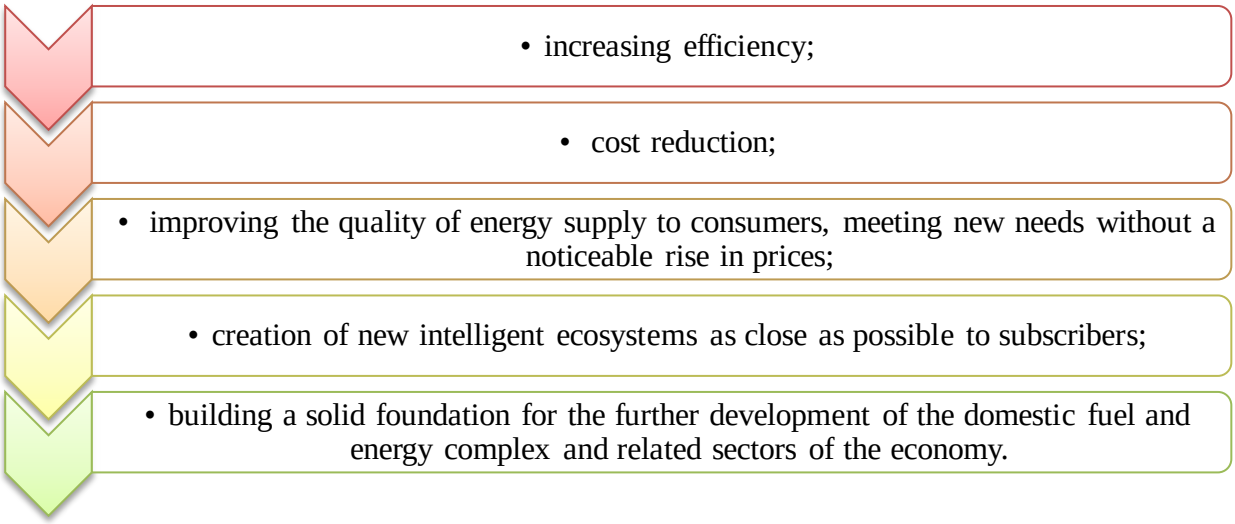
Digitalization will have the greatest impact on the power industry. New digital technologies will not only increase the stability of the operation of power systems, but will also create opportunities for the development of distributed generation on a scale from one station to an entire network with hundreds of facilities, including those based on renewable energy sources, thereby creating an ecosystem of the Internet of energy. In addition, according to experts, the widespread introduction of new methods for monitoring and predicting the state of generating and network equipment will significantly reduce the accident rate, as well as annual electricity losses, which will give up to 500-700 TW worldwide. h of saved electricity per year. The prospects for digital transformation are enormous! By and large, they are the key to the markets of the future!

Digitalization is a new format for managing the operation of power systems, which ensures the optimization of technological and business processes to achieve the target state of the fuel and energy complex.

Energy cannot be considered digital even if every second substation becomes digital, and the network acquires signs of intelligence. Today, digitalization and digitalization processes are being implemented wherever increased flexibility of solutions and efficient use of resources are required.

The concept of "digital energy" is inextricably linked with the modernization

of not only power generating facilities. Experts are convinced that the reconstruction and renovation will also affect the transmission and distribution of electrical energy.



Picture 1. The main results of digitalization in the electric power industry

We are talking about digital power plants (digital twins of real stations that combine several objects into a system), remote maintenance using big data, smart gas turbines and even digital fields.

Digital transformation provides for the installation of advanced equipment at power grid infrastructure facilities and the creation of a unified fully automated control system that provides one level of network operation instead of the existing three. At the same time, the speed of decision-making will significantly increase, and personnel will be involved only in the event of anomalies and, if necessary, a deeper analytical analysis.

The terms “digital transformation of the electric power industry” or “energy transition” are often associated with three D. These are the key processes of industry change: Decarbonization, Decentralization, Digitalization, that is, reducing carbon dioxide emissions, decentralization and digitalization.

Output

The coming era can be characterized as the era of digital platforms, ousting inefficient intermediaries from the market and from production and replacing them

with efficient algorithms. There are varieties of these platforms, two large groups can be distinguished: electronic trading platforms and tools for automatic off-market coordination of joint activities (virtual offices, as well as tools for larger business units), production of goods, provision of services, including energy. Connecting to digital platforms gives market entities such competitive advantages that as these platforms capture national and global markets, the process of a radical transformation of the real sector of the economy will begin in full.

List of references

1. Kupriyanovskiy V.P., Sinyagov S.A. Data quality control software for design organizations // ArcReview №2 (73) | 2015.

2. Kupriyanovskiy V.P., Sinyagov S.A., Pozhidaev V.Yu., Shchichko A.S., Shilov I.V. Smart solutions powered by IBM and Esri. Economic and financial benefits from the application of standards. // ArcReview # 1 (68) | 2014.

3. Kupriyanovsky V.P., Sinyagov S.A., Gunko S.A., Raevsky M.A., Khrustaleva N.M. From smart appliances to smart cities // ArcReview №2 (61) | 2012.

4. OECD Digital Economy Outlook 2015, OECD July 15, 2015 OECD Publishing.

5. Accenture Technology Vision 2015. Digital Business Era: Stretch Your Boundaries. 2015 Accenture.

6. Il'ina N.A., Putilov A.V., Baranova I.A. Kadrovoye obespecheniye upravleniya znaniyami v innovatsionnoy ekonomike // Innovatsii, no. 10, 2016, s. 2-6.

7. Ivanov V.V. Innovatsionnaya paradigma XXI (2nd izd.). M .: Nauka, 2015.383 s.

8. Ivanov V.V., Malinetskiy G.G. Rossiya XXI vek. Strategiya proryva: tekhnologii, obrazovaniye, nauka (2nd izd.). M .: Lenand, 2017.304 s.

9. Ivanov V.V., Putilov A.V. Tsifrovoye budushcheye: sleduyushchiy shag v

razvitii atomnykh energeticheskikh tekhnologiy // Energeticheskaya politika, no. 3, 2017, s. 31-41.

10. Putilov A.V. Razvitiye tekhnologiy i podgotovka kadrov dlya tsifrovoy ekonomiki v energetike // Energeticheskaya politika, No. 5, 2017, s. 58-65.