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1878

THE EMERGENCE AND DEVELOPMENT OF THE DEFENSE INDUSTRY IN BULGARIA

IVAN DALCHEV

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Abstract: *This report addresses the defense industry of Bulgaria from its origins to the present day. An overview of the production of the existing operating companies of the Bulgarian Chamber of Commerce and Industry chronologically from the Liberation in 1878 to the present day. We include companies from the weapons and ammunition industries, the aircraft industry, the production of optical instruments, armored equipment and ballistic means of protection, as well as new models of Bulgarian weapons. The possibilities for innovative development of the defense industry and the challenges to it in the modern security evolution are considered.*

Key words: *HRC, Defense Industry, Military Industry, Military Industry, Military Economy*

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“, 05.2014

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4.

1. „ „, www.bnt.bg
2. „ „ „, „ „ „, 16.03.2015
3. www.arsenal.bg
4. „ - „, „ 90 „ „, 29.11.2016
5. www.arcus-bg.com

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CHANGES IN THE ACQUISITION AND USE OF INTELLIGENCE INFORMATION IN THE CONDITIONS OF GLOBALIZATION AND INFORMATION SOCIETY

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Abstract: *Globalization and technology development have a major impact in all areas of human life. They add new meaning to the information and change the process of its acquisition and use. Nowadays, security is becoming one of the most important values, and intelligence structures must adapt to the challenges of globalization and the information society.*

Key words: *globalization, information society, intelligence, information.*

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“ [7,9].

” [9, 218].

1. , 2003
2. “ - : ”
3. Svendsen. A. Intelligence Liaison, <https://www.afio.com/publications/SVENDSEN%20Intel%20Liaison%2028May20151.pdf> [Accessed 30 October 2017]
4. ().
5. “, 2011
- “, 2012

6. , . (, , , 2012). : -
7. (HUMINT). : - , 2009
8. , .. . : , 2001
9. , . : , 2011, 218

SUPERVISION IN THE DIGITAL AGE DIGITAL SUPERVISION OR SUPERVISED DIGITALIZATION

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Abstract: *Recently, two terms are involved in different by nature, level and stage of debate, contradictions and interactions. Both “digital” and “supervision” have diametrical positions - as desired as well opposed by different fields of society. Identifying strengths and weaknesses as well as revealing the appropriate link between these two terms will give the appropriate prospect of their future - more effective use and understanding of their benefits. The analysis is intended not as much as establishing, rather than expanding the platform for debate, which will inevitably lead to the systematization of the effective, qualitative elements of both terms and their future manifestations and benefits.*

Key words: *supervision, digitalization, connection, debate, interaction*

Overview

Primarily, it is necessary to establish an understanding of the terms “digitization” and “supervision”. The nature of both terms can be seen as a result of new emerging social situations and hence problems which are not possible and/or appropriate and/or effective to be quickly resolved by traditional methods and means. Definitions for both “digitalization” and “supervision” vary, where different public and scientific fields emphasizing topicality, advantages and disadvantages of the terms from their own (narrowly profiled) rather than general and universal positions.

Although some define “digitalization” like - the mixing of virtual technologies with cutting-edge progress into everyday lifestyles through the digitization of everything that can be digitized, in business, legally digitalization is the way toward moving to an advanced business through the use of digital technologies by changing the plan of action, providing new revenue and value-producing opportunities [34]. In summary according to Gartner, “Digitization is the process of changing from analog to digital form.”[33]. Moreover, the business environment reveals an important feature of digitalization - it is a process. The business says „we believe that digital should be seen less as a thing and more a way of doing things” [35].

Obviously new concepts are also becoming more common, such as Digital Transformation; Digital Platform; Digital World; Digital Marketing; Digital Technology; Digital Asset [34]. The review of literature has been established digitalization (digital) in other scientific fields as well:

-Anatomy - relating to, resembling, or possessing a digit or digitless common word for digitate;

- Mathematics-relating to, resembling, or possessing a digit or digits; performed with the fingers;

- Computer Science-representing data as a series of numerical values; Communications & Information- displaying information as numbers rather than by a pointer moving over a dial: a digital voltmeter; digital read-out.;

- Electronics - electronics responding to discrete values of input voltage and producing discrete output voltage levels, as in a logic circuit.

- Botany - a less common word for digitate;

- Instruments music- one of the keys on the manuals of an organ or on a piano, harpsichord, etc. [23][24][25][26][27][28][29][30].

Particular attention should be paid to the socio-economic interpretation of terminology, which introduces new frameworks, such as: Digital culture - the anthropological dimension of the digital social changes; Digital divide - a form of economic and social inequality in access to or use of information and communication technologies; Digital economy - an economy based on computing and telecommunications resources [31].

Summarized, “digitalization” is primarily, but not only transformation, data and information, and everything is a process. It can be assumed (fully justified) that with the increase of the data the information will increase. As the information grows, the need for its transformation will grow ... the process will grow progressively, which will inevitably lead to chaos and most likely to change our brain chemistry as a requirement of reality. Using the language of science (physics), entropy (the measure of chaos) will increase, which fact will require an instrument to solve this problem.

On the other hand, supervision is defined as “a critical view of someone or something ...”[15]. On the international scene, it takes a place, through

Alexander Kadushin's [11] first systematic research work, but it is accompanied by a series of debates, conflicts and divergent views.

The debates are mainly about the sphere of its emergence, some like Kaslow & Munsun [16] are about medical field, others - Hollis & Taylor[7] for apprenticeship, others appeal for compulsory use in psychoanalysis Yung[22], fourth believe it is for pedagogy Vigotski[12], while there are some who believe, it is create in charity organizations Kadushin[8], but all agree that the first use of the term "supervision" belongs to Jeffry Braket since 1904[10].

The differences are expressed both in the speed and pragmatism of the application - USA [20] as well as in the personality of the supervisor and its "medicalization" - United Kingdom [13] as well as in the analytical nature - France [5], but also in providing a new perspective on this process concerning its differentiation into a separate theory - Russian Federation [12]. Of particular interest are also some articles of Boyadjieva [2][3][4], which have a clear analytic-summarizing character but also highlight important circumstances of the process. In recent years, the practical dimensions of the process have also emerged under Bulgarian conditions Petrova-Dimitrova [17][18][19][14].

The obvious interest in supervision has reason to be challenged, on the one hand, the variety of models: evolutionary; integrative; specifically oriented models; the model of SD Stoltenberg; the model of T. Skovholt and M. Ronasead; the model of P.Hawkins and R.Shohet; a model offered by P. Hunt and others, on the other, different and varied styles, between which there is no clear boundary, not least the varied flowing "one-to-one", "One to Group", "Peer", but mainly by its essential characteristics that: supervision refers to the customer(supervised) rather than to the client [1].

Supervision is not psychotherapy, psychoanalysis, ordinary informal activity, counseling, interviewing, mentoring, an extra, examinations or tests, complaints, supervisor assistance, something that is done only when there is a problem, complaining or attesting session; supervision is a process and helps where "the possibilities for recurrent and formalized enhancement of qualifications are very limited." Ertelt & Shulc[9][3] but not only.

It gives the impression, again in terms of business, especially in the United States, that on the supervision is viewed in a positive way - in almost all spheres of business, a position "supervisor" is embedded, the position being accompanied by responsibilities as well as certain benefits for the appraiser.

Summarized and "supervision" is primarily, but not only for transformation, regulation, and information, and everything is a process. This fact, possessing the same elements for both terms, allow us to determine the relationship between them, in other words to outline a prerequisite for a possible existing interaction.

Present situation

Undoubtedly, with the emergence of Digital culture, Digital divide and Digital economy, there will be some challenges and problems in different spheres. Looking at A. Toffler [21], we can summarize that classical industries will be displaced by a number of new and dynamic industries, replacing technology - cheap and affordable minicomputers, orbiting technology. The penetration into the depths of the Ocean and other previously unproven terrains. The gene industry and so on [21].

The new technologies and the dynamics that they impose also cause counter-reaction, resistance, rejection - based on fear for people and ecology, for civilization and the planet [21]. The information BOMB brings a continuous review and reassessment of internal images. There is acceleration within us, accelerated change and interchangeability of the images inside us, and at an ever faster rate ... "The third wave (digitalization) not only speeds up information flows, it transforms the internal structure of the information on which depend our everyday ideas and actions "[32] (Toffler, A).

A huge bound in the information, which people are constantly exchanging with each other. The whole public system pulsates through data streams and information that are becoming more voluminous and dynamic. The home computer is a mass reality, affordable - price like a TV ... Starts mass distance learning, digital education, making bills, booking, obtaining information, shopping, participating in exchanges, games and competitions, exchanging information, as well as free communication in the network, personal communication, new "electronic communities" are formed. There is a need to revise group theories - J.Moreno, K.Levin, social psychology....., because of the new phenomena

The whole environment of man becomes intelligent ... but whether???

Besides the excitement and optimism of this development of the computer and its universal accessibility and applicability, there are also "chilling questions": whether the computer will not prevail over the person and make him dependent; whether the Big Brother, through the computer, does not enter into the intimate sphere of every

citizen and can monitor and control him everywhere; "decentralizing the intellect" and liberating citizens from the control of the central government; whether by pumping our surroundings with intelligence, it will not atrophy our own human brains; whether a disaster will occur if some malicious systems are shut down and computers stop working; In such a situation, will people still have the basic skills to survive or will be helpless in a cruel chaos[32]?

Some note that salvation is in "our intelligence and imagination that we have not yet begun to use in full". It is unanimous that this universal computerization (digitalization) is a fundamental change in the information sphere of society - there is a fundamentally new communication layer in the public system.

This change in the information sphere changes the mind of the person - the way he thinks about the problems by synthesizing the information we anticipate the consequences of his actions.

The role of education in people's lives will change. It is even possible to change the chemistry of our brains [21]. Children changes as well.

LINK AND INTERACTION

In the meantime, with the advent of new technologies (digitalization), they inevitably penetrate in the fields where until recently the situation "face-to-face" was considered to be sacred and inviolable.

More and more often, psychological sessions, counseling and supervision take place through the use of digital amenities (various applications). There is "digital supervision", thus relieving costs, time.

Moreover, there is an opportunity to track the effect of sessions - tracking customer behavior on social networks. It's not far the time when the person who conducts psychological therapy, counseling or supervision will be digitalized on the basis of accumulated and transferred data (a US platform already exists) based on job.

Establishing an algorithm for supervising sessions as well as mapping the theoretical framework of the process will enable the process to be digitally organized. It clarifies the thesis that digitalization in psychology, counseling and supervision is not only necessary but inevitable.

In this context, the digitalization of supervision is a phenomenon demanded by the rapid and sometimes dramatic growth rates of the digitalization of services and professionals in the helping professions.

An in-depth analysis requires the introduction of the supervise digitalization.

Problems (fears) that will arise and/or have arise as a result of digitalization, such as resistance and rejection; overcoming the computer over the person; extreme penetration into the private space; decentralization of the intellect; resistance to thinking; digital terrorism; loss of skills, etc. have and/or will need a solution, and the decision will necessarily have to cover the whole range of digitalization.

As it is established, supervision is a process that combines multiple elements, one of which is surveillance. But in terms of the nature of the process supervision, it combines in a unique way, through its functions, growth in surveillance activities. The universality in its application makes it suitable for different spheres by nature, not limiting its patterns. Its humanistic nature creates the perception of the central role and participation of human in the process and its algorithmic application provides a minimal level of risk of mistakes in its application. Perhaps one of the best positive features of supervision is the ability to be active both vertically and horizontally in any organization with a major emphasis on improving and/or stabilizing and/or growing professional performance.

In this context, the interconnection and interaction in the "supervision-digitalization" is established. It remains speculatively open the question of the personality of the person who will perform the supervision of digitalization and this is not a random fact.

Assumed that a digital supervisor (hologram, application, etc.) can exists (soon or later), based on sessions database, but is it justified to digitalized the supervision of digitalization?

Are there prerequisites to suppose that a cultivar of artificial intelligence could do this? The thin boundary between the complexity of human relationships, imagination and emotions, on the one hand, and the rigid algorithmic systems that can not do a mistake, is not difficult to overcome but inevitably requires more debates and researches and to be placed in the whole spectrum of the scientific community.

In conclusion, we can note the existence of a link between digitalization and supervision, which is bidirectional. Based on this conclusion, as well as the overall text, more questions are revealed than answers, but in the end, quoting, I can say that "The idea is nothing but a concept of perfection that can not yet be found in practice." (Immanuel Kant)

References

1. Avt. Kolegia s rec. I red. Sonia BudevaRakovodstvo za provejdane na

- prakticheskoto obuchenie po socialna rabota, 2008
2. Boyadjieva,N.Prevantivna pedagogika: Supervizia I konsultirane v socialnata sfera, pp.340 .2010
 3. Boyadjieva,N. Supervizia I podgotovka za konsultirane v socialnata rabota: Balgarsko spisanie po psihologia,1-4, V Ncionalen kongres po psihologia, Sofia, 2008, pp.721-729
 4. Boyadjieva,N. Socialnopedagogichesko konsultirane I savetvane: Akademichni poleta na socialnata pedagogika, 2014, pp. 197-282
 5. Cirkova,D. Psihologichno konsultirane na deca, unoshi I roditeli, 2007
 6. Duridanov,L., Curry,J. And Ivanov,S. Virtual Enviroments as an Education Tool for Digital Natives. Proceedings of the National Conference on Education in the Information Society, 2013
 7. Duridanov,L. and Simoff,S. "Inner Listening" as a Basic Principle for Developing Immersive Virtual Worlds. Heidelberg Journal of Religions on the Internet, 3(1), 2007
 8. Duridanov,L. and Simoff,S. The Hearing Dimension of 3D Virtual Worlds: Unexploited Opportunities. In Hongladarom, S. (ed.), Computing and Philosophy in Asia. Cambridge Scholars Pub, 2007
 9. Ertelt,B.Shulc,U. Konsultirane v obrazovaniето i profesiata, 2002, pp. 286-295
 10. Hollis-Taylor. Social Work Education Report in USA //Social work jurnal, [Oxford University Press](#), 1951, pp.230-231
 11. Kadushin,A.Harkness,D.Supervision in social work,Columbia University Press,4th ed., 2002, pp.18, 289
 12. Karagyozev,Iv. Integriranoto obuchenie i obrazovanie na decata sas specialni obrazovatelni potrebnosti: SP Pedagogika, LXXXIX, .7, 2017, pp. 71-80
 13. Kipner-Velner,M. Superviziata nepoznata i blizka sashtevremenno: Buletin FICE,2003, pp.31
 14. Kuzerman,N. Socialnata rabota i predizvikatelstvata na neoliberalizma, v: Socialna rabota-obuchenie I praktika,Sbornik s dokladi ot Vtora nauchno-prakticheska konferencia, 2010, pp.177-178
 15. Mehandjiiska,G. Superviziata v socialnata rabota. Podkrepa, rakovodstvo i razvitie na pomagashtite specialisti, Sofia, 2008
 16. Munson,Carlton E., Handbook of Clinical Social Work Supervision,NY. The Hawort Press, 2002, 3d ed. pp.31-38
 17. Petrova-Dimitrova,N. Socialna pedagogika ili pedagogika na socialnata rabota, Veda-slovena Sofia, 2014, pp.338
 18. Petrova-Dimitrova,N. Osnovi I metodi na socialnat rabota, Veda-slovena Sofia, 2014, pp.10
 19. Petrova-Dimitrova,N. Supervizia v socialnata rabota, Veda-slovena Sofia, 2016, pp.91
 20. Professional Supervision in Occupational Therapy, AOTI, 2010,
 21. Toflar, A. The third wave, Morrow, 1980, p.186-200, p.200-206, p.231
 22. Yung,K. Prakticheska psihoterapia:Statii po problemi na psihoterapiata I psihologiata na prenasianeto, 2011, pp.167
- Web resources
23. Random House Kernerman Webster's College Dictionary, © 2010 K Dictionaries Ltd. Copyright 2005, 1997, 1991 by Random House, Inc. All rights reserved.
 24. The American Heritage® Student Science Dictionary, Second Edition. Copyright © 2014 by Houghton Mifflin Harcourt Publishing Company. Published by Houghton Mifflin Harcourt Publishing Company. All rights reserved.
 25. Based on WordNet 3.0, Farlex clipart collection. © 2003-2012 Princeton University, Farlex Inc.
 26. Collins Spanish Dictionary - Complete and Unabridged 8th Edition 2005 © William Collins Sons & Co. Ltd. 1971, 1988 © HarperCollins Publishers 1992, 1993, 1996, 1997, 2000, 2003, 2005
 27. Kernerman English Multilingual Dictionary © 2006-2013 [K Dictionaries Ltd.](#)
 28. Collins Multilingual Translator © HarperCollins Publishers 2009
 29. English-Spanish Medical Dictionary © Farlex 2012
 30. Multilingual Translator © HarperCollins Publishers 2009
 31. <https://en.wikipedia.org/wiki/Digital>
 32. <http://www.assa-m.com/sociologia21.php>
 33. <https://www.gartner.com/technology/research/digital-business/>
 34. <http://www.businessdictionary.com/definition/digitalization.html>
 35. <https://whatis.ciowhitepapersreview.com/definition/digitalization/>

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CREATION AND DEVELOPMENT OF THE VAZOVSKI MASHINOSTROITELNI ZAVODI AS A LEADING ENTERPRISE IN THE BULGARIAN DEFENSE INDUSTRY

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Absrakt: In 1936 began the construction of the state military factory in Sopot. The factory was founded in 1940 and started manufacturing hand grenades, projectiles explosives for the needs of the Bulgarian army.

After the World War II the State military factory in Sopot expanded and became the foundation for the creation of the Vazovski Mashinostroitelni Zavodi. After the unification of the military factories in Bulgaria into the State production cooperative "Metalhim", VMZ - Sopot became the largest and leading enterprise in it.

Key words: defense industry, state military factory - Sopot, Vazovski Mashinostroitelni Zavodi, manufacturing of ammunition for the army

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EUROPOL AND THE FIGHT AGAINST TERRORISM

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Abstract: The report is devoted to the role of the European Union agency specializing in police cooperation in counter-terrorism activities in Europe. Consideration is given to the different mechanisms for supporting the counterterrorism efforts of the competent authorities of the individual EU countries and beyond, as well as the latest changes in an organizational plan within Europol to optimize co-operation to curb threats of terrorism=

Key words: Europol, police cooperation, European Union, counterterrorism, terrorism

2011 . 2015 .

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2016 . [28.04.2015 .

2015—2020 . (COM 2015/185)]

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(COM 2015/185)]

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„Fraternité“
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1600

2015—2020 . (COM
2015/185)

2. GENERAL REPORT ON
EUROPOL ACTIVITIES 2015. © European
Police Office (Europol), The Hague The
Netherlands, 2016. ISBN 978-92-95200-76-0

3. () 2016/794

11 2016

()

4. :

www.europol.europa.eu

5. Europol Strategy 2016-2020. © European
Police Office (Europol), 2016. Print ISBN 978-
92-95200-72-2 doi:10.2813/73300 QL-02-16-
095-EN-C. PDF ISBN 978-92-95200-71-5
doi:10.2813/983718 QL-02-16-095-EN-N

6. , .

2017.

7. , .

” .34, 2016.”

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1. 28.04.2015 .

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THE CONTRIBUTION OF THE HIGH SCHOOL OF SECURITY AND ECONOMICS IN THE PREPARATION OF NATIONAL SECURITY STAFF

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Abstract: *This report analyzes and evaluates the contribution of the Higher School of Security and Economics to the training of personnel for the needs of national security. Training in a professional field 9.1. "National Security" at the Higher School of Security and Economics is carried out responsibly according to the legal requirements, the public attitudes and the dynamics of the educational environment in this direction. Security is a complex problem, and the training and training of security staff requires an interdisciplinary approach.*

Key words: *Higher School of Security and Economics, National Security, countering crime and terrorism, Ministry of Interior, Security Services, university education*

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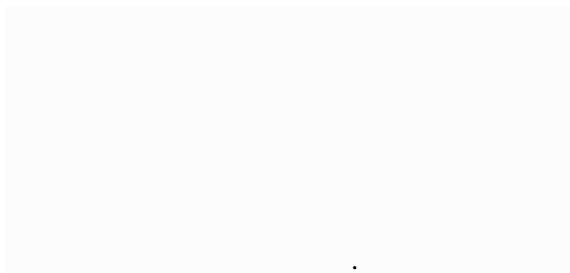
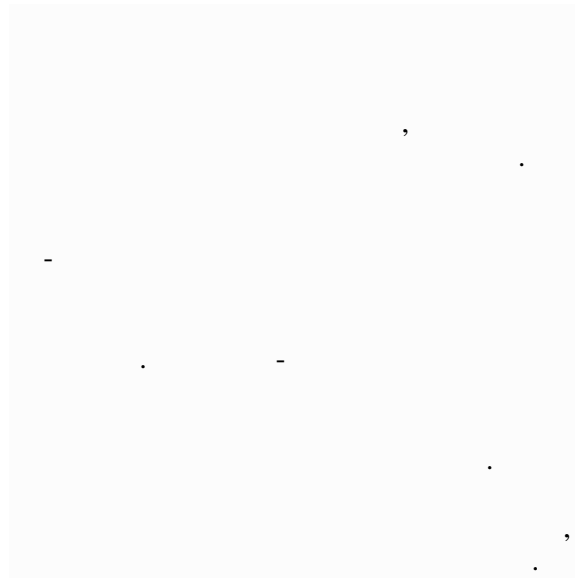
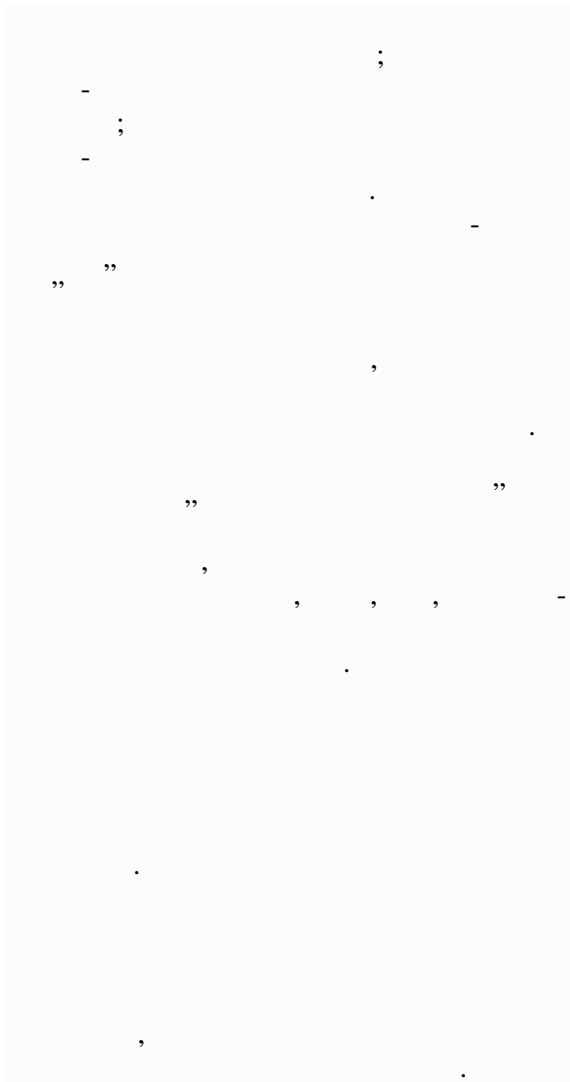
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VALUES BASED RISKS MANAGEMENT IN THE TIMES OF DIGITAL ECONOMY

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Abstract: *The paper presents analysis of Digital Economy (DE) and Digital Transformation (DT) risks problem and proposes the value-based approach for risk management. The critically low level of works studying high risks of DE in comparison to efforts for promotion of new technologies and business models that carry these risks is indicated. To overcome this drawback, the recommendations on risk management method are presented. This method is based on the analysis of the enterprise components which is linked with values that the stakeholders gain or lose when performing specific DT. For backing this risk management method, the common structure of values is proposed, the multidimensional Open Enterprise Values Space (OEVS) and the Open Integrated Values Model (OIVM) of all stakeholders of enterprise transformation is presented. Some options for using the proposed rules and models are showed. The usage of the proposed method is demonstrated by the case of risks analysis of the popular Uber taxi company.*

Key words: *digital economy, digital transformation, digital transformation risk, risk management, value model, value based analysis, values space*

1. Introduction

The current state of Digital economy (DE) brings both high benefits and high risks as results of enterprises transformation, but the risks factor is not so obvious and transparent as the benefits factor and there are far fewer methods for managing the risks factor.

Some common risks for DE enterprise development are shown in the reports of the World Bank [1] and the United Nations [2, 3]. They highlight the problems and risks of a non-technological nature in the digital transformation (DT) of enterprises and engineering of ecosystems involving enterprise users. The latest reports for World Economic Forum [4] and to the Club of Rome [5] clearly present the risks and risk management as a global problem.

However, works studying the risks of DE have much fewer resources and less advertising than promotion of new technologies and business models that bring these risks.

This context requires further research and inclusion of risk management concepts for both observable risks and those that are not yet known in DE and Enterprise Engineering.

This state of affairs motivated the author to undertake projects that include risk analysis in the development of new enterprise architectures on the medium and longer time horizons. The forecasts and models developed in these projects [6, 7] remain workable, but they are not sufficient for the full-fledged risk management both in the

predominantly digital intensive transformations and in related ones.

In this regard, papers [8–10], among other things, present some recommendations on risk management that directly or indirectly require the correlation between the architecture of an enterprise (existing or planned) and the values that the stakeholders gain or lose when performing specific transformations. However, these and similar studies face a high level of subjectivism in the definition of values with a variety of values types and forms, as well as a wide range of risks causes and types of risks themselves. To overcome the difficulties arising in this regard, this study was conducted and recommendations were proposed for structuring and evaluating the components of enterprises undergoing transformations, as well as the values of stakeholders (also named participants or parties) involved or substantially affected by the transformation.

The rest of the article is structured as follows. Section 2 contains information on approaches and basic research methods. Section 3 begins with an example of an architectural analysis of the positive and negative aspects of a particular DE enterprise - the Uber company. This example is then generalized to cover different types of enterprises, and rules for managing risks of transformations are proposed by better aiming for values of parties. Section 4 offers a variant of the general value structure, the multidimensional Open Enterprise Values Space (OEVS) and the rules for

the formation in the OEVS of an Open Integrated Values Model (OIVM) of enterprise and parties of its transformation. Section 5 provides some options for using the proposed rules and models in works on DT and indicates a direction for further research and development.

2. Employed approaches, models, and methods

The methodological basis of this research includes:

- the searching and predictive variant of a historical approach to analysis;
- the architectural approach to an enterprise – from local to global and to extended enterprise and to its ecosystem;
- the holistic integrated approach to an enterprise with attention to social and humanity, economical and informational, strategy and tactics aspects in their interrelations.

The set of participants or parties affected by the transformation includes not only the enterprise as an agent of the economy, but also its owners, employees and partners, clients, public organizations, and public authorities.

In this study we use the five-model DT scheme proposed in [8]. Table 1 shows the conception of the relationship between the proposed models of partial and integrated values and models in the five-model scheme [8] of functional architecture, which includes services or platforms for business functions and their business purposes.

Table 1. *The five-model enterprise transformation scheme and value models*

	For single party or component of enterprise	For integrated representation of enterprise
Values (see Section 4)	Model of specific value $v_{q,n}$ for stakeholder s_q	Open Integrated Values Model OIVM = $\{v_{q,n}\}$
Goals (see [8], Fig. 1)	Business goals and goal indicators achieved through a specific system or DT component	Integrated business goals indicators system; their links with OIVM and OICAM elements
DT components as “DT models” (see [8], Fig. 1)	DT component model c_i (firstly for business functions and digital services or platforms provided to these functions)	Open Integrated Component Architecture Model OICAM = $\{c_i; c_i \times c_p p \ t)\}$

The research includes the phases:

1) Case study. The brief analysis of the Uber company case, including the architectural and value analysis, is presented. This phase is useful for

reducing the difficulty of presentation caused by the great range of causes of DT risks emergence.

2) Generalization of the methodology. The methodology for analyzing transformations and actions for managing the identified risks is intended for enterprises of different types and is formed from the position of compliance with the basic values of the enterprise and its stakeholders.

3) Structuring and integration of the value model. The generalized structure of the value model is considered, which provides the ability to compare different values and risks for parties of different types.

The other aspects of applied methods were described in [8, 9].

3. An approach to DT risk management based on the analysis of components and values

3.1. Case study. Value-based risk management

The example is based on a business model described about 20 years ago in [11] which remains very popular, namely, the use of Internet services and automatic platforms "digital marketplace".

As an example of a particular company, Uber [12] was chosen, as this company is under the scrutiny of the media and its business model is well known. The Financial Times described [13] typical complaints of drivers under pressure of overload at work and having no protection of labor and health standards on the part of Uber, which refused any responsibility for drivers and passengers. Uber has declared itself "just" an analytical company or an information platform that provides support to drivers (as independent entrepreneurs) and passengers. The conflict was examined in the court of London, which took a decision in favor of drivers and refused to Uber to renew the license to work in London. Then a similar decision was taken by the EU Supreme Court [14].

Courts have recognized that declaring themselves to be just a digital marketplace or information platform, Uber is misleading. It should be considered a transport company offering a taxi service and bearing all kinds of responsibility for drivers and passengers. It is possible that the adoption of such a decision was facilitated by cases of violence against passengers in the Uber taxi. In addition, it was important that Uber not only provided information to drivers and passengers, but, depending on the amount of work done, changed the level of support for drivers up to their removal from the drivers' pool. That is, the driver was not an independent entrepreneur. In practice, the courts saw the threat of destruction of public values, including safety and labor standards, as well as the rules of taxation. Such assessments went beyond Europe, and in the latest report to the Club of Rome

[5], inadmissibility of such a business model is indicated not only for Uber, but also for other DE companies.

However, one should take into account that evaluations and opinions of Uber estimates are ambiguous, and along with negative estimates, there are also positive ones. For example, in London, several hundred thousand people stand for support of Uber as the cheapest taxi that quickly responds to orders.

Below are the main "digital" functional components of Uber and assessment of their compliance with the values of consumers, employees and society which have already been discussed by the author earlier in [15, 16]. For brevity, consideration of the values of Uber owners is not included.

We can assume that the basic values of consumers, workers and society are fully met by the automation of functions:

- (+) geolocation of cars and customers;
- (+) routes calculation between them and to their destination;
- (+) calculation of the transportation fee along the route;
- (+) messages "center - client - taxi driver" synthesis and delivery (sms, voice).

The main values of consumers, workers and society are completely contradicted by the completely automatic and practically uncontrolled performance of the following functions or their elimination from business architecture:

- (-) fully remote hiring freelance drivers for the drivers pool without checking their professional competence;
- (-) elimination of social Uber's responsibility to employees;
- (-) elimination of Uber's responsibility to customers for drivers' qualities;
- (-) elimination of support managers for customers.

We also discover some functions that do not receive an unambiguous evaluation at this level of detail and require more detailed analysis, since their complete automation or elimination brings both benefits and losses:

- (+-) drivers selection for the route;
- (+-) simplification of payments to drivers;
- (+-) full elimination of "brokers" (while mediators have both benefit and loss).

The example shows that using functions marked with (-) and (+ -) carries Uber high risks.

Comments: 1) These are not all components, only just as an example; 2) Marks (+), (-) and (+ -) will be used further in the paper along with the mark (0) meaning "matching is not applicable".

At a glance, an obvious recommendation to Uber on risk management is removal or replacement of the components marked with (-), as well as performing further analysis for ones marked with (+ -).

However, models and recommendations are not so simple. For example, risk management actions should take into account that removing or replacing functions of type (-) can lead to losing economic advantages over competitors and to leaving the market, since the remaining digital functions such as (+) have long been mastered by "traditional" taxi companies.

3.2. Generalization of the analysis method of transformations, including risks management

The description of the example in subsection 3.1 is a strong simplification. In this regard, the methodology for analyzing transformations is formed by generalization of the following:

- rules for the architectural analysis of transformations (planned or implemented) at enterprises of different types;
- evaluation of transformations based on assessing the achievement or loss of core values not only of clients but also of the enterprise as an agent of the economy, as well as the values of other parties;
- a sequence of actions to manage risks and reduce possible damages.

The method contains two groups of rules.

3.2.1. Rules for analyzing the architecture of an enterprise and its DT

1) Describe in general the key components of the enterprise (primarily the functional ones), whose deep automation, often done together with their deep business reengineering, is planned to be implemented or has been carried out to improve the operation of the enterprise.

2) Describe in general the key functional components of the enterprise, traditionally included in the business architecture, or existing in its previous version, but not included in the target "digital architecture".

3) Describe the meaning of the links between the functional components themselves and their business environment based on the five-model DT scheme (see Table 1 in 2.3 above and [8]). Appraisals of achievable or anticipated improvements in performance indicators are recorded, primarily (but not only), at the expense of DT.

4) Describe all the basic values of all the participants in the transformation. When describing the values of an enterprise as such (as DE agent), it

is necessary to describe and clearly distinguish two groups of values:

a) declared values (for example, declared in the official mission of the enterprise),

b) values actually affected (created, increased, or decreased) by the newly generated or modified functional components of the enterprise, or affected by the absence or elimination of specific components, as shown in sub-section 3.1.

The group "b" of values is formed on the basis of the description of the enterprise components defined in the OICAM model (see Table 1 in Section 2). In describing groups "a" and "b", some values can enter both groups.

5) Each transformed or eliminated component is marked with a sign that indicates that this component is responsible, contradictory, or not related to the values of participants in the transformation under consideration:

- mark with the sign (+) the components transformation of which meets or does not contradict the values of all parties;

- mark with the sign (-) the components whose proposed or completed transformation contradicts the core values of at least one of the priority parties or the risk of contradiction to such values is unacceptably high. *Comment:* discovered violated values are referred to as the critical ones;

- mark with the sign (+-) the components whose proposed or completed transformation partially contradicts the basic values of at least one of the priority parties which means that they can bring both benefit and loss;

- mark with the sign (0) the components that cannot be matched with any value of any party.

6) The components marked with (+-) should be detailed in such a way that the sub-components under consideration receive the marks (+), (-) or (0) at the resulting level of detail. *Comment:* it is advisable to limit the resulting iterative analysis of sub-components to the second level of detail.

Comment on the rules of analysis: There is an obvious possibility of unequal rights of various DT parties; first of all, with respect to rule 5 which introduces the possibility of some priority of certain parties. This inequality is deliberately allocated to show the objective complexity of the situation, which often requires the search for non-standard solutions in actual work.

3.2.2. Rules for risk management and DT improvement

1) The variants for replacing marked (-) components with other ones that can be marked (+) are designed or selected, or components are modified to minimize remaining risks.

2) Similarly – for sub-components.

3) The obtained new architecture at the level of components and their links is checked for compliance with the values of the parties and for the implementation of other relevant requirements and norms. The remaining risks are assessed, and the architecture, if necessary, is finalized.

4) If it is not possible to form a new useful component or sub-component, it is necessary to select further actions from the following list:

a) weakening the levels of the required values conformed with the parties of transformations, up to obtaining an acceptable compromise option (the weakening of requirements can be completed by lowering the accepted level of value realization, measured by special scales prescribed in the value model discussed in Sections 4 and 5);

b) searching for new values for the parties replacing the detected critical values;

c) refusal to perform the analyzed transformation and transition to a search for a different strategy for enterprise development (see the rules for changing strategies in [10]).

4. Values and their model for DT and risks management

4.1. Interpretation of Values and Value Models for DT

4.1.1. Problems in interpreting values and comparing values through an integrated space of values

At present, there is no generally accepted, sufficiently complete, and at least partially formalized meta-model of values; comparison of values is very difficult due to a number of widely differing approaches to the interpretation of the very concept of value. At the same time, in order to fulfill the rules of analysis and risk management (Section 3), it is necessary to use comparable value models of different participants, in particular, in order to assess the conformity of the values of the parties planning the transformation with the values of other parties.

We also point out the highest rate of change in the picture of the world and the fact that these changes are a crucial factor in the values variability. Thus, in [17] it was shown that for new generations this factor leads to the inverting of value systems relative to those that were considered conventional just a short time ago.

At the same time, in the field of management, social psychology, and ethical teachings, there exist important provisions and partial models that can be applied in the OIVM development. The heterogeneity of these partial models is caused by the fact that they reflect different aspects of value, therefore we consider using them for forming different dimensions of

Open Enterprise Values Space (OEVS) as the space intended for OIVM placement.

4.1.2. Participants and tasks where value models are used

Value models are seen as a working tool for evaluating and selecting transformations. This means that they must reflect the values of a wide range of parties involved in transformations. It is also necessary to consider the great variety of business tasks in which such values must be taken into account.

Here is an example of such tasks for rules 4–7 of the analysis of the enterprise architecture and its transformations and rules 1, 2, 4a, and 4b for risk management and DT improvement (see Sect. 3):

- search for coming products (services) and directions of the enterprise development on the basis of forecasts of prospective values of customers and promising technologies;
- formation of enterprise development strategy in DE and comparison of enterprise DT variants, including comparison of target architectures for new levels of productivity and quality of work;
- design of product (service) improvement, including the choice of the direction and size of the necessary enterprise transformation with the assessment of the "cost-result" balance.

In these tasks, we consider individuals (including conventional representatives of client groups), communities, and organizations as large categories of stakeholders.

In simple cases, the enterprise as a whole (as a DE agent), its owners, customers, and employees, are included in the number of stakeholders or parties whose values are to be taken into account. In more complex cases, the company's partners, public and professional associations, and public authorities that affect the activities of the enterprise and its ecosystem are also considered.

To compare the values of such different stakeholders and carry out these tasks, equity elements must be included in their value models.

4.1.3. On the question of using a general interpretation of high values

To compare the heterogeneous values of different stakeholders, it is methodically expedient to rely on a common interpretation of certain highest values for these parties.

As a step to this, we can consider the approach of Garaedagi [18], where categories of beauty and culture were included, and the culture was treated (following [19]) as a collection of ethical and moral norms that impose restrictions on possible actions. However, this approach is not sufficient to assess future transformations that are

planned to be implemented and for which ethical and moral norms have not yet been worked out.

Therefore, in this paper, it is suggested to use the working definition based on a more general interpretation of value which is understood as the boon to an individual, a group, and/or a society in the sense of moving from satisfying some biological and physiological needs towards highest values.

We discussed this and similar interpretations in different audiences. Very important were the conversations with Dharia Rahi GuruMata, Head of International Department [20]. The boon was discussed in two incarnations, as a high ethical category and as a progress towards this category in everyday life, including activities of enterprises. The subjective nature of the evaluation of the boon was taken into account. The needs and ways of performing expert assessments of the availability of the boon and its relative scope were discussed.

The author recognizes that interpretations of highest values can be dramatically conflicting, and with it, our time shows real possibilities for a strong rapprochement between the positions of various ethical and spiritual teachings, which can be caused by the awareness of the increase in common threats in all aspects (ecological, technological, other). The report [5] is the evidence that today, and in the near future, universal highest values are earnestly needed that focus on the boon for all living beings and the world as a whole.

4.2. Partial value models and the scheme of their integration

The proposed approach to the general scheme (framework) of value models integrates the following views on value:

- meeting the needs of the stakeholder,
- the social environment and personal situation influence on the stakeholder's values
- DE influence on a value's forms.

The approach also provides for the possibility of encompassing common highest values that are relevant at this historical stage.

In order to compare different values for checking their consistency or contradiction to each other, specific values are placed in the OEVS - the general multidimensional Open Enterprise Values Space, which is based on dimensions explicitly or implicitly proposed in the models [21–23] and their extensions.

4.2.1. The Maslow model usage

The Maslow model [21] is used as an open model with its actual extensions. The relativity and variability of the order of the "need / value" levels arising due to different priorities in the satisfaction

of different needs for different actors are recognized, as well as the extension [24] which includes additional levels (types) of needs / values: cognitive, aesthetic, values of self-realization and transcendental values, including altruistic ones. Altruistic values can be accepted as a kind of highest values discussed above in sub-section 4.1.

This model is used as the basis of the dimension $M = \{m_i\}$ of the OEVS where m_i is the level in the "extended Maslow pyramid".

4.2.2. The Graves model usage

The Graves model [22] is applied in both simplified and expanded modes. In a simplified version, it is used in full accordance with its original scheme as an ordered sequence of development levels of the socio-economic environment joined with the type of the participants' behavior defined as rational for this environment.

In this case, in order to comply with the rules of sub-section 3.2 and the business tasks in paragraph 4.1.2, the levels of the environment with Graves codes DQ, ER, FS are primarily used.

In this version, this model is used as the basis of the dimension $G = \{g_e\}$ of the OEVS, where g_e is the level of development of the environment and of the stakeholders' behavior in it.

In the expanded mode, it is taken into account that the environment and the stakeholder's behavior may not correspond to each other in the manner defined in [22]. This discrepancy can mean either a gap between the declared and real characteristics of the environment or a decision taken by the stakeholder not to act according to the rules called rational by Graves or both. In this case, the partial model induces two dimensions of the OEVS:

- dimension $G = \{g_e\}$, where g_e is the level of development of the medium,
- dimension $B = \{b_h\}$, where b_h is the level of the behavior of the stakeholder.

4.2.3. The Schwartz model usage

For each value in OEVS, we must provide the connection of the above defined levels of m_i , g_e , and b_h with a description of the value of a specific type. What is important, this value description is extended by actual forms of this value representation and by measurable levels of the value realization in these forms. These descriptions, combined with the scales of value implementation levels, are used as the basis of the aggregated dimension SH for description of OEVS values.

For the initial formation of this aggregated dimension, descriptions of the values in the Schwartz method [23] originally developed to study the dynamics of the values of individuals and

groups are used. Lists of values from [23] are supplemented by additional values as needed for specific conditions.

The model [23] expanded and supplemented with the above-mentioned method is the basis of the dimension $SH = \{sh_{j,f,k}\}$, where $sh_{j,f,k}$ is the combination of the description of value, the form of its expression, and the level of implementation, with a description of this level interpretation.

Thus, for the stakeholder s_q , the specific value $v_{q,n}$ is represented by a point with coordinates in the OEVS space:

- in the simplified version, $v_{q,g} = (m_i, g_e, sh_{j,f,k})$, which provides a way for using three-dimensional illustrations,
- in the extended four-dimensional version, $v_{q,g} = (m_i, g_e, b_h, sh_{j,f,k})$, with a potential increase in the number of dimensions up to five or six in the case of splitting SH dimension.

The stakeholder's value set or value system is formed as a set of its specific values $V_q = \{v_{q,n}\}$, where $n = \{1, \dots, N\}$, N is the number of different values of a stakeholder s_q from the set of stakeholders S has.

4.3. From the value model of one participant to the integrated model of enterprise values

The Open Integrated Values Model (OIVM) of an enterprise is defined as the set of value models of the parties / participants of the enterprise and its transformations (including customers as part of the enterprise ecosystem). That is $OIVM = \{V_q\}$, where $q = \{1, \dots, Q\}$, Q is the cardinality of the set of stakeholders S , and all V_q are defined in the same OEVS. This provides an opportunity to match the values of different parties and to determine their conformities or contradictions to each other.

Realization levels of certain values can be expressed in natural units of measurement (for example, "time spent on receiving a service", etc.), but for other values the level of realization is expressed as ordination number of conditional realization level of qualitative assessments (for example, realization levels of ability for doing something: "1" = "no ability", "2" = "limited ability", "3" = "ability for most situations", "4" = "highest ability"). This approach is common in multidimensional descriptions of complex objects.

Development of such metrics is performed with each extension of the general scheme of the value models for SH dimension and value forms especially. This makes it possible to form and accumulate knowledge about values in such a way that on this basis it is possible to gradually increase

the automation level of intelligent analysis of enterprises DT.

An example that represents the value dynamics of digital society: The common value of level 4 "Respect" according to [21] can be determined by the value form "Prestige as the H-index of the citation", and (for other or same conditions and/or demographic groups) - by the value form "Prestige as a number of *Like* and *Followers* in social networks". Meanwhile both forms can be applied as forms of this common value of one stakeholder.

5. Conclusion

5.1. About application of value models for risk management in DT

In the above text we proposed the method for DT analysis, the rules for assessing DT acceptability and managing risks of its application. To implement this method, a common scheme for designing a stakeholder's value model as a participant of the enterprise and its DT, as well as an integrated values model of all stakeholders OIVM in the OIES values space, were formed. At the same time, it is useful to create and use various derivative models adapted for carrying out specific business tasks of enterprise development, including assessing the acceptability of its DT, based on integrated OIVM and OICAM.

In particular, for risk management in the evaluation of the DT components of DE enterprises described in Section 3, it is useful to analyze the compatibility of pairwise combinations of values of different parties categories, which can clash with each other. In particular, in sub-section 3.1, this is done for assessing the combinations of enterprise values as values generated (or excluded by the absence) by specific functional components, on the one hand, and the values of its employees and customers, on the other.

In order to formalize such evaluation of a functional DT component, it is possible to determine the variants of the function $F(c_t, v_{q1,n1}, v_{q2,n2})$, which yields the result (+), (-), (+ -), or (0) depending on the evaluation of the compatibility of $v_{q1,n1}$ and $v_{q2,n2}$ under the specific implementation of the c_t component from the OICAM model (see Table 1).

Determining these estimates as meanings of the function F at the initial stage of the OIVM models application will require the "handmade estimations" by experts in different subject areas and the performance of permanent extensions of the

SH dimension by descriptions of new types and forms of specific values. Such extensions could be used as knowledge accumulation for raising the automation level of function F calculation

Another recommendation of this study is that it is advisable to develop these scales in such a way that they set their order on the dimensions of the OIES space based on the ordering scales levels. This provides an opportunity to measure comparative distance from one value to another or to a reference value. The author and his colleagues have the experience of such developments [25] successfully applied in real practice [26]. *Example:* Scales to reflect the levels of IT professionals' abilities [25], such as "responsibility", "autonomous work ability" and others were developed to present the realization levels of abilities which are values both for an individual participant and for the enterprise as a whole.

5.2. On the prospects of the need for risk management and on further research

The conflict situation with Uber company discussed in sub-section 3.1 is a precedent for a multilateral conflict of values and its resolution. However, this conflict resolution has a local character and does not eliminate future risks of this kind.

Infringements of values become possible due to the inevitable delay in the development of such laws and ethical norms that could prevent the use of those components that violate values. Therefore, in order to minimize such risks, continuous work is required to analyze the architecture components proposed in DT projects and assess their compliance with the values of all affected parties.

Such a work should be combined with constant research and accumulation of knowledge about rational options for presenting actual forms of values and levels of their implementation. This will allow developing more and more sophisticated systems of intelligent software agents that support complex procedures for joint analysis of multidimensional value models based on well-developed OIVM models for multi-agent enterprises of digital economy.

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REFERENCES

1. Digital Dividends. World development report. International Bank for Reconstruction and Development, Washington (2016).
2. E-Government for the future we want: United Nations E-Government Survey 2014. NY, United Nations (2014).
3. E-Government in support of sustainable development: United Nations e-Government survey 2016. N.Y, United Nations (2016).
4. The Global Risks Report 2018.13th Edition. World Economic Forum, Geneva, Switzerland (2018).
5. Weizsacker, E. U., Wijkman, A. Come On! Capitalism, Short-termism, Population and the Destruction of the Planet. A Report to the Club of Rome. Springer, NY (2018).
6. Zinder, E.Z. The novel in the enterprises architectures and their systems: Opportunities and risks (in Russian). In: Proc. of the 7th Int. Conference “Modern Enterprise Governance Technologies and Information Systems Usage Opportunities: State, Problems, Perspectives”, 30–31 March 2012, Odessa, Ukraine, pp. 148–152 (2012).
7. Zinder, E.Z. The future of the enterprise architecture taking into account the cardinal changes in the IT area (in Russian). In: Proc. of the XV Conference “Business processes reengineering based on modern IT. Knowledge Management Systems”. April 26-27, 2012, .. MESI, pp. 79–84 (2012).
8. Zinder, E. Z. Expanding Enterprise Engineering Paradigm. Business Informatics, 2016, 4(38). Pp. 7–18 (2017).
9. Zinder, E.Z., Yunatova, I.G. Digital Economy and Knowledge Barriers: Their Origin and Dealing with Them. In: Alexandrov D.A. et al. (Eds.) DTGS 2017, CCIS 745, pp. 445–463 (2017).
10. Zinder, E.Z. Managing the Balance of Strategy and Tactics in Digital Enterprises and Electronic Governments Implementation (in Russian). Information Society, 2017, 2, pp. 9-22 (2017).
11. Timmers, P. Business models for electronic markets. Electronic Markets, 1998, 8 (2). Pp.3–8 (1998).
12. Uber Technologies, Inc. <https://www.bloomberg.com/profiles/companies/0084207D:US-uber-technologies-inc> [Accessed 05 February 2018]
13. O’Connor, S. Driven to despair – the hidden costs of the gig economy. Financial Times, 22 September, 2017.
14. Alderman L. Uber Dealt Setback After European Court Rules It Is a Taxi Service. The New York Times, 20 December, 2017.
15. Zinder, E.Z. New technologies and happiness. Cyber-tech channel, Streamed live on 30 October, 2017, 15:05. Archive on <https://www.youtube.com/watch?v=6KTG9brsiNU&feature=youtu.be> [Accessed 05 February 2018]
16. Zinder, E. Risk Management in the Digital Age (Report on Round Table). November 23, 2017. Plovdiv, Bulgaria (2017).
17. Sitkevich, N. V. Features of the transformation of moral values in the conditions of the information society (the dissertation). Novomoskovsk, Russia (2011). <http://www.dslib.net/etika/osobennosti-transformacii-nravstvennyh-cennostej-v-uslovijah-informacionnogo.html> [Accessed 05 February 2018]
18. Gharajedaghi, J. Systems Thinking: Managing Chaos and Complexity, 3rd ed. Elsevier, Burlington, USA (2011).
19. Dewey, J. Freedom and culture. NY, Prometheus Books (1989).
20. Atma Kutir Ashram, Garwal Himalaya, India. <http://atmakutir.blogspot.ru> [Accessed 05 February 2018]
21. Maslow, A.H. Toward a psychology of being. Princeton, Van Nostrand, USA (1962).
22. Graves, C.W. Levels of Existence: an Open System Theory of Values. J. of Humanistic Psychology, 10, issue 2, pp. 131-155 (1970).
23. Schwartz, S. H. An Overview of the Schwartz Theory of Basic Values. Online Readings in Psychology and Culture, 2(1) (2012).
24. McLeod, S. A. Maslow’s Hierarchy of Needs (2017). www.simplypsychology.org/maslow.html [Accessed 05 February 2018]
25. Zinder, E.Z., Yunatova, I.G. Conceptual Framework, Models, and Methods of Knowledge Acquisition and Management for Competency Management in Various Areas. In: P. Klinov and D. Mouromtsev (Eds.), KESW 2013, CCIS 394, pp. 228–241, 2013. Springer-Verlag, Berlin (2013).
26. Guzik, S.V., Zinder, E.Z., Yunatova, I.G. New Enterprise Engineering paradigm and work process – performers’ competencies alignment (in Russian). In: 16th Conf. Enterprise Engineering & Knowledge Management, pp. 90–100. MESI, Moscow (2013).