можливості підприємствам успішно конкурувати з іншими суб'єктами господарювання та ефективно використовувати свої ресурси. Для розвитку конкурентоспроможності держави на основі «економіки знань» варто проводити державну політику направлену на розвиток знань, інформатизації та конкурентоспроможності, що потребує створення структурованої та осмисленої програми розвитку на майбутні десятиліття.

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FROM BIG DATA TO INNOVATIVE ECONOMY

Any business support nowadays requires the presence of «digital kernel» at any enterprise. This "digital kernel" includes systems for automatization of business processes and decision making support, including databases. The traditional approach concerning this question which is generally used today by businessmen with moderate beliefs provides only slow development of business. From another point of view, more perspective look provides an opportunity to enter new data very quickly

and possibility to have a full range of modern technologies to speed-up exponential growth of business. For this purpose it is extremely important to improve the automated support of existent business processes altogether with new ways of search of essence of what takes place, such as activity of other business structures (customers and suppliers), activity of people (clients) and functioning of devices («things»). These possibilities are mostly provided by the *intelligence analysis of data*.

Strategy of «digital transformation» as a new kernel for those structures and people, who aims to compete with other ones in a digital economy, provides modern opportunities for significant part of large world companies to get a profit from services which are provided on the basis of accumulated information (*data-as-a-service*), such as sale of raw data, measures, obtained understanding (*knowledge*) and recommendations, received on the basis of *Business Intelligence* (BI) technologies and intelligence analysis of data (*Data mining*).

These prospects are based on the main trends of IT development, such as creation of facilities of *artificial intelligence* (AI), provision of *machine learning* (ML) and introduction of the *Internet of things* (IoT).

This direction is characterized by the processes of robotization and cyber-socialization technologies convergence and elimination of verges between different areas of activity. These processes will cardinally change the way we live and work, study and take a rest. It also refers to the way we will perceive data that have been accumulated by humanity for the decades of «computer era» in the databases of enterprises and organizations, establishments of different levels in large warehouses of giants of world economy. As it was evaluated by well-known analytical company IDC the amount of data in the world will reach 40 zetabytes for the nearest years. And it means that each individual can deal with 5200 gigabytes of information in the future [1]. As an example of suitable comparison, analysts has compared amount of

40 zetabytes to the abstract example in nature and came to conclusion that information systems will deal with the amount of data approximately in 57 times more than amount of grains of sand on all Earth's beeches by 2020!

From another point of view, data domain nowadays is characterized by enormous volumes of information but not only by it. It is important to note that the data domain is also characterized by wide expansion throughout the world. In addition, the dynamics of changes in data bases domain permits to define this domain as one with the fast acceleration and as the one transferring consequently to the «real-time mode».

It is considered at the same time that information, collected as a whole and analyzed with the help of modern computers with high performance and proper algorithms, permits to achieve the brand-new understanding of what this information must contain and, as a result, permits to answer the questions that did not have answers before. This transition from information accumulated by humanity to the quality of task decisions, that we must implement, is determined as a phenomenon of «mining of data and knowledge», «search of patterns». And today it is one of the most discussed developments in the industry of information technologies [2].

The top of these transitions are Big Data technologies. They permit to overcome the above-mentioned problems of data processing related to information volumes, information expansion and real time. The ability of Big Data technologies to use the accumulated information for decision making support of processes having a substantial value can give exclusive competitive advantages for business. This ability will help people to build more effective countries, and also will provide people with new opportunities, and, as a result, will make our lives more comfortable and more safe. The main point of the new revolution is not in data processing computers, but in data by itself and in the way we use them.

Big Data are important milestones for the new method of information analysis that transforms our understanding about information role in society. In the world of Big Data analysis enormous amount of data is carried out, and not only it. It should be stressed that all and comprehensive data relating to certain phenomenon are used very often. It means that the analysis comprises not only random samplings, as it is defined in the classical statistical analysis of data, including Data mining. Using all and comprehensive data (N=”all”) from a subject domain, researchers can get more exact result and can see nuances with especially clear picture of details (which are inaccessible when limitations with small volume of random samplings take place).

Most of discussions concerning interrelation between technology and data relates to artificial intelligence (machine learning as main part of it). ML deals with analysis of big data and identification of new knowledge as well as with robots implementation in manufacturing. These are the most obvious examples of influence of new technological innovations on economy growth acceleration.

In spite of that, Big Data can trigger a great number of new problems that concern public safety, global economic models, immunity of private life, legal relations between human, business and state. In the near future we will meet with fantastic level of transparency of our life, actions and acts. In fact, modern technologies together with Big Data will allow people and their actions to be tracked in different ways. When we use the Internet, when we purchase many things in internet-shops or large networks of supermarkets, when we move with mobile telephones – our actions can be tracked because we accumulate new information that can become a “food” for those persons who owns Big Data technology [3]. It demands increased attention from state authorities to adjust the use of new technologies properly.

To take advantage of new technologies in Ukraine a large number of questions is needed to be decided by society. These questions refer to direct improvement of

system state administration in Ukraine (and not only in IT industry but also in economy in whole). Moving of labor force, creation of new highly technological productions, development of innovative and informative society is not that simple. The problem is that there is no clear understanding, where and how intelligence technologies will be used, and in what concrete domains. The most unpleasant is that people are still not ready to be re-educated for IT trends. This is what can become a very serious challenge in future. Only economic strategy and step-by-step planning with concrete terms of digital transformations will make it possible to talk about real economic changes in near future. In addition, innovative technologies, such as Big Data and robotics, require considerable financial funds. Investments are the only way of such financial funds. If state administration system in Ukraine and Ukrainian economy will not be in compliance with global IT tendencies, Ukraine will be off-road for digital revolution for a long time. There is no alternative and there are no other solutions.

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