

TRENDS OF DIGITAL TRANSFORMATION OF INDUSTRY

P. O. Alyushkina

*student, Peter the Great St. Petersburg Polytechnic University, St. Petersburg, Russia,
polalushkina@mail.ru*

Supervisor: A. A. Timofeeva

*PhD in economics, associate professor, Peter the Great St. Petersburg Polytechnic
University, St. Petersburg, Russia, timofeeva.aa@spbstu.ru*

The paper identifies trends of digital transformation of industry in global community, Russia and Belarus by analyzing global trends in digitalization. Purpose of the article: to identify the trends of digital transformation in industry based on analysis of global trends in digitalization. Objectives: highlight the digital trends of industry in developed countries, Russia and Belarus; conduct a comparative analysis of the trends identified; show directions of development of digital transformation of industry in Russia and Belarus.

Keywords: PRA; business intelligence; ESG platforms; advanced analytics; AI; ROC; DAM; IoT; mobile apps; digital twins; marketplaces.

ТРЕНДЫ ЦИФРОВОЙ ТРАНСФОРМАЦИИ ПРОМЫШЛЕННОСТИ

П. О. Алюшкина

*студент, Санкт-Петербургский политехнический университет Петра Великого,
г. Санкт-Петербург, Россия, polalushkina@mail.ru*

Научный руководитель: А. А. Тимофеева

*кандидат экономических наук, доцент, Санкт-Петербургский политехнический
университет Петра Великого, г. Санкт-Петербург, Россия, timofeeva.aa@spbstu.ru*

В работе анализируются факторы внешней среды, определяющие цифровую трансформацию промышленности в развитых странах мира. Цель статьи: выявить тенденции цифровой трансформации в промышленности на основе анализа глобальных тенденций цифровизации. Задачи: осветить цифровые тенденции развития промышленности в развитых странах, России и Беларуси; провести сравнительный анализ выявленных тенденций; показать направления развития цифровой трансформации промышленности в России и Беларуси.

Ключевые слова: PRA; бизнес-аналитика; ESG-платформы; продвинутая аналитика; искусственный интеллект; ROC; DAM; IoT; мобильные приложения; цифровые близнецы; торговые площадки.

Digital transformation purpose is to automate and robotize different business processes. Result will be the following: time losses are reduced, the speed of transmission and processing of information is increased. There is a significant rise in the introduction of digital technologies in all spheres of society, economy and business [1].

During the analysis of digital transformation of industry, such trends as PRA, Business intelligence, ESG platforms, Advanced Analytics, AI, ROC, Compo DAM, IoT, mobile apps, Digital Twins, marketplaces were highlighted.

Robotic process automation (or RPA) is one of the technologies for automating business processes. Robotization is applied for routine tasks, which are performed clearly by the algorithm.

Business intelligence is data processing, examining company performance to solve problems or propose improvements. Business analytics is needed to enable leaders to make data-driven decisions.

Advanced Analytics works with large data sets to help businesses make strategic decisions. This approach allows to find weak points and growth points of the product.

Return on capital (ROC) measures a company's net income relative to the sum of its debt and equity value.

DAM is a system that brings together all your media assets, including images, graphics, documents, videos and other media content. DAM system allows to integrate, consolidate and manage digital assets of any type and quantity.

The Internet of Things (IoT) is a system of interconnected computing devices that can collect and transmit data over a wireless network without human intervention.

Mobile app is software designed to work on mobile devices.

Digital Twin – is a digital copy of a physical object or process that helps optimize business efficiency.

Marketplace – is a trading platform that sells goods and services of different sellers through internet.

Robotic process automation, Business intelligence, ESG platforms, Advanced Analytics, AI, ROC take up leading positions in global community, whereas in Russia and Belarus AI tools, IoT, mobile apps, Digital Twins, marketplaces and Robotic process automation are the most popular trends of digital transformation of industry [2].

There are only two overlaps between Russia, Belarus and the rest of the world. The first is advanced AI tools. The second is RPA (Robotic Process Automation). Russia, Belarus and the rest of the world do not overlap in other technological blocks. In Russia and Belarus, in the context of industrial digitalization and the use of AI, Industrial Internet of Things (IIoT) or digital twins are most used and talked about, while in the world more attention is paid to business intelligence (BI) systems and ESG platforms [3]. Our industries are

actively forming and solving increasingly large-scale problems, concentrating on Advanced Analytics, ahead of other countries in this area.

Digital transformation of the industry allows to optimize many processes, make them faster and easier. Russia and Belarus are making serious progress in this field and investing a lot of resources in order to evolve. Our industries should increase application of automated control systems, industrial robots and drones to increase efficiency and reduce human factor. Apart from this, it is important to Ensure data and systems security because of increasing amount of cyber threats, especially in critical industries. Lastly, development of training programmes for professionals required to work with new technologies is crucial in this fast-changing world.

Библиографические ссылки

1. *Володько Л. П., Володько О. В.* Цифровая трансформация промышленности: технологические тренды и модели. 2023.
2. *Джамай Е. В., Фокина Д. А., Михайлова Л. В.* Комплексный анализ основных тенденций цифровой трансформации промышленных предприятий // Вестник Московского государственного областного университета. Серия: Экономика. 2023. № 2. С. 85–92.
3. *Измайлов М. К.* Тренды развития цифровых технологий в деятельности российских промышленных предприятий // Имущественные отношения в Российской Федерации. 2023. № 3(258). С. 21–29.