The interest of budding entrepreneurs in organizing a franchise business is explained by the following two advantages:

- 1) Franchising provides an opportunity to start a business with less risks, as the franchisee gets a proven business model;
- 2) The franchisee does not have to spend a lot of time and money to promote the brand.

The history of franchising began in the mid-19th century, when Singer used franchising to market his sewing machines. At the current time, franchising continues to develop and adapt to new opportunities. The main trends that are shaping the future for this form of business are:

- 1) Integration of technology: Artificial intelligence, automation and data analytics, mobile apps, online platforms are all helping to improve various business processes and customer service;
- 2) Sustainability: Entrepreneurs are reducing the amount of waste and using ecofriendly packaging materials, which helps to save the environment and attract natureconscious customers;
- 3) Globalization: Franchising expands international markets by adapting business models to local conditions and culture;
- 4) Staff training: Staff training is a key route to success because consumers expect a high level of service;
- 5) Social franchises: Social franchises are focused on solving social and environmental problems, as well as attracting investors and customers interested in sustainable development.

In conclusion, the future of franchising will be dynamic and innovative. Technology integration, sustainable development, globalization and etc. open new opportunities for entrepreneurs. Therefore, it is important for owners of this form of business to follow and adapt to trends in order to stay competitive in the economic market.

**Y. Trishyn Я.Д. Тришин** ВГТУ (Витебск) *Научный руководитель В.К. Егорова* 

## APPLICATION OF NEURAL NETWORKS AS A BASIS FOR ACCELERATED ECONOMIC DEVELOPMENT

## Применение нейронных сетей как основы ускоренного развития экономики

The application of neural networks is currently being actively developed in many countries. Among the most advanced in this field are the USA, China and the UK. In the

USA, neural networks are used in various industries, including healthcare, finance, marketing and technology. China is actively investing in the development of artificial intelligence and neural networks, especially in facial recognition, factory automation and big data analysis. In the UK, neural networks are being used in the healthcare, financial sector and for the development of autonomous vehicles. Also, a significant number of start-ups and investments are in technological innovation using artificial intelligence and neural networks.

The application of neural networks on the way to technological leadership contributes to the sustainable development of the modern nation's economy. Therefore, the aim of the study was to analyse the current level of neural networks application in the practice of Belarusian enterprises and to develop proposals for further expansion of their implementation.

The use of neural networks at enterprises Belarus is at an early stage, but it follows the same trends as in the global economy.

- 1. Defect detection. Machine vision systems for quality control on spinning, weaving, footwear equipment.
- 2. Color gamut. Predicting the final tone of products by mixing fibers of different colors and matching the color of fabrics.
- 3. Design and production. Predicting fashion trends and consumer preferences, using data analytics to determine future trends these processes can be taken over by neural networks.
- 4. Market research and consumer demands. Among the main directions of application of neural networks in marketing activities are the analysis of market trends, web design, contextual advertising and evaluation of the effectiveness of advertising campaigns.
- 5. Equipment repair. Neural networks can be applied in the system of planned and preventive repair using sensors installed on machines, lines and analytical systems.
- 6. Safety. Reducing injury rates by using neural networks video analysers that track safety violations.
- 7. Robotisation. Automation of production processes using robots with artificial intelligence provides technological leadership in the industry.

Based on the above, we can conclude that the process of implementation of neural networks in Belarus has a number of difficulties, but this direction contributes to the acceleration of economic development.

The conducted study shows that the application of neural networks is a breakthrough technology with great potential. Two main barriers to the use of neural networks have been identified, there are financial constraints, lack of specialists with the necessary competences.

Practical recommendations at the state level include increasing funding for educational programmes and scientific research in the field of neurotechnology; creation of specialised training programmes, supporting universities; providing grants and subsidies for start-ups and companies engaged in such developments; encouraging partnerships between the state and private companies for joint developments; raising awareness and educating the population to increase the level of trust in new technologies.

These measures will help the government to expand application of neural networks, integrate them into various areas of the economy in order to accelerate its development.

**А. Kholenkova А.Н. Холенкова** БНТУ (Минск) *Научный руководитель Е.В. Хоменко* 

## IMPLEMENTING CIRCULAR ECONOMY PRINCIPLES INTO BUSINESS MODELS OF TRANSNATIONAL CORPORATIONS

## Внедрение принципов циркулярной экономики в бизнес-модели транснациональных корпораций

Goal of the study: to examine how transnational corporations integrate circular economy principles into their business models, identify best practices, analyze challenges, and provide recommendations for enhancing environmental and economic sustainability.

Advancements in eco-friendly and waste management strategies are critical to reducing the environmental impact of our consumer society. The circular economy is an economic system based on the reuse and regeneration of materials and products. Linear business principles must be reconsidered to address this issue. The traditional linear economy, based on ever-increasing resource consumption, not only damages natural potential, but also carries significant economic risks. In addition, the introduction of innovative solutions such as circular business models can play a key role in accelerating environmental progress through the activities of multinational corporations. These corporations have the ability to operate across supply chains, allowing them to deliver goods and services in collaboration with their suppliers and customers.

The traditional commercial system has not yet achieved the goals of the circular economy, which operates on non-linear principles. Although there has been extensive research on how the circular economy can be implemented by companies and governments, the focus has mainly been on identifying the necessary steps to achieve its evolving objectives, rather than on the practicalities of adopting circular business models. Businesses lack the knowledge and guidance on how to transition to and operate within adaptable circular economy standards. There is also a lack of literature on how multinational corporations can expand and move across national categories, so a mixed approach including case studies and interviews is needed to obtain more comprehensive results.