

NEW REALITY

Industrial revolution 4.0 affects business management



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A critical aspect of the modern world is a high change rate. Key global processes are picking up speed — economic, political, social, growing data volume, as well as the need for new knowledge and technologies. Business requirements are constantly changing, leading to rapid efficiency loss of the chosen management models. Steady progress is a key factor for productivity growth and keeping up with other companies in a new economic environment: no progression- no evolution. Use of innovative management approaches increases a company's chance to capture market share, leaving less progressive companies behind.

Destabilization of routine

Currently, "Industrial revolution 4.0" and " digitization " are hot topics in the business community. Development of science and technology always go before industrial evolution, but there is a qualitative difference with the fourth revolution: for the first time, a significant role in this process is given to data, machinery and engineering systems, along with humans.

Technological and informational progress shapes a game-changing market with new rules. Boundaries between large and medium-sized businesses are dissolved, traditional products and services are replaced by digital ones, and new channels and platforms have appeared for companies to interact with consumers. It all leads to a new level of competition. Nowadays, companies compete not so much in scale and volume, as in innovation: companies offering disruptive innovations and using the latest technology, outdistance industry giants through the transition to a new level of service and product quality.



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The word "disruption", one meaning which is "to destabilize", exactifies this situation. Destabilization is what is happening with a traditional, well-established business. Key issues that shareholders and senior management face include whether to invest in new digital technologies, and, if so, what type.

Let's recap the term "digitization" and what it means with respect to the business processes of the enterprise. Digitization is a breakthrough stage of company development, where different methods of management and decision-making are used, based on the analysis of bulk information (Big data). Embedding digital devices into different areas of the production chain allows information systems to predict scenarios. The purpose of digitization is to create more agile, competitive and profitable enterprises, using modern technology as a tool.

The new digital reality has arrived, and it dictates business management requirements and decisionmaking time, the ability to think outside the box and to adapt plans, and addresses the changing business environment.



By analyzing the experience of companies that switched to digital production, we can distinguish three main areas of issues:

1. Traditional planning vs. Agile (trial-and-error approach).
2. Lack of competent personnel for selection and implementation of new technologies.
3. Unavailability of the information infrastructure.

Let's take a closer look at each area.

Through trial and error

At the moment, the market already has a variety of modern digital technologies, designed to simplify production challenges, implementation, and improve business efficiency. It is IoT and Big Data, machine learning and augmented reality, computer vision, new sensors, artificial intelligence, chatbots, and so on.

How do you choose the most appropriate technology for a particular business? How do you plan the implementation? Standard approaches- experience-based long-term, detailed planning, and management developed plans, distributed as a directive, do not work in high market volatility. Agile methodology, which combines short-term plans and long-term vision, is constantly adjusted as you move forward.

The Fail-Fast (quick testing) model is used when software design work well too. It works not only in IT but in other business areas as well. Fail-Fast processes can be outlined as follows: selected technologies are quickly tested, then a decision on applicability and economic value is made. The technology is launched in a limited extent test mode, and after a certain time, the results are assessed, and a decision is made to continue or to stop.

Selecting the Right Partner

A key issue is deciding who you can trust to select new technologies. Numerous suppliers of digital technology and equipment offer their solutions to large businesses. Who can act as an impartial advisor when choosing?

Above all, one needs to understand the company's strategic objectives and select technologies that will make a significant contribution to their achievement. However, a significant contribution is often impossible to anticipate. It is difficult to assess the impact and benefits of a particular technology. Progressive transformation background specialists with an entrepreneurial mindset, who are able to determine the most effective and reliable options for investment, are needed.

Management has a choice — whether to involve such specialists as employees or to seek outside expert partners and consultants, to address this issue. It's important to learn from the world leaders who successfully implemented digital technologies in production.

Get infrastructure ready

According to international statistics, only 5% of the total company's data is used by managers for decision-making. By increasing the rate of data used to 50%, it may significantly improve the quality of decisions.

Most of the problems with data processing (e.g., instability and low-quality data, diversity of information types, and so on) are coming from large company infrastructure. Infrastructure solutions typically consist of dozens of different systems that are not always integrated.



Moreover, a pivotal challenge of poor information infrastructure is a lack of technology and tools to analyze information, as well as necessary competencies. Adding new systems and technologies and attracting new specialists creates an expansion of large staffs that negates the very essence of digitization — to simplify processes and reduce the dependence on the human factor.

One option is to involve highly specialized companies to customize data management processes at the company instead of increasing its own staff.

In summary, digitization and the industrial revolution 4.0 is not the future, but a new reality that cannot be ignored. The impact on business competitiveness in the next 3-5 years is enormous.

Companies must take specific steps towards a new business reality:

- Revise the company's strategy in the light of new technology and a changing environment.
- Leverage production data.
- Develop competencies and digital technology techniques in the enterprise.

The sooner shareholders and senior management move towards new technologies, the better chance they have to increase business performance and profitability.

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