



ENTERPRISE MANAGEMENT IN THE CONTEXT OF DIGITAL TRANSFORMATION

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Abstract: Today, when managing an enterprise, managers face new requirements for high agility, flexibility. Such enterprise management in the context of digital transformation should contribute to the continuous improvement of the efficiency of production enterprises. One of the solutions, in our opinion, is the use of well-founded conceptual approaches of the production and economic system at the enterprise. Solving this problem will significantly improve of the enterprise. The paper presents the rationale for general approaches, the methodology of lean and flexible operational production, rapid response production, and digital production. An analysis of the comparative characteristics of management concepts for the development of the production and economic system of an enterprise is presented. Depending on the adoption of management decisions in the work, it is proposed to take into account the limitations when implementing the considered concepts of lean production and rapid response production, flexible production, and the concept of the factory of the future. The developed concept within the framework of the implementation of development projects in the main areas allows us to ensure the coordinated work of all structural divisions, which allows us to organize the effective activities of the enterprise when making management decisions in the conditions of digital transformation.

Keywords: *enterprise management, digital transformation, lean production, management decisions, the concept of the factory of the future.*

Introduction

Organizations are reimagining, reshaping, and retooling for an era in which traditional business rules and industry frontiers have been blown wide open the accelerated progression of technology and its rapid uptake by consumers have pushed the issue of digital business transformation to the top of the agenda for organizations globally. The opportunity, or existential threat, that these seismic changes represent is focusing the minds of business leaders and business owners on the future of their Companies and industries as never before.

Digital business transformation is akin to permanent disruption, a self-imposed regimen that recognizes transformation not as a one-and-done endeavour but as an ongoing commitment to adapt in line with changing customer needs and shifting industry landscapes. One of the most powerful shifts in business over the past decade is value creation. While successful established businesses have always been value-centric, for most of their existence businesses have created value with some combination of their core products and services, brand, economies of scale, and efficiencies.

What was a “science fiction” once, becomes a reality today

- through new products and services, without which we cannot imagine life, let alone business.

In addition to the new opportunities, which are provided by dynamic technological progress, the way we live, work and relate to each other is also changing (Popovic et al., 2022).

An analysis of the literature showed that scientists are engaged in solving issues of enterprise management in the context of digital transformation, as well as strategy itself.

The challenges enterprise specialists face in project design and implementation are more complex and time dynamic than ever before. The identified trends indicate the need to substantiate general methodological approaches associated with the new interaction nature, with the management connections organization between structural divisions, with the development and implementation of projects using the development management concept of the production and economic system and the management

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decisions development. Based on this, we will consider the concepts of rational organization, lean, flexible production, quick response manufacturing, the concept of the factory of the future, which allow the enterprise to choose a strategy for the development of the production and economic system (PES) and also improve organizational changes aimed at making management decisions.

Research Methodology

General methodological approaches can be identified (Tashkinov, 2022):

- production rational organization (Ford's model);
- lean production (LEAN);
- quick response manufacturing (QRM);
- agile (flexible) production (AP);
- the concept of the factory of the future (FoF)

The production rational organization concept

Rational production organization is the first concept we consider. The production rational organization concept belongs to F. Taylor. According to the author, work can be improved, transferred to another worker, and fairly rewarded (Locke, 1982, Burgess, & Nelson, 1992).

It is also known from the considered works that the rational use of labor used the so-called labour scientific organization principles (LSO). On this basis, the main advantages of the general methodological approach related to the rational production organization are the research and directions: -labour relations theory;

- production processes organization;
- workplace design (organization);
- job training methodology;
- labour rationing.

The main disadvantages of this production rational organization concept are discussed by the author in the article (Ford, 2012). Further it is proposed to consider the modern methodologies of managing the development of PES used in the framework of our study.

Considering the above, enterprise management needs to use innovative and intensive methods for managing the development of PES. In order to reveal the essence of this issue related to the practical implementation of the enterprise PES management concept when making managerial decisions, let us consider the main idea that takes into account the author's view of the interrelationship of processes -the concept of lean production.

One of the first concepts used in solving the above-described tasks is the well-known concept of lean production. Based on this, we will consider a general methodological approach associated with the production nature of interaction, with the organization of management relations between structural divisions, with the development and implementation of projects aimed at identifying and reducing losses with the involvement of personnel in the process of the product life cycle and the development of management decisions.

To understand the general methodological approach essence, we will present an express analysis and prerequisites for the development of the lean manufacturing concept in the aviation industry. As is known from the history of the issue, with the production rational organization until the 1980s end, assembly operations used the mass production principles, known in production management as the G. Ford's principles. These principles have not lost their application today. Some of the principles have been transformed and are used in the lean production system development.

Lean Production concept

The new concept was called «Toyota Production System» (TPS). In 1988 John Krafcik coined the term «Lean Production». The term LEAN («lean manufacturing») appeared in American management. In 1990, J.P.'s famous book was published (Womack & Jones, 1990) *The Machine That Changed the World*. In 1993, the Lean Aerospace Initiative was created at MIT in Cambridge, Massachusetts to address this very issue – LAI. LAI - brought together a consortium of aerospace and defence companies (including Pratt & Whitney) and MIT in partnership with the US Air Force, US Navy and Department of Defence.

Development measures for the enterprise's production system were developed and indicators. These measures have been applied and broadcast further in Boeing Corporation; Lockheed Martin-LM21; Pratt & Whitney and others (Slack, 1999). As a rule, the LEAN concept classifies all activities of an enterprise as follows (Womack & Jones, 1990, Krafcik, 1998, Slack, 1999).



1. Activities that directly create customer value, as a result of which a product (service) is created that the customer is ready to purchase.

2. Actions that do not directly add consumer value, but which cannot be avoided: warming up, setting up and readjusting equipment, maintenance, training and retraining of personnel, process optimization, quality control and assurance, etc.

3. "Net" losses, i.e. actions that are completely unnecessary both from the point of consumer view and from the point of supplier (manufacturer) view. LEAN implementation requires employees and managers to be able to identify losses, understand what actions or states are actually losses, and continuously work to eliminate them.

The essence of the LEAN concept is not to reduce costs, which may lead to a decrease in product quality, but to reduce the losses that do not add value to the customer, which are present in every workplace, from temporary to production. It is known that comprehensive LEAN implementation requires systemic PES development activities. An integral part of these is, in our view, the LEAN concept deployment. Taking this into account, we will present the main conceptual provisions of the full-scale LEAN concept deployment at Plant. A detailed description of the LEAN concept and a number of main stages in the lean manufacturing implementation tools are discussed by the author in the article (Tashkinov, 2022).

The LEAN concept introduction allows you to qualitatively increase the level of production, reducing production cycles and losses. Modern high-performance software equipment makes it possible to make production more flexible and responsive to customer needs and market challenges.

Taking into account the above advantages, the LEAN concept under consideration is being actively developed at aircraft engine building enterprises and has successfully proved itself in project management. However, its methodology has significant limitations related to the reduction of the total order fulfillment time.

Quick Response Manufacturing concept

The identified limitations lead to the need to consider the interrelation of the selected priorities and types strategies of concepts for management development of enterprise PES for management decisions. On this basis, let us consider the quick response-manufacturing concept, which allows an enterprise to choose a PES development strategy due to the criteria laid down in the PES when selecting priority directions. Quick Response Manufacturing concept - QRM belongs to the author (Suri, 2010) has appeared in management relatively recently. The main source of competitive advantage, which includes economic, structural, informational indicators of enterprise functioning in the QRM concept, is time. The concept allows you to look at the traditional organization from the side of time costs, by managing which the rest of the enterprise economic indicators are managed.

So according to the authors the QRM concept can be considered as a strategy or concept of enterprise management, which, in our opinion, does not contradict this meaning (Popov & Ostapenko, 2016). The QRM emphasis, of course, is on identifying and reducing time waste. And, if LEAN is focused on reducing production operations losses, QRM - on reducing non-production operations time losses, although R. Suri «The Competitive Advantage of Quick Response Manufacturing» notes "all" company's operations. He also points out a very important feature that QRM is oriented, first of all, to small and medium-sized companies producing a wide range of products, a variety of orders. In such companies, production processes are unstable, many orders are made only once, demand is unpredictable, staff must learn new products every time, which leads to long lead times and possible disruptions in order fulfillment dates.

In general, looking at the difference between QRM and LEAN, we come to the conclusion that QRM emphasizes the continuous reduction of the duration of the overall production process by improving product quality, increasing the functional reliability of processes and eliminating losses, while the LEAN concept focuses on reducing losses that do not add value.

Agile (flexible) production concept

Still there is a significant limitation, in operational management terms, i.e. the three limiting factors in project management, in the open innovation context with project management and processes digitization. One of these principles is based on three management constraints, also referred to as the "iron triangle", namely cost, scope, and time to complete the project. These factors are synergistically related, which means that a deviation of any one of these factors will negatively affect the other two. At the same time, the concept of active (flexible) production allows to remove this limitation.

Thus, the authors, suggest the use of lean manufacturing principles with integration in project development. According to them, lean software development is a set of principles and tools based on lean



manufacturing that focuses on eliminating waste, delaying management decisions as late as possible, and ensuring product quality as early as possible (Poppendieck, 2003).

Recently, there is more and more empirical research evidence on the successful active (flexible) application Agile approach. One such study, examines critical success factors for an Agile approach, which include appropriate use of Agile methods, a highly skilled project team and the right strategy. While the appropriate management process, organizational structure and consumers are factors that contribute to the project success (Fogelstrom et al., 2010).

Therefore, the authors, (Byrd & Turner, 2000) who hold senior positions in the department of the aviation and supply chain management, say that software development organizations must adapt to frequent changes in their environment, such as customer needs, regulations and technology, in order to maintain their competitive advantage.

Taking into account the analysis of the scientific work, we note that this methodology is still poorly studied and not presented in detail in the project management scientific works in the aircraft engine and engine-building enterprise. In this connection, there is an urgent need to consider conceptual provisions for the development of Agile project management methodology in an aircraft engine and motor manufacturing enterprise.

The software industry is very dynamic and competitive. At the same time, software development organizations need to deliver shorter lead times, higher quality and lower budgets. Agile approaches in software development have emerged to address this situation. Various project planning aspects, in particular the Agile approach, are discussed in the scientific works (Sutherland, 2014, Cohn, 2016, Stelman, 2017 Cagan, 2008, Stelman & Greener, 2014, Crowder & Friess, 2015).

With the above in mind, let's list the key Agile values:

- people and the interaction between them;
- work product (project);
- cooperation and partnership with the customer;
- readiness for change.

Let's take a look at agile project management methodologies for product development.

There are two main approaches to product development. In 1970, Dr Winston W. Royce presented a paper on "Managing the Development of Large Software Systems" in which he shared his thoughts on managing successful software projects based on his experience in aerospace systems development (Royce, 1970). Winston W. Royce presented in the article "A Summary of the Waterfall Paper" a method of dividing the software development process into two phases for small projects, analysis and coding, and seven post-phases for larger projects (Fogelstrom et al., 2010).

The first approach is classical, sometimes called cascade, or in English Waterfall, i.e. waterfall approach. This methodology proposes to create a product sequentially, moving from stage to stage, where a functioning product is ready only at the end, and the transition from one stage to another is possible only when the previous one is completed. It is not possible to go back to any of the stages you have passed.

The key advantages of this approach are the ability to accurately estimate the cost and timing of product development, clarity of technical tasks to be solved in the product creation process, as well as clear reporting on a structured development plan (Cohn, 2016). Agile methodologies combine product development principles and methodologies and are most often used in ICT-enabled business units that are based on the key idea of an iterative process of product development over several non-time-consuming phases, at the end of each of which a version of the product is ready, representing what is known in lean manufacturing as business value.

We will explore what the Agile-approach is and why it is now gaining recognition in project management, as well as look at specific practices, including the equally popular SCRUM and Kanban (Sutherland, 2014).

Before diving tightly into agile methodology development, it is suggested to review existing approaches to product development.

So why do companies resort to Agile in product development? Let's look at the main advantages of this approach. Firstly, the development process becomes transparent to all team members and stakeholders. Everyone understands what is currently happening with the product, what results have been achieved and what is still in the works. Secondly, the Agile approach is about creating value quickly. Agile methodologies allow for faster development of a product in project management that has value for real users, as Agile-approach is about creating value for the real product in a short cycle, which also reduces the risk of developing a product that is unnecessary for the user (Stelman, 2017). Thirdly,



high adaptability to changes and problems in the development process, as it allows reacting and quickly adapting to changes in the external and internal environment due to the absence of a clear regulated technical specification for development and short delivery and development cycle (Stellman & Greener, 2014).

However, the Agile-approach is just a philosophy that inspires you to want to make changes in your company. There are various practices for this.

The main Agile-approach advantages to project management are accelerated time to market, higher customer satisfaction with the developed product, as well as quick response to various changes in the external environment.

It is also necessary to identify the limitations associated with the Agile approach. Thus, according to the above-mentioned authors, the Agile approach cannot be applied to the development and creation of all products with clearly defined quality and characteristics. Here we are talking about public tender procurements where the product has to fulfil clearly defined specifications or in regulated fields such as medicine. In general, when working with public funding, for example, with grants, where strictly regulated accountability for the targeted use of received budget funds is required, flexible methodologies will not find their application either.

The concept of the factory of the future

Next, we will present examples of countries of enterprises of the concept of the factory of the future.

Japan

As part of a cohesive "innovation program" (noting the broader international agenda of Japan compared to Germany and USA, which focus on national economies) the focus of themes emerging from the 4th Science and Technology Plan 2011-2015 and Japan's science and technology (S&T) strategic roadmap and linked manufacturing competitiveness strategy.

China

Themes emerging from China's 12th Five Year Plan (2011-2015), the 'MLP' (Medium- and Long-term National Plan for Science and Technology Development 2006–20), the 'Innovation roadmap 2050, the Chinese Academy of Sciences roadmap for Chinese S & T development beyond MLP and China's policy of 'zizhu chuangxin' (indigenous innovation) include:

Key trends: globalisation, ICT integration, 'intelligent' manufacturing systems and resource efficient production.

Emphasis on development of seven strategic emerging knowledge-based industries: new-generation IT, high-end equipment manufacturing, advanced materials, alternative energy, energy conservation and biotechnology.

Focus on 'advanced manufacturing technologies': advanced materials, 'green' resource-efficient and eco-friendly manufacturing, digital and intelligent design & manufacturing, along with design, production and testing technologies for manufacturing at the micro- and nano-scale, advanced automation/intelligent service robots and service life prediction technologies.

Development of eight socio-economic systems, including: a 'sustainable energy and resources system' and 'new materials and green manufacturing system'.

Twenty-two strategic technology areas, including manufacturing-related topics such as: 'green manufacture of high quality elementary raw materials', synthetic biology and nanotechnology.

Serbia

A common mistake is that small business organizations focus on the technological component of the digital transformation framework. This happens because it is the most widespread trigger for starting such a transformation. While technology is a vital component, overlooking other steps will quickly prevent transformation. Similarly, even if all streams are working towards a common goal, if there is no cooperation, the program will be crippled. If knowledge and insights are not shared, duplication will occur and progress will slow down. The solution to this is to ensure the existence of regular communication meetings at all levels of the organization, for those who lead the transformation, as well as for those who deal with the program on a day-to-day basis. This method of regular communication and team engagement also reflects a different way of working for many organizations. Nevertheless, joint cooperation is one of the desired outcomes of any digital transformation framework (Krahovic, 2021). The sooner this way of working becomes part of the organizational culture of small businesses, the faster they will advance in their transformation. A member of the Association of Young Businessmen of Serbia (AYBS) who has



launched the SDR Hire platform (which deals with the provision of digital services) points out that a distinction should be made between the digital sale of products and the sale of digital products. He goes on to say that a small business owner can move their school supply store online, for example, and introduce online shopping. And this is an example of traditional entrepreneurship being transferred to the digital channel (Association of Young Businessmen of Serbia, 2022).

The solution of such a problem requires further development of a common methodological approach - the concept of the factory of the future and allows to integrate the main elements of QRM, LEAN and Agile concepts into a single methodology. Foreign researchers consider the main general methodological aspects of the concept of the factory of the future (FoF) (Ridgway et al., 2013).

The main reasoning of the authors is that the FoF concept has the ability to create and manage the value chain through the integration of the LEAN and Agile concepts, which together provide a unique value proposition for the user market and considered as the most important.

Results

Taking into account the research we have reviewed; we will list the main arguments in favour of an objective transition of enterprises to the concept.

In general, considering the results obtained when implementing QRM and LEAN and Agile approach, we come to specific conclusions. Firstly, the QRM project, by reducing the production critical path, results in a reduction in the overall production process duration, which improves product quality, increases the functional reliability of processes and eliminates losses. Secondly, when implementing a LEAN project by optimizing processes and reducing losses that do not add value during the product life cycle, we get savings in the form of reduced loss of working time, reduced labour intensity for the product manufacture, material resources. Thirdly, during the Agile-project implementation, we ensure the coordinated work of all structural divisions through the IT solutions implementation in key areas.

Thus, the theoretical and methodological provisions of project management using the concepts of lean, active production at an aircraft engine manufacturing enterprise are considered, and the work on achieving the indicators of the Lean Aerospace initiative is described (Tashkinov, 2023a).

The solution of such a problem requires further development of a common methodological approach - the concept of the factory of the future and allows to integrate the main elements of QRM, LEAN and Agile concepts into a single methodology. Foreign researchers consider the main general methodological aspects of the concept of the factory of the future (FoF) (Ridgway et al., 2013). The main reasoning of the authors is that the Internet of Things concept has the ability to create and manage the value chain through the integration of the LEAN and Agile concepts, which together provide a unique value proposition for the user market and considered as the most important future source of the competitive advantage.

So, according to Future research on the Internet of Things needs to focus on making breakthroughs in the following areas: (1) standard issue, (2) security issue, (3) perception technology, (4) storage scheduling, and (5) complex network behaviour. Big data interoperating technology. Big data interoperating technology is necessary to realize the big data value chain (Zongben et al., 2021).

As a response to the challenges of the global trend of digitalization, the Chamber of Commerce and Industry of Serbia, with the support of GIZ, established the Centre for Digital Transformation (CDT), as an instrument to support the MSME sector in the process of digital transformation. CDT enables to respond in an efficient and transparent way to all challenges of economy digitalization, through education, consulting, as well as creating strategic partnerships with technology promoters, on the one hand, and companies that would apply these solutions in their business, on the other.

Data storage and computing mainly include data storage and the use of new computing tools to complete data processing tasks in the field of science and technology. Data analysis and interpretation can include three sub directions, including big data statistics, big data machine learning, and big data algorithms, which are the main manifestations of statistics and machine learning extensions. Data products and applications can mainly include big data intelligence, data product development technology and tools, and data product testing and packaging.

The European market for analytics and data technologies is growing strongly, fuelled by demand for resiliency, agility, and digital transformation. In this space, analytics is an especially critical enabler of resiliency and innovation.

The forecast also shows that BDA spending will gain strength over the next five years as the European economy recovers from the COVID-19 pandemic. The compound annual growth rate (CAGR) for European BDA spending over the 2021–2025 forecast period will be 11%.

Let us consider some specific forms of technology above and beyond what is discussed in previous



chapters that can help you achieve your very specific business objectives.

Big data has three primary sources (Hoque, 2000):

-Streaming. This includes material that derives from a variety of connected devices, such as the Internet of Things.

-Social media: Social interaction can provide a wellspring of insight and information.

-Public data: This is information from federal, state, and local agencies, the European Open Data Portal, and other publicly accessible repositories.

Examples of the use of big data include governmental analysis of information to maintain varied infrastructures, manufacturers finding ways to increase productivity and minimize waste, and health-care providers' use of big data to offer improved patient care.

Concept of industrial enterprise management in the context of digital transformation

Taking into account the above argumentation and well-founded conclusions, we present the author's vision of the formation of an integration approach to the concept of managing the development of PES of an aircraft engine manufacturing enterprise.

The proposed author's concept of managing the enterprise's PES development more accurately reflects the scientific foundations, general methodological approaches, considering in a complex the essence, purpose, objectives, principles, combining them into a single methodology, which significantly reduces the existing inconsistency and streamlines the relationship of all elements. This concept, based on an integration approach, allows us to systematize the theoretical and methodological provisions for managing the development of the enterprise's PES, as well as improve organizational changes aimed at effective enterprise management.

Taking into account the above, we will give a definition from the point of view of enterprise management in the process of digital transformation.

The digital transformation of an industrial enterprise is a qualitative improvement in production and business processes by introducing modern concepts of enterprise management, as well as adapting existing and customized business models in the modern digital economy, which allows you to change the established thinking, and make its transition to the updated "digital thinking" of personnel and transform the culture of the organization (Tashkinov, 2023b).

Discussion

Locke examined the ideas and techniques of Frederick W. Taylor with respect to their validity and acceptance in contemporary management, supporting Taylor's views as fundamentally correct and generally accepted (Locke, 1982).

The Japanese efficiency in high production happened due to the implemented LEAN principles established at the factories' workplaces. The famous LEAN principles include: 5S system, Kanban, Kaizen, TPN, JIT, SMED, VSM, Poka-yoke, U-shaped cells and visualization. Their choice wasn't spontaneous for the Japanese culture. As stated, Japanese LEAN methods are distinguished by their originality, which is expressed in the Japanese worldview of the production process as a whole (Womack & Jones, 1990, Krafcik, 1998, Slack, 1999).

According to experts consulting on the implementation of the concepts of QRM and Agile, in the world today there are rarely companies that use the principles of only one of them. As a rule, enterprises create a specific mixture of the main elements of these concepts, which constantly changes in structure, and the specific gravity shifts towards QRM and Agile, provided that LEAN retains the role of their "foundation." This means that the efficient operation of QRM and Agile in enterprises is impossible without creating the main elements of the LEAN, FoF, Big data Internet of Things concept.

So, according to Future research on the Internet of Things needs to focus on making breakthroughs in the following areas: (1) standard issue, (2) security issue, (3) perception technology, (4) storage scheduling, and (5) complex network behaviour. Big data interoperating technology. Big data interoperating technology is necessary to realize the big data value chain (Zongben et al., 2021).

The stated conceptual and methodological provisions have not yet been reflected in the management literature and have been explicitly systematized, contain elements of scientific novelty, and include a certain scientific increment as an expanded management toolkit. The developed author's concept based on integration cooperation allows us to systematize the theoretical and methodological principles of enterprise management, as well as improve organizational changes aimed at developing management decisions (Tashkinov, 2023a).



Conclusion

Today, managers when managing an enterprise are faced with new requirements for high agility, flexibility, prompt provision of all structural units with operational information, but quite effective and manageable. This management must contribute to continuous improvement of operational efficiency enterprises. The paper describes the conceptual approaches of the production and economic system at the enterprise. Solving this problem will allow significantly improve the project activities of the enterprise, the innovative orientation of projects and programs for the development of the production and economic system of enterprises.

The work presents general methodological approaches to the methodology of lean and flexible operational production, rapid response production, and digital production. An analysis was carried out and a comparative description of the concepts of managing the development of the production and economic system of an enterprise was presented. Depending on management decision making, the author proposes to take into account the limitations when implementing the considered concepts of lean production and operational production. Developed concept within development.

The implementation of projects in the main areas allows us to ensure the coordinated work of all structural divisions, which allows us to organize the effective activities of the enterprise when making management decisions (Tashkinov, 2023c).

The stated conceptual and methodological provisions have not yet been reflected in the manual literature and were clearly systematized, contain elements of scientific novelty and include a certain scientific increase as an expanded management toolkit.

The author substantiates general methodological approaches and uses management tools for the methodology of lean and flexible operational production, quick response manufacturing. An analysis of the comparative characteristics of management concepts for the development of the production and economic enterprise system is presented. Depending on the adoption of management decisions, the author proposes to take into account the limitations when implementing the considered concepts of lean production and quick response manufacturing.

The developed concept within the framework of the development projects implementation in the main areas allows us to ensure the coordinated work of all structural divisions, which allows us to organize the effective enterprise activities when making management decisions.

This concept, based on an integration approach, allows us to systematize the theoretical and methodological provisions for managing the development of the enterprise's PES, as well as improve organizational changes aimed at effective enterprise management (Tashkinov, 2023a).

With digital transformation, small business employers are stepping back and rethinking everything they do, from internal systems to customer interactions. In doing so, they focus on the issue of changes in their way of doing business that will enable better decision-making, greater efficiency in work, or a better user experience with greater personalization. Digital transformation is a cultural, organizational and operational change of an organization, industry or ecosystem through the smart integration of digital technologies, processes and competencies at all levels and functions - conducted through a guided and strategically planned process (Kremergard, 2021).

The author substantiates general methodological approaches and uses management tools for the methodology of lean and flexible operational production, quick response manufacturing. An analysis of the comparative characteristics of management concepts for the development of the production and economic enterprise system is presented. Depending on the adoption of management decisions, the author proposes to take into account the limitations when implementing the considered concepts of lean production and quick response manufacturing. The developed concept within the framework of the development projects implementation in the main areas allows us to ensure the coordinated work of all structural divisions, which allows us to organize the effective enterprise activities when making management decisions. The stated conceptual and methodological provisions have not yet been reflected in the management literature and have been explicitly systematized, contain elements of scientific novelty, and include a certain scientific increment as an expanded management toolkit. The developed author's concept based on integration cooperation allows us to systematize the theoretical and methodological principles of enterprise management, as well as improve organizational changes aimed at developing management decisions (Tashkinov, 2023a).

The conceptual and methodological provisions outlined above have not yet been reflected in the management literature and have been explicitly systematized, contain elements of scientific novelty, and include a certain scientific increment as an expanded management toolkit.

As a result of digital evolution and transformation, organizations have to deal with digital culture to



achieve sustainable development. Adapting to a digital culture is impossible without digital leaders who are masters of strategic thinking and use the achievements of every wave of digital technology to create new business perspectives that benefit their customers (Tashkinov, 2024).

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