

New Tendencies in Project Management

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Abstract--- *The paper presents the results of research the **objective** of which was to determine the prospects for developing project competencies of organizations and project team members in accordance with new tendencies in project management. The nature of projects is such that the project participants in the course of elaboration and fulfillment thereof should identify and master new knowledge and search for new solutions. It is not always that the acquired knowledge and project competencies take into account the trends of development of this management sphere. This discrepancy determined the research **problem**. The research results **can make up for** the insufficient coverage of the problem in **scientific** literature and focus the supervisors in their **practical** activity on generating project competencies in accordance with the prevailing development vectors. The **methods** and main research tools include content analysis, expert assessments, generalization and classification. **As a result of research there were revealed** novations in global tendencies of project management that will influence the generation of new project competencies, such as: new roles of project managers and development of flexible personal skills, elaboration of hybrid project management methods, digitalization of project communications, artificial and emotional intelligence, and some other.*

Keywords--- *Project Management, Project Manager, Project Activity, Management, Project Team.*

I. INTRODUCTION

Project management, just like any dynamically developing branch, follows many industrial trends, technologies and fashion in some way. There was made an attempt in the paper to consider the most relevant tendencies in project management that have appeared by now with respect to such elements of the project activity as processes, technologies, resources, human capital, communications, and principles of using, combining and selecting specific models and methods of project management.

The objective of the paper is to survey the latest methods, technologies and methodologies used to resolve the applied tasks of project management by the materials of research papers of foreign and Russian scholars in journals, analytical and review articles from open sources, and press-releases of field-specific international conferences, and to form a notion about the development trends in this management sphere for the short-term. It will provide a possibility for project-oriented companies and project managers to timely respond to the dynamic nature of the market and adapt one's strategies and project competencies to real circumstances. Proceeding from the trends that are relevant now one can make forecasts for the near future in the project activity.

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Evaluating the retrospective of tendencies in the area of project management we can see that some of them come and go, or remain and develop with time.

In the modern age, project management is no longer a stagnant platform it used to be. It is a constantly developing business sphere. Despite the fact that using the initial conventional tools and methodologies of project management can help prevent possible failures in future start-ups, the administration of project-oriented companies is always recommended to stay informed about the changing tendencies in project management. The reason for that is that project management is a sphere that integrates a broad range of various areas of activity. Moreover, for a successful and sustainable business one should make sure to adjust the project management strategies in accordance with the prevailing business environment since the success of project activity is one of the factors of competitive ability.

As of today a lot of experts provide forecasts associated with tendencies in project management [1, 2, 3, 5, 6, 7, 11, 12, 15, 16, 25]. Anyway there are discrepancies in the opinions of experts and sometimes rather significant with regard to the number of the most crucial tendencies (the maximum number is 19 [2] of top trends, and the minimum number is top-3 [11] in project management). Sometimes the focus depends on the maturity level and peculiarities of national systems of project activity. Thus, in the Russian practice of project management one of the main trends today is an extensive introduction and professional use of the project approach upon execution of federal, departmental and regional priority projects. In conditions of strict requirements to the value of created results, the role of professional methods of project management grows upon implementation of major infrastructure and industrial projects as well [18]. The crucial objective of the modern Russian economy is its digital transformation. Digitization provides huge opportunities for efficiency improvement for both business and state structures. However, to change the organization requires considerable strain and time, as well as concentration of efforts and managerial talents. Project management is a driver that can immensely enhance efficiency and performance of such changes. The future of project management in China for instance belongs to building relationship between people, permissive managerial style and leadership [5]. At the same time there are common most important tendencies of modern project management for the Russian and foreign theory and practice: using flexible management methods, developing organizational and personal expertise in project management, introducing specialized management technologies in engineering, construction, social projects etc.

II. MATERIALS AND METHODS

The methods of content analysis, expert assessments, generalization and classification were used in the research. In order to reveal the development vectors in project management and make assumptions regarding the future tendencies in development of this management sphere, there were considered the primary novations in the issues of methodology and in areas of applied use of the subject under consideration. The project management trends were reviewed on the basis of reports of the established providers of services for project management in 2016-2019, as well as research publications presented in the references to the paper. The following reports were taken as a basis for analyzing the trends: Pulse of the Profession 2018 (PMI), Pulse of the Profession 2019 (PMI), The Top Ten Project Management Trends for 2017 (Twenty Eighty Strategy Execution) [11, 12, 16]. In the course of the research a great

many of publications on the issues of innovative tendencies in the area being considered based on the expert opinion of scholars from different countries were also analyzed and classified.

In the paper of Ding Ronggui [5] one of the most important tendencies of the modern Chinese project management based on the Tai chi logic is strengthening of the interpersonal component, emotions and human empathy. In accordance with the logic the methods for revealing discrepancies, resolving conflicts and achieving a balance of interests of stakeholders are being established. It is focusing on meeting the requirements of stakeholders that was determined as the most important tendency of project management instead of following the conventional project triangle. In paper [3] there was also emphasized the trend of emotional component in project management. The emotional intelligence is far from being a new concept in the modern world. But it is definitely a progressive and inspiring tendency in the practical activity on project management. In the world where the performance and efficiency are important, the chances to get lost in the diversity of introduced methodologies are high. The better the human resources management in the project and proper managerial communications establishment, the higher the chances for success without mistakes.

When the project team consists of a group of people with different cultural values working together, there will definitely be some problems among the staff. The project manager should necessarily have a proper understanding of different aspects of the emotional intelligence, since the manager enters on the path of an influential factor in the project management tendencies in 2019.

The following examples [3] show the impact of the emotional intelligence on the organizational activity:

1. The Air Force of the USA used the EQ-I questionnaire to select recruiters to their HR department and discovered that the most successful recruiters show much better results in such competencies of emotional intelligence as assertiveness (confidence), empathy and recognition of their emotions. They also discovered in the Air Force that considering the emotional intelligence of candidates when selecting recruiters, they enhanced their ability to predict future successful employees by almost three times. Thanks to it the expenses of the organization were reduced by 3 mln. dollars annually. The governmental finance committee mentioned it in its report for the USA Congress which resulted in the decree of the defense minister to introduce such procedure when recruiting and selecting candidates for all armed forces.

2. L'Oreal sales managers selected on the basis of key competences of emotional intelligence sell much better than the managers hired as per the old recruitment system. On average the L'Oreal sales managers selected on the basis of competences of emotional intelligence sell by \$91.370 more annually thanks to which the net profit of the company grew by \$2.558.360 mln. Also the staff turnover during the first year of work among the employees recruited on the basis of emotional intelligence evaluation was lower by 63%.

In the paper of Dalcher D. [4] attention is given to non-integration of commercial aspects into the basic technology of project management. At the same time full integration is of great importance for the project success. Attention to this critically important area is a key factor of the organizational development and maturity of the Project management discipline. The practice of managing the communication sphere of projects also identifies trends.

Internetization and digitization in the project communication management. To manage the internal project communications, promote products and services of the project, as well as image communication, the companies willing to move with the times strive to test modern digital technologies in order to actively influence their consumer in a new unaccustomed plane and avoid a competitive “stagnancy.” Certainly it seems impossible to precisely predict all forms of the communication activity of a distant future project management. However the main tendencies associated with transformation of means for promoting project products and services in conditions of digital technologies development have been specified by the expert community. A distinction is made between the internal project communications, which imply the interaction of all project team members and its immediate environment, and external project communications ensuring the connection between the project team and external environment [18]. In general form the external communications in a project represent the information exchange between consumers and producers of the project products and services. In a system of external communications a particular role belongs to marketing communications for promoting the project and its products. The value of the marketing communications in theory and practice of project management gradually grows together with understanding the role of communications for settling specific problems of the project and organization both at the Russian and international market.

The primary modern tendency in the area of project communications management is certainly internetization and digitization. One can say that the process of managing the internal and external communications increasingly moves to the Internet. Currently there are several trends in improving the organizational structures of the project team management associated with competencies development, particularly it regards PR managers fulfilling external communications, and introduction of digital technologies — common for all types of projects. The most important of them is platformization and efficient integration enabling to create ecosystems working inside an individual company or a project and uniting partners and clients on the market through different kinds of applications. A highly promising direction for the modern digitization of the process of managing the internal communications is a distant management of the remote project team. The direction implies communicational interaction of individual project team members and project manager. For joint working over projects and discussion thereof, as well as for mutual using and editing of documents the services for task assignment and tracking are used. At that group chats in the known social networks can be used as a corporate communication channel for project discussions. The available services can be used for mutual working with text documents, planning of meetings and video calls. Such tools as Deskun and GoToMeeting have already been developed and are used for task management of remote staff, as well as for joint discussion of projects online. When implementing a project one should follow the way the interaction takes place inside the project team, who is the group leader, what kind of information is transferred efficiently and which one encounters difficulties. As a result of the emerged need, a method of social network analysis appeared [9]. The method is rather convenient for analyzing the impact of information technologies on the efficiency of project communications in conditions of remote management of the project team. Using computers in the communication process allows a more objective consideration of remote project team members who are involved in communications, methods of information analysis and computer networks of the organization. Also an obvious advantage of the method is a possibility of visualizing the communications between the project team members.

There appeared a possibility to collect the data on communications between the project participants and present them in a graphic form which will enable to describe communications characteristics more precisely during the project execution. Despite a well developed tool set and broad opportunities of the method, the social network analysis is used very seldom to study the efficiency of the project communications. Social network analysis also enables to obtain quantitative characteristics of the project communications and compare social networks of the teams with projects efficiency. Using the method allows a more detailed considering of the problems of communications management in the organization.

The methods of arranging cooperation with business partners, target and key audiences are an essential element in the subsystem of managing the external communications of the project and the basis for an advertising and PR activity in its area of expertise. The primary cooperation methods are advertisement and PR.

In the modern world it is not at all easy to create a positive image of a company or a project without introduction of modern technologies. Therefore an unconventional and advanced approach is required not only on the development stage, but also on the project promotion stage. The main directions for using modern digital technologies for online and offline promotion of projects in various spheres of activity are mostly associated with innovations in the means of presenting and arranging of project advertisements. Presently these innovations are presented by different groups of methods and means [17, 20, 21]:

1. AV and VR-technologies, i.e. technologies of augmented and virtual reality showing “live” advertisement that one simply will not see in a common situation. Such advertisement is divided into two directions. The first is an active advertisement: games and moving objects. The second direction is a passive advertisement: signboards and banners. When turning the phone camera viewfinder or smart-glasses to the signboard, the user can see the required information about the products or a project.
2. Relevant predictive advertisement — creates namely such advertisements that a given specific user would want to switch over to. The algorithm studies his/her consumer behavior and having analyzed the information the advertising script starts operating with due account for the variety of his/her preferences.
3. Programmatic buying – the neuronet determines the parameters the target audience of the advertisement complies with and selects users therethrough.
4. Digital-offline advertisement of products and project services using digital technologies in offline-channels (POS-terminals, electronic gadgets).
5. Mobile technologies — special smartphone applications enable not only to follow the events in real time, but also take an active part in them.
6. Promotion websites. A transition takes place from the websites with clear structure to the “cloud” of landing pages each of which serves its purpose and aims at a certain audience of the project.

This list of the digital technologies used in the process of external project communications management is not exhaustive and will definitely be constantly supplemented due to both dynamically developing digital technologies and creativity of using there of.

Artificial intelligence (AI). As of today more and more experts say that the artificial intelligence will be so engrained in the work force that the integration thereof will be considerable by 2021.

Project managers declare that most often projects fail due to disruption of communication, that is why an efficient cooperation of the systems with each other, translation by means of AI and further transmission thereof to the end user is a sound investment.

Andrew Hill adds for the Financial Times the following: “The majority of managers will have to develop special skills, either creative or technical, that cannot be mastered by machines yet.” Those project managers who cannot specialize will encounter difficulties in preserving their work [14].

AI pervasion in daily life is of great importance for both business and consumers. The artificial intelligence provides such a competitive advantage that companies that do not invest in this direction can lose their competitiveness. Some experts suppose that by 2020 over 10% of recruited IT-specialists will be occupied with writing scripts for bots. The artificial intelligence systems can ensure considerable cost saving for business. In the course of moving to paper-free environment an urge to transfer the projects to cloud systems grows. There are many positive moments in it: connection to the project team in real time, “live” instruction, data collection etc. Thus, a contemporary project manager should comprehend a number of cloud platforms of applications and easily handle the opportunities they provide.

Naturally there is no single system so far that would integrate all these functions, but project managers will undoubtedly gain benefits from the artificial intelligence of project management irrespective of the branch.

Remote project teams. 70% of employees worldwide work remotely at least once a week [25]. Remote working becomes more and more widespread, therefore it is rather possible that project supervisors will use it in a larger number of projects in 2019. Project management offices will continue to grow, but probably not all of them will be physical offices; virtual offices are likely to increase. No attachment to the working place whether for a permanent employee or a contractor helps the staff to be more adaptable and combine work with home life the way it is more convenient for them.

It will be useful for the project managers to have access to a broader resource pool without the need to manage departments abroad and go on frequent business trips. The freedom of recruiting globally will require the project managers to maintain high communication standards for resources. The role of the project manager will become more flexible, whereas remote work will be more widely spread.

A team of coordinators is perfect for remote work so far. However, if the team works in different time zones or speaks different languages it can cause problems. Grows a number of tasks for planning and tracking the performance of the project team members required for maintaining the project distributed throughout the whole world. Nevertheless, project managers will be able to make use of greater flexibility with respect to their location, they will have to ensure better structure of the resources management processes. With the help of the software for resources management, remote working will enable project managers to efficiently communicate with the teams worldwide. Motivation will no longer be attached to steady source of income, but will be based on recognition,

sense of belonging and value. Moreover, millennials will make the greater part of the project team at the enterprises worldwide [8].

Hybrid methods [1, 3, 7, 10, 13, 14]. The project management methods have considerably changed over the last years. Companies started to introduce hybrid technologies based on various aspects of Agile and Waterfall technologies. A tendency of hybrid methodology is conditioned by an objective of enhancing flexibility to improve the project efficiency. The key principle of Agile technology — is the development in short iterations (cycles) at the end of each of which the client (consumer) obtains a product.

Waterfall – is a project management method that implies successive transition from one stage to another without omissions and returns to previous stages.

These methodologies help to process projects at a large-scale working basis, but it requires as many managers involved as possible. Upon introduction of flexible project management at a level of an enterprise even hybrid project management will distribute further. In many companies the roles of project management will be replaced by Scrum-masters.

Management of changes. With the commercial sector moving to “flexible” methods and “flexible” work spaces the ability of a project manager to understand and efficiently handle the principles of changes management will become almost mandatory. The competitive world of commercial business now dictates that companies provide “experience,” not just a place for sitting and working. The role of project managers through implementing these solutions consists in rendering assistance to provide such experience, and management of changes is a key set of skills required for that. Especially in IT sector the project managers will spend more time for changes management than usually, taking an active part to ensure the willingness of parties concerned to accept the changes. Management of scales will no longer imply protecting the initial volume elaborated in the business-plan, but will propose innovative solutions by means of a closer cooperation of project and business groups in order to find the path of the least resistance to changes.

Therefore the modern competitive world requires many more managers of hybrid projects who can cope with several methodologies.

Project Management Office (PMO) is a main structural subdivision for project management that is required to determine the project goals, objectives and strategy in advance. PMO is capable of decreasing the gap between the strategic foresight of a company at high level and efficient project implementation. PMO becomes increasingly popular and preserves one of the future tendencies of project management in 2019.

According to a recent research of several cases of project management by means of a highly efficient PMO, 42% of projects managed to achieve their goals. The data indicates that PMO will definitely contribute to positive changes in business for all companies [15, 24, 25].

Cyber security [6, 7]. If protecting a company from the breach of database or security incidents used to be much easier before, presently the companies struggle not to lose the information from the endless security threats,

malicious programs, cyber attacks and insider theft. It also means that protection mechanisms should keep pace with the growing complexity in the area of projects cyber security.

III. RESULTS

The keynote of all the analyzed expert opinions in the sphere of using the project management concepts and practical approaches became the following view on new tendencies in the development of this management sphere: vigorous changes in economy, technological areas, and quality requirements generate a necessity of constant improvement of different methods and tools of project management. In addition, more and more frequently the questions concerns rethinking of seemingly unshakable foundations of project management.

In presented reports and expert opinions we can see similar trends and conclusions:

- Talent management becomes one of the essential directions for project companies. Project-oriented enterprises of both medium and large business will invest even more in improving the expertise of their employees by means of the relevant academic and certification courses to work with dynamic and complex projects;
- Using hybrid technologies will in many ways determine the speed of creating new projects and success of companies. In larger organizations the transition from the management model “waterfall” to flexible project management will be accelerated, since they understand that the only way to gain benefits in an increasingly dynamic and complex environment is to learn quickly and adapt;
- Managing project portfolios and programs with the help of PMO becomes the primary method of fulfilling a strategy of companies;
- The main focus will be on acquiring the project resources and their distributing between different organizations, branches and countries;
- The conventional model of attaching resources including human capital to certain established organizations will be changed: positions will turn into roles, and hired employees to partners; the problems of identifying and attracting competent staff to the project that would meet its requirements will become more acute. Project managers will be more multi-functional, flexible, strategic and will focus more on dependences within the project frameworks. Project supervisors will experience as great pressure as never before from external stakeholders, therefore they should be more creative to think innovatively in order to achieve strategic goals;
- Changes in the field of the project communications management with strengthening of the role of external communications to integrate commercial management to the project activity;
- Strengthening the attention to cyber security in project management;
- Enterprises will be highly projected with integrating the project thinking to all working processes. With the growth of remote teams, soft skills will be even more important. Social responsibility and accountability will gain greater attention at the enterprises throughout the world;
- Efficient communication between cross-geographic flexible teams will play a pivotal role;

- New technologies such as artificial intelligence, automation of robotized processes, computer-aided learning, virtual reality (VR), cloud, blockchain and nanotechnologies will be more popular at enterprises. The future of the project managers will depend on the presence of these key skills since they will be more demanded for management of complex projects in future;
- Internet of things (IoT) will bring important and complex data for working with project supervisors and group leaders. Emotional intelligence will become a part of their daily activity during the whole project life cycle;
- Enhanced competitiveness will require the project manager to provide “something” different, an additional advantage, not only hardskills, but also softskills. It will simply be insufficient for the project manager to say that he/she is an expert in the field, since the client’s access to a broader market of project managers enables to expand the field of “experts.” Project managers in 2019 will have to work on the development of their skills beyond the area of their knowledge and see how they can ensure an individual experience for every client;
- A large number of mega-projects will be sanctioned especially in the oil and gas sector. Scale expansion will be more task-oriented in the sector, and in the whole world a bitter fight and demand growth will take place for competent resources and certified PMI, project management professionals (PMP), program management professionals (PgMP), portfolio management professionals (PfMP), as well as practical specialists;
- The project success will be evaluated in terms of providing advantages, not only in terms of conventional principles of budget limits and timely delivery;
- Digital transformation will be necessary for both small business projects and major organizations that will seek for a totally integrated solution.

The aspects enlisted are the result of research and classification of the primary trends in project management that are relevant now and will still be influential in 2020. The revealed novations can have a great impact in future on the development of this sphere of management and project expertise of the project participants.

IV. DISCUSSION

The present research has a number of constraints that should be taken into account when using the obtained results in practice and in further investigations. First of all, the research is based on the material obtained within the frameworks of analyzing secondary information from open publications which makes it tricky to use the research results for the companies and projects that are different from those under study, and weakens the information base for conclusions. The number of studied publications seems small and the collected material is insufficient to consider the conclusions made statistically significant to the full extent. To clarify the obtained results it is relevant to present data based on the analysis of the initial information obtained by means of surveys [11, 12, 16]. The research of the Pulse of the Profession 2018 is based on feedbacks from 4445 specialists throughout the world that represent different branches, among whom 447 are top managers and 800 are project managers. The developers of the report of the Pulse of the Profession 2018 revealed the following trends in project management:

1. Sponsors involved

The organizations with great involvement of sponsors show 40% more successful projects. Every fourth organization notes that insufficient sponsor support caused failure of projects.

Efficient sponsors use their influence in the organization to overcome difficulties via communicating the project connection with the strategy, overcoming “bottlenecks” and supporting organizational changes. The tendency is observed with a positive dynamics since 2016. In a similar research of 2017 it was revealed that an actively involved sponsor is a key driver of the project. The survey participants informed that 62% of projects in 2018 as compared to 59% of projects in 2016 used the role of a Sponsor of projects.

2. Control of the project content

“Content creep” can happen with any project. As a consequence - failure to meet deadlines, budget overrun, unachieved goals. The companies showing the best results are less subjected to it than those lagging behind (33% against 69%). Feedback from the customer and focus on results can help control the content.

3. Project management maturity

The project management maturity includes the whole range of competences allowing the organizations to successfully execute projects and programs.

The maturity helps to quickly adapt to changing conditions balancing between efficiency and creativity.

4. Application of various approaches and tools in future

Success starts with selecting a proper approach to work. Organizations will proceed using more than one approach and combine different techniques to achieve the result. The mere fact of using a formalized approach improves the results, however the research shows that companies capable of selecting a proper approach show better results.

5. Professionals will expand their skills and learn in a new way.

The surveyed supervisors of project offices identified new roles characteristic of a project manager:

Strategic advisor – plans and implements.

Innovator - acts as a product owner and creator.

Communicator - clear and laconical irrespective of the audience.

Big thinker - flexible, with a developed emotional intelligence.

Many-faceted manager - possesses different approaches.

6. Organizations will rely on the managers capable of not only responding to changes, but also of using them

Over a half of respondents noted that they feel a considerable influence if digital transformation on the activity of their company. New challenges impose expectations from the project managers, including learning ability (25%), communications (22%), leader and managerial skills (18%), management of changes, adaptability and flexibility (12%).

In a previous research of 2017 it is said that three among five organizations provide project management training for their employees, and a little less than half of companies have a formal process for developing competences of a project manager and determining the career path for project supervisors. In the report of Pulse of the Profession 2019 (PMI) a new trend is specified which is defined as an account of a *project management technology quotient* or PMTQ. As a result of a survey in 2019 of 3313 project offices directors and 368 project supervisors it was noted that organizations lost almost 12% of their investments in projects last year due to low performance, and the figure practically did not change for the last five years [22]. As a solution PMI appeals to project specialist throughout the world to evaluate and increase their Project Management Technology Quotient (PMTQ). PMI elaborated the principles of PMTQ basing on the ideas of novator companies that attach primary importance to acquiring digital skills and knowledge combined with commitment to traditional culture of project management. PMTQ adds the level of project management to the notion of technology quotient (TQ), which is determined as an ability of a human to adapt, manage and integrate the achievements in the area of technologies in a project or organization. “In future, project teams will rely more and more on technologies as a required condition in their work or as one more member of their team,” said Murat Bicak, Senior Vice-President on PMI strategy. – “High PMTQ and in-depth knowledge of technologies will be of prime importance for everybody who is assigned to bring the strategy into action” [22].

In the research of Pulse of the Profession 2017 the tendencies were specified that are presently noted by other experts as well:

- More and more companies when determining the success of the project pay attention not only to the facts whether the project was accomplished in time and within the budget, but also whether it brought a real profit for the business. Benefits realization management (BRM) is a great way of coordinating projects, programs and portfolios with general provisions of the company’s strategy. However, presently there is no single and widely accepted BRM process. Despite this fact, more and more organizations make steps to establish procedures of identifying benefits and monitoring the progress in achievement thereof during the whole life cycle of the project and after its completion. Actually, 31% of organizations in a survey inform that they achieved some maturity in the discipline of benefits realization management.
- ***Project management offices (PMO)*** start playing a crucial role for the company. The role often involves responsibility for coordinating the project portfolio with the strategy, monitoring, progress and strategy realization optimization, risk management, benefits realization management, and talent management.
- ***Using Agile when executing projects.*** 71% of organizations informed that they use Agile for some of their projects. Actually, for the last 12 months one of five projects used Agile, whereas another one of five applied hybrid approaches. For example, the Michelin Company applies Agile approach to projects, programs and project portfolio. Project supervisors in the organization as well as the steering Committee and the project sponsor together determine the best approach for each project. The representative of Michelin says: “As a matter of fact the world around us changes very quickly, so we cannot afford any longer the projects that will bring result in two-five years, since the initial requirements will change during this period” [11].

In 2016 the Twenty Eighty Strategy Execution company in order to generate its report The Top Ten Project Management Trends for 2016 arranged a group of experts to identify 10 most important trends. The experts identified the following trends in project management [16]:

1. Growing influence of Agile flexible methodologies of project management

At the time when many still experience difficulties with understanding the principles of Agile, “smart” organizations help their staff adopt the principles of flexible project management and start working in a new way. Future-oriented companies will seek for the balance between classical approaches and Agile. They feel the growing need for Agile and help their staff master the required knowledge and skills.

2. Growing strategic influence of project managers

Project managers require strategic thinking. It is necessary because of the reduced hierarchy levels in the organizational structure of companies. The number of middle-rank managers is reduced, and part of their duties is undertaken by project managers. Now the project manager shall think about the organization as a whole. From project managers they develop into “value creating managers” responsible for the financial results of the organization and value creation.

3. Fundamental role of changes management

Any project creates a reason for company’s change, which means that management of changes becomes a required skill for a project manager. “Smart organizations” understand that it is very difficult to find managers who are already experienced in implementation of changes. Therefore they create conditions for training project managers to implement changes in practice.

4. Growing complexity

Technologies become increasingly complex. Project managers who can state “complex things” in a simple manner will have advantage in career progression.

5. Talent development

Companies focused on prospects actively develop the talents of their project managers. It ensures greater return on investments rather than hiring managers with the required skills from outside.

6. Design thinking

Design thinking allows elaborating solutions using the approaches adopted from engineering practices and developments combining them with the ideas from art, social sciences and business world. For project managers it is first of all a tool for elaborating the project content, defining the requirements and developing solutions for uncommon problems arising during the project. Leading companies help the managers of their projects master the design management approaches and encourage innovations in management.

7. The importance of portfolio and program management

Portfolio and program management, PPM has become a key element of successful implementation of the company’s strategy. Portfolio and program management skills can bring essential advantage to those companies that

encourage the development of such skills as attention to details, comprehension of the business specific character, as well as the ability to see the project picture of the organization from outside.

8. Gender diversification

Experts state that gender diversification at work place contributes to clients' involvement, flexibility and helps develop the companies. According to the recent research of The Economist journal, 83% of respondents assert that gender-diversified companies better cope with the introduction of a diversified client base which enables to cover the market better. While over 50% of all professional work places are occupied by women, according to the latest report of the Wall Street Journal with respect to the large global technological companies, only one in four leading positions is occupied by women. Experts favor the demographic balance in human capital of companies.

9. Global teams and distributed work

The trend for "virtualization" of work teams and groups continues to grow. It sets new objectives for project managers. In the first turn there are difficulties in communication between the employees from different countries in view of the language, cultural and even time barriers. The manager has to arrange the group work taking into account that work in different parts of the globe proceeds in mode "24/7" and consider cultural features. The managers possessing these skills will be demanded in the near future.

10. Disseminating the project approach in non-project areas

Not only project managers have to master the project approach. Project management can be useful for heads of functional subdivisions - sales, marketing and logistics departments. Organizations striving for success will have to invest in training their staff to basic principles of project management and thinking irrespective of position.

A certain constraint of the performed analysis is that the research considered only the novations that were repeated in the analyzed materials more than once. At that there were selected the most important and sustainable tendencies by the criteria stated by the scholars. Informal and written opinions of experts regarding the importance of the role of these or that novations in the development of project management and their impact on the project success should also be studied.

V. CONCLUSION

The present research allows making considerable conclusions that presently the project management evolution develops quickly, finds its reflection almost in all aspects of business sphere, and that there is connection between the project management development tendencies and project competencies development for projects success. The key business parameter is a forecast of the future condition of the environment. In order to ensure the business success the whole project management team should know and most importantly adopt all tendencies and strategies in this management sphere. Comprehension and acknowledgement of the above mentioned latest tendencies in the area of project management will undoubtedly help the organization and heads improve the project competencies to comply with both new and existing business strategies.

In the course of studying the modern tendencies in project management the following promising directions in the development of this sphere were identified:

- Strengthening and changing the role of managers in the common strategy of team work;
- Enhanced use of artificial intelligence;
 - Management of changes;
 - Talent management;
- Integration of commercial aspects into the basic technology of project management;
 - Emotional intelligence as a new type of creative approach;
 - Growth of the number of project offices and remote project management;
 - Integration of project thinking into “non-project” areas;
 - Advantages realization management;
 - Encouragement of an active sponsor involvement into implementation of the project concept;
 - Development of a hybrid methodology use in project management;
 - Development and unification of tooling in the area of project management, including cloud means and services of intellectual data analysis, as well as new intellectual products of user level.

The results of the present research confirm the opinions expressed by many scholars about the importance of revealed tendencies and formed on the basis thereof requirements to competencies of participants for improvement of project efficiency. However, for more sound statements one should make connections between the revealed trends and competencies on a broader statistical material, which requires similar research covering more experts and projects. It seems rather interesting to conduct further theoretical and practical studies in the specified directions, as well as to study not only formal, but also informal views of experts. Taking into account the dynamic nature of tendencies in the sphere of project management, further researches should pay attention to the dynamic change of project competencies as well.

In general, using the approaches and tools for analyzing new tendencies seems to be a very fruitful direction in studying the problems and phenomena of project management.

REFERENCES

- [1] 12 PM trends for 2018. “Project manager” *journal*. Available at: www.projectmanager.com
- [2] 19 Project Management Trends for 2019 by PM Experts. Available at: www.invensislearning.com
- [3] Amarendra Babu L (2019) Project Management trends to watch in 2019. *Project Times*, January²³
- [4] Dalcher D. (2017). Commercial management and projects, a long overdue match? – *PM Word Jurnal*, Vol V1, IssueX, October
- [5] Ding Ronggui. PM competence is Key Growth Driver of Developing Countries. <https://www.pmreview.com.cn>
- [6] Inkeri Parman (2019) 8 Emerging Trends in Project Management for 2019, March 19th
- [7] Katharina Gerberding (2018) 5 Benefits of Project Management for Cybersecurity. *Hitachi Systems Security Inc.*, October 16th
- [8] Mark Dixon. The Workspace Revolution: Reaching The Tipping Point// <http://images.contact.regus.com/>
- [9] Mead, S.P., Using social network analysis to visualize project teams, *Project Management Journal*, 2001 December. pp. 137-155.
- [10] Michael Guta (2018) What is Kanban and How Can it Benefit Your Business? *In Management*, October 9th
- [11] PMI Pulse of the profession 2017. Available at: <https://www.pmi.org>
- [12] PMI Pulse of the profession 2018. Available at: <https://www.pmi.org>
- [13] *PRINCE2 – strukturivannyy podkhod k upravleniyu proektami*. // *Proekt FinSWin* [Structured approach to project management, FinSWin project]. Available at: <https://finswin.com/projects/metody/prince2.html>

- [14] Rachel Burger (2017) I, Project Manager: The Rise of Artificial Intelligence in the Workplace. *Project Management*, June 12th
- [15] Rachel Burger (2017) The 5 Biggest Project Management Trends Shaping 2018. *Project Management*, November 14th
- [16] The Top Ten Project Management Trends for 2016. Available at: http://www.esi-intl.co.uk/resource_centre/white_papers/top-project-management-trends-2016
- [17] Didzhtl-reklama [Digital advertisement]. Available at: <http://www.sostav.ru/columns/trandinmarketing/2012/digitalreklama>
- [18] Kogotkova I.Z., Guseva M.N. Project communications management in conditions of digital technologies development. *Materialy XXIII-y Mezhdunarodnoy nauchno-prakticheskoy konferentsii «Aktualnye problemy upravleniya-2018»* [Proc. of XXIII-th International Scientific and Practical Conference “Pressing management problems – 2018”]. Moscow, GUU Publ., 2018
- [19] *Metodologiya modelirovaniya sobyiy. Proekt FinSWin*. [Methodology of events simulation. FinSWin Project]. Available at: <https://finswin.com/projects/metody/event-chain-methodology.html>
- [20] *Novye tekhnologii v reklame*. [New technologies in advertisement]. Available at: <https://qwizz.ru>
- [21] *Obzor interaktivnykh reklamnykh nositeley* [Review of interactive advertising media]. Available at: <http://www.advertiser-school.ru/advertising-theory/interactive-ads-review.html>
- [22] *Rabota budushchego: idti vpered i vmeste s PMTQ* [The Future of Work: Leading the Way WithPMTQ]. Available at: www.PMI.org/Pulse.
- [23] Soroko G.Ya., LyalinA.M., Khalimon E.A. *Modelirovanie protsessov upravleniya: uchebnoe posobie*. [Management processes simulation: textbook]. Moscow, GUU Publ., 2018
- [24] *Talanty vykhodyat na peredniy plan: kakie eshche trendy v upravlenii proektami zametili eksperty* [Talents move to the forefront: what other trends did experts notice in project management]. Available at: <https://probusiness.io/management/>
- [25] *Trendy v upravlenii proektami v 2019 godu* [Trends of project management in 2019]. Available at: <https://merehead.com/ru/blog/project-management-trends-2019/>