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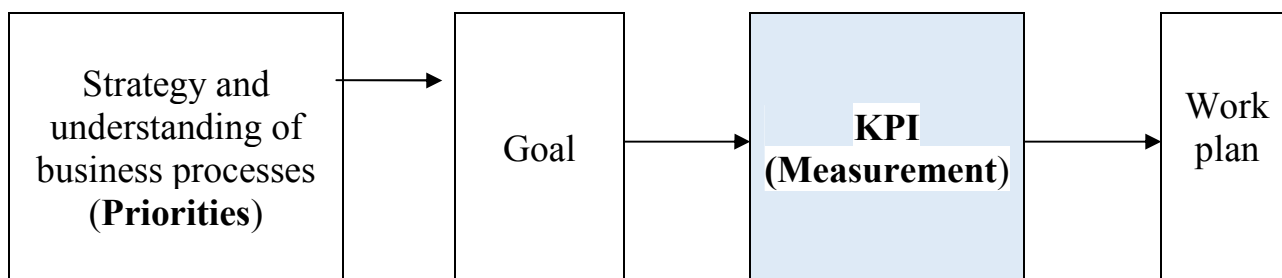
## **SPECIAL FEATURES OF CONSTRUCTION OF KEY PERFORMANCE INDICATORS (KPIs)**

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Recently, KPIs have become more popular in estimating the performance of enterprise personnel. What can explain this surge in popularity? The prime reason is the importance to motivate employees. On the one hand, managers may not approve when their subordinates merely perform their duties. On the other hand, employees themselves should be interested in making sure the company achieves best results. The KPIs or Key Performance Indicators are aimed at quantifying the contribution of each employee to the achieved final result of the enterprise.

A properly established system of motivation in the organization is the key to balancing the interests of employees and the management. Regarding key performance indicators it is important to set their place in the business process of each enterprise – from priorities to specific actions (Figure).



**Figure. The place of key performance indicators in business processes**  
Source: [1, p. 6]

There is a number of requirements for KPIs. They are not just some selected indicators to calculate the corresponding values in the result. On the one hand, key performance indicators should be aimed at increasing employee motivation. On the other hand, they must be connected to the main goal of a business.

While the KPI system has only recently been used in Ukraine, some countries, such as Korea, Singapore, the United States, Japan, Germany, Hong Kong and Malaysia, have adopted key performance indicators at the national level. KPI models are based on various management concepts:

- Management by Objectives (Peter Drucker, 1954);
- Total Performance Scorecard (Hubert Rampersad, 2003);
- Organizational Balanced Scorecard;
- Total Quality Management (70s of 20th century), etc. [1, p. 7].

The most well-known and widespread system is the Balanced Scorecard, covered in the books of Robert Kaplan and David Norton.

In Ukraine, KPIs are not yet as widely used as abroad. For example, in agricultural enterprises, their practical application causes difficulties for managers. The reason is the insufficient level of professional training of managers, the lack of a well-established system of adaptation of foreign methods of building KPIs at the level of national companies, the resistance of some staff to possible organizational changes. However, the experience of some Ukrainian companies shows that with the introduction of key performance indicators it is possible to achieve an increase in staff efficiency by an average of 20–30% [2].

Developing KPIs is a very responsible task. After all, these are not just indicators to measure. The planned values must be achievable. The goal that is faced by an employee must be clear and realistic.

The scope of a company and the responsibilities of an employee are important. For instance, the KPIs of an accountant and a seller cannot be the same. The work of the teacher and the manager cannot be evaluated by the same key performance indicators, because the essence of their work is different. Employees need to know what their efforts should be focused on when they want to have their compensation raised.

Thus, in the sales department the KPIs can be: fulfillment of the sales plan for various product groups, sales growth in comparison with the previous period, sales volume, fulfillment of the plan for the service of sales outlets, etc.

Regarding institutions of higher education, there is no clear approach to evaluating the effectiveness of their staff. All indicators are related, first of all, to the scientific activity of the teaching staff. Then, the educational work is evaluated. There is no generally accepted methodology for developing KPIs in this area. Educational institutions offer different methods and classifications. After all, when developing a system of indicators, it is important to create conditions for motivating the teaching staff. It is interesting to note that higher education institutions that are competitive in the global education system and occupy high positions in the world rankings have their own staff incentive systems, which are based on key performance indicators [3].

It should be noted that the evaluation of work using such indicators has many enemies. However, KPIs are gaining more and more believers. With proper

development and implementation, their transparency and the ability to achieve higher results are very attractive.

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## IMPLEMENTATION OF STEM EDUCATION ELEMENTS IN TRAINING OF FUTURE STATISTICIANS IN THE CONDITIONS OF INFORMATIONAL AND EDUCATIONAL ENVIRONMENT

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Future statisticians acquire both technical and engineering skills and it is very important to provide modern teaching methods, a set of tools for their implementation is presented in the context of information and educational environment. Therefore, in the training of such professionals, it is important to develop an engineering mindset that can be ensured by the introduction of STEM technologies in an information and educational environment. Such kind of environment combines a wide variety of educational software and networking technologies, including e-mail, forums, sharing software, chats, video conferencing, audio and video recording, and a wide range of web-based learning tools [1].

STEM education involves sequential course or program of training that prepares job seekers for successful employment, requiring different and more technically sophisticated skills, including applying mathematical knowledge and scientific concepts [2]. The STEM acronym is used to refer to a popular line in education that encompasses science, technology, and mathematics. This is an area of education in which the curriculum enhances the natural sciences component and