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APPROBATION OF THE ENGINEERING SYSTEM PROCEDURE

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Abstract

The relevance of this project is to identify deviations found during the examination of scenarios for the development of the BPO enterprise. As a result of their identification, business information is accumulated, on the basis of which situations of exit from the mode of sustainable functioning are studied. Processing information allows you to avoid potential losses in the future, which reduces the time when enterprise is in an unstable state. This is achieved through the sequential collection of data on more than six hundred parameters.

Key words: *standards, rreproducibility, readiness, change, needs, study, growth.*

1. Introduction

In the course of their processing, eight-fold compression of business used as part of a unified diagnostic system takes place. Such a system is tuned to an assessment based on well-defined standards, such as: the reproducibility of a sustainable process, the average proportion of critical attributes, the length of the route for passing a distance in the zone of sustainable operation. Based on the system of standards, reasonable conclusions about the state of the organization are formed. Thus, it is possible not only to respond to external influences in a timely manner, but also to determine the user's readiness degree. This level is especially important in an environment where the demands for performance improvement outpace the introduction of new process improvement proposals. As a result, traditional service-oriented change acceptance approaches conflict with the needs of the organization, thereby reducing the performance of the organization as a whole. Moreover, typical evaluation tools lead to the selection of proposals that destroy the effectiveness of the organization. Because of this, the content of the problem is defined, expressed in the statement: "It is impossible to ensure an effective improvement of the process

in the absence of objective mechanisms for selecting the proposed improvements".

2. Requirements for the organization

The research shows that the object of testing the system is the Engineering System Procedure (ESP), the support of which is carried out at the level of the established ranges of key indicators [1, 2]. The support subject is focused on the timely improvement of the ESP [3]. At the same time, the ongoing changes are carried out as part of the developed procedure. The purpose of the validation procedure is to develop a standard to ensure that reasonable system improvement specifications are met at the level of determining the state of each element in a well-defined measurement sequence of fourteen nodes. In accordance with the goal, four tasks are solved. The first task is related to identifying the features of the application of the enterprise standard in the field of supporting unique assessment tools. The second task required a description of the activities of the selected BPO enterprise [4]. As part of the solution of the third task, a full-scale assessment of the activity of the investigated enterprise was carried out [5]. The final task is related to determining the effectiveness of the use of ESP in the enterprise under study.

3. Results

The results obtained show that the two-level selection system made it possible not only to compress the initial number of parameters to seventy (we are talking about a compression ratio: 9 to 1), but also to identify the key reasons that hinder the increase in value. Their neutralization contributes to the growth of the organization as part of development scenarios. Moreover, improvement requests are prepared on the basis of ESP, and not using a typical, low-performing, three-factor cost sensitivity model. As a result, the compatibility of reproducibility indicators represented by dimensionless values and cost indicators has been achieved. The use of algorithms of the third level of selection provides control over the compliance with established norms and consumed measures. In the event of deviations, elements that interfere with the achievement of performance are identified and solutions are developed for recovery. Thus, the experience of overcoming anomalous situations is accumulated, which contributes to the improvement of self-learning programs. If necessary, justifications are prepared for the "launch" of a new project, set to revise the ranges of norms and measures.

References

1. Kossiakoff, A., Swee, N., Seymor, S., Bier S. (2011) Systems Engineering Principles and Practice. John Willey & Sons, Inc.
2. de Weck, O. L., Roos, D., & Magee, C. L. (2011) Engineering Systems: Meeting Human Needs in a Complex Technological World, MIT Press.
3. de Weck, O. L. (2022) Technology Roadmapping and Development A Quantitative Approach to the Management of Technology., Springer Nature Switzerland AG 2022.
4. Fred David R, 2015 Strategic Management Concepts and Cases A Competitive Advantage Approach : 15th Edition, by Fred R. David and Forest R. David, published by Pearson Education.
5. Copeland T, Dolgoff, A, 2006 – Expectations-Based Management. *Journal of Applied Corporate Finance*. Vol. 18, No. 2. Pp. 82–97.