

DOI <https://doi.org/10.30525/978-9934-26-597-6-93>

THE ADVANCED SIDE OF ROI TECHNOLOGY: A SYSTEMS THEORY-STYLE DESCRIPTION

Yusuf Karahan

Latvia, ISMA

e-pass: ysf.krhn.20@gmail.com

Abstract

This study is devoted to increasing the significance of the method used as an assessment of the return on investment. This is achieved by developing corrective actions. As such, the means of eliminating defects detected by the computational procedure are used. Their development is carried out in such a way that, using the theory of systems, to organize the process of effective implementation of the task for development. First of all, attention is paid to compliance with deadlines and the approved estimate.

Keywords: replication, losses, uniqueness, theory, system, organization, growth

1 Approach

The idea of this study arose from the need to align evaluation standards with measurement measures. In the process of developing complex systems, increased attention is paid to the quality of software. At the same time, organizational aspects are relegated to the background. The software development process is a design based on the "Black Box". Traditionally, the development process is performed step by step and in the following order:

Step No 1. Detailing the "Black Box".

Step No 2. Initialization of input data.

Step No 3. Developing the output document.

This approach has proven its effectiveness with an established procedure, within the framework of which modifications are made to the next version of the software product. However, with the spontaneous nature of changes, the shortcomings of the traditional development process are revealed:

- 1) All functions are implemented by the software developer.
- 2) The depth of research is low.
- 3) User dissatisfaction.
- 4) Frequent changes.
- 5) High cost.

In addition, when using traditional assessment tools, the sequence of software development phases is violated:

- 1) The condition of the output document is known.
- 2) The values of the array of initial data are specified.
- 3) The design algorithm must be adjusted to the "known input and output".

Using systems theory allows you to resolve the identified shortcomings, organize software development activities at a high level [1, 2]. This is achieved by imposing system theory on the technology of designing software products. As an assessment tool, the approach to measuring efficiency based on ROI technology was chosen. At the same time, as part of the methodology, it is necessary to develop an algorithm for calculating efficiency in relation to the conditions of private changes.

At the same time, it is necessary to conduct an analysis from the position of the technology client, who is able to formulate the requirements for software development. This makes it possible to identify a contradiction in which the control tools used in the current state assessment method provide inconsistent actions, since they are focused on assessing a complex indicator. When using the ROI methodology, it is necessary to coordinate the interests from the position of all participants: managers, investors, clients [3]. Thus, the content of the problem was revealed: "It is impossible to make objective conclusions about the financial condition of the enterprise without knowing the weak points of the computational procedure." Taking this into account, the object of the study is the requirements imposed on the system of related ranges of all indicators used in the calculations. The vector of the study is aimed at the subject, which is an algorithm for detailing the key indicator in the system of parameters used to measure the position of individual participants involved in the organization at various stages of activity. From the point of view of such a statement, the purpose of the study was formulated. Its content is reduced to the development of a procedure that ensures the diagnosis of the state of the organization in the context of the effectiveness of the investments made.

2 Methodology

This study is devoted to increasing the significance of the used method for assessing the return on investment. This is achieved through the development of corrective actions. As such, the means of eliminating defects detected by the computational procedure are used.

Task No 1. To organize the computational process, it is necessary to develop a system of related ranges of all indicators used in the calculations

Task No 2. Measuring the effectiveness of investment, control and distribution of financial resources is carried out at various stages of its organization.. The control tools used in the state assessment method should

not have inconsistent actions. When analyzing the ROI of the technology, a conflict of interests observed between the services of one enterprise was revealed. The fact is that the Turnover Rate indicator is measured by specialists of the marketing department, and the Capital Turnover Rate indicator affects the activities of the finance department.

Task No 3. When using the methodology, key links in the organization that negatively interfere with the growth of its enterprise potential are recognized. The novelty of the approach is associated with the recognition of key links in the organization that negatively interfere with the growth of its enterprise potential. Organizational imbalances are identified during recognition. Their knowledge allows modifying the means of measuring efficiency

Task No 4. Measure the efficiency of the organization's activities in the long term. The measuring tool is a procedure that provides diagnostics of the organization's state in terms of the efficiency of investments for five years. In addition, during the imposition of new functions, the property of emergence is proven. The efficiency of the activity is confirmed taking into account the instructions, which together represent the approved form of the output document.

The developed procedure allows for a diagnostic assessment of investments through systematic analysis. The solution to the set tasks ensures that at stages of varying durations, an assessment of the current state is carried out taking into account the consideration of interests analyzed by means of operational, strategic response, including determining the position in the long term.

3 Conclusions

In the applied plan, based on the ROI methodology, a serious contradiction is removed, which usually occurs when using traditional methods. This discrepancy arises from my unfounded proposals coming from dissatisfied users.. The methodology used allows you to align the expectations of stakeholders.

In the context of novelty, the approach used allows you to solve the identified problem, solved by eliminating the organization's weaknesses during a full assessment of the financial condition of the organization.

The study found that the use of a structured ROI methodology provides more reliable calculations of efficiency and contributes to making clear and reasonable investment decisions. This approach combines system theory with system analysis, providing a unique ROI methodology tool for aligning various stakeholders and improving financial diagnostics.

References

- [1] Kossiakoff, A., Swee, N., Seymor, S., Bier S. (2011) *Systems Engineering Principles and Practice*. John Wiley & Sons, Inc.
- [2] de Weck, O.L. (2022) *Technology Roadmapping and Development A Quantitative Approach to the Management of Technology*, Springer Nature Switzerland AG 2022
- [3] Phillips, M. (2015). The DuPont invention that changed how things work in the corporate world, Quartz (publication).