

Чжан Даяна Чжэньевна

студентка

Фомичева Татьяна Леонидовна

канд. экон. наук, доцент

ФГОБУ ВО «Финансовый университет
при Правительстве Российской Федерации»

г. Москва

ИНФОРМАЦИОННЫЕ ТЕХНОЛОГИИ В ТЕЛЕКОММУНИКАЦИОННЫХ СИСТЕМАХ

Аннотация: в статье определены требования к оценке эффективности этапов ИТ-стратегии телекоммуникационных компаний. Обозначено логическое обоснование оценки каждого из этапов, а также предложены критерии оценивания.

Ключевые слова: ИТ-инфраструктура, ИТ-стратегия, оценка эффективности, телекоммуникационные системы, системы контроля, телекоммуникации.

Abstract: the article defines the requirements for evaluating the effectiveness of IT strategy stages of telecommunications industry organizations. The rationale of evaluating each individual stage is described and criteria for evaluation are proposed.

Keywords: IT infrastructure, IT strategy, performance evaluation, telecommunication systems, control systems, telecommunications

As of today, the use of the state-of-the-art IT solutions by organizations in order to solve a wide range of problems is considered a common practice. In most cases, IT is used to solve such problems as building a telecommunication system to improve the interaction efficiency among business units within the organization, automating production process, providing a convenient environment for customer interaction, etc. [1]. The necessity for this is that principal income is at large brought by customer services and facilities.

For these purposes, one of the most important tasks is to choose a strategy using which internal and external development of information technologies will be carried out.

A success of the strategy used is in the best interests of any executive. For decision-making purposes in choosing a development strategy, an executive has to have it clear what quality changes it leads to, in other words, it is necessary to make an assessment.

An assessment of effectiveness is carried out using various techniques, for example: UNIDO, BSC, VBM, etc. [2; 3]. Worth noting that most of the methodologies are based on evaluating economic indicators, which show how efficient the investments into the project are. The disadvantage of this approach is that the result of the strategy implementation is evaluated.

Considering that it's the IT strategy that should be analyzed then this poses a question – how internal positive effects can be evaluated, for example, the impact of the introduction of new technologies on staff performance.

Typically, IT strategies development has a variable quantity of practicable methods to achieve a final goal. When choosing the way, an executive should take into account not only the goal that is being achieved but also the possibility of creating new tools, services, and facilities in the long term. If an executive has a certain IT strategy realization roadmap (Figure 1) he will be able to make changes and deliver possible consequences of these changes quickly and efficiently.

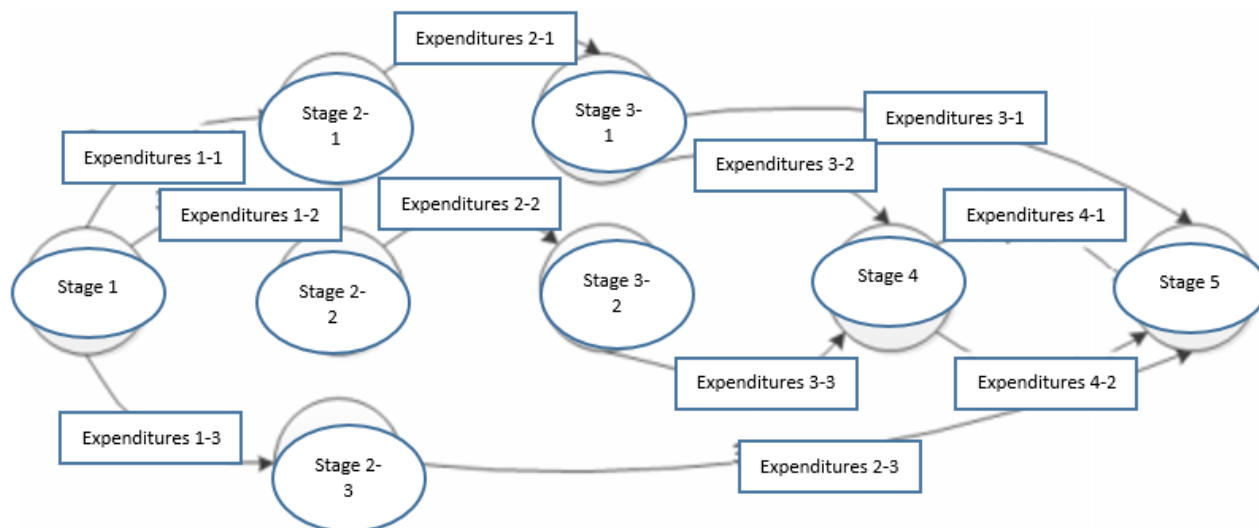


Fig. 1. An example of a roadmap for implementing an IT strategy
for telecommunications industry organization

Such an approach is relevant in view of specifics of telecommunication systems. This specific nature is determined by a rapid growth and development and strong impact of innovation. Acquiring an expensive, advanced hardware, you will always be at risk that in a year there will be a new product launched having greater performance and lower price.

A roadmap should reflect the list of IT strategy implementation stages with all possible alternatives. Each stage should contain:

- a detailed description of the actions to be taken,
- necessary expenditures (material and labor),
- an expectation effect (for example, the number of new services and facilities that can be organized, the number of processes that will be automated, reduction / increase in jobs, etc.)
- possible options for using the result of the stage in the future (the possibility of application for creating new services and facilities),
- a projected level of relevance (if the results will be in demand in the future and how soon upgrading, partial or full replacement will be required),
- positive or negative impact on the work of the staff (if the working process became easier, if the productivity improved, how request execution speed was changed).

As a result, the effectiveness of the IT strategy stage can be represented as a function:

$$EF = f(x_1, x_2, \dots, x_n) \quad (1)$$

where EF is the effectiveness of the strategy stage; (x_1, x_2, \dots, x_n) is the assessment value of each of the n parameters that describe the selected stage.

Such a description will make it possible to model the options for IT strategy implementation in a more informative way, considering the introduction of changes, amendments and the influence of external and internal factors.

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