- •Своевременная работа с бракованными изделиями и включение их в повторное производство
 - •Уменьшение времени простоя оборудования

Данные улучшения, а также схема карты целевого потока создания ценности отвечают краткосрочным целям компании.

В заключении можно сделать вывод о том, что картирование потока является универсальным инструментом по оптимизации производства на всех этапах жизненного цикла предприятия, а также при любом состоянии производственной линии.

RISK MANAGEMENT IN THE QUALITY MANAGEMENT SYSTEM

Bureeva M.S.

Tomsk polytechnic university, Tomsk

Scientific supervisor: Redko L.A., associate professor, Department of Physical Methods of Non-Destructive Testing, TPU

Language supervisor: Soboleva A.V., senior teacher, Department of Foreign languages of the Institute of Non-Destructive Testing, TPU

International experience shows that sustainable business development and the management efficiency improvement are almost impossible without the use of risk management tools. Risk management aims to ensure a balance between making a profit and a decrease in business losses. The risk management system is considered to be an integral part of the organization management as it should be integrated into the general policy of the organization, its plans and business activities [1].

Generally risk is described as the possibility of some adverse events occurrence. In IEC 51897 [2] the term *risk* is defined as a combination of the probability of an event and its consequences. It is well known that the activities of any company are associated with numerous risks.

The essence of risk management is to optimize the various risks and maximize the benefits of the current situation through streamlined operations of risk managers [3], so that senior managers should seek recognition of the need for risk management by all members of the company as one of the key factors in improving performance and sustainable development of the enterprise.

The main features of risk management are the following [1]:

- 1. Risk management serves to identify potential deviations from the planned objectives and the management of these disorders to improve outcomes and reduce losses.
- 2. Risk management involves a detailed analysis of the conditions for making management decisions. This is a complex logical and systematic process used to plan long-term improvement of entrepreneurial activity.
- 3. Risk management requires advanced thinking and a clear division of responsibilities and authority for decision-making.
- 4. Risk management depends on the efficient cooperation between the risk management participants.

According to experts, at the end of the last century, risk management, even in the most successful companies all over the world was seen as fragmented, ad-hoc approach. The main characteristics of the approaches to risk management are shown in Table 1.

Table 1: Main aspects of the traditional and the innovative approach to risk management

The traditional approach	The innovative approach
Fragmented risk management	Integrated risk management
Each unit operates the risk	The company's management
independently	coordinates risk management, each
	employee considers risk management
	as a component of his work
Episodic risk management	Permanent risk management
Risk management is limited to	Risk management is advanced
reviewing the financial and insurance	as it reviews all the possible risks of
risks	the organization

The implementation of risk management processes in the quality management system of the organization is aimed at their classification, identification, analysis, evaluation and the development of ways to prevent the risk.

The general scheme of risk management processes implementation in the quality management system (QMS) consists of the following steps [4]:

- 1. The initial stage of the risk management process in the organization is analysis. The main purpose of this analysis is to obtain the necessary information about the structure, object properties and existing risks.
- 2. Evaluation of comparative efficiency of impact on the risk, ways to reduce it by selecting the best of them in order to reduce potential damage in the future.
- 3. Decision making, development of a common strategy for managing the total of risks in the quality management system, the definition of the necessary management and labor.
 - 4. Direct impact on risk (risk reduction, risk preservation, risk transfer).
- 5. Monitoring and correction progress in the implementation of the chosen strategy (derived on the basis of new information from the managers).

Risk-management is the overall and continuing process of minimizing risks to product quality throughout its life-cycle in order to optimize its benefit/risk balance.

It can be applied both proactively and retrospectively. Risk-management should ensure the evaluation of risk to quality based on scientific knowledge and experience [5].

Four primary principles of risk-management in QMS are:

- the evaluation of the risk to quality should be based on scientific knowledge;
- risk-management should be dynamic, iterative and responsive to change;
- the level of effort, formality and documentation of the management process should be commensurate with the level of risk;

• the capability for continual improvement and enhancement should be embedded in the process [6].

Implementation of the risk management process in the organization's QMS will help find a balance between the actions to maximize profits and actions aimed at ensuring the safety of the organization. Profit, quality and safety are the three factors that must be a concern of any competent leader of the organization in the XXI century.

References

- 1. Martsynkovsky D.A., Vladimirtsev A.V., Martsynkovsky O.A. Guidelines on Risk Management // Certification Association "Russian Register". St. Petersburg: Beresta, 2007.
 - 2.GOST R 51897-2011 Risk Management. Terms and definitions.
- 3.Svitkin M. Formation of the company's risk management system "Methods of Quality Management", № 2, 2010.
- 4.Kalita T. Risk management in the construction processes of the QMS. [Electronic resource]. Mode of access: http://www.cfin.ru/finanalysis/risk/process.shtml.
- 5.Quality Risk Management Principles and Industry case Studies; T. Frank et al (Dec 2008); sponsored by the Pharmaceutical Quality Research Institute Manufacturing Technology Committee (PQRI-MTC).
- 6.Ries H. Risk Assessment and the Quality Management System. [Electronic resource]. Mode of access: http://www.qualitydigest.com/inside/quality-insider-article/risk-assessment-and-quality-management-system.html

АНАЛИЗ СОВРЕМЕННЫХ ПОДХОДОВ К ПОСТРОЕНИЮ СИСТЕМ УПРАВЛЕНИЯ В ОРГАНИЗАЦИИ

Буреева М.С.

Томский политехнический университет, г. Томск Научный руководитель: Редько Л.А., к.т.н., доцент кафедры физических методов и приборов контроля качества

Построение эффективной системы управления в организации, вне зависимости от масштаба и сферы ее деятельности, всегда было одной из главных целей для менеджеров многих стран. С появлением различных инструментов и методов организации управления, этот вопрос стал особенно актуальным. Последнее десятилетие в России (и начиная со второй половины XX века в Японии, Америке и Европе) у менеджеров различных уровней управления, да и у многих «простых обывателей» на слуху популярные концепции управления, среди которых: 6 сигм, бережливое производство (БП), теория ограничений, 20 ключей, управление рисками, система менеджмента качества (СМК). Каждая из концепций подробно объясняет и расчерчивает путь к успеху любой организации, предлагая свои способы и инструменты,