

55th EOQ Congress
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"Navigating Global Quality in a New Era"



June 21, 2011 (Tuesday) 55th EOQ Congress

CONCURRENT SESSIONS
KEMPINSKI HOTEL CORVINUS

Tuesday 13:30 – 17:30
Erzsébet tér 7-8, Budapest V.

REGINA BALLROOM I.

10.1. INNOVATION AND QUALITY I.

Session Chair: *Robert E. Cole, Doshisha Business School, Japan and University of California, Berkeley, USA*

14.10 Economics for Quality as the Scientific Basis of Managing the Quality and Innovation

Vladimir V. Okrepilov, Member of RAS, Test-St. Petersburg, Russia

Okrepilov, Vladimir V. (Russia)

In 1970 he graduated from the Leningrad Mechanical Institute as a mechanics engineer, specialty: “mechanical equipment of automatic installations”. In 1992 he received Doctoral Degree in Economics, and later on Professor Rank. In May 2000 he joined the Russian Academy of Sciences (RAS) as a corresponding member. He has worked in the system of GOSSTANDART of Russia as Chief Engineer of the research &- production association VNIIM (Mendeleev All-Russian Institute for Metrology); earlier he was Director of the Leningrad Centre for Standardization and Metrology. He has been General Director of the federal government institution “The Centre for Testing and Certification, St. Petersburg” - one of the largest government institutions within the system of the Federal Agency for Technical Regulating and Metrology (the former GOSSTANDART of Russia) beginning from 1990 till to the present. He has been a successful leader in implementation of government policy in the fields of standardization, assurance of measurements traceability, quality management, conformity assessment of products, services and management systems. Prof. Okrepilov also contributes much to improvement of quality and competitiveness of local products. Under his initiative, in 1997 the St.Petersburg Quality Award and the Leningrad Region Government’ Quality Award were launched. He is one of the organizers of the St. Petersburg’s multilevel education and training system for local quality professionals on the basis of several higher educational schools’ cooperation. Prof. Okrepilov is the author of more than 300 publications, including five textbooks recommended to higher schools by the Education Ministry of the Russian Federation. He has been awarded with the Rank of: “Deserved Person in Science & Engineering in the Russian Federation”, Orders: “For merits to the Fatherland – IV grade” and “The friendship of peoples”, State Science & Engineering Prize of the Russian Federation, Education Prize’ 2002 of President of the Russian Federation.

Presentation at the 55th Congress of the European Organization for Quality
« Navigating Global Quality in a New Era»
(Budapest, Hungary, 21-23 June, 2011)

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Economics for Quality as the scientific basis of managing the quality and innovation

One of the most significant objectives of economic activity is achieving high quality.

Initially, «quality» was perceived as a purely technical matter. However, in the author's opinion, quality is first of all an economic category, considering that:

- all factors and parameters affecting the quality of life include an economic component;
- increased risk of decision-making in terms of the market economy determines the need to choose the right criterion for assessing the activities' effectiveness;
- leaders and top managers must have the knowledge in the quality management basics with the aim of ensuring activities quality, rather than just of achieving short-term commercial benefits.

In the recent years, the studies of economic mechanisms related to quality assurance and management are being carried out under the author's leadership, based on which the concept of Economics for Quality was formed.

Economics for Quality - is a part of economics, which studies the interrelation between the qualitative characteristics of objects or phenomena and the economic indicators, covers all areas of economic science and extensively

involves the natural, social and technical scientific disciplines (physics, chemistry, sociology, psychology, jurisprudence, mathematics).

The ultimate goal of economics for quality as a science is the development of models, which adequately reflect the role of quality in the natural, technical, social and legal mechanisms of economic systems functioning.

Based on such interpretation, the specialists of St. Petersburg scientific school under the author's leadership have carried out a research on the issues of economics for quality in relation to key areas of socio-economic development of society.

The main results of the above studies are as follows:

- development of methods based on the Excellence Model for a comprehensive assessment of the activities quality of companies operating within various industries, of different sizes and ownership forms;
- implementation of quality management methods at the levels of municipality, district, city, Federation subject and the whole country;
- development of methodological guidelines for creating a multi-level quality management system and a plan for establishing a mechanism for its implementation;
- development of a method for assessing the innovative projects using the results of regional contests for Quality Award;
- establishment of a multi-level professionals training system, including scientific school carrying out research on the issues of economics for quality

Methodological approaches developed during the research allow considering and assessing the quality indicators of economic, technological, organizational and human resources components of any business company through using the universal criteria. And by combining the selected criteria such complex indicators as market sustainability or the level of corporate social responsibility can be assessed.

The above technique can be used for internal company evaluation by its own personnel (self-assessment) as well as for the external one, performed by

independent experts in terms of the contests.

Results of the contests demonstrate that the quality awards are not serving as an incentive only but more as a tool of searching the possibilities for improvement. This is evidenced by the repeated participation of the same organizations (about 20%) in the contests for quality awards. Such companies tend to improve their performance by all indicators, using the conclusions given by the experts assessing the documents and data submitted for the contest.

It should be noted that both theoretically and practically company-wide management methods are widely implemented. However, this is not enough for achieving the social satisfaction and quality of life in the country. In order to ensure a well-operating process of governance at various levels the appropriate methods and mechanisms shall be developed.

Integral quality management system shall be multilevel and include four interrelated managing levels:

- micro-(enterprise);
- mezo-(municipal unit, subject of the Russian Federation);
- macro-(Federal District);
- mega-(interstate unions, international organizations).

Generic model of multilevel quality management system consists of the following elements:

- system of targeted development indicators;
- targeted scientific-and-technical and socio-economic programs, regional "Quality" programs;
- monitoring and analysis of achieving the targeted indicators;
- corrective actions.

Operation cycle of a multilevel system starts with formation of the targeted indicators in various kinds and areas of activities, affecting the qualitative results of the region's socio-economic development and the population's quality of life.

To achieve the planned indicators the appropriate targeted scientific-and-technical, socio-economic and "Quality" programs shall be developed and

implemented. Such programs establish a set of measures, their performers and the works timing.

The main goal of creating a multilevel quality management system is improving the quality of life.

Among the urgent research issues at present are the economics of innovation, the enhanced efficiency of the region's innovative development as well as ensuring the above with the appropriate infrastructure.

In this regard, the method for assessing the usefulness and effectiveness of a specific innovation is highly called-for today for making a reasoned decision on its funding.

Without rejecting the classical approach to evaluating innovations, we have developed a technique based on the quality management methods.

The above methods and quality management systems by themselves are managerial innovations and are assessed through certification, by the results of which companies may receive governmental support.

Another effective method is assessing the innovative projects through the EFQM Excellence Model criteria. Evaluation can be carried out through self-assessment, as well as through participation in contests for Quality Award, mentioned above.

Carrying out the works in the field of quality requires the qualified specialists having professional competence in the field of economics for quality, knowledge in the theory and practice of quality management.

Training on quality methods and techniques is not an isolated discipline, designed exclusively for professionals in the field of quality. This problem is interdisciplinary and applies to all spheres of scientific, industrial-and-economic and administrative activities. Educational process should include not only general technical and engineering disciplines, but also such disciplines as psychology, sociology, foreign languages, national and professional traditions, and of course, special sections of mathematics, economics, etc.

Since the mid 1990's a multilevel training system has begun to form in St.

Petersburg, which together with the ongoing studies, which were carried out by us, became a basis for assigning the status of a scientific school to a team of specialists involved in research of the economics for quality problems in relation to key areas of socio-economic development of society.

The main task of the Russian educational system today is providing the high quality of education that can be considered both as the quality of results (the level of professional knowledge and skills of students, etc.) and as a set of qualitative characteristics of the educational process itself.

Continuous quality improvement is one of the postulates for economic development, and continuous improvement within the social progress should become a postulate for the state development.

In this regard, development of economics for quality is a priority task, aimed at improving the quality of management, which in its turn stimulates implementation of innovations.