

# COMPETENCE-BASED APPROACH WITHIN ORGANIZATIONAL CHANGES

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## ABSTRACT:

*The paper contains the different issues of competence management in industrial companies. The theoretical bases of human resources management and practical issues of innovative enterprises' competitiveness are considered. The research is focused on the modern industrial enterprise change management problems; it focuses on the effective management of the personnel of industrial enterprises on the basis of competence approach. The influence of organizational changes on the competence development is discussed. The need for development of the new technologies based on competence-based approach to personnel management including in the conditions of carrying out organizational changes is mentioned, and methods of acquisition and development of missing professional competences of key personnel for forming of steady competitive advantage of the organization are discussed.*

**KEYWORDS:** *Competence model, development of industrial company, organizational changes, competitiveness, core competencies.*

## INTRODUCTION

Process of globalization set for modern accounting entities a task of key positions forming. The most important objectives of global industrial companies are increasing their own resources for creation of an effective competitive source in global environment. In particular, personnel policy of the company as the instrument of preserving personnel capacity of the organization shall be reviewed from a line item of competence-based approach. New competitive advantages based on core competencies help global industrial companies to improve the economic relations, form of information society and integrate industrial companies into world economic space [1].

Some theorists make a hypothesis that core competence force was developed and enhanced to competitive level became characteristic feature of the personality inside the competence-based approach. Other researchers consider that the concepts "competence and competence" began to be used since 1958 [2]. According to Argyris and Schun, interest in a problem of a research of competences usually matched crisis stages of development of economy and education [1].

The simplified scheme of historical development of the concept "competence" within the approach based on management of competences of a personnel management system can be divided into the following stages:

- 1950-1970 – In case of assessment of human resources of the entities traditionally use the term "professional and important qualities", the emphasis is placed on qualities, separately taken and most critical for this specific type of activity (most often mental and physiological characteristics) [2];
- 1970-1990 – The need for assessment of intellectual personnel, the workers who are engaged in mental work, heads amplifies. The emphasis is placed on assessment of knowledge, skills and capabilities, practical use of experience, the term "qualification element" is used [3];
- Starting from 1990 – The task of assessment procedure began to be based on bigger prognostic profiles of positions and specialties become wider [2], [4], [5]. The term "competence" as the most extensive concept allowing describing readiness of the person for productive work (Table I) begins to be used.

TABLE I  
COMPARATIVE CHARACTERISTICS OF ORGANIC AND INORGANIC COMPETENCIES

Indicators/Period	1940-1950	2000s	From 2005
Priorities	Authority	Team work	Trust
Style of leadership	Directive	Situational	Mentoring
Formation of success	Following to a template	Effective communication	Flexibility
Professionalism	Technical qualification	Authority delegation and separation of responsibility	System approach

The employee competence is shown in integration degree in a corporate culture of the organization, unites in itself any characteristics of the worker, significant for production process. Competences can possess various extents of manifestation (from basic level to the expert's level). A certain set of competences characterizes both an official line item, and personally the worker. The structure of the competences necessary for accomplishment of the same function can differ depending on specifics of an organizational structure of the specific entity.

### LITERATURE SURVEY

#### A. Competence-Based Competence Approach

Main author considers that a concept of competence can be discussed as the individual characteristics of the specialist which are directly connected with execution of functional obligations and more universal personality characteristics and behavioural models [3]. The logical competency structure allows considering knowledge and experience of the worker in various sections of professional and other activity which he seized in the course of acquisition of life experience, and not just the qualification necessary for the solution of specific production objectives on a workplace.

It is possible to select the most significant characteristics inherent in competence:

- Establishment of close interrelation between competence and professional activity;
- Competence possesses the structure consisting from the interconnected and constantly developing elements: skills, knowledge, abilities, etc.;
- Competence is not congenital and is purchased and accumulates with experience;
- Competence is the concept connected with professional activity of the person.

We try to investigate all definitions of competencies, estimate core competence' model and analyse the linkage between organizational competencies and competitiveness.

Dependence between a core competency of the organization and competences of its key personnel is not linear, so, the core competency of the company cannot be determined by the simple amount of employee competences, and depends on their configuration and properties of mutually strengthening (availability of effect of synergy) [7], [8].

During this research we make the solution, that employee's competences can provide the synergy nature of core organizational competency only in case of their complementarity. In this case, if company wants to improve its competitive level it should follow some management directions:

- 1) to observe existing competencies;
- 2) to provide compliance;
- 3) to manage core competencies.

Two last functions of management of the organization are regulated:

A) by means of activation of informal confidential interaction that is implemented extremely seldom owing to "closeness" of informal structure for third-party invasion;

B) by means of traditional training (programming of this action, assessment of effectiveness, ensuring compliance of tasks, employee developments are directed organizational dynamics).

In industrial companies the task of a complementarity of competences finds strategic importance owing to variability of a contour and structure of project structure. Such organization shall provide training process in the permanent mode.

The concept of the American researchers [2], [7], [9] which considers a concept of competence within a personnel management system as set of six of its components is interesting:

1. Conceptual aspect – perception and judgment of theoretical bases of professional activity;
2. Tool aspect - ownership of basic labour skills;
3. Integrative aspect – possession of a capability to put the theory into practice in case of the solution of professional problems;
4. Contextual aspect - perception of canons of a corporate culture in which professional activity is performed;
5. The adaptive aspect – possession of skills of anticipation of change of external and internal environment and readiness to react to them;
6. Communicative aspect – possession of oral and written skills of interpersonal communication.

This research determinates that core competency is offered as capabilities of the organization to develop the available resources on the basis of the effective training system of personnel creating steady competitive advantage.

#### *B. Hamel and Prahalad Theory [5].*

Two scientists Hamel and Prahalad provided significant contribution to the development of theories about competitive strategy. Their new vision was introduced at London Business School in 1993. In 1994 it was published their joint book «Competing for the Future», in which the authors argue that, instead of treating the company as a set of enterprises, managers should begin to perceive it as a combination of key, basic competence, i.e., skills, abilities and technologies that provide benefits to consumers [5]. According to G. Hamel and Prahalad, the prospects of the enterprise are recognized not today, but in future markets and is referred to as intellectual leadership. These markets, as the researchers say, has not yet formed, but now they should represent and strive for their creation. That is, skills, abilities and techniques may not be localized in a particular division or department.

One of the most important conditions for intellectual leadership according skilful application of the "basic functionality of the product" and "core competencies." The first concept is that in order to predict the future control should not think about services, and start thinking about their functionality and to ask the question "What value or benefits delivered to customers existing products and services?" Asked the question, managers will be able to discover a lot of new opportunities for their companies. Moreover, these new features can be created on the basis of available.

G. Hamel and Prahalad, an explanation of the essence of "core competencies", consider that it is necessary to establish contact with three groups of employees. Scientists believe that first of all needs the contribution of young professionals as they make a bet on the future: "we must encourage represent Generation X workers to exchange ideas with the grey-haired members of the executive committee." Secondly, the researchers suggest the use of people who are on the periphery of the organization as well as the ability for strategic innovation increases with every mile is proportional to the distance from the central office. It is on the periphery (such as subsidiaries or remote locations), most likely, it is possible to find people who are more open and processes, inappropriate orthodox principles of the company. Such people have the greatest creative potential as limited minimal resources. Finally, G. Hamel and Prahalad give advice to bring into the process as much as possible the new organization, since these people "is not imbued with the prevailing dogma in the industry."

A new term has been introduced to denote a competitive strategy G. Hamel and Prahalad - "strategic architecture". With the strategic architecture of the company can see the opportunities that it should increase at the moment; new channels, you need to study today, new development priorities to be pursued at the moment to seize the future and market initiative. Thus, the strategic architecture addresses issues that need to be taken today to prepare for the mastery of a significant share of future earnings in the arena of emerging opportunities." As a result, this approach is called the concept of a market space.

The process of generating ideas is different from the use of knowledge. Most people are not able to create and implement at the same time, that's why nomination of ideas requires a creative approach. Edward de Bono [8] introduced the concept of "lateral thinking" and defined it as "a set of processes

for use by way of information, generating creative ideas through astute restructuring concepts accumulated in memory."

Companies derive their ideas of the goods or services from the development of researchers, focusing on consumer needs, behaviour on the market and other competitors. The process of generating ideas is activated at the beginning and during the implementation of a new project.

*C. Influence of organizational variability on object of management*

The American scientist K. Levin [9] provided 3 stages of process of changes:

1. "Thawing of a glacier" – change of habitual way of functioning of the organization which supports the existing behaviour and installations. This process shall reflect that changes pose for people potential hazard and therefore for achievement of natural state of balance it is necessary to motivate the people involved in reorganization;

2. Process of change – emergence of the accompanying reactions with use of new information;

3. "Building-up of a glacier" – entering of change in a stabilization phase, approbation of new responses for those who are involved in transformations.

Standardly any carried-out changes cause active resistance of both personnel, and the organization. The analysis of literature shows that the reasons of resistance to organizational changes are generally researched in the context of various theories of organizational development.

Organizational resistance has three versions (Argyris K.) [1]:

- resistance to delegation of obligations and responsibility;
- inertness and not dynamism of difficult organizational systems;
- Resistance to changes which are imposed by experts from outside.

The most known classification of overcoming resistance methods belongs to D. Kotter [4]. He allocates six methods, gives their analysis from the point of view of benefits and shortcomings, and also creates approbation prerequisites (Table 2).

TABLE II  
METHODS OF OVERCOMING RESISTANCE TO ORGANIZATIONAL CHANGES

<b>Measures</b>	<b>Prerequisite</b>	<b>Advantage</b>	<b>Shortcomings</b>
Corporate training and providing full information	Shortage of information, provision of unreliable information	Active participation of workers in the held event in case of successful belief	It is rather labor-consuming on time as covers practically all personnel
Attraction for work in the project	Shortage of information at initiators on the implementable project and the possible reasons of resistance	Intensity in collective decreases, the team on work in the project is formed	Rather costly on time because of long process of provision and studying of information
Stimulation and support	Resistance owing to individual adaptation to the project	Provision of support in case of adaptation and accounting of individual wishes provide goal achievement	A lot of time, and also financial expenses requires that can lead to a project failure
Negotiations and agreements	Resistance of a management of the organization because of fear to lose the privileges in a project deliverable	Provision of guarantees in exchange for support is rather easy way of overcoming resistance	Often requires heavy expenses and can cause discontent other groups of personnel
Staff rotation	Insolvency of other "tactics" of influence or unacceptably high costs	Resistance is rather quickly liquidated, without requiring high	Threat to future projects because of mistrust of the affected persons

	on them	costs	
Hidden and obvious enforcement powers	Acute shortage of time or lack of the authority at initiators of changes	The threat of punishments reduces resistance, accelerates project implementation	It is connected with risk, generates resistant hostility to initiators, the passive resistance of possible reorientation of the project

One of types of an organizational change is development of personnel capacity of the organization. Any organizational change significantly influences personnel development. Personnel development implies the structured employee development oriented to goal achievement of the organization through expansion and deepening of the available professional competence, training in new professional skills, and also increases in interest and organizational opportunities of the company more fully to use the potential of workers. An easy way to comply with the conference paper formatting requirements is to use this document as a template and simply type your text into it.

**MANAGEMENT CORE COMPETENCIES IN INDUSTRIAL COMPANIES**

*A. The impact of changes in organizational behaviour of industrial companies*

For the purpose of achievement of steady competitive advantage and strategy implementation of development in the project companies the following directions of organizational changes are implemented:

1. in interaction with the external environment:
  - integration with large industrial complexes (entry into structure of large holdings and corporations);
  - disintegration on small firms in various directions of project works;
2. in interaction with the internal environment:
  - implementation of the "working" quality management system – the analysis of key business processes;
  - Implementation of management system competences, creation of the self-training organization.

In case of the choice of the strategy of development for competitive advantages the project company needs use of instruments of project-oriented management.

It is possible to offer the following determination of the project-oriented organization: the organization determining as a factor of steady competitive advantage a fixed involvement into the project activities connected with the solution of uncommon tasks in the conditions of uncertainty and variability of the external environment.

It is necessary to mark out features of the project-oriented company which are shown in the following areas:

- The organizational structure of the organization allows moving freely personnel, to create temporary work groups irrespective of functionality of structural divisions and the built interrelations between them.
- The budget is planned and performed on separate projects, but not in general on the organization. Flexibility of the budget structure allows to create reserve funds on one project and to credit other projects at the same time.
- The system of requirements to personnel which shall have unique key set of skills and abilities is created, due it is given to creation effective system of motivation which shall conform to these requirements.
- Tough control of terms of accomplishment of the project documentation and of quality of the made project decisions.

The main essence of project-oriented management consists in system (process - oriented) approach and management of key parameters of the project, such as content (structure of works), terms, cost, and communications, quality is that management is considered as set of obligatory processes:

planning, control, motivation and other. Disaggregating process project management it is possible to provide a certain matrix of management at which cells there are managerial procedures.

*B. Core competence model*

Considering the professional competence, most researchers distinguish:

1) Simple (basic) competence (seen in certain types of activity, formed on the basis of knowledge, skills, abilities, easily fixed);

2) The core competencies - is extremely difficult to account for, and storage of measurement, in all spheres of activity, reflects the attitude of the individual person and the global environment.

The process of formation of competence of the organization is an integral part of building a competitive strategy and is a basic step in the formation of core competence model. The main objective and the step of forming the organizational competencies is definition of key organizational competence that forms the main competitive advantages (Porter's Model) [12]. The practice of competence management in innovative companies in existence shows a number of problems:

- The complexity of specialist involvement - the holder of the key competences - to another project;
- The indispensability of a highly qualified specialist and, therefore, control the complexity of competence;
- A high degree of lack of interest in the transfer of knowledge in the performance of the project, the complexity of the formation of competencies.

The most acute problem faced with such an innovative organization, performing complex design. One of the features of many innovative companies is excessive requirements to the profile of competences of key employees. This is due, no doubt, with the uniqueness of the products (and / or services), which are produced by the projects. It is known that the "smart" company to a greater extent than the other players in the market depends on the professionalism of its key personnel and the effectiveness of their core (and hidden) competencies. The criterion for such a relationship is possible (with some modifications) to use the indicator of the total costs share of the wage fund in the cost of the project or service.

The problem of determining organizational competencies as a source benefits is a compound of core competencies with individual. With this statement we can agree, as in resource-institutional theory of core competencies creates competitive advantage of the organization, and organizational competence increase the level of use value. Thus, the key competence is a special category of organizational competence to help innovative organizations to create and maintain a sustainable strategic competitive advantage. The main property of the key competence - to establish the usefulness of the product produced. To treat the core competence, a set of skills offered must meet four criteria:

1. Produce value for internal and external users (customers). The customer for the innovative organization is the chief referee, who determines what is considered a key competence.

2. Skills must be unique and be individual. There are differences between forced and distinctive competencies. A key competence is, if in the opinion of managers and key specialists of the company, there are resources for its development. For example, the innovative organization can dramatically improve the quality of customer service, well above its average level in the industry, making it their core competence.

3. Core competencies should ensure a competitive advantage in the long run. In defining key competencies managers need to move away from the outer parameters of the product and consider how contained in this product, you can use the competence to produce innovation.

4. Key competence should be long-term and unique.

To build a model of competence of key employees for organization as a system of control algorithm competencies is-use tools such as the development of role-playing instructions and the establishment of competency cards. Usually, the role guide contains the following sections: a set of core competencies, responsibility (responsible for individual sections of the project and co-executor in any stage of the project), and the project targets (figure 1).

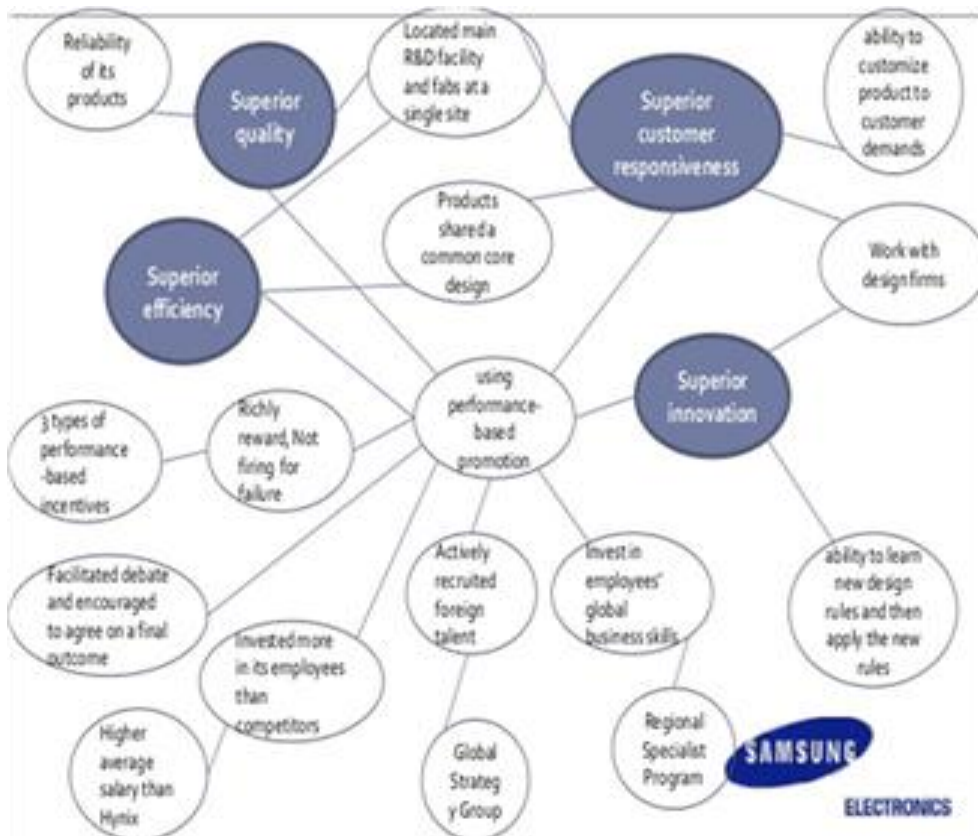


Fig. 1 Samsung's activity matrix

Source: host Website of Samsung Company [16]

Designing competence - there is at the moment when it comes to the areas in which innovative organization must possess all possible resources or skills, but rather to create them from existing. Strengthening competence is adequately when innovative organization finds additional market segments for the use of its existing capacities [6].

The change in the ratio of policies directly depends on the macroeconomic management of the environment organization, as well as on the strategic orientation of the design organizations, their willingness to sacrifice short-term income in exchange for a higher and more long-term.

It is necessary to identify a number of factors that determine the choice of strategy: the level of development and the basic forms of market competition, the ratio of the rate of increase in the cost of staff and the active part of fixed assets, respectively, replacing living labour, the time factor, the rate of inflation and the structure of the consumer basket, asset portfolio of innovative organizations, government regulation economy and transport industry and the priorities of industrial policy, the provision of cross-sectorial ne-redistribution of capital and labour, the development of innovative activities.

*C. Matrix's unique competencies for innovative companies*

Any modern corporation operating in the high-tech markets must be adapted to the current pace of development tools and mechanisms, which include the methodology of forming "core competencies", the creation of support centres "inorganic competencies" (focused on the creation of new "core competencies") and practical arrangements "open innovation" as tools that provide speed dealing and the development of new competencies on the basis of close cooperation with the market and getting feedback from it. For an adequate decision on the development of a competence and to select the form of using the approach of "open innovation" competency matrix is used, namely the partition of all subsets of the innovation unit of competences and not only on the organic and inorganic expertise (table 3).

**TABLE III**  
COMPARATIVE CHARACTERISTICS OF ORGANIC AND INORGANIC COMPETENCIES

<b>Criteria</b>	<b>Organic</b>	<b>Inorganic</b>
Competence	Development of the current "core competencies"	The development and acquisition of new competencies
Source	The source of the company itself acts	Along with internal competencies are actively involved in the competence of the market
The payback period of brief examination of competence development	Projects with medium-term prospects for the return outlet	Projects with long-term prospects for the return outlet
Criteria for making a decision on the development of tight financial decision	Along with finance	Decisive role decide the market prospects in a few years and current technological trends

As international experience shows such giants like Intel, General Electric, Apple, Motorola, Thales, North Grumman and a number of others, the most important competitive factor is the acquisition of new competencies within the framework of inorganic innovative projects [10].

For example, Google's innovative complex is presented as a set of separate research teams involved in the development of new technologies and products that appear due to the unique corporate system "20 per cent time" - the company's philosophy, according to which the company's employees can spend one day a week for the development of new projects not related to their immediate duties. Thus, 80% of their time programmers must deal with the search engine development and advertising services, and the remaining 20%, they can devote to their own projects. Leaders must also innovate: it is necessary to pay 70% of the time the main work, 20% - to other projects related to the main job, 10% - new trends and products [15].

Today, the company carries out strict control of such projects, as the company's management has recognized the value of these innovations. Thus it was developed Gmail and GoogleDocs. The company's expenses in R & D rose up to 3.7 billion in the year (12.63% of revenues). Thus, professionals and entire teams develop competence largely on their own, decentralized [11].

As practice shows, any large company should implement its own system of support for "inorganic competencies" as possible modification of a set of core competencies over time, and new competencies, and identify them as an update key as a basis to remain competitive acts is the ability to grow or to borrow from the market [10].

In managing the competences assumed that in the process of developing an organizational strategy, management should clearly identify which organizational competencies needed to implement this strategy. Organizational competence is a set of competencies of staff combined with the ability of organization to achieve specific results. Examples of organizational competencies can be the organization the ability to develop new product with minimal costs to the industry, the competence in the field of foreign representative offices and branches, the competence in the area of customer needs in the development of new product and others (figure 2).



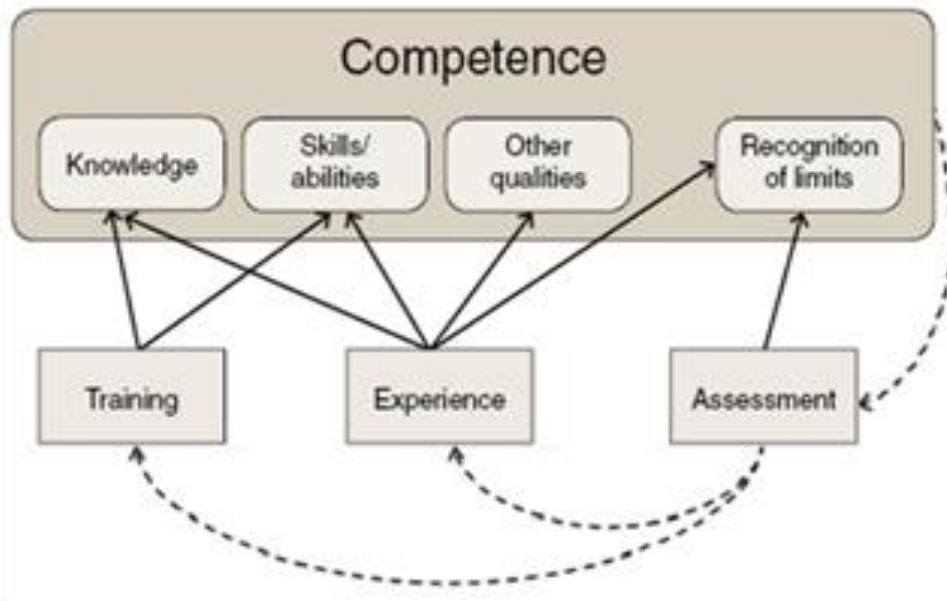


Fig. 2 Competence in project oriented management

Source: Quinn J.B. *Intelligent Enterprise: A Knowledge and Service Based Paradigm for Industry*. – N.Y.: The Free Press, 1992 [13]

Marketing skills, or organizational resources (e.g., the ability of Coca-Cola - to meet the needs of residents of almost all countries - in the technical possibilities (manufacture of miniature electronic equipment, in connection with which involved hundreds of people such as the competence of Sony) can act as a source of organizational competencies soft drinks in the world and the organization of regular supply), qualification of personnel (for example, the competence of the company McKinsey consultants - development plans of strategic and organizational changes).

Despite the fact that organizational competencies have a long-term nature and are essential for the development of the organization, it is important to understand that there is no single organization which can develop itself successfully over a long-term period without improving their own competencies and the acquisition of new ones.

Sources of unique competencies - "internal" (in the company) and "external" (search the market competencies, competencies Exchange) and how they enter into circulation

As the internal and external competence considers only those factors that give the company a significant competitive advantage and the threshold cannot be easily copied by competitors. Typically, to create such factors requires a sufficiently long period of time and experience in a particular field.

## CONCLUSIONS

At the present stage of development of the level of economic and engineering business - environment competitiveness of innovative organizations are regularly re-determined by its ability to accumulate knowledge, experience and skills, the talent to maintain an acceptable social climate and to develop organizational and information culture. The concept of the development of knowledge, competencies and, in general, the human resource is widespread, both in innovation and in traditional sectors of the economy.

Thus, in modern conditions of development of domestic economy an important factor in the success of innovative competitiveness of the organization is its ability to identify and develop their own core competencies. Innovative organization that seeks to provide a high level of competitiveness should be able to synthesize the strategies and skills of staff, individual (personal) and collective (organizational) competence. To do this, firstly, to evaluate existing in the organization of competence, to develop profiles of key competencies (some standards, benchmarks) and to develop an effective system of

personnel training and development within the Learning Organization for the accumulation of existing competencies and the acquisition of the missing [14].

In the event that the profile of the key competencies of industrial organizations endorsed the program of training and development of staff shall provide the trainees the necessary handouts and an opportunity to try out the standards of behavior required in the development process. This means that development activities should provide the opportunity to apply the techniques studied in a variety of work situations. In connection with this development activity should include a range of techniques, such as workplace training and special courses with the assistance of mentors.

Thus, it should be noted that many factors affect both the training program and the development of an innovative organization, and on the extent to which passes the actual training. Strategic plans for innovative organization and its personnel policies directly affect the training and development programs.

In the process of passing the training acquired new skills-functional skills and expertise. Possibilities and techniques to achieve the required learning outcomes are numerous and varied, but all aspects and directions of improvement of the personnel must be correct in order to ensure effective results. If training activities are not supported by the development of the activity (implementation in practice) skills, the theoretical and methodological materials will soon be forgotten.

Within the framework of the international quality management system standards for design organizations ISO 9000 establishes clear requirements to the human resources' personnel involved in work affecting product quality shall be competent, that is, to have a proper education, training, skills and experience. A new training requirement in recent years has become a competence as a reasonable ability to apply knowledge and skills. Competence in the frames of ISO requirements must be documented [15]. Documentation should be periodically reviewed and corrected. The level of competence is defined in the selection, recruitment, training, staff training and development. The use of international standards of quality management in project management allows the company to build a clear competency model of project personnel, taking into account international experience in project management and the specifics of their own enterprise; implement a corporate "intelligent" control system based on its personnel, including regular assessment, education system, development, and incentives for employees.

Organization competencies model must be dynamic, developed in accordance with changes in the company's corporate strategy, involving the implementation of innovative projects. The main competences of the tool - is the creation of an innovative program of staff training.

Strategic competence innovative organizations can be identified as a key factor in improving the competitiveness of products. It consists of the relationships of key organizational and individual competencies. Update rate strategic competence determines the life cycle of goods and services.

In this regard, the organization must promptly innovate and introduce new technology, trained in the process of solving actual problems of development of business, that is, to become a learning organization. Organizational learning involves the development of intellectual potential of the employees and their assessment based on competence management principles in order to achieve the strategic goals of innovation development of the organization.

### **ACKNOWLEDGMENT**

Author Olga A. Shvetsova thanks the Head of engineering department of SAMSUNG Company. This paper referred to research field of industrial management of KOREATECH University and supported by KOREATECH Research Funding.

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