Human Development Management and Organizational Changes
ELKIN S. E., METELEV S.E., METELEV I.S., MURAT M.

HUMAN DEVELOPMENT MANAGEMENT AND ORGANIZATIONAL CHANGES

MONOGRAPH

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Theoretical significance of this monographic study is determined by the development of human potential management theory in the context of organizational changes under modern conditions. Theoretical ideas and research findings reveal new directions for studying the structure and functions of management in the management of organizations as economic systems, enhance understanding of multidimensional and complex character of organizational changes in their relationship with human development. The formulated conclusions and obtained results contribute to the deepening of theoretical views on the system of change management, processes and factors contributing to sustainable human development and growth of organizational effectiveness at present. The practical value of the study consists in the fact that the proposed model of sustainable human development in the system of organization management allows to identify the most significant factors influencing its origin and thus determine the overall course of actions of the management subjects related to its stabilization. The author’s recommendations on structuring and identification of the human development elements that take into account the specifics of Russian management and labor relations, methodological basis for assessing the role of human development in the change management of an organization can be used in the practice of executive government of organizations as well as in the activities in higher educational institutions.

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INTRODUCTION

Economic changes taking place currently in the institutional environment are directly connected with the desire of organizations to increase efficiency through innovations in technology and are based on the use of the resource approach. However, it is obvious that disproportions caused by insufficient attention to the potential of human development complicate the solution of organizational management problems. The extent and nature of human development determine the social and economic effectiveness of organizational changes. Through the mechanism of socio-economic, labor and management relations the formation of human capital of the organization is taking place. Controversy arises in time and managerial aspects when the tactical objectives to increase profits of a particular organization become a deterrent to growth-oriented economy in the long term for the application of innovative and high technologies requiring high quality human potential. Many international organizations point out this problem. For example, firms that produce cheap labor-intensive goods or exploit natural resources often do not require more skilled workers and may pay little attention to their health if there is a surplus of labor in the labor market.¹ A management system that would take into account the necessity of changes aimed at increasing organizational effectiveness while ensuring the growth of human potential may become one of the ways to solve this contradiction.

In Russia the introduction of such a system of management that would ensure a coordinated growth of human potential simultaneously with changes aimed at increasing the organizational efficiency of economic systems is becoming the solution.

Complication of topical problems of human resource management extends the subject area of management covering various aspects of human development - from organizational changes to the demographic and socio-economic problems of human development management. Multidimensional nature of the human potential manifestation determines the importance of its study in the management context.

The approach of international organizations also testifies to the significance of the problem. The reports on human development in the framework of the UN
Development Programme (UNDP) stated that the consideration of organizational changes has become crucial not only in the area of growth of material goods and services when their quantitative increase seemed the best way to improve living standards and address other national problems, but above all as a condition of human development.

The approach based on human development determines the need to abandon the strategy for managing organizational changes aimed at increasing physical capital only. Qualitative parameters of human development become a means and, simultaneously, conditions ensuring such a system for managing organizational change which is characterized by the consistency of changes of an organization and of a person.

Complication of relations connected with the rational use of human potential in all spheres of human activity emphasizes the theoretical and practical importance of the issues related to the parameters of the system of change management based on indicators of human development, the analysis of the characteristics of management system, its relationship to social and labor relations, criteria of efficiency and development trends and the conditions of organizational changes. All these processes manifest themselves in economic systems in the form of organizational improvement of management system that requires clarification of particular ties and system parameters, the use of more effective methods of implementation, improved reliability, etc. Organizational improvement of the system (its subsystems and elements) affects not only certain ties, but also the structure of management in general. Development and improvement of the economic system is based on thorough and deep knowledge of the organization, which requires the study of human development and management systems in the context of organizational changes. And this, in turn, requires new ties and removing unnecessary ones, significant change in management functions and methods of making management decisions based on the functioning of the human potential.

UNDP experts in their annual reports admit the close relationship between efficiency of economic systems (at the level of the state, region, organization and
individual) and human development. Data of the last 40 years also reveal an enormous diversity of experience in the field of human development. There is no single model or uniform prescription for success.⁴ At the same time modernization aimed at transforming the economy of post-industrial technological base can not help being accompanied by substantive changes in the social and political spheres. Despite the importance of this issue it has come to the focus of UNDP attention only in recent years. This is due to significant geopolitical changes that have led to a revision of the orthodox purely market views on the priorities and strategies of organizational development, new global challenges (global financial and economic crisis, climate change, etc.). In this connection it is appropriate to use an approach of J. Roxburgh⁴ who offered to treat modernization as an increase in capacity for social changes. It is important to note here that all of them in different ways can affect the human development of the society, and even more so –its particular components included in the Human Development Index (hereinafter - HDI). Thus, total socio-economic modernization if it focuses on enhancing the value of human life will, of course, produce a positive impact on the country's HDI. Partial technological modernization may not manifest itself at all in the HDI - if the number of affected employees and the resulting GDP growth are small.

In Russia the management of human development is mainly provided in economic policy, in particular, income policy and policy of the social sphere development, which management model is just beginning to emerge. An approach based on the management of human development determines the need to abandon the strategy of organizational changes aimed solely at the growth of physical capital. Quality parameters of human development management system become a means and simultaneously the condition for organizational changes. The most notable example of targeted programs of human development management in the Russian Federation are the priority national projects in the social sphere - a number of complex large-scale targeted programs in the social sphere such as education, health and housing and utility amenities. However, there are virtually no significant human development management programs at a lower level (industries, organizations).
Every organization develops its own strategy for managing human development, determines its goals, objectives and programs to ensure their achievement. But the basic postulates and principles, criteria and trajectory of socio-economic development should be uniform. The first step to develop such policies and programs should be the analysis of the social and human development, including an assessment of the achievements and challenges, the difficulties, existing regional and social differences, the situations concerning particular population groups formed by gender, professional, educational and territorial characteristics. It is now an indisputable fact that markets do not necessarily guarantee that the benefits brought by increased effectiveness of economic entities will be enjoyed by everyone. These factors have led to significant changes in management theory and caused an increased relevance of the concept of human development management.

The evolutionary process of modernization requires, first of all, a considerable number of initiative and interested actors - not performers of a centralized project, but individuals and organizations ready at their own risk to implement the changes aimed at increasing efficiency. This basic condition can be directly correlated with the key characteristics of human development such as health, education and income level. In turn, competitive technology will also impose high requirements on employees. Naturally, the dynamics of social and cultural capital is also important to examine the issues of modernization in general and Russia's modernization in particular and has direct relevance to human development, the level of human potential and human capital. Under these conditions there is a need of not only a comprehensive theoretical investigation of issues of human development management, but also of practical recommendations to improve the efficiency of its formation, development and use in organizational changes.

Essence and content of the development processes of various systems have been for a long time the area of study of a number of scientists (G. Bergman, T. Kuhn, I. Lakatos, G. Leibniz, I. Prigogine, G. Spencer, I. Schumpeter and others).

The development of socio-economic systems was investigated by V. Antoniuc, D. Bell, A. Bogdanov, F. Braudel, N. Wiener, J. Gig, J. Galbraith, L. Kantorovich,
N. Kondratiev, B. Kornejchuk, S. Kuznets, V. Leontief, E. Lorenz, D. Lvov, V. Majewski, I. Prigogine, Yu. Urmantsev, R. Foster, A. Freeman, H. Haken, K. Shannon, R. Entov, S. Young, and many others. The objective of research is generally to create models of economic development at both the global and macro- and meso-levels, and to study certain aspects of economic development (structural shifts, changing technological structures, development cycles, the economic role of the state, monetary factors, etc.).

Such scientists as M. Weber, P. Drucker, J. Locke, D. Keynes, F. Quesnay, D. Cleland, R. Coase, A. Marshall, F. Knight, R. North, V. Pareto, A. Pigou, D. Ricardo, P. Samuelson, A. Smith, F. Hayek and others made their contribution to the theoretical basis, capabilities, goals and mechanisms of socio-economic systems. And it was J. Collins who made a major contribution in the study of long-term sustainable development at an enterprise level.

General issues related to the human role in the development were considered by the classics of economic theory (A. Smith et al.). The principle of rational human behavior in a market economy was worked out by the representatives of marginalism. Within the framework of the neoclassical school (Cambridge School) A. Marshall has formulated the relation between wealth accumulation and human development. J. Keynes identified development and realization of human abilities, empowering of personal choices as crucial to economic growth. The problem of human capital as the main factor of material well-being growth was treated by T. Schultz, S.A. Dyatlov, etc.

Fundamentals of modern studies of human development concept were laid down by M. ul Haq and cover such areas as the "expansion of human choice" and "empowerment of choice" (A. Sen). Of fundamental importance for the formation of a conceptual approach to human development are theoretical investigations of Amartya Sen expressed in the concept of "empowerment of choice." Disputing utilitarian assumption on which the economy of development is largely based, A. Sen considers development as a process of expansion of the "possibilities" of people rather than increasing material or economic well-being or satisfaction.
Analysis of theoretical approaches has led to the conclusion that the feature of human development concept developed by a group of economists led by M. ulHaq does not simply determine the relationship between population and development, but states the need for an integrated approach to human development. Speaking about the expansion of choice, it is noted that at any stage of human development there are three key problems, three needs: to live a long and healthy life, to acquire knowledge, to have access to the resources providing a decent standard of living.

Human development as a matter of economic studies of labor relations dates back to the famous United Nations Development Programme (UNDP), which publishes special World Report on Human Development starting from 1990. With the participation of K. Griffin T. McKinley, V.P. Kolesov, R.P.Kolosova, T.S. Razumov, V.H.Echenique and others UNDP materials on all major aspects of the interaction within the concept of human development were translated into Russian and adapted.

The works of these authors have made significant contributions to the theory and methodology of management of organizational and human development, but have not exhausted it. The multiplicity of the problem caused a new stage of discussions on the theory and methodology of management system formation, the structure of human capital, monitoring of changes in human development indicators and its evaluation.7

Self-important status has also been acquired by human resource development determined by the maximization of human potential and its effective use for economic and social development.

Understanding the need of the human dimension of development effectiveness of any economic system significantly affected the research approaches to the problem of changes in economic systems having laid the conceptual foundations for the design of innovative systems of economic systems management. At the same time transformational aspects and interrelation between changes taking place in the organization and human development were considered fragmentarily, mainly in terms of the characteristics of economic growth of the organization. Features of managerial environment determining the efficiency of the system managing the changes in the organization to create the conditions of optimal human development failed to get into
the focus of scientific research.

Systemic assessment of the changing trends of development of economic systems in the direction of structured management of human development will form an innovative system for organizational changes management. The concept of human development has acquired innovative and socializing effect in states with non-oil and gas oriented development in the frame of construction of systems to manage organizational changes on the human factor basis. The concept of human development is constantly evolving acquiring specific characteristics, integrates into related areas of concern changing management approaches to the study of such civilizational areas as urbanization, life safety, social development, employment and social and labor relations. In the Russian economic science the problem of increased effectiveness of organizational changes management with the account of the human development factor has become relevant only in the last decade. Complication and acceleration of processes in economic systems caused the need to improve their management. However, the main focus was on maximizing the function of human resource management. And the staff was considered primarily as an organizational resource with its quantitative and qualitative characteristics, while the study of other aspects of the functioning was considered as a concomitant condition. For this reason, interrelation between the system of changes management and features of human development may considerably affect organizational performance which requires the development of innovative approaches to the construction of such management system. Despite the fact that the results of studies have made a significant contribution to the explanation of the causes and mechanisms of organizational changes in their relationship with the socio-labor relations many topical areas remain unexplored. Among the major issues that require study we can state an incomplete awareness of the determining role of human, social dimension of organizational changes effectiveness as opposed to the dominant paradigm of material form of changes assessment. In the context of the transformation period of economic systems development human development and its impact on the system of management is obviously underestimated. At the same time purposefulness of human development
differs significantly from the development strategy focused on growth which in general gives rise to an organizational conflict. The solution to the problem of the human costs of the economic system restructuring should be also recognized as an essential condition for the increase of organizational changes efficiency.

One of the reasons of the situation under discussion is the lack of systematization and integration of knowledge about human development in the study of this phenomenon by various sciences. The literature presents a wide range of theoretical and practical models of management systems, concepts of human resource and staff management. All lines of research are industry specific, methodological approaches to the problem are often interdisciplinary in nature resulting in the findings being largely contradictory.

The fact of having various and often inconsistent models and estimates of human and organizational development is explained by insufficient development of the concept of human development which is not analyzed in close relationship with the institutional rules governing the interaction between subjects of social and labor relations.

The author sees the solution to these problems in the integration of the various approaches to the analysis of such a complex socio-economic phenomenon as human development management which is possible within the organizational and institutional approaches. On the one hand, it allows revealing economic and social conditions for the changes, and on the other hands, makes it possible to connect them with the characteristics of human development identifying contradictions and substantiating general direction of integration and improvement.

The above mentioned studies of various aspects of the theory of human capital and socio-economic conditions affecting human development notably enriched present day economic science. At the same time along with the growing importance of the problems of preservation and development of human potential in the human development management unexplored and unresolved methodological and conceptual problems became more evident. They relate to the conceptual apparatus and are associated with the study of problems of formation, conservation and improved
management of human potential in the contemporary socio-economic conditions in Russia in general, and especially at the level of regions and organizations.

For instance, the conceptual apparatus of such socio-economic category as "human development" remains not elaborated in economic science. One evidence of this problem was the report "On Human Development in the Russian Federation - 2013" which uses updated formulation of a number of key terms compared to the previous years editions: "human development" instead of "development of human potential", "Human Development Report" instead of "Report on development of human potential". Theoretical basis of this study are the fundamental works of national and foreign scholars in the field of economics, institutional economics, labor economics and human resource management, organizational and systems theories, management as well as empirical studies on this issue.

Scientific methods (scientific abstraction, analysis, synthesis, generalization, analogy) applied to the analysis of human development management constitute methodological basis of the research. To determine the structure of management system, elements, factors and indicators that determine the organizational changes in interrelation with human development, their quantitative evaluation, dynamics and trends of change neoclassical techniques and modeling are used. Information (empirical) data base of research includes the official Russian statistics, the World Bank and International Labour Organization data, the United Nations reports, regulatory documents of the Russian Federation and its regions, internet resources on the issue of human development.

Fundamental works of national and foreign scholars in the field of instrumental and social views on human being, primarily in the field of the human development theory as well as research in the field of labor economics, economics and finances of social area, social policy, regional administration and management made the basis of the monographic study. For the empirical verification theoretically designed principles, rules and indicators of innovation system analysis of human development and of organizational change management are used. A number of methods resulting from the general logic and ultimate objectives of the study - theoretical
analysis, systematic and structural-functional analyses, methods of economic research, economic, statistical analyses, methods of socio-economic modeling - have also been used in the process of the research.

Scientific novelty of the gained results consists in the development of theoretical and methodological basis of human development management in the context of organizational changes in today's institutional environment.

The theoretical significance of the study is determined by the development of the theory of human potential management in the context of organizational changes under present conditions. Theoretical positions and research findings reveal new directions for studying the structure and functions of management in organizations’ management as economic systems, expand the understanding of multidimensional and complex organizational changes in their relationship with human development. The practical significance of the study consists in the fact that the proposed model of sustainable human development in the organization's management system allows us to identify the most significant factors influencing its emergence and thus determine the overall course of actions of the managed subjects related to its stabilization. Recommendations proposed by the author on structuring and identifying of human development elements that take into account the specifics of Russian management and labor relations, methodological basis for assessing the role of human development in the management of organization changes may be used in practice by the executive bodies of organizations.

Verified informational material, modern graphical interpretation and use of modern methods of analysis provided the reliability and validity of the results presented in the monograph. The resulting theoretical, methodological and practical findings and conclusions can be used by the organizations regardless of their ownership in personnel management, in the development of a set of measures for the regulation of social and labor relations and labor markets by state and municipal governance.
CHAPTER 1. THEORETICAL APPROACHES TO THE STUDY OF HUMAN DEVELOPMENT MANAGEMENT

1.1 THEORETICAL ASPECTS OF THE CONTENT AND STRUCTURE OF HUMAN POTENTIAL

Formation of theoretical views on the human role in economic and social processes takes place during the formation of a new conceptual direction which united theory of human development and economic growth. No doubt, the answer to the question about the most effective use of existing resources in the economic system determines the content of contemporary economics. And in the emerging post-industrial type of economic development based on the preemptive use of knowledge, the role of the human factor in solving this problem is increasing. First of all, we are talking about human potential which is used as a scientific category for the qualitative characteristics of the level and conditions for the use of competencies, experience, intellectual capacities as the ability to continuously improve and develop. This concept has replaced the concept of human capital, human resource and human factor, each of which has consistently succeeded one another over the past century and a half. Objective socio-economic reasons for this transformation of concepts are varied. Indeed, during the past quarter century there have been radical changes in the economy— the number of employees of the primary and secondary sectors in all countries has reduced, and the number of representatives of the tertiary sector have increased. According to the IBRD in the last decade of the twentieth century world gross product consisted of the following main components: the share of the means of production and capital accounts for one fifth (21%), natural resources accounts for less than 1/7 (15%) while the share of the human component makes 2/3 (64%). But a hundred years ago the ratio was exactly the opposite. These realities of life prompted a revision of global development targets. The center of gravity began to shift from the goals of economic growth to human development goals, the more that
the growth limits and the transition to a new way of thinking were reported. The notion of human development has become the source for the already well-known concept of human potential.

Its value lies primarily in the fact that based on its ground assessment of a country’s state includes not only traditional macroeconomic parameters, but also the characteristics of the health and education levels of the population. And the most important thing is that all three of these components are given the same importance.

The main terminological difficulty consists in the definition of relationships between concepts characterizing the human component in the management system at the micro level. During the last two decades the attention of researchers was attracted to the issues of the quality of the population, human development and human development potential. However, until now there is no unambiguously interpreted and interrelated system of concepts to describe and analyze population, a human being and human potential.

For example, referring to the analysis of the population some researchers speak about its quality, others discuss its qualitative characteristics or the quality potential of the population. Thus, according to N.M. Rimashevskaya methodology for assessing the quality characteristics of the population is based on three fundamental pillars:

- Physical, mental and social health;
- Vocational and educational abilities of people forming their intellectual potential;
- Cultural and moral values and spirituality of citizens, their social and cultural activity.

To characterize the population N.M. Rimashevskaya uses such key terms as health, the abilities of people, values and spirituality of citizens, their activity. However, it is obvious that this is only one possible approach, whereas a holistic description of all social characteristics of the population requires theoretically grounded and logically interrelated system of concepts. Such a system in the field of social sciences is yet to be developed. At some point, it seems that the concepts of «quality potential of the population» and «quality of population human potential » are
synonymous. Ivanov O.I. suggested that the categories of "quality of the population" and "human potential of population" despite certain proximity of their content should be distinguished. The concept of "human potential of population" includes only part of especially significant social characteristics of the population. This means that the concept of "quality of the population" has a more general content than the concept of "human potential of the population." However, according to Soboleva I.V. "human potential of the economy can be characterized as the accumulated stock of public physical and moral health, general cultural and professional competences, creativity, entrepreneurship and civic engagement implemented in a variety of areas as well as in the level and structure of needs."\textsuperscript{14}

Thus, the Soboleva’s key concept to characterize the human potential is the reserve (of health, competences, activities). For this author human potential is created, preserved, stored, and used health, competences and activities. According to Soboleva in the economic theory human potential can not be seen in all its properties, but only to the extent that its development and implementation determine the social and economic efficiency of reproduction processes. This author concentrates on the realization of human potential in labor activity and in consumption, as well as on the analysis of labor potential.\textsuperscript{15}

“Human potential”, according to Zaslavskaya T.N., “is the willingness and ability of the national community to the active self-development, timely and adequate response to the multiple challenges of the external environment and successful competition with other companies.”\textsuperscript{16} While determining the potential Zaslavskaya T.N. uses the notion "ability" and the notion "readiness" of communities. Ivanov O.I. believes that the human potential should be interpreted and explained primarily in terms of activity theory and refers to the fact that Zaslavskaya T.N. in the structure of human potential identifies four interrelated but relatively independent components: socio-demographic, socio-economic, socio-cultural and active.\textsuperscript{17}

Many authors believe that the human potential of large social groups is not the sum of the potentials of individuals. According to T.N. Zaslavskaya "this is not the integration of personal potentials and some other entity that is much less dependent
I.V. Soboleva actually agrees with this, but in her opinion if the total human potential is not the sum of individual potentials, the cumulative human capital can be reduced to the sum of individual human capitals. It is clear that our strategies of human potential formation, use and management depend on our ontological views on human potential, its nature, structure, and levels. We should clearly understand what human potential we are dealing with, who are its carriers, what is its subject - population, particular regions of the country, some social community (organization), small social groups or this is just the potential of individuals? From the ontological point of view human potential can be described from the standpoint of social realism, social nominalism or combining realism and nominalism, and in terms of methodology using holistic, individualistic or both holist and individualist methodological approaches.

Collective human potential (of a country, a state) has at least three levels: personal level, group and various social communities level; more-than-group level, that is, a holistic human potential of the country and the state. The elementary unit of human potential of the community, of the country is the potential of an individual. Interacting with each other and joining together in different social groups and communities people create human potential of the group, of the community which power is superior to the potentials of individuals.

Groups interacting with each other create human potential of a higher level, the potential of the country and the state. In this way various human potentials or different levels of a single aggregate human potential are created, interact and get enhanced or attenuated.

The concept of human development by Ivanov O.I. involves such basic concepts as -subjects of potential, agents of potential formation, the structure of potential; needs, abilities and readiness of potential subjects to perform socially important activities, social functions, social roles; general and specific systems of needs, abilities and willingness of subjects to perform socially meaningful activities, social functions and social roles; the quality of human potential; the dynamics of human potential (its appearance, change, functioning, disappearance); the formation of
human capital; its use; deformation of human potential; degradation of human potential. Ivanov O.I. defines human potential as formed in the interaction with the social environment the system sets of universal (general) and specific (specialized) needs, abilities and willingness of various social communities to perform socially necessary activities, basic social roles and functions that provide both continuity and innovation in the development of vital public spheres as well as in society as a whole.

In this connection it is necessary to invoke the concept of "human resources" and "human capital." Approaches treating a person primarily as a resource, the scope of their applications and the range of problems that can be solved with their help are determined clearly enough. Both concepts allowed us to view a person not simply as one of the functional elements of industrial, social, technical, commercial, etc. systems, but as an entity that can not be tightly integrated into these systems or reduced to pure functionality. Actually, the very desire to take into account these human qualities was caused perhaps by the same considerations to improve system performance, enhance their manageability. But in reality it has led to the radical change of the very systemic analytics: elements of non-linearity, what is called bifurcation points, had to be somehow introduced into it. Nevertheless, these concepts have fundamental limitations: people there acted only in their relatedness to these systems and involvement in them as merely something that was consumed, used in production processes or social practice in this or that way.

Table 1 - Evolution of the view on a person as the subject of economic life

<table>
<thead>
<tr>
<th>Category</th>
<th>Period of active use in national science</th>
<th>Reflected views of a person</th>
<th>Factors of emergence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Labor force</td>
<td>19th century – to present</td>
<td>Person as the bearer of abilities and qualities that can be used in the labor process</td>
<td>The need to take into account and personal production factor</td>
</tr>
<tr>
<td>Workforce</td>
<td>The 20s of the 20th century – to present</td>
<td>Person as a passive object of external control, as a planning and accounting unit</td>
<td>Need to measure the efficiency of the process of labor reproduction under the centralized management of the economy</td>
</tr>
<tr>
<td>Labor potential</td>
<td>70-80s of the 20th century – to present</td>
<td>Person as an object with his/her labour needs and interests</td>
<td>The need to intensify and effectively use the personal factor related opportunities</td>
</tr>
<tr>
<td>-----------------</td>
<td>----------------------------------------</td>
<td>-------------------------------------------------</td>
<td>---------------------------------------------------------------------</td>
</tr>
<tr>
<td>Human factor</td>
<td>Late 80's - early 90-ies – to present</td>
<td>People are the main driving force of social production, a means of increasing its effectiveness</td>
<td>Socio-political conditions, the need to increase the personal factor impact</td>
</tr>
<tr>
<td>Human capital</td>
<td>Beginning of the 90s – to present</td>
<td>Person is the object of the most effective investments and the subject transforming the combination of knowledge and skills with a view to their subsequent realization</td>
<td>Recognition of instrumental value of a person and productive nature of the investment in his development</td>
</tr>
<tr>
<td>Human potential</td>
<td>Beginning of the 90s – to present</td>
<td>Person is the owner of the qualitative characteristic of the level and conditions of the use of competencies, experience, intellectual ability capable of continuous improvement and development</td>
<td>Human development is a process of enlarging people's freedom to live a long, healthy and creative life, to enjoy other valued purposes, to actively participate in ensuring justice and sustainable development on the planet</td>
</tr>
<tr>
<td>Human development</td>
<td>Present time</td>
<td>Person is not only a means but also the main objective of economic development</td>
<td>Theory and methodology of complex economic, social and political development. It includes moral and philosophical point of view, detailed analysis of economic sciences, as well as a specific aspect of the ethical and political issues.</td>
</tr>
</tbody>
</table>

Due to the necessity to determine the relationship between the components of the concept of human development we will consider the now traditional for economics problem of human qualities influence on productivity. This situation is also interesting because within the approach under consideration the task is set to identify the links of organizational capabilities to implement changes based on the management of the human development potential. So, to identify opportunities for human participation in economic processes the concepts of "labor force" and "human capital" are typically used. Labor force is commonly understood as a person's ability to work, i.e. a combination of physical and intellectual abilities that can be used in
production. The practical significance of this approach is determined by the characteristics and indicators of health, education and professionalism. Human capital is seen as a set of qualities which determine performance and can be a source of income for both the person and for the organization and society as a whole. These qualities, according to most researchers, should include health, natural abilities, education, professionalism, mobility. Thus, the main recommendation is the formation of multicomponent characteristic of the labor potential as the basic concept involved in the formation of the new directions in the study of organizational effectiveness and development. This approach should take into account psychophysiological abilities to participate in public activities, the formation of stable social contacts; generating abilities, rationality of intraorganizational behavior, knowledge and experience sufficient for the use in the organization, etc. Thus, in terms of content related aspect such components as labor potential, health, creativity, activity, professionalism, etc. are of importance. And the parameters describing these components can, according to A.P. Egorshina, be applied to both an individual and to the staff of the organization as a whole. Human labor potential can be considered as part of his/her individual potential when it is part of human potential which is formed on the basis of natural abilities, education, training and experience.

The consistent development of the concepts of "labor force", "human capital", "employment potential" and "human potential" determined the course of further investigation, when the direction of organizational changes is determined by the possibilities of human development.

With the changing requirements for employees there arises an issue of the human capital quality, which would allow integrated assessment of the employee’s ability to perform a job in accordance with the requirements of society and current production. Today it is not enough to possess just specific professional knowledge, skills and abilities. The training content should be expanded so that an employee could acquire a wide range of knowledge reflecting a pattern of the contemporary world. UNESCO recommendations on redefining of the concept of human resources can be considered an acceptable guidance here. These recommendations suggest
a transition from the classical understanding of human resources to the concept of human competence.

Figure 1 - The mechanism of reciprocating coordination of organizational changes resulting from human development possibilities.

In many respects the concepts of "standard of living" and "quality of life" which are used in the social sector to assess and optimize the health system are quite interesting. It is important to form such an integral understanding of the possibilities of a person which would include both of these aspects- that a person acts as a consumed material resource being however a special kind of resource able to show his own, not determined by any ambient systems activity, and that he consumes natural and social resources. It is this that determines the need for recourse to the concept of human potential which we believe is an integral one in its content. Moreover, this concept is related to the incompleteness, the dynamic instability of human development. The notion of potential as is known has been thoroughly worked out in physics, in the study of dynamical systems. In general, the potential of the system is its ability to perform some work. This notion, therefore, provides an indication of the value that can be quantified. Characteristically, that the measure
obtained in this way is not some absolute characteristic of this system. The work which the system can perform is usually determined via the potential difference.

Human potential (of an individual, social group, population, country, etc.) will be correlative value determined by both the characteristics of the object itself – usually called internal ones - and by external characteristics - things surrounding him and those he has to deal with while performing some work. It is important to keep this in mind as far as the human potential of the individual is largely formed and developed in the process of socialization. This is important also in the sense that formed potential human as well can be realized in a different degree depending on external conditions and on the desire of the individual himself.

Phenomenology of human potential has the following specifics:

1. Systemness - human potential has systemic properties and can not be reduced to a simple sum of qualities of people.

2. External conditionality - the formation and realization of human potential is determined mainly by "external" conditions and factors, the medium of its existence.

3. Opacity - human potential is characterized by hidden properties that can manifest themselves under changed conditions.

4. Strategic importance - the properties of human potential cause human development for both the near term, and the more distant future.

Human potential can increase because its productive realization when people use their abilities to acquire new knowledge does not reduce its capacity.

Among the external circumstances there are opportunities associated with the improvement of conditions for the conservation, development and realization of human potential. In this sense, the notion of human potential includes not only descriptive, but also normative components.

We will note that the value of human capital can not be expressed only in terms of cost. Moreover, it can not be reduced in principle to only quantitative estimation since there are no methods to directly measure possibilities. But at the present stage of research to understand the phenomenon of human potential it is important not only to formally calculate its value, but to assess the quality of social life and the prevailing
economic conditions for the formation and implementation of human potentialities in labor or other socially recognized activity. If such conditions exist, the human potential can be realized as human capital being the source of income for its bearer and the source of economic growth and social progress for the society.

According to Yudin B.G. the concept of human potential has not only theoretical and methodological, but also value foundations. The concept of human potential has definite ideas about a person and his/her place in the world, the relationship with the surrounding social and economic systems, etc.

Identification of the three components of the human potential index i.e. per capita income, average life expectancy and literacy level of the population can not be combined with that one-dimensional view on a person typical of narrow concepts. But furthermore, none of these components add anything definite concerning human nature - and from this point of view the three components of the UN index can be interpreted as something that characterizes the conditions of human development, human self-realization. The higher the values of these components, the higher the total index value, the more favorable are the conditions for this self-realization, the more opportunities there exist to use human potential.

We spoke about the three components of the human development index presented in the UNDP concept. As we found out, both these components and the index as a whole characterize the conditions of human development and fulfillment. Each of these components can obviously be understood as a certain kind of resources - then, with a certain simplification, per capita income will represent material resources, the average life expectancy – health and literacy level - education. And each kind of resources deficit substantially limits, or even makes it impossible at all the realization of human potential. Thus, each of these types of resources can be considered necessary for the normal functioning of the organization. However, is the number of resources exhaustive? Here we take into account that there are developed methods for quantifying and comparing as well as extensive statistics concerning each type of resources. After all, what can be calculated does not always coincide with what seems really important. In this context, it makes sense to pay attention to
the research of V.M. Petrov in which an attempt to define and measure spiritual potential is made. Within the spiritual potential the author identifies more particular types - aesthetic, artistic, social and moral and other potentials. It should be noted that the measurement method developed by V.M. Petrov differs significantly from that used in the reports of UNDP and is of interest in itself.

Distinguishing between educational and general cultural component of human potential, according to some authors, has serious implications because the relevant types of resources play significantly different roles in human activity. The first type is the one that a person uses at his/her discretion. The more the knowledge, the wider the range of possibilities for a person to accomplish his/her personal or organizational goals. Resources of the second type may limit a person. However, this rather serious topic deserves a separate discussion. It is important that development opportunities and in particular the opportunities to realize the potential largely depend on the extent to which human rights are protected and guaranteed in the society. Meanwhile, the UNDP reports pay this issue little attention. This subject is touched upon only in the report of 1996. However, it only presents a table which indicates which of the international human rights instruments are ratified and approved in this or that country. This obviously is not enough to judge the real human rights situation. Meanwhile, human rights violations arising from the bureaucratic arbitrariness constitute a clear and often very serious obstacle to the realization of the person’s abilities. Now let us consider the concept of intellectual potential. In today's world, intellectual principle more and more dominates in various fields of human activity. Modern socioeconomic mechanisms allow us to promptly implement these achievements in the latest technologies, and then in goods and services. There appear new means of communication, new social institutions, new fields of human endeavor, and all this is fundamentally changing the very fabric of social life. And its forming structures while being updated become more receptive to scientific and technological innovation; the latter, in turn, continuously generate pulses that transform not just the external conditions, but also the actual content of the existence of man and society.

Thus, scientific and technological development of recent decades has been
increasingly concentrated around the human being. Increased human capabilities and new degrees of freedom become its main direction. The underside is that a person increasingly becomes a critical link in many technological and organizational processes, and is also subject to hazards posed by the same new technologies that sometimes threaten not only his physical and mental existence, but also call into question his very identity.

This organizational context constitutes the main objective of the study - to work out such a concept of human development management which would promote the growth of social and economic efficiency taking into account sustainable development of an organization.

One of the factors influencing both trends in employment and human development is the dual transformation of production systems and labor markets towards an economy based on knowledge. With the increasing requirements for adaptive capacity of both businesses and employees job creation is also changing. The globalization of economic relations, the widespread use of information and communication technologies give rise to new professions and eliminate the old ones, transforms the nature and content of labor. Knowledge and continuous learning process are becoming the most important success factors for both an individual and businesses. Employment policy should anticipate technological and organizational modifications so that employees were adequately prepared for the jobs changes, the jobs were in demand and there were incentives to create them. The Report on the World Employment devoted to the issues of training to increase employment capacity stated the need for new approaches and integration of training activities with other political activities aimed at promoting employment. Given the importance of this issue for both enterprises and employees it was suggested to focus on ensuring access to education as a basis to increase the quantity and quality of jobs.

Development of the concept of human potential was largely facilitated by the fact that starting from 1990 the UN Development Programme (UNDP) has been publishing annual global "Human Development Reports". Solid integrated approach to a human being and human society under this concept has been recognized as a very
constructive and promising one in many countries which resulted in national reports on human development being published startin from 1995.

UNDP World Reports for all countries use a common approach to the operationalization of the concepts of man and society, to the principles of analysis and assessments of each country’s state, etc. But Russia (as well as any other country) requires special adjustments of UN basic principles and methods for the study of human development. First, the "internal" analysis should consider not only the already mentioned three components of human development (economy, health, education), but also their different projections - labor potential, intellectual potential, population potential, personal capacity, etc. Second, with the sociocultural, economic, ethnic and geographic, historical, etc. heterostructure of Russia general statistical analysis of the whole "structure" can be considerably complicated by the fact that the notion of human potential may become not so much an integrative but a syncretic one regarding its individual projections.

To avoid this danger, it is apparently useful to determine a separate aspect of the human potential analysis and, therefore, independent priority scale of its projections for each of the "substructures of" Russia - for different markets (labor, capital), regions, ethnic cultures and faiths, subcultural strata and demographic cohorts. Methodologically to assess each projection of the human potential for each of the "substructure" is quite rightly. There is no reason to fear whether we will get a uniform picture combining these estimates across Russia because the factor that unites all these estimates (and a dominant one for each estimate separately) is labor component.25

According to the A. Sen’s findings economic growth can contribute to human development when it provides not only an increase in per capita income, but also allows you to have a sufficient level of public spending that are invested in the social sphere (and not weapons), and are accompanied by a fair distribution of resources in the economy.26 Income, according to the concept of human development, is just one of the choices a person would like to have and despite its importance it does not determine the complexity and diversity of human life.
Nature of interdependence of human development and employment determines trends in the formation of the economic foundations of human development and most importantly - the vector of this development in general. The task of identifying specific opportunities for human development in the social and labor spheres requires detailing, employment structuring, quality indicators. This goal is achieved through the identification and employment in the analysis and calculations of the parameters characterizing the labor and industrial relations, and further – the search of such their combination which would create the best conditions for human development. The international community represented by the ILO has proposed the concept, definition denoting and characterizing the most effective combination of such indicators and signs that reflect the working conditions requirements in their broadest sense and at the same time meet the criteria for the concept of human development, and has offered the term "decent work".  

As the primary objective of ILO during the global transition period its first report suggested promoting decent work for women and men, equality of opportunities in this field throughout the world which fully complies with the principles of the concept of human development. We shall note here that a number of provisions concerning decent work and equal opportunities for all in the world of work were formulated in ILO Declaration of Philadelphia in 1944, when postwar goals of this organization were being determined. As stated in the Declaration of Philadelphia, "ILO commitments include commitments to promote the adoption of programs that aim at " the employment of workers in the occupations where they can get satisfaction revealing fully their skills and knowledge and can make the best contribution to the general welfare. " It stresses the importance of providing opportunities for all to participate in the fair distribution of the fruits of progress. This is the basis of the concept of decent work. This approach to economic progress, labor and employment coincides with the principles of human development concept. Decent work means highly effective labor in the proper working and safe environment. It means free labor and good work organization delivering each employee satisfaction, the opportunity to fully demonstrate their abilities, skills and
craftsmanship. It also means work with decent pay, with a fair distribution of the results of progress, labour with the workers' rights protected and they themselves being actively involved in the organizational changes and can make the greatest contribution to the common well-being. Here, as we can see, the precondition, the factors and the conditions for human development are presented in full.\textsuperscript{30}

Economic objectives of the company by labor factor in a market economy as we know is to optimize costs and increase their impact, to pursue rational staff policy, to minimize transaction costs, to maintain and develop the productivity of workers, etc. At the same time the current management philosophy suggests social orientation and social responsibility. In this context, the economic policy objectives of the enterprise must be consistent with the objectives of individuals, i.e. be social. Charles Hucks\textsuperscript{31} in 1961 proposed to combine (align) the main goals and objectives of economic policy with economic goals and objectives of enterprises and those of individuals. In this regard, K. Hucks offers such goals as the decentralization of decision-making and the development of systems of participation in decision-making, improved social relations and economic situation, as well as strengthening of "emotional ties" with the enterprise without compromising attachment to other groups, such as family and etc. This essentially means that the economic and social efficiency underlying the development of socially-oriented economy is mostly predetermined by the behavior of people. Economic behavior is a form of social behavior, has a complex structure and is determined by a complex interaction of consciousness and objective reality which affects the formation of values. Conversely, already generated values and economic consciousness in general largely determine the perception of reality and the choice of a particular set of economic actions, models and strategies of social behavior. Social orientation of the market economy associated primarily with human development puts it at the center of economic development and must find the real embodiment of economic policy in general, in economic and social programs of the state, regions, enterprises and organizations. Differences in the approaches to the human factor by economists and politicians, sociologists and psychologists are largely due to well-known contemporary theories. This was pointed out by E. Laser:
"... Economists have a comparative advantage in providing solutions, and the lag in asking questions. Economic theory uses scientific methods like physics or biology. But the weakness of economic theory is that the exactitude requires simplification that limits the analysis and narrows the focus of the researcher. For this reason, industrial psychologists and sociologists who think more broadly identify issues better than give answers. " Economists’ approach allows them to provide a specific solution, but sometimes it makes it difficult to think of the larger or more important aspects of the problem. An economist examines generalization as the goal. Generalizations are more applicable to human resources than to more impersonal market structures, employees are individual units as opposed to units of capital, they have the idiosyncratic basics and behavior patterns. Economic theories are successful only if they are widely used, and their content is important. The task of labor economists in practice solving problems of human development is to find simple models that describe well the important components of employee behavior. Credible background of an economic model depends on the extent to which a person is independent in his/her economic preferences. This occurs when, first, the person is not included in personal relationships (kinship, friendship, partnership), and secondly – he/she is neither included in the more general social order expressing the ethnic, religious and political elements of the culture. And this is totally unrealistic since human relationships are always immersed in the context of culture in the broadest sense of the word, and besides in a particular national culture which has its own rules, codes of conduct in the family, labour activity, group, etc. Thus, to explain the processes that govern the interaction of employees and employers in the context of the objectives and instruments of human development it is necessary to rely on two relatively independent of each other target components - economic and social efficiency. Leading researchers see the principle way to solve this challenge in the socio-economic development as follows. Conceptual background to overcome the contradictions between economic and social efficiency are presented as complementary factors: social efficiency, i.e. the conditions for human development can only be achieved in the profitable enterprise, and economic efficiency requires
such efforts that the employees are willing to make only starting from a certain level of human development, as a consequence of social efficiency.\textsuperscript{33}

People differ from other systems by their ability to perceive and distinguish alternative courses of action, and mainly - to conceive and manage their own actions through conscious efforts. They set priorities and make axiological choices based on preference, necessity or any other motivating forces.

Everyday working life is basically determined by a number of choices followed by actions, new situations or states are formed. The cycle continues as new alternatives caused by the previous choices appear. Groups of people form the organizations and choices to meet common goals. The choices made today form tomorrow alternatives. Despite the fact that the concepts of choices and purpose may be considered as something taken for granted, they are fundamental to the perception of a single system. The study of the system takes place with the aim of identifying points of intervention in which functions, streams or structures may be changed to suit the purpose. Purposes themselves are checked for feasibility or desirability in light of the actual circumstances.

The purpose of the system created by people on the ground level can be set by those who designed it. Later, in the process of changes the system is adapted to the objectives of the users. Final goal or purpose achieved during the transformational changes may not be realized by creator of the system. In this case the system should be identified in connection with its users as they determine its final purpose.

If the main objectives and points of view of creators and users are different, the systems described by them may also differ especially concerning the issues of political and social influences. These differences can lead to conflict, if one group is in need of actions that are blocked by another group. The system can have more than one purpose depending on the viewpoint of the observer. Obviously, different perceptions of the system’s purpose can lead to significant differences in estimates or in system behavior. When trying to assess the behavior of different kinds of systems researchers discover that many assessment methods fail to explain the multiple and conflicting perceptions of the system’s purpose. It is therefore impossible to assess
the behavior of the system without the synthesis of conflicting points of view. Since the purpose is essential for evaluation of the system and is associated with the point of view of people who are part of the system it is necessary to include multiple perspectives and possible differences between them which can lead to the conflict. Thus, any system has the potential for conflict concerning the objectives and functions performed. Systems of various types are potentially conflict environment. The main problem of the theory of systems, and especially in social systems is how to reach agreement on the purpose as the first stage of conflict resolution.

Organizations as systems can not be studied in isolation from the participants. When people are components of the system their behavior either promotes or impedes the implementation of the purpose. Human factor of purposeful systems makes them less predictable and manageable compared with mechanical systems.

It follows that in social systems to reach their purpose people should cooperate with the unconditional goal - to make the system function better. Quality of the working environment, intellectual stimulation of work and personal contribution to the yield - all this contributes to the implementation of the system’s purposes. Conflict resolution in such a way that the "losers" associate themselves with the organization is a task that requires specialized knowledge when considering strategies, arbitration or while developing the structure of an organization.  

What is the nature and causes of the growing attractiveness of the concept of human development? Fundamentally important idea of the concept is the assertion that development can no longer be seen only as an increase in volume of goods and services. Consequently, the conventional macroeconomic indicators including gross domestic product (GDP) and per capita income are not adequate for characterizing development in all its manifoldness. Only economic indicators can not serve as a universal criterion for the distribution of public resources or ranking of countries in terms of development. An idea that the production of more and more goods and services is the best way to improve living standards and address other national objectives is to some extent one-sided. This approach leads to an underestimation of the many non-economic parameters of development. Standard of living can be
relatively low with formally high economic growth rates. The opposite situation is also possible - a relatively high standard of living at moderate rates of economic growth. Human Development Index (HDI) proposed by the UNDP as a combination of indices of longevity, educational attainment and adjusted income allows us to consider development more adequately and comprehensively. The index takes into account the most important parameters of human welfare. Directly or indirectly through the index such characteristics of the development as health and longevity, the environment, culture and level of education, level of income are taken into account. All these components are formalized and suitable for cross-country comparisons. As can be seen, human development as measured by the HDI is something more than what is formally derived from the proposed three dimensions. However, there is no contradiction here: HDI is an integral socio-economic indicator, which is constantly being improved by experts of UNDP.\textsuperscript{35}

In this aspect, the theoretically correct and justified is the study of human development in an organizational context that allows us to synergistically combine all above conditions and dimensions of the human development taking into account cross-country differences of indicators and methodologies.

The UNDP report of 2010 contains significantly completed definition of "human development". According to the authors, the definition of human development as the empowerment of human choice is fundamental but not sufficient. Human development implies the preservation of positive results for a long time and counteracting the processes that impoverish people or enhance their oppression and structural injustice. Therefore, the key issues are also such principles as social justice, stability and respect for human rights. Proceeding from this the organization's experts offered a new amended definition corresponding to the practice and research on human development: "Human development is a process of enlarging people's freedom to live a long, healthy and creative life, the enjoyment of other purposes, which they have reason to value, to participate actively in ensuring just and sustainable development on the planet."\textsuperscript{36}

In light of the above the definition of human development has three components:
Welfare: more real freedoms for people so that they can thrive.

Empowerment and the possibility of a person and groups to act and produce valuable results.

Justice: improving social justice, providing sustainability of results over time, respect for human rights and other societal goals.

It can be stated that human development is seen as a means to achieve long-term goals of socio-economic development. Economic benefits derived from the people, whether in the form of cash income, material goods and services received in kind, own production or the production of consumer goods or features, such as long life and health which can be only partially mediated through the relations of production and exchange, and can be understood as the streams originating from the capital stock, which, in turn, can be divided into three components: natural capital, artificial physical capital and human capital.

Stock of physical capital comprises produced means of production, i.e. plants and equipment used in agriculture, industry and services, physical infrastructure (roads, bridges, ports, pipelines, railways, airports, irrigation canals) and dwelling stock. As well as natural one physical capital can be used, get degraded or transformed into other forms of capital. Traditional economic development is actually focused on the increase in the stock of physical capital, for example, by creating incentives for businesses to invest due to increase in the savings rate or through the creation of public enterprises. Investment in physical capital for a long time has been considered as a key factor in the development of human capital which consists of knowledge, skills, experience, energy and ingenuity of people. It is now recognized that human capital plays the central role in the process of organizational development and this has increased the interest to the economics of education, health economics, labor economics and related sub-disciplines. Benefits of investing in human capital have been underestimated. This has led to a marked prejudice against investments in human capital in favor of investment in physical capital and the exploitation of natural resources. A distinctive feature of human development strategy is a focus on human capital. This does not mean that the increase in the natural and physical capital
is ignored - it would be a serious mistake - but it means a major change and redistribution in favor of the priority of human capital. The reason for this change in priorities is that, firstly, the income from investments in people is generally higher than from other forms of investment, secondly, investment in human capital, in some cases, reduces the use of physical capital and natural resources exploitation and, thirdly, the benefits from investing in people in general are distributed more evenly than the benefits from other forms of investment. Thus, a greater emphasis on human capital formation should lead to rapid and sustainable development with a more just distribution of benefits from it.

There is a connection between the level of literacy, professionalism and productivity. There is also a complementarity between investments in people and investment in physical capital. Human capital is a direct contribution to the production process. For example, morbidity leads to lower productivity and reduces the number of days worked. Therefore, programs that lead to improved health are not only valuable in themselves (as human development), but have a positive impact on the volume of production (human development as a means). In addition, more experienced employees provide high productivity. Skilled labor can not only do what is within the competence of unskilled labor, but can probably work faster with less control and the number of errors, and produce goods and services of higher quality.

Complementarity between human capital and physical capital follows from the nature of the production process. The organization which gives priority to physical capital neglecting its human capital will soon discover that the level and rate of return of physical capital are lower than they should be. Finally, investments in human capital are necessary for technological progress which in conjunction with human capital is the driving force of economic growth. It is difficult to improve production methods, if buyers, workers and consumers do not have sufficient training and education to understand the new technology. Physical capital, education, human capital accumulation and technological progress are closely linked.

Human development strategy is likely to require the state's activity. First, it will have to intervene to correct the bias in favor of products and processes that make
heavy use of natural capital. Secondly, the state will have to correct the bias towards the formation of human capital, as the market tends to ignore the many benefits associated with spending on human development. Thirdly, the state will actively participate in the financing and implementation of investment projects including the cost of research and development, education and training, health and nutrition, as well as investments in various forms of physical capital such as transport, energy and urban infrastructure.

It is sometimes argued that government’s spending "displace" private ones and that private investment yield is greater than the return on government spending. This is then used as an argument for tax cuts and government spending. However, in the case of human development, public investments are an addition to private investment. And because spending on human development generate positive externalities - the state should take on a wide range of activities within the framework of child nutrition programs or investments in research and technology. Once these public investments are made, the private sector can assign these external benefits by investing its own and receives a higher rate of return than would otherwise be possible. This means that the profit growth of private investment is growing simultaneously with the public expenditure on human development. At the same time benefits from public spending on human development are received in part due to the employment created through private investment. Public and private investments thus complement each other. The more is spent on human development, the greater is the likelihood that private investments will increase. In addition, the larger is the spending on human development, the more uniform is the distribution of income, ceteris paribus, and the faster overall growth rate.

In many developing countries the incentive structure is in conflict with the goals of human development, and it will play an important role in the design of human development. Human development is significantly related to correcting market failures, particularly failures in production factor markets. If generated signals are left to their fate, the market would lead to a systematic underinvestment in human capital and in research in the field of science and technology, because private firms can not
provide the benefits of their spending on research and development (despite the existence of patents and copyright) as investments in research are characterized by considerable economy and therefore the research projects related to human development are seen as risky and hence unattractive if not integrated into larger national research programs.

One of the important findings of the current discussions on the future directions of development is that human development is neither desirable nor possible without sustainable development.

Thus, the concept of human capital generates a quantitative and qualitative assessment of capabilities, facilities - but not goals. Methodologically productive approach in this case is the development of the concept of human development in the context of organizational changes that will provide the possibility of management of human potential in the economically rational way.

In continuation of this conceptual scheme there appears the possibility to establish the relationship of human development and economic actors in the context of organizational changes.

Organizational changes are the formation of a new organizational structure adequate to the changes in the environment. Organizational changes are accompanied by structural break of values, norms and patterns of action shared by staff, as well as traditional methods of decision-making that become obstacles to the organization’s adaptation to the pace and direction of market changes.

In management human resources is the most onerous asset of all. An almost limitless variety and unpredictability of people make them incredibly difficult for the assessment, much harder than any electromechanical assembly together with its practical specifications. Nevertheless, people are the only element that has the ability to produce value.

An organization that creates the most comfortable working conditions will successfully develop, preserve the most productive employees and have the most loyal customers.

One of the main driving forces in the performance of work is knowledge.
Knowing our success is directly associated with satisfaction from the work performed. To maintain a competitive position in the market of the XXI century the management will have to find methods that increase their awareness of the people. The most cost effective and lasting solution to the problem of talent deficit is to help each person to become more productive. This requires management to figure out how to invest in the potential of human performance.

In the last years of the XX century management believed that people, not money, buildings or equipment is a crucial feature of the successful enterprise. As we move into the new millennium and the existence in the economy based on knowledge, it becomes impossible to deny that it is the human potential that is a source of profit. Any property of organizations except people is passive, and these passive resources require human intervention to produce value.

Organizations undergo painful changes not only because of globalization, but also because the force that makes global company really competitive is the exchange of information. Senge shows the main features of this phenomenon: "For the first time in its history the mankind has the opportunity to create more information than it can assimilate, give rise to such interdependence which it can not control, and to accelerate changes to such an extent that it can not keep up with them." Reflecting on measuring of human development value, we must recognize that there are two aspects: economic and spiritual. A priori we can agree that the spiritual value of people is extremely important, and focus on the economic side of the issue.

To measure the effectiveness of human potential is not only possible but also necessary to retain a viable market position. Using human capital ever more successfully the staff increases its contribution to the goals of the enterprise. Today both in this country and abroad there is growing understanding of economic development as primarily human development, as expansion of functions and potentials of a person, accumulation of human capital and its use in an expanded social reproduction in the interest of all members of the society.

All economic systems and organizations are striving to develop, but by what criteria one can determine which of them is more successful and which one is less?
What is the relationship between the concepts of "development" and "progress", "development" and "sustainability", "development" and "equality", "development" and "stability"? The answer to this question depends on the main objective of the development. Does it consist in the accumulation of wealth or in something much greater - in improving the welfare of people, in creating conditions for social security and freedom of every person, in ensuring preconditions for his/her creative and innovative work, in providing equilibrium coexistence of man and nature? Such more advanced definition of the purpose of development is the main postulate of the concept of human development.

Conclusions on 1.1.

Human potential is a scientific category used for the qualitative characteristics of the level and conditions of the use of competencies, as the ability to continuous improvement and development in the context of the integral representation of the possibilities of a human being when he acts as a special kind of resource able to exhibit activity non determined by systems, and being simultaneously a consumer of natural and social resources. Human potential can be realized as human capital being the source of economic growth for the organization and society.

In this theory human development and human potential is postulated as a global goal of the highest priority which has universal significance. Current understanding and a new paradigm of balanced socio-economic development claim a human the main subject of reproduction processes, and put him/her to the center of all social and economic interactions.

Consistent awareness, approval and implementation of the concept of human development involves a radical restructuring of national, regional and organizational development programs aimed at ensuring, as far as possible, the most complete satisfaction of human needs, improving and highest possible realization of their abilities. Appropriate goal setting, priority system and tasks of social and economic development should be coordinated at all levels of society and economy.

The concept of "human capital" is becoming increasingly used in economic practice, but its content, place and role in the socio-economic system has not yet been
subjected to a comprehensive theoretical and methodological analysis, the directions of intensive growth potential have not been identified, approaches to managing its development are still not determined.

Thus, the formation of the integrated concept of human development management promotes social and economic efficiency determining the long-term sustainability of an organization. Methodologically productive approach in these circumstances is to develop the concept of human development management in the context of organizational changes that will allow us to provide management of human development in the economically rational way.

1.2 FORMATION OF SCIENTIFIC VIEWS ON HUMAN DEVELOPMENT

The theory of human development has a long tradition in economics. Aristotle, F.Aquinas, J. Calvin and others studied it as an economic phenomenon. Economists of different schools starting with the Physiocrats have been solving the problems of its formation, operation and accumulation, composition, structure, and measurements. Various methodological approaches and techniques considered potential as microeconomic and macroeconomic phenomenon.

The theory of human development is based on the theory of production factors formulated by the classics of economics. W. Petty, A. Smith, D. Ricardo, J.S. Mill developed methodological principles that later allowed us to analyze such intangible elements of production as knowledge, skills, worker’s experience. K.Marx researching labor costs, skills, workers’ qualifications, and creative nature of the work made a significant contribution to the theory of human development. He defined and studied the category of variable capital which in economic terms is most similar to the current concept of human potential.

Theoretical background of the concept of human potential was developed by A.
Marshall, J.B. Clark, I. Fischer and others. Among Russian researchers we cannot but name S.G. Strumilin who emphasized the special role of education in the development of production and accumulation of wealth. In the second half of the XX century the theory of human capital was developed by G. Becker, M. Blaug, M. Fischer, T. Schultz and others.\textsuperscript{37}

The theory of formation and effective use of intellectual and creative characteristics of individuals with the analysis of such categories as "labor", "human factor", "workforce" were deeply developed in national economics (S.A. Dyatlov, L.E. Miller, E. I. Ruzavina, etc.).\textsuperscript{38}

Improved knowledge about the possibilities of human being in reprocessing appeared in economics in the late XX century (V.S. Klimov, T. Stewart, L. Edvinsson, etc.)\textsuperscript{39} Applied aspects of the intellectual potential theory such as accounting and valuation of intellectual resources of the firm in the form of intangible (intellectual) assets have been developed. Concepts of human resources development and knowledge management are rapidly developing research areas studying the influence of human potential accumulation on the productivity of economic actors.\textsuperscript{40}

Genesis of scientific ideas and views on human potential is characterized by the diversity of approaches. At the same time there is no a holistic concept of human development. Many theoretical aspects of human development such as the nature, structure, features of its reproduction, the specificity of economic relations in the field of institutional interaction remain insufficiently studied.

In fact, the concept of human development is the result of a long evolutionary synthesis of many scientific schools and economic theories. The first attempts to examine and assess the role of human beings in the development were made by the classics of economic theory. Adam Smith and his followers believed the man not only the source, but also part of the social wealth. Treating a human being as a goal of social production, directly or indirectly, can be found also in the writings of representatives of other schools. The representatives of marginalist direction, for example, formulated the principle of rational human behavior in a market economy. Through the idea of utility having formulated the main tenets of the marginal utility
theory they came close to the foundation of the consumer behavior theory. One of the founders of the Cambridge school and neoclassical direction A. Marshall having synthesized many ideas about man's role in the economy directly associated the accumulation of wealth with human development. He made the following statement: "The production of wealth is just a means of maintaining human life, a means to meet his needs and to develop his forces - physical, mental and moral. But the man himself is the main means of production of wealth, and he also serves as the ultimate goal of wealth ... ". In the 30-s of XX century J.M. Keynes singled out the development and implementation of human capabilities and the empowerment of personal choice as an essential condition for economic growth.

At the same time for a long time, during the period of the industrial transformation of society economic thought in general was influenced by the processes of material accumulation. Capital accumulation and material factors were considered as universal determinants of progress. However, it was a factor analysis of sources of material wealth growth that caused a new view on the role and importance of a human in the economy. The thing is that, conceptually, the economic thought came to human development through the concept of "human capital". The impetus for the emergence of the latter was given by the work of T.Shults, an American scientist in 1950-1960-ies who in search of sources of productivity growth identified an unknown parameter which was initially called "residual factor". It was later identified as acquired and developed abilities to work. The research of T.Shultsf followers allowed them to formulate the concept of "human capital" which came to be understood as the body of knowledge and skills that performs the dual function of capital goods and consumer durables. "Human capital" factor enables us to determine fundamentally important source of economic development which is the knowledge and expertise and therefore correctly identify the economic role of education, science, health, hitherto regarded as consuming and unproductive. Human capital involves the use of resources, and therefore is related with costs. To carry out investment in human capital and its accumulation future benefits should compensate for the costs. According to the theory of "human capital" its accumulation can take
various forms. The most obvious of these is the accumulation of capital (development of abilities and skills) during school and after school training as well as the acquisition of knowledge and skills in the course of professional activities. Here also belongs family upbringing. There are other forms: investment in health, migration, getting information on the functioning of the economy, labor market and other forms ensuring the development of intellectual and physical abilities and possibilities of their implementation, improvement of his work efficiency. You may accept or reject this logic; however, one must admit that the concept of "human capital" became a milestone in the overall trend of changed attitude to education, health, culture and other public services, in particular in terms of their resource provision.

Return on education costs, for example, contributed to the perception of education in many countries as a factor of economic development, and by entrepreneurs and managers - as a factor in increasing productivity and the possibility of organizational changes optimizing intrafirm activity. Largely due to this the so-called non-formal education and adult education as well as in-house training programs are also developing. In many countries education is now regarded as economically rational human activity throughout one’s life. Lifelong or continuous education has become a conceptual reflection of this process. Naturally, this could not but affect the resources provision of education, with the most notable fact being that not only and not so much budgetary allocations were increased, but the sources of financing diversified. In the United States, for example, thanks to this process the share of expenditure on education in GDP for the third of the century has almost doubled and in absolute figures now exceeds defense spending. The fact that 55% of young people at the age from 17 to 23 (in Japan up to 60%) get higher education is today the most important factor for the future economic development.

In the area of international economic cooperation in recent decades an independent direction has formed - the promotion of human resources development which is undoubtedly genetically connected with the theory of "human capital".

"Human development" with all the nuances specific to different interpretations used in various international organizations means maximizing of human potential and
its effective use for economic and social development. Problems of “human development” include today's demographic problems, employment, health, nutrition, housing and urbanization, the environment, education and training, etc.

The concept of human development due to its structuring allows us to use the results in quite a number of ways which can be seen in the UNDP annual reports on the Human Development and national reports from different countries. Already the first report in 1990, along with the development of the theory and measurement of indicators contained thematic section devoted to urbanization. Subsequent reports analyzed such aspects as the necessities of life, the different dimensions of human security, opportunities for social development by reducing military spending, new areas of cooperation, poverty alleviation, employment, the impact of globalization, consumption patterns, the relationship of human development with environmental sustainability criteria and many others.

Researches in the Institute for Socio-Economic Studies of Population RAS chaired by the N.M. Rimashevskaya suggest, as already noted in the previous section, a more comprehensive approach to the definition of human potential and the use of three components: physical, mental and social health; professional educational resources and intellectual potential; cultural and moral values, spirituality and socio-cultural activities of citizens. The first group - the characteristics that determine the quality of human potential in terms of health - is crucial, because ultimately not only the physical ability of citizens, but the processes of demographic reproduction and the very existence of the population depend on it. The second group of indicators actually builds the boundaries of the labor potential of society and involves all forms of general and special education including the training of highly qualified specialists as well as the intellectual potential of the country, the basis of creative and of innovative activity. The third group reflects the cultural and moral potential of society which includes the system of moral values and the depth of their internal assimilation by an individual on which other qualitative characteristics (health, education, profession, intelligence) largely depend. Each of these components in the context of specific indicators depending on the purpose of measurement can be detailed and integrated.
Qualitative characteristics of the population can be used on a population level, i.e. in relation to the population as a whole and at an individual level, i.e. in relation to an individual. Of course, the macro-and micro-levels have their own indicators. So, if for the "top" position the most capacious health indicator is the average life expectancy, for the "lower" level integrated assessment of individual health are suggested. Population characteristics are critical in the spatial and temporal comparisons including inter countries ones. As for the individual indicators, their use is wider especially when assessing the quality structure of population including socio-demographic groups. They reflect the age evolution of the qualitative state and socio-economic factors at different stages of the life cycle of individuals determining it.

Fundamental difference between the concept of "human development" and the concepts of "human capital", "human resources" and other its predecessors is that human development is seen as a two way process. On the one hand, it is the formation of human capabilities (health strengthening, acquisition of knowledge, enhancement of skills), and on the other hand, it is the realization of acquired skills for productive purposes (work) or for leisure, cultural and political activities. A number of other features characterizing the fundamental aspects of human development can be distinguished as well. They are:

- analysis of the implementation of human development opportunities;
- focus on the activity of humans as subjects of the human development process;
- attention to not only prospective employees, but also to children and future generations;
- more distant horizon of the analysis;
- treating education as valuable in itself process, part of culture, not only the condition to advance training and work experience;
- recognition of the high importance of the off-production activity of women, support for women's equality and their status improvement;
- giving priority to sectors that contribute to better quality of life, but do not have a direct impact on the production of income (housing construction, sanitation);
- reliance not only on the economic and financial institutions, but also on non-
governmental, non-governmental organizations, church and cultural institutions.

The current concept of human development was formed in the late 80-ies of XX century. The main provision of this concept is the statement that people are not only the means but also the main goal of economic development. The very human development is seen as a process of giving people a wider choice. However, the expansion of choices and opportunities is not possible without observance of human rights and respect for fundamental freedoms. The first international instrument to proclaim universal status of human rights was the Universal Declaration of Human Rights adopted by the UN General Assembly in December 10, 1948. The approach based on the fact that human development is the purpose and criterion of social progress did not arise at once. At different times the key development objectives were determined as economic growth, poverty reduction, basic needs and human resource development.

"Human development ... is creating an environment in which people can develop their full potential and lead productive, creative lives in accord with their needs and interests. ....Fundamentally important is to empower choices to create opportunities for a person - all the things that people can do or they can become. The most basic condition for human development is the ability to lead long and healthy lives, to be well informed, to have the funds necessary for a dignified existence, to take part in social life. Without these, many choices are simply unavailable and many prospects in life remain inaccessible. "

Over the years, economic growth was seen as one of the main development targets applied in the development of policies. It was believed that the achievement of economic growth will automatically entail progress in the development of people and society, and the increase in aggregate output (e.g. GDP per capita) reduces poverty and increases the overall welfare of the population. The basis of this assumption was the view that production generates income and higher incomes, in turn, increase the financial or economic well-being.

Relationship between output growth and poverty reduction was considered so strong that many economists believed that it is enough to focus on growth as such in
order to achieve development goals. In other words, the growth was not just a means of ensuring the development and the purpose of the development. Nevertheless, even at this stage some experts understood that economic growth is not an end in itself, but a means of development. In 1955 an economist from the West Indies, Nobel laureate Arthur Lewis defined the aim of development as "the expansion of human choices." The same definition was given in the first Human Development Report published in 1990. The difference was that Lewis simply equated the idea of a wider choice to larger income and believed more that economic growth would inevitably lead to human development.

The realization that economic growth is not synonymous to human development came with the growth of socio-political instability and poverty. Practice in some developing countries has shown that the situation may also deteriorate with the production increase. These countries experienced rapid economic growth, but inequality, underemployment population and widespread poverty remained whereas other countries were able to achieve quite satisfactory level of welfare despite small incomes. It became evident that economic growth alone can not ensure a fair distribution of resources. This happened only in the few countries whose governments purposefully took measures to increase equality by implementing programs in the field of education and health as well. As for the richest countries, the proof that high levels of income donot protect from human deprivation became such indicators as rising crime, pollution, the spread of diseases, deterioration of the social situation. High economic growth rates have not improved the lives of people.

Development experience of the 60-s confirmed that without the implementation of large-scale social programs one can not achieve a significant increase in quality of life, solve social and demographic problems, build productive employment system and reduce poverty.

Given these circumstances, in the early 70s the main focus of economic development concepts was shifted toward the interaction of economic and social development, to the problem of the distribution of income and wealth, to enhancing the role of the public sector. As a result, the concept called "redistribution through
growth" appeared. Its aim was to ensure the welfare of people, primarily the poor through the expansion of labor-intensive production and hence the increase in GDP, wages and income; massive state support for the social sphere and general public involvement in the design and planning. This should have led to a better distribution without sacrificing incomes and assets of the rich.

A more direct approach was developed in the mid-70s under the concept known as "the concept of basic needs" which focused on the responsibility of the state to make the basic means of subsistence such as food, health care and education available to all.

However, neither the idea of "redistribution through growth" nor "the concept of basic needs" became widespread. Artificial division of development into economic and social one has not been overcome yet. Relationship between economic growth and quality of life has not been fully clarified. Basic needs, for example, were largely confined to the provision of goods and services rather than indicators of quality of life, the main emphasis was placed on the state and the population served as recipients rather than active participants in the activities aimed at the development. Moreover, these measures reduced economic activity while excessively increasing government spending on social services.

By the early 80s it became clear that economic growth per se can not be considered the value. Many countries have experienced a slowdown in economic growth and structural crisis. In the development policy qualitatively new priorities such as reducing public debt and spending, overcoming the economic downturn came to the fore. "Restructuring" and liberalization of the economy have redoubled attention to the previously proposed human capital theory justifying the economic feasibility of investment in education, health, vocational training and which considered man as the most important capital factor of production.

UNICEF (Giovanni Andrea Cornea, Frances Stewart, Richard Jolly) reacted to the policy of structural rearrangements. The report "Adjustment with a Human Face» was published in which the authors while not denying the importance of structural economic reforms urged the IMF and the World Bank to pay more attention to the
problems of poverty and the human conditions improvement. The fundamental principle was that the social aspects should not just "be added" to the package of structural adjustment of the policies as its only change. Instead they should be included in the new comprehensive development mechanism designed for long-term and focused on the needs of a person.

In 1987, the UN Committee for Development Planning agreed to consider in its report in 1988 the human costs of structural adjustment. This was the impetus for research under the direction of M. Ul-Haq, K. Griffin and J. Knight with the results published in the draft report "Human Development: the Forgotten Dimension of Development Strategies." In 1989 K. Griffin and J. Knight published the results of this work in a special issue of the "Journal of Development Planning" reprinted in 1990 in book form. A huge impact on the contemporary understanding of human development was made by theoretical developments of the Nobel Prize Laureate in Economics (1998) Amartya Sen. In 1989 he published a paper "Development as Empowerment" which used “the capability approach”. A. Sen treated the development as a process of enlarging people's choices, and not only the increase in material or economic well-being. In his view, the standard of living in a society should be measured not by the average level of income but by the opportunities for people to lead a life which they consider worthy. He saw the aim of social development not in the infinite production increase, but in providing opportunities for more choices: the choice to make more things, to live long, to get rid of diseases that can be avoided, to have access to knowledge. A. Sen connected this process with the expansion of freedoms which enabled people to choose the most preferred choices from a wider range: "One of the most important tasks of evaluation system is to consider human values. The task of "human development in the 1980s and beyond" can not be realized without conscious consideration of this issue, and focusing on expanding freedoms and opportunities that have the greatest significance for our lives. To expand life framework in which the majority of people are inevitably forced to live is the main task of human development in the world today."42

Based on the concept of A. Sen the development process was defined as
people-centered. Later this and other ideas were combined by a group of UNDP experts and formed the basis of a conceptual approach to human development, which was first presented at the Global Human Development Report for 1990.

By UNDP definition "Human development is the process of providing people with a wider choice. Basically, this choice can be endless and can change over time. But at all levels the key aspects of human development is the possibility to live a long and healthy life, to acquire knowledge and to have access to the resources needed for a decent standard of living. In case there is no access to these basic choices a person will not have access to other opportunities either." 

The concept considers the dual approach to human development. On the one hand, this is expansion of human capabilities through health promotion, acquisition of knowledge and the improvement of professional skills; on the other hand, it is a process when people use their skills for production purposes, cultural, political activities and leisure. Thus, this concept does not reduce human development only to the formation of resources for productive activities and orientation to increase material wealth. Human choice depends largely on the "enabling environment", that is, on economic, social and political opportunities the existing in a country. The notion of opportunities implies access to resources, facilities or activity aimed at establishing or taking advantage of opportunities. According to the A.Sen view point opportunities are based on personal features and social and economic choice provided by the society. Thus, the main goal of human development is to establish political, economic, social, cultural and ecological environment which would provide material prosperity and opportunity to enjoy long enough healthy and creative lives.

The concept of human development has four main structural elements:

1. Productivity. People should be able to increase the productivity of their lives fully participating in the process of income generation. Therefore, economic growth is a component of human development.

2. Equality. All people initially should have equal opportunities in economic life, and therefore all the barriers to such opportunities must be eliminated.

3. Sustainability. Access to opportunities should be provided not only for the
present but also for future generations. In order to ensure the sustainability of human development we should make it possible to replenish all kinds of capital - physical, human, natural without debts to be paid by future generations. Such debts can take the following forms:

- financial, caused by long-term internal or external loans;
- social, caused by the neglect of investments in human development;
- demographic, associated with the continuation of uncontrolled population growth (or long-term large-scale depopulation);
- environmental, generated by irreversible depletion of natural resources and pollution.

Sustainability involves the equitable distribution of development opportunities between present and future generations, as well as within each generation without sacrificing anyone's interests. At the same time this justice is equality of opportunities and not necessarily equality of outcomes since the realization of opportunities is a matter of personal choice of each generation.

4. Empowerment. This should be done in the interests of citizens and through their own efforts. People need to fully participate in the decision-making processes that shape their lives. They are born with certain potential abilities. The task of human development is to create an environment in which every individual can develop their abilities and potential of this development should increasingly expand. Tensions between the market and regulation should qualify if the aim is to expand the range of people's choices, both now and in the future. Empowerment means increasing people's responsibility for the fate of the family, country and humanity in general, especially given the current “ability” of people to irreversibly ruin nature.

Thus, increasing of the opportunities increases productivity of people so that people can be effective agents of economic growth. In turn, economic growth should be accompanied by an equal distribution of its results, which should be available both for the present and for future generations. And finally, all people should be empowered to participate in decision making that affects their lives.

The concept of human development does not contradict traditional theories of
economic development, but rather is in favor of growth and job creation. The
difference between the schools of economic growth and human development is that
the first focuses exclusively on the expansion of only one choice - income - while the
second covers the expansion of all types of human choices, whether economic, social,
cultural or political. Under this concept, M. Ul-Haq examines critical issues such as
economic growth, international trade, budget deficits and monetary policy,
employment, equality, basic social services and social services for the poor.

The idea of the relationship between human development and economic growth
was considered in the first Human Development Report and later more fully in the
Report for 1996, which clearly stated that "human development is the goal, and
economic growth is only a means to achieve it. Economic growth is certainly an
important factor in social progress. Increasing the wealth of the country as a whole, it
increases its potential in the fight against poverty and in solving other social
problems. However, much depends on the model of economic growth. Rapid
economic growth can be achieved through an intensive exploitation of natural
resources or generate inflationary pressure which would eventually lead to recession.
Besides, rapid growth does not necessarily imply a corresponding increase in
employment. According to the concept of human development economic growth may
enhance human potential when growth not only provides an increase in per capita
income, but also allows us to have a sufficient level of public spending that are
invested in the social sphere, and not, for example, in armament, and is also
accompanied by fair distribution of resources in the economy.

Increased production in the concept of human development is seen not as an end
but as a means for a dignified human existence. At the same time there is feedback -
through increased levels of human development a higher level of production is
achieved. People are not means of production growth. On the contrary, the increased
volume of production should be considered as a means to improve people's lives.
Practical task is to ensure the relationship between economic growth and human
development, in particular the ways in which to turn the increased income into the
improved possibilities for people.
A distinctive feature of the concept of human development is the statement according to which "people do not need infinitely high income to provide a decent standard of living." Higher income generally contributes to the expansion of human choice, but the impact weakens with increasing income.

Figure 2 - Economic growth and human development.

Income, according to the concept of human development is just one of the choices a person would like to have, albeit a very significant one. But it can not determine the complexity and diversity of human life. Equally important are health, education, environment, freedom of action and speech. Therefore, development should be more than just a growth of income and wealth. Its aim must be people. Income is not an end but a means to empower people in the economy, social activities, education, health, etc.

The concept of human development focuses on two reasons why the exclusive concentration on the material income is wrong. First, the accumulation of wealth is not an only precondition for the fulfillment of all human desires. Society does not have to be rich to establish democracy, gender equality, preservation and promotion of cultural heritage. Secondly, human desires extend far wider than economic welfare. People may seek to live a long and healthy life, to enjoy culture and science,
to preserve nature and live in harmony with it.

The principle on which the contradictions between the maximization of wealth and human development are solved runs as follows: "The national wealth can expand the choices of people. However, this may not happen. Wealth in itself is not the most important thing, but the way it is used by different countries. And as long as society does not realize that its main wealth is people, excessive concern about production of material goods will overshadow the ultimate goals of enriching the lives of people."

Almost simultaneously with the emergence of the concept of human development the problem of quantitative evaluation of advances in improving the lives of people around the world arose. New tool to measure social and economic progress - human development index (HDI) - was proposed in the preparation of the first Human Development Report 1990. Feature of the HDI is that the index goes beyond the assessment of human welfare only on the basis of GDP per capita. HDI is a composite index which assesses the human development goals such as the expansion of education, improving health and life expectancy, as well as an increase in income. HDI is the most important criterion to divide countries into groups with different levels of human development. Regardless of the level of economic development (be it industrialized or developing country) countries with high human development level have HDI > 0.8, countries with medium level of human development have 0.5 < HDI < 0.8, and countries with low level of human development have HDI < 0.5.

The theory of sustainable human development is of considerable importance within the concept of human development. Sustainability is one of the dominants of human development and potential. The essence of sustainable human development consists in equal access to development opportunities, both now and in the future. In the Human Development Report for 1994 the following definition of sustainable human development is proposed: "Sustainable human development is such development which results not only in economic growth but also in fair distribution of its results, which restores the environment but not destroys it, which increases the
responsibility of the people but not turns them into soulless executors. Such development gives priority to the poor, increasing their opportunities and enabling them to participate in decisions that affect their lives. Such development is development for people, for nature, for increasing the employment and advancement of women in society."

As is known to meet its needs the humanity has to solve wide range of problems: economic, social, environmental. However, to ensure the lasting development of society without jeopardizing the ability of future generations to meet their needs, it is necessary to achieve some balance in addressing all three groups of tasks. Ignoring any of them can endanger both the further economic growth and further development of the society. If to represent each of the development parts as a circle, the intersection region will be the achieved balance between social progress, economic growth and environmental protection, which is the essence of the concept of sustainable human development.

Sustainability is based on the principles of "equality of opportunity for all generations." In other words, sustainable development means a moral obligation to leave for future generations at least the same level of opportunities for human development as the current generation enjoys. This implies, first, the inadmissibility of economic debts to be paid by further generations, secondly, adequate investment in education and health to prevent social debt for future generations, and third, the use of natural resources in a manner that will prevent their depletion and ecological debt.

At the same time the position when concern about the fate of future generations causes the society to lose sight of today's problems of ecology and poverty can not be considered a consistent one. Economic development should not entail a redistribution of income, which would threaten the welfare of people belonging to a different social group or another country.

**Conclusions on 1.2.**

Contemporary understanding of social development places a human being into the centre of primarily the reproductive circulation of connections and is based on the assumption that a person is both the initial and final points of social and economic
development. Human or social dimension of this development is its determining dominant and the material potential is a condition of this development. Thus, the concept of human development incorporates issues of production and distribution of goods and services with the issues of formation and use of human abilities and opportunities considering the development of human abilities as the ultimate goal of social progress without regard to their impact on income generation.

1.3. CONCEPTUAL FOUNDATIONS OF HUMAN DEVELOPMENT MANAGEMENT

The process of the world changes is continuous and follows evolutionary laws. There is no doubt that physical and biological laws are the most fundamental in their manifestation. But social and economic processes are much more dynamic and are not always determined by linear dependencies which make them really relevant to the study. We can say that the essence of management largely determines the possibility of changes in social development, explaining the patterns of development, its dynamics, focus and other important parameters.

In this sense, the researchers of human potential face an important and multidimensional problem of managing its development. Though the problems of management on the whole are rather well researched, the multidimensional nature and ambiguity of management as universal concept require some explanation in relation to the subject of this study.

It is generally recognized that management is an economic, social and philosophical concept. According to B.A. Raizberg "management is a conscious human impact on various objects and processes as well as on people involved, which is carried out in order to make these processes follow certain direction and bring the desired results." Sure, that depending on the orientation and level of subject-object relations the notion of "management" can be manifested primarily as a conscious process having the properties of information impact on the object that generates
a stronger effect, and having the target orientation. P. Druker argued that "management is a special kind of activity turning an unorganized crowd into an efficient targeted and productive group." In this context management of human potential is determined by the possibilities of multiple growth of efficiency at the appropriate level of the process organization.

The study of management in scientific methodological context irrespective of its political, economic and temporary modifications reveals a number of contradictions. The most meaningful in this situation approach is treating management as information process - when any system reaches a certain level of complexity there appears in it a part which stores information about the entire system to streamline its operation and which is characterized by the appearance of the controlling and the controlled subsystems.

Let us dwell on various definitions of "management". In terms of natural sciences, in particular thermodynamics, management is the preservation of the existing state of the object, or its transfer from a more probable state to a less probable one.47

Another group of definitions bases on the relation.48 According to Atamanchuk G.V. "management is the relation through which, in the course of which and due to which social energy, will, goals, and other meaningful organizing representations of managing component are transformed into consciousness, energy, will of managed components causing them to move in the desired social direction or increase the activity of internal "self-movement." If to give certain target orientation to the relation, then management is an objectively existing and necessary, organizationally and regulatory formed relationship between the components of subjects and objects of management that provides integrity, systemic unity, dynamism for both managing and managed subsystems, as well as for the social system as a whole.49

According to TikhomirovYu.A. "management acts as the highest form of conscious regulation of the functioning and development of the system."50

Summarizing the considered approaches we can offer the following definition: management (at the organizational level) is the change (preservation) of an employee
behavior in the situation of various types of dependencies through appropriate types of actions by means of organizational management structure.

Thus, we can talk about different levels of management that implies the use of different terminology. "Management" exists as a universal concept applicable to the management at the level of state, organization, collective, etc.

In management theory the internal and external management is distinguished. Depending on the purpose of managerial influence the choice takes place. With internal management the controlling action is formed within the managed system while with external one controlling actions come to the managed system from the outside. It should be noted that with regard to organizations the division of management into internal and external is to some extent arbitrary.

It is customary to refer the human impact on the world of nature and people to ensure the existence, continuation and improvement of life, i.e. "human management" to the management understood in economic terms. Consequently, all processes and objects can be divided into managed and unmanaged. And finally, in any system of management there are integral elements such as subject and object of management, management actions that form the management loop. According to the general scheme of the managed systems functioning the subject of management initiates management actions in the form of signals that are received by the object of management and obtains information on the response through a feedback channel forming the managed system in this interaction.

According to the classification of B.A. Raizberg there are certain specific situations in management. Maintenance of a certain steady state of an object is called homeostasis. The use of established parameters and guidelines in management is called management by exception. Finally, situational management is determined by the state of the environment. Economic content of management information and the ability to change the economic system through management is essential.

The definition of Academician V.M. Glushkov is the most succinct, in our opinion. He noted that the management does not study only the informational nature of the management actions and feedback. It focuses on subjects and objects of
management, on the mechanisms of the management actions formation, methods and results of their influence on the management objects.

In the management of human potential the targeted nature of system development is manifested. It consists in the change of the quantitative parameters and quality of the system operation to transfer it into the desired and more favorable condition characterized by the better target results. The following sections present these aspects of development goals in the expanded and systematic form.

It is important as B.A.Raizberg stressed that irrespective of the system’s goals management itself has its own universal goal—to improve purposefulness and organized nature of managed systems operation, to provide effective, ideally optimal trajectories of their development. Optimal management is seen as the management ensuring the transfer of the managed system from the initial state to a desired one in the shortest possible time at the lowest cost while respecting the restrictive conditions that is laws, prohibitions, generally accepted ethical rules and regulations. In reality, the goals of the management subject do not always coincide with those of the management object and the entire managed system. Moreover, there may be contradictoriness of goal aspirations within the subject or object of management.

It should be noted that a holistic view on the structure of economic systems is still in its infancy that allows us to distinguish also such specific type as management of the management, i.e. management of the management industry operation which involves the perfection of forms, methods, organization and management tools.

Returning to the issue of human potential, we will note that the resource-based approach significantly limits the use of human capabilities for the development of economic systems. Integrated approach considering the human potential through the prism of the conditions of its implementation defines it both as an object and as a condition of the development. Person is the central object of the economy. At the same time the management of people and with the help of people is the most important feature of the economy. Person is the goal of the economy, as the economy operates to provide for people's lives. At the same time, person is a means of the
economy being the main economic resource.

Mutual ties, relationships, processes of interaction of objects among themselves and with their environment make essentially the subject of economic entities management. According to B.A.Raizberg and R.A.Fatkhutdinov the main types of economic units should be called "managed economic entities." The objects of management in the broad sense are not only the real material, information, money objects, but also economic processes in which they are involved and that make them an integral unity. Management of economic processes of resources transformation inevitably involves management of interests, relationships, interaction of people. Or rather we speak about economic resources and products management, as well as economic relations in the process of their conversion and use.

According Soroko E.M. management turns into an integral feature of social life in all its spheres, subsystems, structures, into the pattern of development and formation of new structures and functions when a person becomes the main object of social policy. In historical time scale the final product and purpose of management in society is the state of an individual, not just his/her welfare. According to V.G. Afanasyev "to manage the society scientifically it is necessary to know what are the trends of the system’s development, and the way it is "arranged" and is working, because only with the optimal structure and at the optimal functioning the objective tendencies inherent in the system and characterized by the development laws can be implemented." The ultimate goal of management is "to optimize the management system."

Tcherevko I.A. and Belenkyj P.E. determine the task of management as "an ensuring of the dynamic equilibrium of the system during its development and during its stationary operation." Thus the possibility to manage on the basis of structural optimization of systems appears. Thus, management is a multidimensional phenomenon with the most important components being management as a relationship, management as an activity and management as a structure. The result of management is smooth efficient operation and development of the system.

As a philosophical category development is irreversible, specifically directed
and regular change of material and ideal objects resulting in new quality.

Economic development of society is a multidimensional process covering economic growth, structural changes in the economy, improving the environment and quality of life.

Until the last quarter of the twentieth century each of these sciences chose its own specific criterion of development that caused the artificial division of the concepts of "economic development", "social development", "democratic" and "social progress." Only the concept of human development have combined all these development types. Progress in human development serves the main indicator in the concept of human development.

"The concept of human development, - said M. ulHaq, - in fact, is a comprehensive concept of development embracing both the objectives and means, performance and justice, economic and social development, material goods and social security. "53

In general, if we talk about the development of society not only in terms of economic development, but also of human development, it is a complex, contradictory and quite difficult to measure process. Such development is irregular, can not occur increasingly and includes periods of growth and recession, quantitative and qualitative changes, positive and negative trends. From this position it is necessary to talk about the category of socio-economic development.

As a socio-economic category development is the process of reorganization and reorientation of the entire economic and social system, which includes along with rising incomes and production qualitative changes in the institutional, social and administrative structures as well as in the public consciousness, traditions and stereotypes.

It should be noted that the problems of development and selection of optimal criteria for its evaluation is the main research theme of various schools of economic thought.

It should be emphasized that the methodological basis of the concept of human development is closely connected with the theory of welfare. History of economic
doctrines considers prominent classics of political economy Adam Smith, David Ricardo, representatives of marginalism A. Marshall, B. Pareto, A.C. Pigou as the founders of the theory of wealth. Further welfare theory has been enriched by the writings of proponents of institutionalism. A significant contribution to its development has been made by the nineteenth century English scientist Henry Sidgwick whose theory was later further developed by Arthur Pigou in his paper "Economic Theory of Well-Being" (1912) which emphasizes that the economic welfare of the nation depends on two factors: the volume of national income and the way of national income distribution.

Among the many theories and models to stimulate economic development four main areas prevail:

1. The theory of linear growth stages;
2. The model of structural reforms;
3. External dependency theory;
4. "Neoclassical counterrevolution" based on free-market ideas.

Besides the above, in recent years there appeared one more, the fifth approach associated with the so-called new theory of economic growth.

Deepening of the development concept in the last quarter of the twentieth century is taking place under the influence of the increasing spread of the ideas of institutionalism. In the institutionalism theories development is treated together with the whole complex of conditions affecting a person's life. These are legal, social, political, psychological and environmental factors. Proponents of postindustrial concepts consider not only the development of production as such, but also the two fundamental changes generated by it: labor productivity growth as a purely economic indicator and the degree of personal freedom as a social indicator. Austrian-American economist and sociologist Joseph Schumpeter introduced into economic science the distinction between economic growth and economic development. Economic growth is the increase of production and consumption of the same goods and services over time. Economic development is, first of all, the emergence of something new, not previously known, or, in other words, innovation. Changes in economic structure
are accompanied by dramatic changes in social institutions, human behavior and ideology. Such changes are called modernization.

Thus, up to the 70s of the twentieth century the economic development was understood as the ability of the country to increase production at a higher rate than population growth. Accordingly, the notion of "economic development" measured by the ratio of the national income to its population is the quantitative reflection of the development process.

However, the critical analysis of the developing countries experience in the 60s showed that many of them having achieved high rates of economic growth failed to nail it down since economic growth has not contributed to the socio-economic development. Theodore Schultz, the recognized founder of the theory of human capital devoted his studies of 50-60-ies to the analysis of the causes and factors of productivity growth. He singled out the so-called "residual factor", which later in the works “Capital Formation by Education” (1960) and “Investment in Human Capital” (1961) was defined as acquired and developed abilities to work. In search of new factors of economic growth Schulz paid attention to the fact that it is education that transforms a common performer into the creative worker making him to analyze the situation and look for the best solutions to industrial problems.

Further development of this idea by the followers of Schultz has resulted in the human capital concept. So, a significant contribution to the development of this concept was made by another American scientist G. Bekker who received in 1992 Nobel Prize in Economics. Bekker in his major study “Human Capital” (1964) included into the human capital investment not only the cost of education, but also the costs of health care, information, job search, parenting, i.e. all costs that increase the productive power of a person.

Currently, human capital is understood a set of abilities resulting from investments in the person and caused by a certain stock of his/her knowledge, health, skills and abilities to work which contribute to the growth of labor productivity and increased revenue. Investments in human capital in the developed countries are the most efficient and fast payback to society. Human capital is considered as one of the
most important factors of economic growth and increasing economic potential.

It should be emphasized that there is a definite relationship between human development and human capital theory or human resource development. According to the concept of human development and human capital theory human possibilities and abilities are the most important input in the production. However, human capital theory treats people as a means of production growth in contrast to the concept of human development where people are the main goal of progress.

Thus, already in the 70s the notion of "economic development" was increasingly enriched with qualitative characteristics: the structure of the national economy, the ratio of the extractive and manufacturing industries, export structure, the level of education in the country, the state of health and cultural population needs structure, etc. With further deepening of economic research development is being seen as a multidimensional process considerably influenced by social and political factors. It was at this time when new paradigms and principles which provided a framework of the theory of human development appeared: the concept of basic needs, the concept of redistribution, human capital theory, etc.

The most well-known is the concept of basic needs which laid the foundation for the report of the International Labour Organisation (ILO) "Employment, Growth and Basic Needs" (1976). The basic principle of this concept is that public policy should be aimed at ensuring access to social services and goods. The concept of basic needs includes three main elements: income, social services and participation. In this vein, a new economic growth theory - the theory of endogenous growth – has become widespread. The main purpose of the theory of endogenous growth is to study the impact of human capital on the long-term growth rate based on the formalization of technological and innovative changes.

So, in the late 80's - early 90-ies of XX century a new approach to economic development has developed in economic science. Distinctive features of this approach are that, first, the growth rate is not considered as a self-contained development goal, and secondly, major emphasis is on the quality of growth, its alternative sources, factors and spheres.
At the same time, understanding of rationality of actions aimed at development provides a methodological basis for determining the economic and organizational structure of the system of organization management of human development. Action is purposeful striving for anything. In this sense, spheres of rational and economic activities coincide. Every rational action is simultaneously an economic action. Economic activity is rational. Rational action is individual since is based on the individual decision on the direction and speed of changes. As a result of the actions of an individual an organization arises. This reflects the principle of feedback that caused the possibility of purposeful formation of the human development vector in the direction of increasing organizational effectiveness, which can be subjected to economic (cost) estimates and that makes it necessary to determine the mechanisms of influence on human development in the context of organizational changes.

In the current concept of socio-economic development the most important place belongs to the human development, to the issues of person’s abilities, skills, education on the one hand, and his needs - on the other hand. The higher the level of development of the person, the more complex and diverse his/her needs are and their reverse impact on the production of material goods and services. This reflects the axiological relationship between economic growth and human development.

Thus, the concept of human development is different from the approaches to development which predominate in economic disciplines. The concept of human development is focused on the end result - well-being, freedom and empowerment, not on means of achieving - abundance measured by real income and a set of goods and services. Development of the human development concept has allowed us to formulate a new promising approach to the understanding of social progress.

Table 2 - Difference of the basic economic theories from the human development concept.

<table>
<thead>
<tr>
<th>People</th>
<th>Theory of Economic Growth</th>
<th>Human capital theory</th>
<th>The concept of basic needs</th>
<th>The concept of welfare</th>
<th>The concept of human development</th>
</tr>
</thead>
<tbody>
<tr>
<td>People</td>
<td>Production factor</td>
<td>Production factor</td>
<td>Recipients of benefits</td>
<td>Recipients of benefits</td>
<td>Means and purpose of development</td>
</tr>
</tbody>
</table>
Currently there is a kind of socio-economic imperative: either economic development is subject to tasks of free harmonious development of people and the realization of their creative potential, or a given economic system remains outside the progress.

The system analysis is based on the principle of systemacity, and the theories of self-organization are based on the principle of development. Synergetics, theory of change and theory of catastrophes belong to the theories of self-organization. Synergetics which main provisions were formulated by G.Haken is a heuristic method to study open self-organizing systems subject to the cooperative effect which is accompanied by the formation of spatial, temporal or functional structures or, briefly, the processes of self-organization of various systems. Synergetics and system researches are united by principles of systemacity, development, isomorphism, systems’ typology. The generally accepted definition of the category of "development" is understood as irreversible, directional, regular change of matter and consciousness, their universal property. As a result of the development a new qualitative state of an object - its composition or structure - appears. Thus, development should be understood as qualitative change in the composition, relationships (i.e. structure) and the functioning of the system, or any qualitative change in the system. Quantitative change in the composition and relationships of the system expresses the idea of "growth."

For the system to be self-organizing and therefore have the opportunity to progressively develop, it should meet at least the following requirements: the system should be open, i.e. exchange matter, energy or information with the environment;
the processes occurring in it should be cooperative, i.e. the actions of its components should be compatible with each other, the system should be dynamic and be far away from the equilibrium state. The state of equilibrium is such a state of the closed system when its macroscopic parameters remain unchanged. Equilibrium state can be stable (stationary) and mobile. Nonequilibrium is the general form of organization of matter arising under the influence of the external environment. It is nonequilibrium systems that have the effect of sensitivity to external influences: weak signal at the input can cause significant and often unexpected change in output, which means that hard causal relationships when the consequence is if not identical then proportional to the reason cannot be applied here. Thus, as we move from one bifurcation point to another the development of the system is taking place. At each point of bifurcation the system chooses the path of development, the trajectory of its movement.

The most significant sources of the development process are the following types of discrepancies between:
- the function and purpose of the system;
- the needs of the system in resource and the ability to meet them;
- changing quantity and former quality (which gets its maximum -near the bifurcation point);
- the old and the new;
- the desire for order and chaos;
- the desire of the system to establish a steady state and the means to achieve it;
- the goals of the system and goals of its components;
- processes of functioning and development;
- functioning and structure.

Management helps these processes in various systems, in particular, social ones.

To define the notion of human potential management in this methodological context is a rather complex problem. On the one hand, human potential determines the success and effectiveness of management in organizational systems. On the other hand, the effectiveness of influences implemented at each level of government (state, organization, individual) generates the appropriate profile, the quality of human
potential.

In UNDP practice public management is seen as the implementation of the economic, political and administrative authority to guide the country's affairs at all levels. It comprises the mechanisms, procedures and institutions of power through which citizens and groups of citizens can express their interests, exercise legal rights, fulfill obligations and resolve contradictions. This understanding of public administration is reflected in the concept of «good governance». The two features or two characteristics are key to accurately determine the idea of «good governance».56

First, «good governance» suggests that public management is based on the democratic principles of separation of powers, democracy, elective and displaceable senior officials, accountability of executive institutions, rule of law, political pluralism and freedom of press. Second, it means government effectiveness as achieving goals within the required timeframe and with a reasonable minimum cost of public resources.57

Good governance is not just a phrase, but one of the most common and actively used in practice concepts. In the 1990s the term began to be used consistently in the literature on development.

The term "governance» has been common in political and academic circles for a long time. Aggregated indicators for assessing the level of government developed by the World Bank are the following: 58

1. Voice and Accountability (VA) reflects the degree of participation of citizens in electing their government, freedom of expression, freedom of association and independent mass media.

2. Political stability and absence of violence (PV) suggests that the government will not be destabilized or overthrown in unconstitutional violent ways including political violence and terrorism.

3. Government Effectiveness (GF) means the quality of public services, developed and implemented policy as well as awareness that the government will stick to this course.

4. Quality Control (QC) is the government’s ability to formulate and implement
policies and regulations that allow us to support the development of the private sector.

5. Rule of Law (RL) is subordination of law enforcers to the laws of the society, the ability of law enforcement agencies to work for the benefit and in the interests of the society, to effectively fight against crime and violence and not abuse law.

6. Control and Corruption (CC) is the level of use of public power for personal gain including petty and grand corruption as well as the degree of influence of elites and individuals on public policy.

The concept of governance is evolving, developing and changing. Effective state governance is a state accountable to its people, driven by constitutional rule of law and able to form and maintain a stable political atmosphere. According to UNDP "the country can support human development only when the government is fully accountable to its people and the public can participate in the discussion and decision-making on issues directly related to them." Effective state governance implies the laws and institutions based on the rule of law, transparency, accountability and participation of greater masses of population in political decision-making.

Three sectors of governance are:

1. The state - (political and governmental bodies such as parliament, the executive, judicial and legal systems, security services, election committees, etc.)

2. The private sector and market structures, private companies, multinational corporations, regulatory structures, etc. which provide employment and generate income.

3. Civil society organizations (or third sector) - NGOs, cooperatives, trade unions and professional associations, the media, special associations, consumer groups, etc., mobilizing citizens to participate in economic, social and political events.
Figure 3 - Three sectors of good governance

Most often these relationships are considered between government and markets, legislative and executive powers, employers and organized labor.

Governance is perhaps the most important factor in eradicating poverty and promoting development. According to the Human Development Report for 2002 effective governance has a strong impact on human development and suggests effective enforcement bodies and laws that support it by creating favorable environment for the development of the market and the protection of human rights as well as population participation in the processes of political decisions-making that affect their lives and achieve fair economic and social outcomes.

At the same time human potential management and its development is possible also at the level of an organization applying the theory of endogenous development.

Human potential is the main driving force of social progress. It is based on influence and close interaction of both internal and external factors: the family, the economy, public relations, communications and many others.

A special place among these factors belongs to the state with its many means and tools of influence on people. This institution is responsible for the creation and maintenance of a favorable social climate, in other words, holds the responsibility for favorable conditions of human life. During the period of radical change and solving complex problems of reforming in the social and economic spheres the role of
management at all levels - from the national and state level to individual organizations and governments – dramatically increases. Understanding of the management component importance causes the problems associated with the improvement of management to be constantly in the spotlight. This is confirmed by multiple changes in governance – both of the country, and of organizations. They take place at all levels and in all management elements - in the processes, structures, information technologies, methods, and, of course, in the most important element - people of management profession - managers. It is known that under the influence of changes in the world knowledge is becoming the key resource of any organization. Carriers of knowledge, its "producers" and "users" are people who are managers in the management field.

Hence practically significant conclusion is that the human capacity to manage is the main factor in the effective functioning and development of any organization. This provision is equally applicable both in business and in the administration of state and municipal authorities and institutions. In today society the level of engineering and technology is so high that it is impossible to gain a significant advantage in the market only at their expense. It is necessary to engage a more powerful and promising resource which is a person with his/her great potential and the ability for self-development.

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Consideration of the theoretical foundations of the human development concept undertaken in the first chapter of the monograph suggests the following conclusions:

1. Human potential as a scientific category is used for the qualitative characteristics of the level and conditions to use competencies, experience, intellectual capacities as the ability to continuously improve and develop.

2. With the changing requirements to employees there arises an issue of the quality of human capital which would allow integrated evaluation of the employee’s ability to perform this or that job in accordance with the requirements of society and modern production. Today it is not enough to have only professional knowledge, skills and abilities. The training content should be expanded through a wide range of
knowledge reflecting contemporary world. An acceptable guidance here can be recommendations of UNESCO on the reinvention of human resources notion. Recommendations suggest a transition from the classical understanding of human resources to the concept of human competence.

3. It is important to form such an integral axiological idea of human possibilities which would include the fact that a person acts both as a consumed material resource being, however, a special kind of resource able to exercise his/her own activity, and that he/she uses natural and social resources.

This determines the need to consider the notion of human development, which we believe is integral in the axiological content. Moreover, this notion is related to the incompleteness, the dynamic instability of human development.

4. Phenomenology of human potential has the following specificity:

1. Systematicity. Human potential possesses systemic properties and can not be reduced to a simple sum of the human qualities.

2. External conditionality. For the formation and realization of human potential the most important as a rule are "external" conditions and factors, the features of its environment.

3. Nontransparency. Human development is characterized by hidden properties that can appear when certain conditions change.

4. Strategic importance. Properties of human potential predetermine human development possibilities in the near future and in the more distant future. Human potential can increase because its productive realization when a person uses his/her abilities to acquire new knowledge does not reduce its capacity.

5. Nature of interdependence of human development and employment determines trends in the formation of the economic foundations of human development and most importantly - the vector, direction of this development in general. The task of identifying specific opportunities for human development in the social and labor spheres requires detailing, structuring of employment, determination of quality indicators. This goal is achieved through the use in the analysis and calculation of some parameters characterizing the labor and industrial relations, and
then- search of a combination thereof which would create the best conditions for human development.

6. Human potential can be realized as human capital being a source of economic growth for the organization and society. Thus, formulated integral concept of human development management should contribute to the growth of social and economic efficiency, determining the sustainability of the organization. Methodologically productive approach in these conditions is the development of the concept of human potential in the context of organizational changes.

7. Genesis of scientific ideas and views on human potential is characterized by the diversity of approaches. At the same time, there is no holistic concept of human potential. Many theoretical aspects of human potential such as the essence, the structure, features of its reproduction, the specificity of economic relations in the sphere of action are still insufficiently studied.

8. "Human development" with all the nuances specific to its different interpretations by international organizations means maximizing of the human potential and its effective use for economic and social development. Problems of «human development» comprise today demographic problems, the problems of employment, health, nutrition, housing and urbanization, the environment, education and training, etc.

9. Fundamental difference between the concept of "human development" and the concepts of "human capital", "human resources" and its predecessors reducing human development to a single aspect - the formation of resources for productive activities - is that human development is seen as a two way process. On the one hand, this is the formation of human abilities (health promotion, gaining of knowledge, enhancement of skills), and on the other hand it is the realization of acquired skills for productive purposes (work) or for leisure, cultural and political activities.

10. Current understanding of social development assigns a person the central place primarily in the circulation of productive connections and bases on the recognition that a person is both the initial and final point of the socio-economic development. Human, or social dimension of this development is its determining
dominant and material potential is a condition of this development. Thus, the concept of human development incorporates issues of production and distribution of goods and services with issues of formation and use of abilities and capabilities of people considering the development of human abilities as the ultimate goal of social progress without regard to their impact on income generation.

11. The contemporary concept of socio-economic development places the human development, the development of his abilities, skills, education on the one hand, and needs - on the other hand in the center. The higher the level of development of the person, the more sophisticated and more varied are his/her needs and their reverse impact on the production of material goods and services. This reflects the axiological relationship between economic growth and human development. The main purpose of the theory of endogenous growth is to study the impact of human capital on the long-term growth rate based on the formalization of technological and innovative changes.
CHAPTER 2. METHODOLOGICAL FOUNDATIONS OF HUMAN DEVELOPMENT MANAGEMENT

2.1 CHARACTERISTICS OF THE SYSTEM OF HUMAN DEVELOPMENT MANAGEMENT

The study of the basis of the human potential concept enabled us to formulate some important conditions for effective development associated, first of all, with changes in the organizations. The use of human potential not only as the resource, but also in axiological (evaluative) aspect predetermined the need to study the impact of transformation processes on the characteristics of human potential. Such mutual conditionality is organically inherent in almost all dynamic systems, however, it implies not a simple linear relationship, but a complex multidimensional system with elements of economic planning and the ability to justify the mechanism of human development management. The most significant step in the study of these processes is the identification of ontological foundations and economic possibilities to manage human development from a content point of view. It is methodologically important, in our view, to investigate the relationship of human potential, human development and the possibilities of an organization to use it in the most rational manner taking into account axiological features of human behavior in the workplace.

The essence of management process is work with people, regulation of their activities. The forms of management processes are the techniques used. They are seldom studied irrespective of the content and the results of their application. The system is characterized by its elements, subsystems, levels, states, structure, behavior and laws.

Organization is a purposeful system comprising at least two targeted elements having a common purpose, with respect to which the system performs functional division of labor. Its subsets with distinct functional properties can respond to each other through observation and communication, and at least one subset performs the function of control over the system. Organization of the system is an activity that can
be performed only by purposeful creatures; to become an organization the system should contain them. Achieving general purpose of the organization is carried out by the functional division of labor between its elements which determine this goal.

Another problem to be mentioned in connection with the research issue of human development is the evolution of economic systems. According to the traditional understanding, the economic systems are systems of production, exchange, distribution and consumption where consumption is the purpose and production, exchange and distribution are a means. Structure of the economic system is determined by the interactions and expectations of economic actors - individuals and groups, more or less independently managing the process and results of their activities. Robinson believes that each of them "always takes actions that will provide more benefits than harm." Indispensable requirement for sustainability of the economic system is feedback from consumption to production, regulation and stimulation of production by consumption. This means that changes in demand sooner or later entail a change in supply determining it as a function of demand.

Basic properties of developing systems in relation to the study of human potential can be presented as follows. At the beginning of development there should be certain initial resources. A dynamic system should receive matter, energy and information. A developing system should have a subsystem of reproduction and improvement of the subsystem itself. There should be cooperative and competitive behavior ensuring non-equilibrium state of the system. (The system being non-equilibrium can move from one quasistable (homeostatic) state to another). There should be autocatalytic and damping variables (dissipative structures) distinguished. Also wear of reproduction and production technologies of a developing system should be taken into account.

Consideration of various properties and examples of developing systems shows that to give an exact mathematical definition of developing systems does not seem appropriate. Currently there are various definitions of systems which describe in more or less detail the behavior of some properties of developing systems. For example, cybernetic systems are defined as systems that are generalizations of controlled
systems, a whole group of entities with their own goals will be associated with a cybernetic system. However, the definition of a cybernetic system is different from the description of developing systems - the description of the latter includes the subjects themselves with not only their goals, but also with their dynamic and evolutionary characteristics. Perhaps the closest dynamic models necessary to describe the developing systems are models of systems involving people, which determine their relevance in solving problems of human development management in the context of organizational change.

Conclusions on 2.1

1. Use of human potential not only as a resource, but also in axiological (evaluative) aspect predetermined the need to study the systemic impact of transformation processes and characteristics of human potential. Such mutual conditionality is organically inherent in almost all dynamic systems, however, it implies not a simple linear relationship, but a complex multidimensional system with elements of economic planning and the ability to ground the mechanism of human development management. The most significant step in the study of these processes is to identify the ontological foundations and economic possibilities of the system approach in relation to the management of human potential in terms of content.

2. Methodologically important in our view is to examine the relationship of human potential, human development and the possibility of the organization on its use in the most rational economic manner taking into account axiological features of human behavior in labor activity.

3. The principle of maximizing behavior of economic entities was determined in the classical theory, but the development of the theory of social harmony, evolutionary economics and behavioral theories in the economy shattered such arguments of the supporters of this approach. It is in this direction that the study of the relationship of organizational development features and human development opportunities should be undertaken.

4. The basic idea is to justify the effectiveness of human development management. For this purpose the informative side of transformational and
organizational processes, their interrelation and contradictions of development at the present stage, the basic axiological dependences in relation to endogenous growth theory have been investigated.

2.2. ORGANIZATIONAL PRINCIPLES AND FACTORS OF HUMAN DEVELOPMENT MANAGEMENT

Organizational-economic management is based on organization theory and the theory of organizational and economic disciplines. The organization theory includes praxeology, the general theory of organization, the theory of actions, the theory of the organization of human collectives, the theory of organization and management.  

The subject of the theory of organizational and economic management is the study of organizational and economic relations of management, organizational laws in specific management systems and processes, the connections of organizational laws with economic laws and other laws and regularities.

This profound and meaningful process contains quite clear prospect of using the economic approach in somewhat unusual for a classical approach context. The study assumes that the economic approach to human behavior in an organizational context is due to not so much mercenary motives, but to much more extensive (axiological) understanding of human values and preferences.

"Human development ... is creating an environment in which people can develop their full potential and lead productive, creative lives according to their needs and interests ..."  

The classical understanding of the economic approach to a wide range of social processes set forth in the works of G. Becker facilitates accurate methodological delineation of the problems of human development and human capital. 

In particular, it is possible to apply the general characteristics of the approach to the problem under study when the assumption of maximization of usefulness and their well-being by individuals is focused on their ideas regardless of the individual
characteristics of the subject, his altruism, selfishness, or other kind of loyalties. Their behavior is directed to the future, but bears the mark of past experience, in other words, the possibility of creating a situation of choice, opportunities to perform appropriate actions and thereby provide their perspectives on life. Future-oriented behavior requires a certain stability, possibly within a dynamically developing systems and, necessarily, time-matched. Institutional constraints, which must necessarily be taken into account, also represent a certain problem within the chosen economic approach. It is about the size of income, disposable time, individual abilities, etc.

Economic approach is largely based on the theory of individual choice which is very closely connected with the understanding of human development, when there is the creation of conditions and opportunities for human beings under appropriate medical, social, information, financial and other conditions. Economic approach is adapted to macro-level units of analysis that allows us within the concept of human development to take into account cross-cultural differences.

Thus, the rational choice model does provide the most promising basis for a unified approach to the study of social problems as well.

One of the most important aspects of human development is the ability to have a decent standard of living. Wealth of the country, a high level of income and consumption of its citizens are possible only if there is sustainable growth of industries producing wealth. The secret of the "economic miracle" of many countries that have achieved the welfare of their people, is in fact, quite simple and obvious. All these countries have had high and stable pace of development of the national economy for a long period which provided employment, rising incomes and high level of consumption. There is no doubt that economic growth leads to an increase in wealth of the country as a whole, expanding its potential in the fight against poverty, hunger and in solving other social problems. That is why a high level of economic growth is one of the main targets of economic policy in many countries. However, as the world experience of socio-economic development in recent decades there are examples of economic growth that have not been accompanied by corresponding
progress in human development, which has lead to increased inequality, denial of democracy and human rights, environmental degradation. Even countries with roughly equal average income of the population can vary considerably in terms of "quality of life", i.e. the opportunity to have an interesting job, access to education and health services, clean air and drinking water, the level of security.

Subject area of methodology consists in the organization of activity. Not every activity needs to be organized or requires methodology. It is known that human activity can be divided into reproductive and productive activities.

Reproductive activity copies the activity mastered in previous experience. Productive activity aims at getting objectively or subjectively new result. Activity, in a sense, opposite to productive activity is the so-called regulating activity. If productive activity often destroys the old order, the stereotypes the regulating activity is aimed at restoring order. It sets norms of activity implemented, in particular, in the form of standards, laws, orders, etc.

Any research activity by definition is always aimed at objectively new result. In case of productive activity there is a need of its organization, i.e. there appears the necessity to apply the methodology in relation to human development management system.

If methodology is considered to be the study of activity organization, then, naturally, we should consider the notion of "organization." According to the definition, the organization is 1) internal orderliness, consistency of interaction of more or less differentiated and autonomous parts of a whole conditioned by its structure (property); 2) a set of processes or actions leading to the formation and improvement of the relationships between parts of the whole (process); 3) an association of people together implementing some program or purpose and acting on the basis of certain rules and procedures (organizational system).

An economic organization or firm in the interpretation of R.H. Coase is such which specifics is concentrated in the relationship between its members in the production and distribution of economic benefits, which purpose is the realization of economic interests of the organization based on a main principle of the
economy. These relations represent mechanisms for coordination, integration, and combination of subordination, which are established in the company and displace pricing mechanisms of intra-economic regulation.71

Methodology considers the organization of activity. To organize activity means to streamline it into an integral system with clearly defined characteristics, logical structure and the process of its implementation - a *temporal structure* (based on a pair of categories of dialectics "historical (temporal), and logical").

*Logical structure* includes the following components: subject, object, form, means, methods of activity, its result.

External to this structure are the following *characteristics of activity*: features, principles, modalities, norms.

Historically, there are different types of activity organization. Design and technological type is a current one. Here the productive activity of a person (or organization) is divided into separate completed cycles which are called *projects*. Today, there are two definitions of the project: project as normative model of a system and the project as a purposeful creation or modification of a system limited in time and resources and having a specific organization.

The implementation process is considered in the framework of the project realized in a specific temporal sequence in stages and phases, and this sequence is common to all activities. The completeness of activity cycle (project) is determined by three phases:

- the design phase which results in a model of the system being built - a scientific hypothesis as a model of the system of new scientific knowledge - and its implementation plan;

- *technological phase* which results in the realization of the system, i.e. verification of the hypothesis;

- *reflexive phase* which results in the evaluation of the constructed system of new scientific knowledge and understanding the need for its further correction, or "start" of a new project, i.e. constructing a new hypothesis and its further verification.

Modern scientific methods are designed to provide the solution of at least two
largely contradictory tasks associated with achieving optimal distribution of the resource potential of economic agents in a predetermined time interval and identification of patterns of sustainable development of economic systems in which the process of this transformation is taking place.

Historical sequence of rapid, uneven and largely spontaneous development of the world economy over the past decades was accompanied by a variety of events and crises.

It is the solution of such problems that was the focus of modern economic science represented by the so-called classical (or orthodox neoclassical) and liberal economics.

Russian experience in this sense is no exception. Innovation activity of Russian companies remains very low, and the number of enterprises engaged in technological innovation, was only 8.5% of the total. For comparison, in the UK, Finland, France, Italy, Korea - 40-50%, in Germany the figure was 73%, Ireland, Belgium and Denmark- 58-61%, Estonia and the Czech Republic- 41-47%. Closest to Russia on this indicator are Latvia with 17%, Bulgaria with 18%, Hungary with 21%, and Romania with 22 per cent.72

Technological innovation takes place largely through borrowing foreign technology, primarily in the form of import of technological equipment. With the 2.6 times growth of the number of advanced production technologies in the Russian industry, the intensity of domestic technologies introduction decreased by 36%. The share of imports in the procurement of new equipment is as follows: 48% - in metallurgy, 60% - in chemical industry, 56% - in engineering and 67% - in forestry complex. On the one hand, it is natural; on the other hand it indicates the growing gap between the needs of the economy in technological updating and the ability of the Russian research complex to meet these needs.

The process of developing new technologies in Russia is characterized by a marked reduction. In some areas, Russia is technologically dependent on the world's leading countries. Number of advanced production technologies based on the use of computers and micro-electronics and intended for use in the design, production
or processing of products declined in 1997-2011 by more than 25%.

Distinctly different are the levels of technologies also in various industries. The technological levels in relation to the world ones are: in nuclear power on average 95%, in the aerospace industry - 85%, in special metallurgy - 70%, in the aviation industry - 60%. At the same time, the estimated technological levels in machine tool industry is only 35% of the world level, in the electronics industry - 20%, in chemical industry - 55%, in the lumber industry and the textile industry - 20%. At the same time a number of development areas ensuring production of high-tech products are lost.

Deterioration of experimental and testing facilities and personnel aging in military science casts doubt on the possibility of updating and expanding the scientific groundwork for the development of advanced weapons systems - precision weapons, means of information gathering and processing, directed energy weapons. The Russian economy and sphere of scientific and applied technology have reached a point at which a simple preservation of the existing situation and the containment of accumulated imbalances become impossible.

Understanding the need for innovation scenario in human development determines also the promising areas of sectoral organizational change related primarily to the restructuring of key innovative sectors financing - communications, science, education and health.

In 2013-2015, the acceleration of investment growth will be affected by the expansion of public and private investments in fixed capital in consumer-oriented and social-industries trade, provision of utilities, social and personal services, education and health care.

Table 3 - Investments in fixed capital by industry complexes, %.

<table>
<thead>
<tr>
<th>Industry Complex</th>
<th>2007</th>
<th>2010</th>
<th>2015</th>
<th>2020</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oil and Gas Industry</td>
<td>16,5</td>
<td>14,2</td>
<td>13,2</td>
<td>12,1</td>
</tr>
<tr>
<td>Transport and Communications</td>
<td>21,9</td>
<td>21,1</td>
<td>18,9</td>
<td>19,7</td>
</tr>
<tr>
<td>Engineering</td>
<td>2,6</td>
<td>2,9</td>
<td>3,6</td>
<td>4,0</td>
</tr>
<tr>
<td>Energy Sector</td>
<td>7,4</td>
<td>7,3</td>
<td>5,6</td>
<td>3,4</td>
</tr>
<tr>
<td>Raw Materials Complex</td>
<td>7,9</td>
<td>7,4</td>
<td>6,7</td>
<td>6,5</td>
</tr>
<tr>
<td>AIC</td>
<td>7,6</td>
<td>7,4</td>
<td>7,3</td>
<td>6,5</td>
</tr>
<tr>
<td></td>
<td>3,4</td>
<td>3,4</td>
<td>4,3</td>
<td>4,4</td>
</tr>
<tr>
<td>----------------</td>
<td>-----</td>
<td>-----</td>
<td>-----</td>
<td>-----</td>
</tr>
<tr>
<td>Trade</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Real Estate</td>
<td>17,3</td>
<td>19,2</td>
<td>20,3</td>
<td>21,0</td>
</tr>
<tr>
<td>Education and Health Care</td>
<td>5,0</td>
<td>6,1</td>
<td>6,5</td>
<td>7,0</td>
</tr>
<tr>
<td>Others</td>
<td>10,4</td>
<td>11,0</td>
<td>13,6</td>
<td>15,4</td>
</tr>
</tbody>
</table>

Thus, the provisions of orthodox economics do not clarify the real developments in current classical economic science. Goal-setting (it being benefits maximizing for consumers or profits maximizing for producers) is the initial task. Certainty, predictability and universality of this movement to the goal explains the thing that in the current world order should bring markets to an equilibrium state via spontaneous regulation not requiring government intervention, even in the form of control.

At the same time, it is quite appropriate to view economy as a developing system that should be designed with the account of the theory of developing systems which proved vital and constructive by biology, ecology and other natural sciences.

This theory shows that due to non-linear feedback unstable and chaotic stages appear on the way to the goal. This can cause several different final states of equilibrium market (i.e., bistability phenomenon). Modern methods of investigation of these processes can predict the time of the chaos onset, particular stationary states probable after a chaotic stage and their number. There appears a chance to assess the likelihood of various options, but you can not give a definite answer. This means the actual failure to unambiguously predict the future and reveals the difference from astrology and orthodox economics. The main defect of the latter is breaking away from natural sciences and other developing systems theory, neglect of the development peculiarities and as a result, detachment from economic reality.

If there are multiple equilibrium states the society itself can not uniquely choose one of them. Spontaneous transition from one state to another is either impossible which with the current experience in regulating of economic and biological objects requires the interference of the state in view of the entire complex of features and specific interests of the national community.

Orthodoxy is opposed by evolutionary economics which considers economic development as an irreversible process of growing complexity, diversity and
production productivity due to periodically repeated change of technologies, types of products, organizations and institutions (rules of conduct according to D. North) and that in contrast to orthodoxy adequately perceives the features of technologically advanced economy. Such areas of the theory of developing systems as evolutionary economics, synergetic, "physical" economics have much in common and are based on the theory of developing systems. Now they are at different stages of development, but they are far from being complete and we can rather state the formation of terminology. Nevertheless, there are already some important results related to the elucidation of the mechanism of rapid development through the struggle of "innovators" and "conservatives." The role of bimodal distributions according to income and savings in economics and sociology is clarified. The mechanism of rapid changes in firms’ and industries’ states and the role of these phenomena in the economic evolution is determined. Mechanisms of fluctuations in the economy are determined and their basic models are constructed. These fluctuations transform in time into crises or the ups and are explained by such notions of fundamental sciences as "bistability" and "bimodality".

In the opinion of D.S. Chernavskii expressed in his article "Evolutionary economics and biological evolution" the evolutionary economics is the scientific direction based on the idea that evolutionary economics should develop by analogy with other natural sciences and use their achievements. Elements of the evolution theory of development can be seen in many sciences: physics, chemistry and, of course, biology. These processes have much in common, which is why, most likely, a separate direction has emerged - the theory of developing systems which covers all these areas of knowledge.\(^7\) Within this theory general regularities which are reduced to a few basic effects have been revealed.

In all developing new systems there is valuable information on the possibility (preferability) to choose one of several possible options. Evolution has an irregular character. Smooth development stages (even, perhaps, long enough) alternate, according to T. Poston and I. Stewart, with short-term stages of rapid development ("catastrophes" in mathematical sense).\(^7\) New information mainly appears during
these periods. During the first period the state can be considered steady (more precisely, quasi-steady state). In fact, in any developing system the steady state parameters are slowly changing, however, at this stage the system can keep track of changing parameters and remains close to the chosen stationary state. In physics, this process is called adiabatic.

The crisis is usually understood in two ways: first, as a sharp abrupt change in anything, and secondly, as hard transition state. A.A. Bogdanov in his "Tectology" summarized the notion of crisis. He writes that the notion of crisis is widely used in various fields. Originally it was understood in the sense of "solution", then it was used in relation to any sharp transition, to all changes as a violation of the continuity: organism development crisis, crisis of overproduction, the critical temperature, etc. Crisis in general according to A.A. Bogdanov regardless of the content aspect of the process is a "change of organizational form of the complex." With regard to economic theory the crisis is such state of the theory when it is not able to perform its functions, that is to solve the problems faced by society.\textsuperscript{76}

There are constant changes in economic life. To interpret them only as a transition from one equilibrium state to another, as most contemporary economic theories do including the theory of economic growth appears to be wrong. It would be better to talk about the evolution of economic systems and their development as a special case of positive movement, and not about the growth and the pursuit of equilibrium.

The concept of economic evolution (development) is still little developed in economic theory. Its understanding is more intuitive than scientific. Economic development is mostly viewed as some kind of positive movement of the economic system – "positive" being understood differently by a researcher or an expert who either base their ideas on the extrapolation of prior experience of some other similar economic system, or on common sense.

The term "evolution" is understood in three different ways: a) as the pursuit of one of the possible and chosen stationary states after a disaster- it is a relatively quick process, b) as slow development monitoring changing parameters until reaching the
next bifurcation; c) as rapid change from the stationary state, when the latter becomes unstable (a disaster proper). All these processes make evolution. But the methods of description, research and modeling of these processes are essentially different. The word "evolution" is often used without any indication of what stage is in question. Evolutionary processes are best studied in biology. Therefore, in evolutionary economics the analogy with biological evolution and the corresponding selection models are most often used. And the researchers used primarily the ideas of the so-called Darwinian evolution without taking into account the fact that in the second half of the 20th century the theory of biological evolution has been significantly developed and expanded. How appropriate it is to apply an evolutionary approach to solving problems of human development management is yet to be seen. However, the apparent process similarity of evolutionary and organizational changes allows us to apply certain statements of related scientific fields to identify methodologically important features of human development.

Two types of development processes are differentiated in biology. The first relates to the evolution of the biosphere as a whole including the emergence of living beings and new species, their development and the disappearance - phylogenesis. The second relates to the development of a multicellular organism from egg cell to adult species and is called ontogenesis. And this is accompanied by the change in the functions of individual cells, by reshaping of the body and the appearance of certain organs - morphogenesis.

These processes have much in common (ontogenesis is the repetition of phylogenesis), but there is also a difference (ontogenesis is more rapid and does not involve the genome changes, i.e. mutations). The phylogenesis ideas are connected with the Charles Darwin theory:

1. Evolution of the genome is due to point mutations caused by radiation, heat and other mutagenic factors;
2. From the mutants who came into existence the best one (most adapted to living in this ecological niche) is selected and this option is fixed in evolution;
3. Selection takes place as a result of the struggle for existence.
These provisions are often used in evolutionary economics and thus it is assumed that the analog of point mutations are certain scientific and technological innovation. The analogue of the struggle for existence is the competition which results in the selection of the best producer.

Darwin's theory is actually not represented in the views on ontogenesis. All information necessary for the development is already in the genome and therefore there are no mutations, selection, and the struggle for existence in ontogenesis.

Among the main factors of ontogenesis there are the following: 1) genome as a database which stores all information accumulated in the course of phylogenesis and necessary for the development; 2) inductors - substances capable of initiating the restructuring of the body (it is important that even random factors can act as non-specific inducers); 3) competency – the state of the organism in which it is quite susceptible to the action of inductors, a measure of competence being sensitivity to external influences. As mentioned above, ontogenesis occurs irregularly. Stages of sexual development according to Waddington are called chreods. At the end of chreod the competency increases, there appears a transitional stage (usually quasi chaotic, the body gets rebuilt and starts to operate in a new mode (next chreod). There may be several such modes. Which mode is going to be selected depends on the genome, it prompts the next chreod selection. If for any reason a different creod is selected the development does not stop, but a biological object incapable of independent existence is formed. During smooth stages all processes occur due to self-organization, i.e. physical and chemical reactions. The parameters of these reactions are set by the genome in the beginning of chreod and are not changed to its end.

If to compare ontogenesis with the development of the economy, the following analogy can be drawn. The main factor of evolution are not the innovations themselves, but an increase in competency to them. Competence can be considered as an analogue of the elasticity of demand for innovation. Information about innovations is already contained in the archives and is extracted when needed. Inductor can not be likened to innovation, because random effects can act as an inductor. Rather, advertising, fashion and other non-economic events drawing attention to a particular
innovation can be regarded as an inductor. Further development of the biological aspect of the theory of developing systems demonstrated (M. Kimura) that the bulk of the living beings genome is not involved in their life cycle at all. The genetic information contained in this part does not help (though neither prevents) the flow of vital processes. Nevertheless, this information load is handed down from generation to generation. This information was called neutral.\textsuperscript{77} From the standpoint of orthodox Darwinism surpluses are always harmful and neutral information would have had to disappear. However, it has not happened. The concept of biological evolution developed on the basis of these facts was called the neutralist one. The question of to what extent it contradicts orthodox Darwinism is still debatable. In fact, neutral information is an archive which is kept by nature "just in case" and is rarely used. However, these particular rare cases provide fast pace of biological evolution. Their role is particularly important in the branching points of the evolution, i.e. during the formation of new species. It was further found out that the main driving force of evolution are not point mutations, but block ones which differ significantly from the point mutations. With point mutations the new information does not appear via breaking down the old one and its re-creation (as with point mutations), but through the combination of ready-made blocks of information. For this to happen the archive of ready-made blocks should already exist and was being passed on to offsprings. This clarifies the role of neutral information. And finally, in the evolution of the biosphere selection turns out no less important than selection. Selection is determined process as the best is selected. The result is predictable and unequivocal, i.e. only one (usually the best possible) option is realised in the end. Choice is indetermined process that takes place in a state of instability. The choice result is unpredictable, i.e. choice is made at random and thus not necessarily the best option is chosen.

This brief digression into the "biological" layer of terminology allowed the researchers to draw an analogy between the current theory of biological evolution and the economy. The initial desire to construct a universal theory (or mathematical model) of economy regardless of the development phase is unattainable within the
rationalist approach. To be more exact, such a model can be suggested but only when the models of smooth stages and models of crisis are constructed and studied separately. Analogue of selection in economics is the pursuit of the best equilibrium. The term "the best" means that the state of the object is unique. Attempts to prove this by an example of economic objects were unsuccessful. Striving to one of the possible equilibrium states is the analogue of choice in a biological context. But these states are usually few and the chosen state may not be the best, but stable and survive long enough. The analogy of block mutations with economic processes with regard to the management of human development has two aspects. For example, the creation of new designs (innovations) in technology or social system is done through combinations of known elements used in previous designs. Their subsequent combination with traditional technologies results in some economic effect gained with the accumulation of "critical mass" of innovations. And if we recognize that a major factor in the theory of development is not innovations but the ability of society to their perception (competency), we will see the analogy with the previously described process of ontogenesis. As for the problems connected with the modeling of developing systems several approaches can also be found here. It is assumed that only in the dynamic models the result is predetermined. In fact, after averaging stochastic models give equally predetermined results.

Real alternative to full determinism are dynamic models comprising points of bifurcation and unstable processes. In such models there may appear chaos and unpredictability at the macro level. It is these phenomena that take place in crisis situations. The researchers believe that any processes are determined and include a chain of causal relationships. However, with the development of the dynamic chaos theory, it became clear that this belief is false since with the loss of stability the causal links are broken and occasionality in the points of rupture appears. Thus, it is in the economy in the states close to unstable where the belief in predetermined result is particularly dangerous.

According to J. Schumpeter the whole multitude of subjects is divided into innovators who design, develop and introduce new technologies and products, and
conservatives operating existing technologies and institutions and seeking their immutability. This division is inherent in all stages of human civilization. Neoclassicism does not analyze the foundations of economic evolution and features of technological progress as its main driving force.

Formation of basic notions and ideas of evolutionary economic theory is associated with the names of such economists as Richard Nelson,78 D. North, S. Winter, P. Murrell, B. Ickes, R. Reitherman, etc.

Because of these features, V. Majewski believes, evolutionists do not view the market as a model of perfect competition since innovators when they appear on the market with their innovations remain for some time monopolists with some of these innovations, which is incompatible with the model of perfect competition. Moreover, the epicenter of the competition from the standpoint of evolutionary theory is the struggle with conservatives for market outlets and resources markets. Finally, in competitive struggle between innovators and conservatives an important neoclassical principle - all economic agents maximize profits - is inadequate. In fact, only innovators are guided by this principle. Conservatives, making usually the majority, are focused on survival criteria. In particular, they are trying not so much to increase profits but to keep it, that in particular determines a significant role of prehistory in the evolutionary models.

Inconsistency in the positions manifests itself in the fact that for neoclassical economists one of the basic motives of behavior of aggregate economic agents is the movement toward equilibrium between supply and demand. Nonequilibrium states are viewed as undesirable. For evolutionists imbalance is one of the basic conditions for development.

So, the main difference of evolutionary theory from the neoclassical one is in focus at the study of features of technologically progressing economy. For this reason the central focus of the emerging evolutionary theory can become the task of assessing the differences between industrial and financial innovation in terms of sustainable economic development. The most important conclusion to be drawn from the analysis of these approaches lies in the fact that the problem of economic growth
is closely linked to the biological and social parameters of organizational development, and above all, with the assessment of the level of human development.

As a starting point it is recognized that the economy is akin to living systems and so many evolutionary properties of living systems are inherent in the economy. "There is nothing surprising in the fact - writes V. Majewski - that first Ch. Darwin when developing his theory of the origin of species borrowed some ideas from the theory of Adam Smith and T. Malthus, and then contemporary economists of the evolutionary trend put forward, as one of the basic ideas of evolutionary economics, the concept of economic "natural selection" when the development of new businesses (or institutions) takes place due to the displacement of other undertakings (or institutions) from the economic space. Such borrowings are quite natural."

Emphasizing the role of uncertainty in economic life R. Nelson described the principle of randomness as key feature of any evolutionary theory. This principle is very important for the analysis of mechanisms and criteria of selection. As a result of the interaction of chance and necessity the process of self-organization is taking place.

In evolutionary theory the notion of “creative destruction” introduced by Schumpeter is widely used. This refers to the mechanism of destruction of the old in the process of evolution and making room for the creation and development of the new. Schumpeter argued that evolution itself creates mechanisms that are in some sense optimal. Too rapid destruction is bad because it dominates and prevents the creation of the new. Lack of destructive mechanism is equally bad as the old blocks the way for the new. As a result the evolution produces the middle balanced way. The evolutionary process accelerates or slows down depending on various external and internal factors and can lead to qualitatively different results.

Contemporary evolutionary theory identifies also the principle of heterogeneity (impurity principle). It is critical of the neoclassical thesis that the economic system is functioning the better, the fuller it represents the institutions corresponding to its basic principles (that is, the purer, more homogeneous the system is). So, neoclassicists insist that for the most efficient operation of the market economy the
The scope of the market rules of the game should be actively extended suppressing the institutions that operate according to different rules (for example, government or self-managed enterprises). The evolutionary theory opposes this approach with the principle of heterogeneity borrowed from cybernetics: systems with heterogeneous elements adapt better to rapidly changing multi-directional and intense impulses. For such systems the crucial thing is the bifurcation nature of their evolution which implies that the system developing randomly accumulates new properties first quantitatively and then proceeds in a probabilistic way to a new quality. Equilibrium steady states of such system are only moments in their movement. Economic crises in terms of the theory of nonequilibrium systems are bifurcation points.

Contemporary evolutionary theory basing on the latest discoveries in biology and systems theory has identified a number of features of social, economic and technological development. One of these features is chreod effect (from the Greek. chre- “doomed” and odos-“path”). It means that due to accidental causes a certain phenomenon can begin to develop in a sub-optimal way, and the further the development the harder it is to change the chosen trajectory.

Manifestation of chreod effect suggests that evolutionary selection does not always follow the criterion of optimality. An economic entity can take a market niche even if it is inferior to competitors on product quality or other market characteristics. For example, if it has a local monopoly (in certain area) and wins over the manufacturers of more high-quality products from other regions due to savings on transport costs. We can not but agree with the conclusion of the leading contemporary evolutionist J. Hodgson that "in the economic context evolutionary processes do not necessarily bring optimal results."

The state of being organized is as much a general and universal property of living matter and society as the ability to develop. Organization can be understood as a process of transformation of disordered phenomenon into the ordered one. So, organization is the process of transformation of random connections into the necessary ones. An organization is not invariable. It is stated that "the evolution of life from its elemental form to humans is the development of the organization."
of the organization is connected with change in the structure, but the change of the organization is not a consequence of any change in the structure. The structure can vary in many different ways and in different directions, and its change is irreversible.

The essence of the principle of feedback is that any deviation of management system from the predetermined state is the source of a new movement in the system always directed so as to keep the system in a predetermined state. Feedback principle is the principle of governance which is a prerequisite for information interaction between the manager and the managed object.\textsuperscript{85}

The study of the evolution of economic systems involves taking account of the historicity of their development. Historicity of development is associated with the concepts of time and space. Any development can be described only in relation to other processes connected with a particular coordinate system, i.e. with the space-time parameters. Space and time as universal forms of being of production elements are fundamental categories in contemporary sciences.

Such notions of theoretical economics as the life cycle of production systems and products, theories of short and long waves of economic development reflect the presence of tempo-rhythms in the economy. Dynamics of economic processes is always connected with the cyclical nature of productivity efficiency, sustainability, stability.

Due to the complexity and multifactor nature of economic development its causal relationships can not be defined as such dynamic patterns when this state of the economic system would uniquely determine its next state. And the knowledge (information) about the initial state itself can not be sufficiently complete.

Economic laws are stochastic in nature which means that the present state of the system is determined by its subsequent state only with a certain degree of probability revealing the possibility of realization of embedded past trends. We should restore our understanding of the balance between regularity and randomness, between the dynamic and statistical components thereof.

There appears an opportunity for theoretical and applied economic research on the basis of general regularities and phenomena, and not just by cutting off things that
does not fit into these general regularities while treating them as irrelevant. It is they which can turn out significant in the future. Economic development due to its probability is also phenomenal to a certain extent, because it is just as accidental as regular.

Therefore, the main problem to be solved by contemporary researchers is dictated by the dialectics of economical system development determined through change and synthesis and ensuring high stability of dynamical states at the macro level in conjunction with the development of human potential. Such combination of conditions and regularities is becoming an increasingly characteristic feature of current economic institutions and systems that gives good reason to speak about the actual progress in implementing of the ideas and the practical application of the changing systems theory to explain the many contemporary economic phenomena. It is possible that further research in this direction will bring even more interesting results at the micro level, that is sure to transform purely theoretical discussion about the features of human potential management in the realization of practical recommendations with the account of organizational changes.

**Conclusions on 2.2.**

Thus, the system of human development management in the organizational and methodological aspects includes evolutionary economic characteristics determining in stages axiological opportunities of a subject in the conditions of transformation processes. Economic projection is the most complex element and determines the final efficiency of innovations realized on the basis of the axiological orientation of human potential to implement its needs. The most predictable in terms of socio-economic result is the use of dynamic models that provides an environment in which people can develop their full potential and lead productive lives according to individual axiological assessment of their interests. Methodological significance of this approach is determined by the dependence of the parameters of human development on the conditions of organizational development of economic system functioning in conditions of dynamic equilibrium and the optimal combination of quantitative and qualitative parameters determining the strategic direction of development.
2.3 STAGES AND FORMS OF HUMAN DEVELOPMENT MANAGEMENT

The transition to a post-industrial (information) stage results in a change in human development and is accompanied by radical changes in the structure and management of organizations. These changes concern primarily the nature of subordination and interaction of the organization and the employee as well as non-economic objectives of organizational structures. Organization and employee relations acquire a social character that is an example of the subject-object relationship. As a result, there appears a synergistic effect of economic cooperation on the level of an organization implying that personnel is seen as a human asset, and management and improvement of the productive capacity of workers - as its increase.⁹⁶

Change in value orientations in economically developed countries transforms the management approach in the organizational environment. And to the traditional three levels of development of management concepts (classical school of personnel management, human resources management, and human capital management) management of human development is added.

Classical personnel management is typical in large organizations with huge bureaucracy. However, the need for flexibility in dealing with organizational problems has transformed personnel management into the human resources management in the process of implementation of the organization’s strategic objectives.

Goal setting of these approaches results in an exhaustive list of administrative tasks, the rational use of employment time; optimization of the size and structure of the organization, creation of conditions for training and obtaining skills required to effectively perform job functions.

The main problem of these management approaches is the inevitable clash of
interests of the parties of labor relations in the organization. Desire to achieve tactical objectives by the organization may become the cause of the conflict, violation of the structural integrity of the interaction within the organization.

Complexity of the problem lies in the fact that the goals and interests are formed not only on the basis of relations connected with management, but also under the influence of other numerous social relations existing between people in the socio-economic system. In turn, the human development goals influence the formation of the organizational structure and the development of public relations.

In other words, the process of human development is the result of the interaction of organizational factors. This raises the problem of choosing a mechanism that takes into account these interactions and allows to foresee the consequences of the actions planned.

Human resource management (HRM) can be defined as a strategic and coherent approach to the management of the enterprise's most valuable asset - the staff who collectively and individually contribute to the objectives of the enterprise.

The main objective of HRM is to achieve the success of the organization with the help of people. HRM idea can be regarded as a kind of philosophy which can be used in various ways, but for which there is no single model of description. Rigid HRM treats people as human capital from which, with reasonable investment in its development, an income can be obtained.

The main activities in the field of HRM are: planning of the organization, planning of jobs, the development of the organization - programs of incentive, planning and implementation aimed at improving the efficiency of the organization and its ability to adapt to changes.

Resource-oriented approach to strategic HRM pays special attention to the needs of the intellectual capital of the organization. An approach focusing on the resources’ potential deals with the acquisition, development and preservation of intellectual capital. All managers involved in the HR act in the way affecting the behavior of employees so that it meets the needs of the enterprise.

The process of organization can be described as the design, development and
maintenance of the system of coordinated actions when individual employees and teams of people work under the general direction helping each other and trying to achieve the goals that are understood and accepted by all. The key word in this definition is "the system." Organizations are systems that, as a result of environmental influences, get a certain structure which includes both formal and informal elements. Organizational planning is the process of converting of the analysis into the project. It determines the structure, relationships, roles, requirements to human resources and the ways to implement the changes.  

From the perspective of decision-making the task of the organization's leadership consists in the formation and direction of the process of optimal use of resources towards the achievement of these goals. The vast majority of the decisions should be made within a limited set of resources. Regardless of the size of the organization the strategic decisions involve choices of alternative use of resources. Management decisions of the organization connected with the structuring of resources are aimed at increasing the capacity of their use. One part of the problem is associated with the organization itself - the structuring of the powers and responsibilities of personnel, construction of production and information flows, etc. Another part is to obtain and use resources: finding and training of personnel, finance, etc. 

J.M. Keynes described the evolution of the organizational constraints to the point where they acquire the status of the main operational objective in the following way: "One of the most interesting developments in recent decades (which has remained unnoticed) became the desire of large enterprises to socialize themselves. With the growth of the company there comes a time when the owners of capital, i.e. shareholders almost completely withdraw from management. As a result managements’ direct interest in obtaining large profits vanishes. When this more stage of development is reached the leadership appreciate the overall stability and reputation of the organization rather than maximization of shareholders’ profit."

Human capital management suggested by W. Beck and P. Drucker is based on freedom of choice and independence of individual employee and their totality is
treated as a flexible variable resource.

The role of intellectual capital and creative approach to work has been steadily increasing. That is why the issue of within-the-organization management of intellectual capital as well as the formation of tools and methods for its accumulation and increase is so important. Human capital management offers a model of the organization on the basis of person-centered objectives of an employee determining the efficiency of the organization. This model is based on several basic principles: the creation of a corporate culture, use of flexible planning system, professional growth. Information and technological changes as well as changes in the market require continuous training, involving ultimately achieving an advance of the professional growth with the account of dynamics of internal and external changes.

Historically, changes always happen with acceleration, accumulating and increasing exponentially. There is nothing dangerous or unexpected here. But the changes that are taking place today have unique aspects that worry many researchers.

First, changes in technology and social life are now taking place with such acceleration that does not allow timely and effective adaptation. Individuals and entire economies are forced to adapt relying not on special methods but making occasional or minor changes or gradually, i.e. slower than development process requires realize the need for change. Delayed reaction of economic and social systems to changes may cost too much, and sometimes it leads to disastrous consequences. Adapting to rapid changes involves frequent and coordinated transformations of vital processes. Alvin Toffler said that we either do not respond to the changes, or react not quickly and effectively enough. He called it futuro shock. According to Peter Drucker, today managers have to manage discrete chaos.

Secondly, with the increasing pace of changes the complexity of problem-solving increases as well. The more complex the problems, the longer it takes to solve them. The faster the pace of changes, the faster the problems to be solved change, and the duration of the positive effect of their solution reduce.

Experts on changes see the solution of problems arising from the accelerating pace of changes in improving forecasting, training and adapting to them. But since
manage changes is better than to respond to them we should pay more attention to management. We should realize that we will not be able to effectively cope with the changes unless develop better methodology or form a new world outlook. Any change of economic systems’ paradigm inevitably exposes the methods used to get aware of the world as well as our actual understanding of it to changes.

Present day living environment is one of the main components subject to change. First of all, researchers are interested in the effect of changes on the patterns of development of economic systems and processes.

Ambiguity of interpretation of the process of changes as an independent phenomenon resulted in the fact that various scientific directions interpret it differently, sometimes contradicting each other and often identifying the notions of "change", "growth", "development", "transformation", "conversion", "evolution". Taking into account the possibility to classify the phenomenon on the basis of species, factor, time, a subject, etc. aspects we get a huge field of meanings each of which is used to describe the functioning of different objects. If to consider a fairly considerable terminological disunity typical of the natural sciences and the humanities, the study of changes as an independent process seems rather complicated and ambiguous. Consequently, taking into account the multidimensional nature of the problem, we should generate a certain conceptual apparatus that would include major categories characterizing the changes and would describe the process in question.

However, the formation of only categorical apparatus is not enough because the object of study are primarily internal mechanisms of development, the analysis of which required a more in-depth study of the internal structure of developing objects and their organization. Such a close correlation of elementwise, terminological and functional approaches to the solution of the problem determines the need for a classification of those directions in which attempts to study this phenomenon were made.

Applying enlarged classification conventionally there are traditionally six fields of knowledge where the category of change is used and is treated differently:

6. Philosophy.

The first to study changes were philosophers who tried to determine the fundamental principle of the world and the laws of preservation and development of the matter’s forms of existence. This period did not bring the fundamental discoveries or laws. But there was awareness of the inevitability of the motion of matter and possibilities of its change. Moreover, there came the understanding of the relationship of the change and the environment.

Later, as part of the German classical philosophy Hegel G.V. basing on the dialectical method revealed the idea of development justifying the universality of the development and explained its universal mechanism and source - the emergence, struggle and overcoming of opposites.

Later Marxist philosophy has attempted to offer the complete scientific concept of development. As a general theory of development materialist dialectics was proposed where the main features of the processes of development expresses the content of its basic laws - the unity and struggle of opposites, the transition from quantitative to qualitative changes, negation of the negation. Development through contradiction, or negation of the negation, is spiral form of development. "In this context, the development process is not only the acceleration, but above all, an irreversible, directional, qualitative change in the system.

Thus, we can conclude that change as the process or phenomenon historically is interpreted in the form of development.

Indeed, the organization is successful if it is in constant, consistent and steady development caused by the need to preserve its structure and stability and sustainability in general which is achieved through the life-cycle management.

H. Vissema indicates that the old paradigm: "First conservation then - development" is replaced by a new one: "Conservation through development."

The term "development" in science is treated as "irreversible, directional, regular change of material and ideal objects." Only the simultaneous presence of all three of these properties distinguishes processes of development, among other changes.

Any socio-economic system has two trends of its existence: the functioning and
development. E.M. Korotkov defines functioning as the "maintenance of life, preservation of functions that determine its integrity, quality certainty, the essential characteristics " and treats development as "the acquisition of a new quality that enhances the performance of the organization in a changing environment."

In papers on economics development is usually treated as movement forward, as the formation of not only new goals, but also the emergence of new systemic, qualitative and structural characteristics. Development includes the growth, expansion, improvement, quality changes. R.L. Ackoff distinguishes between the notions of "growth" and "development", but does not oppose them saying that they can reinforce each other."To grow means to increase in size or number. To develop means to increase the ability and desire to satisfy one’s own needs and legitimate desires and needs and desires of others. Encyclopedic dictionary runs that "development is a change that is associated with the emergence of a qualitatively new state of the object, which acts as a change in its composition or structure."

W.H. Starbuck on the basis of analysis of the motives of the organizations’ growth - the desire for self-fulfillment, risk, prestige, profit growth, costs reduction, maintaining the stability or survival proposed the concept of "self-projected organization " which is a system allowing constant improvements.

The main purpose of development of the organization is to ensure maximum convergence or harmonization of local goals and objectives of individuals, departments with the goals and objectives of the organization as a whole. The methodology of this approach was developed by A.Y.Kibanov, V.M.Mishin, B.Z. Milner, V.L.Doblaev and others. Considering the development of the organization as a system one can see that no social system can exist without a certain degree of harmonization of human behavior, without unity of their actions and goals.

Ronald Coase argued that "to develop one needs to see goals as a beacon ahead." Therefore, it seems necessary to say that the development has focus determined by clear goal or the system of goals. If this focus is positive, socially useful we speak of progress, and if it is negative then it is regression or degradation. The development of organizations always involves progressive progression from the simple to the
complex, from the lower to the higher, as well as a certain goal or several goals providing direction, irreversibility, regularity and continuity of quality changes.

Progressive change in the economic sphere can be quantitative, and then we talk about economic growth. It can be qualitative, and then we talk about structural changes or change in content development or the acquisition of qualitatively new characteristics by the object of management.

Along with purely economic characteristics we should consider social development parameters. It is therefore considered necessary to view the development of the organization through the prism of the behavioral approach to better management of employees.

The concept of the organization’s development is based on theoretical assumptions of A. Maslow, F. Gertsberg, R. Laykurt using behavior of individuals in the organization. P. Draker, K. Arzhiris, D. Makgregor and others see the development as an increase in skills and competencies.

According to P. Drucker, "development is growth, and growth always comes from within." Zelentsova L.S. identified and determined two types of management development: passive and active. The development of organization according to Dokashenko L.V. is a focused and irreversible qualitative transformations preempting the decline in organizational life cycle, based on the realization of internal features.  

From the lexical point of view development is a process that describes the changes of things and phenomena as following each other various forms and states.

When it comes to learning we are talking about the assimilation of knowledge and information. This phenomenon provides a process through which over time experience and understanding are transformed into certain points of view, types and forms of behavior which are determined by conscience and consciousness.

From this it becomes obvious that transformation and change are general principles characterized by the development and learning.

Development emphasizes systemic nature of consecutive steps, which mean further progress.

Simplistically change can be represented as a dual process:
- Individual subjective process by which people get a new understanding of the world around them and, at the same time,
- A structured process where the framework conditions are inside and under the people who influence the opportunities of their perception and of other actions.

Koenig and Vollmer offer six forms of changes:

1. Change of personality and its surroundings: a person can go from one group - in which he feels uncomfortable or even anxious - to another group without these negative factors.
2. Change of subjective nature.
3. Change in rules of the system: the coexistence of people operates on the basis of formal and informal rules.
4. Change in interactive structures: they are a combination of subjective and collective concepts and rules.
5. Changes concerning the direction and speed. Changes always have either pronounced or hidden aims.
6. Changes in the world surrounding the system. Changes in the world around the system change the system itself.

With a holistic (systemic) consideration of the changes one can not do without the classic differentiation (according to Vattzlavik) between changes of the first and the second orders. The system can take various states which means that it changes according to the first order principle. According to the change of the second order the system is aware of itself as such, and plays this role in a completely new way. Second-order change is quantum jumps.

People want stability and trying to find it get united into groups, organizations, institutions and communities. Due to increasing interconnection and interdependence of individuals, groups, organizations, institutions and communities caused by changes in communications, information processing the external environment has expanded, has become more complex and less predictable. In other words it has become more turbulent. The only kind of balance available in such circumstances is a dynamic equilibrium. Indeed, the combination of such specific potential as human resource
with the opportunities of organizational development can significantly transform the idea of the conditions of functioning and efficiency of economic systems.

Understanding the way the parts work, we are trying to understand how the whole mechanism of human development operates. This three-stage process - dismantling thing apart to understand how it operates, an attempt to understand properties of the parts separately and willingness to recognize the functioning of the mechanism as a whole - has become the primary method of analysis of the study. Addressing to the analytical method stimulates observation and experimentation, creates the basis for scientific approaches to the study of economic systems.

One of the dilemmas of the present day times is that the choice and the mechanism are in many respects incompatible notions.

Coming back to the issue of “change” in the context of organizational development we shall note that currently there is a whole lot of often contradictory works (Peter Waterman (1984), Hammer, Champy (1993), Kochan, Useen, (1992)).

These authors are considered pioneers in the field of change management. They pointed out that the existence of organizations depends on their ability to adapt to new requirements as quickly as possible. They represent a holistic (systemic) method of work on projects of changes even if they have applied very different approaches to this work. The system changes should be understood as change in the main components of an organization: vision of the objectives, strategies, technologies, internal structures, human resources. These components should be connected with each other. They require simultaneous transformation.

The principle of changes in terms of integrity can be viewed in different ways. So, one can observe various events in organizations (system).

1. Systems’ changes are associated with stability or homeostasis. Changes are tried to be avoided if principles that reduce deviations are too strong. System becomes stationary; every natural development in the forward direction is blocked.

2. On the other hand, if the processes of changes are following each other too quickly the protection and the blockade may also appear as the system is "defensive"
because it has a different "speed".

The system always tends to be in equilibrium. Changes occur according to a system-specific laws or regulations. Structures are set rules. Finally, the context of the system is also involved in making decisions on the scope and depth of changes.

*Organization* (from Greek “instrument”) means anything that determines the order of the system. It becomes the most extensive and general tool for producing order. Organization is what forms a system with its order and makes it what it is. *Structures*, on the contrary, are units of the organization. Structures may be used as long as they do not call into question the order of the system (organization).

In the theory of conceptual analysis and design of organizational management systems the notion of "development" is defined as "the acquisition of a new quality in one direction or another. And there should be no limitations hindering the development." 94

The term "development" is also understood as irreversible directed, regular change characterized by the transformation of the quality, by the transition to new levels of organization. Consequently, development equals change, and the latter is determined through the transformation of quality.

While studying the organization conceptualists introduced five "modes of the organization": creation, operation, maintenance, development and liquidation of the organization. They distinguish three submodes in the organization’s development mode: method development, functional development and conceptual (paradigmatic) development. Method development assumes the development of new skills in the existing functions. Functional development assumes expansion or modification of functions when using both old and new methods. Submode of conceptual development means forming a new world outlook and new functions and new methods for their implementation.

Professor N. Kosolapov has examined the conceptual group "change - variability - transformation - evolution - development" in his article "International relations and global development." He notes that they differ in the extent, nature (incidental or consequential), direction (reversible, irreversible). In the above sequence the level of
sustainability and reversibility increases and the degree of randomness decreases. In particular, transformation allows the most profound changes, but also involves a high degree of continuity of events that makes it in principle reversible. Evolution according to N. Kosolapov consists of a sequence of numerous transformations for a long time naturally arising out of each other, which results in the fact that the object of the evolution acquires stable, irreversible, new qualitative features which change its nature, manifestation and functioning of this object. Development is defined as a long-term and very-long-term phenomenon by its formation and functional duration, as a regular one by its reasons, driving forces, nature and character, ways and means of its materialization, clearly directed (in time, space and in all transformations), and for all these reasons, irreversible change of tangible and ideal objects.

Thus, in the above sequence development occupies the highest stage in both the duration and content. It seems to incorporate other terms as particular cases. Other notions apparently are subordinate to development. At the same time they are all inherently denote the transition from one state to another. This synthesis represents one more element of management approach applied to human development.

From both the viewpoint of the concepts’ subordination and the semantics of the word "development" an unconventional approach of F.J. Guiyar and G.H. Kelly seems very interesting. In their book "Transformation of the organization" they treat the organization as a living organism - biological corporation. Essentially, they are talking about the way to use human potential in the activity of an economic system. To ensure the health of a biological corporation it is proposed to abandon the stepwise reflexive reactions to competitive threats and proactively create conditions for accelerated evolution of the corporation. Business transformation according to the authors is organizational redesign of the genetic architecture of the corporation which is achieved as a result of simultaneous work in four areas - reframing, restructuring, revitalization and renewal. Reframing is a shift in the corporation’s view on what it is now and what it can achieve in future. Restructuring is the preparatory stage enabling the company to achieve such level of efficiency which
ensures its competitiveness. Revitalization is stimulation of growth by linking corporate body with the environment. Renewal deals with the human side of the conversion process and is associated with providing people with new skills and new goals. Each of these directions is concretized by three elements, "chromosomes." Development alongside with the reward system and organization of training is one of the renewal’s chromosomes. In this case we are dealing not only with a fundamentally different level which the term "development" occupies in the hierarchy of close notions, but with a new sense as seen by Guiyar.

Development is represented as a constant focus on staff training in order to continuously adapt to a changing environment. "Every healthy organizational structure should prepare for ongoing adaptation processes that will dissolve the existing organizational boundaries and create new dependencies that will come into conflict with the existing schemes. The very essence of progress is forcing people to apply new knowledge in new ways. "Design of organization (we are talking about the organizational structure of management), the use of teams as the main link and the factors of organizational adaptation, the transformation from a predominantly economic institute into social one constitute the parts of the chromosome "development".

The need to constantly restructure the organization in response to changes in the external environment is emphasized also in the book by V.N.Samochkin "Adaptive enterprise development." One of the main strategic issues of Russian enterprises is the "ability to quickly and with minimum cost respond to the market demand, i.e. be flexible in the face of fierce competition." According to popular understanding of the flexible development, it involves many repeating cycles, each comprising two elements:

- economic results gained today allowing the company to develop current and future areas of activity,
- the ability to develop new products that will be in demand tomorrow.

Diagnosis and evaluation of a flexible enterprise development, according to V.N.Samochkin should be implemented in the current period as well as long-range
and strategic planning. In this content-rich context human development emerges as an essential element of the organizational change mechanism ensuring the stable functioning of the economic system in the future.

One of the first models of organizational change was developed in the late 40s of the XXth century by an American sociologist and psychologist K. Lewin and represents the change process in three consecutive steps of "unfreezing", "movement" and "new freezing." At the first stage, the members of the organization, on the one hand, should be forced to feel discomfort which will promote a better understanding of the necessity and inevitability of change, on the other hand - a vision of the future should be formed. At the movement stage the main task is to overcome resistance to changes. The last stage - "new freezing" - aims at consolidating the irreversibility of the changes. Skipping one of the stages will inevitably lead to failure. This model also affected subsequent studies in management.

From the early 60's to early 90's the vast majority of studies in this field describe the changes within the concept of organization development. Its general idea consists in the targeted fundamental change of organizational (corporate) culture to adapt the organization to changing environmental conditions. Thus, the main object of influence in organization development projects is the corporate culture, and therefore the whole social subsystem of an organization.

Today the effectiveness of the organization depends on:
- favorable business environment;
- the right strategy of the organization;
- quality of human resources.

Russia's transition to a market economy raised the issue of the need for effective systems to ensure high quality of human resources with the following features.

First, the more people are involved in the professional activity, the more life and professional experiences they accumulate, the less time they need for high-quality solutions of professional tasks, the more valuable they are for the organizations.

Second, this is a very complex object of social management.
Third, the professionalization of activities requires high capital intensity to make people real professionals.

Fourth, the high efficiency of the professionals in the organization is achieved by creating sustainable management of their capabilities.

The concept of "human resources" recognizes the need for investment in the creation and development of human resources based on economic expediency with the aim to attract more high-quality professional employees to create conditions for their professional development which entails the need for better use of their knowledge and skills. Hence the emphasis in the work with the staff is changed, in particular efforts are made to develop and disclose their "hidden" capabilities. The problem is that people are the most conservative part of the organization, and mandatory adaptation of human resources to new objectives, methods and relationships is required. There is no doubt that investigation of possibilities of an integrated approach to the management of the organization employing the resources of human development is the most popular scientific paradigm and requires a detailed study of the characteristics of the design process of organizational change management.

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The study of methodological principles of human development management undertaken in the second chapter of this monographic research allows the following conclusions.

1. The use of human potential, not only in the resource but also in axiological (evaluative) aspect determined the need to study transformation processes and characteristics of human potential.

2. The relationship of human potential, human development and the possibility of the organization for its use in the most rational manner, taking into account axiological features of human behavior in the workplace has been methodologically investigated.

3. The influence of the theory of social harmony, evolutionary economics and behavioral theories in economics in the direction of studying the features of
organization development and possibilities of human potential has been revealed.

4. The content of transformation and organization processes, their interrelation and contradictions of development at the present stage, the basic axiological dependences of human potential formation with the account of the influence of endogenous growth theory has been researched.

5. Thus, the structure of the human potential concept can be considered on two levels: the base level which includes physical, mental, social health and activity level which includes physiological, psychological, intellectual, social and cultural potentials. As a result of a long process of development of ideas about human being as an subject of economic life a whole range of concepts such as "labor", "labor resources", "labor potential", "human factor", "human capital" appeared. At the same time limitless potential, uniqueness, sheer complexity and the inability to model the behavior of both the individual and the group requires a transition to a qualitatively new system of approaches forming an optimal combination of quantitative and qualitative parameters determining the strategic direction of development.
CHAPTER 3. HUMAN DEVELOPMENT MANAGEMENT UNDER THE CONDITIONS OF ORGANIZATIONAL CHANGES

3.1. DESIGN METHODS OF THE SYSTEM OF HUMAN DEVELOPMENT MANAGEMENT

Contemporary strategic management considers that market changes go beyond the normal planning cycle. It becomes essential to reduce the organization’s reaction time to external changes. Organizational planning can be defined according to P. Doyle as a process of management of development and preservation of the company’s strategy and organization, on the one hand, and of external changes - on the other hand.

According to O.S. Vikhansky strategic management is such organization management that is based on human potential, guides production activities to satisfy customers’ needs, quickly responds to changes and implements timely changes in the organization to meet arising challenges and to promote competitive advantages that taken as a whole gives the organization a chance to survive in the long term while achieving its goals.  

Rationalism considers planning as a way of decision-making when "decisions precede actions." In this case there is a step by step process of justifying the selection of goals, aspirations, choices, consequences and results. This method is known as the planning method by the best possible results. It should be noted that there is a danger of creating planning models not adequate to social realities and ignoring the human factor.

Management turns into an integral feature of social life in all its subsystems, structures, into the regularity of development and the formation of new structures and functions when a person becomes the main object of social policy. In historical time scale the final product and purpose of management in the society is the state of an
individual rather than his well-being as the highest goal. To carry out scientific management we should know tendencies and directions of development of the system, its mechanisms and patterns of functioning. Functional aspect of management has been researched better than the structural one, as universally valid criterion of an objective character that would be able to serve as a regulatory mechanism of structural changes is yet to be identified. As for the interaction of function and structure here according to H. Spencer there are at least two points of view. According to the first point of view function’s changes cause changes in the structure. The second position is based on the mechanism of the transition of quantitative changes into the quality. It is noted that with considerable changes in the behavior of the system there happens an abrupt change in the structure that makes the essence of management based on the principle of structural optimization of the systems.

The managed system has the ability to shift from one state into another which determines the point of its development management. Here the state of the system is often understood as its spatiotemporal characteristics qualitatively determined. In general, the system’s state may be expressed by a vector each component of which represents a separate parameter of the system varying within predetermined limits. Direction of change for each of these n parameters is considered as measurements of n-dimensional space of the states. In turn, the aspect of the quantitative study of social phenomena is based in particular on the provisions of the theory of self-organization founded by E. Prigozhyn. The ability to regulate the functional manifestations of aggregate components at once taken height of limited diversity is a difficult art of structural policy of management, art of harmonizing the structural elements of the whole synonymous to optimal behavior under conditions of incomplete certainty. In a certain sense we can say that management is a struggle against entropy in socio-economic systems. Management is a purposeful transfer of the system from less ordered to a more ordered state, from a less organized into a more organized state, from a state with a large variety into the state with lower variety.
Relative character of the notion “system” determines the program which implementation may lead to one or another specific definition of the system. Distinctive features of any system is the link, integrity and stability of the structure. However, if we say that stability of the system is relative than we recognize that the system also has some instability. Instability is a fundamental feature of changing systems, it forms a necessary condition of their evolution and development. Systems that do not have instability, can not evolve. Instability is structural cause of qualitative changes in the system. Economic systems belong to the changing ones. In a state of stable equilibrium economic system does not evolve, but undergoes damped oscillations near this state. However, this state itself is the result of the previous evolution of the system. In view of this last process, any equilibrium situation of the market economy is the situation of maximum efficiency, and vice versa. Highly nonequilibrium economy interacts with its future.

The structure of the organization reflects the current number of the organizational units, connection between these subdivisions and their integration. The starting point in the construction of the structure is the design of work. In this regard, management should organize their work with staff so as to promote positive results of behavior and activity of any employee and try to eliminate the negative consequences of his actions. Management development is not one time transformation of the governance with the aim of achieving the best state of this governance, but uninterrupted long-time transition from one state to another, which is characterized by qualitative changes in governance in general or by an introduction of qualitatively new elements, features or characteristics affecting the essential parts of governance. Many of the changes in the management system are the result of improvement, but not every rationalization can be considered as a basis for management development. Design of work includes the analysis, description of the content and the requirements for it based on the scale, complexity and relationships parameters. Development of the system is a transfer from the current state into the potential one.

Proponents of organizational development believe this direction to be the
method of planning when organizational changes are caused by agents external to the system. Organizations are also seen as socio-technical systems in which "the flow of organizational changes is the process of learning, aimed at the formation of consciousness and behavior of members of the organization." 100

To implement a successful economic system design one should take into account that such a component as communication between people is present in complex open systems, even at a high level of autonomy of subsystems where true cybernetic effects prevail.

Like system design, planning is a process of solving problems facing the social systems. It is very likely that the only real difference between the planning and designing of systems is in some orientation of planning for the future, and in its symbiosis with management. Apparently, one can try to achieve only technologically feasible goals. It is best to deal with phenomena that allow linear model and forecast of their development. Assuming a competitive character of free enterprise system solutions are considered "progressive" to the extent they serve the purposes of an individual.

Planning is designing of a desired future and effective ways to achieve it. Obviously, planning is a preliminary decision-making process. The main difficulty of planning lies not in the decisions themselves, but in their relationships.

Planning is the process of acceptance and evaluation of a number of interrelated decisions that precede a certain activity when there is awareness that the desired future condition will not take place without some actions and that these actions will increase the likelihood of a favorable outcome.

It is in the increased ability of each part of the organization including human resources to contribute to the improvement of the entire company activity is the advantage of planning.

Planning is seen as an open system affecting its environment and other systems and experiencing, in turn, their influence. According to H. Ozbekhen "planning generates changes" by energy and information exchange with other systems. Thus, planning is a kind of intelligent system designed to translate plans into action. In turn,
Bir proposed to classify systems not by subject basis, but only in terms of complexity. In order to operate efficiently within the concept of complexity we create an organization (which reduces the entropy). Planning here is to study the possible future consequences of our present actions and is an integral part of the systems designing.

The main means of successful enterprise adaptation to uncertain and rapidly changing environmental conditions is an effective control mechanism providing the formation and implementation of such a scenario, which will ensure the best under the circumstances final results.

We note that issues of capacity building, in particular innovation potential building has not been overlooked in economic papers, but the concept of "innovation potential" particularly in relation to the process of human development has no clear interpretation.

Innovation processes are implemented within the appropriately chosen innovation strategy.

Management process in the economic system can be represented as a set of routine (template) processes to solve problems. Problematic situation arises when maintain the existing process in the new environment does not result in the achievement of the desired goal, or, in other words, when the goal can not be achieved by known (template in this sense) modes of action. Lack of change mechanism leads to the isolation of the management apparatus when organizational structure and not the content of management process and its results becomes primary. This reduces the efficiency of the economic system.

The designing of the system of an economic system management includes identification of problems, creating models, data collection and analysis. Model of the economic system is necessary to anticipate its behavior and especially to monitor connections between the actions of management system (control mechanism), the behavior of the economic system and the environment, which is crucial in the management of the development and design of control mechanisms.

The complex of three main mechanisms of development management satisfies
these requirements.  

The main mechanism of the design of economic system development comprising a forecast of possible changes in the external and internal environment, setting goals, the problems encountered on the way to achieve them, formation, comparison and selection of effective programs of actions to solve the problems is the mechanism for identifying and solving problems.

Burkov V.N. and Irikov V.A. distinguish ten universal stages of decision-making in economic systems:

1) identification of the goals of the economic system, 2) identification of the problems in the process of achieving these goals, 3) examination and diagnosis of the problem; 4) search for solutions to the problem, 5) evaluation of all alternatives and choosing the best of them, 6) agreeing the decisions and interests of performers; 7) approval of the decisions; 8) preparation for putting decisions into action, 9) managing the implementation of decisions, 10) verification of solutions.

Mechanism of coordination of decisions and interests implies the coordination of interests through incentive mechanisms. It provides activation and mobilization of all the resources of the economic system to solve problems and, therefore, to achieve the objectives of the economic system.

The main purpose of the mechanism of monitoring and management mechanism design (mechanism of management system development) is to oversee the first two mechanisms, to analyze their effectiveness by the final results, to identify problems and find solutions aimed at the improvement of these mechanisms and their restructuring in accordance with the decisions and external conditions.

The combination of these three mechanisms is an option in the process of management mechanism designing. But it is not enough just to develop a good program, project; you need to bring into force mechanisms for the implementation of this program.  

These are mainly two types of mechanisms - mechanisms of operational program management and incentive mechanisms. They both are based, naturally, on mechanism of control, recording and assessment.
Additionally mechanisms for financing of development projects (priority and competitive resource allocation mechanisms) are used. The most popular and simple are the so-called priority mechanisms. Their essence is that the resources are distributed in proportion to the priorities of the economic system, but not more than the declared value. Typically two options are used: direct priorities mechanism suggesting that the bigger the declared resource the more the resulting one, and the mechanism of reverse priorities, i.e. distribution according to the efficiency of the resource usage. Sometimes a combination of these options is used - absolute priority mechanism.

More rigid are the so-called competitive mechanisms when resources are allocated according to the priorities that reflect a greater or lesser degree of expected efficiency from the resource use.¹⁰⁵

From the point of view of these management mechanisms we shall note features of activity determined as internal and external activity regulated by the goal.

According to Kogan there are necessary and sufficient mechanisms which include five blocks: motivational, orientational, operational, energetical and evaluating.

Feature of orientation block is the inclusion of mechanisms of goal-setting, planning and activity forecasting in its structure. In turn, plans of activity are understood as preliminary representation (model) of the future activity which includes both the goals and the programs of particular actions to ensure the achievement of these goals.

In the operational block the most important thing is to determine technology as a set of ways and means of any activity.¹⁰⁶

Activity is realized in the form of specific operations and elementary actions. Accordingly, the process of performance management is cyclical in nature with each management cycle containing the same stages and the same procedure and execution operations of different nature. In other words, the model of management cycle is invariant (unchangeable in structure) with respect to the operations of different nature. This property of management processes technology naturally follows
from the described structure.

Specificity of management mechanism designing consists in the need to present element being developed as part of a complex system. There are currently many concepts of the system, which are characterized by unity of regularly arranged in the concatenation parts or as an organized set of tools to achieve a common goal.¹⁰⁷

The main objective is to identify specific parameters of each projected element on the basis of assessment of the effectiveness of the economic system as a whole. To achieve this task the methods of designing efficiency together with the methods of systems analysis, mathematical methods to research operations and other system areas are used. The object of research at this stage is the project of the being created mechanism of human development management which is regarded as really existing and functioning in the system. It is important to note that at the last stage the being designed mechanism can only be considered as a part of the whole economic system performing certain task. In fact this is system-communication aspect of the analysis which object is not an economic system, but the project of mechanism to manage it.

Designing is a creative process in which options are generated for finding the best solutions. Generally, an improvement of one parameter leads to the deterioration of another, a comparison of options is therefore necessary. The need to compared the worked out options assumes development of special methods of comparison with account to the efficiency of each option and level at which the comparison is made.¹⁰⁸

At the designing stage the designing efficiency based on the methods of systems’ analysis and operations research is becoming increasingly widespread. The solution of designing effectiveness tasks is based on the information from the preceding stage of studies presented in the form of initial requirements to the organization and to the parameters of available human potential.

Construction of models to research effectiveness for the designing stage is connected with the account and the elimination of uncertainty. The following methodological techniques are used here: identification of the models’ levels, techniques of domination, identification of the operation’s stages, accumulation of
generalized indicators, etc. Of greatest interest are the following methods: the use of generalized indicators as a method of considering the uncertainty, the principle of balancing as a method to form restrictions; analysis as a method of compensating capabilities to eliminate uncertainty.

To practically study economic systems in most cases it seems sufficient to consider the unity of six aspects.

- **System-component aspect** implies identification of the model’s components whose interaction provides new qualitative features unique to the system as a whole. Principles of identifying the constituent elements of the system are determined by the object and purpose of the study as well as by the aspects covered.

- **Systemic-structural aspect** provides identification of the structure of the system based on the revealing of the model components relations (of direct, reverse, neutral, material, energy, information or mixed character). The structure determining the way of interaction of the system components depends on the parameters of the system elements, connects and converts them making the system integrated and determines such qualities that are not inherent to any of the system components separately.

- **Systemic-functional aspect** involves the identification of functional relationships of the research components based on the coordination and subordination of elements.

- **Systemic-integrative aspect** aims at identifying systemically important mechanisms providing the components with the new quality peculiar to the system.

- **Systemic-communication aspect** allows you to emphasize the interaction of the system with the environment with the opposing systems in the process of its functioning.

- **Systemic-historical aspect** requires the study of the system development mechanism on the basis of the study of its retrospective and prospects.
As we have already noted, the planning procedure is rarely a one-act decision-making process. As a rule, then a multiple (iterative) procedure (especially if we are talking about previously determined system of decision-making) comes. Such a decision-making procedure in this element of the system does not contain within itself references to other elements.

Analysis tasks are connected with the study of the functioning of the specified

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**Figure 4** - Schematic diagram of the organizational design of management systems.\(^{109}\)

<table>
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<tr>
<th>1</th>
<th>Analysis of the dynamics of the internal state of the organization</th>
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<td>Organizational, functional and human potential of the organization's management system</td>
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properties or some set of mechanisms, and the problems of synthesis are related with the construction of the functioning mechanisms with the right properties.\textsuperscript{110}

While solving these problems a number of methods is used: observation of the functioning of real organizations, pilot testing of the ideas, simulation, theoretical research. The greatest effect can be achieved only by their combined use.

Description of the operation mechanism allows us to reflect the procedures of generating information for management, methods of forming the control parameters (plans, prices, standards), financial management techniques and economic incentives, organizational and financial restrictions on the activity of organizations, operational management techniques - in general, a set of organizational, legal, economic, financial rules governing the functioning of the organization in the economy and production.

We shall note that the mechanism for operating the model of centralized economic system includes two components: budgetary limits and the law of pricing.

In addition, there are three important parameters that assess the economic system: the criterion of the effectiveness of the functioning mechanism, the exponent of the nonfulfillment of the plan and the degree of information distortion. Using these indicators one can effectively carry out all of the previously set goals for analysis and synthesis of mechanisms in a particular situation of human development management in the organization.

Thus, we have examined a number of basic concepts, tasks setting and results of the theory of synthesis concerning mechanisms of economic systems functioning. Improving economic systems management is one of the most urgent and challenging tasks, which requires a comprehensive, systematic approach to its solution, clear and effective organizational forms of development and implementation of the designing and introduction of modern management mechanisms.

The main problem that requires further description is to develop the concept of the research process (designing) of the mechanism of economic systems management.

Clear cut mechanism is required to improve management efficiency.
Mechanism is determined by economic laws and practical actions. This means that it is difficult to talk about the same mechanisms in different organizations and economic systems in general realizing similar goals. We should proceed from the general understanding of the mechanism as a socially-driven system with adequate authority, resources, and a specific structure enabling us to manage groups of people by making decisions. Such an approach allows us to study statics and dynamics of management mechanism, which respectively mean the organizational structure of management and processes of administrative decisions development.

Management (organizational) designing proper is a system of decision-making which is the foundation allowing to adequately analyze the entire management system and provide optimal conditions for management decisions, from the collection of baseline data, study of existing institutional arrangements and decision trees, up to the ways to improve the management system - the result of the decision.

It is always advisable to carry out such kind of analysis at the beginning of work aimed at transforming the management system. According to Ignatieff A.V. and M.M. Maksimtsov the analysis is most effective if it comprises six stages.  

At the first stage organization of management is surveyed, all the documents governing the management, job descriptions, the current system of departments’ management are studied and the data obtained are compared with the responsibilities outlined in the Regulations. The result reveals the extent to which management practice comply with its model and, if necessary, adjustments are made. At this stage it is also required to find out and to document the flow of information.

The second stage involves the development of organizational procedures for making management decisions. At this stage the scheme of each organizational procedure is made, its description is provided, a list of documents used in this procedure is compiled.

At the third stage the relationships between decision-making procedures are revealed and block-schemes of decision-making are offered.

At the fourth stage the decision-making scheme of particular organizational units recording levels of management and schemes of current decision-making procedures
The fifth stage of work consists in the logical analysis that provides all management procedures performed in the department, documentation required to perform each of the organizational operation and stored at each management level. Logical analysis of the decision tree allows us to judge the effectiveness of administration.

The sixth stage is direct development of all documentation that regulates the activity of administrative personnel of separate organizational unit.

Let us dwell on the task of designing of a mechanism (system) of organization (economic system) management.

The priority task is the formation of its goals of functioning. This task is crucial when designing economic systems for several reasons. First, by their very nature all real economic systems are multipurpose. Secondly, the life period of functioning purposes is different, and therefore, to design management mechanism based on only the objectives is not possible. Third, the designing of management mechanism for all the goals of functioning is too laborious and, therefore, their number should be as few as possible.

First of all, there should be the assessment and selection of global management purposes. Structuring of goals should be carried out by the research of management functions. The task of designing also involves modeling of management decisions.\textsuperscript{112}

Thus, the transition to effective methods of designing of any systems and mechanisms requires well-determined conditions. Speaking of the currently available examples of constructive representations of the basic mechanisms we shall note, first, typical scheme of mechanisms of integrated performance assessment. This scheme allows us to specify a set of initial indicators to assess the activity or condition, to choose a scale to assess the significance of indicators, the procedure of estimates parameters aggregation in local estimates by group of indicators and, finally, it contains a convenient apparatus of matrix convolutions allowing flexible configuration of complex (final) assessment of a wide variety of purposes. With efficiency assessment unit we can design a wide class of competitive priorities and
mechanisms. Thus, if we add to the efficiency assessment unit (referring to the expected efficiency) the resources (plans) determining unit based on the performance evaluation, we shall get the system of designing of competitive or priority mechanisms.

Another important condition is connected with the necessity of experimental verification of created mechanisms projects prior to their implementation. Such experimental testing can be reliably performed using business games and simulations. As for the CAD systems of management mechanisms, there are a number of additional features and conditions that are appropriate to consider separately.

Computer-aided designing is the integration of methods of technical sciences based on the use of databases, libraries of programs and communication subsystems. Such mechanism includes deterministic assignment of system goal, system elements and rules (procedures, limitations, functions, and so on) regulating and determining the actions of the elements in the predetermined structure. Proceeding from this definition of the mechanism of functioning mechanism of management or organizational mechanism can be decomposed into the description of interconnected blocks - components. As a basis of decomposition the separation of management functions is used. The result is blocks-components of planning, assessment, operation, accounting, promotion. Thus, the organizational mechanism of the active system is understood as a system of cyclically occurring organizational processes of planning, evaluation, stimulation of active elements. Cyclicity of organizational processes varies depending on the hierarchical level of the organizational system.

On the basis of the methodology applied here we can characterize CAD system of management mechanism which is achieved through analysis and synthesis of organizational mechanisms models. The system should include two main modules: the module of analysis of mechanisms models and the module of mechanisms synthesis. The modules should have the following properties:

- functionality (transparency, obviousness) - user-friendly realization of functions;
- reality - presentation of the source and output data in the form of measured values understandable to the user;
- reliability - performance with a given probability over the lifetime of the functions determined by the initial data. Reliability is achieved by the availability for testing, periodic testing of system functions;
- structural completeness - the content of the minimum set of models providing ease of use and understanding of the functioning dynamics;
- manageability - possibility to automatically change the structure of the module in order to reduce the number of functions performed by means of governing principles included in the original data;
- hierarchy - the ability to use (to develop) individual elements of the module for independent modules;
- intelligence - the ability to use both natural and artificial intellects.

Thus, the architecture of the system is connected with the identification of user needs and further designing of a system that meets the requirements as efficiently as possible within economic and technical constraints.

When there is the need for rather exact control of the object’s operation based on the knowledge of its internal and external relations, when an object is deliberately designed there appears a systematic approach. Its main function in human activity is to provide deliberate designing of an object in view of the final results.

System designing in accordance with the requirements of its final results suggests a distinct vision of these requirements. And if these requirements can be met by traditional already mastered ways, then there is no need to create a new system. The latter makes sense only when meeting the requirements is problematic. "The system is the means by which the solution to the problem is carried out."114
Categorical structure of the systemic approach can be represented by the following scheme:

![Figure 5 - Categorial structure of systemic approach.](image)

Goal-setting is the most important process of systemic approach since the goal implies objective requirements and at the same time it governs all activities to establish a system and determines the trajectory of system activity. Awareness of the goal allows to reveal the function understood as the operation of the system to achieve the goal, the method of achieving the goal. Purposeful functioning is the way of life of system objects. Purposeful functioning is provided by the system’s construction that includes elemental composition and structure. Finally, it occurs in certain environments which impose restrictions on the work of the system and at the same time on the approximation to the goal and the solvability of the problem situation.

System is purposefully functioning structure capable to resolve the problem situation under certain environmental conditions. This approach provides a constructive definition of the system, since it reveals the way to identify it through the goal and the problem situation.  

When the behavior of the system depends not only on the structure, but also on the spontaneously changing composition we are dealing with organizational systems and accordingly with the organizational variant of the systemic approach, which is its most complex and advanced form. In principle, everything can be constructed and described in terms of designs. The novelty of this approach is the specification of the
theoretical and methodological principles to the level of operating methods in the management of social processes and the design of organizational structures.

Law of entropy has important consequence - the dependence of potential of the system on the degree of its organization or the nature of its structural elements interaction. On the basis of this law we can determine the dependence of the system’s potential on the potential of its structural elements for an organized system that allows you to develop recommendations for the rational organization and management of the system.\textsuperscript{116}

We will consider the concept of management process where the process is dynamic characteristics of the phenomenon. Management process is cyclical in nature, which means that it flows continuously and is a set of successive cycles. Each cycle begins with the identification of the goal and finishes with its achievement, and then on the basis of the results achieved a new cycle begins.

Management process consists in the analysis of the situation, in the development and making management decisions, organization of its execution and in final control which closes the management cycle. Thus, management process is a system whose elements (operations) have an organic relationship and focus on consistent achievement of intermediate and final results by building a "tree of goals." It follows that in the management process there are the stages of the situation analysis, decision-making, implementation and monitoring of the decisions’ execution.

At the heart of improving of economic entities management is designing of organizations, i.e. promotion of institutional projects that provide identification and solution of management problems through the development of innovations that meet the needs, perspectives and the particular conditions of specific organizations, and measures to ensure their implementation.\textsuperscript{117} The object of organizational design that accompanies any managerial innovation is always the system of the same class. The main property of the organizational and economic systems is that these people are the elements of their structure. Organizational-economic system is a social and economic system created deliberately or formed spontaneously for the implementation of the process of joint work. To transform elements into integrated set (the organization) it is
necessary to combine them expedient to the designed system of interrelations - information and real-power communications providing streams required for the operation of the whole system.

In other words, the organizational system should be purposeful, self-regulating, self-developing and self-learning. There is a need in mechanism of management and distribution of management functions ensuring these properties of the organizational system.

The designing stages of the organizational system management include identification of problems, models generation, data collection and analysis. Model of organizational systems is required to forecast its behavior primarily to monitor communications between the actions of management system (control mechanism), the behavior of the organizational system and the environment, which is crucial in the management of the development and design of management mechanisms. A complex of the following three basic mechanisms of development management satisfies all the requirements.\(^{118}\)

1. Mechanism for identifying and solving problems. It includes a forecast of possible changes in the external and internal environment, identification of goals and problems encountered on the way to achieve them, formation, comparison and selection of effective programs of action.

2. Mechanism of decisions and interests coordination. It involves coordination of interests through incentive mechanisms.

3. Mechanism for monitoring and changing of management system (mechanism of management system development). Its main purpose consists in monitoring the first two mechanisms and analyzing their performance by the final results.

The combination of these three mechanisms is the variant of management mechanism development from which the basic management functions and their distribution follow. Thus, the organizational system is a reasonable, mutually beneficial association of people (and resources) in a holistic separate body acting purposefully and in a coordinated manner through the introduction of a specific structure of the relationship between the system elements and mechanisms governing
the functioning and interaction of these elements.

This implies that the technique of the process and management actuators structuring in constructing effective management system should come from final results to the content of management processes and from them - to the organizational structure. The goal can be achieved in various ways, using one of the many management mechanisms.

The system is a means of achieving goals. Common goals, a certain structure and certain rules of elements interaction are essential features of the organizational system.

Organizational mechanism is a set of rules governing the actions of the organizational system elements during functioning.

The mechanism of management is a set of procedures to ensure the specific development of an organization in time. We can judge the quality of management mechanism only if we are able to assess the state of the organization in terms of its goals. Restructuring almost always requires a change in mechanism, while change of mechanism can be done without structural changes. Therefore the task of developing effective organizational mechanisms with a given structure is a necessary element for assessing the effectiveness of the structure itself.

Systemic approach and analysis determined the development of new design techniques in the face of uncertainty and conflict.\textsuperscript{119}

The purpose of modern designing consists in the organization of designing as a process causing changes in an artificial environment.

The main subject of a systemic approach is an object called a system. Praxeological approach is aimed at the analysis of the action subject. Systemic approach implies a holistic treatment of any specific object, while praxeological approach considers its object in terms of efficiency. Praxeological approach considers integrity as the result of effective actions while for the systemic approach efficiency is the result of a holistic consideration of objects. For both approaches a comprehensive analysis of the relevant phenomena is a means to obtain the finite optimal solution (goal).\textsuperscript{120}

Designing is understood as information preparation of an action aimed at
changing the reality. To solve problems of designing knowledge of reality and knowledge of evaluation criteria are required: the projecting system therefore generates a cognitive need aimed at the system of research.

**Conclusions on 3.1.**

Management as an organizational process is a part of all social subsystems. It determines patterns of development and the formation of new structures and functions when the main object of management is the human potential determining the state of an individual as the highest goal rather than organizational welfare.

Consideration of planning as a method for forming a step-by-step process to justify the selection of goals, variants and consequences is known for the best possible results. It will be appreciated that the projected planning model should be adequate to the economic realities and at the same time take into account the human factor determined by the parameters of human development.

Implementation of scientific management is provided by justification of tendencies and directions of economic systems development, their mechanisms and patterns of functioning. The functional aspect of organizational management has been researched more fully than the structural one. Currently there are no universal and objective criteria to assess human development and that would be able to serve as a regulatory mechanism of organizational and structural changes.

In a sense, management is a struggle against entropy in socio-economic systems, the transition from a less ordered to a more ordered state with the account of the human potential of the organization.

Management changes occur as a result of the improvement, but not any kind of rationalization of management can be considered as a basis for management development. Designing of the system of human development management involves the analysis, description of the content and the requirements for it based on the parameters of scale, complexity and relations with the transition from the current state to the potential.

The research of the designing problems revealed that the primary means of successful adaptation of the organization to changing conditions is an effective
mechanism for management of human potential which will provide the best in the current economic conditions results that allows us to apply the concept of “innovation potential” to the process of human development.

The basic scheme of organizational designing of management systems in relation to human development has been suggested.

Mechanism should be regarded as a socio-controlled system due to economic laws, with adequate powers, resources, having a certain structure that allows to manage the development of human potential by making decisions. This approach allows us to study statics and dynamics of management mechanism which is understood respectively as the organizational structure of management and processes of administrative decisions development within the existing structure of human potential management.

At the heart of management of economic entities improvement is designing of organizations, i.e. promotion of institutional projects that provide identification and solution of management problems through the development of innovations that meet the needs, perspectives and particular conditions of organizations.

3.2. CHOICE OF THE MANAGEMENT SYSTEM MODEL

The study of managerial aspects of human development of economic systems requires a more precise subject classification of a system as a category. There are numerous definitions of the system as one of the major scientific categories. For instance - "Everything consisting of related parts can be considered the system". "System is a complex of interacting components," "System is a set of related operating elements"; "system is a set of interrelated elements ... there is no one subset of the elements not connected with another subset" "system is not just a set of units ... but a set of relations between these units"; "system is a definite set of interrelated elements forming stable unity and integrity and having integral properties and regularities"; "A more complete and meaningful general definition describes a system
as a set of objects that have these properties, and a set of relationships between objects and their properties";" system is the plurality of components, their connections and interactions among themselves and with the environment making the unity, qualitatively definite and purposeful."System may be any process, scientific theory, etc., if they possess elements forming unity (integrity) with their connections and interactions, which eventually creates a set of properties that are unique to this system and distinguish it from other systems (the property of emergence)."121

These definitions have some common features, but the scale of the category of "system" allows us to formulate not only common, but also specific characteristics of the defining features of the concepts application to the study of a wide variety of objects. If we consider the system in the context of natural science, we will focus on some physical laws and constants that determine the structure and interaction in the global universe. Research of the system in the anthropological aspect will inevitably lead to solving problems of sequence, variability, environmental resistance, etc. at the level of biological objects. Social system and its structural arrangement will require consideration of stratification, gender and other characteristics of the studied social community. And this series can go on and on. Our task is to identify only the most general regularities influencing almost all aspects of existing systems. Solution of such a problem is not so much theoretically important but should rather be seen as an attempt to practically justify the need to consider the problems of global development in the context of structural transformation of economic systems. Globalization of economic, political, social and other processes which has caused currently a lot of discussion has not only negative, but quite tangible practical consequences. Not trying to give in-depth assessment of changes taking place in this field we will mention only one most important characteristic which will be used further to describe the features of economic systems. We are talking about the mechanism of elements interaction in any, but above all, in an economic system. Qualitative stability of the notion “system” does not allow us to extend the definiteness of the mechanism of internal elements interaction for long time periods. Such a restriction is not the result of errors in the determination, but the neglect of possible changes in the very
conditions of existence and the regularities that determine the form and content of the phenomenon. Therefore, the main problem of theoretical constructs application in the field of management systems research comes down in the first approximation to understanding the sequence and direction of the development of economic systems with regard to the external environment and constantly changing conditions (political, climatic, institutional, etc.).

Our task is to identify the most important parameters describing the behavior of an object within a particular economic system (organization) in order to predict possible management impact on the human potential and the subsequent effect of maximizing its core activities. This issue is being discussed in the economic literature, but we failed to find out there an acceptable variant for practical application. At the same time it should be emphasized that certain approaches to the study of some aspects were analyzed in detail by other authors, so that some common views on the problem being solved allows us to identify some conceptually formed focus of research.

The system is usually understood as a complex of interacting in some way components. However, this understanding is too broad since it includes various kinds of conglomerates. In the strict sense of the word system is a holistic entity having new qualitative characteristics, which are not contained in its constituent components. System is a kind of unity in which the internal connections between the components prevail over external influences on them.\textsuperscript{122}

The system actively influences its components transforming them accordingly to its own nature. As a result, the original components undergo noticeable changes – they lose some initial properties, acquire new ones, some former properties undergo transformations. System is a set consisting of two or more elements that satisfies the following three conditions.\textsuperscript{123}

1. The behavior of each element affects the behavior of the whole.
2. Behavior of the elements and their impact on the whole are interdependent.
3. Whatever subgroups of elements are formed, each element affects the behavior of the whole, and none of them have any effect on them on its own.
Thus, the system is such a whole that can not be divided into independent parts. Hence, two important features of the system - each part of the system has properties that it loses in case of separation from the system, and each system has certain (essential) properties that none of its parts have.

Essential properties of the system in general arise from the interaction of its parts. System is a whole that can not be understood through analysis. Systemic thinking consists in the use of the analysis and synthesis as complementary processes.

System is a set of interrelated elements. We understand the system as an integrity comprising at least two elements, each of which is interconnected with the others, or at least with one of the elements. Connection of elements within the system can be direct or indirect.\(^\text{124}\)

Element is an integral part of a complex whole. Element is an indivisible part of the system independent in relation to this system. The indivisibility of an element is regarded as the inadvisability to record its internal state within the model of the system. The element itself is characterized only by its outward manifestations in the form of ties and relationships with other elements.\(^\text{125}\)

The traditional understanding of the need to study the system as a social object assumes multi-level approach to its elements. V.G. Afanasyev distinguishes at least four elements:

- system– object - i.e. objectively existing system which is a source of systemic scientific knowledge - the prototype of the theoretical system;
- theoretical scientific system based on the principle of reflection in the thinking of the system-object;
- movement (development) of the theoretical system in the direction of the more adequate reflection of objectively existing system;
- practice as a sphere to use the knowledge about the system.

V.G. Afanasyev admits undeniable existence of the system in the society and shows that consistency is a property, a feature of objective reality.

We should agree that learning in general and acquiring knowledge of the systems (social, economic, biological, etc.) pursues the purpose of natural and social
processes management.

Ontology of systems (their being, existence), epistemology of systems (getting to know systems and systemic knowledge of them) and management of systems (ensuring their functioning, improvement and development, the practice of their creation) taken together constitute the content of the systemic approach in the broadest sense of the word.126

Real system, knowledge of it, its reflection in the human mind and then practical impact on the system, the conscious management of its operation and development - such is the dialectics of the subjective and the objective, of theory and practice in the systemic approach. At the same time, it is noted that only the epistemological aspect of the problem of integrity which encompasses, first, issues relating to the system approach in the knowledge of integrated systems, and second, issues of integrity of the very forms of cognition (perception, concepts, etc.) and third, issues about the means and ways of knowledge of the whole does not provide complete knowledge of integrity.127

Objectively existing complete systems are reflected in the consciousness not absolutely, but approximately true. This relativity follows primarily from the fact that any knowledge of a holistic system is historically conditioned and expresses the state of the science about this whole at some historical stage.128

To know a holistic system means to reflect in the mind its inner nature, its distinctive features, sides in the form of certain concepts, categories, theories. To get to know the whole means to disclose:

- its nature, qualitative specificity, inherent systemic and integrative qualities;
- composition, quantitative and qualitative characteristics of its parts, components, their coordination and subordination, the main part holding the system; their heterogeneity and inconsistency which are an important source of movement, of the development of the whole;
- structure, i.e. the internal organization, the relationship of components finding out why these components are combined and interact in this way and not otherwise, why they form particular this and not another unit;
- functions, i.e. its activity as well as functions of the parts and the way these latter "work" for the common functions;
- integrative, systemic factors, mechanisms ensuring the integrity of the system, its development and improvement;
- communications with the external environment including the relationship with a broader whole which part it is itself;
- history, origin and source of origin, formation, development, tendencies and prospects, the conversion to a qualitatively new holistic system.¹²⁹

Systemic method comprises three stages:¹³⁰

1. Identification of the whole (system), part of which is a subject that should be explained.
2. Explanation of the behavior or properties of the whole.
3. Explanation of the behavior or properties of an object by its role or function in the whole containing it.

Development of complementarity is the main task of systemic thinking. The analysis focuses on the structure. It shows how the system works. Synthesis focuses on function. It shows why it functions this way. Therefore, the analysis provides knowledge, the synthesis provides understanding. The first allows us to describe, the second allows us to explain.

We are also interested in the functional interaction of the parts of the system. This approach stems from the fact that the systemic thinking focuses on the construction and reconstruction of the systems.

There are significant differences between the so-called analytic and synthetic management.

If each considered separately part of the system is forced to work with maximum efficiency, the whole system will not function as effectively as possible.

Characteristic of the system depends not so much on work of the details individually, but on their interaction.

Description of the conflict between the parts and the whole is reflected in the common recognition of the required matching of the properties of the parts.
In accordance with the systemic thinking it is believed that a better understanding of the system under study can be achieved by expanding the system rather than reducing it to its constituent elements.

Attention of the system-oriented research focus on purposeful systems. Organisms and organizations are systems that tend to pursue their own goals. Therefore, when we refer to organizations we are interested in three-level tasks: tasks of the system, tasks of its parts and tasks of the system which part is this system (of supersystem).

A set of elements or parts that perform the same function are not a system, but an aggregation. To make a system we should functionally divide work between its parts and establish coordination between them.

Internal properties of the system are characterized by a certain systemic-componential, systemic-structural, systemic-functional and systemic-integrative aspects. Any system has a specific set of components.

System-componential aspect of the systemic approach is a search for an answer to the question of what components the whole is formed. This is the study of the system’s substance. System’s components in the philosophical sense are the structural units whose interaction causes, provides qualitative features inherent in the system.

Speaking about systemic-structural aspect we should say that structure is the internal form of the system, the way of interconnection and interaction of its constituent components. It is very important for determining the qualitative specificity of the system, its features and properties. The notion of system’s structure is very close to the notion of form, but not identical to it. It covers only one aspect of the notion “form” - the internal organization of the content. Relative independence and stability of the structure is particularly important for keeping the system. Being the most stable feature of the system the structure "opposes" constant changes of the components, keeps these changes within a certain quality. There are no relationships without objects of ties, the structure is "tied" to the components and is generated by them.

Then systemic-functional aspect comes. Functions of the system are the
integrative result of the functioning of its components. Functions of the components are coordinated in time and space and have expedient character in respect to the system. There is coordination and subordination of functions.\textsuperscript{132}

The internal stability of the system is a natural condition for its stable functioning. At the same time some side and probabilistic relations and impacts can significantly affect the result of the system functioning as a whole. Using statistical and probability theory methods we can take into account the role and significance of possible random factors.

Now to the systemic-integrative aspect. One of the fundamental aspects of the systemic approach is the issue of systemic factors, of the mechanisms that ensure qualitative specificity of systems, their operation and development. Management is an indispensable, inherent property of the system.

There are two types, two mechanisms of management action - spontaneous and deliberate. In the event of a spontaneous mechanism the ordering, management action on the system is the average result of a clash of often divergent individual acts. Deliberate system management mechanism involves the formation of management subjects, i.e. the system of the bodies exercising deliberate impact on the system in order to achieve certain results.

Connection is a set of dependencies of one element properties on the properties of the other components. Double-sided dependence of the properties of one element on the properties of other elements of the system is called interconnection. Interaction is a set of interconnections and relationships between the properties of the elements when they acquire the character of interactions to support each other. Structure of the system is a set of system elements and relationships between them in the form of multitude. The structure is a static model of the system and describes only the structure of the system without considering the number of properties (states) of its elements.

A criterion for boundary between system and environment is participation or nonparticipation of this or that phenomenon in the creation of system properties, the nature and extent of such participation. The system includes only those objects,
phenomena and processes that take direct and immediate participation in the creation of system properties. It is their interaction that creates the system with its qualitative characteristics.\textsuperscript{133}

External environment is a set of existing in space and time objects (systems) which are supposed to influence the system. The external environment is a collection of natural and artificial systems, for which this system is not a functional subsystem.

System limitations are what determine the conditions of its operation (implementation of process). Limitations are internal and external. One of the external limitations is the external goal of the system. An example of an internal limitation can be resources providing realization of this or that process.\textsuperscript{134}

System motion follows the ordinary differential equation, which right-hand side has the function that can be selected by the designer (management). Moreover, there is a fundamental idea of optimality - the choice of management should optimize some quality parameter.

The most common current approach describes the system as a linear operator which converts the input signals to output ones. In the signal space various norms inducing the relevant norms in the space of operators can be introduced.

In some cases, you can choose management as a function of time (time cycle control). However, this method is not suitable in the presence of uncertainty in the object or in external signals, so traditionally in engineering practice management in the form of feedback is used. It can be either management by the state (when the state vector is available) or management by the output (if the current system information is given by its output).

For stable systems the possibility of the most accurate description of the attainability set, i.e. all the states in which the system can be transferred using limited in some way norm of management is of interest.

The main task of linear objects management is stabilization, i.e. ensuring the stability of the closed system by feedback. Management under uncertainty is the problem of robustness (stability, rigidity).

The idea of taking into account the uncertainty when designing management
systems is fundamental in the theory of management at all its stages. If the object and the external signals were known exactly, time cycle management or the use of the direct (and not the feedback) connection would be possible. This contradiction is often omitted which leads to errors in management.

One of the first models of uncertainty (nonlinear sectored) was proposed in the theory of absolute stability in the works of A.I. Lurie, M.A. Yzerman, F.R. Gantmakher.

Models of parametric uncertainties in linear systems appeared later. I. Horowitz offered special half heuristic methods to work with them - the so called QFT (Qualitative Feedback Theory).

An important trend in the analysis of the uncertainty is connected with the model of the «unknown-but-bounded» perturbations (A.B. Kurzhanskii, F.L. Belousko). Similar ideas were used in a minimax theory of management.\textsuperscript{135}

Theory of active systems is a section of the theory of socio-economic systems management studying the mechanisms of their functioning conditioned by the manifestations of the system participants’ activity.\textsuperscript{136}

The main research method is the mathematical (game-theoretical) and simulation modeling.

In addition to theoretical studies of the tasks of planning and stimulation, a number of so-called basic mechanisms to manage active systems and their applications models have been developed in the theory of active systems. Among them there are the mechanisms of complex evaluation, of active examination; of formation of composition and structure of the active system, of resource distribution, funding, operational management, etc.\textsuperscript{137}

There are different types of systems and methods for their representation (simulation). We are interested in the consequences of the application of one type model to another type of system.

There are three main types of systems and their models.

1. Deterministic - systems and models that neither themselves nor their parts are purposeful.
2. Animated - systems and models which generally pursue certain goals, but their parts are purposeless.

3. Social (public) - systems and models in which both their parts and they themselves are purposeful.

Deterministic systems having no purpose which parts are not purposeful are the systems which properties are predetermined. The function of such systems is to provide a predetermined service. Properties and behavior of a deterministic system are determined by its structure, causal laws, as well as by its environment if it is an open system. Deterministic systems do not have a choice. Deterministic systems can be classified by the number of functions they perform.

Animation systems unlike their parts have their own purposes. Life is currently characterized by self-renewal, "preservation of the units integrity while the components themselves continuously and periodically break and line up again, are created and destroyed, are produced and consumed." A long list of prominent biologists adhered to mechanistic views includes J.B. Lamarck (evolutionist), K.A. Rudolphi, J.J. Berzelius, M. Verworn.

Social (public) systems have their own objectives, contain parts (or other social systems animate organisms), which also have their own goals and are usually part of larger social systems.

Social systems are often modeled as organisms (Stafford Beer) and even mechanisms (e.g., social physicist Jay Forrester). Evolutionary philosopher Herbert Spencer gave an example of biological modeling of social systems. Spencer groups these comparisons of life and society under four headings, showing that three well-known characteristics of life are equally inherent in everything that can be called society: growth, growing differentiation of the structure and increasing differentiation of function. When we talk about models of deterministic, animation and social systems we mean classes of models within which there are many variations. However, these variations arise from different interpretations of irrelevant variables.

Solving problems consists in applying social system models to social systems.
The project based on the model of public management system of an organization has many features none of which is compatible with other models except the model of social organization.

- The organization is based on the internal market principles.

- It has a multi-dimensional organizational structure, in which each level of the organization has the structural units of three different types: determined by their function, products and users. This type of organization eliminates the need for constant restructuring which is replaced by the reallocation of resources.

- Interactive planning that includes idealized redesign of organization and determination of maximum realizable approximation to the project is used.

- It includes the system providing solutions, facilitating learning and adaptation by means of fixation of expectations associated with each important decision, assumptions and information on which these expectations are based, and knowledge about the process by which the decision was made and by whom it was made.

It is important to mention also the research of A.A. Bogdanov who first considered the general theory of systems defining the system not just as a set, but as a dynamic complex which can be regarded as a process with cyclical development. And he drew a clear distinction between the organization and the structure. The organization is understood as a set of processes of its components, and the structure is a special spatial representation of this set. The organization is seen not as the final state, but as a process of constant transformations connected with the continuous change of the equilibrium states.

Systemic approach as a method of scientific knowledge allows us to identify commonality in systems of different nature, regularities of combining parts into a whole, the laws that determine the structure, the functioning and development of systems, content and formal methods and means of presentation of both individual parts and the whole system, the nature of connection with surrounding objects and assessment of possible limiting characteristics of the systems. Methodologically systemic approach is an applied theory used to solve specific practical problems.

Thus, the main issue is the choice of the model of optimal distribution of
resources between the objects of economic systems. The problem of optimal distribution of resources for managers of economic system is of almost priority importance as the economic system by definition is a set of interconnected elements between which system resources are continuously being distributed. And as has been proved earlier the nature of these resources and human development indicators can be very diverse, which explains the expediency of this problem in general terms.

So, there is a specific economic system (entity) with a limited amount of some resource of $X$ units (fund of working time, number of employees with a certain level of professional qualifications, etc.). There are $K$ objects claiming that resource (the organization with predetermined financial indicators or a unit with budget constraints). To solve the problem of its optimal distribution we should know the expected assessment of the efficiency of the resource use by all the elements (objects) of the system, i.e. the so-called efficiency functions.

We should distribute a disposable resource in such a way so to get the maximum total (systemic) effect (income, profit, etc.).

Unfortunately, getting efficiency functions involves significant challenges and at best they can be given in a tabular form as a set of discrete values. In this study statistical forecasting methods and their subsequent adjustment based on informal expert methods are used. In this case, linear characteristics can not be applied to these functions and therefore linear programming techniques to solve them cannot be used. The most effective method for solving nonlinear problems of this type is the method of dynamic programming. The specificity of the method of dynamic programming is that to find optimal management solutions analyzed process is divided into separate stages thus becoming a multistage, multi-step one. And each time management is optimized at only one stage. Thus, the model of dimension «$n$» is replaced by a $n$-time optimization of model dimension "unit". Another feature of the problems solved by the proposed method of dynamic programming is that the transition of the economic system from one state to another must be a markov one, i.e. a process lacking consequences. This means that if the system is in a certain state, the further development of the process depends only on this state and does not
depend on how the system was transformed to this condition.

The basis of the general concept of the dynamic programming is the Bellman’s principle of optimality. The optimal strategy has the property that no matter how the system got in this particular state, subsequent decisions should make optimal strategy bound to that state.

Thus, by using dynamic programming management at each stage is selected with the account of its consequences in the future. This rule has only one exception - the last stage, where you can act without regard for the future because it simply does not exist at the last stage. Management at the final stage should be chosen so as to bring the best effect – the best for that stage. Dynamic programming method unfolding the process of finding the optimal management from the end is based on the principle of finding at each step of conditionally optimal management for each of the possible outcomes of the previous step.

**Conclusions on 3.2.**

We have determined the content of the traditional understanding of the need to study the system as a social object which implies multi-level approach to the determination of its elements. The content of major elements of the system required to form models of human development management was substantiated. System is regarded as an object that is a theoretical scientific system based on the principle of reflection and characterized by the development of a theoretical system in the direction of more adequate practical reflection of objectively existing system.

The features of the functional interactions of the parts of the system determined by the possibility of construction and reconstruction have been characterized. The differences between the analytical and the synthetic management when considering a part of the system operating at peak efficiency does not provide the possible functioning of the system have been identified. This confirms the dependence of the system characteristics on the interaction of its elements and is reflected in the recognition of the need for properties to match parts of the system through its expansion, but not reduction to elements subject to limitations of the system, which determine the conditions of its functioning (the implementation of the process of
human potential management system design). One of the external limitations is the purpose of functioning of the system, and internal restrictions include human potential ensuring implementation of a particular organizational process.

Thus, the main issue is the choice of the model of optimal distribution of resources between the objects of economic systems. The problem of optimal distribution of resources for managers of economic system is almost top priority as the economic system is a set of interconnected elements between which system resources are being continuously distributed. Using the proposed approach it is expected to implement organizational changes in the economic system making economically sound decisions regarding the distribution of a limited amount of financial resources and their purposeful direction for the goal of human potential creating.

### 3.3. MECHANISM OF MANAGEMENT SYSTEM

Constructors of mechanisms try to generate their own ideas about parts by decomposition of their idea of the whole. This orientation of study became known as systemic point of view. Currently, studies of the structure of the system’s parts is carried out based on the understanding of the functioning of the entire system as a whole.

Management plays the role of one of the main systemically important factors of organizational systems. Ways of influencing the management object referred to as management methods are divided into administrative, economic and socio-psychological. The impact itself is the management process. A set of rules, algorithms for decision-making and management actions determine the management mechanism. It is the mechanism of management in the system and in the process of management that plays the role of intellectual core determining the efficiency of management.

The system of management operates with representations (models) which are an information reflection of the process. In turn, the management process is a set of
operations, procedures, information transformation resulting in the impact on the process leading to the achievement of the ultimate goals of the organization.

The process of economic system management is divided into two classes of management functions. The first ensures sustainable and stable functioning of the economic system. The second is determined by the content of management functions on changing the mechanism of management or even of the management system structure. The need for such changes arises when change in external conditions or changing goals of the organization makes it impossible to ensure its effective operation with the existing mechanism. For this reason, the functions of this class are sometimes referred to the functions of development, and the appropriate mechanism is called mechanism of development.

Thus, the mechanism of management of economic systems development is a set of functions that provide change (improvement) of management mechanism. It is important to point out the need for certain stability of management mechanism which implies efforts and time necessary to adapt to the new management mechanism.

Such discreteness of the process of management improvement determines a relatively small importance of the functions of development compared with the functions of management functioning.

Nevertheless, the development functions primarily affect the efficiency of the economic system, especially in terms of technological progress and changes in the global economy. They play a crucial role in the renewal of management mechanisms, their adaptation to the new conditions, the creation of new, more effective management methods that solve new problems.

Selecting the direction of management mechanism change as well as the choice of direction to improve production efficiency, of course, is carried out by logical scheme of analysis and elimination of "bottlenecks".

We can assume that the mechanism of development in the management of economic systems is a set of procedures, methods, information technologies enabling us to create (design) new mechanisms for managing the required properties, in particular human potential.
In this area, in addition to the development of incentive and planning mechanisms we should focus on the development of automated systems of appropriate mechanisms and information technology designing.

Economic system (organization, organizational system) system should be focused, self-regulating, self-developing and learning. A mechanism of management and distribution of management functions ensuring these properties is required.\textsuperscript{139}

We can say that organizational systems are artificial systems. Unlike natural systems, they are specially created by people to achieve specific human goals, are consciously constructed, targeted, rational due to the introduction of a specific structure of the relationship between the system elements and mechanisms governing the functioning and interaction of these elements.

It is important to note that the notion of "economic mechanisms" has not been specially researched. For example, Charles Rist makes no clear distinction between those mechanisms and institutions in which the mechanisms function and which will be further treated in the category of "economic regime."\textsuperscript{140}

Economic mechanisms are just one of many elements which analysis enables the economic theory to make its generalizations.

Economic mechanism is determined either by the nature of the original phenomenon, or by the end result of a series of events. But the constituent elements of the mechanism are always simultaneously the original phenomenon, the final phenomenon and the whole process that happens in between. The mechanism includes a specific sequence of economic phenomena. It should be borne in mind that you can distinguish the mechanisms of open and closed types describing the economic processes taking into account the time factor, i.e. in dynamics and in statics.

Even a simple account of the specific conditions and circumstances of the functioning of the economic mechanism could allow us to identify possible, desirable or negative changes in the nature of its action and its results. The objective nature of the economic mechanism does not eliminate the possibility of external factors impact. As you can see, the optimal character of the mechanism can be revealed only through study of the conditions of its action. The same can be said about the results of the
analysis of the use of the economic mechanism.

Thus, a part of the economic mechanisms is developed by logical constructions - often for the simple reason that it is thus possible to determine exactly the object of observation. Economic systems for the most part are observable, and the role of theory is precisely to introduce into this process a certain order providing optimal conditions for observation.

Let us consider the basic properties of economic systems.

1. Intensity of the activity. It is determined by the ability to set new and adjust internal goals, to make an independent choice of methods and means of attaining goals, to predict the behavior of other systems, to actively influence other systems with available means, to self-develop.

2. Purposefulness which means the ability to produce the structure and functioning mechanisms that leads to the goal. Indeed, any economic system is created to solve certain tasks, to perform specific functions, and thus, by its very nature, must be a purposeful system.

3. Integrity (emergence).

4. Distribution expressed by the need in coordination and synchronization mechanisms that regulate processes of solving particular problems and provides a solution to the general problem and the achievement of the goal of an economic system.

5. Manifestation of the organizational structure, multilevel and implementing the mechanisms of management processes.

It follows from the above that the need to consider the activity of economic system elements, goal formation and management by end results are not attributes of an abstract approach. These are natural properties of reasonably organized activity. They correspond to the management mechanisms that combine the methods of the theory of active systems with methods of program-goal approach supported by information technologies.

Technique of structuring the process and management actuators in the construction of an effective management system should come from the final results to
the content of management processes and from them - to the organizational structure. And one and the same ultimate goal can be achieved in various ways, using one of the many management mechanisms. When you select a specific mechanism of management the management process can be organized in different ways, and the same process of management can be implemented in different organizational structures. This explains the huge variety of options to structure the process of management, functions and their distribution over the performers.

To solve the management problems in economic systems we should identify the system properties of this special class of systems.

Common goals, a certain structure and certain rules of interaction of the elements are essential features of the economic system. When describing first, structural scheme and mechanisms of functioning are distinguished. Description of organizational structure comprises, in turn, the description of system composition and the description of structure of links (relationships) between the system elements. Description of the system composition includes the description of each structural element.

Organizational mechanism or the mechanism of functioning (management) of the economic system is a set of rules (procedures, functions) governing the activities of elements of the system during operation. It is a complex concept allowing decomposition on various grounds (structural, functional, territorial, time, etc.). The simplest decomposition assumes identification of mechanisms of goal-setting and management.

Goal-setting mechanism is a set of procedures to form a number of goals and tasks of functioning and development of economic system, as well as to give a comparative evaluation of the states in which it can be.

The mechanism of management is a set of procedures ensuring the development of a specific organization in time. Obviously, a good management mechanism provides improvement in the economic system, i.e. development towards the goals.

Description of the organizational mechanism is impossible without knowledge of the organizational structure, description of the structure of relations is impossible
without knowledge of the composition of the system, and finally we can judge the quality of management mechanism only being able to assess the state of the organization from the positions of its goals, i.e. with goal-setting mechanism.

Restructuring almost always requires a change in mechanism while the mechanism changes can be performed without structural changes.

We shall note that the efficiency of the economic system is largely determined not so much by the structure itself, but rather by organizational mechanism that exists in the system. Therefore the task of developing effective organizational mechanisms for a given structure is a necessary element for evaluating the effectiveness of the economic system.

Description of the management mechanism is based on the description of interconnected components. Most often decomposition by the management functions is used. As a result, there are the following components: forecasting, planning, accounting, evaluation of the functioning, promotion.

Mechanism of forecasting is used at the stage of data formation preceding the planning stage (decision-making). In fact, at this stage the assessment of the set of possible states of the system (environment) in the period of operation (estimation of future system capabilities and future state of the environment) is done. Researchers have identified two data generating schemes - counter and adaptive.

With the counter scheme the information about the set of possible states is reported immediately by the active elements of the system. With adaptive scheme, the information about the system and the external environment is projected on the data basis of its state in the previous periods.

The problem of developing management mechanisms ensuring reliable information message is one of the major problems in the theory of management in economic systems. Mechanisms with such properties are called open management mechanisms.

In theory and practice of organizational management the concept of planning refers to the process of decision-making about the desired values of the essential characteristics. In fact, the planning mechanism is a procedure for determining the
desired state of the economic system. This condition is called the plan of the system.

Mechanisms of real economic systems functioning are fairly complex set of procedures, rules, regulations, instructions governing the behavior of decision-makers at all stages of operation. One can speak about a certain set of basic mechanisms of which complex mechanisms consist.

The basic management mechanisms are divided into some groups with specific properties.

The first group includes mechanisms in which when forming the plans some indicators of active elements priority are substantially used. As a rule, the priority indicators characterize the expected effectiveness of the elements, so the plans are set in proportion to the effectiveness and mechanisms are called the priority mechanisms. Special subgroup of priority mechanisms is formed by competitive mechanisms in which, depending on the expected efficiency the winners receiving the right to perform a particular project or funding are revealed.

The so-called multi-organizational mechanisms in which the decision is made on the basis of the draft plans offered by various elements of the economic system are close to competitive ones in the nature of their impact on the elements.

The second group includes open management mechanisms, also called mechanisms of fair play or motivational mechanisms. Their main property is stimulating the reliability of information. They are indispensable in finding compromise solutions in the framework of joint projects, etc.

In the mechanisms of open management each element receives a plan ensuring maximum of its preference function on a set of feasible plans (preference function of an element is assessment of its objective function (incentive system)).

The third group consists of the coordinated mechanisms (mechanisms coordinated by choice) providing a choice made by the elements from a given set of states. For example, the mechanisms coordinated by a plan provide accurate execution of the plan by all elements.

The fourth group consists of advanced mechanisms encouraging the element development in the direction desired for the economic system (increase in production
Progressive mechanisms are widely used in pricing and taxation systems where they got the name of anti-cost mechanisms.

Present mechanism grouping defines only the main of its properties. Therefore, the priority mechanism may be at the same time open management mechanism, the mechanism of open management may be concerted, progressive, etc.

The main types of basic mechanisms considered above are grounded on relatively simple models of organizational and economic systems. These are two-level, deterministic and static systems. Real systems usually have multi-level (hierarchical) structure, a lot of random and uncertain factors to be considered in their description and change over time. All this, of course, complicates the description and study of management mechanisms.

Speaking of random and uncertain factors in the description and the study of economic systems, we mean an incomplete awareness of system elements in the set of possible states and the management mechanism. It is assumed that each element knows exactly the set of possible states, its objective function and management mechanism. This, of course, does not mean that the element makes decisions in conditions of full information awareness since it does not have complete information about other elements. Therefore some hypotheses eliminating this uncertainty (hypothesis of independent behavior, the principle of guaranteed result, the Nash equilibrium, etc.) are usually introduced.

The complexity of management mechanisms research in these cases, of course, increases. Fundamental problems arise as well. Thus, with random or uncertain factors the idea of exact fulfillment of the plan becomes uncertain. Accordingly, the concept of coordinated mechanisms also becomes uncertain. To generalize these concepts to systems with uncertain random factors specific approach is applied.

The plan is considered coordinated by the implementation, if it is coordinated with any value of uncertain or random factor (the principle of guaranteed coordination). Similarly, we can also generalize the notion of a mechanism coordinated by the selection of the state.

A similar problem arises with the notion of reliability of the information and,
accordingly, with the notion of open management mechanisms. What should we consider as reliable information in the case of uncertain or random factors? One approach implies the reliability of the information provided as the interest of an element in getting all information known to it. Thus, if the area of uncertainty or the distribution functions of various parameters are described parametrically, the mechanism of open management can be defined as the mechanism by which the communication of reliable values of these parameters is the dominant strategy of each element. In this case, many of the results obtained for the deterministic case can be generalized in view of possible uncertain and random factors.

If the value of uncertain or random factor becomes known at the implementation stage (i.e., uncertainty or randomness is present only at the planning stage) the principle of a flexible plan is applied. The idea is that at the planning stage only the procedure itself is determined, but the specific value of the plan is determined directly at the implementation stage, when the element gets to know the values of the corresponding parameters. Applying the principle of a flexible plan allows us to summarize many of the results obtained for the deterministic case.

The most common method of investigation of dynamic systems that also includes economic systems is based on their description by means of static (deterministic) parameters.

If feedback management when the plan in this period is determined on the basis of plans and states in the previous periods is used, the task of choosing a management mechanism requires a different approach. Such mechanisms are called adaptive because the plan of the system in the period is adjusted depending on the history - we can say it is being adapted to changing conditions. When studying the adaptive mechanisms we should take into account the farseeing of the active elements and the impact of the condition selected in this period on the plan in future periods.

An important condition to adaptive mechanisms is their progressiveness. In terms of content the condition of management mechanism progressiveness means that the active element selects the state in this period by maximizing its objective function in this period on the entire set of possible states, without fear that it will lead to
unprofitable plans in the future period. An example of a non-progressive mechanism is monopolistic market mechanism when the reduction in output (and therefore profits) today leads to a fall tomorrow. In the case of the progressive mechanisms an element is interested in maximum use of the opportunities of this period.

Analysis of the behavior of the elements in each period of functioning in this case is performed as in the case of an oncoming method for communicating information based on the hypothesis of independent behavior. We shall note that progressive adaptive management mechanisms are analogous to open management mechanisms at the oncoming method for forming data. Indeed, they get an element interested in choosing a state on the entire set of possible states and thus allow to obtain reliable information about this set and use it to determine plans for the future period.

The analysis of hierarchical systems is drawn from top to bottom. First, the mechanism of management of the main unit and its subordinate subsystems is analyzed, and then the next and the analysis continues down to the lower row units.

In the study of hierarchical systems the advantages of correct management mechanisms are revealed more clearly. Confidence in the reliability of information and implementation of plans at all levels allows an accurate enough description of the set of possible states at any level of any subsystem as aggregates of a plurality of coordinated plans for subordinate systems. On the other hand, the distortion of the information accumulated from level to level results in that at the upper levels of management any idea of the true state of affairs is lost, and unfulfillment of plans actually leads to the uncontrollability of lower level elements by the upper level.

Thus, the economic stability of the organization, its survival and performance is inextricably linked to the continuous improvement and development. At the same time improving the organization should be implemented according to the principle of adaptation to the external environment. A constant effort to maintain compliance of the organization with the external environment is the principle of adaptive management. 142

Ultimately, the mechanism of economic systems itself is a complex system
designed for the collection, analysis and processing of information in order to maximize the final result under certain constraints (availability of resources, for example).

Nowadays one can identify at least five types of system representations: microscopic, functional, macroscopic, hierarchical and procedural.

While studying the management mechanism as an object of research it is necessary to realize the requirements for management systems that allow us to judge the degree of organization of the system. These include elements of determinism, dynamism of the system, the controlling parameter in the system, feedback channels in the system.

Summarizing the interim results of research we would like to make some conclusions concerning main approaches to the terminological and methodological support of the management mechanism of economic systems.

Mechanism of the organizational system functioning is a set of rules (procedures, functions) governing the activities of the center and elements during operation.

Description of the management mechanism is given through the description of its parts: the target system functions, limits of the mechanism of functioning, planning law, the sequence of actions as well as the procedure of forming the data used to obtain information about the elements. This representation corresponds to the isolation and classification of parts of the organizational mechanism used in real systems.

The first kind of actions of the center on the formation of mechanism of management is the formation of the management parameters that makes sense with respect to the desired states of the elements in relation to the planned values of the components.

Changing the method of introducing of management parameters in the mechanism, you can get almost all known variants of understanding of the management parameters. Management parameters in some cases may be regarded as "building element" of the management mechanism limitations and target functions of
Another possible classification of planning laws is based on the planning principles that underlie their construction: the principle of rational planning and the principle of optimal planning. In its simplest form the idea of a rational mechanism reduces to the construction of implemented variant of the plan.

In its turn management of the economic system by selecting (or changing) target functions of elements from a set of possible ones is referred to as criterial management.

Thus, by changing the connections between the elements the center can change the structure of the system and thereby the mechanism of its functioning, as well as the scope of possible changes.

The elements’ possibility to make multiple choice of their states during one implementation stage complicates both the process of the system functioning and its research.

Thus, an economic system is described, therefore, its structure and the mechanism of functioning (i.e., management and goal setting mechanism) are described as well. How can we assess the effectiveness of the existing management mechanism and decide on the directions and reserves of its improvement in the conditions of structural transformation of economic systems?

To do this we should first of all predict the behavior of active elements of the system. Freedom of active elements behavior is shown at two stages of functioning - at the stage of data generation and at the stage of plans implementation.\textsuperscript{144}

Let us consider the counter method of data generation. In this case, at the stage of data generation an active element should decide what information to report, and at the stage of plans’ implementation - which state to choose from a set of possible states. It is hard to believe that you can make good decisions based on false information. Moreover, it is proved that for a number of particular problems communication of reliable information is one of the properties of optimal management mechanism. Unfortunately, we failed to obtain such overall result. In other words, we can not convincingly state that honesty is a necessary condition for
good governance. In view of their importance management mechanisms in which information is reliable received a special name of open management mechanisms or mechanisms of fair play.

In its turn, the mechanisms with the property to fulfill the plans are called coordinated (or rather, mechanisms coordinated by the plan), and mechanisms possessing both properties (i.e. coordinated open management mechanisms) are called the correct mechanisms.

Finally, if the evaluation of the effectiveness of the mechanism is based on functioning, then the guaranteed efficiency is estimated. In the general case (if it is not known in advance that the mechanism is correct), the procedure of the mechanism effectiveness evaluation becomes more complex, though quite natural. The most popular is "hypothesis of independent behavior" according to which the elements, when choosing their state, do not take into account global constraints and so just maximize their objective function on the set of possible states.  

Thus, we can state the main problem of the theory of management in economic systems - from a set of possible management mechanisms we should choose the mechanism of maximum efficiency. The challenge is caused, of course, by the complexity of procedures for assessing the effectiveness of management mechanism. The complexity of solving the problems of constructing optimal (or at least sufficiently effective) management mechanisms has led to the fact that researches in this field were carried out in the direction of studying the properties of different types of mechanisms and evaluation of their effectiveness in solving specific problems of management. As a result, the so-called basic management mechanisms were identified. In fact, these mechanisms are integral parts to be used for designing complex management mechanisms.

In the historical context of the development of methods for the implementation of organizational changes two main approaches to the organizational changes are becoming increasingly popular: evolutionary and revolutionary approaches.  

The concept of organizational development is an example of an evolutionary approach. Economic re-engineering as a radical redesign of the company is an
example of a revolutionary approach. The main difference between these approaches is, according to many authors, the speed of implementation and the degree of novelty of organizational change. Organizational development and business process reengineering are polar concepts with compromise development options in between.

Table 4 - Comparison of two main approaches to change management

<table>
<thead>
<tr>
<th>The comparison criterion</th>
<th>Business process reengineering</th>
<th>Organizational development</th>
</tr>
</thead>
<tbody>
<tr>
<td>Method’s origin</td>
<td>Management consulting, engineering sciences</td>
<td>Traditional management, social psychology</td>
</tr>
<tr>
<td>Conceptual Basis</td>
<td>Analysis of the company performance from the standpoint of engineering sciences. Basis for decision making is construction of the optimal business-process. Process-oriented approach</td>
<td>Management of team of the organization. The basis of the decision is the scientifically grounded intuitive opinion. The predominant functional approach</td>
</tr>
<tr>
<td>Main idea</td>
<td>Radical rethinking and redesign of the production and business processes, procedures in the organization</td>
<td>Long-term, comprehensive change and development of the organization due to the accumulation experience of sound decisions</td>
</tr>
<tr>
<td>Tasks of the leadership</td>
<td>Unconventional vision of the organization. Creating a team of leaders-professionals. Clear vision of optimal business-process. Ability to convince the staff in the correctness of the new approach. Control over the actions diverting changes.</td>
<td>Strategic vision of business, objectives, positions and qualifications of members of the organization. Preservation and development of the organization potential. Creating self-developing bases in the team. Involvement of employees affected by the changes.</td>
</tr>
<tr>
<td>Attitude to the staff</td>
<td>Additional authority. Training of professionals. Dismissal of saboteurs.</td>
<td>Democratization of management. Creating stability and development prospects. Reliance on staff able to training and ready to take on the responsibility.</td>
</tr>
<tr>
<td>Scope of changes</td>
<td>Complete reconsideration of business-processes. Discontinuity of the process. Changes in large jumps</td>
<td>Long process of training and development. Continuity of the process Changes in small steps</td>
</tr>
<tr>
<td>Implementation period</td>
<td>Design recorded. The results are evident shortly after the completion of the project</td>
<td>For a long time, with the expectation of strategic growth</td>
</tr>
<tr>
<td>Object of changes</td>
<td>Enterprise as a whole or key processes</td>
<td>Enterprise as a whole by improving its parts</td>
</tr>
<tr>
<td>Goals</td>
<td>Significant and rapid increase in profitability (economic efficiency), the elimination of ballast</td>
<td>Gradual increase in profitability and humanization of labor (social efficiency)</td>
</tr>
<tr>
<td>Applicability</td>
<td>Stagnation and low profitability of the</td>
<td>Not limited</td>
</tr>
</tbody>
</table>
| Strategy of changes | "Top-down" strategy | "Top-down" strategy
"Bottom-up" strategy
Bipolar strategy |
|---------------------|---------------------|---------------------|
| Methodological approaches | Reengineering of processes in accordance with the market strategy
Adaptation of organizational structures and job descriptions
Change in value concepts of staff (focus on value creation process or clientele) | Structural and personnel approach (new forms of organizational structures).
Changing attitudes and behaviors of employees.
Training of employees. |
| Key roles | Leader ("overbearing patron")
"Master of the process" (as a curator)
Group of reengineering | "Agents of changes"
"Client system" (an area being reorganized)
"Catalyst of changes" |
| Strengths | Applicability in crisis situations.
Possibility of radical renovation
The ability to quickly increase profitability.
Significant expansion of the competence of experts.
Implementation of the most advanced information technology.
Availability of business modeling techniques | Continuity during the changes.
Ability to develop the members of the system.
Stimulation of self-management and self-organization.
Long-term perspective.
Absence (decrease) of resistance to changes.
Widespread use of expert assessments. |
| Weaknesses | Exceptional process orientation.
Instability in the phase of changes.
Exclusion of alternatives for the strategy of changes (only the "top-down").
Low social acceptability, high level resistance of the leadership | Insufficient reaction rate.
Excessive requirements on social competence of the participants of organizational development process.
Impossibility of use in crisis situations.
Poor IT support. |

Reengineering of business processes is based on process management methodology that is more progressive in relation to the older methodology of functionally-oriented management. The main difference from the general line of activity-based management is a fundamental change of processes rather than their gradual improvement quite complying with a modernized concept of organizational development.

Last decade have seen a gradual transition from functional-oriented management methods (manufacturing process is carried out by discrete functional departments designed to perform the same type of function) to the activity-based one (manufacturing process seems inseparable and is coordinated by management functions). This is due, according to Gramoteev R.V., primarily to the following factors of economic development:
- market development and intensification of the struggle for the client requiring an individual approach;
- increasing complexity and range of products and services;
- reduction of the life cycle and time to develop products and services;
- cost-effective use of advanced production technologies, marketing, management and others. In this situation, functionally driven organizations are more inert.  

The origins of the functional approach to management are found in now classical conceptions of scientific management (F. Taylor, F. Gilbert), and administration (A. Fayolle, L. Gulick, L. Urwick, etc.). Functional management techniques are addressed in the works of foreign (A. Chandler, D. Robey) and Russian scientists (B. Milner, B. Portugal) are used in designing and redesigning of linear functional structures of the organization. "Synthesis of organizational structures" and its national analogues (function-oriented, regulatory and functional, structural – functional methods) are based on isolation of functions, positions, their properties, on finding connections with subsequent grouping into subsystems (functional units) according to certain criteria. These methods relate only to the structural aspects of the organization, and only with the functional approach.

Weaknesses of function-oriented management practices are:
- The lack of a direct interest of the functional units in general outcomes.
- Poor focusing of departments at organizations’ targets.
- Contradictions and competition between departments in abnormal situations.
- Difficulties with the transfer of relevant and reliable information;
- Lack of complete information to make sound decisions.

Thus, if earlier organizational changes were related to improving the functional-oriented management methods, today there is a gradual change to a process-oriented methods and their improvement.

However, function-oriented management techniques can be used in change management as a complementary tool of functions distribution between the performers, especially since most of the organizations of the Russian economy are
linear-functional structures. In contrast to the function-oriented organizations based on grouping of functions (positions) into sub-systems (linear-functional structure), process-oriented organization focuses on achieving the goals and objectives through business processes.153

Business process reengineering stands out from the group of process-oriented management practices by its aiming at radical change of business processes, while other methods are closer to the type of evolutionary development, to the improvement of business processes.

Considerable risk of failure of reengineering business and its revolutionary approach to changes causes some cautious attitude to it. Experts identify three types of companies where the use of reengineering is justified:
- crisis companies that require radical steps to improve the quality and profitability;
- precrisis companies where there is an expressed need for radical changes in order to preserve competitive advantages;
- successful companies able to take risks and to pursue an aggressive policy of increasing competitive advantages.

Business process reengineering is of the greatest interest for the management of organizational changes in process-oriented management practices. This is due primarily to the fact that this methodology represents change management, while others methodologies are in a greated degree methodsof organization management. The main objectives of business process reengineering is a decrease in the amount, timing and cost of the work parameters not bringing additional product value, and optimal cost-structuring of work adding value. There should be a detailed study of all the necessary processes because those not bringing added value are often integral components, and insufficient attention to them can lead to miscalculations causing losses in abnormal situations. In this case we are to decide what is more profitable - ongoing funding of additional business process or financing (if even intermittently) of losses caused by its absence (quality control elements, duplication of functions, etc.). And here a new doctrine of managers thinking should become of fundamental
importance – inductive thinking, when, first, an effective solution is found, and then the problem area of its application is searched.

In practice, reengineering is often associated with the introduction of new information technologies, as they allow you to support radically new, more efficient business processes. The researchers distinguish four stages: 1. Developing an image of the future company; 2. Analysis of existing business; 3. Development of new business; 4. Introduction of new business.\textsuperscript{154}

Stages are performed not necessarily in strict sequence, their parallelism and repeatability are situationally explained.

Process-oriented methods of cost accounting were developed as "operationally-oriented" alternative to the approaches to traditional financial approaches (accounting records, financial reports) that give vague details of specific products net cost on the basis of direct and overhead costs of the total volume of production. They enable us:

- to arrange information in a visual manner that is understandable for the performers of business processes;

- to distribute overhead costs in accordance with a detailed calculation of the resources used strictly in accordance with the chain of processes, to reflect the real cost of goods;

- to find processes bottlenecks, to determine the effectiveness of processes, to provide analytical information to improve processes and other things.

Thus, process-oriented methods of cost accounting provide information for decision-making in the application of process-oriented management practices, which in turn are focused on productivity increase, prime cost and time costs reduction, quality improvement.

Management plays a role of one of the main systemically important factors of organizational systems. Ways of influencing the object of management are called management practices. The influence itself is called the management process, and a set of rules, algorithms for decision-making and development of operating influences is known as management mechanism. The mechanism of development is a set of functions that provide change (improvement) in management mechanism.\textsuperscript{155}
Being not very important in terms of labour intensity, development functions are very important in their influence on the efficiency of the organization, especially in conditions of technological progress and changes in the economic and social spheres. They play a crucial role in the development of management mechanisms and their adaptation to the new conditions, in the creation of new, more effective management methods that solve new problems. Thus, the mechanism of development is a set of procedures, methods, information technologies to create (design) new management mechanisms with the desired properties. The main focus is the development of systems to design mechanisms and information technologies.

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The research of the design process of human development management system undertaken in the third chapter resulted in the following conclusions.

1. Management as an organizational process is a part of all social subsystems. It determines patterns of development and the formation of new structures and functions when the main object of management is the human potential determining the state of an individual as the highest goal rather than organizational welfare.

2. Consideration of planning as a method for forming a step-by-step process to justify the selection of goals, variants and consequences is known for the best possible results. It will be appreciated that the projected planning model should be adequate to the economic realities and at the same time take into account the human factor determined by the parameters of human development.

3. Implementation of scientific management is provided by justification of tendencies and directions of economic systems development, their mechanisms and patterns of functioning. The functional aspect of organizational management has been researched more fully than the structural one. Currently there are no universal and objective criteria to assess human development and that would be able to serve as a regulatory mechanism of organizational and structural changes.

4. In a sense, management is a struggle against entropy in socio-economic systems, the transition from a less ordered to a more ordered state with the account of the human potential of the organization.
5. Management changes occur as a result of the improvement, but not any kind of rationalization of management can be considered as a basis for management development. Designing of the system of human development management involves the analysis, description of the content and the requirements for it based on the parameters of scale, complexity and relations with the transition from the current state to the potential.

6. The research of the designing problems revealed that the primary means of successful adaptation of the organization to changing conditions is an effective mechanism for management of human potential which will provide the best in the current economic conditions results that allows us to apply the concept of “innovation potential” to the process of human development.

7. The basic scheme of organizational designing of management systems in relation to human development has been suggested.

8. Mechanism should be regarded as a socio-controlled system due to economic laws, with adequate powers, resources, having a certain structure that allows to manage the development of human potential by making decisions. This approach allows us to study statics and dynamics of management mechanism which is understood respectively as the organizational structure of management and processes of administrative decisions development within the existing structure of human potential management.

9. At the heart of management of economic entities improvement is designing of organizations, i.e. promotion of institutional projects that provide identification and solution of management problems through the development of innovations that meet the needs, perspectives and particular conditions of organizations.

10. We have determined the content of the traditional understanding of the need to study the system as asocial object which implies multi-level approach to the determination of its elements. The content of major elements of the system required to form models of human development management was substantiated. System is regarded as an object that is a theoretical scientific system based on the principle of reflection and characterized by the development of a theoretical system in the
direction of more adequate practical reflection of objectively existing system.

11. The features of the functional interactions of the parts of the system determined by the possibility of construction and reconstruction have been characterized. The differences between the analytical and the synthetic management when considering a part of the system operating at peak efficiency does not provide the possible functioning of the system have been identified. This confirms the dependence of the system characteristics on the interaction of its elements and is reflected in the recognition of the need for properties to match parts of the system through its expansion, but not reduction to elements subject to limitations of the system, which determine the conditions of its functioning (the implementation of the process of human potential management system design). One of the external limitations is the purpose of functioning of the system, and internal restrictions include human potential ensuring implementation of a particular organizational process.

12. Thus, the main issue is the choice of the model of optimal distribution of resources between the objects of economic systems. The problem of optimal distribution of resources for managers of economic system is almost top priority as the economic system is a set of interconnected elements between which system resources are being continuously distributed.

13. Using the proposed approach it is expected to implement organizational changes in the economic system making economically sound decisions regarding the distribution of a limited amount of financial resources and their purposeful direction for the goal of human potential creating.

14. Management plays the role of one of the main systemically important factors of organizational systems. Ways of influencing the management object referred to as management methods are divided into administrative, economic and socio-psychological. The impact itself is the management process. A set of rules, algorithms for decision-making and control actions determine the management mechanism. It is the mechanism of management in the system and in the process of management plays the role of intellectual core determining the efficiency of
management.

15. It follows from the above that the need to consider the activity of economic system elements, goal formation and management by end results are not attributes of an abstract approach. These are natural properties of reasonably organized activity. They correspond to the management mechanisms that combine the methods of the theory of active systems with methods of program-goal approach supported by information technologies.

16. Thus, the mechanism of management of economic systems development is a set of functions that provide change (improvement) of management mechanism. We can assume that the mechanism of development in the management of economic systems is a set of procedures, methods, information technologies enabling us to create (design) new mechanisms for managing the required properties, in particular human potential.

17. Organizational mechanism or the mechanism of functioning (management) of the economic system is a set of rules (procedures, functions) governing the activities of elements of the system during operation. It is a complex concept allowing decomposition on various grounds (structural, functional, territorial, time, etc.).

18. The efficiency of the economic system is largely determined not so much by the structure itself, but rather by organizational mechanism that exists in the system. The task of developing effective organizational mechanisms for a given structure is a necessary element for evaluating the effectiveness of the economic system.

19. Description of the management mechanism is based on the description of interconnected components. Most often decomposition by the management functions is used. As a result, there are the following components: forecasting, planning, accounting, evaluation of the functioning, promotion.

20. The main problem of the theory of management in economic systems consists in the selection from a set of possible management mechanisms the mechanism of maximum efficiency. The challenge is caused, of course, by the
complexity of procedures for assessing the effectiveness of management mechanism. The complexity of solving the problems of constructing optimal management mechanisms has led to the fact that researches in this field were carried out in the direction of studying the properties of different types of mechanisms and evaluation of their effectiveness in solving specific problems of management. As a result, the use of basic management mechanisms was recommended. In fact, these mechanisms are integral parts to be used for designing complex management mechanisms.

21. The shift to the process-oriented methods of organizational management based on the features of human development is recommended.
4.1. HUMAN DEVELOPMENT INDICATORS AS A CRITERION OF ORGANIZATIONAL AND ECONOMIC EFFICIENCY OF INNOVATION MANAGEMENT SYSTEM

Development of managerial decisions is impossible without a system of indicators. Only with their help logic, principles and methodological approaches of strategic planning can be implemented.

An indicator in contemporary accounting is understood as qualitative and quantitative description of socio-economic phenomena and processes. The qualitative side displays the essence of phenomena or process in a given place and time, and the quantitative one - its size, the absolute or relative value.

In relation to human development indicators should be understood as a measure that gives it quantitative or qualitative determination.

The current system of indicators in general allows us to characterize the content of the basic organizational processes.

The system of indicators used in strategic planning should meet certain requirements:
- unity and obligatoriness of indicators for the given level of planning;
- indicators should be able to get aggregated and disaggregated, to be comparable;
- should have a measure, i.e. be specific;
- should provide a comprehensive description of all aspects of the planned facilities functioning;
- the indicators system should be flexible, adaptive, capable of reflecting the changes in the state of the planning object.

The human factor being the main link in the development of an organization is at the same time a measure of its effectiveness. The problem is particularly actual in relation to the existing contrasting notions of "effective" and "social" based on the belief that there is an inverse relationship between economic development and the
solution of social problems.

Economic growth expressed as the absolute or relative increase in GDP may not indicate the development of a person if, for example, is achieved at the expense of extensive factors, intensified exploitation of employees, sharp income differentiation. In this case, you can not even speak about economic development in the true sense of the word. Because the concept of economic development involves not only an increase in volume indices of production results, but always comprises the qualitative aspect of the reproductive process and its results, change in the relationship and structure of growth factors, increased efficiency which includes socio-economic one.

We can speak about economic development which dominant factor is human progress, the reproduction of human potential. For many decades economic growth has been the main benchmark based on the belief that it will inevitably lead to human development. On the basis of these ideas, the technical and economic aspects of growth, the statistical estimates of the relationship of quantitative factors and results of production were concentrated on. This can be explained by the fact that in the process of gradually improving economy, many important "industrial" human features, the overall development of personal qualities were ignored by an economic system. An exceptional adaptability of a human being enabled him to perform many essential functions in the most unfavorable conditions of life and work. It should be noted that most of the losses associated with the inadequate development of the human factor were of a hidden character revealing themselves only in the long term. These losses were not detected by conventional volume indicators and were not perceived as economic damage.

The transition to a new type of economic growth characterized by intensification of production, resource conservation, the social component as growth objectives has begun. During this period intercorporate coordination mechanism which, together with the competition which began to be involved in the regulation of social and economic mechanisms has started to take shape. Gradually the situation in which the quality of life has become a need and objective condition for the progress of the
economy in general has developed. There appeared the understanding of the limitations of "industrial" approach to human progress. According to the theorists of the Club of Rome the crisis of technological civilization in terms of the human dimension has begun. Contradiction between economic and social development has led to the conclusion that neither further involvement of the productive resources nor quantitative growth of production, but only human potential building will ultimately determine the success of economic and social development. Thus, there was a fundamental change in the nature of reproductive interaction of two major components of the elements of economic development potential: a human being and material factors created by him. In this period theories of economic growth confirmed the fact that the real driving force of economic progress is people. The concept of human development has become the reality. New theories proceeded from the fact that growth is primarily a function of the human capabilities development.

There appeared two types of growth models. In the first the major role was played by human capital, in the second – by research and development. It has been proved on the basis of the first model type that the growth of human capital allows to advantageously use in the production process the so-called positive external factors (education, qualifications, etc.) which lead to increase in productivity and in final results. Thus, the main idea was that increasing of the human development level causes more efficient use of all factors of production.  

The basic premise of the second type of models was that the long-term growth rate is more affected by investments in R & D which do not bear the costs of human potential development, but enjoys the positive effects of investments in people produced in other areas.

Obviously, the development of human potential is one of the major factors in both models. The ability of economic agents to perform effective qualitative and structural changes inhering the human factor, and therefore those kinds of economic and social activities that ensure its development and improvement has become the center of economic analysis. The society got an opportunity without sacrificing the satisfaction of material needs to direct a greater share of resources to buildup
intangible wealth, to human development. In these conditions the content of economic growth can not be the attainment of quantitative objectives, and the growth can not be measured by a quantity of material goods, any quantitative indicator, even such as GNP.

Reproduction of human potential is becoming a major component of development models closely associated with the indices of human progress and considering many qualitative variables (various components of the social services, living conditions improvement, human productive forces) that determine ultimately the ability of economic systems to the scientific, technological and social innovation. Thus, on the one hand, these figures characterize the human role in the socio-economic development and on the other hand they enable us to consider a person as a criterion for economic development. The most common and affordable way to assess the factors of economic growth is the development of complex social indicators, structural and value judgment. It is also about the possibility of transformation of these variables into the controlling and controllable parameters of social development. It is also characteristic of human development indices used by UN. This approach differs not only from the traditional analysis in the theory of economic growth, but also from human capital theory where people are studied primarily as a means of socio-economic development. In the new models, a person becomes the goal of the development. Analysis from the perspective of human development integrates production and distribution methods with an approach that determines the possibility of expansion and use of human potential. In this approach, human development is seen as a dynamic process. In such a multifactor system traditional economic indicators act as a form of social indicators.

Considering the issue from a purely economic point of view, we can say that human reproduction as labor force becomes more and more expensive. The advance of effect growth over the costs of the human factor is considerably higher than over real material conditions of production. This is one of the main features of the post-industrial economy based on knowledge.

Obviously, when assessing the efficiency of the economy and the organization,
particularly in terms of its impact on the human potential we should consider all the components. The indicators of human dimension of the economy effectiveness include indicators characterizing demographic processes, the state of health and level of education (human development index), the state of culture and morality; indicators of life quality and degree of implementation of the social justice principle.

Organizational and economic efficiency is associated with its stability, understood as the development, not only generates economic growth but also to fairly distribute the results and increase opportunities for people.\textsuperscript{158}

There is a correlation between HDI and empowerment, inequality and sustainability, using indicators of political freedom and reduce the HDI due to inequality as well as an indicator of sustainability. Except inequality, the picture is not unambiguous. There is no statistically significant relationship between the stability and the HDI. Democracy on average positively correlates with HDI, but the variation of this ratio is much higher than in the case of inequality. The lack of correlation can be seen in the large number of countries that have a high HDI, but failed with other variables.

These simple correlations are only a rough reflection of much more complex reality. For example, there is a broad discussion about the connections between democracy and socio-economic development and the role of equality in the development. It is reasonable to assume that there is a positive relationship between them, and below we offer a valid proof of it. But we can not be sure that the increase in the HDI will be accompanied by positive shifts in the broader dimensions of human development, or that these changes will lead to an increase in the HDI.

In 1990 the public understanding of development problems was galvanized by the appearance of the first "Human Development Report". Headed by the visionary Mahbub ul Haq, this research had profoundly affected the way policy-makers, government officials, the media as well as economists and other social scientists assess the social progress. The report did not focus on the few traditional indicators of economic progress (such as gross national product per capita), but offered a systematic study of the vast reservoir of information about people’s life in various
However, the problem of replacing simple digital information like GNP with a huge number of tables (and multiple analysis results) is that the latter lacks the practicality and convenience of GNP. Therefore, in contrast to GNP another simple indicator - Human Development Index (HDI) - which focuses only on lifespan, basic education and minimal income was introduced. Not surprisingly the HDI which has become very popular in the public debate has "roughness" comparable to the GNP. Rough HDI met expectations: it works as a simple indicator like GNP but unlike GNP it is not confined only to the income and commodities. At the same time, the huge breadth of human development concept should not be confused, as is sometimes done, with the narrow limits of the HDI. In the steady flow of "Human Development Reports" new tables continue to appear and new indexes designed to enhance the HDI and enrich our evaluations are being developed.

The concept of human development is constantly topical in comprehending of our changing world and in the search for ways to improve human welfare. Human development is not a fixed and static set of requirements but an evolving idea since the world changes are followed by the changes in analytical tools and concepts.

Addressing these issues requires new techniques. Three indicators of the whole family of Human Development Report indicators - inequality-adjusted Human Development Index, index of gender inequality and multidimensional poverty index are the most advanced today. They have incorporated the latest advances in theory and practice of measurement and confirm the central role of inequality and poverty in the human development. These experimental data series are given with the intent to stimulate reasoned public debate beyond the traditional orientation to the indicators summary. The idea that the concept should be dynamic and not frozen remains unchanged in the tradition of human development.

"Human development is the inclusion into human freedoms rights of people for a long, healthy and creative life, for the enjoyment of other goals, which, in their opinion, have value, for active participation in providing justice and sustainable development on a shared planet. People - both individually and in groups - are both
beneficiaries and the driving force of human development. ”

Research results based on new data and analysis confirm two main controversial points: that human development is different from economic growth and that significant advances can be achieved even without rapid growth. These achievements were made possible because growth is separated from the processes that determine the progress in human development not related to income.

One important aspect is how the relationship between markets and states is organized. Governments in various ways address the issue of tension between the desire of markets to profit and dynamism and the need to overcome market failures. Markets can be necessary to ensure sustainable economic dynamism, but they do not automatically bring progress in other dimensions of human development. Development that makes too much emphasis on rapid economic growth is seldom sustainable. In short, the market economy is necessary but not sufficient.

These observations date back to the brilliant characterization formulated by Karl Polany more than 60 years ago concerning the myth of the self-regulating market - the idea that markets can exist in a political and institutional vacuum. Usually markets do extremely poor job with the performance of public tasks - such as security, stability, health and education.

For example, firms manufacturing cheap labor-intensive goods or exploiting natural resources often do not feel the need for more skilled workers and may pay little attention to their health, if there is a surplus of labor in the labor market. Human development is not just about health, education and income, it also includes active participation in the formation of development, justice and stability - integral aspects of freedom that allows people to live the kind of life they have reason to value. There is less unanimity on the question of what constitutes progress in these aspects, the indicators are also often lacking.

However, lack of quantitative evaluation is not a reason to disregard quantitative indicators or ignore them. Even if countries are making increasing HDI, they are not necessarily as successful in the broader dimensions. A country can have a high HDI and be unsustainable, undemocratic and unjust, likewise another country can have a
low HDI and be a relatively stable, democratic and just state. These schemes generate serious problems in relation to what we think of human development, its indices and strategies of gradual improvement of results and processes.

There is no simple communication scheme of the HDI with other dimensions of human development, such as empowerment and sustainability. The exception is the inequality which is inversely proportional to the HDI, but even that relationship has many variations. The lack of correlation can be found in many countries with high HDI and low results for other variables: a quarter of countries have high HDI but low sustainability; similar, though less clear picture can be observed in the area of political freedoms. However, perhaps the greatest challenge to preserve human progress is created by unsustainable patterns of production and consumption. To make human development truly sustainable, it is necessary to break the close relationship between economic growth and greenhouse gas emissions.

Expanding the boundaries of estimates has always been the cornerstone of human development. However, measurement for the sake of measurement has never been an end in itself. HDR has opened new opportunities to comprehend progress putting forward a simple but compelling idea that development is much more than a simple revenue growth. Over the years the HDR has been introducing new indicators to assess progress in reducing poverty and extending the women’s rights. The main obstacle here is lack of reliable data.

Human Development Index has been a strategic element of the new concept. It represents a shift in thinking, even if it does not fully cover the richness of human development. As a consolidated tool to measure health, education and income the HDI assesses their levels and their progress using a broader concept of development than that based solely on income. And, as it happens with any aggregate measuring instrument and international comparisons, it simplifies and covers only a part of things included in human development.

New directions of researches on development recognize that the results of reforms vary depending on the circumstances, and that appropriate strategies should be identified and developed at the local level.
As an example of this approach we shall consider the features of the index methodology for measuring human development applied to the subjects of the Russian Federation.\footnote{161}

HDI is composed of three equivalent components:

- income, determined by gross domestic product (gross regional product) in purchasing power parity (PPP) in U.S. dollars;
- education, determined by literacy rates (with a weight of 2/3) and the proportion of students among children and youth aged 6 to 23 years old (with a weight of 1/3);
- longevity, determined by life expectancy at birth (life expectancy).

For each of the partial indices there are fixed minimum and maximum values:

- life expectancy at birth of 25 and 85 years;
- adult literacy rate: 0\% and 100\%;
- total enrollment among children and youth: 0\% and 100\%;
- real GDP per capita (PPP): $100 and $ 40,000.

The income index is calculated somewhat differently, it uses the decimal logarithm of real per capita income in accordance with the principle of diminishing utility of income.

Final Human Development Index (HDI) is calculated as the sum of the arithmetic average of three components: longevity index, education index (consisting of literacy index with a weight of 2/3 and enrollment index with a weight of 1/3) and the income index.

When calculating the income index for the subjects of the Russian Federation additional procedures are introduced:

- updating (proportional increase) of gross regional product (GRP) of each subject of the Russian Federation on the undistributed portion of the country's GDP;
- GRP updating for difference in prices by multiplying it by the ratio of the average living wage to the subsistence minimum in the region;
- translation into U.S. dollars at purchasing power parity (PPP) for this year.

In calculating the index of education the level of literacy is determined in 99.5\%
of the population. Enrollment is calculated as the ratio of the number of students of educational institutions of all types (schools, primary, secondary and higher vocational education institutions) to the population aged 6-23 years. Values of the human development index can vary from 0 to 1. Value 0.800 is the lowest limit of the developed countries level.

The private sector is vital for human development. New conceptual vision of the role of the private sector in the development has recently emerged within development institutions that have recognized the role of markets in expanding opportunities and choices for poor people and households as producers, consumers and employees.

Described by many as the development of inclusive market, the private sector development is meant for the poor, and the creation of markets work for the poor; the basic principle in this process is inclusion.

According to the Economic Development Ministry forecast, the growth in real disposable money income in the long term is caused by increase in real wages, personal incomes from entrepreneurial activity, the accelerated development of the pension and social security, increase in social support for low-income groups of population.

During the period of 2011-2020 real disposable income will grow by almost 2.6 times according to the innovation scenario and almost 2 times at the inertial scenario.

Table 5 - The dynamics of income and consumption, %.

<table>
<thead>
<tr>
<th></th>
<th>2010</th>
<th>2015</th>
<th>2020</th>
</tr>
</thead>
<tbody>
<tr>
<td>Real disposable income</td>
<td>147,0</td>
<td>207,0</td>
<td>286,0</td>
</tr>
<tr>
<td>Real wages</td>
<td>168,2</td>
<td>259,3</td>
<td>384,7</td>
</tr>
<tr>
<td>Real labor pension</td>
<td>154,4</td>
<td>267,7</td>
<td>437,7</td>
</tr>
<tr>
<td>Retail trade turnover</td>
<td>166,7</td>
<td>239,5</td>
<td>327,2</td>
</tr>
<tr>
<td>Paid services</td>
<td>131,6</td>
<td>176,0</td>
<td>234,7</td>
</tr>
</tbody>
</table>

Annual growth in real wages in 2011-2020 will be 7, 6-9, 7% and it will rise in comparison with 2007 by 3.3 times in the overall economy by 2020. Implementation of innovative scenario will give a boost to the higher wage growth in high-tech and
knowledge-intensive activities.

Scenarios assume different hypotheses concerning the pension provision. Innovation scenario provides increase of ratio between the average level of pensions and the average wage to 30% in 2020, which will require an increase in the volume of federal transfers to the Pension Fund of the Russian Federation, or alternative ways to increase the income of the pension system.

Social protection of the population will develop in the direction of expansion and improvement of the effectiveness of regional targeted programs for the poor, which will withdraw working families with children and households of pensioners from the poor sector.

Within the innovation scenario as a result of monetary incomes increase and structural shifts the proportion and number of people with incomes below the subsistence minimum will tend to decrease. During the first five-year period (2006-2010) it will decrease from 15.2% in 2006 to 10.4% in 2010. At the end of the next five years (2010-2015) it will be up to 7.8% and will involve approximately 11.1 million people. By 2020, poverty will be reduced to 6.2% (8.9 million people). Over the entire period from 2006 to 2020 the number and proportion of people with incomes below the subsistence level may be reduced by more than two times.

Significant changes in the long term may occur in the structure of the poor. Given the substantial increase in wages of public sector employees, their share of the poor population will considerably decline.

Concurrently with a reduction of the poor is projected the decrease in the group of low income citizens with incomes below two subsistence minimums from 45% (64.1 million people) in 2006 to 21.3% (30.7 million people) by 2020.

These social changes are not only the result but also the prerequisite for a new quality economic growth, since they imply the formation of higher quality human capital, productivity growth and development of the service economy.

Development of the labor market in the long term will be formed under the influence of the growing labor shortages due to the decrease in the working age population, as well as the imbalance between demand and supply of labor from the
professional and territorial points of view.

Having determined the quality of human potential and having identified the factors influencing it, we can formulate principles of effective programs that will change the current negative trends in the social sphere and noticeably improve the quality of people's lives. We should formulate some general but important provisions to be considered when developing such programs.

Summarizing, we emphasize the importance of comprehensive monitoring of the processes related to changes in the particular components of human potential. It allows to timely track emerging issues, to identify ways out of the crisis so that the society do not pass the dangerous point of no return. Considering Russia's development strategy the state of the population and quality of life characteristics should be regarded as the main criterion for all decisions of the federal and regional authorities.

Opportunities to increase employment among the population of Russia in the long run are extremely limited. The women employment rate is one of the highest in the world and can fall under the influence of measures to stimulate fertility.

The main feature of the innovation scenario is connected with the intensive restructuring of employment and production in the high-tech sector. Its share in GDP will increase from 10.6% in 2007 to 18.6% in 2020; the share in total employment in these sectors will increase accordingly, from 7.3% in 2007 to 11.9%.

Table 6 - Structure of the employed in five large groups of economic activities in 2006-2020, %.

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Total in the economy</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>-</td>
</tr>
<tr>
<td>Including:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Agriculture, forestry, fishing and hunting</td>
<td>10,8</td>
<td>10,2</td>
<td>9,2</td>
<td>7,5</td>
<td>5,7</td>
<td>53</td>
</tr>
<tr>
<td>- Industry</td>
<td>21,2</td>
<td>21,4</td>
<td>21,2</td>
<td>19,6</td>
<td>17</td>
<td>80,2</td>
</tr>
<tr>
<td>- Construction</td>
<td>7,6</td>
<td>7,7</td>
<td>6,7</td>
<td>7,7</td>
<td>9,6</td>
<td>126,3</td>
</tr>
<tr>
<td>- Trade, hotels and restaurants, transport and communication</td>
<td>26,8</td>
<td>27</td>
<td>28,1</td>
<td>29,9</td>
<td>32,1</td>
<td>119,8</td>
</tr>
<tr>
<td>- Financial services, real estate transactions, renting and services</td>
<td>33,7</td>
<td>33,8</td>
<td>34,9</td>
<td>35,3</td>
<td>35,7</td>
<td>105,9</td>
</tr>
</tbody>
</table>
Productivity. Currently, in the production of value added per employee Russia lags behind the U.S. by 5.9 times, behind the G7 countries ("Big Seven") - by 5.2 times, and behind Japan - by 4.3 times. In the production per one hour, the gap is even higher - 6.1 times with the U.S., with the G7 countries - 5.4 times.

Recently the wage fund grows by 28 percent or more per year, and its share in GDP increased to 44.8% (2007). The rapid growth of the average wage is accompanied by its increased differentiation in economic activities. In the financial sector and the extraction of fuel and energy minerals average monthly salary exceeds the average for the economy as a factor of 2.5. In agriculture and light industry average wage is 50% of the average in the economy. Under the current structure of wages according to the employment trade, agriculture, transport and communications, construction, as well as mechanical engineering, food industry and metallurgy are leading.

Disparities in wages lead to a redistribution of the shrinking workforce in high-yield sectors, contribute to a shortage of professionals and skilled workers in most manufacturing industries, which is a constraint to processing industries, diversification and increase of production efficiency.

According to forecasts by 2020 with the innovative scenarios productivity is projected to increase by more than 2.5 times.

Table 7 - Growth in labor productivity (in the added value), %.\(^{162}\)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Agriculture, hunting and forestry</td>
<td>113</td>
<td>170</td>
<td>260</td>
</tr>
<tr>
<td>B. Fishing, fish farming</td>
<td>110</td>
<td>140</td>
<td>175</td>
</tr>
<tr>
<td>C. Mining and quarrying</td>
<td>109</td>
<td>132</td>
<td>160</td>
</tr>
<tr>
<td>D. Manufacturing</td>
<td>126</td>
<td>195</td>
<td>302</td>
</tr>
<tr>
<td>E. Production and distribution of electricity, gas and water</td>
<td>116</td>
<td>145</td>
<td>181</td>
</tr>
<tr>
<td>F. Construction</td>
<td>150</td>
<td>228</td>
<td>353</td>
</tr>
<tr>
<td>G. Wholesale and retail trade; repair of motor vehicles, motorcycles, personal and household goods</td>
<td>137</td>
<td>200</td>
<td>299</td>
</tr>
</tbody>
</table>
Modernization of education in accordance with the requirements of innovative development is characterized by significant structural changes in the financing of the education sector and the quality of services provided. Increased spending on education to 6-7% of GDP, including budget expenditures - to 5-5.5% of GDP is based on the following assumptions:

- The growth of the payroll budget of the teaching staff of educational institutions from 1.82% of GDP in 2008 to 3.05% in 2020;
- Increase in spending on basic research in universities to 0.08% of GDP in 2016-2020;
- Increased spending on the establishment and functioning of the leading universities, including spending on science from 0.1% of GDP in 2008 to 0.18% of GDP in 2020.

Table 8 - Major budget allocations on education (% of GDP)

<table>
<thead>
<tr>
<th>Current education funding</th>
<th>2008</th>
<th>2012</th>
<th>2016</th>
<th>2020</th>
</tr>
</thead>
<tbody>
<tr>
<td>- payroll budget expenditures in educational institutions</td>
<td>1.82</td>
<td>2.22</td>
<td>2.62</td>
<td>2.8–3.1</td>
</tr>
<tr>
<td>- effective contract -</td>
<td>-</td>
<td>0.26</td>
<td>0.48</td>
<td>0.66</td>
</tr>
<tr>
<td>- other expenditures including capital construction</td>
<td>2.26</td>
<td>2.43</td>
<td>2.36</td>
<td>2.35</td>
</tr>
<tr>
<td>Leading universities - in addition</td>
<td>-</td>
<td>0.10</td>
<td>0.12</td>
<td>0.18</td>
</tr>
<tr>
<td>Fundamental research in universities</td>
<td>-</td>
<td>0.08</td>
<td>0.08</td>
<td>0.08</td>
</tr>
<tr>
<td>Total</td>
<td>4.08</td>
<td>4.83</td>
<td>5.18</td>
<td>5.5-5.7</td>
</tr>
</tbody>
</table>

Payroll budget share in budget expenditures on education in 2008-2020 is projected at 45-56%. This wage increase is necessary for the effective return on investment in education infrastructure. To improve the quality of educational services, infrastructure investment should be also accompanied by adequate investment in human capital of the educators and renewal of the teaching staff.
Table 9 – Expenditures on scientific and technological development of Russia

<table>
<thead>
<tr>
<th>Indicators</th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gross domestic expenditure on research and development of large and medium-sized enterprises billion rubles as% of GDP</td>
<td>196,0 1,28</td>
<td>230,8 1,07</td>
<td>288,8 1,07</td>
<td>371,1 1,12</td>
</tr>
<tr>
<td>Budget allocations to science and R &amp; D billion rubles as% of GDP</td>
<td>- 0,80</td>
<td>172,1 0,80</td>
<td>197,9 0,74</td>
<td>263,3 0,80</td>
</tr>
</tbody>
</table>

Domestic investment - both private and public - is crucial. Few countries have made significant progress solely by foreign investment and development assistance. Mobilizing domestic investment and entrepreneurship involves the creation of a favorable climate with the mechanism protecting the rights of owners. The studies in this field display the variety of successful approaches. Some countries rely more on strategic transactions between the business elite and the government, and not on the overall institutional or legislative reforms. Financing of the internal public investment requires sufficient budget revenues with their collection mechanism being fair and transparent.

**Conclusions on 4.1.**

This section attempts to explain the global progress, local variability and lack of systematic linkages between economic growth and progress in other dimensions of human development, emphasizing the importance of ideas and technologies dissemination. Money matters, but the facts clearly show that you can achieve great success in other aspects of human development without any acceleration of economic growth. Variety of ways and results is rooted in the diversity of market structures and the ways they interact with states and institutions, with a significant role played by the comprehensive nature of the political system.

Basic principles of the human development concept are not to constantly provide needy populations and countries with humanitarian aid, but to stimulate the development of these people, to enhance their participation in public life, to empower
lifestyle choices and making decisions affecting their lives, simultaneously strengthening their responsibility for the decision made and for their implementation.

Generalization of the conceptual apparatus and desire to give the most accurate definition of "human development" resulted in the need to improve the interpretation of this category. Human development is an economic category illustrating the process of providing conditions for people to make their choices from the expanding opportunities to realize their human potential. Certainly, the creation of conditions for human development requires resources, so it is expedient to distinguish the following hierarchical levels ensuring it:

- a family one, which implies the conditions for selecting and implementing the opportunities for formal education, proper health condition and standard of living using family and local budget;

- microeconomic (enterprise) level which determines the conditions for the employee to select and implement using the enterprise funds the opportunity to get special education, to improve competitiveness and to maintain an adequate level of health and life by the income received;

- mesoeconomic (regional) level, which creates opportunities for full life of the people living in the region, on the basis of particular priorities and the use of the local budget. Isolation of mesoeconomic level is especially relevant in present conditions of significant regional disparities appearance in their development and the government's attempts to introduce a contractual relationship between the center and the regions to implement regional policy, concentration of state and local resources to address priority problems and the conclusion of agreements on regional development. Implementation of such a mechanism will initiate new relationships between the center and the regions on a long term basis to address territorial development problems.

In today’s conditions the effectiveness of the organization depends on:

- favorable business environment;
- the right strategy of the organization;
- the quality of human resources.
Implementation of market economy principles in Russia raised the issue of the need for effective systems to ensure high quality of human resources which feature consists in the fact that:

- first, the more people are involved in the professional activity, the more they accumulate life and professional experiences, the less time they need for high-quality solutions of professional tasks, the more value they represent to organizations;
- second, this is an extremely complicated object of social management;
- third, the professionalization of activities requires high capital intensity for the formation of professionals;
- fourth, the high efficiency of the professionals in the organization is achieved by creating sustainable management of their capabilities.

The concept of "human resources" recognizes the need for investment in the creation and development of human resources basing on economic expediency, with the aim to attract more high-quality professionally employee, creating conditions for creative and professional development of each employee, which entails the need for better use of knowledge, skills of workers. Hence the changed emphasis in the work with staff, in particular efforts are made to develop and disclose "hidden" capabilities of the employee. The problem is that people are the most conservative component of the organization, and mandatory adaptation of human resources to new objectives, methods and relationships is required.

When forecasting economic growth the state of human resources should not be overlooked. It should be noted that the need for reorientation of policies to expanded reproduction capacity building in addition to the simple reproduction of a personnel reserve for rotation is connected with a sharply increased requirements for initiative, entrepreneurial, able to find new solutions in demanding environments employees.
4.2. SUSTAINABLE HUMAN DEVELOPMENT AS THE BASIS OF INNOVATION MANAGEMENT SYSTEM

With varying degrees of understanding the organizations begin to realize that the global problem—exceeding reasonable limits of nonrenewable planetary resources—is a serious threat to organizations, society and the planet as a whole.\(^{163}\)

Both the complexity of the subject of sustainable development and the importance of and the need for large-scale reconstruction of the system in these areas in accordance with the existing problems are becoming apparent.

But the key dimension of the sustainable development is still overlooked by most organizations. Few of them pay attention to the impact of competencies that shape our ability to understand the world and allow us to take effective actions.

Large-scale discussions of the sustainable development topic often do not take into account the competences, the nature of their development and gradual expansion of consciousness. Along with the study of the vast number of forms and types of sustainable development recognition of the importance of the internal competence development deserves more attention.

Within the framework of contemporary theories of human capital and human potential the section on assessment of human development, on the necessity of renovation methods of social evaluation in conditions of market relations in Russia is being developed (E. Brooking, Bychenko Yu. A. Dobrynin, I. Ilyinsky, Kapelyushnikov R., A. Sogradov).

The problems of interrelation of transformations in education and human development are treated both in foreign and in national researches. The impact of education on human development in the global context is analyzed by L. Bremer, G. Callan, R. Kishun, K. Klasek, Makberni G., A. Pollock, L. Chipman. The impact of education on human development at the level of society is studied by Vashchekin N., V. Vzyatyshev, S. Ivchenkov, P. Kuznetsov, V. Nechaev, A. Ponukalin, A. Prusak, M. Rutkevich, A. Slepukhin, A. Ursul et al.

The most important contribution to the research on the growth of living
standards was made by J.Klugman, F. Rong, V. Bobkov, V. Levashov, A.V. Razumov, L.Figlin. Justifying transformation of goals, objectives, dimensions of human development many authors summarize the ideas of scientists engaged in research on sustainable socio-economic development (B.Mirkin, N. Moses, L.Naumova, G. Nicolis, P. Prigogine, A. Romanovich A.Ursul). In considering the problems of human capital accumulation you can base on research on the labor market represented by S.Konstantinov, A.Kochetov, S.Nechaeva, A.Savushkin.

To quantify the indicators characterizing this process, it is appropriate to conduct a critical analysis of certain aspects of the current demographic situation in Russia.

Economic development depends critically on the human factor. Therefore, long-term demographic forecast is a necessary component in determining the prospects for innovation and technology, and structural dynamics. Such forecast covers three main areas:

➤ dynamics of population and labor force;

➤ changes in the quality of the population and labor force;

➤ economy of sociodemographic and social structures of the complex.

Population dynamics is studied in order to determine how the processes of increase / decrease in population (labor force, labor force), their pace and components (fertility, mortality) influence the dynamics of macroeconomic indicators, including GDP, productivity, savings, etc.

Research on the quality of the population and labor resources allows us to estimate the impact of this indicator on the size and growth rate of GDP, the level of technological development of the country, as well as the current per capita income of citizens. The first to study the issue of the quality of the population was Adam Smith. In his classic work "Inquiry into the Nature and Causes of the Wealth of Nations" he correctly observed that "the abundance or scarcity of supply with the necessary items and facilities is largely determined by the art, skill and ingenuity of the peoples than the ratio between the number of those employed in useful labor, and those who are
not ". This is true in our days as well.

Economy of sociodemographic structures shows what are the economic consequences of age, education and other sociodemographic transformations of the population structures, how the development of the social complex affects this structure. In this regard one of the most acute problems of today is the demographic aging of the Russian population and socio-economic consequences of this process for the country – the reduction of the innovation-active population.

We should properly assess the current socio-demographic situation from the perspective of not only population size, its natural decrease, but also its quality. Surely a decrease in population is a direct threat to national security. But even more serious risk is the reduction of the quality of human resources taking place in all areas.

The same can be said about the health of Russians at the population level referring to the three main indicators: morbidity, disability and life expectancy. The main criterion for federal and regional authorities in making their strategic decisions should be the characteristics of the quality of life of the population.

We should build such a system of social shock absorbers, which would make every citizen sure that throughout his life, no matter what happens, he will be able to use the guaranteed social support. This principle is particularly important in the "new" economy based on knowledge. The point is that living labor that is required for the present public production is based on high intelligence, knowledge and awareness to a much greater extent than before.

One of the necessary conditions for the preservation and development of human potential at both the individual and societal level is sustainable human development. However, I.I. Ashmarin notes that "the term" sustainability "is so expressive that it speaks for itself". 164 At the same time the definition in mathematical encyclopaedia runs: "Sustainability is a term that does not have a clearly defined content ...". 165

The concept of sustainable development was formulated at the UN Conference on Environment and Development (UNCED) in 1992 in Rio de Janeiro. Initially, this concept has been focused on solving global problems of mankind's survival against
the background of the interaction between nature and society. The history of the term "sustainable development" actually began with the Declaration of the UN Conference on Environment (Stockholm, 1972), as well as with the papers of the Club of Rome, when the negative consequences of technological transformations of socio-natural systems were clearly recognized and stated. The International Commission of the United Nations on Environment and Development has set a goal to develop an appropriate program which concept got the name of "sustainable development" recorded fixed as the term by the UN Conference in Rio de Janeiro.\(^\text{166}\)

Despite the above mentioned vagueness of the term there is still a core component in it. First, the term denotes both the state of rest of a system (stable equilibrium) and its motion (stable motion). Second, in both cases the sustainability implies the existence of external and / or internal forces which at small deviations from the equilibrium position of the system or from the unperturbed motion path return it to its original position or to the original trajectory. With such content the notion of sustainability may well be introduced into study of social and humanitarian phenomena as the term available to analytical elaboration.

As a first step we will consider possible strategies to stabilize the development of an individual and the society (we can use here an already well-established notion "the trajectory of sustainable development" - this will give even more universal meaning to the notion of sustainability). In the view of some researchers\(^\text{167}\) there may be two strategies here: 1) the establishment and strict observance of rules that eliminate the slightest deviation from a sustainable path - the strategy of ban; 2) the establishment of mechanisms that automatically return any system to a sustainable path in the event of small deviations from this trajectory, or, in other words preventing their uncontrolled growth - the strategy of self-regulation.

In the management theory, any system can be described by some output variables, by the vector of the state and by the so-called vector of management – it is initially supposed that the system cannot be left for itself (without which, of course, management theory just does not make sense). And the system in addition to sustainability should possess such quite mathematicized property as controllability,
and the state of the system should have also mathematically given property of observability. In management theory they are abstract concepts, the necessary elements of the mathematical apparatus. In the socio-economic aspect synergetic approach is becoming more productive.\textsuperscript{169} Traditional management theory deals with linear stationary systems, while synergy (the theory of self-organization) which grew out of the problems of nonlinear thermodynamics initially considers nonlinear, nonequilibrium systems. Moreover, in the contemporary theory of dynamical systems instability and fluctuations dominate: "... we exist in a world of unstable processes ...".\textsuperscript{170}

As noted by G. Nicolis and I. Prigogine, "the main source allowing the society to exist for a long time, get updated and find unique ways for development are its adaptive capabilities."\textsuperscript{171}

Ashmarin I.I. proposes to call these features as "adaptation potential" and quite logically employs the concept of human development for the research\textsuperscript{172} since its key thesis "preservation, implementation and development of human potential" has almost the same meaning as the thesis of "sustainable human development".

R. Nelson and S. Winter in "The Evolutionary Theory of Economic Change" develop basic approach to explaining economic phenomena such as the purpose and behavior of firms, competition, economic growth and other, which radically differs from the dominant theory of general economic equilibrium. Without using the term "development" in its highly specialized sense but talking about "change", the authors of the theory of evolution actually are searching for patterns of economic development in its different aspects. For example, technological changes became the subject of scientific interest of Nelson. Researching them, he came to understand that "these processes have inherent uncertainties, "groping in the dark", confusion, abundance of mistakes," and realized how difficult it is to "reflect these realities while remaining within the orthodox theoretical framework." The methodology of this work dates back to the writings of Malthus and Darwin, the founders of evolutionary theory as a branch of economics are believed to be Schumpeter and H. Simon. Nelson and Winter's work was the result of, first, research on the role of
technological changes in the processes of long-term economic development, secondly, of an attempt to create a more realistic economic theory of behavior and development of the company and the industry. The discrepancy between the assumptions of equilibrium theory and the theory of evolution can be seen from the following passage. "Our evolutionary theory suggests that firms are guided by the desire to gain profit and search for ways to increase it, but we do not proceed from the assumption that their actions are profit maximization on a clearly defined and exogenously given set of choices. Companies whose activities we model at any given point in time just have certain potential opportunities and rules of decision making. " In other words, evolutionary theory recognizes that both the decision-making process, and the consequences of these decisions have an inherent element of randomness.

According to Nelson and Winter evolutionary theory opens up broad prospects for contributing to the analysis of a large range of phenomena associated with economic changes that result from either changes in demand for products or offer conditions of production factors or are caused by the innovations.

A number of basic ideas of evolutionary theory, in particular the idea of economic natural selection are borrowed from biology. The success of commercial firms is linked with the market environment and is determined by the ability of a firm to survive and grow in this environment. In addition, the idea of “evolutionary genetics” is developing. It is just to point out that the problem of self-preservation is much easier solved in the invariable market environment, and if changes occur the company adapts easier to the changes of a fundamentally different kind. Nelson and Winter called their theory "blatantly Lamarckian considering also"the inheritance " of the unfavorable situation influence.

In a broader sense departing from the biological interpretation of the subject of this theory the term "evolution" means that this theory examines the processes of long-term incremental changes. Regularities observed in reality are described not as a solution to the static problem, but as a result of action of comprehensible dynamic processes of transition from the known or plausibly represented states that have occurred in the past, or as characteristics of a base for building fundamentally
different future under the influence of the same dynamic processes. At the same time this theory may be only indirectly related to the idea of gradual development opposed to revolutionary changes.

Sustainable development is defined as development on a lasting basis. Development of the organization is systematic changes in the organization based on the rapidly developing management. Development of the organization is based on a systemic approach.\textsuperscript{173}

A.D. Ursul and A.P. Romanovich define sustainable development as "the process of providing long-term (continuous) socio-economic development."

V.A. Los highlights the most significant components of the aggregate sustainable development: economic and social, when human activity involves production efficiency and social orientation. Most researchers define sustainable development as a process of long-term, continuous, balanced socio-economic development, ensuring the indefinite existence of civilization with a high degree of security of socio-natural systems.

The emphasis on sustainable development caused the need to consider the dynamic stability of the organization, as the problem of dynamic equilibrium is associated with changes contributing to the development of the organization and the need to manage these changes. The achievement of stability for a long period of time by such complex system as an organization requires streamlining management processes based on the use of technologies of management.

Considering sustainability as a common property of all systems, it is necessary to consider the stability of the system structure. At the same time stability of the structure is most often associated with the increasing complexity of the system elements and the way they interact.

In contrast to the concepts of classical thermodynamics which states the inevitability and the continuity of growth disorder or entropy, I. Prigogine showed that nonequilibrium thermodynamic state of an open system can cause order in it, that irreversible processes can lead to a new type of dynamic systems "endowed with innate ability to evolve in the direction of increasing entropy."
Ability of the organization in the changed external environment to depart from thermodynamic equilibrium determines the content of the principle of sustainable disequilibrium.

Le Chatelier-Brown’s principle states that "external impact that puts the system out of balance stimulates in it the processes trying to weaken the results of this action" and shows that internal resources in the organizational system, while maintaining their qualitative certainty can stimulate the processes on streamlining and development.

In physics A.M. Lyapunov developed a method of sustainability analysis determining that the only an equilibrium system is the system that remains in the neighborhood of this state after a disturbance. Essentially the method covers the totality of methods of investigating the sustainability of a motion of physical bodies united by a common purpose.

V.G. Aliyev distinguishes sustainability of the first and second kinds. Sustainability of the first kind (static equilibrium) is the feature of the system to return to its original position after it leaves the equilibrium state. Sustainability of the second kind (dynamic equilibrium) occurs when after the system is out of balance it comes to fluctuations near the new equilibrium, but at a higher level with the disturbances suppressed by an internal restructuring, internal capacity and new growth.

V.A. Ostreyhovsky understands sustainability as the "ability of a system to return to equilibrium after being out of this state under the influence of external perturbations."

In the economic literature there are different approaches to the characterization of sustainability. There is adaptive sustainability of the first kind, which "implies limited number of mechanisms in the system to compensate for the external impact by creating adaptive chains of existing elements combination. In the case of adaptive sustainability of the second kind "the chain is closed in the cycle, as a result it is possible to compensate for the disturbance in power beyond the capability of an individual chain."
In the case of group sustainability, based on the principle of duplication, the system has a complete group of complex compensatory mechanisms to all possible changes. Delayed sustainability implies that a system has opportunities to get away from the exciting factor exposure and not even have the appropriate compensatory mechanisms. Sustainable development is primarily anticipated and controlled development.

In order to analyze the practical activity of the organization absolute and relative sustainability are distinguished. Absolute sustainability is expressed in specific numerical values determining the organization's activities in the dynamics. Relative sustainability indicates the degree of sustainability based on the analysis of the organization’s development indicators relative to other organizations. Economic sense of the relative sustainability of the organization is close to competitiveness.

There are definitions of "sustainability", "organizational and economic sustainability", "economic sustainability", "financial stability." The development of these definitions is reflected in the writings of such scholars as A.D. Sheremet, V.I. Strazhev, V.V. Kovalev, O.V. Efimova, M..I Bakanov, E.S. Stoyanov, M.N. Kreinina, G.V. Savitsky, etc. The concept of "financial sustainability " has been the most researched.

"Economic sustainability is a special integrated property of the organization as a system in the complex market environment characterizing the guarantee of purposefulness of the system movement in the present and foreseeable future. It synthesizes a set of properties of the system and the major components of its industrial and commercial activities with developed and actively used factors of self development wholly or mainly produced in the system itself."

A.D. Sheremeta defines financial sustainability "as a certain condition of the enterprise’s accounts guaranteeing its solvency."

V.M. Rodionova defines financial sustainability of an enterprise as "a state of financial resources, their distribution and use that provide enterprise development on the basis of profits and capital growth while maintaining solvency and credit conditions at acceptable level of risk."
I.N. Omelchenko introduces the concept of "organizational and economic sustainability" which is understood as "the ability of enterprises to maintain financial stability in constantly changing market conditions by improving and focused development of its production, technological and organizational structures with the methods of logistics-oriented management."

A.L. Gaponenko highlights sustainability of development "characterized by systematic increments of result" and "the ability to self-regulation, self-governing, self-improvement with maximum use of internal resources."

Sustainable development of organization is a continuous, irreversible process of qualitative transformations based on anticipation and managed development of organization on the principles of self-organization ensuring that the system of management is ready for changes in an unstable external environment.

B.A. Raizberg determines the aim of management of organization development as "increasing the level of purposefulness, improvement of the controlled system functioning, the provision of effective and optimal trajectories of development."

According to the classical approach "management is the process of maintaining the system in the designated parameters under which the system is able to optimally perform the functions that are specific to a given subject area."

Malakhov N.D. considers management as a process, as an organization and as a system. "Management as a process is "an interconnected set of cyclically recurring actions" aimed at the development and implementation of solutions that target to the efficient functioning and development of the organization.

Processuality is one of the main characteristics of management since every management is a process in which the managerial activity of subjects correlates with controlling actions. "In the unity of two parties forming management - process and structure - its content is revealed in the process." The main parts of the system are input, process or operation and output.

Management is implemented through the joint activity of people organized in various institutions of governance. In this case, management is considered as an organization. It is noteworthy that in this case to review any changes in the
organization in the context of human development, which paradoxically expands existing knowledge about the ways and forms of management purposes becomes inevitable.

The change management system in this case is determined by the structure of the human capital in its development in inversed manner. In fact, we are talking about harmonization of human capabilities as the subject and the object of management system provided that there is self-realization understood in the broadest sense as the need of not only the quantitative growth of material goods and services available and consumed but as human development determined through the possibilities.

All variety of ideas about possible ways of development can be subdivided into three areas - biocentrism, anthropocentrism and sustainable development. The basic principle of biocentrism is subordination of human development to the processes of nature by eliminating the benefits of civilization, i.e. the slogan "back to nature" is proclaimed. Anthropocentric position is totally opposite to the use of the biosphere as a resource source to satisfy the growing needs of humanity that is supposed to be achieved through technological progress. Sustainable development requires the harmonization of relations of humanity and the biosphere, development of conditions and conscious restrictions on the consumption of resources based on the capabilities of the biosphere.  

International Commission on Environment and Development defines the concept of "sustainable development" as development that meets the needs of present generations without compromising the needs of future generations. Sustainable development of civilization consists of the sustainable development of its three subsystems: the natural environment, society and economy. Sustainable development of the natural environment means saving nature's ability to heal itself.

From a social point of view sustainable development involves the union of all social, ethnic age groups to participate in managing the development of the territory, a fair distribution of work, income, social benefits, safety and welfare provision.

Sustainable economic system involves the use of effective methods of management (in all sectors of industry and agriculture) to improve the quality of
resource use. These are resource-saving technologies, products and services of high quality. The process of development of all three components is an interconnected and interdependent and therefore should be considered in unity.

Sustainability of the three subsystems is not uniform. An ecological subsystem has the highest degree of sustainability. An economic one has the least sustainability degree. The often used term "path to sustainable development" implies a reduction of anthropogenic stress on the ecological subsystem to the maximum permissible level.

The literature on macroeconomic processes often emphasizes the direction of development. We can speak about giving up the understanding of development as a linear process, which can only be regarded as a special simplest case. Contemporary science exercises systemic approach and presents the development of any complexity system and its elements as extended in time spiral. This means that the system in its development can progress and degrade i.e. evolve from complex to simple, from the highest to the lowest. The simplest example of such an interpretation of development is long cycles of economic conditions identified by N.D. Kondratieff. According to his theory the cyclic development of the economy is inevitable and is implemented as a coherent phases sequence of the revival of production, recovery, crisis of overproduction and depression. If we proceed from this interpretation, we can conclude that the development in the form of progress has no more chances than regression. Development in any direction depends on the complex of specific conditions, which content enables us to estimate the probability of upward and downward movements of the system.

Development is often used in the meaning close to the meaning of the term "growth". At the same time, there are works in which these two notions are treated differently that does not exclude the relationship between them. For instance, Professor. T.V. Checheleva writes in the book "Effective economic growth" that starting from the last quarter of the XX century an effective economic growth is a means of achieving economic and social development. Economic growth is basically a quantitative characteristic. It is expressed in the growth rate of gross national product or national income. Socio-economic development provides the
qualitative characterization of the state (the ratio of extraction and processing industries, the population needs structure and per capita income, the state of education and health, basic and applied science, etc.). In general, the higher the rate of economic growth, the faster the level of economic development increases.

A similar view is shared by S.G. Boldyreva who while describing the essence of the concept of civilization sustainable development also distinguishes between the growth and development concepts. "The purpose of economic system development for a long time is its quantitative growth, increase in the volume of goods and services by increasing the amount of natural resources used. In contrast to the process of growth the development process involves qualitative transformation of the system, increase in the of production efficiency at constant or even decreasing amount of resources used."

A large section of classical economic theory is devoted to the study of changes in the economy in the long run. Most of the researchers starting with Adam Smith were inclined to think that long-term economic changes in their essence are economic progress. Despite a certain loss of interest to this matter in some periods of the XX century, on the whole efforts to create a grounded theory of economic growth were undertaken regularly. For example, in the early 50-ies of the XX century Harrod and Domar tried to supplement the static Keynesian theory with the dynamic component having recognized the dual role of investment which acts both as a source of demand for goods and services, and a source of increasing supply of goods and services. They constructed the growth model which assumed constant coefficients of economic growth costs and which originally looked the following way. At any given time in a competitive market the companies face the choice, first, of production resources and their correlation and, secondly, of the products they will produce. The choice is determined by the condition of profit maximizing or net present value at the given external conditions. A key assumption is the balance of the economy, that is the situation when supply and demand are balanced in all significant markets, and no manufacturer can improve his position under the specified actions of his competitors. If we are talking about "one-sector economy not experiencing Keynesian difficulties
then its growth is explained by increasing with time factors of production and the expansion of production possibilities. Dynamics of production, costs and prices is explained by the actions of firms that seek to maximize profits in the conditions of economic equilibrium, which, in turn, shift due to changes in the demand for production factors and the use of the production function method for the study of economic growth. Gradual examination of the many unknown technologies that underlie the company’s development is treated as a historical incremental process, in which inter-company information flows are essential and in which each company owns at the same time only one technology. Such representation compares favorably with the above-mentioned assumptions of neoclassical theory that at any given period of time there is a wide range of technological possibilities to choose from including options not previously used by any firm.

It should be noted that the concept of "socio-economic development" evolved over time. Until the 70s of XX century it meant the country's ability to increase production at a higher rate than population growth. Then, under the influence of scientific and technological revolution the requirements for manpower quality changed, the term "human capital" appeared and investments in it were recognized vitally important. Accordingly, the status of social component of the development increased.

"The purpose of development is to improve the quality of life. Improvement of the life quality, especially in the poorest countries, means primarily an increase in income, but not only that. It includes, in particular, better education, nutrition and health, poverty reduction, improvement of the environment, equal opportunities, expansion of personal freedom and a richer cultural life. "175

Summarizing, we will note that the seemingly obvious semantics of the term "development" is hiding variety of its interpretations by the representatives of various theoretical schools of economics. It applies to varying complexity systems - from civilization to a company.

An inseparable element of the semantics of development is the treatment of the latter as a dynamic process. The common features of many interpretations are such
properties as duration of development, its irreversible character but at the same time, the possibility of direction change. Trajectory of development may be different, but at longer time intervals the general trend of development of economic systems is usually recognized as spiral. Over time, the probability of changing the direction of development is increasing due to its cyclical character.

According to the position of the evolutionary theory authors firms’ development has an inherent element of randomness. The development takes place in the form of transition from known or plausibly presented variety of options to new solutions, technologies and directions of an economic system functioning.

Finally, along with the development of quantitative changes in the system a qualitative transformation of its characteristics is always involved.

In terms of implementation of management function such important properties as uniqueness, purposefulness and capacity for self-adaptation are important. There are many definitions of the system, for example, the following - "this is some integrity consisting of interdependent parts, each of which contributes to the characteristics of the whole."

Using the systemic approach we will understand "the development of an organization" as a long-term process of successive qualitative changes in the system "organization" resulting in a new set of elements of the system and (or) the relationships between them, which, in turn, is a prerequisite for the emergence of a new systemic integrity. Enlarged elements of the system "enterprise" are business processes, that is, the totality of the various activities when at the "input" one or more types of resources are used, and as a result of this activity at the "output" a product with some consumer value is made.

We have the right to speak about the development of an enterprise as about a constant "tending to infinity" process of changes when the principle of continuity is observed. It implies that the company is not going to cease to exist in the foreseeable future. V.A. Goncharuk distinguishes two diametrically opposite types of strategies from numerous ones used in the Russian enterprises. Profit strategy prevails today. Strategy of long-term presence is aimed at a stable business growth in certain
directions or style. However, it is clear that the changes in the sense mentioned above take place in the case of the implementation of innovative strategies in the long term providing a coherent organization evolution in the context of human development in compliance with the institutional conditions for sustainable development.

The need to develop the productive forces has put before management as a social institution the problem of algorithmic ordering, harmonization of those subject fields which are involved in its practice.\textsuperscript{176} You can not effectively manage the development of individuals and society and especially generate structural policy not knowing the most general principles that govern all the variety of structural forms. It is generally recognized that the merits of any theory is determined by the accuracy of its forecast, by the extent to which the responses, the type of behavior and development of the designed system, the character and order structural and functional changes and ultimately, the laws of structural optimum can be predicted. Every natural system with metabolic processes can be attributed to the class of self-organizing systems. Self-organization is the process of bringing the components of the system to one measure under the influence of internal forces - sources of self-organization, spontaneous accumulation of information, etc. This process can take place in either structural or functional aspects. In the structural aspect the internal structure of the system undergoes transformation, whereas in the functional aspect its quality and purpose change. Structural self-organization provides the structural stability of the system, search for the proportionality, self-consistency, harmony of conflicting, differing components. Functional self-organization finds and supports optimal modes and rhythms, techniques and direction of behavior maintaining a sequence of actions adequate to the problems addressed by the system.

Structural organization is the type, procedure, etc. of the distribution of the system components as parts of a whole, the method of their connection, subordination, the nature of the hierarchy. Functional organization is essentially a known order and consistency in carrying out the required actions to achieve immediate and long-term goals of the system.\textsuperscript{177} Structure is "stopped movement", instantaneous fixation of the system’s state in the process of its development.
Development of systems can be regarded as the change of their states, in the first place, structural ones. Condition is the moment of development, relatively complete phase or stage. It is an element of spatio-temporal structure of being.

Just as the structure is the specification of quantity differentiated by elements and their relationships representing multitude, the function is an analogue and specification of quality and its direct development and correlates with the development of the idea of quantity. Of all the possible movements the one enabling the achievement of the goal with the lowest cost of action is performed. According to this principle the process associated with minimal disruption to the organization of a system is realized.

Drastic changes in the environment change the system of production and economic activity of enterprises. The tendencies of the economic environment changes are prerequisites of the necessity and conditions for systemic transformation of enterprises.

Transformations of a company are characterized as a process of creation and keeping under control such necessary changes that allow the company to adapt to the new conditions of the external economic environment. Systemic changes are rationally planned, deliberately caused and controlled integrated transformation process aimed at is the development of the enterprise. Systemic changes at all levels of production and economic activity are determined by the need for the internal environment of the organization to adapt to qualitatively changed environmental conditions of its functioning. The ultimate goal of systemic transformation of enterprises is the stability and efficiency of their operation and development under current conditions. Transformations are carried out both to overcome the crisis situation of the company, and for timely and effective adaptation of the enterprise to the changing conditions of the market and to ensure the sustainability of its development. Thus, system transformations are rationally planned, deliberately caused and controlled process of integrated transformation aimed at the development of the enterprise.

Each of the models of enterprise development is characterized by the
predominance of certain qualities necessary for the enterprise to survive in the long term. Different models differently determine many factors, properties of enterprises as complex organizational systems affecting the quality of their functioning and development. And, respectively, views on sustainability factors and manageability of organizational systems factors are also different. In some approaches these qualities are produced primarily by the efforts of in-house structures by bringing them to an optimal state, in other approaches the company’s success largely depends on the impact of market influences, in the third ones the main thing is bringing organizational and external environment to the harmonious adequacy.

Presented in this paper an innovative model of development based on systemic transformations provides an opportunity to change not only internal but also external environment of the enterprise. In this model, the company is treated as an artificially created system being constantly redeveloped to meet new challenges and is strongly correlated with the development of human potential.
Figure 6 - The concept of innovation system of human development management in the conditions of systemic transformations.

On the basis of the conducted study the author assigns the key role in achieving the positive dynamics of the enterprise development to the innovative activity which is characterized by the creation of high technology and modern production capacity by finding the optimal management of human development. Management of innovative processes on the basis of systemic transformation is associated with an increased risk and uncertainty, but can bring an enterprise on a new level of development.

National and international experience shows that during the crisis the innovation policy of an enterprise focused on the growth of human development indicators allows faster and less costly to overcome the consequences of destabilization of the economy and more confidently move forward in its development.

**Conclusions on 4.2.**

Economic development depends critically on the human factor. Therefore, long-term demographic forecast is a necessary component in determining the prospects for innovation and technology, and structural dynamics. Such forecast covers three main areas:

➤ dynamics of population and labor force;

➤ changes in the quality of the population and labor force;

➤ economy of socio-demographic and social structures of the complex.

Population dynamics is studied in order to determine how the processes of increase / decrease in population (labor force, labor force), their pace and components (fertility, mortality) influence the dynamics of macroeconomic indicators, including GDP, productivity, savings, etc.

Research on the quality of the population and labor resources allows us to
estimate the impact of this indicator on the size and growth rate of GDP, the level of technological development of the country, as well as the current per capita income of citizens.

One of the necessary conditions for the preservation and development of human potential at both the individual and societal level is sustainable human development.

The emphasis on sustainable development caused the need to consider the dynamic stability of the organization, as the problem of dynamic equilibrium is associated with changes contributing to the development of the organization and the need to manage these changes. The achievement of stability for a long period of time by such complex system as an organization requires streamlining management processes based on the use of technologies of management.

Considering sustainability as a common property of all systems, it is necessary to consider the sustainability of the system structure. At the same time sustainability of the structure is most often associated with the increasing complexity of the system elements and the way they interact.

In the economic literature there are different approaches to the characterization of sustainability. In order to analyze the practical activity of the organization absolute and relative sustainability are distinguished. Absolute sustainability is expressed in specific numerical values determining the organization's activities in the dynamics. Relative sustainability indicates the degree of sustainability based on the analysis of the organization’s development indicators relative to other organizations. Economic sense of the relative sustainability of the organization is close to competitiveness.

The process model of sustainable development was substantiated, and the mechanism for sustainable development of an organization was proposed.

Using the systematic approach, we will understand "the development of an organization" as a long-term process of successive qualitative changes in the system "organization" resulting in a new set of elements of the system and (or) the relationships between them, which, in turn, is a prerequisite for the emergence of a new systemic integrity. Enlarged elements of the system "enterprise" are business
processes, that is, the totality of the various activities when at the "input" one or more types of resources are used, and as a result of this activity at the "output" a product with some consumer value is made.

Systemic changes are rationally planned, deliberately caused and controlled integrated transformation process aimed at is the development of the enterprise. Systemic changes at all levels of production and economic activity are determined by the need for the internal environment of the organization to adapt to qualitatively changed environmental conditions of its functioning. The ultimate goal of systemic transformation of enterprises is the stability and efficiency of their operation and development under current conditions. Transformations are carried out both to overcome the crisis situation of the company, and for timely and effective adaptation of the enterprise to the changing conditions of the market and to ensure the sustainability of its development. Thus, system transformations are rationally planned deliberately caused and controlled process of integrated transformation aimed at the development of the enterprise.

Presented in this paper an innovative model of development based on systemic transformations provides an opportunity to change not only internal but also external environment of the enterprise. In this model, the company is treated as an artificially created system being constantly redeveloped to meet new challenges and is strongly correlated with the development of human potential.

On the basis of the conducted research the author assigns the key role in achieving the positive dynamics of the enterprise development to the innovative activity which is characterized by the creation of high technology and modern production capacity by finding the optimal management of human development. Management of innovative processes on the basis of systemic transformation is associated with an increased risk and uncertainty, but can bring an enterprise on a new level of development.
The issue of management efficiency is traditionally important. Total costs (material, financial, human, intellectual, information and others) of the organization on management are large. The scope of management activities connected with written documentation and organizational efforts is very large scale. This is one part of the issue suggesting the appropriateness and usefulness of the organizational costs. There is a functional aspect of the issue connected with the evaluation of the role of management in organizational and human development.\textsuperscript{179}

Human development in the context of organizational change requires concerted efforts of government agencies, municipalities, civil society and business in addressing the most pressing social and economic problems. And it is the state that possess most of the resources and has the maximum power to influence human development being accordingly responsible for its state.

Formation and development of human potential is considerably influenced by innovation activity which is based on intensive structural shifts in favor of high-tech and information sectors, and thereby contributes to the creation of quality jobs with higher wages and creates demand for quality education. Human development is one of the most urgent tasks of any management structure, which should strive to create an environment where the human rights, needs, talents and abilities are fully realized.

Obviously, the positive changes in people's lives to a large extent depend on the professionalism of the management team, its approaches to management of the organization, values, management models, as well as the actual practice of interaction between the state and municipal authorities, civil society organizations in the region.

One of the features of human potential management is associated with a significant role of project management.

Project management fits into the concept of the new organizational management according to which the task to meet consumer needs is more effectively performed not by hierarchically organized bureaucracy but by multi-professional team, which is formed ad hoc to perform a certain task. The advantage of project management is its

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focus on results with the limited resources (time, financial, logistical).

One of the major management projects can become a project to create a model of functional target-oriented management (hereinafter -FTOM). It is based on a system of objectives and targets, and the main elements are functional target-oriented blocks (hereinafter -FTOB).

Returning to the issue of the definition of "development" we present a number of arguments clarifying the overall concept of the formation of human development management system. From the lexical point of view development is understood as the process going on according to certain regularities that describes the changes of things and phenomena as following each other various forms and states. 180

Learning means assimilation of knowledge and information. Obviously, variation and change are general principles that characterized the development and learning. Development emphasizes consistently made systematic steps which mean further progress. Formally, the change is an individual process of understanding the world and, at the same time, the structural process of influence on the ability of perception and other actions.
Koenig and Vollmer offer six forms of changes: changes of an individual and his environment; of subjective nature, of the rules of the system; of interactive structures, concerning direction and speed; of the outside world of the system.

The system changes are to be understood as the change of the main components of an organization: goals, strategies, technologies, internal structures, human resources. They require simultaneous transformation. The principle of changes viewed in terms of integrity can be approached in some ways. In organizations changes are connected with stability, or homeostasis. The system always tends to be in equilibrium. Changes take place according to system-specific laws. Structures are frozen rules. Finally, the context of the system, for example, in the form of market conditions is also involved in making decisions about the scope and depth of the changes.

Organization (instrument in Greek) means anything that determines the order of the system. Organization forms a system with its order and makes it what it is. While structures, on the contrary, are organizational units.

Today the researchers have overcome one-sided picture of an organization as of only the structural ordering of its parts by connecting the two sides of a whole—the structural and functional ones. The very variability of processes is not chaotic, but has a certain temporal sequence of the same phenomena, i.e., changes are characterized by some rhythm which is a type of link between the events and that organizes parts of the development process into a coherent whole.

John Galbraith identified the designing of an organization as a constant search for the most effective combination of organizational variables. At the same time "Organizational designing as a function of the organization is to develop such organizational elements and the relationships in the generated (simulated) system, which being implemented would produce an organizational unit with the properties of high reliability, stability and efficiency." Organizational designing can have different targets: a new system, partia
limprovement or a radical transformation of the existing organizational system.

Systemic approach to the designing of organizational structures primarily involves the incorporation of external and internal factors surrounding the organization, and in their dynamic development and change. Organizational modeling method allows us to clearly formulate assessment criteria of organizational decisions rationality.

Ignoring the concept of development in the processes of designing, manufacturing and operation of systems results in non-viable systems. The notion of the system function should be considered as a unity of functionality and properties of the system. When considering specific systems it is appropriate to use not the notion of “form”, but its specification—“structure”. In the interconnection of structure and function the leading role is usually assigned to function, and the structure is transformed in accordance with the realized functions and specific operating conditions of the system. Structure serves the formative factor that modifies the elements in accordance with the functionality of the system.

Changing environment entails a change in the mode of action of the system in its interaction with the external environment, i.e. leads to the change of system functions.

Management is a purposeful, systematic impact on groups of people and individuals during their joint (labor) activity. Process of management is the consistent implementation of the decision-making, carrying out the decisions, coordination and monitoring of the realization of the decision taken. Management function is specific form of management activity which involves the use of special techniques and methods, as well as related organization of operations. "The system of management is an organized whole consisting of professionals united in the management who implement and enforce management using a combination of methods in the management process. It also includes computer technology, relations between elements of the system made by the ways of interaction and flows of management information; paper flow required to perform tasks and responsibilities distributed between management bodies to achieve the objectives set for the organizational
Here the structure of management system is a form of management system, the way the system elements are organized that are determined by a set of stable relations between these elements and ensure the integrity of the system, reserving its basic properties at various internal and external changes.

Thus, the structure of the management system depends on the possibility of rational organization of management in any field of endeavor. Central backbone element in the management of human development is the category of "organization."

Structural components of the theory of socio-economic systems management are: management tasks; scheme of management activities; management conditions, types of management; management objects, types (methods) of management; forms of management, management means, management functions, factors affecting the efficiency of management, principles of management, management mechanisms.

Monitoring and analysis of the current state of socio-economic systems which is required to obtain the "point of reference" with respect to which the development of socio-economic systems will be assessed taking into account management impacts or without. Comparison of the current state of socio-economic systems with those views that reflect their "ideal state" allows us in the first approximation to estimate the current efficiency of its operation.

Forecast of socio-economic systems development conducted without management actions gives an indication of the dynamics of their behavior and of the extent it will depart from or approach the "ideal state" without any additional measures.

Goal setting involves the formulation of general development goals as well as performance criteria reflecting the compliance of this and/or future objectives of socio-economic systems with their development. In relation to the concept of human development management such goals are proposed to be income level, the quality of labor and conditions of reproduction.

At the planning stage (in the narrow sense) a set of specific tasks is determined - actions, activities, etc., which allow to reach or come as close as possible to the goals
in existing or future conditions.

The resulting set of activities requires, in addition to the distribution of functions between the participants of the system, the appropriate provision with the resources including motivational, financial, personnel, information and other resources, which is one of the key management functionst o ensure the development of SES. Also, of course, motivation of personnel involved in the implementation of planned activities is required.

The control of the SES development is to continuously monitor the changes in the state of SES due to actions of the controlled subjects undertaken in accordance with the plan, and to identify deviations from the plan. Since the development of SES is a continuous (in time) process, then with new information (obtained as a result of the control function) on the progress of meeting development challenges one may need to make corrective actions which is the essence of operational management.

With the completion of each of the planned stages of SES development including (and especially) the entire planning horizon, to implement the following stages we need to analyze the changes, to summarize the experience of development, which should be used to develop strategies and tactics for further SES management. These stages (corresponding to the main functions of management - planning, organization, motivation and control) may be repeated to form a management cycle. Temporary return to the previous stages and their correction is also possible.

Requirement sare specified, objectified in the motives that are motivators of human activities, social groups, and for which it is committed. Motivation, i.e. process of encouraging people, social groups to commit certain activities, actions is a complex process that requires analysis and evaluation of alternatives, choices and decisions.

Figure 8 - The structural components of activity.
The main question is who determines the goal. If the goals are set from the outside, then the activity is of operational, uncreative character, and goal-setting problems, ie constructing target determination process does not arise. In the case of productive activity the goal is determined by the subject and the process of goal-setting becomes a rather complicated process, with its own stages and the steps, methods and tools. Given the conditions, requirements, standards and principles of the activity the goal is instantiated in a set of tasks. Then using the chosen technology some action is selected which subject to the impact of the environment brings some result. The result of the activity is evaluated according to the subject's own (internal) criteria, and elements of the environment (other subjects) – according to the (external to the subject) criteria.

A very special place in the structure of activity take those components that in the case of the individual subject are called self-regulation, and in the case of interaction of subjects - management. Self-regulation in the general sense is defined as the expedient functioning of living systems.

External environment is defined as the set of all objects /subjects not included in the system, which changed properties and /or behavior affects the system under study as well as those objects /entities whose properties and / or behavior change depending on the behavior of the system.

The figure presents the factors determined by external (with respect to the subject of the activity) environment:

- requirements to activity and its results (including such crucial for SES characteristic as social demand);
- Criteria for conformity assessment of the result to the goal;
- norms accepted in society and organizations (legal, ethical, hygiene, etc.) and principles of action;
- Terms of activity (logistical, financial, information, etc.) will apply to the environment, and at the same time, may be part of the activity itself given the potential impact of the subject on the active creation of conditions of their activities. The following group of the conditions for any activity including management is an
In the first approximation the conditions can be divided into institutional and resource. Although, of course, in each case they will have their own specifics.

Thus, we have examined the basic characteristics of the activity and its structural components. We now proceed directly to management. Management activity is specific (but partial) kind of practice since management is an activity on organization of activity. Consequently, in order to understand what is management it is necessary to discuss what is "organization."

Let us consider generally accepted content of the notion"organization":

1) internal orderliness, consistency of interaction of more or less differentiated and autonomous arts of a whole conditioned by its structure;

2) a set of processes or actions leading to the formation and improvement of the relationships between parts of a whole;

3) an association of people together rimplementing some kind of program or purpose and acting on the basis of certain rules and procedures", i.e.-functioning mechanisms (mechanism is "a system, a device that determines the order of an activity").

In accordance with the first definition an organization is a property, in accordance with the second definition it is a process (the appearance of this property), according to the third definition an organization is an object (organizational system) which has the organizational property and in which there is a process of organization.

Organization of functioning of any organizational system is ensured by the mechanisms of functioning- the rules and procedures governing the interaction of its participants. Narrower notion is the notion of management mechanism– a set of procedures for management decision-making(from this point of view "management mechanism" and "management procedure" are synonymous). Thus, the mechanisms of functioning and management mechanisms determine the behaviour of the organization’s members and the way they make decisions.

Thus, the category of "organization" is the central backbone element for the the
theory of SES management, since, on the one hand, this concept is involved in the determination of the management (management is the process of organization, which result is the emergence of the property of organization in the controlled system), and, on the other hand, almost any SES (management object) is an organizational system.

The presence in the organization of a set of "prescribed" management mechanisms is attractive both in terms of the governing body—as it allows us to predict the behavior of managed entities and in terms of controlled entities—as it makes the behavior of the governing body predictable which is one of the essential properties of any organization as a social institution.

For the management body (e.g., the director) to choose this or that decision-making process (one or another management mechanism, i.e., the dependence of his actions on the actions of managed entities), he should be able to predict the behavior of subordinates—their reaction to these or other controlling actions. Experimenting in life by practicing various management actions and studying the reaction of subordinates is inefficient and almost never possible. Here simulation—construction and analysis of models (analogues of the researched objects) comes to help.  

Having an adequate model, it is possible to analyze the possible reactions using the controlled system (stage of analysis), and then to choose (at the stage of synthesis) and use in practice that managing impact which results in the desired reaction.

Now we have everything necessary to turn to the consideration of management proper. Here are a number of common definitions of the term "management".

*Management* is "an element, function of organized systems of various nature: biological, social, technical that ensures the preservation of their particular structure, maintenance of the activity, realization of the program's goals."

*Management* is "the direction of someone's/something movement, guidance of someone's actions."

*Management* is "the impact on the controlled system to ensure its desired behavior."

There are many other definitions according to which management is determined
as an element, function, influence, process, result, choice, etc.

We will not claim to give one more definition, but will only emphasize that if management is performed by the subject, then it should be considered as an activity. This approach to management as to a form of practical activity (management activity) puts a lot into place - explains the "multifacetedness" of management and brings together different approaches to the definition of this concept. Let us explain this statement. If management is the activity of the governing body, the implementation of this activity is a function of managing system, the process of management corresponds to the process of activity (administrative), the control action corresponds to its result, etc.\textsuperscript{196}

In other words, in SES (where management body and managed system are the subjects) management is an activity (of the governing bodies) on the organization of activity (of managed subjects).

The criteria of the controlled system efficiency depends on its state and, perhaps, on control actions.

If the dependence of the state of the managed system on management is known, then we get the dependence of the efficiency of the controlled system only on the management actions. This criterion is called the criterion of good governance. Consequently, the task of management can be formally stated as follows – we should find the permissible management impacts with maximum efficiency (such management is called optimal management). For this to achieve we need to solve the optimization problem - to select optimal management (optimal management actions).

It should be noted that in many practically important cases it is not necessary to look for the best (optimal) management - sometimes it suffices to consider the so-called rational management which ensures satisfactory management efficiency. According to the theory of limited rationality in decision-making impossibility or impracticality of looking for the optimal solutions may be caused by the following factors.\textsuperscript{197}

First, there may be no full information required for finding the optimal solution, and obtaining this information will require a lot of time and / or resources. Second,
the cognitive abilities of the governing body may be limited - it can not in the time required to consider all possible alternatives and is forced to use the first one that leads provides the satisfactory efficiency criterion. And, finally, the governing body may, for example, due to the incompleteness of information on the criteria of efficiency confine itself to certain efficiency value sufficient from his point of view. In other words, the theory of limited rationality states that rational decisions can be made in situations where the governing body "either has no possibility, time or inclination to search for the optimal solution."

We formulated in the most general form the task of management. To show how it is put and solved, we will consider a common technology covering all stages from constructing of the SES model to the analysis of efficiency of implementation of simulation results in practice.198

The first stage - the construction of the model - is the description of the managed system and the construction of its model which also includes specification of the composition, structure and functions of the system being modeled.

The second stage is analysis of the model (investigation of the managed system behavior under various control actions). Having performed the analysis, we can proceed to the third stage –to the completion of, first, the direct management task, ie, the synthesis of optimal control actions consisting in finding admissible controls with maximum efficiency, and, second, of the inverse management task- search for the set of admissible control actions that transform the controlled system into a given state. It should be noted that, as a rule, this very stage of management task completion causes the greatest theoretical difficulties and is most laborious from the researcher’s point of view.

Having a set of the management task solutions we should pass on to the fourth stage, ie to investigate their stability.

Investigation of stability implies solving at least two tasks. The first task is to examine the dependence of optimal solutions on the model parameters, ie, this is the task of analyzing the stability of solutions.199

The second task is specific for simulation. It consists in the theoretical study of
the model adequacy to the actual system which, in particular, involves the study of the effectiveness of solutions optimum in the model, which, when used in actual systems may due to the simulation errors differ from the model.

So, these four stages consist in the theoretical study of the SES model. In order to use the results of the theoretical research in the management of a real system, the model should be setup, ie it is necessary to identify the modeled system and to perform a series of simulation experiments–these will be respectively the fifth and the sixth stages. The stage of simulation in many instances is necessary for several reasons. First, it is not always possible to obtain an explicit analytical solution for the synthesis of optimal management and investigate its dependence on the model parameters. Simulation can serve as a tool to obtain and evaluate solutions.

Secondly, simulation allows to check the validity of hypotheses adopted in the construction and analysis of the model, ie provides additional information about the adequacy of the model without a full-scale experiment. And, finally, the use of business games and simulation models for training purposes allows participants to learn the system and to test these or other management mechanisms.

The final is the seventh stage - the stage of implementation when training of SES employees and executives is provided, implementation of the results in a real system with subsequent evaluation of the effectiveness of their practical use is performed.

Conducting systemic transformations requires significant investments in the future of the company, and this limits the current economic growth and reduces the profitability due to the growth of the company debt during this period. In this regard, there appears the need to implement the principle of balancing of innovative development and systemic transformations of the enterprise. Otherwise, a crisis situation may arise. To plan an innovative activity at every stage of the systemic transformations of an enterprise an algorithm that provides a balance of innovative development with ongoing organization’s changes is required.
Figure 9 - An innovative model of human development the organization based systemic transformations
Development of the plan of systemic transformations implementation is constructed based on its features, strengths and weaknesses and external factors. The difficulty lies in the inability to predict the market situation with a high degree of probability, so it is necessary to provide a plurality of alternatives and implement a flexible system of regulation of the systemic transformations implementation when using innovation. Basing on the conducted studies the author offers an innovative model of development based on systemic transformations allowing increasing enterprise value and improving effectiveness of the transformation based on the use of human potential.

At the first stage of systemic transformations indicators characterizing the current economic condition of the enterprise are used. These are E. Altman’s bankruptcy model, profitability, business activity, economic stability and liquidity indicators. Possible future changes in the corporate structure are analyzed on the basis of the selected direction of systemic transformations that characterizes the appropriateness of modernization, technical re-equipment, reconstruction, reengineering, restructuring or reorganization of the organization. Next comes assessment of the organization in regard to the possibility of various innovations and their duration that allows you to assess the impact of the planned transformations on the values of economic performance and value of complex effects which the company can count on. The main stages are the formation of the system of information support for innovation processes, the mechanism of investment support for the innovation activity and monitoring of the enterprise innovation activity.
Setting goals of systemic transformations in organizations through the development of human potential

Development of a basic enterprise strategy and determining the extent of its compliance with innovation potential of the enterprise, objectives of systemic transformation, objectives of human development

Identifying innovative organizational objectives

Estimation of innovative potential of the organization, determining the extent of its compliance with innovative climate, internal investment opportunities

Establishment of a body responsible for compliance of innovative objectives with all the required criteria, implementation and monitoring of innovation (the establishment of partnerships with external organizations, creation of own unit)

Developing innovative projects of human development, expert evaluation of their effectiveness

Budgeting of organizational changes

Harmonization and integration of innovation projects of human development in the overall program of systemic transformations

Adjustment and implementation of innovative development strategy in terms of systemic transformations

Change in basic organization development strategy, change in objectives of systemic transformations of the organization, change in innovative goals of the organization in the conditions of human development

Figure 10 - The mechanism for implementing the innovation strategy of human development in the conditions of organizational changes
One of the main mechanisms to adapt the organization to the changing environment is an effective innovation strategy based on the use of human potential. Strategic decisions based on the use of the specific concepts, methods and approaches to the collection, processing and distribution of information help to cope with internal and external changes and make the necessary corrections, allow to anticipate business trends, make the right strategic choices and realize the intended purposes. The author defines innovative business strategy as naturally and consistently carried out process of specific activities in research and development, creation of innovation and their development into their production in order to get new or improved products, new or improved production technology. The figure shows the mechanism of formation of the innovation strategy of human development based on organizational transformation.

Realization of the developed mechanism of innovative strategy of human development in an organization allows us to organizing a system of continuous improvement of production processes. This creates a competitive advantage when they are most relevant and are in demand allowing the company to maintain economic stability at a given level, which determines the synergistic effect of cooperation of human potential and organizational changes designed to increase the overall economic efficiency of the organization.

**Conclusions on Chapter 4**

1. The explanation of local variability and lack of systematic interlinkages between economic growth and progress in other dimensions of human development, emphasizing the importance dissemination of ideas and technologies is offered.

2. Basic principles of the human development concept are not to constantly provide needy populations and countries with humanitarian aid, but to stimulate the development of these people, to enhance their participation in public life, to empower lifestyle choices and making decisions affecting their lives, simultaneously strengthening their responsibility for the decision made and for their implementation.

3. Generalization of the conceptual apparatus and desire to give the most accurate definition of "human development" resulted in the need to improve the
interpretation of this category. Human development is an economic category illustrating the process of providing conditions for people to make their choices from the expanding opportunities to realize their human potential. Certainly, the creation of conditions for human development requires resources, so it is expedient to distinguish the following hierarchical levels ensuring it:

- a family one, which implies the conditions for selecting and implementing the opportunities for formal education, proper health condition and standard of living using family and local budget;

- microeconomic (enterprise) level which determines the conditions for the employee to select and implement using the enterprise funds the opportunity to get special education, to improve competitiveness and to maintain an adequate level of health and life by the income received;

- mesoeconomic (regional) level, which creates opportunities for full life of the people living in the region, on the basis of particular priorities and the use of the local budget. Isolation of mesoeconomic level is especially relevant in present conditions of significant regional disparities appearance in their development and the government's attempts to introduce a contractual relationship between the center and the regions to implement regional policy, concentration of state and local resources to address priority problems and the conclusion of agreements on regional development. Implementation of such a mechanism will initiate new relationships between the center and the regions on a long term basis to address territorial development problems.

Macroeconomic level requires the creation of conditions for the choices and needs of the movement of people from the lower to the higher levels by identifying strategic priorities and the use of public financial resources resulting in the growth of human potential and competitive advantage achieved by the state.

4. Economic development depends critically on the human factor. Therefore, long-term demographic forecast is a necessary component in determining the prospects for innovation and technology, and structural dynamics. Such forecast covers three main areas: dynamics of population and labor force; changes in the
quality of the population and labor force; economy of sociodemographic and social structures of the complex.

5. One of the necessary conditions for the preservation and development of human potential at both the individual and societal level is sustainable human development.

The emphasis on sustainable development caused the need to consider the dynamic stability of the organization, as the problem of dynamic equilibrium is associated with changes contributing to the development of the organization and the need to manage these changes. The achievement of stability for a long period of time by such complex system as an organization requires streamlining management processes based on the use of technologies of management.

6. Considering sustainability as a common property of all systems, it is necessary to consider the sustainability of the system structure. At the same time sustainability of the structure is most often associated with the increasing complexity of the system elements and the way they interact.

7. In order to analyze the practical activity of the organization absolute and relative sustainability are distinguished. Absolute sustainability is expressed in specific numerical values determining the organization's activities in the dynamics. Relative sustainability indicates the degree of sustainability based on the analysis of the organization’s development indicators relative to other organizations. Economic sense of the relative sustainability of the organization is close to competitiveness.

8. The process model of sustainable development was substantiated, and the mechanism for sustainable development of an organization was proposed.

9. Using the systematic approach we will define "the development of an organization" as a long-term process of successive qualitative changes in the system "organization" resulting in a new set of elements of the system and (or) the relationships between them, which, in turn, is a prerequisite for the emergence of a new systemic integrity. Enlarged elements of the system "enterprise" are business processes, that is, the totality of the various activities when at the "input" one or more types of resources are used, and as a result of this activity at the "output" a product
with some consumer value is made.

10. Systemic changes are rationally planned, deliberately caused and controlled integrated transformation process aimed at is the development of the enterprise. Systemic changes at all levels of production and economic activity are determined by the need for the internal environment of the organization to adapt to qualitatively changed environmental conditions of its functioning. The ultimate goal of systemic transformation of enterprises is the stability and efficiency of their operation and development under current conditions. Transformations are carried out both to overcome the crisis situation of the company, and for timely and effective adaptation of the enterprise to the changing conditions of the market and to ensure the sustainability of its development. Thus, system transformations are rationally planned, deliberately caused and controlled process of integrated transformation aimed at the development of the enterprise.

11. Presented in this paper an innovative model of development based on systemic transformations provides an opportunity to change not only internal but also external environment of the enterprise. In this model, the company is treated as an artificially created system being constantly redeveloped to meet new challenges and is strongly correlated with the development of human potential.

12. On the basis of the conducted research the author assigns the key role in achieving the positive dynamics of the enterprise development to the innovative activity which is characterized by the creation of high technology and modern production capacity by finding the optimal management of human development.

13. Human development in the context of organizational change requires concerted efforts of government agencies, municipalities, civil society and business in addressing the most pressing social and economic problems.

14. Formation and development of human potential is considerably influenced by innovation activity which is based on intensive structural shifts in favor of high-tech and information sectors, and thereby contributes to the creation of quality jobs with higher wages and creates demand for quality education.

15. Human development is one of the most urgent tasks of any management.
structure, which should strive to create an environment where the human rights, needs, talents and abilities are fully realized, conditions for his personal development are provided.

16. One of the features of human potential management is associated with a significant role of project management. Project management fits into the concept of the new organizational management according to which the task to meet consumer needs is more effectively performed not by hierarchically organized bureaucracy but by multi-professional team, which is formed ad hoc to perform a certain task.
CONCLUSION

Human potential is a scientific category used for the qualitative characteristics of the level and conditions of use of competencies, as the ability to continuous improvement and development in the context of the integral representation of the possibilities of a human being, when he acts as a special kind of resource able to exhibit activity non determined by systems, and being simultaneously a consumer of natural and social resources. It is incomplete dynamic instability of human development that determines the need to use the integral in the content concept of human potential. Human potential can be realized as human capital being a source of economic growth for the organization and society. Thus, formulated integral concept of human development management should contribute to the growth of social and economic efficiency, determining the sustainability of the organization. Methodologically productive approach in these conditions is the development of the concept of human potential in the context of organizational changes. Current understanding of social development assigns a person the central place primarily in the circulation of productive connections and bases on the recognition that a person is both the initial and final point of the socio-economic development. Human, or social dimension of this development is its determining dominant and material potential is a condition of this development. Thus, the concept of human development incorporates issues of production and distribution of goods and services with issues of formation and use of abilities and capabilities of people considering the development of human abilities as the ultimate goal of social progress without regard to their impact on income generation.

With the changing requirements to employees there arises an issue of the quality of human capital which would allow integrated evaluation of the employee’s ability to perform this or that job in accordance with the requirements of society and modern production. Today it is not enough to have only professional knowledge, skills and abilities. The training content should be expanded through a wide range of knowledge reflecting contemporary world. An acceptable guidance here can be
recommendations of UNESCO on the reinvention of human resources notion. Recommendations suggest a transition from the classical understanding of human resources to the concept of human competence.

Human potential may increase because its productive realization in productive use of human abilities to acquire new knowledge does not reduce the potential.

Nature of interdependence of human development and employment determines trends in the formation of the economic foundations of human development and most importantly - the vector, direction of this development in general. The task of identifying specific opportunities for human development in the social and labor spheres requires detailing, structuring of employment, determination of quality indicators. This goal is achieved through the use in the analysis and calculation of some parameters characterizing the labor and industrial relations, and then-search of a combination thereof which would create the best conditions for human development.

Human potential can be realized as human capital, speaking source of economic growth for the organization and society. Thus, the formation of the integrated concept of human development management promotes social and economic efficiency determining the long-term sustainability of the organization. Methodologically productive approach in these circumstances is to develop the concept of management of human development in the context of organizational changes that will allow us to provide control over human development in the economically rational way.

Genesis of scientific ideas and views on human potential is characterized by the diversity of approaches. At the same time, there is no holistic concept of human potential. Many theoretical aspects of human potential such as the essence, the structure, features of its reproduction, the specificity of economic relations in the sphere of action are still insufficiently studied.

"Human development" with all the nuances specific to its different interpretations by international organizations means maximizing of the human potential and its effective use for economic and social development. Problems of «human development» comprise today demographic problems, the problems of
employment, health, nutrition, housing and urbanization, the environment, education and training, etc.

Fundamental difference between the concept of "human development" and the concepts of "human capital", "human resources" and its predecessors reducing human development to a single aspect - the formation of resources for productive activities - is that human development is seen as a two way process. On the one hand, this is the formation of human abilities (health promotion, gaining of knowledge, enhancement of skills), and on the other hand it is the realization of acquired skills for productive purposes (work) or for leisure, cultural and political activities.

The contemporary concept of socio-economic development places the human development, the development of his abilities, skills, education on the one hand, and needs - on the other hand in the center. The higher the level of development of the person, the more sophisticated and more varied are his needs and their reverse impact on the production of material goods and services. This reflects the axiological relationship between economic growth and human development. The main purpose of the theory of endogenous growth is to study the impact of human capital on the long-term growth rate based on the formalization of technological and innovative changes.

Use of human potential not only as a resource, but also in axiological (evaluative) aspect predetermined the need to study the systemic impact of transformation processes and characteristics of human potential. Such mutual conditionality is organically inherent in almost all dynamic systems, however, it implies not a simple linear relationship, but a complex multidimensional system with elements of economic planning and the ability to ground the mechanism of human development management. The most significant step in the study of these processes is to identify the ontological foundations and economic possibilities of the system approach in relation to the management of human potential in terms of content.

Methodologically important in our of view isto examine the relationship of human potential, human development and the possibility of the organization on its use in the most rational economic manner taking into account axiological features of human behavior in labor activity.
The influence of the theory of social harmony and evolutionary economics and behavioral theories in economics in the direction of studying the features of organizational development and possibilities of human potential has been revealed. The efficiency of a systematic approach to the management of human development has been substantiated. For this purpose the informative side of transformational and organizational processes, their interrelation and contradictions of development at the present stage, the basic axiological dependences in relation to endogenous growth theory have been investigated.

Thus, the structure of the human potential concept can be considered on two levels: the base level which includes physical, mental, social health and activity level which includes physiological, psychological, intellectual, social and cultural potentials. As a result of a long process of development of ideas about human being as an subject of economic life a whole range of concepts such as "labor", "labor resources", "labor potential", "human factor", "human capital" appeared. At the same time limitless potential, uniqueness, sheer complexity and the inability to model the behavior of both the individual and the group requires a transition to a qualitatively new system of approaches forming an optimal combination of quantitative and qualitative parameters determining the strategic direction of development.

Management as an organizational process is a part of all social subsystems. It determines patterns of development and the formation of new structures and functions when the main object of management is the human potential determining the state of an individual as the highest goal rather than organizational welfare.

Consideration of planning as a method for forming a step-by-step process to justify the selection of goals, variants and consequences is known for the best possible results. It will be appreciated that the projected planning model should be adequate to the economic realities and at the same time take into account the human factor determined by the parameters of human development.

Implementation of scientific management is provided by justification of tendencies and directions of economic systems development, their mechanisms and patterns of functioning. The functional aspect of organizational management has been
researched more fully than the structural one. Currently there are no universal and objective criteria to assess human development and that would be able to serve as a regulatory mechanism of organizational and structural changes. In a sense, management is a struggle against entropy in socio-economic systems, the transition from a less ordered to a more ordered state with the account of the human potential of the organization. Management changes occur as a result of the improvement, but not any kind of rationalization of management can be considered as a basis for management development. Designing of the system of human development management involves the analysis, description of the content and the requirements for it based on the parameters of scale, complexity and relations with the transition from the current state to the potential.

The research of the designing problems revealed that the primary means of successful adaptation of the organization to changing conditions is an effective mechanism for management of human potential which will provide the best in the current economic conditions results that allows us to apply the concept of “innovation potential” to the process of human development.

The basic scheme of organizational designing of management systems in relation to human development has been suggested. Mechanism should be regarded as a socio-controlled system due to economic laws, with adequate powers, resources, having a certain structure that allows to manage the development of human potential by making decisions. This approach allows us to study statics and dynamics of management mechanism which is understood respectively as the organizational structure of management and processes of administrative decisions development within the existing structure of human potential management.

At the heart of management of economic entities improvement is designing of organizations, i.e. promotion of institutional projects that provide identification and solution of management problems through the development of innovations that meet the needs, perspectives and particular conditions of organizations.

We have determined the content of the traditional understanding of the need to study the system as asocial object which implies multi-level approach to the
determination of its elements. The content of major elements of the system required to form models of human development management was substantiated. System is regarded as an object that is a theoretical scientific system based on the principle of reflection and characterized by the development of a theoretical system in the direction of more adequate practical reflection of objectively existing system.

The features of the functional interactions of the parts of the system determined by the possibility of construction and reconstruction have been characterized. The differences between the analytical and the synthetic management when considering a part of the system operating at peak efficiency does not provide the possible functioning of the system have been identified. This confirms the dependence of the system characteristics on the interaction of its elements and is reflected in the recognition of the need for properties to match parts of the system through its expansion, but not reduction to elements subject to limitations of the system, which determine the conditions of its functioning (the implementation of the process of human potential management system design). One of the external limitations is the purpose of functioning of the system, and internal restrictions include human potential ensuring implementation of a particular organizational process.

Thus, the main issue is the choice of the model of optimal distribution of resources between the objects of economic systems. The problem of optimal distribution of resources for managers of economic system is almost top priority as the economic system is a set of interconnected elements between which system resources are being continuously distributed. Using the proposed approach it is expected to implement organizational changes in the economic system making economically sound decisions regarding the distribution of a limited amount of financial resources and their purposeful direction for the goal of human potential creating.

Management plays the role of one of the main systemically important factors of organizational systems. Ways of influencing the management object referred to as management methods are divided into administrative, economic and socio-psychological. The impact itself is the management process. A set of rules,
algorithms for decision-making and control actions determine the management mechanism. It is the mechanism of management in the system and in the process of management plays the role of intellectual core determining the efficiency of management.

It follows from the above that the need to consider the activity of economic system elements, goal formation and management by end results are not attributes of an abstract approach. These are natural properties of reasonably organized activity. They correspond to the management mechanisms that combine the methods of the theory of active systems with methods of program-goal approach supported by information technologies.

The mechanism of management of economic systems development is a set of functions that provide change (improvement) of management mechanism. We can assume that the mechanism of development in the management of economic systems is a set of procedures, methods, information technologies enabling us to create (design) new mechanisms for managing the required properties, in particular human potential.

Organizational mechanism or the mechanism of functioning (management) of the economic system is a set of rules (procedures, functions) governing the activities of elements of the system during operation. It is a complex concept allowing decomposition on various grounds (structural, functional, territorial, time, etc.).

The efficiency of the economic system is largely determined not so much by the structure itself, but rather by organizational mechanism that exists in the system. The task of developing effective organizational mechanisms for a given structure is a necessary element for evaluating the effectiveness of the economic system.

Description of the management mechanism is based on the description of interconnected components. Most often decomposition by the management functions is used. As a result, there are the following components: forecasting, planning, accounting, evaluation of the functioning, promotion.

The main problem of the theory of management in economic systems consists in the selection from a set of possible management mechanisms the mechanism of
maximum efficiency. The challenge is caused, of course, by the complexity of procedures for assessing the effectiveness of management mechanism. The complexity of solving the problems of constructing optimal management mechanisms has led to the fact that researches in this field were carried out in the direction of studying the properties of different types of mechanisms and evaluation of their effectiveness in solving specific problems of management. As a result, the use of basic management mechanisms was recommended. In fact, these mechanisms are integral parts to be used for designing complex management mechanisms.

The shift to the process-oriented methods of organizational management based on the features of human development is recommended.

The explanation of the global progress, local variability and lack of systematic linkages between economic growth and progress in other dimensions of human development, emphasizing the importance of ideas and technologies dissemination is offered.

Basic principles of the human development concept are not to constantly provide needy populations and countries with humanitarian aid, but to stimulate the development of these people, to enhance their participation in public life, to empower lifestyle choices and making decisions affecting their lives, simultaneously strengthening their responsibility for the decision made and for their implementation.

Generalization of the conceptual apparatus and desire to give the most accurate definition of "human development" resulted in the need to improve the interpretation of this category. Human development is an economic category illustrating the process of providing conditions for people to make their choices from the expanding opportunities to realize their human potential.

Economic development depends critically on the human factor. Therefore, long-term demographic forecast is a necessary component in determining the prospects for innovation and technology, and structural dynamics. Such forecast covers three main areas: dynamics of population and labor force; changes in the quality of the population and labor force; economy of sociodemographic and social structures of the complex.
One of the necessary conditions for the preservation and development of human potential at both the individual and societal level is sustainable human development. The emphasis on sustainable development caused the need to consider the dynamic stability of the organization, as the problem of dynamic equilibrium is associated with changes contributing to the development of the organization and the need to manage these changes. The achievement of stability for a long period of time by such complex system as an organization requires streamlining management processes based on the use of technologies of management.

Considering sustainability as a common property of all systems, it is necessary to consider the sustainability of the system structure. At the same time sustainability of the structure is most often associated with the increasing complexity of the system elements and the way they interact.

In order to analyze the practical activity of the organization absolute and relative sustainability are distinguished. Absolute sustainability is expressed in specific numerical values determining the organization's activities in the dynamics. Relative sustainability indicates the degree of sustainability based on the analysis of the organization’s development indicators relative to other organizations. Economic sense of the relative sustainability of the organization is close to competitiveness.

The process model of sustainable development was substantiated, and the mechanism for sustainable development of an organization was proposed.

Using the systematic approach we will define "the development of an organization" as a long-term process of successive qualitative changes in the system "organization" resulting in a new set of elements of the system and (or) the relationships between them, which, in turn, is a prerequisite for the emergence of a new systemic integrity. Enlarged elements of the system "enterprise" are business processes, that is, the totality of the various activities when at the "input" one or more types of resources are used, and as a result of this activity at the "output" a product with some consumer value is made.

Systemic changes are rationally planned, deliberately caused and controlled integrated transformation process aimed at is the development of the enterprise.
Systemic changes at all levels of production and economic activity are determined by the need for the internal environment of the organization to adapt to qualitatively changed environmental conditions of its functioning. The ultimate goal of systemic transformation of enterprises is the stability and efficiency of their operation and development under current conditions. Transformations are carried out both to overcome the crisis situation of the company, and for timely and effective adaptation of the enterprise to the changing conditions of the market and to ensure the sustainability of its development. Thus, system transformations are rationally planned, deliberately caused and controlled process of integrated transformation aimed at the development of the enterprise.

Presented in this paper an innovative model of development based on systemic transformations provides an opportunity to change not only internal but also external environment of the enterprise. In this model, the company is treated as an artificially created system being constantly redeveloped to meet new challenges and is strongly correlated with the development of human potential.

On the basis of the research done the author assigns the key role in achieving the positive dynamics of the enterprise development to the innovative activity which is characterized by the creation of high technology and modern production capacity by finding the optimal management of human development.

Human development in the context of organizational change requires concerted efforts of government agencies, municipalities, civil society and business in addressing the most pressing social and economic problems.

One of the features of human potential management is associated with a significant role of project management. Project management fits into the concept of the new organizational management according to which the task to meet consumer needs is more effectively performed not by hierarchically organized bureaucracy but by multi-professional team, which is formed ad hoc to performa certain task. The advantage of project management is its focus on results at a given resource limitations (time, financial, logistical).

Formation and development of human potential is considerably influenced by
innovation activity which is based on intensive structural shifts in favor of high-tech and information sectors, and thereby contributes to the creation of quality jobs with higher wages and creates demand for quality education.

Human development is one of the most urgent tasks of any management structure, which should strive to create an environment where the human rights, needs, talents and abilities are fully realized, conditions for his personal development are provided.
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