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**ТЕХНОЛОГІЯ УПРАВЛІННЯ НАДІЙНІСТЮ ПЕРСОНАЛУ В КОНТЕКСТІ  
КАДРОВОЇ БЕЗПЕКИ**

Мета статті полягає у визначенні сутності поняття «технологія управління надійністю персоналу», характеристиці найбільш актуальних і значимих складових елементів технології управління надійністю персоналу в умовах діяльності вітчизняних підприємств, систематизації підходів до визначення поняття «кадрова безпека», виокремленні найбільш значимих факторів впливу на рівень кадрової безпеки. В результаті дослідження були визначені вектори оцінки рівня кадрової безпеки персоналу, зокрема: соціально-мотиваційна, професійна, психологічна безпека та безпека життєдіяльності. Обґрунтовано, що ступінь надійності персоналу значною мірою залежить від обраної технології професійного відбору працівників. Одним з перспективних шляхів удосконалення системи професійного відбору, є впровадження спеціальних психофізіологічних технологій, у тому числі скринінгових.

Подальші дослідження доцільно проводити у напрямку розробки методики оцінки рівня надійності персоналу і побудови регресійних моделей залежності кадрової безпеки підприємства від рівня надійності персоналу.

**Ключові слова:** технологія управління, надійність персоналу, кадрова безпека, плинність персоналу, професійний відбір, психофізіологічна діагностика, стабільність кадрового складу.

**Рис. 2, Літ. 9.**

**И. Н. Сочинская-Сибирцева****ТЕХНОЛОГИЯ УПРАВЛЕНИЯ НАДЕЖНОСТЬЮ ПЕРСОНАЛА В КОНТЕКСТЕ  
КАДРОВОЙ БЕЗОПАСНОСТИ**

Цель статьи заключается в определении сущности понятия «технология управления надежностью персонала», характеристике наиболее актуальных и значимых составляющих элементов технологии управления надежностью персонала в условиях деятельности отечественных предприятий, систематизации подходов к определению понятия «кадровая безопасность», выделении наиболее значимых факторов влияния на уровень кадровой безопасности. В результате исследования были определены векторы оценки уровня кадровой безопасности персонала, в том числе: социально-мотивационная, профессиональная, психологическая безопасность и безопасность жизнедеятельности. Обосновано, что степень надежности персонала в значительной степени зависит от выбранной технологии профессионального отбора работников. Одним из перспективных путей совершенствования системы профессионального отбора, является внедрение специальных психофизиологических технологий, в том числе скрининговых.

Дальнейшие исследования целесообразно проводить в направлении разработки методики оценки уровня надежности персонала и построения регрессионных моделей зависимости кадровой безопасности предприятия от уровня надежности персонала.

**Ключевые слова:** технология управления, надежность персонала, кадровая безопасность, текучесть персонала, профессиональный отбор, психофизиологическая диагностика, стабильность кадрового состава.

**I. Sochinska-Sybirtseva****MANAGEMENT TECHNOLOGY OF PERSONNEL RELIABILITY IN THE CONTEXT  
OF STAFF SECURITY**

The objective of the article is to determine the essence of the notion of "management technology of personnel reliability"; to characterise most important and significant

components in the conditions of activity of the national enterprises; to systematise approaches to the definition of "staff security" and to single out the most important factors influencing the level of staff security. The results of the research enabled identifying assessment vectors of staff security, in particular: social, motivational, professional, psychological security and life safety. It was proved that the reliability of the personnel is largely depended on the chosen technology of professional selection of employees. One of the prospect ways to improve the system of professional selection is the implementation of specific physiological and psychological technologies, including screening.

Further research is appropriate to develop methods of assessment of personnel reliability and regression models of dependence of staff security of an enterprise on the level of personnel reliability.

**Key words:** management technology, personnel reliability, staff security, personnel turnover, professional selection, psycho-physiological diagnostics, personnel stability.

The Ukrainian enterprises operate in an unpredictable dynamic environment that creates unstable market relations, unstable political, economic and social processes. The necessity to solve many problems of adaptation of enterprises to the economic, scientific, technological, informational and social changes in the society motivate managers to implement effective management technologies of economic security at the enterprise.

One of the main functional components of economic security of the enterprise is staff security, since the human factor is considered as a specific and most important of all economic resources of a company. The specific character of the human factor compared with other factors of economic development is that, firstly, people create as well as consume material and spiritual values; secondly, the diversity of human life is not limited only to working activity, and hence in order to use effectively human labour, we should always consider the needs of people as personalities; third, technological and scientific progress, and social orientation of public life rapidly increase the economic role of knowledge, morality, intellectual potential and other personal characteristics of employees which are formed for years and generations, and can be opened only under favourable conditions.

According to the research of the International auditing company PricewaterhouseCoopers (PwC), published in the "The 2014 Economic Crime Survey", 80% of losses of tangible assets of the company is carried out by its own employees and only 20% of hacking attempts through networks and unauthorized access to information appear from the outside. According to the experts of the company most common types of economic crimes are conversion in possession of assets (69%), fraud in the procurement (29%), bribery and corruption (27%), cybercrime (24%) and financial fraud (22%) [1].

In this context, it is an important task to create an effective system of personnel reliability. Company managers try to have not only subordinate staff ready and able at the appropriate level to carry out their professional responsibilities but are also looking for opportunities for personnel preservation, development and increasing reliability. Reliability is an important part of professional competence of employees of both public and private companies. The employees who possess such quality, preserve moral fortitude and loyalty to the company and feel "tied down" to their jobs. The work itself is a high motivational significance and its loss is estimated as a serious setback in life.

It should be kept in mind that the degree of reliability depends on various reasons and can be changed if the conditions change, particularly in non-standard and extreme (emergency) situations or crisis. In these situations the demonstration of unreliability may have people that do not consider themselves bound to the moral requirements or have some personal weaknesses.

The lack of theoretically based and practically tested system that takes into account the peculiarities of social, economic and political situation in the society and objective

possibilities to enhance the reserves of "human factor" have negative impact on the performance of the main task of the personnel management system which is to ensure a high level of professionalism, personnel reliability and staff security.

This problem can be solved only through the use of effective selection technology and staff development to increase staff security and reliability of every employee. Therefore, present-day conditions demand considerable improvement of the existing technologies of influencing personnel.

Technology of personnel management is aimed at optimisation of the management process through the choice of rational methods, operations and procedures of making management decisions for effective influence on the human component of the company.

Theoretical, methodological and practical issues of selection, implementation and use of management technologies were studied by leading foreign scholars M. Badawi, T. Bazarov, L. Byers, F. Herzberg, J. Grayson, L. Davis, G. Dessler, P. Drucker, A. Yehorshyn, O. Kibanov, E. Maslov, M. Meskon, F. Taylor, V. Travin, H. Folmut, D. Harrington, S. Shekshnia and others.

A wide range of issues related to the characteristics of the constituent elements of staff security, measuring the impact of factors of external and internal environment on management system of staff security were considered by the Ukrainian scientists O. Amosha, O. Grishnova, S. Dovbnya O. Doronina, Y. Ivanov, M. Kyzym, N. Lukyanchenko, N. Meheda, H. Nazarova, O. Novikova, N. Podluzhna, V. Ponomarenko, N. Cherednychenko, G. Shchokin, O. Yastremska and others.

It should be noted that at present the studies of functional components of staff security were carried out, the conceptual approaches to the definition of external and internal factors of threats to the staff security were elaborated. However, the practice of the national companies in terms of sustainable development shows a deep contradiction between the needs of enterprises in secured and retained staff security and the possibilities to introduce effective management technologies of personnel reliability.

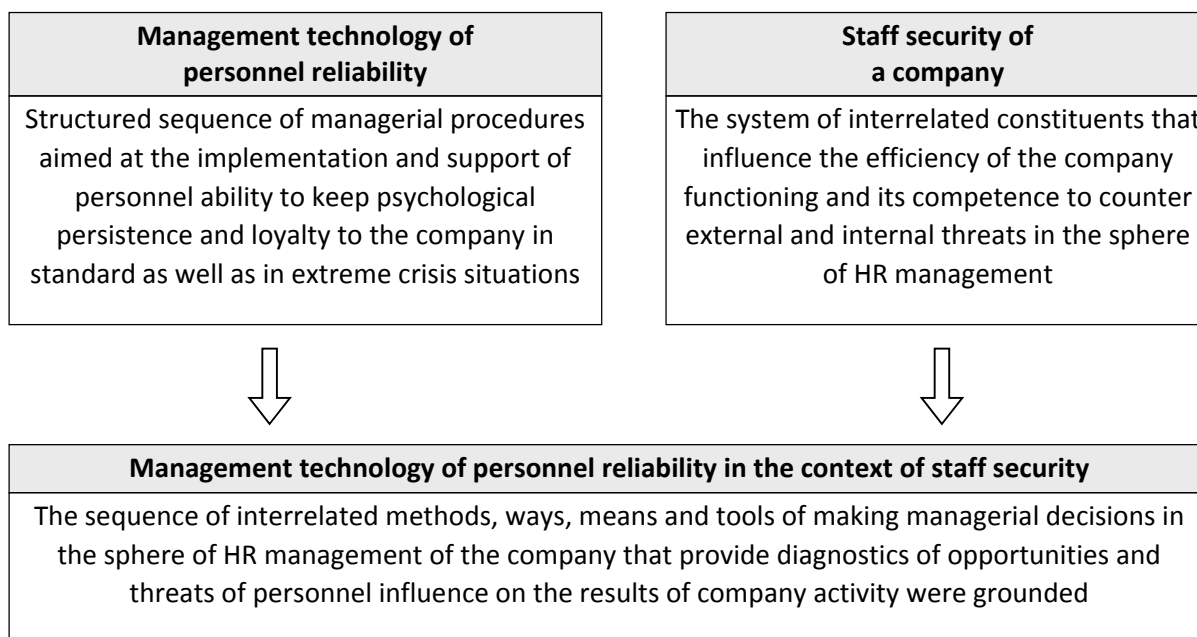
Under such conditions, there is an objective need to continue research in this direction. The objective of our research is to consider the concept of "management technology of personnel reliability" in the context of staff security, to identify most significant and important components of the management technology of personnel reliability in the conditions of activity of the national enterprises and to identify possibilities to influence staff security by improving personnel reliability.

Under the management technology we understand a structured sequence of interrelated managerial procedures and operations aimed at the implementation of administrative functions accompanied by management decisions and certain methods, techniques, tools and instruments [2].

Another complex and multifaceted is the concept of "staff security". Generalisation of the sources [3, 4; 5; 6] allows making the conclusion that scholars have identified the following approaches to determine the staff security: static, process-based and systematic. We focused on the systematic approach, as staff security is defined as the interaction of specific components that affect personnel in the process of recruitment, employment, development and resignation.

Taking into consideration the above-mentioned material we are able to formulate the definition of the notion "management technology of personnel reliability" in the context of staff security (Figure 1).

Management technology is a leading component of the management process, which is the basis of management system that describes it at most, and is the most difficult element for analysis and research. It should be highlighted that the personnel management system needs formalization in cases of separation of management technology of personnel reliability for the effective practical use by managers.



**Figure 1. Definition of the notion “management technology of personnel reliability” in the context of staff security**

The formation of management technology of personnel reliability enables determining most important categories of this process which include functions, principles, methods and techniques of influencing the personnel. Effective management technology of personnel reliability is designed to rationalise the management process by selecting optimal methods and techniques to achieve the goal in each functional subsystem. Therefore, effective management technologies of personnel reliability provide managers with unconventional tools to identify, use and develop hidden opportunities and threats of the company.

The objective necessity to develop methodological guidelines for the implementation of management technology of personnel reliability can be proved by the results of the following research. Consultants of organizational development of manufacturing companies state that only 10% of employees can formulate clearly their objectives of activity at the company and only half of them correspond to the concept of the company management [7]. Lack of understanding of the staff of the ultimate goal of their actions, the uncertainty of the goal will lead to inefficient methods in achieving the strategic goals of the enterprise, reduces the efficiency of human resources as well as logistic, financial and informational resources.

The presence of manufacturing plants abuse management personnel-oriented management system, where much attention is paid to the personal characteristics and qualities of "meaningful" employees who can compensate for some shortcomings or lack of personnel management technology. Unlike the process-oriented management system where an employee must have certain characteristics, knowledge and skills, achievement of results is due to the use of certain tools and certain compliance with regulations of the relevant technology. Sometimes the managers of manufacturing enterprises use personally-oriented management system excessively, which focuses on personal characteristics and qualities of a "valuable" employee who can compensate some drawbacks or lack of the technology of managing personnel. Unlike the process-oriented management system under which an employee must have certain characteristics, knowledge and skills, the achievement of results is reached due to the use of certain tools and compliance with regulations of the relevant technology.

The absence of consistency, ignoring the benefits of an integrated approach to management process and opportunities of management technology of personnel reliability while solving manufacturing and economic problems of the company are reflected in the application of the outdated management practices. The solution of current problems should be

based on the forecasting, not only on the acquired experience, so all practical activity of the company has to be focused on the development and implementation of effective operational methods in real and future, internal and external conditions. National enterprises have a problem of complete lack of sustainable technology for strategic decisions that significantly affects the decision-making technology in the system of personnel management.

The results of research indicate that most enterprises with unbalanced performance and unstable development level, the process of decision-making in the personnel management system is carried out according to the experience of the top management and has intuitive character. The management technology of personnel reliability is an essential tool for the successful functioning of the components of personnel management system and the drawbacks mentioned above indicate that the technology needs to be improved by learning and developing its constituents.

The centre of attention in the ensuring staff security of the company should be focused on notification and prevention of violations of loyalty from the side of employees, in other words personnel reliability should be increased.

One of the key elements of personnel management system, which improves personnel reliability is a quality selection of the staff. Under the professional selection process we understand the process of selection of the applicants according to their individual, typological and personal qualities who are potentially capable of effective implementation of their responsibilities.

Unfortunately, the study of HR departments of the Ukrainian companies shows that only a relatively small number of them are serious about the use of efficient technologies for professional selection of employees. Typically, testing is a formal selection process without application of psychological techniques.

Moreover, it is important to take into account that the selection standards were elaborated in the narrow sphere of professional activity, particularly in occupations such as "man - technology - social and psychological environment." A large number of professions, significant social and psychological factors of successful activity of people demand a differentiated approach in the formation of objectives and criteria of personnel selection according to the characteristics of specific positions and jobs.

One of the criteria that illustrates real situation in professional compliance and security of personnel is the personnel turnover. Personnel turnover and personnel stability are two major signs of interrelated and complementary features which is mobility and sustainability that a company needs in today's environment. Personnel mobility is a necessary condition for maintaining consistency and proportionality between the production factors. Along with mobility it is necessary to take care for the relative stability of employees in relation to the profession, workplace, working team which is an important precondition for the effective formation and application of personal factor as well as real production factors.

Personnel turnover occurs for various reasons and is provided by the movement of employees around jobs (staff fluctuations). One of these forms is staff turnover. While characterising this indicator we must remember that the turnover is sometime necessary due to changes in the organisation of production or staff reduction. There is also so-called excessive personnel turnover that makes the company spend large amounts of money for severance pay, compensation for the unused vacation, elimination of arrears of wages to employees who are resigned, and to spend money on recruitment, selection, organisation of workstations, professional orientation, workplace learning and adaptation of newly hired employees.

High personnel turnover leads to economic losses especially at the companies that pay attention to their staff development and allot costs for training and retraining. So the issue of team stability becomes especially important in determining how to ensure personnel reliability.

Ensuring staff stability of the company is an important factor in the efficiency of personnel management. The fact that personnel turnover is related to temporary inactivity of the employees and their workplaces; decrease of productivity among those employees who took the decision to resign; those who just came to the company for the period of adaptation; the losses from the defective products and lack of product quality when professional qualification characteristics of new employees do not fully comply with vacancies. It is also connected with the failure to use educational potential of people with higher and special secondary education hired not by their profession. There will be additional costs for training new employees to adapt to the requirements of the production process.

It is possible to eliminate excessive personnel turnover by using modern technologies of professional selection of employees.

It should be highlighted that traditional techniques of psychological and psychophysiological diagnostics used by HR departments in professional selection of personnel lack scientific and methodological grounds [8; 9]. The departments usually use outdated methods and software for the assessment of applicants. Measures taken to improve the quality of selection process are fragmented. These facts show the urgent need for new technologies of personnel management that will significantly change, substantially improve and standardize the process of professional selection of employees including the monitoring of the human factor reliability.

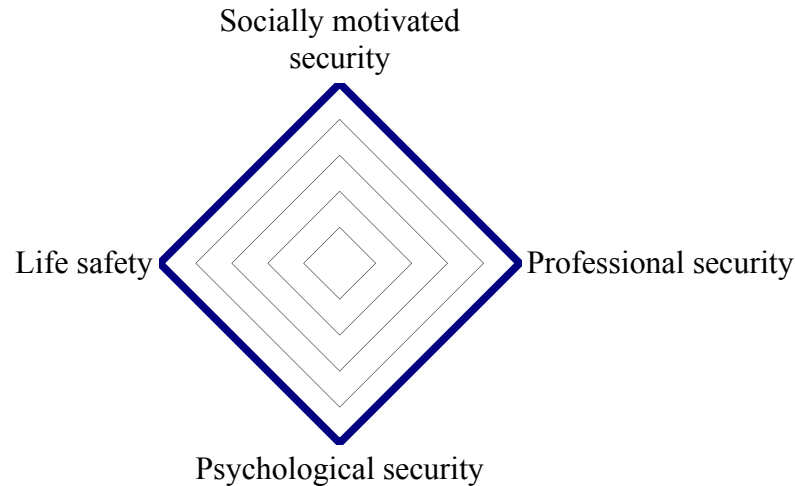
That is why it is advisable to resume and intensify the functioning of the psychological services unit in structure of personnel department. The unit will carry out diagnostics of neuro-dynamic, individual and personal characteristics of people based on job and psychic profile diagrams.

Overseas experience shows that the human factor reliability test is carried out by a professional staff selection, scheduled and unscheduled performance assessments. Professional selection of applicants is performed according to the established schemes: an interview with an expert in psychology, psychological and physiological testing and special psycho-physiological study.

In the USA the human reliability factor is calculated by the ratio of screenings to the total number of population and is expressed as a percentage. The performance indicator ranges from 4.5% to 5% which is about 10 million performance assessments per year. If it is less than 1.5% the findings are considered ineffective. The total number of assessments includes: assessment of the procedure of professional selection of employees, scheduled and unscheduled screenings, internal investigations and measures to combat crime. The share of using a polygraph as the measures to fight crime ranges from 10% to 12% of the total number of assessments. And the number of polygraphs and experts involved in professional selection and assessment procedures ranges from 10% to 15%. A total number of polygraphs used in the USA for professional selection is 15000 with about the same number of experts [9].

In Ukraine professional selection using polygraph is applied only for the applicants of the internal affairs bodies. However, the practice of the national enterprises in a competitive environment, industrial espionage requires the development of staff security measures ensuring personnel reliability.

The implementation of management technology of personnel reliability and assessment of the level of staff security in the company, in our view, is appropriate on the vectors presented in Figure 2.



**Figure 2. Assessment vectors of the level of staff security**

Thus, we can conclude that personnel reliability is largely dependent on the chosen technology of professional selection of employees. One of the effective ways to improve the system of professional selection is the implementation of special psychological and physiological technologies, including polygraph testing. Application of computerized polygraphs in the selection process of personnel should be considered as an essential condition for the establishment of an effective system of personnel reliability. Staff security depends on the chosen selection technology, selection, commitment and adaptability of employees, that is a complex of security measures in the process of recruitment.

Further research is appropriate in development of methodology of assessment of personnel reliability and working out regression models of dependence of staff security of the company on the level of personnel reliability.

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