THE PRACTICE OF MANAGING "METACOMPETENCIES" FROM THE PERSPECTIVE OF SYSTEMS THEORY

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Abstract

The author touches upon issues related to the management of metacompetencies from the perspective of systems theory and organizational theory. The article proposes a comparison of the concepts of " complicatedness" and " complexity" for using "hard" and "soft" skills in new realities at a time of global transformations when it is necessary to offer alternatives for managing competencies in a multipolar setting. Getting metacompetencies right is of strategic importance. The author demonstrates this connection using the interaction of " thinking tools" as an organization manages seven aspects of social systems, which in successful companies are handled by top management and not by human resources (HR) departments. The material is based on actual methods used in transformation projects of international and Russian companies in the context of international business. In the end of the paper, an in-house developed technology for systems-based management of six groups of metacompetencies is presented.

Keywords

Metacompetencies, metalevel, systems theory, organizational theory, hard skills, soft skills, subject skills, metaskills, technological challenges, talent pool for the future, competitiveness in international markets, collaboration.

This article presents cases of establishing collaboration between competing companies and demonstrates how successful companies remove barriers to healthy growth, develop a favorable environment, and build an adaptive communications system to implement innovative and effective approaches.

A preliminary conclusion of this article is that collaboration is one of the most valuable metacompetencies. But in order for it to start working and shape a close-knit team of employees in your company, knowledge and technology alone are not enough. It takes some special abilities dictated by the current times of global, local, rapid, and all-encompassing social, technological, and political changes - these are the abilities to master complexity.

Although these abilities are based on the metacompetencies of individuals, management, and key employees of a company, according to systems theory, they must be mastered by both the individuals and the organization as a whole, as a living social system.

Organizations must learn to change its communications "softly", that is consistently and sometimes "craftily", so that adaptability and collaboration become part of visible and invisible processes and structures of the organization itself. That is, in order for these processes and structures to establish by default the rules of adaptive behavior, algorithms for balanced decision-making, and principles of interaction are required. The main condition in this regard is that an organization must be built as an "open system". Unlike "closed systems", "open systems" dynamically interact with their environment [2].

THE DIFFERENCE BETWEEN CONCEPTS SUCH AS "COMPLICATEDNWSS", "NEW COMPLICATEDNESS", AND "COMPLEXITY"

In this article, for the purposes of its main idea and the development of an organization as an open system, the term "soft" is used, as we are dealing not just with a state of "complicatedness" but also with a state of "complexity". And in order to effectively manage all elements containing such adjectives as "soft", "live", "meta", i.e. relating to "soft approaches" and "hard skills", it is important to lift a conceptual barrier that blurs the boundaries between two radically different states and prevents one from seeing opportunities in conditions of uncertainty in the external environment, which only grows over time.

A state of uncertainty is an integral part of the lives of many people and organizations, which implies the presence of events that are not amenable to rules, calculations, planning or control. Even though doing everything right, some individuals fail, while others make objectively wrong decisions and nevertheless achieve success. Uncertainty or randomness is defined as follows: a phenomenon or a coincidence of several phenomena that do not have a cause-and-effect relationship. This is where the border between complicated and complex lies.

A state of turbulence and uncertainty implies the ability to manage ambiguous tasks in conditions of insufficient information or the absence of proven methods and resources. This state is called complexity.

The difference between complex and complicated systems can be observed using the Cynefin Framework (Table 1) [3].

Table 1

The Cynefin Framework

Complex system	Complicated system
– cause-and-effect relationships exist but they only become clear after the fact; – management through self-organization; – a team of researchers.	– cause-and-effect relationships exist but they are not obvious; – management through goals; – a council of experts.
Chaotic system	**Simple system**
– there are no cause-and-effect relationships; – quick risky decisions; – an authoritarian leader.	– cause-and-effect relationships exist but they are not obvious; – a command and control approach to management; – an unqualified employee.

Source: Netology. The Cynefin Framework. Available at: https://netology.ru/glossariy/cynefin-framework-model-kenevin (Accessed 11 December 2023).

The terms "complexity" and "complicatedness" are defined differently in English and German. English: complex. German: komplex. English: complicated. German: kompliziert. In Russian, these two completely opposite concepts are referred to as "slozhnost".

A complicated system lies between the concepts of "a complex system" and a "simple system". A complicated system can and should be managed. It is amenable to planning. Someone who knows how the system works and how to fix it can be helpful in this process. This could be a professional, consultant, or manager possessing the required expertise in using various standards and technologies, as in this domain, we are dealing with non-living objects and processes. They are predictable, they can be calculated, planned, and have a linear structure of cause-and-effect relationships, where one follows from the other.

When dealing with this kind of objects and processes, it is sufficient to acquire qualifications and professional competencies. Since many elements in an organization are built based on predictable processes, it is sufficient to define goals, draw up an action plan, and monitor their implementation. At the same time, the behavior culture suggests following certain rules, the principles of setting goals and making plans, which becomes possible because of the low dynamics of change.

In this regard, personal interests play an important role as they are pursued by specialists, experts possessing professional knowledge, methods, and technologies. Therefore, they may be limited by extrinsic motivation in the form of a higher status, greater influence, recognition, and personal gain, for example, money, or other kind of material compensation.

A complex system lies between a chaotic system and a complicated system. In a complex system, objects and processes differ from those of a complicated system in terms of the boundaries between living and non-living, non-linear and linear, unpredictable and predictable. Examples of a complex system are society, weather, values, the future, culture, human consciousness, etc. Complexity is unmanageable. The only thing you can do about complexity is somehow learning to deal with it skillfully. In a complex system, it is impossible to make long-term projections. Similarly to the weather, only a forecast can be made for a couple of days in advance, which still may turn out to be inaccurate. Apart from that, in a complex system, it is impossible to fix anything because nothing in it can "break down"; things can only change or cease to exist

completely. It is also impossible to reliably guarantee that a complex system is error-free if at least one person is part of this system, as, for example, in organizations.

In the context of organizations that system consultants deal with, there is always a high degree of complexity, not just complicatedness. Therefore, when working with an organization, management, executives, and consultants always deal with complexity. In this context, an important role is played by employees' talents, their personality traits, and meanings combined with an "image of the future" that they understand, which helps them unite their efforts with other capable individuals. In order for all these factors to be in harmony with each other, it requires the right culture of values and the ability to work on the basis of existing principles, which requires being sensible to all living things and able to listen and adapt to changing conditions caused by turbulence and high dynamics of change. Individuals who think in terms of complexity generously share their knowledge, technologies, and capabilities. They are interested in meanings, the innovation process, the big goal, and less interested in money, interest, and commissions as derivatives of complexity because, when dealing with complexity, a window of opportunity opens for exponential growth.

THE IMPORTANCE OF UNDERSTANDING THE DIFFERENCE BETWEEN THESE CONCEPTS

Developing the skills required to respond timely and correctly to uncertainty and turbulence is the most promising ability of our time.

It is safe to say that the ability to cope with complexity is the "new oil", i.e. complexity opens up incredible opportunities if you learn to "speak the same language with it". This is an attempt to find common meanings and semantic fields in order to adequately respond to the rapid changes in today's world.

And this is the most important component because only through the ability to work in turbulent conditions do we get the opportunity to cooperate with extraordinarily talented and promising individuals, which contributes to the formation of a favorable environment with the right culture of values, where the level of self-organized cooperation assumes the key role. Self-organization is required for the life of any community based on the principles of collaboration, cooperation, and association in the long term.

THE DIFFERENCE BETWEEN A COMPLICATED AND A COMPLEX SYSTEM

The fundamental differences between these concepts can be demonstrated using a timepiece and a person as an example. For a timepiece, being a complicated system, the result is always predictable. In this system, linear cause-and-effect relationships allow us to predict exactly what we get as a result. If there is no result, this means that the timepiece is broken. Complicated systems may break down but they can be fixed. For a watchmaker, timepieces are no longer a complicated system because he knows the movement from the inside. Timepieces remain a complicated system only for ordinary people.

Humans as a complex living system are a completely different case. Decisions taken by humans are unstable due to the presence of the "human error" factor. Similarly to the weather, the future, innovation, and organizations are all complex systems. Human behavior, the weather, and the future can be predicted, but complexity has the final say. Since for humans, the weather, or the future, there are a number of non-linear phenomena, multidirectional factors, and unknown processes, it is impossible to identify cause-and-effect

relationships or - even more so - manage them. Complex systems cannot be simplified. You can only adapt to them using "soft skills" or "metacompetencies" (Table 2) [4].

Table 2

Complicated system	Complex system
1. Cause-and-effect relationships are discernible. 2. Results are predictable. 3. If there is no result, then the system is broken. 4. It can be fixed by a master. 5. For a master, complicatedness ceases to exist and turns into simplicity. 6. Since there are relationships, the result is highly predictable and manageable.	1. Cause-and-effect relationships are intricate, and many of them are not obvious. 2. The result cannot be predicted. Only projections can be made. 3. The system is not disrupted. It only plunges into chaos and causes problems. 4. Complexity cannot be fixed. 5. Since relationships are multifaceted and intertwined, they cannot be managed or controlled. You can only adapt to them.

Source: Baecker D., Luhmann N. Einführung in die Systemtheorie. 2002. P. 33-56.

Any complex system organizes itself in its own way, and no one can fully know how it does so. One must be prepared for any turns and be able to adapt to them. A complicated system also organizes itself, however, there is always someone who knows how it will behave and who can fix it.

If both systems could be referred to as "complicatedness" or "new complicatedness", then we would be depriving ourselves without reason of the opportunity to comprehend a unique source of meanings, resources, potential, and opportunities that opens up as we deal with complex systems. Since the ability to properly manage complexity is a sort of "new oil", its reserves are open only to those who possess thinking tools and developed metacompetencies. This is where one can find unlimited resources for exponential growth and quantum leaps in the most uncertain conditions.

USING SOFT SKILLS IN AN ORGANIZATION'S OPERATIONS

Association at cross-functional and multidisciplinary levels is only possible if the style of communication with employees and the decision-making process are systematically based on the following components:

1. Employee recognition (Würdigung).
2. Motivation for association and mutual care for each other (Sinn und Fürsorge).
3. Personal responsibility for promises made, control over oneself and one's actions (Selbstverpflichtung).
4. Trust: reduction of control, division of labor and delegation of responsibilities, which is always perceived as encouragement (Vertrauen).
5. Openness to the world and to everything new, moving away from the old environment and the pattern "I am what I am" (adaptive Offenheit).

Collaboration requires strict requirements that all participants follow voluntarily. In order for collaboration to take place, a person must break out of their own thinking patterns formed under the categories of competitors and rivals. A properly built system not only promotes the development of communication among employees of different companies and researchers, with their personal goals and ambitions; it directs the efforts of a team towards

mutually beneficial support for the benefit of common values, principles, norms, and rules. Apart from an exchange of new knowledge and methods (hard skills), the behavior of individuals is also shaped through shared values (soft skills).

MAIN DIFFERENCES BETWEEN THE SYSTEM AND INDIVIDUALS. THE CASE OF A DEVELOPING ORGANIZATION

The difficulty of managing a company is that over time it turns into a self-managing system. That is, it goes out of control of people, including shareholders and top management. The only way for individuals to exercise some influence is to make this system cease to exist. Their influence on the way this system operates is rather indirect because the organization, as noted above, is primarily an environment where decisions are made based on established relationships and methods of communication between employees.

In other words, an organization is a system that has an established way of communication and relationships formed in the decision-making process. The way these decisions are made becomes the dominant factor for the system and the structure of the organization. One of such structures is corporate culture that keeps pace with modern values and guides individuals. Without a systems-based approach, any type of work with people and corporate culture does not involve the system, but rather its reflection. According to systems theory, people are only one of the components of the system, and they manifest themselves in this system only through communications that involve making informed decisions [5].

Figuratively speaking, the culture of an organization and the behavior of people can be compared to the shadow of an established system and its structure. For example, you cannot change the shadow of a tree unless you change the tree itself. Similarly, in an organization, you can change top managers one after another, run an endless number of projects to change the corporate culture, and train employees. However, the effect will be limited if all efforts are directed towards the shadow, that is, with the reflection and manifestation of the organization's culture. To change the organization itself, it is necessary to deal with the system and its structures: if they change, then their shadow will change. They change according to the rules and norms, which have already been established in the organization as "company traditions" and are used by its employees to communicate, interact, and make decisions. As noted above, established rules in the company need to be dealt with skillfully; one should lead team members to the necessary changes through soft skills.

From this point of view, metacompetencies in management become especially important because they allow us to distinguish between the reflections of two types of companies in terms of communication and relationships when making decisions: traditional companies and modern ones.

In traditional organizations, the system of communications and relationships between employees is based on a vertical hierarchy. In this hierarchy, the decision-making process is top-down. The distribution of authority is also top-down. This method of distribution of authority ensures the subordination of employees to various levels of management. Without such levers of vertical authority, it is impossible to ensure stable performance of tasks. Communication between different levels of the hierarchy is established through setting goals and objectives, allocating a budget, exercising control, establishing rules and regulations, and a system of rewards and punishments.

In modern organizations, communications and relationships between people are based on more flexible approaches, where authority is distributed

horizontally, and sometimes even from the bottom up. Decisions are made collectively, work is based on principles and self-organization of the team. The means of influencing in decision making are personal responsibility, intrinsic motivation, and self-control. Communications and relationships are built on the basis of openness, trust, mutual respect, and care for each other. Such organizations have a better chance of effective collaboration.

Traditional and modern organizations are two different systems that have certain values, norms, and principles dictating their management style and shaping the corporate culture. If an organization is required to be transformed from traditional to modern, then it is necessary to change the system because it is always stronger than the people. Hiring a new top manager or a new management team helps only if these people already possess the necessary metacompetencies and are able to "softly" transform along with the organization. Expensive projects to develop corporate culture without developing such "soft skills" are money and effort that go down the drain. Not to mention programs aimed at increasing team efficiency, training sessions, or education. All these activities are ineffective, as in this case the effort is applied within the system, that is, to the shadow of the social system, and not to the system itself, which implies a consistent impact on the structure of the organization and a gradual change in methods of communication.

To develop an organization and adopt more modern approaches to its management, it is necessary to change the system. This means dealing with complexity, which requires metacompetencies in order to transform the management model and the management leadership system in a skillful, "soft", and sometimes even "crafty" way (Table 3) [6].

Table 3

Traditional approaches	Modern approaches
Standard and individual goals	Transparency of goals and continuous improvement
Management by Objectives (MBO)	Comparing teams based on Objectives and Key Results (OKRs)
Budgeting and planning	Comparison of the organization's operations with previous periods
Personnel performance assessment	Dialogue and feedback
Position-based compensation	Compensation based on the organization's performance
Personnel compensation for operations	Personnel compensation for performance
Incentives and bonuses	Reducing waste
Commitment to reduce costs	Targeted cost reduction

Source: Pflaeging N., Organisation fuer Komplexitaet, BoD Verlag, Norderstedt. 2013. P. 102-145.

THE MODERN MODEL OF DEVELOPING AN ORGANIZATION

In order to reach the required level of systems-based interaction, it is necessary to know about the evolution of the development of organizations as complex social systems. The stages of development can be observed using systems theory, organizational theory, and the systems-based approach. Over the last century, these disciplines have gone through four significant stages, each of which demonstrates the specifics of dealing with competencies and metacompetencies. The more developed these competencies are, the greater the need for them, since complexity can only be dealt with using "soft" approaches.

To find common ground with a complex system, it is important to learn not to confuse it with a complicated system, which will allow you to apply "soft" approaches using metacompetencies and thinking tools in order to achieve the respective goals of the organization. Examples include the ability to distinguish a complex system from a complicated one, see the specifics of traditional and modern management, the relationship between hard and soft approaches in the process of developing individual employees, teams, and organizations. Using the example of the creation and evolution of such a discipline as systems theory, one can see the process of creating thinking tools and forming respective metacompetencies that allow one to "softly" influence the operations of an organization.

Systems theory and organizational theory are disciplines that are applied in practice. Studying the history and stages of their formation opens up access to information that is especially valuable in conditions of uncertainty: how to "softly" force a complex system to reveal its unlimited resources and potential, as well as establish mutually beneficial collaborations, even with competing companies.

1. Creation of general systems theory: a model of technical systems (1940-1950).

This theory is based on the desire to interconnect general theoretical models of various systems (from physics and medicine to social sciences), which allows us to obtain "general characteristics of the system" that can be observed in various fields. Under this model, technical systems and mechanisms are the basis, and the organization is viewed as a fine-tuned machine.

For example, the relationship within the technical system of a thermostat, in which the turning on and off of a heating device is controlled by temperature. When cooled to a certain temperature, the device turns on. When heated to a certain temperature, the device turns off.

We can conclude that a system is defined as a certain number of elements that interact with each other [7]. In the 1970s, general systems theory was used in a study of improving the performance of organizations and companies [8].

An example of the use of general systems theory in the operations of a company can be a specially designed diagram demonstrating a cyclical relationship of certain elements within an organization. According to this diagram, increasing the impact on element A enhances the capabilities of element B, etc. (Figure 1) [9].
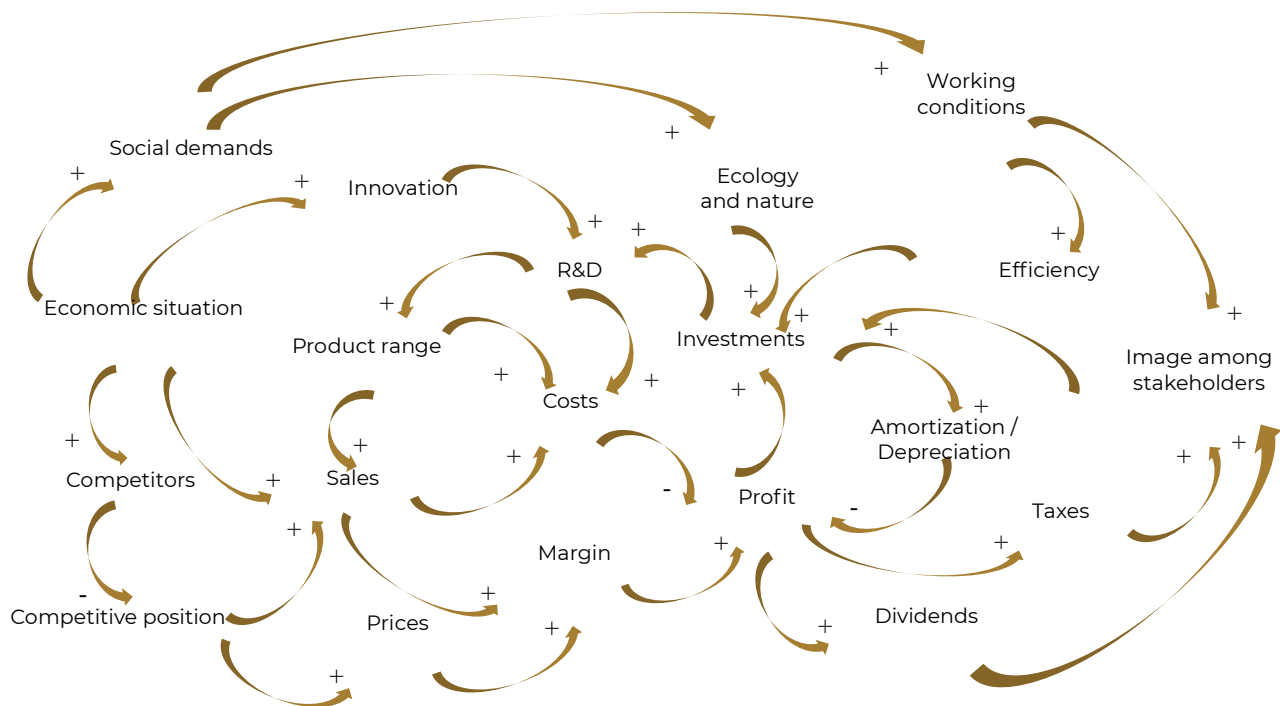
Fig. 1. The cyclical relationship of certain elements within an organization.
Source: Probst, G.J.B./Gomez, P., Vernetztes Denken, Gabler-Verlag, Wiesbaden. 1991. P. 3-39.

General systems theory has opened up great opportunities for companies, although it has a number of limitations. Despite the fact that it is very convenient to consider mechanisms as a technical system, plants and living organisms, as a biological system, and organizations and companies, as a social system using general laws, this approach also has a number of disadvantages. Although these systems have a lot of common features, they differ in the level of complicatedness and complexity. Studying these systems in the form of general conclusions blurs the boundaries between them and their key features. Conflicts in social systems look very different from conflicts occurring in biological systems, although both systems both deal with living elements. In technical systems, attrition and conflicts also occur, but they do not involve living elements.

These reflections have led to the development of three specific systems theories that focus on specific domains: biological, social, and personality-related.

2. Evolutionary systems theory: the model of living systems (1980–2000).

The development of general systems theory begins with biology by borrowing concepts such as "development", "evolution", and "biocybernetics". At the same time, the outside world is considered as a "system of connections" and an "ecosystem".

Examples of ecosystems are steppes and deserts, which seem lifeless, but in fact they are brimming with life and are a complex system. Snails of the Melanoides genus live in the soil, which they loosen. When they die, they fertilize the soil and provide food for woodlice, which aerate the soil. This soil is fit for algae that snails feed on.

This biological notion of a system becomes the basis for the concepts of "evolutionary management" with two key directions.

F.Malik's school, which, in contrast to the approaches of H. Ulrich based on the general systems theory, focuses on biological systems, i.e. F.Malik in his reasoning takes into account biological processes and the fact that "companies and organizations are quite self-adapting, self-evolving, and self-organized

systems that can be controlled to a lesser extent than it is commonly assumed" [10].

The evolutionary theory of organizations by W.Kirsch states approximately the same thing. He argues that "companies operate in a world that is constantly evolving. They are dealing with an open and unknown future they are forced to cope with…" [11].

Since the early 1990s, evolutionary management has become the basis for paradigm shifts in management associated with the transition from traditional management models to more modern ones, suggesting the following:

- ensuring self-organization;
- promotion of creative projects and innovations;
- management of knowledge flows;
- managing a complex system (Redundanz) in such a way that system elements can easily cope with unforeseen situations;
- ability to adapt to changes;
- ensuring continuous training and development.

There is a transition to holistic-evolutionary leadership, which involves a consultative style of management and delegation of authority through self-reflection, dialogue with subordinates, feedback, situational conversations, and training of employees in order to develop a joint knowledge map and discuss projects.

3. Social systems theory is based on the theory of social communities and includes such concepts as "system", "structure", "process", and "order".

As early as in the 1960s, T.Parsons was the first to identify the interconnection of elements within this system. His follower N.Luhmann in his book Social Systems (1984) was able to apply the main ideas of this theory in the practice of systems strategic consulting.

According to N.Luhmann's theory, social systems are characterized by:
· the difference between the system itself and its environment;
· social differentiation;
· elements and functions;
· the presence of autopoiesis;
· cohesion and integrity of the team;
· complexity;
· the presence of meanings.

According to N.Luhmann, an organization is the basis for communication and the development of relationships between people. Individuals are the environment of the system, and not the system itself, with which they interact through the rules and principles of communication established by the organization. In other words, if there is no effective communication between employees of a company, then the reasons for that should be sought not in them, but in the social system itself. And it is this feature that can help a company cope with complexity. The lack of an effective communication system allows the company to stay afloat, since it protects it from various types of changes in employee behavior [12].

If people are considered as the environment of a system, and the organization, as a system that establishes the rules of communication, then it becomes clear that it is not the people who are to blame for the lack of effective communication. The system, the interactions within it, and the decision-making process require improvement.

Based on the study of social systems, there emerge a number of popular concepts aimed at increasing labor efficiency and productivity. One of these concepts is presented in P.Senge's book The Fifth Discipline: The Art and Practice of the Learning Organization [13].

4. G.Bateson's personality-related systems theory.

This theory includes two main conditions:

- one should focus not on individual elements of a system, but on the social system as a whole (group, team, various areas of business, connecting local networks, etc.);

- dealing with people should be aimed at facilitating and providing assistance in managing the company and identifying the right solutions.

In addition to biological and social theories, the following can be added.

1. People are not just part of the system, they are in active interaction with this system.

2. An organization is not only a system of communications and relationships, but also the people themselves with their emotions, needs, and motives.

3. A distinctive feature of a social environment is the presence of mental maps or mental models for shaping assumptions, beliefs, and attitudes for the purpose of performing subsequent actions and viewing the required reference points [14].

CONCLUSIONS

The state of an enterprise as a living system depends primarily on the following.

- Employees hired and their internal beliefs that determine their thoughts and actions (management).

- Social rules and guidelines that shape the rules of behavior and traditions of a company, which are the foundation for the communication system (processes).

- The environment of the system and its development (external environment).

These conclusions give rise to seven aspects of the social system, which mutually determine each other.

1. People as elements of a social system (superior-subordinate in the traditional management system or manager-employee in the modern management system).

2. Beliefs, thoughts, attitudes and their influence on people's behavior (with the traditional approach, the superior perceives his subordinates as ineffective employees, and employees see him as a tyrant; with the modern approach, the manager helps employees unlock their potential).

3. Social rules that guide the actions and behavior of people (with the traditional approach, the rule "superior-subordinate" applies, requiring polite communication regardless of the attitude towards each other; with the modern approach, the rule "manager-employee" applies, which also requires polite communication, however, everyone can openly express their opinion).

4. Models of behavior according to the Bateson-Watzlawick communication axioms (with the traditional approach, the employee withdraws into themselves when criticized by their superior; with the modern approach, the employee is grateful to the manager for feedback).

5. Material and social environment (with the traditional approach, the most important role is played by the position of the superior and the diligence of subordinates; with the modern approach, the manager tries to provide everything required to reduce waste).

6. Development of the social system (with the traditional approach, the superior and subordinates act relying on luck and turning a blind eye to possible risks; with the modern approach, they try to learn from past experiences and manage potential risks).

7. The reproduction process (with the traditional approach, actions are

repeated without any changes; with the modern approach, metacompetencies are developed in order to adapt to any external changes).

Communication axioms according to Bateson-Watzlawick:

-it is impossible not to communicate;

-each communication system consists of certain aspects and relationships;

-communication is always followed by an appropriate response;

-communication is always verbal and non-verbal;

-communication between people is symmetrical (both interlocutors criticize each other) or complementary (one interlocutor criticizes, and the other distances themselves and withdraws into themselves) [15].

SOFT SKILLS FROM THE PERSPECTIVE OF VARIOUS SYSTEMS THEORIES

Competencies are the requirements of a certain cultural environment and a professional role (position, job title, activity) for behavior that allows an individual to independently show high performance and be successful [16]. In other words, this is the relationship between "I know", "I can", "I want" and "I am able to", which forms the ability to solve tasks and problems in a specific situation related to professional activity. Competence is always based on professional knowledge, personal motives and beliefs, values and is determined by specific requirements for a particular activity in a specific situation. Competence can be broken down into three main groups.

1.   Professional qualification.

Professional knowledge, skills, experience (hard skills).

2.   Soft skills-based qualification.

Distribution of roles in accordance with skills, work organization / project management, having communication skills, the ability to lead, motivate or manage (a combination of hard skills with soft skills).

3.   Soft skills-based competencies.

Behavioral and personality traits: stress resistance and productivity, motivation to work, customer focus, business thinking, internal attitude, attitude to business, life values, ethical standards.

Each of the three groups has competency-related requirements that employees must meet to successfully solve their professional tasks. Successful companies use the most effective methods and technologies that are adopted as competency management systems [17].

When dealing with the first two groups of professional qualifications and soft skills-based qualifications, hard of soft skills can be used, however, when dealing with the third group of soft skills-based competencies, there is some confusion. Soft skills-based competencies are referred to as "cross-cutting competencies", "versatile competencies", "metacompetencies" [18], "fundamental competencies" [19], "soft skills" [20], "metaskills" [21], "skills of the future" [22] , "transprofessionalism" [23], etc.

The practice of implementing a competency management system demonstrates that such a variety of terms leads to even greater confusion and makes the logic of thinking impractical for management [24].

Soft skills-based competencies cover individual traits of character, motives, beliefs, and values that cannot be measured in grams or centimeters. They are based on "soft skills" that only manifest themselves in actions or results. And in order for them to manifest themselves, it is important to create adequate conditions and lift certain barriers. These conditions will be described below.

To facilitate the management of soft skills, it is worth expanding the concepts such as "competencies" and "metacompetencies", taking into account their specificity and versatility.

Competencies are professional and soft skills-based qualifications combined with specific soft skills-based competencies.

Metacompetencies are soft skills-based competencies that become critically important in conditions of high uncertainty, high dynamics of change and constant turbulence.

Soft skills-based competencies and metacompetencies can be referred to as soft skills. The role of soft skills is extremely important and is becoming greater every day, as confirmed by research from three reputable research centers. Soft skills determine up to 85% of success in professional activities [25].

Hard skills include professional education, knowledge, qualification grade, required skills, and technical proficiency. Such skills are mandatory and are considered basic today. Therefore, hard skills are gradually becoming less important for success in professional activities.

Individuals independently become high-performers if their motives are based on fulfilling their potential. If an individual lacks knowledge and experience to make independent decisions, they can develop them through soft skills.

The impact of soft skills at the level of specific competencies and versatile metacompetencies increases in conditions of uncertainty. These include being able to make projections, stress resistant, prepared for any situation, able to make quick decisions, which opens a window of opportunity for exponential growth. In other words, it is the ability to independently apply soft skills while working in conditions of uncertainty that is the "new oil" for intrinsic motivation. Because in this way we acquire two important qualities for intrinsic motivation: self-competence and metacompetence.

Self-competence is the first level of intrinsic motivation where an individual is able to motivate themselves (get ready for hard work, calm themselves down, find the strength to complete a task, master new skills, etc.).

Metacompetence is the second and highest level of intrinsic motivation where an individual is able to become a high-achiever by leveraging their beliefs, positive or negative experiences, as well as life values and motives. These qualities are inseparable from the individual and make them a professional in their field without any extra effort required [26].

In conditions of certainty, it is possible to set a goal, develop a plan, build processes, and monitor results. However, in conditions of uncertainty, it is soft skills activating intrinsic motivation that start playing an important role in increasing labor productivity, accounting for the 85% noted above.

However, in order for soft skills to benefit the company, it is important to master the management of complex systems and set the right priorities within key strategic decisions.

THE ROLE OF "SOFT COMPETENCIES" IN HUMAN LIFE AND ACTIVITIES AND THE SPECIFICS OF THEIR DEVELOPMENT

Soft skills are rooted in every person and are expressed in the form of their motives, values, thinking, and personality traits. To effectively manage this level of skills, it is suggested that we use the Change Management Iceberg proposed by W.Krüger. The tip of the "iceberg" is represented by external attributes, which include external behavior, food, clothing, customs, mores, language, history, manifestation of an individual's personality. Hidden "below the surface of the water" are those soft skills-based competencies that represent

human values, ways of thinking, motives, feelings, fears, interests, attitudes, world outlook, ways of communication, etc. [27].

According to the Anglo-Saxon school, the management of competencies is based on the required behavior conducive to results. In this case, competencies are determined by behavioral indicators with grades ranging from beginner to master.

According to the German school, competencies are determined by the requirements for actions that an individual undertakes and which can secure the desired result. The distribution of the developed groups of competencies is not based on individuals' behavior, but on their actions [28].

SPECIFICS OF SYSTEMS-BASED MANAGEMENT OF "SOFT COMPETENCIES"

Firstly, in order to properly build competency management in a company, it is necessary to determine the most suitable approaches. Within complicated systems with a high level of certainty one can rely on requirements for the desired behavior. But in complex systems with a high level of uncertainty and rapid change, it is recommended to use approaches aimed at developing the self-organization of employees who are able to fine-tune their actions using "metacompetencies".

Secondly, it is necessary to structure the actions that must be taken by an individual independently using a clear language of actions, i.e. skills, focusing on the final result (Figure 2).

It is possible to integrate the methods of several German schools for the management of competencies [29], potential [30], motives [31], and values [32]. In our corporate projects, we followed this specific path of integration of various schools and approaches. Our in-house developed model covers six groups of cross-cutting, i.e. versatile soft skills that enable individuals to independently achieve success in their work, solve certain problems, and achieve goals [33].
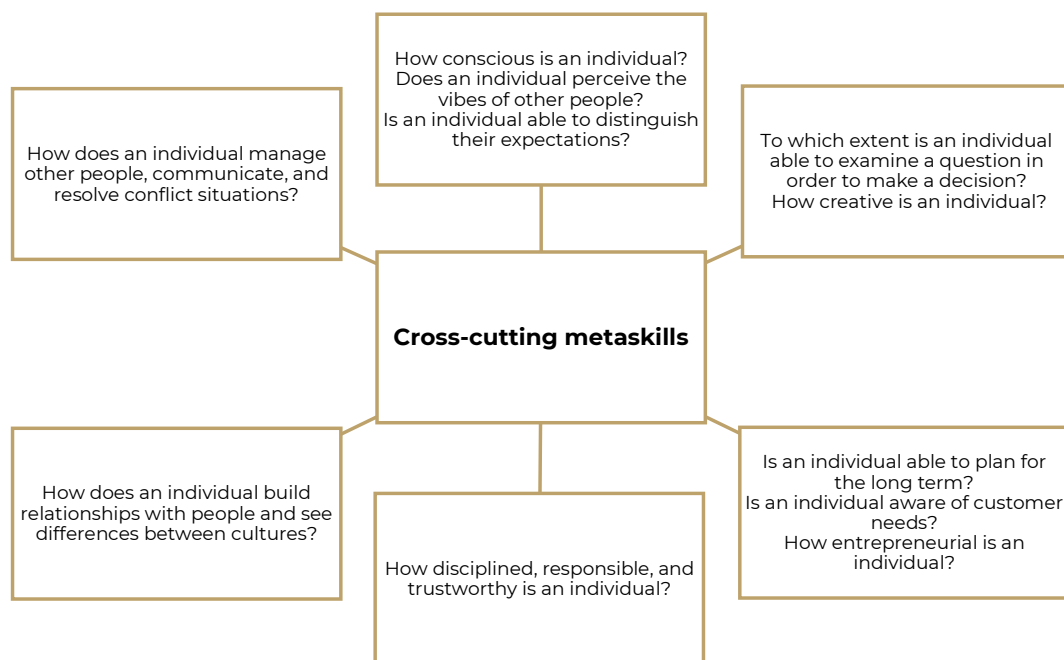

Fig. 2. Cross-cutting metaskills derived from ATG-CNT Consult projects.
Source: Kachcharov S. What are "soft competencies" and how to evaluate them? Available at: https://atg-consult.com/upload/atgcntdokuments/SixMetacompetencesATG-CNT.pdf (Accessed 14 December 2023).

Thirdly, it is necessary to translate - in accordance with metaskills - the actions that occur into the language of metacompetencies. Figure 3 represents 6 cross-cutting, i.e. versatile metacompetencies, each of which consists of 3 soft skills.
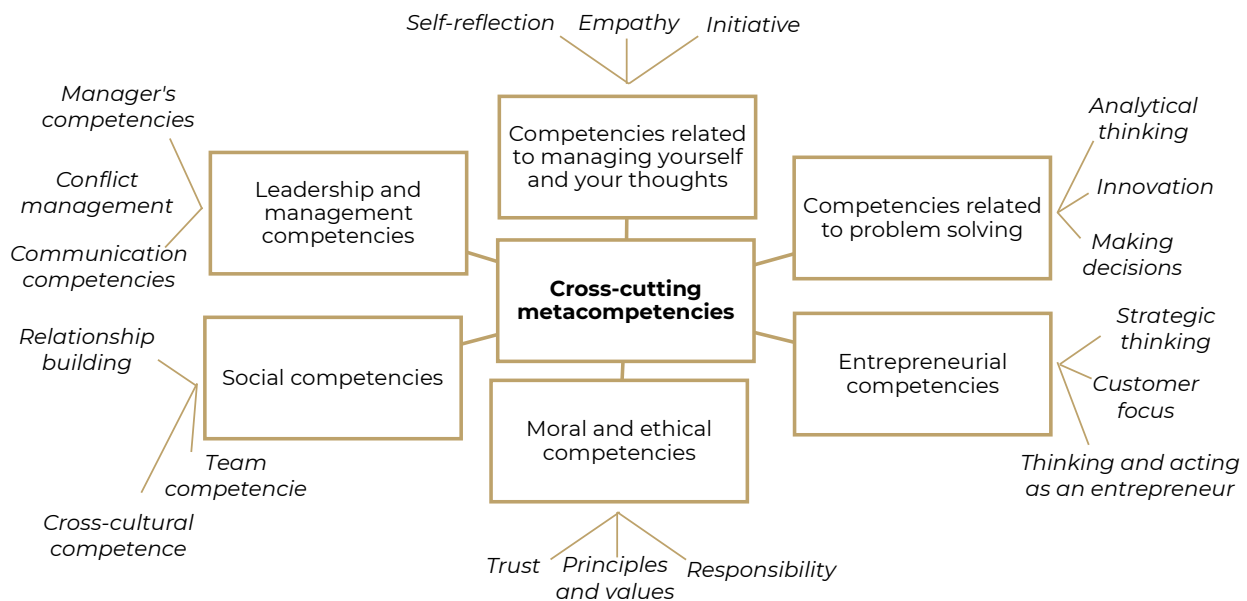

Fig. 3. Model of cross-cutting metacompetencies used in ATG-CNT Consult projects.
Source: Kachcharov S. What are "soft competencies" and how to evaluate them? Available at: https://atg-consult.com/upload/atgcntdokuments/SixMetacompetencesATG-CNT.pdf (Accessed 14 December 2023).

Fourthly, it is necessary to introduce a unified technology of profiling and diagnostics of employee potential. For example, the CAPTain Test®, (Computer Aided Personnel Test) approach, on the one hand, provides psychometric, i.e., objective diagnostics and, on the other hand, can determine an individual's self-esteem. Based on explicit and implicit predispositions and a conscious behavioral pattern, the test automatically estimates both the potential and the competencies of an individual and compares them with the "requirements profile". Thus, technologies can convert the qualitative parameters of potential into quantitative ones. Therefore, there is a special way to measure each of the 18 soft competencies.

1. Moral and ethical competencies.

The ability to stick to moral and ethical standards when choosing ways to achieve goals. This includes three soft competencies:

- principles: the ability to live and work based on established principles;

- responsibility: the highest priority should be given to the type of responsibility that affects the social environment, as well as the quality of interaction and the level of relationships;

- trust: the ability to build long-term trusting relationships, the ability to create an environment of trust.

2. Self-management.

Self-management implies the responsibility for oneself, unlocking one's potential, and building relationships with other people, as well as influencing one's immediate environment. It is based on three soft competencies:

- self-reflection: the ability to take responsibility for the conscious nature of one's thoughts, feelings, and their impact on other people;

- empathy: the ability to understand the feelings, motives, and needs of other people, as well as the willingness to take required actions;

- initiative: the ability to see hidden and obvious driving forces influencing

changes in the structure and the environment.

3. Problem solving.

Problem solving is an important metacompetence for complex systems in conditions of uncertainty. This includes three soft competencies:

- analytical thinking: the ability to break down information or a situation into components, see logical connections, and make correct conclusions;

- decision making: the ability to develop alternative solutions in conditions of uncertainty;

- innovation: the ability to take a creative approach to solving problems by thinking outside the box.

4. Entrepreneurial competencies.

Entrepreneurial competencies are a metacompetence which is important for taking appropriate actions in the event of changes, taking into account various needs and interests. These include three soft competencies:

- strategic thinking: the ability to think long-term, see the big picture, and adhere to a value-based approach;

- customer focus: the ability to see customer needs and be ready to meet them in the best possible way;

- entrepreneurial predisposition: the ability to think and act like an entrepreneur, anticipate trends, and be ready to take the initiative.

5. Social competencies.

Social competencies are a metacompetence that determines the quality of relationships and collaborations, both in a known environment and in conditions of uncertainty. These include three soft competencies:

- building relationships: the ability to build relationships with different categories of people, taking into account their expectations;

- team competencies: the ability to think from the standpoint of "we", act in the interests of the team based on mutually beneficial cooperation;

- cross-cultural competencies: the ability to adapt to conditions of uncertainty, maintain the balance while interacting with representatives of another race or culture.

6. Leadership competencies.

Leadership competencies are a metacompetence for organizing goals and influencing people's behavior and actions, which determines the quality of communications and problem solving. These include three soft competencies:

- leadership skills: the ability to organize people and resources to solve problems and achieve common goals, maintaining a balance between routine operations and innovative projects;

- conflict management: the ability to anticipate and mitigate conflicts in the process of joint activities, directing people's energy to the process of making constructive decisions;

- communication competencies: the ability to hear and listen to others, create conditions for effective communication, exchange of information, and feedback.

All of the six metacompetencies mutually determine each other if it is required to manage complex systems in a self-organized way. For example, the key metacompetencies for any manager or employee are responsibility and the capacity for self-management. If managers and their subordinates are unable to live and work according to principles based on trust and ethics and lack the capacity for self-management, using a competency-based or a metacompetency-based approach in conditions of uncertainty will not prove to be useful. This also explains the low effectiveness of training sessions and courses for the development of soft competencies. Metacompetencies should be developed systematically and with the use of technologies, considering them as strategic assets and a function of a company's management.

CONCLUSIONS

Being a social system, an organization is structured in a way to ensure its survival in the market and therefore perceives any novelty or innovation as risks. This is one of the strengths of an organization, since it will cope with complexity to the last, even with low-quality or incompetent management. However, this always occurs on the edge of survival and comes at great cost, material and psychological. However, if you rely on systems theory and develop competencies and metacompetencies purposefully using thinking tools and proven profiling technologies, then complexity starts to benefit the company and helps it respond adaptively to changes. In this case, communication processes, interaction procedures, and decision-making paths in the organization begin to contribute to the successful creation of mutually beneficial collaborations, increasing the company's profitability and improving the quality of life of people.

The competency-based approach is thought of as a mechanism for determining the compliance of an individual's qualifications and skills with the requirements set by the employer in order to ensure consistent actions and secure the desired results.

The metacompetency-based approach goes beyond the standard one, since, in conditions of uncertainty and high dynamics of change, it is difficult to plan and ensure accurate results. Therefore, it is necessary to develop abilities and skills for adequate interaction, organizing joint activities and cooperation with clients based on principles, creative ideas, and the willingness of employees to be proactive in taking responsibility for making decisions, in particular in conditions of uncertainty.

What practical conclusions can company executives draw from understanding systems theory?

The most important finding refutes a common practice in most organizations: when proactive development of metacompetencies in an organization is confused with overcoming growth barriers, which are only symptoms on the path of development.

This is due to the fact that a system characterized by a huge force of inertia and strictly oriented towards maintaining the status quo can only be "convinced" to somehow change its dynamics only if its management, in its decisions and actions, uses thinking tools at the level of the entire system. In other words, the development of an organization and people does not occur "partially", limited to individual elements of the system or using isolated solutions detached one from another. This development occurs based on a systems-based interaction of elements as holistic forward-looking work.

According to our consulting expertise, management can leverage the following three elements to overcome destructive system constraints:

- identify which management styles dominate in leadership positions and to which extent they hinder the development of metacompetencies;
- identify active behavioral models in the organization that are unconsciously followed by the executives (and scrupulously reproduced by employees) as possible barriers to holistic development;
- identify which self-reflection and self-correction abilities teams have to determine the dominant ways of thinking and communication that prevent the executives from improving the management system;

Consultants specializing in the systems-based development of metacompetencies can effectively facilitate this process.

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