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S. A. IVANOVA

CREATIVE STRATEGIES FOR INFORMATION ACTIVITIES: FROM MEANING CONSTRUCTION TO STRATEGIC DECISIONS

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The monograph «Creative Strategies for Information Activities: From Meaning Construction to Strategic Decisions» explores creative strategies for information activities in the context of information overload, cognitive overload, and growing managerial uncertainty. The work examines the transformation of the role of information in modern society: from a resource for recording and transmitting data to a mechanism for constructing meaning, building trust, and making strategic decisions.

The author analyzes the limitations of text-centric management models and algorithmic thinking, demonstrating that the accumulation of information does not ensure understanding or guarantee effective decisions. Particular attention is paid to visual thinking, image-centered models of cognition, applied dramaturgy, scenario-based management, and creativity as a cognitive technology for overcoming uncertainty.

The monograph explores the philosophical, psychological, and managerial foundations of creativity; it examines the mechanisms of divergent thinking, meaning-making, and strategic adaptation of systems. The work integrates approaches from the fields of philosophy, cognitive science, communication theory, public administration, advertising, PR, media, and business strategy.

The practical part of the research includes framework models, diagnostic matrices, and applied tools for analyzing communication and management systems, focused on the transition from normative administration to scenario-based management. The proposed models can be used in the fields of public administration, corporate management, strategic communications, advertising, media education, and analytical work.

This monograph continues the research presented in «The Information Evolution of Thinking: From Data to Understanding. Information Methodologies, Perceptual Paradigms» and develops the author's approach to *infology* as a methodology for working with information, meaning, and uncertainty.

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INTRODUCTION

The modern era is defined not by a shortage but by an excess of information. The growth of data and the acceleration of communications do not enhance understanding but often lead to cognitive overload, fragmentation of perception, and a decline in the quality of decisions.

As Herbert Simon (1971) noted, “a wealth of information creates a poverty of attention,” emphasizing that an excess of information leads to a deficit of attention as a key cognitive resource. Later, Neil Postman (1985) pointed out that information flows in the media environment are beginning to serve not the function of deepening understanding, but rather the function of entertainment and the fragmentation of reality. Manuel Castells (1996) linked this to the formation of a network society, in which information becomes not only a resource but also a mechanism for structuring power and social relations.

Text-centric management models, based on codification and regulation, become a source of rigidity in complex conditions: they increase regulatory overload, reduce adaptability, and lead to decision paralysis, as they handle uncertainty poorly and fail to foster innovation.

In this context, the importance of image-centered and creative strategies for working with information is growing. Contemporary research on the “visual turn” (Mitchell, 1994; Boehm, 1994; Mirzoeff, 1999) shows that the image is not secondary to text but functions as an independent form of cognition that precedes the verbalization and structuring of experience. Images allow us to work with uncertainty, a premonition of change, low-signal processes, and scenario-based thinking. This is precisely why visual thinking, applied dramaturgy, scenario design, and creative methods of information processing are becoming not merely auxiliary but strategic management tools.

Artificial intelligence occupies a special place in this context. In public discourse, AI is often viewed as a tool for generating new knowledge. However, this study proposes a different interpretation: artificial intelligence is primarily a tool for capturing, scaling, and reproducing existing patterns, rather than a mechanism for

genuine understanding. An algorithmic system is capable of enhancing the processing, structuring, and reproduction of information, but it does not replace the processes of meaning-making, cognitive transformation, and the dramaturgical transition from situation to event. AI represents the culmination of text-centered logic, but not an overcoming of its limitations.

In this context, creative thinking should be viewed not as a soft skill or an optional competency, but as a management technique. Research by Guilford (1950), Torrance (1974), Csikszentmihalyi (1996), Boden (2004), and Sawyer (2012) show that creativity serves as a mechanism for overcoming uncertainty, a tool for generating new solutions, and a means of adapting systems to an unstable environment. For business, this means a shift from process management to meaning management; for public administration, a shift from normative administration to scenario-based management; for advertising and PR, a shift from message delivery to the architecture of trust and the construction of interpretive models.

This monograph is a logical continuation of the previous study, “The Information Evolution of Thinking: From Data to Understanding. Information Methodologies, Perceptual Paradigms” (Ivanova, 2025), in which the methodology of “infology” was developed as a tool for information analysis, cognitive diagnostics, and the transition from data to understanding. The central question in the first monograph was: what is information, and how can perceptual distortions be overcome in the context of an information crisis? A formula for the meaning of information was proposed, and it was demonstrated that information is not reducible to data but constitutes an adaptive process of organizing uncertainty.

The second monograph develops this methodology and shifts the focus from the analysis of information to the processes of generating the new. While the first work was devoted to infology as the study of the nature of information, this work establishes the field of creative infology – a disciplinary approach that examines the mechanisms of transforming information into solutions, strategies, innovations, and managerial actions.

Thus, the research aims to develop theoretical and applied models of creative work with information that enable a transition from recording to understanding, from understanding to meaning, and from meaning to strategic action.

In this work, human perception is viewed as the foundation of information processing. It is worth emphasizing that people, while working with information on a daily basis, rarely realize that they are dealing not with the objects of reality themselves, but only with their representations – fluid, incomplete, interpretive, and often distorted forms of the world’s presence in consciousness. Information is perceived as something self-evident: data, facts, messages, news. However, behind this apparent self-evidence lies a far more complex phenomenon – a special medium between the object and perception, within which the formation of meaning, decisions, and the very subject of cognition takes place.

Every day, a person solves the canonical task of working with information: “Go I Know Not Whither and Fetch I Know Not What.” This activity is so embedded in everyday life that it ceases to be perceived as an independent cognitive process. The search for the right meaning in a stream of disparate signals, messages, interpretations, and signs becomes the natural backdrop of existence. People look for a “needle in a haystack,” not always realizing that this “haystack” itself is not objective reality, but a complex construct of representations, interpretations, and social fixations.

Contemporary society, on the contrary, actively imposes the idea that it is information that governs the world and the future. To a significant extent, this statement is true: decisions are made based on data, social processes are regulated by communication, reputations are built and destroyed in the information space, and governance is increasingly becoming the management of streams of interpretations. However, it is fundamentally important to understand: information does not act on its own, but only to the extent that its representations more or less correspond to reality, rather than being artificially constructed illusions, simulacra, or instruments of manipulation.

This is precisely where the key problem of perception arises. A person works not with an object, but with its image; not with reality, but with its cognitive model. There

is always a gap between an event and its understanding – a space of interpretation where trust, doubt, distortion, emotional reaction, and decision-making take shape. This layer between the objective world and perception is the true medium of human informational life. This is where not only knowledge but also values, beliefs, fears, identity, and modes of action are formed.

Nicholas Luhmann defined information as “a differentiation that alters the state of a system, that is, produces another differentiation” (Luhmann, 2005). This definition is particularly important because it takes information beyond the understanding of it as a static set of data. Information is not a thing, but an event of change. It does not exist outside the system of perception: information becomes information only when it triggers a transformation of a state – cognitive, emotional, social, or institutional. Thus, a person works not merely with messages, but with the potential to change reality through interpretation.

Global crises – pandemics, economic collapses, political conflicts – serve as a telling example. Often, it is not the physical event itself that has the decisive impact, but rather the informational differentiation – the message that enters the environment and triggers a cascade of new changes. Stock markets react to expectations, societies to interpretations, and people to fears, hopes, and visions of the future. In this case, information becomes a trigger for the transformation of the environment, rather than merely a reflection of what is happening.

On an individual level, this mechanism is even more evident. A single remark, a chance phrase heard at the right moment, can change the course of a person’s life; a single message can destroy trust; a single word can shape a new identity. Or, conversely, go unnoticed. This underscores the most important feature of perception: information is not equal to meaning. Meaning arises only at the point where information and the subject meet.

This is precisely why the task of a person who realizes that they are working not with “things” but with representations does not become simpler, but rather significantly more complex. It is necessary not merely to receive information, but to be able to recognize the degree to which it corresponds to reality, to distinguish meaning from

noise, reality from simulation, knowledge from fixation, and understanding from repetition. Working with information becomes not a technical data-processing procedure, but an intellectual practice of selection, structuring, and meaning-making.

In this context, the ability to structure information becomes particularly important. People strive to live in a world that is at least relatively predictable, whereas the information environment is inherently unstable and fluid. Changeability is its natural state. Consequently, the main task lies not in accumulating facts, but in creating stable cognitive frameworks that allow one to navigate change.

If a person refuses to do this work, choosing instead to ignore new information and avoid change, they find themselves in a kind of “Groundhog Day” – in a world of repetitive patterns where there is no development, and stability is achieved at the cost of turning away from reality. Conversely, creative work with information requires the ability to enter a space of uncertainty, to manage complexity, to construct new models of understanding, and to transform the chaos of change into a manageable structure.

Thus, human perception becomes not merely a psychological characteristic, but the fundamental basis of all information. It is through perception that information is transformed into meaning, meaning into a decision, and a decision into action. Consequently, the study of creative strategies in information activity is impossible without an understanding of how humans perceive, interpret, and construct their own reality.

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PART I. THEORETICAL FOUNDATIONS OF CREATIVE WORK WITH INFORMATION

Chapter 1. Information Beyond Fixation: Why Creativity Is Becoming a Necessity

1.1. Information Overload and Cognitive Collapse

The emergence of a human being in the world is intrinsically linked to the process of highly complex preliminary organization of perception. Even before birth, over the course of nine months, not only are the physiological parameters of the future organism formed, but also the neurobiological structures responsible for the ability to recognize, interpret, and reproduce information. The brain regions responsible for speech, reading, symbol perception, image recognition, and meaning formation are established precisely at this stage. If the formation of these areas is disrupted, a person faces serious difficulties in processing information, which manifests in various forms of cognitive impairments – aphasia, dyslexia, autism spectrum disorders, and other conditions.

However, even biologically formed structures do not guarantee full integration into the informational reality. Their development requires a lengthy “training” phase – integration into the linguistic, cultural, and social environment. Well-known examples of children raised outside human society demonstrate that, in the absence of timely development of these mechanisms, subsequent adaptation to social reality becomes extremely difficult or even impossible. This means that a person does not simply acquire the ability to process information as a biological given – they form a field of understanding through constant interaction with the surrounding world.

The field of understanding is formed over time and never arises instantaneously. It is impossible to fully understand a phenomenon the first time you encounter it. Eduard Meyer (Meyer, 1902) noted that “the picture of events changes every time we receive new material, even where we already possess extensive knowledge.” This observation is particularly relevant for the modern information age, where the volume of incoming data far exceeds our capacity to process it meaningfully.

Modern people exist under conditions of constant informational pressure. Streams of messages, news, notifications, visual cues, social expectations, and digital stimuli

create a state of perpetual cognitive strain. Herbert Simon (1971) rightly pointed out that an excess of information leads to a deficit of attention. It is attention, not access to data, that has become the primary limited resource of the modern individual. Information overload does not automatically expand understanding; on the contrary, it often leads to cognitive collapse: the inability to distinguish between what is significant and what is secondary, what is real and what is simulated, and what is strategic and what is situational.

The reason for this lies in the very nature of human perception. Humans do not work with reality as such, but with its representations. They perceive not the “world” itself, but interpretations of the world, comparing the new with existing cognitive structures. These structures form the Familiar Worldview (FWV), which serves simultaneously as a tool for orientation and a limitation on perception.

In essence, a person is constantly inside a kind of Ouroboros – a symbolic model of a closed, self-reproducing system of knowledge. The Ouroboros, the mythical serpent devouring its own tail, serves here as a metaphor for cognitive closure. New information passes through the filters of already established representations, paradigms, habits, and background knowledge. This allows for the stability of perception to be maintained and prevents it from being overwhelmed by the pressure of endless change, but at the same time hinders the emergence of new ways of understanding.

The function of this mechanism is twofold. Without it, existence in the familiar world would be impossible: the sheer volume of signals requires automatic filtering. However, it is precisely this mechanism that causes intellectual blindness, when the new remains invisible due to the power of pre-existing interpretations. The so-called “gorilla effect” – a classic experiment on inattention blindness – shows just how radically human attention is determined by preconceptions. Participants, focused on counting passes in a basketball game, often fail to notice a person in a gorilla suit walking right across the frame. The brain selects what to consider reality and excludes everything that does not correspond to the current task.

Thus, background knowledge is neither positive nor negative in and of itself. It enables common sense to function, ensures the stability of decisions, and facilitates survival in a complex environment. But it also makes manipulation, delusions, false contingencies, and collective illusions possible. Humans do not perceive “pure” reality – they always see it through a system of layers: memories, emotions, habits, cultural codes, simulacra, and social standards.

Research shows that the brain simultaneously strives for the acquisition of new knowledge and for the automation of repetitive activities: it is this duality that shapes human functional stability. Stereotypical activity frees up resources for non-stereotypical activity, and the new always builds upon the old. However, in conditions of information overload, automation begins to dominate, and instead of developing, the system shifts into a mode of defense against complexity.

The very structure of perception creates additional complexity. For example, a visual signal is not a direct “reflection” of an object. Visual information breaks down into millions of fragments and undergoes several parallel processing pathways: spatial, object-based, and situational. A unified image is formed not as a photographic copy of the world, but as the result of a complex neurocognitive reconstruction. This is precisely why optical illusions demonstrate so convincingly: the brain often interprets not what is there, but what it considers most likely.

Kelly Lambert (2020) writes that the brain is constantly “calculating probabilities” in an effort to produce the most adaptive behavioral responses. This means that perception is always probabilistic, not absolute. People interpret the world not on the basis of complete information, but on the basis of the most probable model of what is happening. In this sense, perception is always associated with incompleteness and the risk of error.

Bayes’ theorem becomes not only a mathematical tool but also a philosophical model of cognition. New information does not create knowledge from scratch but rather corrects an already existing system of representations. Each new observation transforms the previous opinion, refines the probability of hypotheses, and alters the degree of confidence in the interpretation of the world. However, in an era of

information overload, this adjustment becomes chaotic: people either overestimate isolated signals or completely ignore significant changes.

Cognitive collapse occurs when the volume of information exceeds the ability to make sense of it: more data leads to less understanding and weaker strategic decisions. The problem lies not in a lack of information, but in the absence of mechanisms for structuring it, which requires creative approaches to working with meaning. Therefore, creativity becomes a necessary condition for cognitive survival.

1.2. Why Information Does Not Automatically Lead to Understanding

Information in and of itself is no guarantee of understanding. The presence of a large amount of information, data, documents, and messages does not necessarily lead to knowledge, and it certainly does not mean that a well-considered decision has been made. The modern era demonstrates this paradox particularly vividly: the more information becomes available to a person, the more frequently we observe a deficit of understanding, strategic thinking, and the ability to interpret what is happening.

The reason for this lies in the very nature of information. Information is not reality itself, but merely a specific representation of it – a likeness, a trace, a code, an interpretation fixed in a certain form. People do not work directly with the objects of the world, but with their reflections, which have passed through numerous filters of perception, cultural codes, linguistic constructs, and cognitive limitations. Consequently, there is always a gap between information and understanding that cannot be bridged automatically.

Real-time cognitive processes are rarely linear. More often, they involve wandering, searching, refining, and constantly adjusting existing ideas. A straightforward learning process is possible only when someone has prepared a ready-made “lesson” in advance – that is, structured the material, highlighted the main points, and presented a ready-made interpretation as the correct one. This is precisely how basic background knowledge is formed: through the education system, social norms, cultural patterns, and institutional mechanisms for transmitting “correct” knowledge.

From early childhood, a person is integrated into a system of standardized information acquisition. Preschool, school, university, and the professional environment – all these institutions operate according to the logic of transmitting pre-established models of understanding. As a result, a unified paradigm of perception is formed, which becomes the foundation of the Familiar Worldview (FWV). This system is necessary for social stability, but at the same time creates a fundamental problem: people begin to perceive not the world itself, but a ready-made interpretation of the world.

The common paradigm becomes a universal template for understanding. The simpler this template, the more primitive the level of interpretation. The modern educational approach shapes a specific model of intelligence with a loss of quality in understanding: people know many fragments but fail to see the connections between phenomena. The world splits into a mosaic of vivid but isolated fragments of information. Individual elements may be accurate, useful, and even brilliant; however, in the absence of systemic connections, they do not create a holistic understanding.

Fragmentation breeds entropy. When knowledge exists as scattered blocks of information, the reserve of semantic robustness – the system’s ability to maintain stability when new data emerges – diminishes. Instead of self-organizing understanding, a “managed mosaic” emerges, where external regulation gradually replaces the internal capacity for understanding.

This is precisely why information does not automatically generate understanding: understanding requires not the accumulation of data, but the work of deconstructing, re-examining, comparing, and connecting it. Moreover, complete information does not exist in principle. Any knowledge always remains probabilistic, limited, and potentially subject to revision. Consequently, the researcher’s task is not to seek definitive truth, but to create mental constructs with high semantic robustness – structures that do not collapse when new information is added.

The simplest way to go beyond familiar paradigms is to change the very algorithm for working with information. Do not obtain knowledge exclusively from the hands of “masters of ready-made lessons,” but learn to independently notice, gather, and

compare information from various sources. This requires significantly more effort than passively consuming pre-prepared interpretations. It is much easier to “open your mouth and chew the informational gum” created by generations of compilers of “correct answers” than to build your own framework of understanding.

The modern digital environment only exacerbates this problem. Information ranking, search algorithms, the indexing of scientific publications, citation systems, and platform visibility mechanisms create the illusion of a material’s objective significance. However, behind this appearance often lies not knowledge, but technological mechanisms for replicating desired meanings. The more formalized the information selection system becomes, the more difficult it is to go beyond the existing paradigm.

The fundamental difference of this approach lies in the fact that the emphasis shifts not to the consumption of information, but to its acceptance, labeling, re-verification, and scenario modeling. Infology makes it possible to accumulate not just facts, but your own a-paradigmatic experience – a field of contradictions, doubts, and clarifications that gradually undermines the stability of ready-made thought patterns.

One of the most important tasks of this approach is conscious deconstruction. This is not a total rejection of existing knowledge, but rather the creation of an internal space in which different versions of reality can coexist on the basis of probabilistic validity. Richard Feynman’s position is particularly relevant here: “I have approximate answers and possible beliefs and different degrees of certainty about different things, but I’m not absolutely sure of anything” (Feynman, 1998, p. 24).

It is doubt that becomes a necessary condition for understanding. A person who is confident in the absolute correctness of their worldview ceases to see anything new. A person who allows for the possibility of their own error gains the opportunity for cognitive growth. Therefore, infology shapes not only a research method but also the ethics of knowledge: the habit of verifying information, distinguishing between the probability of truth and definitive assertion, limiting the dissemination of unverified data, and maintaining intellectual integrity.

Thus, information does not automatically generate understanding, because understanding requires effort: structuring, re-checking, deconstruction, and the ability to go beyond one's own FWV. Understanding arises not where there is a lot of data, but where there is a method for dealing with uncertainty.

Consequently, creativity in information activities begins not with the generation of something new, but with the ability to see the inadequacy of the old.

1.3. Text-Centric Management and Decision-Making Paralysis

Modern management systems – governmental, corporate, educational, and institutional – are largely built on the logic of textocentrism. Text serves as the primary tool for recording, regulating, legitimizing, and controlling. It is through documents, instructions, regulations, reports, minutes, rules, and strategies that the organization of managerial reality is carried out. Text becomes not merely a means of transmitting information, but a form of existence for the system itself.

At first glance, such a model ensures stability: text allows for the codification of rules, ensures the reproducibility of procedures, formalizes accountability, and reduces uncertainty. However, in conditions of high complexity, turbulence, and constant change, it is precisely textocentrism that begins to turn from an instrument of order into a source of managerial rigidity.

The problem is that text works effectively with what is already known, but copes extremely poorly with what has not yet been formalized, stabilized, or subjected to linear formalization. Text captures the completed, but does not help us work with the emerging. It describes a situation post factum, but does not provide the capacity for foresight, scenario-based thinking, and adaptive management.

As W. J. T. Mitchell (1994) notes, contemporary culture is undergoing a transition from text-centered logic to the pictorial turn – a shift from the dominance of text to the image as an independent form of cognition. A similar logic is evident in management: in conditions of uncertainty, text ceases to be a sufficient tool for decision-making, as it is unable to capture the multidimensionality of processes and the dynamics of change.

Text-centered management gives rise to the phenomenon of administrative rigidity. Its main manifestations include:

- ✓ excessive standardization;
- ✓ reactive management;
- ✓ poor adaptability;
- ✓ excessive regulation;
- ✓ decision paralysis;
- ✓ information overload;
- ✓ declining trust in the system.

Excessive standardization becomes particularly dangerous – a situation in which the quantity of documents begins to replace the quality of decisions. Management activity shifts from solving problems to producing texts about problems. A pseudo-action effect arises: the system actively generates reports, regulations, concepts, and strategies, but no real changes occur.

As a result, a decision ceases to be an action and becomes a documentary event.

This approach is particularly characteristic of public administration, where regulatory codification is often perceived as equivalent to managerial effectiveness itself. However, the presence of a large number of documents does not guarantee the system's ability to adapt. On the contrary, excessive textualization reinforces inertia and reduces managerial sensitivity to changes in the environment.

As demonstrated in studies of visual rotation (Ivanova, 2025), images and visual structures are capable of performing cognitive functions that text performs much less effectively: rapid pattern recognition, maintaining coherence, processing low-signal information, reducing cognitive load, and accelerating decision-making. In an environment of information overload, it is visual clarity that allows us to cut through the noise and structure our attention.

Herbert Simon (1971) emphasized that in a world of information abundance, it is not information but attention that becomes a scarce resource. Text-centric systems consume this resource extremely inefficiently: people find themselves immersed in

vast amounts of documents, where what is strategically important gets lost among the trivial. This leads to decision fatigue – exhaustion from the need to constantly make choices without a clear structure of priorities.

This is particularly evident in corporate governance and investment communications. Research shows (Ivanova, & Anpilohov, 2025) that the visual structure of reporting, the graphic richness of annual reports, the logic of presentations, and the visual organization of data directly influence investor confidence, risk perception, and the speed of decision-making. A visual strategy reduces uncertainty and minimizes the cognitive costs of interpretation.

Thus, the visual form becomes not merely an aesthetic addition, but the infrastructure of managerial interaction. Companies with a clear visual architecture of communication shorten the path from information to meaning, and thus from analysis to action.

In public administration, a similar problem manifests as “paralysis of coordination.” The more complex the system of regulatory relationships, the higher the likelihood that a decision will be indefinitely postponed while awaiting additional documentation, coordination, or formal confirmation. Responsibility gets lost in the paperwork, and the system itself begins to work toward preserving its own procedural nature rather than achieving results.

Niklas Luhmann viewed an organization as a system for reducing complexity (Luhmann, 2000). However, a text-centric system often produces the opposite effect: instead of reducing complexity, it accumulates it, turning management into an endless processing of its own traces. The system begins to serve its own documentation rather than external reality.

This is precisely where the need arises to transition from normative administration to scenario-based management. Management must work not only with what has already been formalized, but also with what is only just becoming possible. This requires a transition:

- ✓ from document to model;
- ✓ from regulations to scenarios;

- ✓ from text to image;
- ✓ from fixation to interpretation;
- ✓ from reaction to foresight.

Consequently, the problem with text-centric management lies not in the text itself, but in its monopoly on management. Text is necessary for recording, but insufficient for generating something new. Where a system faces crisis, uncertainty, and the need for transformation, management must go beyond the text.

This is precisely why creativity in management becomes not an additional competency, but a prerequisite for overcoming decision paralysis. A new solution do not arise in regulations, but in the ability to see the situation differently.

1.4. Limitations of Algorithmic Thinking

In the modern world, algorithmic thinking is perceived as a symbol of rationality, efficiency, and controllability. It is the foundation of digital platforms, administrative procedures, corporate strategies, artificial intelligence systems, and most modern decision-making models. An algorithm promises predictability: if the input parameters, processing rules, and expected result are specified, the system should operate consistently and reproducibly.

This is precisely why algorithmic logic has become one of the dominant forms of governance in the 21st century. It allows for reducing uncertainty, minimizing risks, standardizing processes, and ensuring the scalability of solutions. For bureaucratic systems, the algorithm is particularly attractive because it eliminates the need for constant individual choice: the decision becomes a function of a properly constructed procedure.

However, it is precisely in this strength that its fundamental limitation lies.

An algorithm works only where the rules of the game are known. It is effective in a space of repeatability, but proves powerless where genuine novelty arises. It is capable of optimizing the existing, but does not generate anything qualitatively new. The algorithm handles known patterns perfectly well, but cannot recognize an event – that is, a situation that changes the very structure of the system.

It is important to distinguish between a situation and an event. A situation is a state of the system that can be described and integrated into an existing model. An event is a rupture, a transformation, a transition to a different state. An algorithm works well with situations but poorly with events. It strives to return the system to its previous stability, whereas real development often requires precisely going beyond the limits of the previous logic.

Artificial intelligence demonstrates this limitation particularly clearly. Despite its high level of computational power and ability to generate complex texts, models, and solutions, AI remains, at its core, a system for working with existing patterns. It reinforces fixation, scales reproducibility, and accelerates the processing and structuring of information, but it does not achieve genuine understanding.

AI is the culmination of text-centric logic, not its overcoming.

It works with vast amounts of text, identifies probabilistic connections, predicts the most likely continuation, and reproduces knowledge structures already existing in the system. But this is precisely why it does not go beyond accumulated experience. An algorithm can perfectly answer the question “what usually happens next,” but it fares much worse with the question “what should appear for the first time,” what emergent properties might arise in the system.

Hannah Arendt (Arendt, 1958) emphasized that human action is linked to natality – the ability to begin something new, to disrupt predictability, and to initiate events. An algorithm lacks this ability. It does not begin; it continues. It does not create an event; it calculates the probability of its occurrence based on the past.

This is particularly evident in management systems. When an organization fully transitions to algorithmic management, a paradoxical situation arises: process efficiency increases, but the capacity for strategic transformation decreases. The system becomes perfectly adapted to the past but ill-prepared for the future.

In a crisis, an algorithm often reproduces old mistakes faster and more accurately than a human.

Financial crises, institutional failures, reputational disasters, and political conflicts show that critical management errors rarely result from a lack of data. More

often, the problem lies in the inability to recognize a shift in the logic of what is happening. The system continues to operate according to the old script even when the script itself has ceased to exist.

This is the limit of algorithmic thinking: it assumes that the world remains fundamentally computable.

But reality is not always algorithmic. It includes weak signals, unpredictable connections, affective reactions, symbolic structures, crises of trust, collective illusions, and events that cannot be derived linearly from preceding data. Managing such processes requires not only calculation but also interpretation.

Herbert Simon (1971) pointed out that human rationality is always a bounded rationality. Decisions are made not under conditions of complete information, but in situations of incompleteness, time constraints, and cognitive limitations. An algorithmic model attempts to address this problem through the maximum accumulation of data; however, the amount of information does not eliminate fundamental uncertainty.

On the contrary, as the economics of attention shows, an excess of data can exacerbate decision paralysis. In conditions of information overload, what matters is not the amount of information, but the ability to identify what is meaningful. An algorithm helps sort, but does not determine meaning.

Meaning arises not as the result of a calculation, but as the result of relating information to context, value, risk, time horizon, and the possibility of action. An algorithm can enhance management, but it does not replace the act of meaning-making.

And creativity becomes not the opposite of rationality, but its necessary extension. Where the algorithm ends its work, the space of scenario-based thinking, visual modeling, applied dramaturgy, and creative design of the future begins.

Creativity is necessary not because algorithms are bad, but because reality is always greater than any model.

People are capable of holding contradictions, working with incompleteness, making decisions without a final guarantee of correctness, and creating something new

where there are no established rules yet. An algorithm strives for completeness; creativity strives for the possibility of transition.

This is precisely why modern management requires not a rejection of algorithms, but an overcoming of their monopoly.

It is not the algorithm versus creativity, but the algorithm within a broader system of meaning-making. It is only in this case that management ceases to be a reproduction of the past and becomes a mechanism for generating the future.

1.5. From Information Processing to Meaning Construction

Information acquires meaning not upon receipt, but in the process of comprehension – it is precisely here that the boundary between processing and constructing meaning lies. Processing is limited to the recording and transmission of data, whereas meaning arises through the identification of connections, interpretation, and the construction of cognitive models. In infology, the starting point is mapping – linking information to a specific place and time, without which it remains abstract (*sine loco, anno vel nomine*). This principle draws on the classical tradition of historical analysis, where the unity of time and place is regarded as a basic condition for reliable knowledge (Samaran, 1961), and it is precisely this that transforms data into context.

Further work involves interpretation and mental experiments: comparison, combination, modeling, and scenario building. The goal is not the accumulation of facts, but the identification of connections and probabilistic models of reality. The conceptual field becomes key, allowing for the structuring and re-examination of knowledge. It is fundamentally important to distinguish between compilation (mechanical assembly) and combination (the creation of a new semantic structure), since it is precisely combination that forms a scenario as a form of understanding.

Scenario-based thinking implies a multiplicity of interpretations, which makes divergent thinking a necessary condition for working with information. A person must hold onto alternative versions and go beyond paradigms, overcoming the limitations of “common sense.” In this process, basic operations (grouping, classification) are

important, as well as methods for managing contradictions, such as TRIZ (Altshuller, 1984). Understanding remains probabilistic, yet systematic work enhances its stability.

Thus, the transition from processing to meaning-making signifies a shift in the subject's role: from a consumer of data to an architect of understanding. Creative information activity begins where information ceases to be a set of facts and becomes a mechanism for generating new knowledge.

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Chapter 2. Creativity as a Cognitive Technology

2.1. Creativity and the Management of Creativity

In contemporary scientific discourse, creativity is increasingly viewed not as an exclusive characteristic of individual talented personalities, but as a universal cognitive technology that enables the adaptation of humans and social systems to conditions of uncertainty. In the context of digitalization, the acceleration of social processes, the increasing complexity of management structures, and the growth of information overload, creativity ceases to be an optional soft skill and becomes an essential tool for strategic thinking.

Traditionally, creativity is defined as the ability to generate ideas that are both novel and functionally applicable. This is precisely the interpretation offered by contemporary psychological research, which emphasizes the dual nature of creativity: originality without utility creates no practical value, and adaptability without novelty does not allow one to go beyond the reproduction of what already exists. In this sense, creativity represents a mechanism for generating the new under conditions of constraints.

As shown by studies (Ivanova, 2024; Ivanova, 2025) conducted within the disciplines “Creative Strategies for Innovative Search” and “Creative Strategies for Information Activity,” creativity can be viewed as a multidimensional system encompassing not only the process of idea generation but also forms of thinking, modes of expression, mechanisms for transforming reality, and responses to environmental challenges. The educational and practical guide emphasizes (Ivanova, 2024a) that the development of creativity is linked to the formation of the ability to generate new ideas, adapt to changes, analyze situations, and create non-standard solutions in real-world professional contexts.

At the Oles Honchar Dnipro National University, research on the concept of “creativity” was conducted over several years, during which 190 interpretations of the term were collected; after excluding duplicates, 131 unique definitions were identified.

The affinity diagram method allowed these definitions to be grouped into six main semantic blocks:

- ✓ a form of thinking;
- ✓ a specific human activity;
- ✓ process of expression;
- ✓ transformation of reality;
- ✓ the emergence of the new;
- ✓ challenge.

At the second level of analysis, these groups were combined into two broader categories: the cognitive-emotional nature of creativity and the practical-transformational orientation of creative activity. The resulting integrative definition allowed us to view creativity as a unique human activity based on the process of thinking and expression, aimed at overcoming challenges, transforming reality, and creating the new.

This understanding is particularly important for managerial logic. Creativity ceases to be a characteristic of the artistic sphere and becomes a tool for decision-making. Managing creativity does not mean stimulating “inspiration,” but rather organizing conditions under which the system is capable of moving beyond inertia and the reproduction of standard scenarios.

J. P. Guilford (1950) introduced the concept of divergent thinking, which is associated with multiple solutions and flexibility. E. P. Torrance (1974) developed models for assessing creativity, emphasizing it as a skill that can be developed. M. Csikszentmihalyi (1996) demonstrated that creativity arises at the intersection of personality, culture, and environment, and that innovation requires a supportive institutional structure.

Teresa Amabile (1996) emphasizes that creativity depends on a combination of three factors:

- ✓ expert knowledge;
- ✓ creative thinking skills;

✓ intrinsic motivation.

Consequently, managing creativity requires not only training in idea generation methods but also the creation of an environment of trust, autonomy, and meaningful engagement.

In corporate and administrative practice, a paradox often arises: organizations profess innovation but structurally reproduce anti-creative management models – excessive regulation, fear of error, a culture of approval, and punishment for deviating from the norm. Under such conditions, creativity is not fostered but suppressed.

This is particularly evident in public administration, where normative logic often supplants strategic logic. Formal compliance with procedures becomes more important than the ability to see something new. As a result, the system begins to protect stability at the cost of development.

In this context, managing creativity means a transition:

- ✓ from control to an architecture of possibilities;
- ✓ from punishing for mistakes to experiment management;
- ✓ from standardization to scenario-based thinking;
- ✓ from regulations to meaning;
- ✓ from fixation to the generation of the new.

Practical approaches to developing creativity proposed in the study include self-analysis, keeping reflective journals, strength and weakness maps, brainstorming, the inversion method, SCAMPER, visual metaphors, emotional mapping, scenario modeling, futuristic thinking, affinity diagrams, SWOT analysis, the project approach, prototyping, and design thinking. These tools foster not only the ability to generate ideas but also the skill of transforming uncertainty into a structured solution.

The ability to work with the future takes on particular significance. Creativity is always an activity on the frontier of the absent. It requires the ability to see what does not yet exist as potentially possible. This is precisely why strategic management is closely linked to creative thinking: strategy is always about working with a vision of the future.

Within the author's framework, creativity functions not merely as a psychological characteristic, but as a technology for meaning-making.

Without creativity, information remains a fixation. With creativity, information becomes the basis for action. This is precisely why the management of creativity should be viewed as the management of a system's strategic capacity. An organization incapable of creating something new is doomed merely to reproduce the past more effectively.

Consequently, creativity is not the privilege of a few individuals, but the infrastructure of sustainable development in conditions of uncertainty. And the more complex the environment becomes, the less feasible management becomes without creativity.

2.2. Philosophical Foundations of Creativity (Plato, Aristotle, Nietzsche, Bergson, Deleuze)

A philosophical understanding of creativity forms the foundation for understanding creativity as a distinct way of human engagement with reality. Already in ancient philosophy, a key tension arises between reproduction and the generation of the new. Plato viewed creativity through the prism of mimesis – imitation – believing that art is a reflection of the world of ideas, and thus stands at a distance from truth (Plato, trans. 1997). In contrast, Aristotle attributed cognitive value to creativity, emphasizing that it is precisely through artistic generalization that humans are capable of grasping universal laws that transcend the limits of empirical experience (Aristotle, trans. 1996). A key line of thought is already taking shape here: creativity is interpreted either as a secondary reflection or as a means of deeper understanding.

Subsequently, the philosophical tradition shifts the emphasis from reflection to creation. For Friedrich Nietzsche, creativity becomes an expression of the “will to power” – a fundamental impulse to overcome established forms and create new values (Nietzsche, 1967). Creativity appears as an act of transformation, destruction, and reconfiguration of reality. Henri Bergson introduces the concept of creative evolution, linking creativity to duration (*durée*) and continuous becoming, in which the new is

not derived from the past but emerges as a qualitative leap (Bergson, 1911/1998). Gilles Deleuze radicalizes this line of thought, viewing creativity as the production of difference rather than a variation on the already existing. For him, thinking becomes an act of creating concepts rather than discovering them, which shifts creativity from the realm of reflection to the realm of ontological production (Deleuze & Guattari, 1994).

Thus, the philosophical foundations of creativity demonstrate an evolution from understanding creativity as a form of imitation to interpreting it as a mechanism for generating new being. This allows us to view creativity not as an aesthetic or auxiliary function, but as a fundamental way for humans to interact with reality under conditions of uncertainty.

2.3. The Psychology of Creativity (Guilford, Torrance, Csikszentmihalyi, Boden, Sawyer)

The psychology of creativity provides a scientific foundation for understanding creativity as a cognitive process that can be analyzed, developed, and managed. One of the key milestones in the development of this field was J. P. Guilford's introduction of the concept of divergent thinking, which is contrasted with convergent thinking and is characterized by the ability to generate a multitude of solutions, vary approaches, and go beyond established patterns (Guilford, 1950). The development of this line of research is linked to the work of E. P. Torrance, who proposed tools for diagnosing creativity, identifying parameters such as fluency, flexibility, originality, and elaboration of ideas (Torrance, 1974). Within these approaches, creativity ceases to be perceived as an exceptional ability and begins to be viewed as a developable cognitive resource.

Contemporary psychological models expand the understanding of creativity, incorporating systemic and cultural dimensions. Mihaly Csikszentmihalyi proposes viewing creativity as the result of the interaction between the individual, the professional field, and the social environment, emphasizing that novelty arises only within the context of recognition and inclusion in a cultural system (Csikszentmihalyi,

1996). Margaret Boden analyzes types of creativity, distinguishing combinatorial, exploratory, and transformational forms, thereby demonstrating that creativity can occur both within existing structures and through their radical transformation (Boden, 2004). Kate Sawyer, in turn, emphasizes the social nature of creativity, viewing it as the result of collective processes, interactions, and improvisation, rather than solely individual effort (Sawyer, 2012).

Thus, the psychology of creativity shifts creativity from the realm of the intuitive and spontaneous to that of controlled cognitive processes. It demonstrates that creativity can be developed, structured, and integrated into professional practice, transforming it into a tool for solving complex problems and adapting to a changing reality.

2.4. Creative Thinking and Divergent Cognition

In the scientific tradition, creative thinking is directly linked to the concept of divergent cognition – a method of information processing focused on multiple solutions, varied interpretations, and going beyond established cognitive frameworks. This approach was first systematically developed by J. P. Guilford, who in the mid-20th century proposed distinguishing between divergent and convergent thinking as two fundamentally different types of intellectual activity (Guilford, 1950). Divergent thinking is characterized by the ability to generate a multitude of ideas based on a single stimulus, whereas convergent thinking is aimed at finding the one correct answer. Later, E. P. Torrance expanded on these ideas, proposing methods for diagnosing and developing divergent thinking, highlighting parameters such as fluency, flexibility, originality, and elaboration of ideas (Torrance, 1974).

In later studies, the concept of divergent thinking was further developed in the works of M. Boden, who demonstrated that creativity can manifest itself both within existing conceptual frameworks (combinatorial and exploratory creativity) and through their transformation (Boden, 2004). K. Sawyer, in turn, emphasized the social and process-oriented nature of creative thinking, noting that divergent processes often unfold in collective practices, where ideas arise as a result of interaction rather than

isolated thinking (Sawyer, 2012). Thus, divergent cognition becomes a key mechanism for adapting to uncertainty, as it allows one to hold multiple hypotheses simultaneously, work with incomplete information, and create alternative scenarios for the development of a situation.

In contrast, convergent thinking serves a stabilizing function: it is necessary for selecting solutions, testing them, and bringing them to practical implementation. However, in conditions of information overload and a highly dynamic environment, the dominance of convergent logic leads to reduced adaptability and the stifling of innovation. Consequently, effective creative thinking does not involve opposing these types, but rather their functional combination: divergent generation of options followed by convergent selection (Table 2.1).

Table 2.1.

Comparison of Divergent and Convergent Thinking

Parameter	Divergent thinking	Convergent thinking
Orientation	Expanding possibilities	Narrowing down to a single solution
Goal	Generating a multitude of ideas	Searching for the right answer
Logic	Non-linear, associative	Linear, logical
Attitude toward mistakes	Allowed and encouraged	Minimized
Dealing with uncertainty	High tolerance	Aim to eliminate
Result	Alternatives, hypotheses	Proven solution
Role in the process	Initial stage (search, research)	Final stage (selection, implementation)
Problem type	Open-ended, loosely structured	Closed-ended, clearly defined

Source: author's elaboration

Thus, divergent thinking acts as a cognitive mechanism that enables one to go beyond existing paradigms, whereas convergent thinking consolidates the result and ensures its implementation. In the context of creative strategies for information activities, divergent cognition becomes a key condition for the transition from information processing to the creation of new meaning.

2.5. Creativity as a Mechanism for Overcoming Uncertainty

Uncertainty is an inherent feature of modern social and managerial reality. It manifests itself in the instability of the external environment, the multiplicity of interpretations, the incompleteness of information, and the impossibility of accurately predicting the consequences of decisions made. Under such conditions, traditional rational-algorithmic management models prove to be limited, as they assume the existence of given parameters, stable rules, and predictable results. Creativity, on the contrary, functions precisely within the realm of uncertainty, acting as a mechanism that allows one not to eliminate uncertainty, but to work with it as a resource.

In the cognitive tradition, creativity is understood as the ability to form new frameworks of understanding in the absence of ready-made solutions. It arises at the intersection of experience, environment, and professional context (Csikszentmihalyi, 1996) and is linked not so much to the search for answers as to the redefinition of problems and the identification of opportunities. Under conditions of bounded rationality (Simon, 1997), creativity serves as a form of heuristic thinking that allows one to go beyond the given framework.

The key mechanism is working with alternative scenarios: the ability to hold multiple plausible models of the future and make decisions based on incomplete information. In this sense, creativity is linked to abduction as the logic of hypothesis formation under conditions of uncertainty (Peirce, 1931–1958), facilitating the transition from uncertainty to action.

The affective dimension of creativity is also an important aspect. Uncertainty is often accompanied by anxiety, fear of error, and a desire to return to the familiar. However, as Csikszentmihalyi's "flow" theory demonstrates, it is precisely engagement in complex yet meaningful activity that allows uncertainty to be transformed into a space for productive action (Csikszentmihalyi, 1990). In this case, creativity acts as a mechanism of psychological adaptation, allowing one not to avoid complexity but to master it.

From the perspective of management practice, creativity becomes a tool for strategic adaptation. It allows organizations and social systems not only to respond to

changes but also to shape new trajectories of development. As K. Weick notes, in conditions of uncertainty, the process of sensemaking plays a key role, within which system participants jointly interpret what is happening and create a basis for action (Weick, 1995). In this context, creativity facilitates the generation of interpretations, alternative models, and new semantic structures that enable the system to maintain stability when external conditions change.

Thus, creativity functions not as a side effect of thinking, but as its essential function in conditions of uncertainty. It facilitates the transition from a lack of knowledge to probabilistic understanding, from fragmented information to holistic interpretation, and from uncertainty to meaningful action. In conditions where it is impossible to completely eliminate uncertainty, creativity becomes the key mechanism for overcoming it.

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Chapter 3. Visual Thinking and Image-Centered Cognition

3.1. *The Visual Turn in Contemporary Knowledge*

The visual turn denotes a fundamental shift in modes of cognition, in which the image ceases to serve a subsidiary function relative to text and begins to function as an independent form of thinking and meaning-making (Ivanova, 2025). This transition is linked not only to the development of media and technology but also to a change in the very structure of perception, where the visual becomes a key cognitive tool for interpreting reality.

Historically, the visual turn took shape at the turn of the 19th and 20th centuries under the influence of modernist and avant-garde artistic practices, which called into question the mimetic function of art and shifted the emphasis from the representation of the object to the exploration of the very act of seeing (Ivanova, 2025). As a result, the visual ceases to be a reflection and becomes a means of constructing experience, in which the subject actively participates in the process of meaning-making.

In contemporary science, *the visual turn* is viewed as an interdisciplinary phenomenon that brings together the philosophy of culture, visual studies, cognitive psychology, and neurobiology. In this context, the image is interpreted as an epistemological agent capable not only of conveying information but also of shaping the subject's cognitive, affective, and behavioral responses. Research shows that visual structures activate attention, emotions, and interpretive processes, thereby directly participating in the construction of meaning (Ivanova, 2025).

The key thesis of the visual turn lies in the recognition of the image as an autonomous unit of knowledge. W. J. T. Mitchell introduces the concept of *the "pictorial turn,"* emphasizing the shift from textocentrism to visuality as the dominant mode of cultural analysis (Mitchell, 1994). G. Boehm develops a similar line of thought, viewing the image as a form of thinking and an independent tool of cognition (Boehm, 1994). Visual studies (Elkins, 2003; Mirzoeff, 2013) reinforce this shift, proposing that visuality be viewed as a complex system of cultural and cognitive practices.

In the digital environment, the significance of the visual turn is amplified. The image becomes the primary unit of communication, competing for the limited resource of attention. Within the attention economy, visual forms act as “attention magnets,” accelerating perception, reducing cognitive costs, and influencing decision-making (Ivanova & Anpilohov, 2025). Visual clarity allows for the structuring of complex information and shortens the path from data to understanding, which is particularly important in the context of information overload.

Moreover, visuality takes on an economic dimension. It becomes not only a cultural resource but also a strategic one, influencing behavior, trust, and investment decisions. Visual practices – from interfaces to reporting – create a cognitively comfortable environment for interaction, reducing uncertainty and enhancing communication effectiveness (Ivanova & Anpilohov, 2025).

The *visual turn* is a shift from reflection to the creation of meaning: the image becomes a tool for thinking, not an illustration. Understanding is formed through visual structures, which makes image-centered strategies more effective in complex conditions.

3.2. The Image as a Pre-textual Form of Understanding: Unknown → Image → Assimilation → Text → Stability

The image serves as the primary form of cognition, preceding text: understanding begins with perception, where visual structures establish the initial organization of meaning. A person first “sees” and then “names,” so the image functions as a pre-textual matrix that guides interpretation. Cognitive research confirms that visual processing is faster and more efficient than verbal processing, as it activates systems of attention, memory, and emotions (Kosslyn et al., 2006; Vartanian & Goel, 2004). This makes the image a key tool for orientation in conditions of information overload. From a philosophical perspective, it is viewed as a form of pre-linguistic experience: it does not reflect but constitutes reality (Cassirer, 1944; Merleau-Ponty, 1962). Visual studies reinforce this approach, affirming the autonomy of the image as a form of thought (pictorial turn; Mitchell, 1994). In conditions of uncertainty, the image

performs the function of preliminary synthesis – it allows one to grasp the structure of a situation before formalization and to set the direction of analysis. In the logic of infology, it acts as an intermediate link between uncertainty and text: it forms a hypothesis and provides initial navigation, whereas text fixes and reproduces already structured knowledge.

In an increasingly complex environment, cognition is not linear but spiral in nature: Unknown → Image → Assimilation → Text → Stability.

The unknown serves as a field of possibilities; the image serves as a mechanism of orientation; assimilation serves as a stage of verification and structuring through action and interpretation; text serves as a form of fixation and transmission; stability serves as a stage of institutionalization of knowledge. However, consolidation inevitably reduces sensitivity to change and generates a new unknown, initiating the next cycle. Thus, cognition constitutes a cycle of renewal, where the image plays a key role as a mechanism of transition and renewal, and the text plays a dual role of fixation and limitation. The spiral model shows that effective work with information requires a transition from text-centered to image-centered stages of thinking, and creativity provides the link between them and the possibility of generating new knowledge.

It should be noted that in conditions of uncertainty, cognition begins not with analysis but with the image – the primary form of grasping a situation. An image does not fix knowledge but sets the direction of its formation, acting as a mechanism of preliminary synthesis. It is at this stage that imagery arises – the process of creating meaningful configurations that have not yet been formalized into concepts but already structure perception and set possible scenarios for understanding.

The art of imagery is directly linked to creativity, as it is precisely this process that facilitates the transition from uncertainty to hypothesis. Unlike textual thinking, which is oriented toward fixation, figurative thinking works with the potentially possible: it combines, transforms, and assembles elements into new configurations. Thus, creativity manifests not at the stage of formalization, but at the stage of image generation, where the primary construction of meaning takes place.

Further development involves testing and refining the image through interpretation, modeling, and practical interaction. Creativity serves the function of variability: it allows for maintaining alternative versions, restructuring initial conceptions, and finding new solutions. The result is a transition to text, which captures the already structured understanding in the form of concepts, models, and rules. However, text inevitably simplifies and stabilizes knowledge, translating it into a reproducible form.

The stability stage anchors knowledge within institutional structures, but simultaneously limits its development. At this stage a new zone of the unknown emerges, requiring the re-engagement of imaginative thinking. Thus, the spiral does not close but unfolds, ensuring the constant renewal of the system.

In this logic, visual art serves as the key mechanism of creativity and the connecting link of the entire model. It ensures:

- ✓ a transition from uncertainty to understanding;
- ✓ the generation of new semantic structures;
- ✓ variability and flexibility of interpretations;
- ✓ the possibility of going beyond fixed models.

Consequently, creativity in the spiral model of cognition is not a separate ability, but a process of constant generation and transformation of images, which ensures movement from the unknown to knowledge and back. This is precisely why effective work with information requires not only analysis and recording, but also developed imaginative thinking as the foundation of creative cognition

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Chapter 4. The Formula of Meaning

4.1. *Meaning as a Measurable Category*

In the classical humanities tradition, meaning is viewed as a qualitative, difficult-to-formalize category associated with interpretation, cultural context, and subjective perception. However, in the context of information overload and the increasing complexity of management systems, there is a need to transition from a descriptive understanding of meaning to its operationalization. Meaning ceases to be an exclusively philosophical category and begins to be viewed as a measurable parameter on which the effectiveness of communication, the quality of decisions, and the sustainability of social systems depend (Anpilohov & Ivanova, 2026; Ivanova & Anpilohov, 2026a).

The modern environment is defined not by a lack of information but by an excess of it; therefore, what matters most is not the volume of data but the ability to make sense of and organize it. Meaning serves to organize complexity: it highlights what is significant, connects elements, and transforms information into a basis for action. Without this, information remains fragmented and does not become knowledge.

Within the proposed approach, meaning can be represented as the ratio between the influences affecting interpretation and the number of possible interpretations. This allows us to formalize the category of meaning as follows (Ivanova, 2025):

$$\text{Meaning} = \frac{\sum \text{powers of influence}}{n \text{ interpretations}}$$

This formula reflects two key aspects. On the one hand, meaning depends on a set of factors affecting perception: information noise, cultural attitudes, emotional reactions, competing messages, and other distorting or amplifying elements. On the other hand, it is determined by the degree of divergence in interpretations – that is, the extent to which the understanding of the message is unified or, conversely, fragmented.

The higher the level of external influences and the greater the variability of interpretations, the less stable the meaning becomes. In the extreme case it breaks down, losing its ability to perform a coordinating function. Conversely, reducing

distortions and narrowing the range of interpretations contributes to greater clarity of meaning and increased communication effectiveness.

Thus, meaning functions not as a static characteristic of a message, but as a dynamic relationship between the structure of the stimulus and the audience's cognitive response. It is formed in the process of interaction between the information source, the environment, and the perceiver. This allows us to view meaning as a controllable category that lends itself to analysis, diagnosis, and purposeful construction.

From the perspective of practical application, this model opens up the possibility of quantitatively assessing semantic stability. It can be used to analyze communication strategies, evaluate the effectiveness of branding, diagnose management decisions, and predict audience reactions. In particular, in crisis communication, an increase in the number of interpretations and the rise of distorting factors lead to a loss of trust and a decrease in the manageability of the situation. Consequently, managing meaning becomes a key task of strategic activity.

In a broader context, meaning serves a coordinating function. It unites the disparate elements of a system into a coherent structure, ensuring consistency of action.

Thus, the shift toward understanding the meaning as a measurable category allows for the integration of humanities and management approaches. Meaning becomes not only an object of interpretation but also a tool for analysis and management, opening up new possibilities for working with information in conditions of complexity and uncertainty.

4.2. Why Creativity Determines a System's Strategic Capability

A system's strategic capability is determined not only by the volume of available resources, the level of information, or the degree of process formalization, but above all by the ability to interpret what is happening and develop adequate responses under conditions of uncertainty. In this context, creativity becomes a key factor ensuring the transition from reaction to meaningful action.

Modern systems operate in an environment where changes are nonlinear and often unpredictable. Traditional algorithmic and regulated approaches are effective only

under conditions of repeatability; however, when confronted with new situations, they begin to reproduce outdated solutions. Creativity, on the other hand, allows the system to go beyond established models, redefine the problem, and formulate new courses of action.

The key function of creativity lies in working with meaning. It provides the ability to extract what is meaningful from the flow of information, establish connections between disparate elements, and form a holistic understanding of the situation. Without this ability, the system becomes overloaded with data but unable to integrate it, which leads to a decline in the quality of decisions and increased reactivity.

Creativity plays a special role in conditions of uncertainty. It allows us not to eliminate uncertainty, but to work with it, transforming it into a space of possibilities. This is achieved through divergent thinking, the construction of alternative scenarios, and the ability to hold multiple interpretations simultaneously. As a result, the system receives not a single “correct” answer, but a set of possible trajectories from which it can choose depending on the context.

Creativity is also linked to overcoming inertia. Any stable system tends over time to reproduce its own structures, which reduces its adaptability. Creative thinking disrupts this inertia by introducing elements of novelty and allowing the system to reconfigure its internal connections. This is particularly important in management and organizational practices, where excessive regulation can hinder development.

Equally significant is the communicative aspect. Creativity provides the ability to form clear and convincing conceptual frameworks that can be shared by other participants in the system. This creates a foundation for coordinating actions, building trust, and ensuring consistency in decision-making. Without creative work with meaning, communication splits into a multitude of interpretations, which reduces the system’s manageability.

Thus, creativity acts as a mechanism that connects perception, interpretation, and action. It allows the system not only to adapt to changes but also to actively shape the new conditions of its existence. This is precisely why strategic capability is determined

not so much by the availability of resources as by the ability to reinterpret them and use them in new contexts.

In an increasingly complex world, creativity is no longer a mere bonus but a fundamental prerequisite for sustainability and development. A system lacking creative potential may be able to effectively replicate the past, but it proves incapable of shaping the future.

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PART II. CREATIVE TECHNOLOGIES IN INFORMATION ACTIVITIES

Chapter 5. Creative Technologies: Evolution and Application

Chapter 5.1. The Historical Evolution of Creative Search Methods.

The development of creative search methods in the 20th century reflects a transition from engineering problem-solving techniques to universal cognitive tools applicable in management, communication, and strategic thinking. Initially, heuristic approaches emerged in engineering and scientific-technical circles as ways to overcome the limitations of logical-algorithmic thinking. However, over time, they evolved into methods of organizing thought focused on generating new meanings and solutions.

A key milestone was the emergence of structured search methods aimed at systematizing options, working with associations, and overcoming cognitive inertia. These methods can be grouped according to the logic of their functioning: from analytical-combinatorial (morphological analysis) to associative (brainstorming, synectics) and systemic (systematic heuristics, integral models).

Three research schools played an important role in the development of heuristics. The American school focused on developing methods for idea generation and creative thinking (Osborn, Gordon, Crawford, Zwicky), emphasizing the practice of collective search. The European school (Moles, Müller, Kunze, Hansen) focused on structuring thought, systematization, and visualization of processes. The Soviet school of heuristics (Bush, Shubin, Sereda, Lolovinkin) developed a systemic and algorithmic approach to invention, including the creation of libraries of heuristic techniques and logical-structural methods of analysis.

The general logic of the development of creative search methods demonstrates a transition from engineering heuristics to managerial creative thinking (Table 5.1). While early methods were aimed at solving technical problems, modern approaches are oriented toward working with complex systems, uncertainty, and meaning-making.

Table 5.1.

Historical Evolution of Creative Search Methods

Method	Essence of the method	Author	Country	Type of approach
Morphological analysis	Combinatorics of parameters	Zwicky	United States	Analytical-combinatorial
Morphological box	Structuring of solution options	Zwicky	USA	System-structural
Test questions	Stimulating thinking through questions	Polya, Crawford	USA	Heuristic
Synectics	Analogies and associations	Gordon	USA	Associative
Brainstorming	Collective idea generation	Osborn	USA	Group creative
Discovery matrices	Searching through structural matrices	Moles	France	Systemic
Systematic heuristics	Formalized search	Müller	Germany (GDR)	System-algorithmic
Conferences of ideas	Organization of collective search	Gilde, Müller	Germany (GDR)	Communicative
Catalog method	Use of solution databases	Kunze	Germany	Library
System-logical approach	Logical-structural analysis	Shubin	USSR	System
Library of heuristics	Accumulation of Techniques	Lolovinkin	USSR	Heuristic-Algorithmic
Visualization of Changes	Graphical modeling	Lindberg	USA	Visual-cognitive
TRIZ	Solving through contradictions and the ideal result	Altshuller	USSR	Systems engineering / metatheory
Integral models	Complex search systems	Bouvain et al.	France	Integrative

Source: author's elaboration

The historical evolution of creative search methods demonstrates a gradual expansion of their functionality: from tools of engineering analysis to universal thinking technologies. Modern methods integrate analytical, visual, and communicative approaches, forming the basis for creative work with information in conditions of uncertainty and complexity.

5.2. Creative Methods as Mechanisms for Managing Meaning

Before examining individual methods, it is important to identify their internal logic and interrelationships. Heuristic approaches are not a random set of tools: they form a system that reflects the development of creative thinking – from analyzing the

structure of a problem to managing the processes of solution generation. To reveal this logic, it is advisable to group the methods into broad clusters, each of which corresponds to a specific type of thinking and performs a specific cognitive function.

This clustering allows us not only to systematize the methods but also to show their place in the overall dynamics of the transition from engineering heuristics to modern forms of creative and strategic thinking (see Table 5.2)

Table 5.2

Clustering of heuristic methods

Cluster	Cluster Name	Essence of the approach	Main methods	Authors
1	Analytical-combinatorial methods	Generation of solutions through decomposition and combination of parameters	Morphological analysis, morphological box, discovery matrices	Zwicky, Moles
2	Associative-heuristic methods	Stimulating ideas through associations, analogies, and questions	Brainstorming, synectics, test questions	Osborn, Gordon, Polya, Crawford
3	Communicative-group methods	Generating solutions through collective interaction	Conferences of ideas, group sessions	Gilde, Müller
4	System-logical methods	Analysis and problem-solving through logical and structural models	System-logical approach, systematic heuristics	Shubin, Müller
5	Librarian-heuristic methods	Use of accumulated solutions and techniques	Catalog method, heuristics library	Kunze, Lolovinkin
6	Integral and metasystem methods	Comprehensive management of thinking and problem-solving	TRIZ, integral models, visualization of structural changes	Altshuller, Bouvain, Lindberg

Source: author's elaboration

The logic of clustering reflects the progressive development of creative thinking – from working with the elements of a problem to managing the thinking process itself. The evolution follows a path from structural analysis to associative generation, then to collective forms, followed by systemic organization and the accumulation of experience, and culminates in a transition to the meta-level, where creativity becomes a manageable system.

Each cluster performs its own function: analytical methods break down the problem, heuristic methods generate options, communicative methods enhance the

search through interaction, systemic methods organize and verify solutions, library methods provide a foundation in accumulated experience, and integral methods allow for the management of thinking as a holistic process (see Table 5.3, Figure 5.1.).

Table 5.3

**Methods of Creative Search:
Type of Thinking and Connection to the Spiral Model of Cognition**

Method	The essence of the method	Type of thinking	Stage of the spiral model	Application (business / public administration / advertising and PR)
Morphological analysis	Combining parameters to find solutions	Systemic	Assimilation → Text	Business: product solutions; Public Administration: analysis of alternatives; PR: concept generation
Affinity diagram	Grouping ideas by semantic connections	Systemic / visual	Image → Assimilation	Business: insights; Public Administration: problem structuring; PR: segmentation of meanings
Reverse dramaturgy	Analysis from results to causes	Systemic	Assimilation	Business: case studies; Public Administration: decision analysis; PR: campaign deconstruction
Scenario-based diagnostics	Building the logic of a situation's development	Systemic / Divergent	Assimilation → Text	Business: strategy; Public Administration: forecasting; PR: risk analysis
Visual mapping	Presenting information in the form of diagrams	Visual	Image → Assimilation	Business: processes; Public Administration: systems analysis; PR: visual communications
Question matrix	Structuring the problem through questions	Divergent / Systemic	Assimilation	Business: goal setting; Public Administration: policy development; PR: communication strategies
Strategic storytelling	Creating meaning through narrative	Divergent	Image → Text	Business: branding; Public Administration: public communications; PR: trust and image
Conflict simulation	Analysis of contradictions and interests	Systemic	Assimilation	Business: conflict management; Public Administration: reconciliation of interests; PR: crisis

Weak signals and scenarios of the future	Identifying trends and building scenarios	Divergent / Systemic	The Unknown → Image → Assimilation	Business: foresight; Public Administration: strategy; PR: adaptation to trends
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Source: author's elaboration

Thus, the table shows that:

- visual methods → work at the image stage;
- divergent methods → expand the scope at the unknown/image stage;
- systemic methods → structure at the assimilation stage;
- textual/analytical → fix knowledge at the text stage.

Methods vs. Stages of the Spiral of Cognition

TYPE OF METHOD	STAGES OF THE SPIRAL OF COGNITION				
	1. UNKNOWN (uncertainty)	2. IMAGE (emergence of form)	3. ASSIMILATION (understanding and structuring)	4. TEXT (articulation and fixation)	5. STABILITY (institutionalization and reproduction)
					 Meanings in the form of norms, procedures, and practices.
VISUAL METHODS					
DIVERGENT METHODS					Meanings in the form of norms, procedures, and practices.
SYSTEMIC METHODS					Meanings in the form of norms, procedures, and practices.
TEXTUAL / ANALYTICAL METHODS					Meanings in the form of norms, procedures, and practices.

SUMMARY



Figure 5.1. Mapping of creative methods across the stages of the spiral of cognition: from uncertainty to knowledge fixation

Source: author's elaboration

The final stage of the spiral is not directly linked to the application of creative methods: it reflects the process of institutionalization, within which previously formed meanings are consolidated in the form of norms, procedures, and practices.

It should also be understood that the presented methods are not isolated tools, but form an interconnected system embedded in the spiral model of cognition. Their effectiveness is determined not only by content but also by their alignment with the

stage of the cognitive process: from initial intuitive grasping through variable exploration to subsequent textual fixation.

For a deeper understanding of the role of creative methods, it is important to view them not only as tools for finding solutions but also as mechanisms for meaning formation. In this context, methods can be analyzed through their impact on key parameters of meaning formation – the set of distorting influences and the multiplicity of interpretations. This approach allows us to move from a functional description of methods to their interpretation as means of managing Meaning and assessing their effectiveness under conditions of uncertainty (see Table 5.4.)

Table 5.4

Creative Search Methods in the Logic of Meaning Formation

Method	Effect on Σ powers of influence (reduction of distortion)	Effect on n interpretations (narrowing of interpretations)	Role in the formation of Meaning
Morphological analysis	Organizes parameters, reduces the chaos of factors	Narrows the range of solutions through structuring	Enhances the logical clarity of meaning
Affinity diagram	Eliminates noise through grouping of meanings	Reduces redundant interpretations	Forms clusters of meaning
Reverse dramaturgy	Eliminates false cause-and-effect relationships	Focuses on key factors	Clarifies the causal structure of meaning
Scenario-based diagnostics	Reduces uncertainty through scenarios	Narrow the range of possible interpretations	Forms manageable versions of meaning
Visual mapping	Reduces cognitive noise through visualization	Simplifies perception and reduces differences in interpretation	Makes meaning “visible”
Question matrix	Eliminates unnecessary assumptions	Narrows interpretations through clarification	Increases the accuracy of meaning
Strategic storytelling	Reduces competing interpretations through narrative	Consolidates interpretations around a story	Creates a coherent and shared meaning
conflict simulation	Identifies hidden distortions and contradictions	Clarifies the positions of the parties	Enhances the stability of meaning
Weak signals and scenarios of the future	Reduces the risk of unexpected distortions	Expands but structures interpretations	Ensures the adaptability of meaning

Source: author's elaboration

Creative search methods should be viewed not as tools for generating ideas, but as mechanisms for managing meaning through two basic parameters. First, they influence the aggregate of distorting factors (Σ powers of influence), allowing for the reduction of information noise, the structuring of chaotic data, the identification of hidden influences, and the elimination of cognitive distortions. As a result, meaning becomes “clearer,” free from random and destabilizing influences. Second, these methods manage the number of interpretations (n interpretations), reducing the range of understandings, synchronizing perception, setting the framework for interpretation, and forming a common semantic field. This ensures the stability of meaning and its reproducibility in communication and practice.

Thus, creative methods serve a dual function: they simultaneously reduce the level of distortion and regulate the multiplicity of interpretations, directly influencing the formation of meaning as a key parameter of information activity. In this context, creativity appears not as a process of generating ideas, but as a technology for managing of *Meaning*. Consequently, creative methods should be understood not as tools for finding solutions, but as means for constructing and stabilizing meaning in conditions of uncertainty.

To integrate the approaches discussed earlier, it is advisable to present them as a unified model reflecting the interrelationship between creative methods, stages of the cognitive process, and the formation of meaning. Unlike linear representations, this diagram demonstrates that the methods do not operate in isolation but are distributed across the stages of the spiral dynamics of cognition, ensuring a transition from uncertainty to stable forms of knowledge.

Of particular significance is the fact that creative methods in this model serve not only as tools for finding solutions but also as mechanisms for managing meaning, influencing the level of distortion and the consistency of interpretations (*Figure 5.2.*).

Note:

The presented model allows us to draw several fundamental conclusions. First, creative methods are stage-dependent: their effectiveness is determined by their suitability for a specific stage of the cognitive process. Visual and divergent methods operate at the level of imagery and uncertainty, whereas systemic and analytical methods operate at the stage of assimilation and textual fixation.

Second, the central outcome of applying these methods is not the generation of ideas, but the formation of meaning. This shifts the emphasis from finding solutions to building a cognitive foundation for action.

Third, the methods have a dual effect on meaning: on the one hand, they reduce the level of distorting factors; on the other, they regulate the multiplicity of interpretations. It is precisely this that ensures clarity and stability of understanding.

Fourth, cognition is cyclical in nature: each stage of stability gives rise to a new unknown, which requires the reactivation of creative mechanisms. This makes creativity a constant, rather than an episodic, element of information activity.

Fifth, the integration of methods within the spiral model ensures practical applicability: combining different types of thinking allows for improving the quality of strategic decisions, strengthening communication, and ensuring the adaptability of systems under conditions of uncertainty.

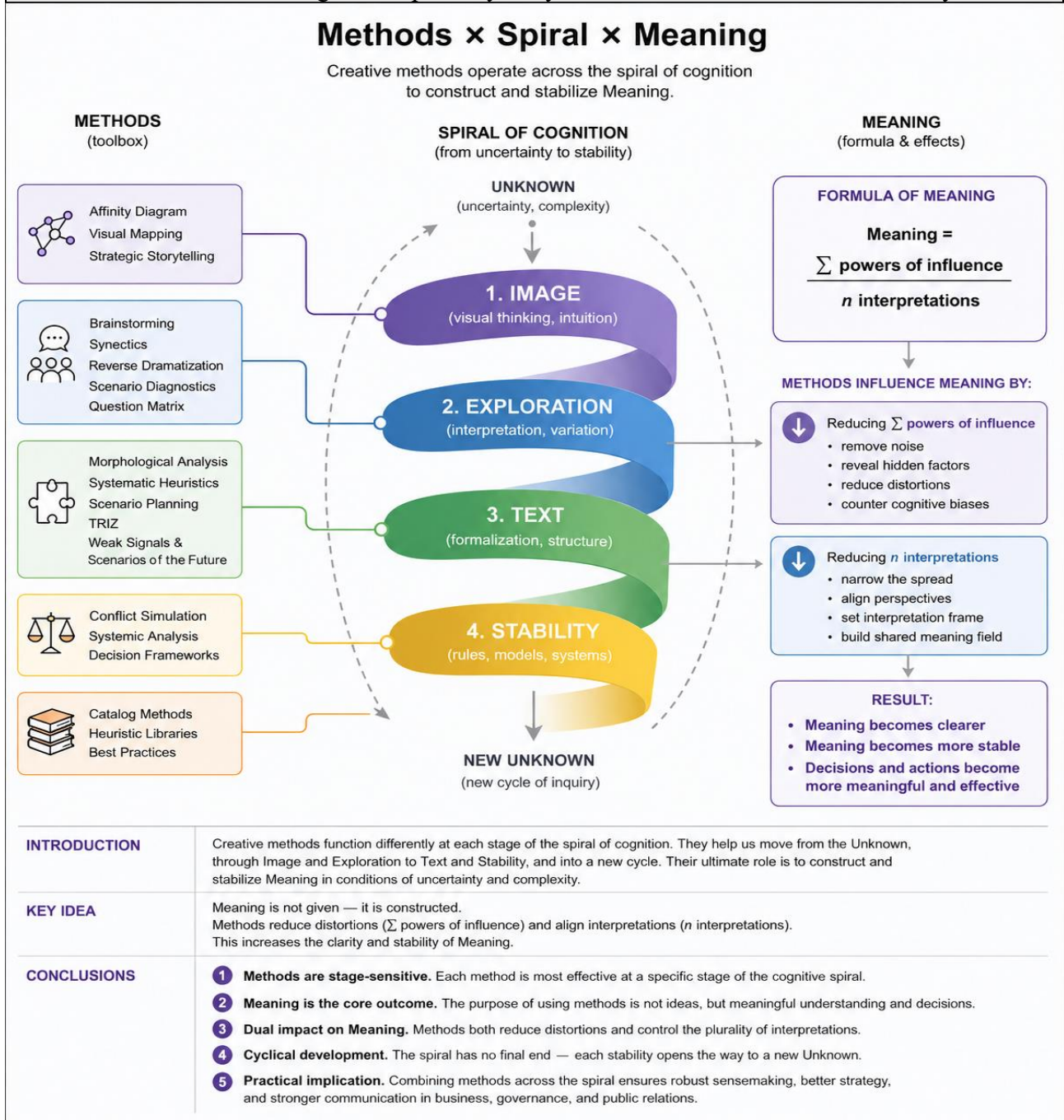


Figure 5.2. Methods × Spiral × Meaning diagram: integration of creative methods, the spiral model of cognition, and the process of meaning formation.

Source: author's elaboration

Creative methods operate at various stages of the cognitive spiral – from intuitive grasping to formalization and stabilization – ensuring a reduction in distortions (Σ powers of influence) and the harmonization of interpretations (n interpretations), which leads to the construction and stability of meaning.

Creative search methods form a holistic system embedded in the spiral dynamics of cognition and aimed at the formation of meaning. Their effectiveness is determined not by isolated application, but by their alignment with the stage of the cognitive process and their ability to simultaneously reduce distortions and harmonize interpretations. In this context, creativity functions as a technology for managing meaning, ensuring the transition from information to meaningful and sustainable action.

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Chapter 6. Creative Technologies in Public Administration

6.1. *Administrative Rigidity Diagnostics*

Modern public administration systems operate under conditions of high uncertainty; however, their internal logic remains largely oriented toward stability, regulation, and reproduction (Simon, 1997; Luhmann, 2000). This leads to the phenomenon of administrative rigidity – a state in which the system loses its ability to adapt to changes and begins to reproduce ineffective decisions.

The key characteristics of administrative rigidity are:

- ***over-regulation*** – an excessive number of regulations that complicate decision-making;
- ***textocentrism*** – the dominance of formalized documents over interpretive meaning;
- ***reactive management*** – a focus on post-hoc reactions rather than proactive action;
- ***decision paralysis*** – the inability to choose a strategy in conditions of information overload and risks;
- ***poor adaptability*** – low capacity to reconfigure processes and models;
- ***information overload*** – the accumulation of data without mechanisms for interpreting it.

Assessing these parameters helps determine the system's readiness for transformation and the transition to more flexible management models. It is essential to understand that over-regulation and textocentrism limit the system's capacity for interpretation and meaning-making, which reinforces the reactive nature of management and leads to decision paralysis in conditions of information overload (Postman, 1985; Davenport & Beck, 2001; Ivanova, 2026).

6.2. *Transition from prescriptive administration to scenario-based management*

Prescriptive administration is based on fixed rules and procedures, which is effective in a stable environment but limited in dynamic conditions. In contrast,

scenario-based management involves working with a multitude of possible future states of the system.

The transition to scenario-based logic includes:

- rejecting the notion of a single “correct” solution in favor of a range of alternatives;
- the use of foresight and scenario modeling methods;
- taking into account weak signals and probabilistic changes;
- integrating divergent and systems thinking.

The transition to scenario-based management reflects the need to work with multiple future states of the system, which aligns with the logic of bounded rationality and heuristic search (Simon, 1997). The use of scenario thinking and the analysis of weak signals allows the system to go beyond linear models and form adaptive strategies (Schoemaker, 1995).

6.3. Image-Centered Management Models

An image-centered approach to management involves a fundamental shift in emphasis from text as a means of fixation to image as a mechanism for meaning-making (Mitchell, 1994; Kosslyn et al., 2006). While text reinforces an already formed understanding, the image operates at an earlier level – it allows one to navigate uncertainty, integrate disparate elements, and form a holistic view of the situation. In this sense, the image serves not as an auxiliary tool but as a primary cognitive structure that sets the direction for further analysis and managerial action.

In an increasingly complex environment, it is the image that enables the rapid “grasping” of meanings before they are formalized, reducing cognitive load and allowing one to work with incomplete and contradictory information. This is particularly important for public administration, where decisions are made under time constraints, involving multiple actors, and with consequences of high social significance.

In management practice, the image-centered approach is implemented through the use of visual models and process maps, which allow for the structuring of complex

systems and make them cognitively accessible. Scenario-based images of the future play a significant role, forming development benchmarks and setting the framework for strategic choices. Equally important are symbolic constructs that unite system participants around shared meanings, as well as metaphors and narratives that serve a coordinating function, simplifying complex ideas and making them shareable.

Thus, image-centered models of governance perform several interrelated functions: they provide initial orientation in uncertainty, integrate cognitive and communicative processes, form a common semantic field, and set the direction for collective action. This strengthens the cognitive cohesion of the system, narrows the gap between perception and decision-making, and accelerates the transition from information to meaningful and coordinated action.

6.4. The Architecture of Trust in Public Communication

In the context of an increasingly complex information environment, trust ceases to be a spontaneous result of effective governance and takes on the character of a purposefully constructed framework. Public communication becomes the key mechanism through which the relationship between institutions and society is built, and thus it is precisely this mechanism that determines the level of legitimacy of decisions and the willingness to accept them.

Modern information overload widens the gap between the transmission of a message and its interpretation: the same action can give rise to multiple, often contradictory interpretations. In this situation, trust depends not so much on the volume of information as on the quality of its semantic organization. Therefore, the architecture of trust is built as a system of principles that ensure a consistent and stable understanding.

The foundational element is semantic clarity, which involves reducing distortions and aligning interpretations. It is achieved through the structuring of information, precise wording, and the elimination of contradictory signals. Transparency complements this principle by ensuring the accessibility not only of data but also of the logic behind decision-making, which reduces uncertainty and increases the

predictability of institutional actions. Consistency ensures alignment between words and actions, fostering a stable perception of the system as reliable and coherent. Engagement, in turn, broadens the scope of communication by including various groups in the decision-making process and thereby strengthening their acceptance.

Creative methods play a system-forming role in this architecture (Weick, 1995; Edelman, 2020). Storytelling allows for the integration of disparate facts into coherent meaning structures, making them understandable and shareable. Visualization reduces cognitive complexity and accelerates perception, while scenario modeling sets the framework for interpreting the future, shaping expectations and reducing anxiety levels. Collectively, these tools facilitate the formation of a shared semantic field within which trust does not merely emerge but is reinforced and reproduced.

Thus, the architecture of trust is not a set of communication techniques, but a systemic model of perception management in which meaning, transparency, consistency, and participation act as interrelated elements. Its effectiveness is determined by its ability not only to convey information but also to ensure a stable and shared understanding necessary for coordinating actions within a complex social system.

6.5. Governance Transformation Framework

The transformation of public governance can be described as a shift from a linear, rule-based logic to a dynamic system in which meaning, trust, and the ability to work with multiple future scenarios play a key role (Teece, 2007). The traditional model, based on rules and control, is oriented toward reproducing stable processes; however, in conditions of uncertainty, it loses its effectiveness because it does not provide sufficient flexibility and adaptability.

The proposed logic of transformation unfolds as a sequence of interconnected stages: RULE → CONTROL → REACTION → IMAGE → SCENARIO → TRUST → DECISION → PROTOTYPE → INSTITUTION. In the initial stages, the system operates in a mode of normative fixation and control, where management is reduced to compliance with rules and responding to deviations. However, as the environment

becomes more complex, there arises a need to transition to more flexible mechanisms, where the image begins to play a key role as a means of primary understanding and orientation.

Further development involves the formation of scenarios that allow for the consideration of multiple possible trajectories and move beyond reactive behavior. In this logic, trust becomes a necessary condition for coordinating actions and making decisions, as it enables collective choice in conditions of uncertainty. Decisions, in turn, cease to be final and take on the form of prototypes – temporary, testable constructs that can be adapted during implementation. The final stage is institutionalization, in which successful practices are embedded in sustainable forms.

Thus, the model reflects a sequential transition from fixation to interpretation, from control to meaning-making, and from reactive management to proactive design of the future. Creativity in this system serves a connecting function: it facilitates the transition between stages, enables the formation of new conceptual constructs, and fosters the emergence of management practices oriented not toward reproducing the past but toward creating the future.

6.6. Institutionalization of Creative Management

The final stage of public administration transformation is the institutionalization of new approaches. Creative practices do not become sustainable on their own, but rather through their integration into regulations, procedures, and organizational culture. Without this, they remain isolated initiatives incapable of changing the underlying logic of the system's operation.

Institutionalization involves the systematic integration of creative methods into administrative activities – from the stages of analysis and planning to decision-making and implementation (Amabile, 1996; Sawyer, 2012). At the same time, relevant competencies are developed: the ability to think creatively, work with scenarios, interpret complex situations, and make decisions under conditions of uncertainty. A key role is played by the transformation of organizational structures, which must ensure flexibility, the ability to respond quickly, and adapt to changing conditions.

Equally important is the formation of a culture in which uncertainty is viewed not as a threat but as a space of possibilities. This requires a shift in managerial thinking – a transition from a focus on rigid regulation to the acceptance of variability, experimentation, and prototyping of solutions.

As a result, creativity ceases to be an occasional tool and becomes established as a systemic characteristic of governance. It becomes an embedded mechanism that ensures institutions’ ability to renew, adapt, and develop new practices in a complex and dynamic environment.

Creative technologies transform public administration, shifting it from the normative logic of reproduction to the dynamics of meaning-making and scenario-based action. They ensure adaptability, improve the quality of decisions, and establish sustainable mechanisms for interaction in conditions of complexity and uncertainty.

It should be noted that the choice of a creative approach is not universal: it is determined by the nature of the management task, the level of uncertainty, and the stage of the cognitive process. Accordingly, methods should be selected not based on preference, but on the principle of cognitive adequacy to the situation.

The selection of creative methods depending on the type of management task can be represented as follows (*Figure 6.1.*):



Figure 6.1. Matrix for choosing creative approaches in public management: integration of task type, cognitive mode, knowledge spiral stages, and meaning formation.

Source: author's elaboration

The matrix demonstrates how creative methods align with specific management tasks, levels of uncertainty, and stages of the knowledge spiral, enabling the construction and stabilization of meaning in complex governance environments.

The presented model (fig. 6.1) reflects a methodological shift from the fragmented use of creative methods to their systematic integration into the management process. It is based on the comparison of three key parameters: the type of management task, the cognitive mode of thinking, and the stage of the knowledge spiral. This framework allows creativity to be viewed not as a universal tool, but as a context-dependent mechanism whose effectiveness is determined by its suitability for a specific situation.

The logic of the model is based on the assumption that different managerial tasks require different modes of thinking: uncertain situations activate divergent and imaginative mechanisms, complex analytical tasks – systemic ones, and decision-making stages – convergent ones. At the same time, the spiral model of cognition defines the dynamics of the transition from uncertainty to stability through successive stages of imaginative comprehension, interpretation, formalization, and institutionalization.

Creative methods in this system function as tools distributed across these stages and facilitating the transition between them. Their application allows not only for the generation of solution options but also for reducing the level of distortion, harmonizing interpretations, and forming a stable semantic field necessary for coordinating actions in public administration.

The choice of a creative approach is not universal: it is determined by the nature of the management task, the level of uncertainty, and the stage of the cognitive process. Accordingly, methods should be selected not based on preference, but on the principle of cognitive adequacy to the situation.

Creativity in public administration ceases to be a “tool for generating ideas” and becomes a system for selecting the appropriate mode of thinking for the task at hand.

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Chapter 7. Creative Technologies for Business: A Comparative Analysis with Public Administration

The logic of creative technologies, examined in the context of public administration, allows us to move on to an analysis of their application in business. Despite differences in goals and institutional conditions, both systems operate in a similar environment characterized by high uncertainty, information overload, and the need for rapid decision-making (Simon, 1997; Davenport & Beck, 2001).

The key difference lies not in the tools themselves, but in how they are applied. Public administration focuses on legitimacy and the reconciliation of interests, whereas business focuses on efficiency, speed, and competitive advantage (Weick, 1995; Teece, 2007).

7.1. Diagnosing Managerial Rigidity

Rigidity in business manifests itself through reliance on established models, operational inertia, and a focus on past success, which limits the ability to adapt (Christensen, 1997). Overloading metrics without interpreting them widens the gap between data and understanding, leading to strategic inertia (March, 1991).

7.2. From Operational Management to Scenario Thinking

The transition to scenario-based thinking is becoming a key mechanism for business adaptation to uncertainty. It allows for the consideration of market dynamics, competitor behavior, and the volatility of consumer preferences (Schoemaker, 1995).

Unlike in public administration, where scenario planning is aimed at coordination, in business it is oriented toward anticipation and the creation of new opportunities (Teece, 2007).

7.3. Image-Centered Models in Business

In business, the image serves not only as a cognitive orientation but also as a strategic positioning tool. Visual and symbolic constructs become key instruments for building competitive advantage and managing perception (Mitchell, 1994; Holt, 2004).

Image allows for the synchronization of an organization's internal processes and external communications, creating a coherent system of meanings that influences consumer behavior.

7.4. The Architecture of Trust: Market vs. Society

Trust in business is linked to reputation and brand and is built through consistency, transparency, and clarity in communication (Edelman, 2020; Weick, 1995).

Creative methods, including storytelling and visualization, allow for the formation of lasting cognitive and emotional connections with the audience, strengthening loyalty and reducing choice uncertainty (Fog et al., 2010).

7.5. Management Transformation: From Control to Adaptability

Modern business is shifting from rigid management models to flexible systems based on the principles of adaptability, experimentation, and rapid decision-making (Ries, 2011).

The concept of dynamic capabilities emphasizes the need for constant updating of strategies and organizational practices in response to changes in the environment (Teece, 2007).

7.6. Institutionalizing Creativity in Business

Creativity is embedded in business through corporate culture, management practices, and organizational structures, shaping a company's capacity for innovation and adaptation (Amabile, 1996; Sawyer, 2012).

Companies that integrate creative technologies demonstrate greater resilience and the ability to create new market niches (Christensen, 1997).

A comparison shows that creative technologies have a universal cognitive basis but differ in their goals and speed of application.

Public administration is oriented toward sustainability and coordination, whereas business is oriented toward adaptability and competitive advantage.

In both cases, creativity acts as a mechanism for transitioning from information to meaning and action (Weick, 1995).

To better understand the role of creative technologies, it is useful to examine their application in various institutional contexts. Despite the use of similar methods and cognitive mechanisms, public administration and business demonstrate fundamentally different logics of implementation, determined by the systems' objectives, the nature of the environment, and the type of decisions made.

A comparative analysis reveals not only differences but also a common foundation – creativity as a mechanism for dealing with uncertainty and constructing meaning. The table below systematizes the key parameters through which these differences manifest and demonstrates how the same set of tools transforms depending on the management context (see Table 7.1).

Table 7.1.

Public Governance vs. Business: Comparative Logic of Creative Technologies

Parameter	Public Governance	Business Systems
System Goal	Legitimacy, reconciliation of interests, sustainability	Efficiency, profit, competitive advantage
Type of environment	Social complexity, political uncertainty	Market dynamics, competitive pressure
Key risk	Loss of trust and legitimacy	Loss of competitiveness
Type of rigidity	Regulatory (rules, procedures)	Model-based (outdated business models)
Key problem	Decision paralysis, textocentrism	Inertia, reliance on past success
Dominant mindset (traditional)	Convergent, rule-based	Convergent, operational
Direction of transformation	→ Scenario-based, image-centered	→ Adaptive, innovative
Role of the image	Coordination, unification of meanings	Positioning, differentiation
The role of scenarios	Shaping the future	Seizing opportunities
The role of trust	The basis of legitimacy	The basis for choice (brand, reputation)
Creative methods	Reducing distortions, aligning interpretations	Generating advantages, accelerating decisions
Speed of decision-making	Low / institutionally constrained	High / market-driven
Form of decisions	Regulations, policies, programs	Product, strategy, hypothesis
Approach to uncertainty	Reduction, control	Utilization, capitalization
Prototyping	Limited, institutionally complex	Key mechanism (MVP, testing)
Institutionalization	Through norms and regulations	Through culture and practices
Outcome of creativity	System sustainability	Competitive advantage

Source: author's elaboration

A comparative analysis shows that the difference between public administration and business is determined not by the presence or absence of creative technologies, but by the logic of their application. In the public system, creativity is aimed at harmonizing and stabilizing meanings, whereas in business, it is aimed at transforming them and using them in competition.

Both systems use the same cognitive mechanisms, but with different goals:

- *public administration seeks to reduce uncertainty,*
- *business seeks to extract value from it.*

Creative technologies are a universal cognitive tool, yet their managerial function is determined by context: in public administration, they stabilize the system; in business, they accelerate its transformation.

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Chapter 8. Creative Technologies in Advertising, PR, and Media

8.1. Constructing Meaning in Branding

In an environment of information overload, a brand ceases to be a carrier of a fixed meaning and transforms into a dynamic space for meaning-making that takes shape during the communication process. Meaning is not conveyed in a ready-made form but emerges through interpretation, where the message is integrated into the audience's individual and sociocultural experience (Weick, 1995; Holt, 2004).

From the perspective of communication theory, meaning is formed as a result of the interaction of information, message, and understanding, with the final interpretation inevitably differing from the sender's original intention (Luhmann, 2000). Communication, therefore, is not a transmission but a process of constructing meaning in dialogue, in which the audience plays an active role.

This process can also be formalized using the following model:

$$Meaning = \frac{\sum \text{powers of influence}}{n \text{ interpretations}}$$

where:

\sum powers of influence – the set of influences that distort or modify the brand message (information noise, cultural stereotypes, competing images, emotional reactions, media environment);

n interpretations – the number and variety of interpretations arising among the audience.

In branding, this formula takes on practical significance. If the level of external influences is high, and interpretations are numerous and inconsistent, the meaning becomes “blurred” and loses manageability. Conversely, reducing distortions and narrowing the interpretive field leads to greater cognitive clarity and stability of meaning.

It is precisely here that creative technologies serve as tools for managing *Meaning*. Storytelling, visual codes, metaphors, and narrative structures allow us to:

– reduce the level of noise and competing influences;

- structure perception;
- set the framework for interpretation;
- form a common semantic field.

Thus, the task of branding is not to convey a message, but to manage the parameters of meaning-making – controlling influences and coordinating interpretations.

Dialogue plays a special role in this process. Since meaning arises on the audience's side, the brand must not only communicate but also listen, adapt, and fine-tune its communication. Feedback becomes a mechanism for adjusting *Meaning*, allowing for a balance between the multiplicity of interpretations and their coherence.

As a result, branding transforms from an act of communication into a system of collaborative meaning-making, where creativity functions not as the generation of ideas, but as a technology for managing *Meaning* in conditions of uncertainty.

8.2. Semantic Barriers and Thesaurus Conflicts

One of the key limitations of communication is the difference in thesauri – the systems of knowledge, meanings, and semantic connections of the participants in the interaction. A thesaurus functions as a cognitive filter (Θ -filter): a subject is capable of interpreting only that information which partially corresponds to existing experience. In this regard, communication is possible only in the intersection of semantic systems:

$$\Theta_1 \cap \Theta_2 \neq \emptyset,$$

where Θ_1 is the sender's thesaurus, and Θ_2 is the receiver's thesaurus. Understanding arises precisely in this area, whereas elements that fall outside its boundaries are either distorted or not interpreted at all.

Semantic barriers arise when the encoding and decoding of a message do not match, leading to a discrepancy between communicative intent and actual perception (Shannon & Weaver, 1949; Luhmann, 2000). Communication is not a linear transmission but a selection of information, messages, and understanding, and their complete alignment is practically unattainable (Ivanova & Myronenko, 2024).

From this follows a fundamental principle: a word does not convey meaning but initiates its reconstruction within the framework of an individual's lexicon. Even when linguistic forms coincide, interpretations can vary significantly due to differences in experience, cultural codes, professional languages, and cognitive attitudes. This gives rise to the "illusion of communication," in which a message is formally transmitted but fails to reach the level of understanding.

In branding, thesaurus conflicts manifest particularly clearly: complex or specialized codes are not understood by the audience, brand values are interpreted ambiguously, a gap arises between positioning and perception, and the effect of a "foreign" brand is formed. These processes can be interpreted through the formula of meaning.

The thesaurus barrier increases both parameters of this model: it amplifies the sum of distorting effects ($\sum powers\ of\ influence$) due to noise, cultural, and cognitive filters, and simultaneously expands the number of interpretations (n interpretations) as a result of diverging conceptual frameworks. Consequently, meaning becomes distorted, and control is lost.

Overcoming thesaurus conflicts requires not simplifying content, but systematic work with interpretations. The central task of communication becomes expanding the intersection of thesauri, which can be expressed as maximizing the area of common understanding: $\max (\Theta_1 \cap \Theta_2) + \text{area expansion}$.

In this process, creative methods act as mediators between different systems of meaning. They allow for the reduction of cognitive and cultural distortions, the formation of common points of interpretation, the synchronization of perception, and the translation of complex semantic constructions into accessible forms. Visualization, metaphorization, storytelling, and dialogue take on particular significance as tools for reconciling meanings.

In the logic of the "image \leftrightarrow text \leftrightarrow thesaurus" triad, text serves the function of recording, the thesaurus that of interpretation, while the image acts as a mediator facilitating the transition between different systems of understanding. This is precisely

why visual and narrative forms of communication become key mechanisms for overcoming semantic barriers.

Thus, communication transforms from the transmission of messages into a process of harmonizing meanings, where it is not so much the content that is subject to management as the conditions of its interpretation. In this context, creativity functions as a technology for working with thesauri – a mechanism that allows for lowering barriers, expanding the cognitive space of interaction, and creating conditions for joint meaning-making in a dialogic environment.

8.3. Neurobranding and Emotional Architecture

Continuing the logic of meaning construction (8.1) and the consideration of thesaurus constraints (8.2), it should be emphasized that brand perception is determined not only by cognitive but also by affective mechanisms. Neurobranding considers communication as a process in which interpretation and emotional response are formed synchronously and mutually reinforce one another (Damasio, 1994; Kahneman, 2011). This means that meaning arises not only through understanding but also through experience, which guides and structures interpretation.

In this perspective, neuroaesthetics takes on particular significance – a field of research that examines how visual and sensory stimuli activate neural mechanisms of perception, attention, and emotion (Kosslyn et al., 2006; Vartanian & Goel, 2004). The results of these studies show that visual forms are capable of directly influencing cognitive and affective processes, bypassing complex stages of rational processing. This opens up fundamentally new possibilities for creative practices: communication can be designed not only at the level of content, but also at the level of perception.

In this context, the emotional architecture of a brand functions as a system for the purposeful construction of the interaction experience. It includes visual images, the rhythm and dynamics of information presentation, color and compositional choices, associative sequences, and symbolic structures. All these elements shape not only the semantic content but also the emotional context in which that content is perceived. Unlike text-centric models focused on conveying meaning, emotional architecture

operates at the level of pre-setting perception, reducing uncertainty and directing attention.

The connection to thesaurus logic is evident in the fact that emotional and visual mechanisms allow us to overcome the limitations of differences in experience and knowledge. While rational understanding requires a match in semantic structures, emotional perception creates a shared field of experience within which the harmonization of interpretations becomes possible. In this sense, image and emotion act as universal mediators between different thesauri.

A key consequence of this is the expansion of creative possibilities. Knowledge of the neural mechanisms of perception allows us to move from intuitive creativity to the conscious design of communication that takes into account the patterns of attention, memory, emotional response, and associative thinking. Creativity ceases to be merely the generation of ideas and becomes a technology for working with perception – the ability to construct forms that activate the desired cognitive and affective responses.

Dialogue plays a special role in this system. The audience's emotional reaction becomes a form of feedback, allowing us to identify discrepancies between intention and perception and to adjust communication. The result is a cyclical model of interaction in which meaning is constantly refined and developed. This transforms branding into an adaptive system capable of self-renewal.

Thus, neurobranding and emotional architecture reinforce the image-centered logic of communication, shifting it from the level of information transmission to the level of perception management. They open up new perspectives for creative practices, allowing us to combine knowledge of neural mechanisms with meaning-making technologies and thereby form deeper, more sustainable, and shared forms of communication.

8.4. Creative PR in a Crisis

Crisis communication requires not only responsiveness but also the ability to work with uncertainty, fragmented information, and multiple interpretations. In a crisis, the speed at which messages spread significantly outpaces the formation of their

understanding, which increases the risks of misinterpretation, speculation, and reputational damage (Coombs, 2007). A situation arises in which managing communication effectively means managing meaning in conditions of its instability.

In this regard, creative PR acts as a mechanism for structuring a chaotic information space. Its task is not simply to inform, but to organize a field of interpretation within which the audience is able to form a coherent and consistent understanding of what is happening. This requires a shift from a reactive communication model to a proactive one, where messages not only respond to events but also set the framework for their perception.

Open dialogue becomes the key principle, allowing not only the transmission of information but also the engagement of the audience in the process of making sense of it. In a crisis, it is precisely dialogue that mitigates the effect of semantic gaps, as it provides the opportunity to clarify, adjust, and align interpretations in real time. The absence of dialogue, on the contrary, intensifies the effect of an “information vacuum,” which is quickly filled with alternative, often uncontrolled versions of events.

Creative methods play a fundamental role. Storytelling allows us to combine disparate facts into a coherent cause-and-effect structure, transforming the flow of information into an understandable narrative. Visualization reduces cognitive complexity and accelerates comprehension, making communication accessible to diverse audiences. Scenario modeling makes it possible to present the development of a situation in real time, thereby reducing uncertainty and shaping expectations.

Managing attention and the emotional backdrop takes on particular importance in crisis communication. In conditions of high anxiety, the audience is prone to simplified and emotionally charged interpretations. Creative PR, based on the principles of neurocommunication, allows us to direct attention, reduce panic, and create a sense that the situation is under control. This is achieved through the rhythm of information delivery, visual cues, symbolic imagery, and the sequence of messages.

Thus, a crisis ceases to be merely a threat and becomes a turning point for transforming the communication strategy. It reveals weaknesses in the system of meaning-making while simultaneously opening up the possibility for its restructuring.

In this logic, creative PR functions not as a reactive tool, but as a technology for managing uncertainty through dialogue, ensuring the alignment of interpretations, restoring trust, and establishing a stable communication environment.

8.5. Visual Persuasion and Media Dramaturgy

Visual forms of communication occupy a central place in persuasion processes, as they influence perception more quickly and directly than textual messages, simultaneously activating cognitive and affective mechanisms (Mitchell, 1994; Kosslyn et al., 2006). As studies of the visual turn demonstrate, an image functions as an independent cognitive unit capable of structuring attention, setting the mode of perception, and participating in the formation of meaning (Ivanova, 2025). Visuality does not merely convey information but shapes the very way it is interpreted, influencing the subject's cognitive, emotional, and behavioral responses.

In the attention economy, visual structures take on additional significance: they act as “attention magnets,” competing for limited cognitive resources and accelerating decision-making (Ivanova & Anpilohov, 2025). Visual clarity reduces cognitive costs, facilitates the interpretation of complex data, and creates a sense of controllability and predictability, which enhances the persuasiveness of communication.

Media dramaturgy takes on particular significance in this logic, as it allows us to view communication as an unfolding process rather than a static message. The dramatic structure – from the presentation of a problem and the creation of tension to the culmination and resolution – corresponds to basic cognitive mechanisms of perception, since people tend to make sense of reality through scenarios and cause-and-effect relationships (Bruner, 1991).

Media dramaturgy enhances the persuasive effect through the temporal organization of meaning: the meaning is not established immediately but is revealed gradually, engaging the audience in the process of interpretation. This allows for the management of attention, the shaping of expectations, and the steering of perception. In conditions of information overload, it is precisely the dynamic structure of

presentation that reduces the likelihood of gaps in meaning and enhances the memorability of the message.

Dialogic nature in this model manifests itself in the active role of the audience. The recipient does not simply perceive a ready-made story, but interprets it, fills in the gaps, and relates it to their own experience. As studies of visual culture show, an image does not fix meaning but initiates its construction during the process of perception (Mitchell, 1994; Ivanova, 2025).

Thus, visual persuasion ceases to be a one-sided influence and becomes a process of collaborative meaning-making, where communication develops as interaction rather than as transmission.

8.6. The Audience as a Co-Creator of Meaning

The development of digital media is radically transforming the role of the audience, shifting it from the position of a passive recipient to the status of an active participant in the communication process. Users not only receive information but also interpret, process, modify, and disseminate content, thereby directly participating in the formation of meaning (Jenkins, 2006).

Contemporary research on visual culture and communication confirms that meaning is not formed on the sender's side, but in the process of interaction between communication participants, where the audience acts as a co-author of interpretation (Ivanova, 2025). This leads to a shift from a linear model of transmission to a model of co-authorship, in which meaning emerges through the interaction of multiple actors.

Under these conditions, communication ceases to be a completed act and takes on the character of an open system in which meanings are constantly refined, transformed, and reproduced. In this logic, dialogue becomes not a supplementary element but the basic mechanism of communication.

From the perspective of creative technologies, this implies the need to design not only messages but also the conditions for participation. Interactive formats, user-generated content, open narratives, and platform mechanics allow for engaging the audience in the process of creation and interpretation. As a result, communication

acquires the properties of a self-developing system that is capable of adapting to changes in the environment and expanding its own semantic field.

Of particular importance is that co-authorship enhances the effect of trust and engagement. Participation in the creation of meaning fosters a sense of belonging and responsibility for interpretation among the audience, which makes communication more sustainable. In this context, creativity manifests as the ability to create forms of interaction that stimulate not only perception but also active participation.

Thus, the audience becomes not an object of influence, but a subject of communication. Creative technologies focused on dialogue and engagement allow us to move from managing messages to managing the processes of meaning-making, transforming communication into a living, dynamic, and open system.

An analysis of creative technologies in advertising, PR, and media shows that modern communication is undergoing a fundamental transformation: from the transmission of messages to the co-construction of meaning. What becomes key is not the content of the message as such, but the conditions of its interpretation, which are formed in the process of interaction between the brand and the audience.

First, meaning in communication loses its fixed character and takes on a dynamic nature. It emerges at the intersection of interpretations, which requires managing not only the messages but also the cognitive environment of their reception. This process shifts branding into the realm of working with *Meaning* as a manageable category.

Second, thesauric differences act as a fundamental constraint on communication. Understanding is possible only at the intersection of meaning systems, making dialogue and the harmonization of interpretations key mechanisms of effective communication. Within this logic, creative technologies serve as mediators, translating complex meanings into accessible forms and reducing cognitive barriers.

Third, the development of neurobranding and neuroaesthetics demonstrates that perception is formed at the level of the integration of cognitive and emotional processes. This opens up new perspectives for creative practices: communication can be designed not only at the level of content but also at the level of perception, allowing for the management of attention, emotions, and interpretation.

Fourth, crisis communication shows that managing meaning becomes critically important in conditions of uncertainty. Creative PR allows for the structuring of a chaotic information space, forming a stable field of interpretations and reducing the risks of reputational damage through dialogue and transparency.

Fifth, visual forms and media dramaturgy enhance the effectiveness of communication through the dynamic organization of meaning. Visuality serves not as an illustration but as a tool for thinking, while dramaturgy is a means of holding attention and managing interpretation.

Sixth, the audience ceases to be a passive recipient of information and becomes a co-creator of meaning. This leads to the formation of a dialogical model of communication, in which meaning emerges through the interaction of multiple participants. Creative technologies in this system are aimed at creating conditions for participation that ensure the self-development of communication.

Thus, creative technologies in advertising, PR, and media perform a systemic function: they facilitate the transition from information to meaning, from transmission to interaction, and from control to dialogue.

Thus, it can be argued that creativity in communication functions not as the generation of ideas, but as a technology for managing the processes of meaning-making under conditions of uncertainty. The model can be visualized as shown in the figure (fig. 8.1).

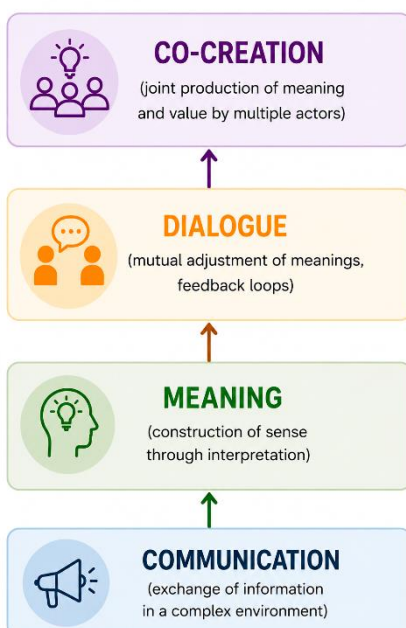


Figure 8.1. Conceptual model of the transformation of communication: from information transmission to co-creation of meaning.

Source: author's elaboration

The model illustrates the transformation of communication from a linear transmission process into a dynamic system of meaning construction. Communication initiates the exchange of signals, meaning emerges through interpretation, dialogue aligns perspectives, and co-creation represents the highest level of shared understanding and value generation.

The presented model (fig. 8.1) demonstrates that modern communication is evolving from information transmission to the co-creation of meaning. At each stage – from communication to co-creation – the role of interpretation, dialogue, and audience participation increases.

In this logic, creative technologies function not as tools of influence, but as mechanisms for organizing meaningful interaction. They facilitate the transition from controlling messages to managing the conditions of understanding, where the key resource is not information, but the system's ability to form, coordinate, and develop meaning in a dialogic environment.

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Chapter 9. Applied Models and Practical Framework Systems

Chapter 9 represents a methodological transition from the theoretical understanding of creativity to the development of applied tools for managing meaning, communication, and change. Within this section, creativity is conceptualized not as a spontaneous ability to generate ideas, but as a systematically organized mechanism for dealing with uncertainty. This approach aligns with contemporary research on creative thinking, which emphasizes the need to move from linear problem-solving models to flexible and multidimensional systems for interpreting and designing the future (Johansson, 2004; Lehrer, 2012).

The central thesis of the chapter is based on rejecting the fragmented use of individual creative methods in favor of implementing structured framework models that ensure alignment between the type of task, the stage of the cognitive process, and the relevant mode of thinking.

The fundamental principle underlying this methodology is cognitive adequacy to the situation, according to which the choice of a creative method is determined not by the subject's personal preferences, but by the degree to which the tool corresponds to the structure and level of complexity of the task at hand. The effectiveness of the process directly depends on the relevance of the chosen type of thinking to the level of entropy in the environment. In situations with a low level of uncertainty, priority is given to convergent analysis and algorithmic optimization, while increasing complexity dictates the need to transition to divergent generation of alternatives, and then to systemic and scenario modeling. At the same time, in conditions of multi-stakeholder involvement and conflicting interpretations, the creative process shifts toward the harmonization of meanings, where methods serve as tools for forming a common conceptual framework.

This logic aligns with the concept proposed by Luc de Brabandere and Alan Iny (2013), according to which genuine change requires a “double transformation”: it is not enough to change actions alone – it is necessary to change the way of thinking within which these actions become possible. In other words, effective transformation

involves not merely changing decisions, but changing the cognitive framework within which the situation is interpreted.

The principle of interdisciplinary convergence of ideas – as exemplified, for instance, in Frans Johansson’s (2004) concept of the “Medici Effect” – plays a significant role in this line of reasoning. The author demonstrates that the most significant changes do not arise within closed professional systems, but at the intersection of various fields of knowledge, cultures, and *modes of thinking*. In the context of this monograph, this means that creativity serves as a mechanism for integrating diverse interpretations, images, and scenarios into a unified field of meaning-making.

Gregory Berns (2010) develops a similar line of thought, emphasizing that creative thinking requires the ability to go beyond social and cognitive stereotypes. Breaking established rules and rejecting automated models of perception become a necessary condition for the formation of new ways of understanding. This is particularly important in the context of managerial rigidity and text-centered models of communication, where the dominance of normative procedures limits the system’s ability to adapt and renew itself.

Research by Jonah Lehrer (2012) also emphasizes that imagination and creativity are the result of a complex interplay of cognitive, emotional, and cultural factors. The process of generating new solutions is linked not only to rational analysis but also to the ability to combine previously unrelated elements of experience, forming new configurations of meaning. This approach directly corresponds to the model of meaning generation proposed in the monograph, where image, interpretation, and dialogue serve as key mechanisms for the transition from information to understanding.

In turn, studies of the visual turn and the economy of attention (Ivanova, 2025; Ivanova & Anpilohov, 2025) show that the modern communication environment requires a shift from text-centered forms to image-centered strategies for organizing perception. In conditions of information overload, it is precisely visual and scenario-based models (Ivanova, 2026) that allow for reducing cognitive complexity, structuring interpretation, and accelerating the process of meaning formation.

Thus, Chapter 9 forms an integrated methodological platform in which creativity functions as a managed system of cognitive and communication practices. The proposed framework models facilitate the transition from the intuitive use of creativity to its institutionalization in public administration, business, PR, and media, transforming creative thinking into a tool for systemic transformation and the design of the future.

9.1. Methodology for Selecting Creative Strategies

One of the fundamental tasks of applied analysis is to establish a correspondence between methodological tools and the specifics of the problem being solved. Based on the postulate that there are no universal technological solutions (Brabandere & Iny, 2013; Berns, 2010; Lehrer, 2012), the process of selecting a specific strategy is determined by a set of factors: the level of entropy (uncertainty) in the environment, the degree of structural definition of the task, and the need to achieve consensus in interpretations among the participants in the process. The systematic logic for selecting a creative approach is based on the following analytical model (see Table 9.1), which was developed based on the material presented above.

Table 9.1.

Correlation matrix of creative strategies and types of cognitive tasks

Task type	Level of uncertainty	Approach	Type of thinking	Methods
Clearly defined	Low	Optimization	Convergent	Analysis, matrices, algorithms
Partially defined	Average	Generation of alternatives	Divergent	Brainstorming, morphological analysis
Complex/weakly structured	High	Reflexive	Visual/ Image	Maps, scenarios, visualization
Conflictual multi-subject	High	Coordination	Dialogical	Affinity diagram, storytelling
Strategic	Very high	Designing the Future	Systemic	Scenario modeling, foresight

Source: author's elaboration

Based on the presented classification, key conclusions that summarize the logic behind the selection of methodological tools can be formulated:

The principle of cognitive adequacy. The choice of a specific creative method is determined not by the subject's subjective preferences, but by the structural correspondence of the tool to the nature of the task at hand. The effectiveness of the creative process directly depends on the extent to which the chosen type of thinking (convergent, divergent, systemic, etc.) is relevant to the level of entropy and the specifics of the problem domain.

The correlation between uncertainty and the complexity of thinking. As uncertainty increases, there is a natural transition from algorithmic, linear methods (analysis, optimization) to nonlinear, synthetic approaches (scenario modeling, systems design). The less structured the task, the greater the need to use visual-imagery and dialogic strategies of comprehension.

Creativity as a tool for reducing entropy. Each of the presented models performs a specific function in organizing reality: from searching for the single correct solution in clearly defined tasks to designing possible future scenarios under conditions of strategic uncertainty.

The communicative aspect of decision-making. In situations involving multiple actors and conflicting interpretations (high levels of uncertainty), the creative process shifts toward the harmonization of meanings. In such contexts, methods (storytelling, affinity diagrams) serve not so much as means of generating ideas as tools for forming a shared conceptual framework (*Figure 9.1.*).

Cognitive Fit of Creative Strategies

Matching task types, uncertainty levels, thinking approaches and methods

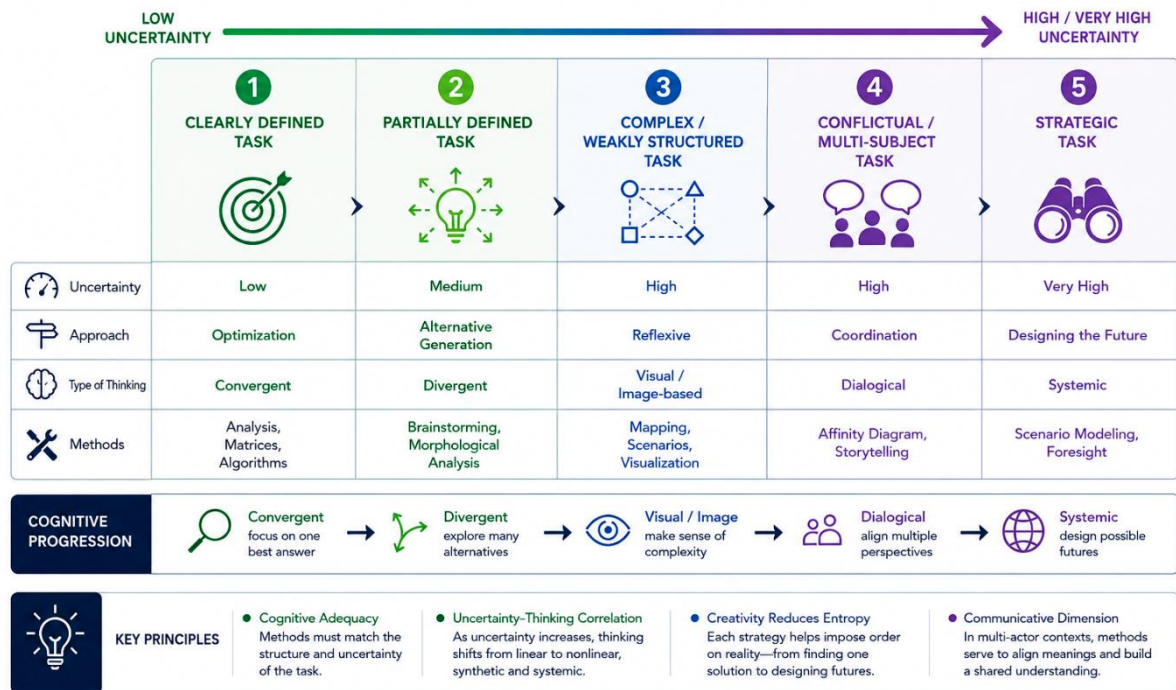


Figure 9.1. Cognitive fit of creative strategies: alignment of task types, levels of uncertainty, thinking modes, and methods.

Source: author's elaboration

The proposed framework model determines the transition of creative activity from the category of spontaneous intuitive activity to the realm of verifiable methodological choice. Within this paradigm, each set of tools serves as a logical deduction from the specific conditions of the cognitive situation.

A graphical interpretation of the model (fig. 9.1) clearly demonstrates the existing correlation: the exponential growth of entropy (uncertainty) dictates the need for a sequential shift in thinking paradigms – from linear convergent analysis to synthetic systemic and scenario modeling.

9.2. Linking Methods to the Spiral Model of Cognition

The systematization of applied tools finds its logical conclusion in the correlation of specific techniques with the previously established spiral model of cognition. The dynamics of the process – from encountering the Unknown to reaching the Stability phase – require specific cognitive operations at each stage. Within this logic, creative

methods are viewed not as isolated techniques, but as functional transitions that ensure the sequential transformation of meanings and their subsequent institutionalization.

The model presented below (see Table 9.2.) establishes a correspondence between the stage of the epistemological cycle and the relevant set of tools necessary for advancing along the trajectory of cognition.

Table 9.2.

Distribution of Creative Tools Across the Stages of the Cycle of Cognition

Stage of the cognitive cycle	Cognitive function	Relevant tools
Unknown	Navigating uncertainty	Weak signal analysis, active monitoring, anomaly detection
Image	Formation of primary meanings	Visualization, conceptual metaphorization, sketching
Assimilation	Verification and operationalization	Scenario modeling, prototyping, stress testing
Text	Semiotic fixation	Formulation of strategies, development of regulations and manifestos
Stability	Institutionalization of experience	Standardization of processes, creation of reproducible algorithms

Source: author's elaboration

An analysis of the integration of methods into the structure of the spiral model allows us to formulate the following propositions:

The procedural role of creativity. Creativity acts not only as a generator of novelty but also as a connecting mechanism ensuring a deterministic transition between stages of cognition. Without the use of appropriate tools, the process risks stalling at the initial image stage, failing to reach the stage of practical fixation.

Functional specialization. Each stage of the cycle presents a unique demand on creative thinking: from the detection of non-obvious data at the “Unknown” stage to rigid structural crystallization at the “Text” stage.

Transformation of uncertainty into structure. The result of the consistent application of this framework is the conversion of chaotic impulses from the external environment into stable institutional forms. Creativity acts as a filter and structuring agent, transforming a cognitive challenge into an organizational resource.

9.3. Governance Transformation Framework: A Conceptual Model of Public Governance System Transformation

At the beginning of the 21st century, public administration systems around the world are facing increasing complexity, accelerating social and technological change, crises of trust, information overload, and a high degree of uncertainty (Castells, 2010; Innerarity, 2015). Traditional administrative models, shaped by the logic of industrial society and based on normativity, hierarchical subordination, and rigid procedural regulation, increasingly demonstrate a limited capacity to adapt in a dynamic environment (Weber, 1978; Bauman, 2000). Such systems function effectively under stable and predictable conditions, but prove insufficiently flexible in situations requiring rapid comprehension of changes, coordination of multiple actors, and prompt decision-making.

One of the key challenges of modern public administration is the mismatch between the pace of environmental change and the pace of institutional response. Bureaucratic mechanisms focused on control and the reproduction of procedures often prove incapable of dealing with high variability and multiple interpretations. This leads to increased managerial rigidity, a more reactive nature of decisions, and the emergence of “decision paralysis,” in which the presence of a large volume of information does not ensure the capacity for strategic action (Simon, 1997; Taleb, 2007). As a result, governance begins to focus not on shaping the future, but on maintaining the formal stability of the system.

Information overload and the transformation of the communication environment become additional factors in the crisis. In the attention economy, state institutions are forced to compete not only for resources but also for the ability to build trust, shape interpretations, and foster public consensus (Goldhaber, 1997; Davenport & Beck, 2001). Text-centric models of communication, based primarily on regulations, reports, and formal communications, are increasingly giving way to visual, scenario-based, and dialogic forms of interaction, which ensure a faster and more holistic perception of complex processes (Mitchell, 1994; Ivanova, 2025).

In this regard, there is a need to transition to a new logic of public governance, founded on the categories of meaning, trust, dialogue, and scenario-based thinking. Governance is beginning to be viewed not as a system of linear control, but as a process of interpreting, coordinating, and designing possible future states. The proposed Governance Transformation Framework conceptualizes this transition as a sequential transformation of the governance system – from static, reactive, and norm-oriented models to dynamic, adaptive, and meaning-centered forms of governance capable of functioning under conditions of uncertainty and high complexity (*Figure 9.2*).

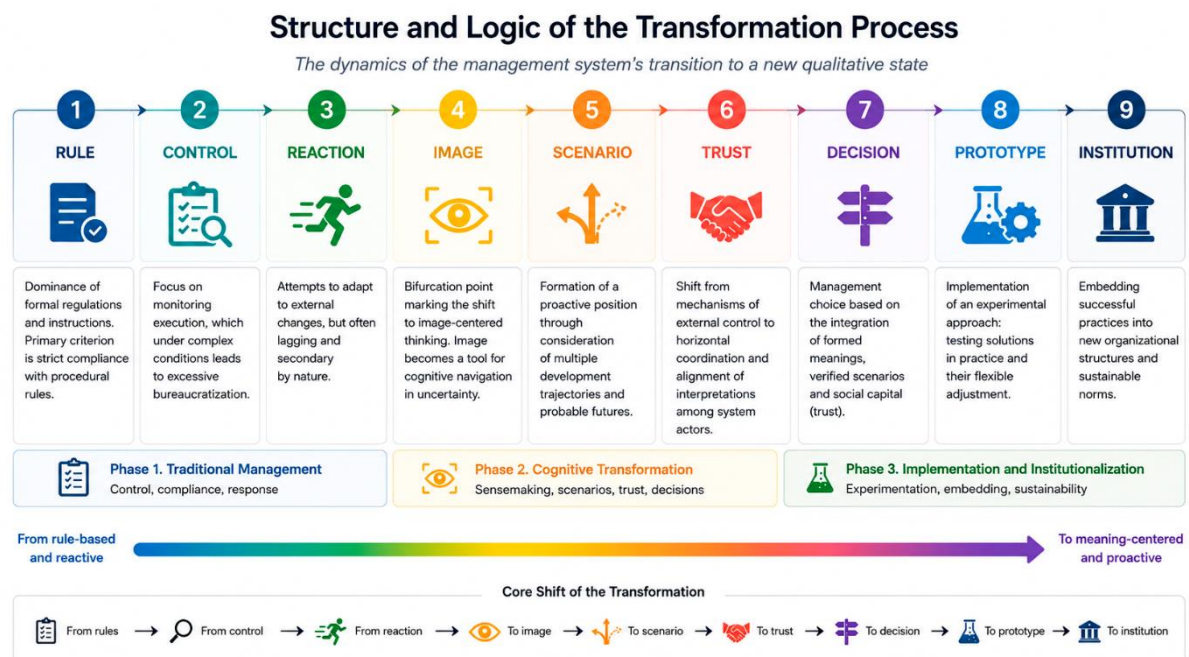


Figure 9.2. From regulation to meaning: a staged model of governance transformation under conditions of complexity and uncertainty.

Source: author's elaboration.

The figure 9.2 illustrates the transition from reactive, rule-based governance to proactive, scenario-oriented, and meaning-centered management through successive stages of cognitive and institutional transformation.

This model captures key paradigm shifts in governance architecture. First, the semiotic shift reflects the transition from the dominance of text-centered forms to the use of visual and conceptual images as tools for primary interpretation. Second, the axiological shift consists in the transition from formal adherence to norms to the search for and generation of meanings as the basis of managerial action. Third, the mechanistic shift manifests itself in the transformation of control into trust and in the

transition from reactive models to scenario-based thinking. Fourth, the methodological shift marks the replacement of final decisions with iterative processes of prototyping and experimentation.

Within the Governance Transformation Framework, creativity functions not as an aesthetic characteristic but as a functional mechanism of transformation that facilitates transitions between stages. It enables to interpret complex and uncertain situations, model alternative development scenarios, and reconcile the positions of various actors. Thus, creativity becomes the link between the cognitive and managerial levels of the system.

This framework is the synthetic result of integrating the monograph's key concepts – the model of meaning generation, communication theory, and the spiral model of cognition. Their interconnection forms a unified transformation cycle: image → scenario → dialogue → decision, which determines the logic of the transition from interpretation to action.

The practical significance of the model lies in its applicability for diagnosing the state of management systems, designing institutional reforms, and developing strategies for proactive development. Overall, the transformation of governance is not a change in procedures but a profound modification of the cognitive foundations of governance. In conditions of uncertainty, governance becomes a process of continuously constructing the future through meaning, where image, scenario, and dialogue serve as key decision-making tools.

9.3.1. Adaptive Governance Cycle: An Algorithm for Scenario-Oriented Governance

Thus, with the general process formula: Diagnosis→Image→Scenario→Dialogue→Decision→Prototype→Adaptation→Institution, the logic of change is established.

Thus, in practical terms, the Governance Transformation Framework can be represented as an adaptive cycle of scenario-oriented governance, ensuring a sequential transition from problem diagnosis to the institutionalization of solutions. Unlike linear

administrative models focused on executing a predefined plan, this cycle is iterative and flexible, involving the continuous refinement of interpretations and adjustment of actions in response to changes in the environment.

The initial stage is *diagnosis* – the identification of structural constraints, areas of uncertainty, and gaps in understanding within the management system. At this stage, not only quantitative indicators are analyzed, but also the nature of communication, the level of trust, the degree of fragmentation in interpretations, and the presence of cognitive rigidity.

The next stage – *image* – involves the formation of a holistic picture of the situation. This image serves as a cognitive navigational tool, allowing us to integrate disparate signals into a coherent configuration and form a preliminary understanding of the problem before it is fully formalized. Within this logic, the Theory U approach (Scharmer, 2009) takes on particular significance, viewing the transformation process as a transition from the automated reproduction of previous models of perception (“downloading”) to the ability to see, sense, and comprehend the emerging future (“seeing,” “sensing,” “presencing”).

From this perspective, an image serves not merely as a visual representation of a situation, but as a mechanism for the emergence of a new managerial vision arising from the process of deeply interpreting the environment. The “*image*” stage allows one to go beyond existing normative frameworks and form a preliminary configuration of the future that has not yet been fixed in textual or institutional forms. This is precisely why the image in this model serves as an intermediate link between uncertainty and the scenario, facilitating the transition from perceiving signals to designing possible trajectories of development.

The *scenario* stage involves the development of alternative scenarios for the course of events. Governance begins to be viewed not as the implementation of a single solution, but as working with a multitude of possible future states. This allows the system to increase its adaptability and reduce its dependence on linear forecasts.

The *dialogue* stage ensures the alignment of interpretations among various actors. A common semantic field is formed there, which is necessary for coordinating actions

and reducing conflicts of perception. In this model, dialogue is not a supplement to management but its structuring element.

Based on the agreed-upon scenarios, a *decision* is made – a management decision that then moves to the *prototype* stage, involving testing and validation in a limited practical environment. Prototyping reduces the risk of large-scale errors and shifts management from a rigidly fixed mode to a mode of experimental development.

The *adaptation* stage ensures that decisions are adjusted in accordance with changes in the external environment and feedback results. Thus, management acquires the properties of a self-renewing system capable of continuous learning.

The final stage is *institution* – the embedding of successful practices into organizational structures, procedures, and norms. However, institutionalization in this model does not imply final stabilization: established solutions remain open to subsequent adjustment and updating depending on environmental changes, which corresponds to the cyclical logic of continuous improvement presented in W. E. Deming's PDCA model (Deming, 1986). In this regard, the institution is viewed not as the final point of the system's development, but as a temporarily stabilized form capable of further adaptation and reconfiguration.

Thus, the proposed cycle forms a model of public administration based not on rigid control and linear planning, but on continuous interpretation, dialogue, and adaptive design of the future. Within this logic, governance takes on the character of a process of continuous improvement and self-renewal, which corresponds to the principles of continuous improvement presented in W. E. Deming's PDCA concept (Deming, 1986). At the same time, the effectiveness of such a model depends on the system's ability to deeply perceive and comprehend changes in the environment, which corresponds to O. Scharmer's Theory U (Scharmer, 2009), which emphasizes the transition from the automatic reproduction of past solutions to the formation of a new vision of the emerging future. As a result, management transforms into a process of continuous learning, interpretation, and alignment of meanings in conditions of complexity and uncertainty. Within this logic, the management system begins to function as a learning organization as defined by Peter Senge (1990), where the key

resource is not only the ability to respond to changes, but also the ability to collectively reinterpret experience, form a shared vision, and continuously develop cognitive models of interaction with the environment. Thus, management ceases to be a mechanism for reproducing fixed decisions and transforms into a dynamic system of collaborative learning and designing the future (Table 9.3).

Table 9.3

Adaptive Governance Cycle: stages, supporting approaches, and expected outcomes

Stage of process	Key idea	Supporting approaches	Expected outcomes
Diagnosis	Identification of systemic constraints, areas of uncertainty, and communication gaps	Systems analysis; diagnostic matrices; entropy analysis	Understanding of structural problems and cognitive rigidities
Image	Formation of a holistic picture of the situation and the emerging future	Theory U (Scharmer); visual mapping; image-centered thinking	Holistic perception and cognitive navigation in uncertainty
Scenario	Construction of alternative development trajectories	Scenario planning; foresight; systems thinking	Increased adaptability and preparedness for variability
Dialogue	Coordination of interpretations and the formation of shared meaning	Dialogic communication; affinity diagram; facilitation	Reduction of conflicts of interpretation and trust building
Decision	Selection of strategic direction based on agreed scenarios	Strategic analysis; collective sensemaking	Coordinated and meaning-centered decision-making
Prototype	Testing and experimental implementation of solutions	Agile approaches; prototyping; iterative governance	Reduction of systemic risks and flexibility of implementation
Adaptation	Continuous correction through feedback and environmental change	PDCA cycle (Deming); adaptive management	Organizational learning and continuous improvement
Institution	Consolidation of successful practices into structures and norms	Learning organization (Senge); institutional design	Sustainable transformation and organizational resilience

Source: author's elaboration based on Deming (1986), Scharmer (2009), Senge (1990).

The table 9.3 demonstrates that the transformation of public administration requires not the isolated application of individual methods, but the integration of various cognitive and managerial approaches into a single adaptive cycle. Each stage of the process fulfills its own function – from diagnosis and vision formation to the institutional embedding of practices – yet their effectiveness is determined by the system's ability to sustain continuous learning, interpretation, and adjustment of

actions. Thus, management ceases to be a linear mechanism of execution and transforms into a dynamic system of collaborative meaning-making, adaptation, and future design.

9.4. A Conceptual Model of Scenario-Based Governance in Conditions of Strategic Uncertainty

The Governance Transformation Framework's adaptive cycle presented earlier describes the general logic of public governance transformation as a system of continuous learning, interpretation, and institutional renewal. However, in conditions of high turbulence and accelerating change, there is a need for a more specialized model focused directly on dealing with the uncertainty of the future. This function is performed by the conceptual model of scenario-based governance.

While the Governance Transformation Framework captures the transformation of the governance architecture as a whole – from a regulatory-control logic to meaning-centered and dialogic governance – scenario-based governance focuses on mechanisms for strategic navigation within an uncertain environment. In other words, the first model answers the question of how the management system itself must change, while the second addresses how the system can handle the multiplicity of possible future states.

In the modern management environment, traditional planning methods are increasingly losing their predictive relevance. Classical models, based on linear extrapolation of past experience, assume relative environmental stability and the possibility of constructing a single most probable forecast. However, in conditions of high complexity, information overload, and accelerating social change, such logic proves to be limited (Taleb, 2007; Innerarity, 2015). Uncertainty ceases to be a temporary deviation and becomes a permanent characteristic of the environment. And in conditions of high uncertainty, management must be oriented not only toward stability but also toward the system's ability to adapt and derive benefits from environmental variability, which corresponds to N.N. Taleb's concept of antifragility (Taleb, 2012; Taleb & West, 2022).

In this context, scenario-based management is conceptualized as a cognitive-managerial system focused not on finding a single correct solution, but on working with variability, alternative development trajectories, and multiple interpretations (Ivanova, 2026). Management in this model is viewed as a process of navigating the space of possibilities, where what takes on key importance is not so much forecasting and control as the system's ability to interpret, reconcile meanings, and adaptively design the future.

The procedural architecture of the model can be represented as follows:
Signals→Image→Scenarios→Interpretation→Alignment→Decision→Adaptation

In the first stage – *signals* – weak signals, latent trends, and early signs of change that have not yet crystallized into stable structures are identified. Next, the *image* stage synthesizes disparate signals into a coherent cognitive configuration, allowing to form a preliminary understanding of the situation and reduce the level of uncertainty.

The *scenarios* stage involves the development of alternative models of how events may unfold. Unlike linear planning, management here is based on the recognition of a multiplicity of potential future trajectories. During the *interpretation* stage, scenarios are critically analyzed, taking into account institutional interests, resource constraints, and the system's value systems.

The *alignment* phase ensures that interpretations are harmonized among various stakeholders and that a shared conceptual framework is established, which is necessary for coordinating actions. Based on this alignment, a *decision* is made – a strategic choice regarding the course of action. The final phase, *adaptation*, involves the flexible implementation of decisions, with the ability to continuously adjust them in response to changes in the environment and incoming feedback.

Thus, the fundamental difference between scenario-based management and traditional planning lies not only in the level of flexibility but also in the very logic of working with the future. While classical planning seeks to minimize uncertainty by fixing goals and procedures, scenario-based management views uncertainty as a space of possibilities requiring continuous interpretation and adaptation. In this model, management ceases to be a mechanism for implementing a predetermined plan and

becomes a process of dynamically aligning meanings, scenarios, and decisions in a constantly changing environment.

To more clearly highlight the differences between the two management paradigms, we present a comparative overview in Table 9.4.

Table 9.4.

Comparative Management Logic in Conditions of Stability and Strategic Uncertainty

Comparison Parameter	Traditional planning	Scenario-based management
Fundamental logic	Linear determinism	Multiple variability
Empirical basis	Extrapolation of past experience	Modeling possible future scenarios
Methodological focus	Forecast (prediction)	Interpretation and meaning
Level of flexibility	Low (rigid fixation)	High (adaptive navigation)
Attitude toward uncertainty	Risk minimization	Dealing with variability
Type of decisions	Predefined	Iterative and adjustable
Role of communication	Information transfer	Aligning interpretations
Role of creativity	Supporting tool	A mechanism for designing the future

Source: author's elaboration

The table 9.3 clearly demonstrates that scenario-based management differs from traditional planning not only in its greater adaptability but also in its fundamentally different cognitive architecture. While linear models focus on reproducing stability through control and forecasting, the scenario-based approach is built on the system's ability to work with uncertainty, coordinate various interpretations, and form alternative development trajectories.

Thus, scenario-based management proceeds from a different methodological premise: the future is not a single predetermined trajectory, but rather a space of multiple possibilities. The focus is not on forecasting as an attempt to predict the "correct" course of events, but on interpreting potential scenarios and working with variability, developing distinctive, variable versions of the future. In this model, uncertainty is no longer perceived exclusively as a threat; on the contrary, it is viewed as a resource that opens up opportunities for formulating alternative strategies and designing new development trajectories.

Unlike traditional planning, scenario-based management offers a high degree of flexibility. It does not involve rigidly fixing decisions, but rather adaptive navigation between different scenarios depending on changes in the environment. This requires a shift from linear analytical thinking to a systemic and image-centered approach, within

which interpretation, meaning-making, and the reconciliation of different perspectives play a key role.

The creative component takes on particular significance in scenario-based management. While in traditional planning creativity is often viewed as a supporting element associated primarily with the search for non-standard solutions, in the scenario model it becomes a system-defining mechanism for dealing with uncertainty. Creativity enables the generation of alternative scenarios, the modeling of possible future states, and the integration of diverse interpretations into a unified field of understanding. In this way, management transforms from a process of implementing a predetermined plan into a process of continuously constructing the future through meaning, dialogue, and adaptive decision-making.

The scenario-based management model serves as a connecting link, integrating the spiral model of cognition, mechanisms for generating meaning, and the overall Governance Transformation Framework. The key sequence “image → scenario → dialogue → decision” ensures the continuity of the institutional development process.

In this architecture, creativity acquires the status of a strategic tool for working with the future. It serves to overcome cognitive inertia, enabling the generation of non-standard alternatives and the integration of divergent interpretations into a unified strategic direction.

The transition to scenario-based management marks a paradigm shift: from attempts to predict the future to the logic of actively constructing it. The practical significance of the model lies in increasing the adaptability of socio-political and organizational systems, minimizing the risks of strategic errors, and accelerating decision-making cycles. In this system, the future is not calculated – it is formed as a space of coordinated possibilities, where a management decision is derived from the quality of the collective interpretation of reality.

9.5. Strategy and Practical Recommendations for Implementing Creative Management Models

The transition to meaning-centered, dialogical, and scenario-based management paradigms requires not only conceptual verification but also the development of an algorithmic strategy for practical implementation. The introduction of creative technologies in this context is viewed as a comprehensive systemic transformation encompassing the cognitive attitudes of actors, communication protocols, and basic organizational processes.

Stages of systemic transformation of the management environment

The process of deterministic implementation of innovative management models is based on the integral logic of sequential transitions:

Diagnosis→Image→Scenario→Dialogue→Experiment→Institution.

1. **Diagnostic phase.** The initial stage involves a comprehensive assessment of the system's current state using the developed diagnostic matrix (see Section 9.1). The primary task is to identify "bottlenecks" in the mechanisms of meaning formation, determine the level of semantic entropy, the degree of fragmentation of interpretations, and the predominant type of communication (monological or dialogical).

2. **Formation of a visual level of management.** To overcome the cognitive inertia of textocentrism, it is necessary to implement visual navigation tools. The use of visual process maps, cognitive schemas, and metaphorical constructs enhances the system's ability to orient itself under conditions of high uncertainty (Ivanova, 2024), forming a primary field of understanding.

3. **Institutionalization of scenario-based thinking.** The organizational transition from linear extrapolation to multidimensional modeling involves the implementation of foresight approaches and the development of variable development scenarios. This ensures the transformation of the managerial stance from reactive (responding to changes) to proactive (designing opportunities).

4. **Development of dialogic communication.** A critical condition for the model's effectiveness is a shift in the communication paradigm: from the simple transmission of information flows to procedures for aligning meanings. The application of

facilitation methods and tools for structuring group thinking (e.g., affinity diagrams) allows for the minimization of lexical barriers and the synchronization of the actions of system participants.

5. Prototyping and experimental testing. The management process must include a stage of hypothesis testing through the launch of pilot projects and iterative refinement of decisions. An experimental approach reduces the risks of large-scale strategic errors and increases the organization's overall adaptability.

6. Institutionalization and competency development. Successful creative practices must be embedded in regulatory frameworks, organizational structures, and corporate culture. Concurrently, a new educational environment must be established to develop competencies in scenario analysis, visualization, and dealing with uncertainty.

Analysis of Risks and Typical Implementation Errors

The process of transforming public administration toward scenario-based, meaning-centered, and adaptive models is accompanied by a number of systemic risks capable of significantly reducing the effectiveness of changes or leading to their formalization. As research on organizational learning and institutional transformations shows, the key problem with most reforms lies not in a lack of tools, but in the system's inability to change its own cognitive foundations (Senge, 1990; de Brabandere & Iny, 2013). In this regard, the implementation of creative technologies requires not only procedural changes but also a reevaluation of the very principles of perception, interpretation, and decision-making.

One of the most common risks is mechanistic formalism – a situation in which new methods and tools are implemented without transforming managerial thinking. As a result, scenario planning, foresight approaches, or visual models begin to be used as additional bureaucratic procedures, without changing the logic of decision-making. This trend leads to the imitation of innovation while maintaining the existing regulatory and control architecture of management. As Luc de Brabandere and Alan Iny (2013) emphasize, genuine change is impossible without a “double transformation,” which involves changing not only actions but also the very cognitive frameworks within which these actions take place.

An equally significant risk is the overregulation of creative processes. Attempts to rigidly standardize flexible and adaptive mechanisms lead to the suppression of the system's innovative potential. In conditions of high uncertainty, excessive formalization reduces organizations' ability to experiment, learn quickly, and generate alternative scenarios. As a result, creativity begins to be perceived as a set of prescribed procedures rather than as a mechanism for dealing with the complexity and variability of the environment (Johansson, 2004).

Ignoring the dialogical basis of management poses a particular threat. Scenario-based and meaning-centered models cannot be effectively implemented in closed, hierarchical communication systems where one-way information transfer dominates and mechanisms for reconciling interpretations are absent. As studies of thesaurus barriers and semantic conflicts show, communication without the formation of a common field of understanding leads to increased mistrust, fragmentation of interpretations, and heightened institutional rigidity (Luhmann, 2000; Ivanova, 2025).

Another critical risk is the system's inability to treat errors as a source of learning. In traditional bureaucratic models, an error is viewed as a deviation that must be concealed or punished. However, in adaptive and scenario-based systems, it is precisely the ability to analyze errors and extract knowledge from them that becomes the foundation for development. Matthew Syed (2015), in his concept of Black Box Thinking, demonstrates that closed organizational cultures focused on error avoidance are significantly disadvantageous compared to systems that view errors as a resource for continuous improvement. In the context of public administration, this implies the need to transition from a culture of formal infallibility to a culture of open analysis, experimentation, and decision adjustment.

Another significant limitation is the cognitive inertia of management systems, manifested in the tendency to reproduce familiar response patterns even under fundamentally new conditions. Otto Scharmer (2009) refers to this state as "downloading" – the automatic reproduction of past patterns of perception and action. In conditions of strategic uncertainty, such logic leads to delayed reactions and a reduced ability of the system to form a new vision of the emerging future.

In summary, it should be emphasized that the implementation of creative technologies is not merely a technical update to a set of management tools, but rather a profound transformation of the ways in which thinking, communication, and social interaction are organized. The effectiveness of the proposed models is possible only with a shift from strict control of information flows to flexible management of meanings, interpretations, and development scenarios. In this new architecture, the key resource is the system's institutional capacity for continuous learning, collective reinterpretation of experience, and adaptive design of the future in the context of a permanently changing environment.

Practical Recommendations for Using the Appendices

The practical value of this monograph is reinforced by a system of appendices (Appendices A–D), which contain applied framework models, diagnostic matrices, visualization schemes, and implementation tools designed for practical use in conditions of uncertainty and complex decision-making environments.

The appendices may be applied in the fields of:

- ✓ public administration and governance transformation;
- ✓ strategic communication and PR;
- ✓ corporate and organizational management;
- ✓ media analysis and branding;
- ✓ educational and analytical practice;
- ✓ scenario-based planning and institutional diagnostics.

In particular:

Appendix A contains diagnostic matrices and analytical templates for assessing managerial rigidity, communication distortions, meaning stability, and institutional adaptability.

Appendix B includes framework models and visualization schemes that illustrate the transition from text-centered management to image-centered and scenario-based governance.

Appendix C provides practical instruments for scenario modeling, cognitive mapping, and the analysis of communication environments under conditions of uncertainty.

Appendix D presents methodological templates and structured tools that can be adapted for educational activities, strategic sessions, analytical work, and AI-assisted interpretation of large-scale information flows.

- ✓ Each appendix is supplemented with a practical instruction section explaining:
- ✓ the purpose of the tool;
- ✓ recommended fields of application;
- ✓ stages of implementation;
- ✓ interpretation logic;
- ✓ adaptation possibilities for different organizational contexts.

The proposed materials are not intended as rigid standardized procedures, but as flexible framework instruments that may be modified according to the goals, scale, and complexity of a specific management or communication situation.

In the context of digital transformation and AI-assisted analytics, the appendices may also serve as structured prompts and cognitive templates for processing large volumes of information, supporting scenario analysis, and constructing strategic interpretations.

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CONCLUSION

This study was devoted to the analysis of creative strategies for information activities in the context of increasing complexity, information overload, and the crisis of traditional management models. Based on theoretical and applied analysis we can conclude that the contemporary problem lies not in a lack of information, but in the limitations of the mechanisms for interpreting, structuring, and transforming it into a basis for meaningful action.

The study demonstrated that text-centric models, based on recording, regulation, and linear data processing logic, exhibit increasingly pronounced limitations in conditions of uncertainty. While they ensure reproducibility and control, they prove insufficient for working with low-signal processes, scenario-based thinking, and future design. In this regard, the necessity of transitioning to image-centered and scenario-based models of information processing is substantiated, where interpretation, visualization, dialogue, and creative meaning-making take on key significance.

One of the central conclusions of the study is the understanding of creativity as a management technology, rather than an optional soft skill. In this work, creativity is viewed as a mechanism for overcoming uncertainty, a tool for cognitive adaptation, and a means of generating something new in the absence of ready-made solutions. It is shown that creative thinking facilitates the transition:

- from information processing to meaning construction;
- from fixation to interpretation;
- from reaction to scenario planning;
- from control to coordination through trust and dialogue.

Particular attention was paid to visual thinking and image-centered cognition. Research on the visual turn has demonstrated that an image is not a secondary illustration of text, but an independent cognitive unit capable of structuring perception, reducing cognitive load, and facilitating the handling of uncertainty. Within the proposed model:

Unknown → Image → Assimilation → Text → Stability

the image serves as a pre-textual form of understanding, while the text acts as a mechanism for consolidating knowledge that has already been acquired.

An important result of this work was the development of the concept of meaning formation as the basis of the system's strategic capability. The proposed formula:

$$\text{Meaning} = \sum \text{powers of influences} / n \text{ interpretations}$$

demonstrated that the stability of meaning depends on the ability to reduce noise and cognitive distortions while simultaneously limiting the chaos of interpretations. In this context, communication was redefined as a process of aligning thesauri and jointly constructing understanding, rather than as a linear transmission of information.

The study showed that in public administration, business, branding, PR, and creative technologies of media are becoming universally significant as tools for adapting to a complex and dynamic environment. Despite differences in institutional goals, all the analyzed spheres face common challenges:

- information overload;
- a crisis of trust;
- multiple interpretations;
- the acceleration of change;
- the limitations of linear forecasting.

The study developed applied framework models that enable the integration of creative strategies into decision-making processes. These include:

- a diagnostic matrix of communication systems;
- a model of meaning generation;
- Governance Transformation Framework;
- a scenario management model;
- practical recommendations for implementing creative technologies.

Of particular importance is the Governance Transformation Framework, which describes the transition from a regulatory-control logic to scenario-oriented and meaning-centered management:

RULE → CONTROL → REACTION → IMAGE → SCENARIO → TRUST →
DECISION → PROTOTYPE → INSTITUTION.

This model demonstrates that management transformation is, first and foremost, a change in the system's cognitive architecture. The management of the future is linked not so much to increased control as to the ability to interpret changes, work with variability, form images of the future, and coordinate multiple interpretations through dialogue.

The study also shows that digitalization and the development of artificial intelligence do not eliminate the problem of understanding. AI enhances the processes of recording, processing, and reproducing information, but it does not replace the mechanisms of meaning-making and creative interpretation. In this regard, creativity becomes not an alternative to technology, but a necessary condition for its meaningful use.

The practical significance of this work lies in the applicability of the proposed models:

- for diagnosing managerial rigidity;
- for developing scenario-based strategies;
- for designing communication systems;
- for building a trust framework;
- for introducing creative technologies into public administration, business, and the media;
- for developing adaptive organizational structures.

The findings of this study suggest that modern management is gradually transforming from a system of control into a system centered on meaning. In an environment of strategic uncertainty, it is precisely the ability to construct cognitive models of the future, foster dialogue, and create new interpretive frameworks that becomes a key resource for sustainable development.

Thus, creative strategies for information activities should be viewed as the foundation of a new management paradigm in which:

image becomes a tool of strategic thinking, dialogue becomes a mechanism for reconciling reality, and creativity is a means of constructing the future.

GLOSSARY OF KEY TERMS

Term	Definition	Function in the study
<i>Cognitive categories</i>		
Meaning	The process of structuring information into an interpretatively stable configuration capable of serving as a basis for understanding, coordination, and action under conditions of uncertainty.	The central category of the study; the foundation of models of meaning formation, communication, and the Strategic Capacity Framework.
Interpretation	The cognitive process of assigning meaning to information, events, and images through existing thesauri, cultural codes, and the context of perception.	Facilitates the transition from information to meaning; it is considered as a key mechanism of communication and scenario-based thinking.
Uncertainty	A state of the environment characterized by a lack of certainty, a multitude of possible development trajectories, and limited predictability.	Considered a fundamental condition of the modern management and communication environment, requiring scenario-based and creative approaches.
Image	A holistic cognitive configuration that provides a preliminary understanding of a situation before it is textually and formally recorded.	It serves as a tool for navigating uncertainty, the foundation of image-centered thinking, and an intermediary link between information and scenario.
Attention	A limited cognitive resource that ensures information selection and the focus of perception in conditions of information overload.	Used to analyze the economics of attention, visual persuasion, and mechanisms of meaning formation in media and communication.
Perception	The process of cognitive and affective perception of information, images, and communication signals by a subject.	Defines the characteristics of interpretation, the formation of emotional architecture, and visual impact in communication.
Cognitive rigidity	The tendency of a system or subject to reproduce stable patterns of thinking and responding even in the face of environmental change.	Used to diagnose the limitations of traditional management, textocentrism, and an inability to adapt and innovate.
Familiar Worldview (FWV)	A stable and habitual system of interpretations, meanings, cognitive patterns, and expectations through which individuals or organizations perceive reality and make decisions.	Used to explain resistance to cognitive and institutional transformation, the reproduction of established interpretative models, and the difficulty of transitioning from familiar explanatory schemes to scenario-based and meaning-centered thinking under conditions of uncertainty.

<i>Communication categories</i>		
Dialogue	The process of mutually aligning interpretations, during which communication participants not only exchange information but also jointly form an understanding of the situation.	It is viewed as a fundamental mechanism for coordinating meanings, resolving lexical conflicts, and building trust in management and communication.
Co-creation	The joint production of meanings, values, and interpretations by multiple participants in the communication process.	Used to analyze contemporary media, branding, and participatory communication, where the audience acts as a co-author of meaning.
Thesaurus barrier	A barrier to understanding arising from differences in knowledge systems, meanings, and semantic connections among communication participants.	Applied to the analysis of semantic gaps, conflicts of interpretation, and limitations of communication in the public sphere, branding, and media.
Semantic conflict	A situation of divergent interpretations in which the same message takes on different meanings depending on the cognitive and cultural context.	Used to explain communication crises, distortions of perception, and problems of meaning coordination in complex social systems.
Trust architecture	A system of communication and organizational mechanisms that ensure the formation of sustainable trust among participants in an interaction.	It is viewed as a key element of public administration, branding, and strategic communication in conditions of uncertainty.
Visual persuasion	A form of communicative influence based on the use of visual images to structure attention, interpretation, and emotional perception.	Used to analyze the visual turn, media dramaturgy, neurobranding, and mechanisms of visual meaning management.
<i>Management Categories</i>		
Scenario governance	A governance model based on working with a multitude of possible future states, scenarios, and alternative development trajectories.	Used as an alternative to linear planning; ensures the system's adaptability in conditions of strategic uncertainty.
Adaptive management	A management approach involving continuous adjustment of decisions based on feedback, environmental changes, and the results of practical testing.	It is viewed as a mechanism for increasing the flexibility of management systems and transitioning from rigid control to dynamic coordination of actions.
Governance transformation	The process of transitioning from regulatory-control and text-centered management models to scenario-based, dialogical, and meaning-centered forms of coordination.	It serves as the central concept of the study; it describes changes in the cognitive and institutional architecture of governance.

Prototype	An experimental approach to implementing a solution that allows for testing scenarios and models in a controlled practical environment prior to full-scale deployment.	Used as a tool for risk mitigation, organizational learning, and flexible adaptation of management decisions.
<i>Creative Categories</i>		
Creativity	The ability to form new interpretations, connections, and models of understanding in conditions of uncertainty and the absence of ready-made solutions.	It is considered as a mechanism for meaning-making, cognitive adaptation, and future design in management, business, and communication.
Divergent thinking	A type of thinking focused on generating a multitude of alternative ideas, interpretations, and scenarios.	Used to analyze solution-finding processes, expand the space of possibilities, and overcome linear models of thinking.
Scenario thinking	A cognitive approach based on modeling various possible outcomes and working with the variability of the future.	It serves as the foundation for scenario-based management and strategic navigation in conditions of uncertainty.
Dramaturgy	A method for organizing events and meanings through the dynamics of situation, conflict, transformation, and sequences of actions.	Used as a tool for scenario modeling, media communication, and designing processes of change.
Creative strategy	A system of creative methods and approaches aimed at forming new ways of interpretation, communication, and action.	It is viewed as a tool for managing meaning, adapting to complex environments, and developing innovative solutions.
<i>The author's framework concepts</i>		
Governance Transformation Framework	The author's framework model for the transformation of public administration from a regulatory-control logic to scenario-oriented and meaning-centered management.	It serves as the central integrative model of the study, describing the transition: RULE → CONTROL → REACTION → IMAGE → SCENARIO → TRUST → DECISION → PROTOTYPE → INSTITUTION.
Model of Meaning Generation	A conceptual model describing the process of meaning formation as a transition from information and images to interpretation, consensus, and action.	Used to analyze communication, branding, public governance, and creative strategies in the context of multiple interpretations.
Image-centered governance	An approach to governance in which the image is considered as a key tool for cognitive navigation, coordination, and future planning.	It is used to explain the transition from text-centered governance models to visual-scenario-based forms of meaning-making and decision-making.

Source: author's elaboration

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Multi-method diagnostics

The diagnostic toolkit proposed in this study is based on the principles of a mixed methods approach, which involves the integration of qualitative and quantitative methods of analysis. This approach is necessitated by the complexity of modern management and communication systems, in which formal indicators do not fully reveal cognitive, semantic, and organizational limitations.

Unlike traditional administrative diagnostic models, which focus primarily on quantitative performance metrics, the proposed toolkit aims to identify the underlying mechanisms of interpretation, communication, adaptation, and trust-building. This allows for the analysis not only of the system's structural characteristics but also of the features of its cognitive architecture, level of scenario maturity, capacity for learning, and ability to handle uncertainty.

The diagnostic framework includes the use of the following methods:

- content analysis of regulatory and strategic documents;
- expert assessment of management and communication processes;
- observation of organizational practices;
- semi-structured interviews;
- analysis of communication flows and interpretive conflicts.

The combination of these methods enables a comprehensive assessment of both formal and informal characteristics of the system, as well as allows for the comparison of institutional, cognitive, and communicative parameters of management (Table A.1.)

Table A.1.
Multi-method diagnostic framework for analyzing management and communication systems

Potential diagnostics	Essence of the analysis	Tools	Expected result
Managerial rigidity diagnostics	Identification of the level of regulatory rigidity, textocentrism, and reactivity	Content analysis of documents; expert assessment; interviews	Determining the system's adaptability
Scenario maturity diagnostics	Analysis of the system's ability to work with alternative future scenarios	Strategy analysis; foresight sessions; expert assessment	Assessment of the level of scenario thinking

Thesaurus conflicts diagnostics	Identification of discrepancies in interpretations among actors	Discourse analysis; semi-structured interviews; observation	Map of semantic gaps and communication barriers
Architecture of trust diagnostics	Analysis of transparency level, alignment, and engagement	Surveys; interviews; communication analysis	Assessment of trust sustainability
Communication connectivity diagnostics	Analysis of the effectiveness of interaction between departments and stakeholders	Network analysis; observation; analysis of communication flows	Identification of areas of system fragmentation
Cognitive rigidity diagnostics	Analysis of the resilience of outdated thinking patterns and resistance to change	Interviews; expert assessment; analysis of management decisions	Identification of barriers to transformation
Visual-communication environment diagnostics	Analysis of the use of images, visual models, and scenario-based tools	Content analysis; visual analysis; observation	Assessment of the level of image-centered governance
Organizational learning diagnostics	Analysis of the system's ability to self-renew and handle errors	Interviews; case analysis; analysis of feedback loops	Assessment of the level of learning organization
Adaptability diagnostics	Analysis of the system's ability to adjust actions in the face of change	Case study analysis; expert assessment	Determination of the level of adaptive governance

Source: author's elaboration

The presented multi-method framework demonstrates that the diagnostics of modern management systems requires a shift from the assessment of exclusively formal indicators to a comprehensive analysis of cognitive, communicative, and interpretive processes. In conditions of strategic uncertainty, it is precisely the system's ability to identify gaps in meaning, coordinate interpretations, and adaptively adjust actions that becomes a key factor in the sustainability and effectiveness of management.

To enhance the operational applicability of the proposed diagnostic framework, it is advisable to correlate the key problem areas of modern management and communication systems with the most relevant methods for their analysis. This approach ensures methodological alignment between the diagnostic object and the research tools employed (Table A.2.).

Table A.2.**Correspondence of Diagnostics Parameters and Analysis Methods**

What we diagnose	Diagnostic method
Textocentrism	Content analysis of regulatory and strategic documents
Trust	Survey + expert assessment
Scenario maturity	Analysis of strategies and scenario documents
Dialogue level	Observation + semi-structured interviews
Semantic conflicts	Discourse analysis
Rigidity	Organizational audit

Source: author's elaboration

The table A.2 demonstrates that the diagnostics of modern management systems requires the use of various research methods depending on the nature of the phenomenon being analyzed. Formal structural parameters can be identified through content analysis and organizational audits, whereas cognitive and communicative aspects can be identified through interviews, observation, and discursive analysis. This confirms the necessity of a multi-method approach as the most appropriate methodological strategy for studying complex adaptive systems.

Diagnostic Analysis Templates

Template B.1. Analysis of managerial rigidity

Object of analysis: Management body / organization / communication system

Parameter	Indicators	Analysis Method	Rating (1–5)	Comment
Regulatory Rigidity	Number of regulations; level of formalization	Content analysis		
Response speed	Decision-making time	Expert assessment		
Hierarchical structure	Number of approval levels	Organizational audit		
Flexibility of procedures	Ability to adjust decisions	Interview		
Level of experimentation	Existence of pilot/prototype practices	Case analysis		

*Source: author's elaboration***Interpretation:**

1–2 – high rigidity

3 – transitional model

4–5 – adaptive system

Template B.2. Scenario maturity analysis

Parameter	Indicator	Method	Rating	Comment
Availability of scenarios	Use of alternative models of future	Strategy analysis		
Working with weak signals	Monitoring emerging trends	Interviews		
Strategy adaptability	Possibility to adjust	Expert assessment		
Scenario workshops	Availability of foresight sessions	Observation		
Work with uncertainty	Recognition of environmental variability	Content analysis		

Source: author's elaboration

Template B.3. Diagnostics of thesaurus conflicts

Parameter	Manifestation	Method	Risk level	Comment
Differences in professional codes	Misunderstanding of terms	Interview		
Semantic gaps	Different interpretations of messages	Discourse analysis		
Cultural differences	Perception conflict	Observation		
Absence of feedback	Illusion of understanding	Communication analysis		
Information overload	Loss of semantic coherence	Content analysis		

Template B.4. Analysis of the Architecture of Trust

Component	Indicators	Method	Rating	Comment
Transparency	Accessibility of information	Content analysis		
Consistency	Consistency of actions	Expert assessment		
Engagement	Stakeholder participation	Interview		
Clarity of meaning	Comprehensibility of decisions	Survey		
Reputational stability	Level of trust	Survey analysis		

Source: author's elaboration

Template B.5. Dialogue level analysis

Parameter	Indicator	Method	Level	Comment
Feedback	Existence of two-way communication	Observation		
Alignment of interpretations	Clarification of meanings	Interview		
Participation of actors	Degree of involvement	Communication analysis		
Conflict	Number of semantic gaps	Discourse analysis		
Flexibility of communication	Ability to adjust	Expert assessment		

Source: author's elaboration

Template B.6. Analysis of image-centered governance

Parameter	Indicator	Method	Rating	Comment
Use of visual models	Maps, diagrams, dashboards	Content analysis		
Presence of scenario-based imagery	Vision/future narratives	Strategy analysis		
Visual coherence	Unified visual logic	Visual analysis		
Dealing with uncertainty	Use of image-thinking	Interview		
Level of textocentrism	Dominance of text-based forms	Content analysis		

Source: author's elaboration

Template B.7. Adaptive governance analysis

Parameter	Indicator	Method	Rating	Comment
Speed of adaptation	Time to adjust decisions	Case study analysis		
Dealing with mistakes	Learning from failure	Interview		
Availability of prototype logic	Testing solutions	Analysis of practices		
Feedback loops	Feedback loops	Observation		
Continuous improvement	Continuous improvement	Organizational audit		

The presented templates are designed for a comprehensive analysis of managerial, communication, and organizational systems in conditions of strategic uncertainty. Their use involves a mixed methods approach combining content analysis, expert assessment, interviews, observation, discourse analysis, and organizational audit. This

combination of methods allows for the identification not only of formal structural parameters but also of hidden cognitive, semantic, and communicative mechanisms underlying the system's functioning.

It is recommended to implement the diagnostic toolkit in stages. The first stage involves a preliminary analysis of the organization's documents and communication materials, which helps identify the system's level of normativity, textocentrism, and scenario maturity. The second stage involves collecting qualitative data through expert interviews, observation of organizational practices, and analysis of communication interactions. The third stage involves comparing the results obtained, identifying key areas of rigidity, semantic gaps, and communication conflicts, as well as constructing a general adaptive profile of the system under study.

To enhance the reliability of the results, it is recommended to use the principle of methodological triangulation, which involves comparing data obtained through different methods. For example, the results of content analysis can be refined through interviews, and expert assessments can be verified through observation of organizational practices. This approach reduces the risk of subjectivity and ensures a more holistic understanding of the environment under study.

The interpretation of results must take into account the specifics of the institutional context, the level of complexity of the environment, and the nature of the organization's communication structure. Diagnostic templates do not imply rigid universalization but serve as a flexible framework tool that can be adapted to various types of organizations – from government institutions and educational systems to business structures, media organizations, and communication platforms.

The practical value of this toolkit lies in its ability to:

- identify the limitations of traditional management models;
- assess the level of adaptability and scenario maturity;
- analyze the architecture of trust and communication connectivity;
- identifying areas of cognitive rigidity;
- develop transformation strategies and organizational learning initiatives.

Thus, diagnostic templates serve not only as a tool for assessing the current state of the system but also as a mechanism for designing its further development in conditions of high uncertainty and constant change.

APPENDIX C

Matrices for Assessing Management and Communication Systems

The presented matrices are intended for the semi-quantitative assessment of management and communication systems. Their use allows for the translation of complex cognitive and organizational parameters into comparatively measurable indicators suitable for expert evaluation, comparative analysis, and monitoring of transformational processes.

The matrices can be used:

- in public administration;
- organizational consulting;
- in educational and media systems;
- strategic planning;
- analysis of communication structures;
- research on organizational learning and adaptive governance.

It is recommended to combine the matrix assessment with qualitative methods (interviews, observation, discourse analysis), which ensures a deeper interpretation of the results and decreases the risk of reducing complex processes to formal numerical indicators (Matrix C.1-C.7).

Matrix C.1. Assessment of the Level of Managerial Adaptability

Criterion	1 – Low level	3 – Medium level	5 – High level
Response speed	Reaction is delayed	Partial adaptation	Proactive response
Flexibility of solutions	Rigid fixation	Limited adjustment	Iterative adaptation
Work with uncertainty	Avoiding variability	Partial acknowledgment	Scenario navigation
Feedback	Formal	Irregular	Continuous feedback loops
Learning from mistakes	Punishment	Partial understanding	Learning-oriented system

Source: author's elaboration

Interpretation: 5–10 points – rigid governance;
 11–18 points – transitional governance;
 19–25 points – adaptive governance

Matrix C.2. Assessment of scenario maturity

Parameter	1	3	5
Availability of scenarios	None	Used occasionally	Integrated into the strategy
Handling weak signals	Not analyzed	Partially analyzed	Systematic foresight
Alternative thinking	Linear logic	Limited variability	Multi-scenario approach
Level of foresight culture	Absent	Is being formed	Institutionalized
Readiness for change	Reactivity	Partial adaptation	Proactive governance

Source: author's elaboration

Matrix C.3. Trust Architecture Assessment

Component	1 – Deficit	3 – Partial stability	5 – High level
Transparency	Information Secrecy	Partial openness	High transparency
Consistency	Contradictory actions	Partial consistency	Stability of communication
Engagement	One-way communication	Limited participation	Participatory communication
Clarity of meaning	Ambiguity of decisions	Partial understanding	High interpretive clarity
Reputational stability	Low trust	Fluctuations in trust	Stable trust

Source: author's elaboration

Matrix C.4. Assessment of the level of textocentrism

Indicator	1 – Low	3 – Medium	5 – High
Dominance of documents	Minimal	Mixed model	Absolute dominance
Use of visual models	Systemic	Partial	None
Scenario-based tools	Integrated	Rarely used	Not used
Flexibility in communication	Dialogic	Partially adaptive	Strictly formalized
Working with images	Active	Limited	Not available

Source: author's elaboration

Interpretation: High values indicate the dominance of the normative-text-centered management model.

Matrix C.5. Assessment of dialogue level

Parameter	1	3	5
Feedback	None	Irregular	Constant
Coordination of interpretations	Minimal	Partial	Systemic
Involvement of actors	Low	Limited	High
Flexibility of communication	Formal	Partially adaptive	Dialogic
Conflict Management	Suppression	Reactive resolution	Reconciliation of meanings

Source: author's elaboration

Matrix C.6. Assessment of cognitive rigidity

Indicator	1 – Flexibility	3 – Partial rigidity	5 – High rigidity
Openness to new models	High	Limited	Minimal
Use of past solutions	Adaptive	Partially template-based	Automatic replication
Willingness to experiment	High	Limited	None
Tolerance for uncertainty	High	Medium	Low
Error handling	Learning model	Partial training	Penalization/masking

Matrix C.7. Strategic Capacity Assessment Matrix

Component	Low level	Medium level	High level
Meaning	Fragmented understanding	Partial coherence	Holistic semantic model
Trust	Low coordination	Limited trust	High institutional connectedness
Horizon	Short-term response	Partial planning	Scenario-based planning for the future
Limits	High constraints	Partial flexibility	Low level of systemic barriers

Source: author's elaboration

Instructions for Using Diagnostic Matrices

The presented matrices are designed for a comprehensive assessment of management, communication, and organizational systems under conditions of strategic uncertainty. Their primary purpose is not only to capture the current state of the system but also to identify directions for potential transformation, areas of cognitive rigidity, gaps in understanding, and limitations on adaptability.

It is recommended to use the matrices within the framework of a multi-method diagnostic approach, which involves a combination of quantitative and qualitative methods of analysis. The assessment of individual parameters should not be viewed as a completely autonomous procedure: interpreting the results requires comparing data obtained through various research tools.

Recommended workflow

1. Preparatory stage. At this stage, the object of analysis is identified:

a government agency;

an educational institution;

business entity;

media organization;

communication system;

a specific project or management process.

An expert group is also formed, or a researcher is selected to conduct the assessment.

2. Data collection. The following methods are recommended for completing the matrices:

Method	Purpose
Content analysis	Analysis of documents, strategies, regulations, and communication materials
Expert assessment	Assessment of adaptability, trust, and scenario maturity
Semi-structured interviews	Identification of hidden interpretations and cognitive limitations
Observation	Analysis of organizational practices and communication behavior
Discourse analysis	Identification of semantic conflicts and thesaurus gaps
Organizational audit	Analysis of management structure and level of rigidity

3. Evaluation principles.

Each parameter is evaluated on a scale proposed in the corresponding matrix: low level; medium level; high level.

Note: If necessary, the following may be used: a point scale (1–5); expert ranking; comparative analysis of several organizations; dynamic monitoring of changes.

4. Interpretation of results.

The interpretation should take into account:

- the institutional context;
- the level of uncertainty in the environment;
- the scale of the organization;
- the specifics of the communication structure;
- the degree of external pressure and constraints.

High scores do not always indicate the “best” state of the system. For example: a high level of standardization may be justified in crisis conditions; a high level of variability without coordination can lead to disorganization; excessive flexibility without institutional anchoring reduces stability.

In this regard, the matrices should be used not as a universal mechanism for standardized assessment, but as a tool for interpretation and identifying directions for development.

5. Constructing an adaptive profile. Based on the aggregate results, an integrated adaptive profile of the system can be formed, reflecting: the level of managerial rigidity; scenario maturity; the degree of trust; the nature of communication

connectivity; the capacity for organizational learning; and the level of cognitive flexibility.

Such a profile allows for: identifying systemic constraints; designing transformation scenarios; developing organizational learning strategies; and assessing readiness for change.

It should be noted that the proposed matrices are not a rigidly standardized tool. They constitute a diagnostic framework model that can be adapted to various research and applied tasks. In highly complex and variable environments, the key factor is not the mechanical measurement of indicators, but the researcher's ability to interpret the interrelationships between the system's cognitive, communicative, and institutional parameters.

Of particular importance is that these matrices can be adapted for use in artificial intelligence systems and prompt-based analytics. The structured logic of criteria, indicators, and assessment levels makes them suitable for integration into AI-assisted analysis when working with large volumes of data, including:

- document analysis;
- communication flows;
- media content;
- strategic materials;
- organizational reports;
- discourse datasets.

In this context, matrices can serve as a basis for generating analytical prompts that enable AI systems to identify indicators of textocentrism, semantic conflicts, scenario maturity, trust architecture, cognitive rigidity, and other parameters. Such integration opens the possibility of transitioning from fragmentary analysis to semi-automated diagnostics of complex organizational and communication environments.

At the same time, it is crucial to emphasize that artificial intelligence in this model is viewed not as an autonomous agent of interpretation, but as a tool for accelerating the processing and structuring of information. The final interpretation of results, the identification of semantic relationships, and the design of strategic solutions remain

dependent on the of human understanding, context, and the ability to generate creative meaning.

Thus, diagnostic matrices serve not only as a means of assessment but also as a tool for forming a new understanding of the organization, allowing a shift from recording the current state to designing possible development trajectories. Combined with AI-assisted analysis, they create the foundation for the development of adaptive governance systems capable of handling the high complexity, variability, and information overload of the modern world.

Framework 1. Governance Transformation Framework

Transformation Logic:

RULE→CONTROL→REACTION→IMAGE→SCENARIO→TRUST→DECISION→PROTOTYPE→INSTITUTION

Model Essence: The Framework describes the transition from a regulatory-control model of governance to scenario-oriented and meaning-centered governance.

Key shifts:

from text → to image;

from control → to coordination;

from reaction → to design;

from fixed decisions → to adaptive governance.

Model function: diagnosing managerial transformation; designing institutional change; developing adaptive governance systems.

Framework 2. Model of Meaning Generation

Formula

$$\text{Meaning} = \frac{\sum \text{powers of influence}}{n \text{ interpretations}}$$

The essence of the model:

Meaning is considered as the result of the interaction between: external influences, noise, and distortions; the number and variability of interpretations.

Model logic

increased noise → reduces the stability of meaning;

increase in interpretations → intensifies fragmentation;

reduced entropy → enhances coordination and understanding.

Model function: analysis of branding and communication; diagnostics of semantic conflicts; study of trust architecture; analysis of semantic stability.

Framework 3. Spiral Model of Cognition

Cognitive spiral:

Unknown→Image→Assimilation→Text→Stability→Unknown

Model Overview

The model describes the cyclical dynamics of cognition: the unknown generates an image; the image provides initial understanding; understanding is fixed in text; text stabilizes knowledge; over time, this stability encounters the unknown once again.

Function of the model: explaining the visual turn; analyzing image-centered cognition; investigating the transition from information to understanding.

Framework 4. Adaptive Governance Cycle

Adaptive Governance Cycle:

Diagnostics→Image→Scenario→Dialogue→Decision→Prototype→Adaptation
→Institution

The essence of the model

The model describes an iterative governance process based on: continuous interpretation; alignment of meanings; scenario navigation; and learning-oriented adaptation.

Theoretical basis: PDCA (Deming); Theory U (Scharmer); Learning Organization (Senge).

Function of the model: implementation of adaptive governance; scenario-based management;

designing organizational change.

Framework 5. Communication → Meaning → Dialogue → Co-creation

Communication cycle: Communication→Meaning→Dialogue→Co-creation

Essence of the model

The model reflects the transformation of communication: from the information transfer to the co-production of meaning.

Key logic: communication initiates interpretation; meaning forms cognitive coherence; dialogue ensures alignment; co-creation creates a shared reality.

Function of the model: analysis of participatory communication; research on media and branding; development of dialogical communication systems.

Framework 6. Scenario Governance Model

Logic of scenario governance:

Signals→Image→Scenarios→Interpretation→Alignment→Decision→Adaptation

Model Overview

The Framework describes the process of strategic navigation under conditions of uncertainty through: working with weak signals; image formation; scenario modeling; aligning interpretations.

Difference from linear planning: future = plurality; uncertainty = resource; governance = adaptive navigation.

Model function: foresight governance; strategic planning under uncertainty; scenario-based management.

The presented framework models form a unified methodological system describing the transition: from information → to meaning; from text → to image; from control → to adaptation; from communication → to co-creation; from forecasting → to scenario-based future design.

Together, these models form the author's concept of adaptive meaning-centered governance, in which creativity serves as a mechanism for cognitive transformation, coordination of interpretations, and the design of new forms of social and managerial reality.