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MANAGING CHANGES IN THE DETERMINANTS OF STAKEHOLDER RELATIONSHIPS DURING THE IMPLEMENTATION OF INNOVATIVE INFORMATION TECHNOLOGY PROJECTS FOR DIGITAL TRANSFORMATION UNDER CRISIS CONDITIONS OF RISING RISKS IN THE SHARED VALUE CREATION ENVIRONMENT

It has been established that, under conditions of enterprise digital transformation, crisis instability, increasing risks in the shared value creation environment, and growing complexity of interaction among participants in innovative information technology projects, change management of the determinants of stakeholder relationships acquires system-forming significance. A theoretical and methodological vision of the mechanism for managing changes in the determinants of stakeholder relationships during the implementation of information technology projects for digital transformation has been developed as a complex integrated management system within which management actors exert purposeful influence on the conditions, factors, processes, behavioural models, and forms of interaction among stakeholders. It has been substantiated that the purpose of this mechanism is to transform stakeholder relationships from an unstable, fragmented, risk-saturated, or conflict-prone state into a state of coordinated, trust-based, digitally supported, and value-oriented interaction. The possibility of describing this mechanism in the form of a tuple has been substantiated; it encompasses a set of agents of stakeholder interaction, types of agents, objects of managerial influence, goals of change management, determinants of relationships, managerial and project actions, communicative actions, types of relationships, environments for digital transformation implementation, system states, strategies, constraints, social and ethical norms, methods for implementing managerial influence, and directions for the mechanism's development. It has been proven that such a model provides a comprehensive representation not only of the composition of digital transformation participants, but also of the logic of their interaction, roles, interests, responsibilities, resources, risks, and forms of participation in shared value creation. It has been established that the key determinants of stakeholder relationships are strategic compatibility of interests, the level of mutual trust, transparency of information exchange, readiness for digital change, availability of digital competencies, distribution of risks and responsibilities, flexibility of organizational processes, ability to coordinate joint actions, value alignment among participants, cybersecurity resilience, motivation to participate in the project, capacity for learning and adaptation, and ability to co-create shared value. It has been substantiated that, under crisis conditions, these determinants are unstable and require continuous diagnosis, monitoring, and adjustment.

Keywords: *change management, stakeholders, stakeholder relationships, determinants of relationships, information technology project, digital transformation, crisis conditions, risks, shared value, digital readiness, trust, communication, organizational resilience.*

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УПРАВЛІННЯ ЗМІНАМИ ДЕТЕРМІНАНТ ВЗАЄМОВІДНОСИН СТЕЙКХОЛДЕРІВ ПРИ РЕАЛІЗАЦІЇ ІННОВАЦІЙНИХ ІНФОРМАЦІЙНО-ТЕХНОЛОГІЧНИХ ПРОЄКТІВ ІЗ ЦИФРОВОЇ ТРАНСФОРМАЦІЇ В КРИЗОВИХ УМОВАХ ЗРОСТАННЯ РИЗИКІВ СЕРЕДОВИЩА СТВОРЕННЯ СПІЛЬНОЇ ЦІННОСТІ

Встановлено, що в умовах цифрової трансформації підприємств, кризової нестабільності, зростання ризиків середовища створення спільної цінності та ускладнення взаємодії між учасниками інноваційних інформаційно-технологічних проєктів управління змінами детермінант взаємовідносин стейкхолдерів набуває системоутворювального значення. Розроблено теоретико-методичне бачення механізму управління змінами детермінант взаємовідносин стейкхолдерів при реалізації інформаційно-технологічних проєктів із цифрової трансформації як складної інтегрованої управлінської системи, у межах якої суб'єкти управління здійснюють цілеспрямований вплив на умови, чинники, процеси, моделі поведінки та форми взаємодії зацікавлених сторін. Обґрунтовано, що призначення такого механізму полягає у переведенні стейкхолдерських взаємовідносин із нестабільного, фрагментарного, ризиконасиченого або конфліктного стану в стан узгодженої, довірчої, цифрово підтриманої та ціннісно орієнтованої взаємодії. Обґрунтовано можливість опису зазначеного механізму у форматі кортежу, що охоплює множину агентів стейкхолдерської взаємодії, типи агентів, об'єкти управлінського впливу, цілі управління змінами, детермінанти взаємовідносин, управлінські й проєктні дії, комунікативні дії, типи відносин, середовища реалізації цифрової трансформації, стани системи, стратегії, обмеження, соціальні та етичні норми, методи реалізації управлінського впливу та напрями розвитку механізму. Доведено, що така модель забезпечує комплексне представлення не лише складу учасників цифрової трансформації, але й логіки їхньої взаємодії, ролей, інтересів, відповідальності, ресурсів, ризиків і способів участі у створенні спільної цінності. Встановлено, що ключовими детермінантами взаємовідносин стейкхолдерів є стратегічна сумісність інтересів, рівень взаємної довіри, прозорість інформаційного обміну, готовність до цифрових змін, наявність цифрових компетентностей, розподіл ризиків і відповідальності, гнучкість організаційних процесів, здатність до координації спільних дій, ціннісна узгодженість учасників, кібербезпекова стійкість, мотивація до участі у проєкті, здатність до навчання та адаптації, а також спроможність до спільного створення цінності. Обґрунтовано, що в кризових умовах ці детермінанти є нестабільними та потребують постійної діагностики, моніторингу й коригування.

Ключові слова: *управління змінами, стейкхолдери, взаємовідносини стейкхолдерів, детермінанти взаємовідносин, інформаційно-технологічний проєкт, цифрова трансформація, кризові умови, ризики, спільна цінність, цифрова готовність, довіра, комунікація, організаційна стійкість.*

Relevance of the Study. In modern conditions, the digital transformation of business is no longer a linear process of technological upgrading of an enterprise; instead, it is evolving into a complex socio-economic restructuring. Within this process, not only information systems, business processes, and management procedures are being transformed, but also the very logic of interaction between the enterprise and its stakeholders.

Information technology projects increasingly function not merely as tools of automation, but as environments for redistributing roles, responsibilities, access to

data, authority, risks, and outcomes among owners, management, employees, customers, partners, suppliers, investors, regulators, and technology providers.

Under such conditions, the success of digital transformation can no longer be assessed solely through technical readiness of solutions, adherence to deadlines, investment volume, or system functionality. Equally important is the extent to which a digital project is accepted by key stakeholders—whether they understand its objectives, trust managerial decisions, possess sufficient digital competencies, recognize their role in the transformation process, and perceive the distribution of benefits, costs, and risks as fair.

Therefore, scientific attention should be focused not only on managing digital projects as technical and organizational initiatives, but also on managing changes in the determinants that define the quality, stability, and effectiveness of stakeholder interactions.

This issue becomes particularly important under crisis conditions, when the environment of shared value creation is characterized by instability, limited resources, increasing security threats, risks of disrupted partnerships, growing informational uncertainty, heightened stakeholder sensitivity to potential losses, and reduced tolerance for managerial errors. In such a context, even an innovative information technology project may lose its effectiveness if its implementation is accompanied by distrust, employee resistance, misalignment of interests, weak communication, unequal distribution of responsibility, or insufficient readiness of participants for new digital forms of interaction.

Analysis of Recent Research and Publications. The issues of change management, digital transformation, stakeholder interaction, and shared value creation are at the center of contemporary economic and management research. In studies devoted to organizational change management (I. Biletska [1], N. Neghi [7], T. Sabetska [1], I. Tsaruk [2], N. Shil [5], A. Chowdhury [5], D. Paraschiv [9], M. Ni u [9], M. Savin [9], and others), attention is focused on the need for purposeful preparation, implementation, and consolidation of transformations that encompass not only technological or procedural aspects of enterprise activity but also behavioral, communication, personnel, and strategic components of organizational functioning. In this context, particular importance is attached to overcoming resistance to change, forming organizational readiness for transformation, developing employee competencies, ensuring resource support for change processes, and increasing the adaptability of management systems. A separate stream of research (A. Bakir Tias [4], Ye. Buriak [2], O. Hudz [3], M. Yokhna [2], S. Strelnikova [3], and others) is associated with the digital transformation of enterprises, which is considered as a process of implementing information systems, digital platforms, analytical tools, cloud technologies, automation solutions, cybersecurity tools, and other technological instruments aimed at improving operational efficiency, business process flexibility, and the quality of managerial decision-making. At the same time, a significant part of existing studies is predominantly focused on technological, organizational, or strategic dimensions of digitalization, while the transformation of determinants of stakeholder relationships in the implementation of information technology projects remains insufficiently explored.

The stakeholder approach (S. Velamuri [6], D. Gionfriddo [7], A. Piccaluga [7], R. Freeman [6], and others) is of considerable importance for the studied problem

area. Within this approach, the enterprise is viewed as a system of interaction among various interested parties whose interests must be considered in strategic and project decision-making processes.

However, the issue of a systemic description of the mechanism for managing changes in the determinants of stakeholder relationships in the implementation of digital transformation IT projects remains insufficiently developed. Existing studies typically address change management, risk management, stakeholder management, or digital transformation separately. Therefore, a comprehensive integrated approach is still required—one that combines stakeholder interaction agents, their roles, objects of managerial influence, change objectives, relationship determinants, managerial and communication actions, types of relationships, digital transformation environments, system states, strategies, constraints, norms, methods, and directions for the development of such a mechanism.

Purpose of the Study. The purpose of this study is to substantiate theoretical and methodological provisions for the formation of a mechanism for managing changes in the determinants of stakeholder relationships in the implementation of information technology projects of digital transformation under crisis conditions characterized by increasing risks in the environment of shared value creation.

Research Methodology. The methodological basis of the study is formed by a combination of systemic, process, stakeholder, risk-oriented, value-based, and structural-logical approaches, the use of which makes it possible to comprehensively reveal the content of the mechanism for managing changes in the determinants of stakeholder relationships in the implementation of information technology projects of digital transformation. The systemic approach is used to consider the change management mechanism as an integrated managerial system that combines agents, types of agents, objects of influence, goals, determinants of interaction, actions, communications, relationships, environments, system states, strategies, constraints, norms, methods, and directions of development. The process approach is applied to reflect the sequence of managerial, organizational, analytical, technical, and communication actions aimed at changing the parameters of stakeholder interaction during the implementation of a digital project. The stakeholder approach is used to identify internal, external, and project-partner agents of digital transformation, as well as to define their interests, roles, resources, expectations, and degree of influence on IT project outcomes. The risk-oriented approach substantiates the need to identify, assess, monitor, and minimize risks of stakeholder interaction arising in crisis conditions of increasing uncertainty, resource constraints, cybersecurity threats, and instability of partnership relations. The value-based approach is applied to define the orientation of the mechanism toward the creation, maintenance, and development of shared value for enterprises, customers, employees, partners, investors, regulators, and other stakeholders. The structural-logical method is used to construct a tuple model of the mechanism, allowing for a formalized representation of its components and the relationships between them. Methods of analysis and synthesis are applied to identify and generalize key determinants of stakeholder relationships, while the method of theoretical generalization is used to formulate conclusions regarding the role of the proposed mechanism in ensuring the effectiveness of digital transformation under crisis conditions.

Research Results. The mechanism for managing changes in the determinants of stakeholder relationships in the implementation of information technology projects of digital transformation under crisis conditions of increasing risks in the environment of shared value creation should be considered as a complex managerial system. Within this system, management entities exert purposeful influence on the conditions, factors, processes, behavioral models, and forms of interaction among stakeholders in order to ensure the alignment of their interests, support digital changes, reduce risks, strengthen trust, and foster shared value creation.

The content of such a mechanism can be described in the form of a tuple:

$$M_{MMCDS}^{DT} = \langle A, G, O, C, D, ACT, COM, R, E, ST, STR, IR, SL, M, EV \rangle \quad (1)$$

де: $M^{DT}{}_{MMCDS}$ – mechanism for managing changes in the determinants of stakeholder relationships in the implementation of information technology projects of digital transformation; A – set of stakeholder interaction agents; G – set of agent types; O – set of managerial objects of influence; C – set of change management objectives; D – set of determinants of stakeholder relationships; ACT – set of managerial and project actions; COM – set of communication actions; R – set of stakeholder relationships; E – set of digital transformation environments; ST – set of system states of stakeholder relationships; STR – set of change management strategies; IR – set of institutional, resource, and risk constraints; SL – set of social, ethical, and behavioral norms of interaction; M – set of methods, tools, and mechanisms for managerial influence implementation; EV – set of directions for the development of the mechanism.

The basic element of the proposed tuple is the set of agents A, since it is through the interaction of different participants in a digital project that the environment for shared value creation is formed, transformed, or disrupted. The set of agents includes internal and external stakeholders who differ in their level of influence on digital transformation, possess heterogeneous interests, have unequal access to resources, and demonstrate varying degrees of readiness for change.

In the most general form, the set of agents can be represented as follows:

$$A = \{A_{in}\} \cup \{A_{ex}\} \cup \{A_{pr}\} \quad (2)$$

where: $\{A_{in}\}$ – internal agents of digital transformation; $\{A_{ex}\}$ – external agents of the stakeholder environment; $\{A_{pr}\}$ – project-partner agents.

The set of internal agents $\{A_{in}\}$ includes enterprise owners $\{A_{in1}\}$, who determine the strategic feasibility of digital transformation; top management $\{A_{in2}\}$, responsible for key managerial decision-making; functional managers $\{A_{in3}\}$, who ensure the adaptation of business processes to digital changes; employees $\{A_{in4}\}$, who directly use new digital solutions; IT departments $\{A_{in5}\}$, responsible for the technical implementation of the project; project teams $\{A_{in6}\}$, who coordinate the execution of digital transformation tasks; as well as risk management, security, finance, and HR units $\{A_{in7}\}$, which provide support, control, and adaptation of changes.

The set of external agents $\{A_{ex}\}$ includes customers $\{A_{ex1}\}$, who evaluate the quality of digital interaction and accept or reject new digital services; suppliers $\{A_{ex2}\}$, on

whom the stability of resource provision depends; business partners *{Aex3}*, who participate in joint value-creation processes; investors *{Aex4}*, who assess the effectiveness of digital investments; state and regulatory institutions *{Aex5}*, which define the regulatory framework of digital activity; and professional communities and civil society organizations *{Aex6}*, which influence the legitimacy of digital solutions.

The set of project-partner agents *{Apr}* includes technology providers *{Apr1}*, digital transformation consultants *{Apr2}*, information systems integrators *{Apr3}*, providers of cloud, analytics, and cybersecurity solutions *{Apr4}*, as well as external experts *{Apr5}* involved in the design, implementation, or support of digital change initiatives.

The inclusion of the agent type set *G* in the tuple makes it possible not only to list participants but also to reveal their functional roles within the change management system. In this context, the following categories can be distinguished: managerial agents *{G1}*, who formulate objectives and make strategic decisions; execution agents *{G2}*, who implement specific project tasks; analytical agents *{G3}*, who collect, process, and interpret information; communication agents *{G4}*, who ensure information exchange, explanation of changes, and feedback collection; resource agents *{G5}*, who provide financial, human, technological, or informational resources; risk-oriented agents *{G6}*, who identify threats and develop response measures; and value-creating agents *{G7}*, who directly participate in the creation, perception, or evaluation of shared value.

The managerial object of influence *O* within the proposed mechanism is not a separate group of stakeholders, but the entire system of conditions, parameters, and characteristics that determine the quality of their interaction during digital transformation. This set includes the structure of stakeholder relationships *{O1}*, the distribution of roles and responsibilities *{O2}*, information flows between participants *{O3}*, decision-making mechanisms *{O4}*, the level of stakeholder engagement *{O5}*, organizational procedures for implementing the digital project *{O6}*, the digital infrastructure of interaction *{O7}*, the risk management system *{O8}*, as well as the model for creating, distributing, and evaluating shared value *{O9}*.

The target set *C* reflects the expected outcomes of change management in the field of stakeholder interaction. It includes objectives of aligning stakeholder interests *{C1}*, reducing resistance to digital change *{C2}*, increasing trust in the digital project *{C3}*, ensuring participants' digital readiness *{C4}*, minimizing interaction risks *{C5}*, maintaining continuity of project implementation *{C6}*, strengthening partnership coordination *{C7}*, creating conditions for shared value generation *{C8}*, and enhancing enterprise resilience under crisis conditions *{C9}*.

A special place in the tuple is occupied by the determinant set *D*, as it reflects the key factors whose changes determine the effectiveness of stakeholder relationships. Within the context of digital transformation, these determinants include strategic compatibility of interests *{D1}*, the level of mutual trust *{D2}*, transparency of information exchange *{D3}*, readiness for digital change *{D4}*, availability and quality of digital competencies *{D5}*, distribution of risks and responsibilities *{D6}*, flexibility of organizational processes *{D7}*, ability to coordinate joint actions *{D8}*, value alignment among participants *{D9}*, cybersecurity resilience *{D10}*, motivation to participate in the project *{D11}*, capacity for learning and adaptation *{D12}*, and the ability for shared value creation *{D13}*.

The determinants *D* are not static characteristics. Under crisis conditions, they may change rapidly under the influence of resource scarcity, security threats, shifts in stakeholder priorities, informational uncertainty, disruption of partnerships, or escalation of conflicts of interest. Therefore, their management should involve not a one-time assessment, but continuous monitoring, adjustment, and maintenance of the desired state.

The set of actions *ACT* includes managerial, organizational, analytical, technical, and behavioral actions aimed at changing the determinants of stakeholder relationships. It includes stakeholder identification in the digital project *{ACT1}*, defining their interests and expectations *{ACT2}*, assessing their level of influence and interest *{ACT3}*, diagnosing the current state of relationships *{ACT4}*, identifying critical interaction determinants *{ACT5}*, analyzing risks in the value co-creation environment *{ACT6}*, developing a change management program *{ACT7}*, designing measures to reduce resistance *{ACT8}*, organizing user training and support *{ACT9}*, implementing digital coordination tools *{ACT10}*, monitoring stakeholder responses *{ACT11}*, and adjusting managerial decisions in response to changes in the risk environment *{ACT12}*.

The communicative block *COM* has independent importance, since in crisis conditions communication largely determines the level of trust, acceptance of changes, and willingness to cooperate. The set of communicative actions includes informing stakeholders about the purpose of the digital project *{COM1}*, explaining expected benefits and potential risks *{COM2}*, organizing consultations and discussions *{COM3}*, establishing feedback channels *{COM4}*, conducting internal and external communication campaigns *{COM5}*, using digital platforms for coordination *{COM6}*, crisis communication in case of deviations or incidents *{COM7}*, ensuring transparency of decisions *{COM8}*, and personalizing communication depending on the role, expectations, and risks of specific stakeholder groups *{COM9}*.

The set of relationships *R* reflects the nature of links that arise between stakeholders during the implementation of an information technology project. Within the proposed mechanism, the following types can be distinguished: managerial relationships *{R1}*, emerging between top management, project teams, and executors; coordination relationships *{R2}*, related to aligning actions between departments and partners; resource relationships *{R3}*, ensuring access to financial, human, technological, and informational resources; information relationships *{R4}*, covering data and knowledge exchange; trust-based relationships *{R5}*, grounded in predictability, openness, and accountability; risk-related relationships *{R6}*, associated with the distribution of threats, responsibilities, and consequences; partnership relationships *{R7}*, aimed at joint achievement of results; and value-based relationships *{R8}*, where participants not only perform project functions but also contribute to value co-creation.

An important characteristic of the mechanism is the gradual transition from fragmented, formal, or conflictual relationships to coordinated, trust-based, adaptive, and mutually beneficial connections. Such a transformation of relationships is one of the key outcomes of managing changes in the determinants of stakeholder interaction.

The set of environments *E* defines the space in which digital transformation takes place. It includes the internal organizational environment of the enterprise

{E1}, the project environment for implementing information technology solutions *{E2}*, the digital environment for data exchange and interaction *{E3}*, the market environment of competition and customer expectations *{E4}*, the partnership environment of inter-organizational interaction *{E5}*, the institutional and legal environment *{E6}*, the security environment *{E7}*, the crisis environment of heightened uncertainty *{E8}*, and the value co-creation environment *{E9}*, within which the results of the digital project are assessed not only by the enterprise but also by other stakeholders.

The set of states *ST* reflects the level of formation and maturity of the stakeholder relationship system. It is reasonable to distinguish an initial unstructured state *{ST1}*, in which stakeholder interaction is situational and poorly coordinated; a conflict-tension state *{ST2}*, characterized by resistance, mistrust, or conflicting interests; a formally organized state *{ST3}*, in which roles and procedures are defined but do not ensure high engagement; an adaptive state *{ST4}*, where the system is able to respond to changes in the risk environment; an integrated state *{ST5}*, in which stakeholders interact based on aligned goals, shared data, and mutual responsibility; and a value-oriented state *{ST6}*, in which digital transformation is perceived as a means of creating shared value for the enterprise, customers, employees, partners, and other participants.

The set of strategies *STR* defines possible directions of managerial behavior regarding changes in the determinants of stakeholder relationships. It includes a strategy of early stakeholder engagement *{STR1}*, a strategy of transparent communication of digital changes *{STR2},* a strategy for reducing resistance through training and support *{STR3}*, a strategy for risk and responsibility sharing *{STR4}*, a strategy for developing digital readiness *{STR5}*, a strategy for crisis adaptation of the project *{STR6}*, a strategy for partnership coordination *{STR7}*, a strategy for strengthening cybersecurity-based trust *{STR8}*, a strategy for forming shared value *{STR9}*, and a strategy for continuous improvement of the interaction model *{STR10}*.

At the same time, the implementation of the mechanism takes place within certain constraints *IR*. This set includes regulatory and legal constraints of digital activity *{IR1}*, requirements for the protection of personal and commercial data *{IR2}*, financial constraints of digital project implementation *{IR3}*, personnel constraints related to a shortage of digital competencies *{IR4}*, technological limitations of the existing infrastructure *{IR5}*, time constraints of project implementation *{IR6}*, security constraints of the crisis environment *{IR7}*, institutional instability *{IR8}*, and constraints caused by uneven readiness of different stakeholders to participate in digital changes *{IR9}*.

Social, ethical, and behavioral norms *SL* define the qualitative boundaries of stakeholder interaction. They include good-faith partnership behavior *{SL1}*, transparency in reporting risks *{SL2}*, responsibility for data usage *{SL3}*, respect for the interests of different stakeholder groups *{SL4}*, prevention of manipulative imposition of digital changes *{SL5}*, willingness to engage in dialogue *{SL6}*, fairness in the distribution of benefits and losses *{SL7}*, compliance with digital security principles *{SL8}*, and orientation toward long-term mutual benefit *{SL9}*.

The set of methods, tools, and mechanisms *M* provides the practical implementation of managerial influence on the determinants of relationships. It can be presented as follows:

$$M = \{M_1, M_2, M_3, M_4, M_5, M_6, M_7, M_8\} \quad (3)$$

where: *{M1}* – methods of stakeholder environment diagnostics; *{M2}* – change management methods; *{M3}* – risk management methods; *{M4}* – communication mechanisms; *{M5}* – digital coordination tools; *{M6}* – organizational and HR mechanisms; *{M7}* – cybersecurity mechanisms; *{M8}* – monitoring and evaluation tools.

The set of stakeholder environment diagnostic methods *{M10}* includes stakeholder mapping *{M11}*, the influence–interest matrix *{M12}*, assessment of stakeholder expectations *{M13}*, analysis of potential conflict zones *{M14}*, and determination of trust and engagement levels *{M15}*.

Change management methods *{M20}* include planning the transition to a new digital state *{M21}*, resistance management *{M22}*, engagement of change leaders *{M23}*, user training *{M24}*, personnel adaptation support *{M25}*, and formation of internal support for the digital project *{M26}*.

Risk management methods *{M30}* include identification of digital transformation risks *{M31}*, assessment of probability and impact of risks *{M32}*, development of a stakeholder interaction risk map *{M33}*, development of response scenarios *{M34}*, monitoring of risk events *{M35}*, and adjustment of managerial decisions in response to increasing threats *{M36}*.

Communication mechanisms *{M40}* include the communication strategy of the digital project *{M41}*, regular stakeholder information updates *{M42}*, facilitation of joint discussions *{M43}*, feedback channels *{M44}*, crisis communication messages *{M45}*, and internal digital support communities *{M46}*.

Digital coordination tools *{M50}* include project management platforms *{M51}*, corporate information systems *{M52}*, CRM, ERP, BI and other integrated solutions *{M53}*, analytical dashboards *{M54}*, digital knowledge repositories *{M55}*, electronic document management systems *{M56}*, and remote collaboration tools *{M57}*.

Organizational and HR mechanisms *{M60}* include clarification of roles and responsibilities *{M61}*, creation of cross-functional teams *{M62}* , development of digital competencies *{M63}*, motivation for participation in digital change *{M64}* , adaptation of organizational structure *{M65}*, and formation of a culture of collaboration and learning *{M66}*.

Cybersecurity mechanisms *{M70}* include data protection policies *{M71}*, access control to information systems *{M72}*, cybersecurity incident monitoring *{M73}*, training stakeholders in digital security rules *{M74}*, backup of critical data *{M75}*, and assessment of the reliability of technological partners *{M76}*.

Monitoring and evaluation tools *{M80}* include stakeholder engagement indicators *{M81}*, trust level assessment *{M82}*, monitoring of resistance to change *{M83}*, control of project obligations fulfillment *{M84}*, digital readiness assessment *{M85}*, analysis of shared value creation results *{M86}*, and communication effectiveness audits *{M87}*.

The final element of the tuple is the set of development directions *{EV1}*, which reflects prospective trajectories for improving the mechanism. It includes the development of early stakeholder risk detection systems *{EV2}*, enhancement of participants' digital maturity *{EV3}*, strengthening transparency of digital projects *{EV4}*, formation of a trust-based interaction culture *{EV5}*, improvement of joint decision-

making mechanisms *{EV6}*, integration of risk management into digital transformation governance *{EV7}*, development of digital platforms for partnership coordination *{EV8}*, strengthening cybersecurity resilience *{EV9}*, expansion of shared value creation practices *{EV10}*, and formation of an adaptive change management model under long-term crisis instability.

Thus, the mechanism for managing changes in the determinants of stakeholder relationships in the implementation of information technology projects of digital transformation can be represented as an integrated managerial system that combines agents, their roles, objects of influence, goals, determinants of interaction, managerial and communicative actions, types of relationships, operating environments, system states, strategies, constraints, norms, implementation methods, and development directions. In this sense, the proposed tuple allows change management to be considered not as a supporting function of a digital project, but as a system-forming element of digital transformation. Its purpose is to transform stakeholder relationships from an unstable, fragmented, risk-intensive, or conflictual state into a coordinated, trust-based, digitally supported, and value-oriented mode of interaction. Such interaction creates the preconditions for the successful implementation of information technology projects, the enhancement of organizational resilience of the enterprise, and the formation of shared value under conditions of increasing environmental risk and crisis uncertainty.

Conclusions. The mechanism for managing changes in the determinants of stakeholder relationships in the implementation of information technology projects of digital transformation under crisis conditions of increasing risks in the shared value creation environment should be considered as a complex integrated management system aimed at the purposeful influence on the conditions, factors, processes, behavioral models, and forms of interaction among stakeholders in order to ensure alignment of interests, support digital change, reduce risks, strengthen trust, and generate shared value. The proposed mechanism cannot be limited to administrative coordination or communicative support of a digital project but must encompass a full set of components, including: stakeholder interaction agents, types of agents, objects of managerial influence, change management objectives, determinants of stakeholder relationships, managerial and project actions, communicative actions, types of relationships, environments of digital transformation implementation, states of the stakeholder relationship system, change management strategies, institutional, resource, and risk constraints, social and ethical norms, methods of managerial influence implementation, and directions for further development of the mechanism. The key determinants of stakeholder relationships in the implementation of information technology projects are strategic alignment of interests, level of mutual trust, transparency of information exchange, readiness for digital change, availability of digital competencies, distribution of risk and responsibility, flexibility of organizational processes, ability to coordinate joint actions, value alignment among participants, cybersecurity resilience, motivation for participation in the project, ability to learn and adapt, and capacity for joint value creation.

Under crisis conditions, these determinants are unstable and may change rapidly due to resource scarcity, heightened security threats, informational uncertainty, shifting stakeholder priorities, disruption of partnership ties, or intensified conflicts

of interest. Therefore, their management should involve not a one-time diagnosis, but continuous monitoring, analytical assessment, communicative support, and adjustment of managerial decisions in accordance with changes in the risk environment.

Directions for further research should focus on developing applied methodological recommendations for diagnosing the state of stakeholder relationships, assessing the maturity level of the change management mechanism, forming a system of indicators for monitoring interaction determinants, as well as constructing practical models for integrating risk management, digital coordination platforms, cybersecurity tools, and shared value creation mechanisms in the implementation of information technology projects of digital transformation.

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