

# Research into the Main Components of a Cross-Border Projects under Martial Law

Dmytro Kobylkin<sup>1,\*†</sup> and Khrystyna Avdieyeva<sup>1,†</sup>

<sup>1</sup> Lviv State University of Life Safety, Kleparivska Street, Lviv, 79007, Ukraine

## Abstract

The article presents the results of a systematic study of the features of the functioning of cross-border projects during armed conflict with an emphasis on the specifics of human resources management in conditions of increased uncertainty. It was established that classical management models do not provide the necessary efficiency in a crisis environment without their adaptation to new challenges, such as risks to the physical safety of personnel, instability of resource provision, dynamic changes in the external environment, as well as restrictions on movement and communication. An analysis of the transformation of the management functions of a cross-border project, such as planning, organization, motivation, coordination and control, was carried out, taking into account the threats of wartime. Special attention is paid to the specifics of HR management in a cross-border context, which requires taking into account multi-level interaction, intercultural sensitivity, emotional support of personnel and digital coordination channels. Physical, psychological, legal and communication risks that negatively affect the sustainability of project implementation are identified, and a risk map with appropriate prevention measures is proposed. Effective international and Ukrainian practices of adapting management strategies to war conditions are analyzed, in particular, scenario planning, decentralization of functions, implementation of digital tools and mental well-being systems. Finally, a structural three-level model of human resources management in cross-border projects is proposed, which integrates strategic vision, operational flexibility and local support. The presented model is designed to ensure adaptability, psychological resilience and effective personnel interaction between the parties in a complex safety environment.

## Keywords

cross-border cooperation, cross-border project, human resource management, HR model, martial law, adaptive management, risks, intercultural interaction

## 1. Introduction

In conditions of martial law, cross-border cooperation (CBC) acquires new meanings and functional load. If in peacetime the main emphasis of cross-border projects was focused on socio-economic development, strengthening interregional ties, infrastructure development and improving the quality of life in border areas, then in conditions of military conflict their role is significantly expanding. In particular, such initiatives begin to perform important stabilization, humanitarian and safety functions, becoming one of the key tools for strengthening regional resilience to crisis phenomena [1].

Cross-border cooperation in critical conditions of state functioning not only retains the potential for integration development, but also transforms into a channel for rapid response to threats: both internal (e.g., population displacement, damage to infrastructure, destabilization of local markets) and external (armed threats, information attacks, cyber risks). In this context, the safety component of cross-border projects acquires particular importance, which is no longer reduced to the classical risk management approach in project activities [1, 2].

Instead, it is about the need to develop and implement a holistic, multi-layered safety system that includes:

---

ITPM-2025: VI International Workshop "IT Project Management", May 22, 2025, Kyiv, Ukraine

\* Corresponding author.

† These authors contributed equally.

✉ dmytrokobylkin@gmail.com (D. Kobylkin); kristina\_avdeeva@ukr.net (Kh. Avdieyeva);

🆔 0000-0002-2848-3572 (D. Kobylkin); 0009-0009-5865-6022 (Kh. Avdieyeva)



Copyright © 2025 for this paper by its authors. Use permitted under Creative Commons License Attribution 4.0 International (CC BY 4.0).

- strategic threat assessment;
- scenario planning;
- physical and information protection;
- legal support;
- continuous coordination with government agencies, armed forces, international structures and civil society.

This approach allows us to consider cross-border projects not only as tools of regional development, but also as elements of hybrid safety, capable of adapting to the multi-vector challenges of modernity.

Thus, studying the safety component of cross-border projects during wartime is not only relevant, but also necessary for the formation of effective mechanisms for responding to crisis situations, strengthening interstate trust, and ensuring conditions for future post-conflict recovery.

## **2. Analysis of recent research and publications**

The author in the work [3] focuses on the analysis of the nature of cross-border cooperation (CBC), which has become more active under the influence of globalization processes. These processes have provided border regions with expanded opportunities for the formation of external relations within their competence. This contributes to economic revitalization, strengthening the competitiveness of regions and their inclusion in global integration processes. In the context of Russian aggression, the emphasis of cross-border interaction has shifted to humanitarian and military assistance, in particular with the support of neighboring countries and the EU.

In the work [4], the content characteristics of the concepts of “cross-border cooperation” and “cross-border entrepreneurship” are analyzed. Theoretical approaches to their implementation are formulated and their significance in the context of modern socio-economic transformations is emphasized. Special attention is paid to the formation of the border environment and its role in stimulating cross-border interaction at the local, regional and international levels.

The authors of the work [5] consider cross-border cooperation as an important factor in the European integration processes and increasing the competitiveness of the regions of Ukraine. The authors focus on the need to update the economic component of the TCS by strengthening the functional efficiency of cooperation. In particular, it is proposed to improve financial mechanisms, activate business participation and stimulate foreign economic activity. A model of cooperation based on a combination of public-private partnership and the potential of social capital is put forward.

The work [6] considers the transformation of the Euroregional approach in the face of modern challenges. The main stages of the formation of the TCS in Ukraine are outlined, the specifics of cooperation with EU countries are studied and the socio-economic problems of border territories are studied. The authors analyze the forms of interaction within the Euroregions and emphasize the importance of the Interreg NEXT programs for activating cross-border cooperation. The study emphasizes the potential of these programs in the field of safety and development of border infrastructure.

The authors of the paper [7] reveal the role of a programmatic approach to the implementation of cross-border initiatives covering the economic, scientific and cultural spheres. The authors emphasize the need to improve communication mechanisms, the institutional environment and border infrastructure. A number of measures are proposed to activate the TCC, in particular the creation of cross-border clusters and industrial parks. At the same time, attention is drawn to the barriers in the implementation of regional development policy due to the lack of legal regulation and weak coordination.

The paper [8] analyzes the experience of Ukraine's neighboring countries in humanitarian and military support in war conditions. The importance of partnership and the geostrategic role of Central Europe in the safety architecture of the region is emphasized. Special attention is paid to

Poland and Romania as key players in the process of transforming Ukraine's cross-border policy. The results of the study can be useful in forming the safety elements of cross-border projects.

The authors of the paper [9] focus on the formation of the organizational and economic mechanism of TCC between Ukraine and the EU. The authors highlight the factors of barrier and contact of the cross-border space and propose tools for overcoming them. Particular attention is paid to infrastructure provision and the creation of cluster structures to optimize resources and increase the efficiency of interaction. The study is useful for identifying stakeholders in safety projects.

In the paper [10], cross-border cooperation is considered as a tool for the development of international business tourism. The possibilities of increasing the economic attractiveness of border areas through the implementation of relevant programs and projects are analyzed. The potential of TCC in ensuring sustainable development and creating new jobs is especially emphasized. This can be used to form approaches to the safe implementation of business initiatives in border regions.

In the paper [11], the authors summarized the main theoretical provisions on cross-border cooperation and its role in socio-economic development. Special attention is paid to the impact of the COVID-19 pandemic on changing forms of interaction between regions. The authors analyze examples of Euroregions and cross-border projects in crisis conditions. The results of the study can be useful in modeling safety approaches to cooperation.

In [12], the financial aspects of Ukraine's participation in European TCS programs are considered. In particular, participation in ENI programs for 2014–2020, which were partly aimed at improving safety and preventing disasters, are analyzed. The importance of these projects for the development of border regions is emphasized. The experience can be adapted for the implementation of new safety initiatives.

In [13], the author presents an analysis of cross-border grant programs with the participation of Ukraine. The areas of support, funding opportunities and tools for communities, businesses and authorities are considered. The importance of strengthening information support and involving stakeholders in participating in cross-border projects is emphasized. The study is useful for identifying potential sources of financing for safety-related projects.

In [1], the authors analyzed approaches to managing cross-border projects in the safety sector, focusing on their implementation within the current regulatory framework governing international territorial cooperation. Special attention is paid to international project management standards that offer effective tools for planning, monitoring and overcoming challenges, which, in turn, contributes to the implementation of cross-border initiatives within the specified time frames even in conditions of limited resources.

The paper [2] examines the principles of forming an effective team within international grant projects implemented in the system of the State Emergency Service of Ukraine. It is noted that the key factor in the successful implementation of such projects is high-quality interpersonal interaction in the team: both between the manager and the performers, and between specialists with each other. The authors emphasize that a common understanding of goals, the responsibility of each participant and openness to cooperation are the determining prerequisites for achieving high results.

In summary, it should be noted that most of the existing research focuses on reviewing the implementation of infrastructure or socio-economic projects within the framework of cross-border cooperation. However, the management of cross-border safety projects remains underdeveloped, requiring the development of specialized approaches and effective implementation tools.

**Object of study.** Human resources in cross-border projects implemented under martial law, taking into account the impact of risks.

**Subject of study.** Human resources management processes in cross-border projects, taking into account the specific risks of wartime, intercultural and legal features, as well as technological aspects of communication.

**The task of work.** To investigate the main components of a cross-border project under martial law with an emphasis on the features of human resources management that ensure the sustainability of project activities, adaptation to a risky environment and effective interaction of participants from different jurisdictions. In order to solve the scientific problem should:

- analyze the structure of a cross-border project in martial law from the perspective of management functions;
- identify the specifics of human resource management in projects with a cross-border component during armed conflicts;
- identify the risks that affect the work of personnel in such conditions (physical, psychological, communication, legal);
- investigate the practices of adapting management strategies to the challenges of wartime;
- propose a model or conceptual approach to human resource management in cross-border projects operating in an environment of high uncertainty;
- to form directions of further research.

### **3. The bulk of research**

In conditions of war, the management of cross-border projects requires a review of traditional approaches and the formation of new management solutions, especially in terms of working with human resources. The personnel component, which is usually perceived as an operational function, acquires strategic importance, because it is precisely on the effective interaction of participants that the stability and viability of the project depends [1].

This is due to the fact that the implementation of the project takes place in conditions of increased risks, limited communication capabilities and heterogeneity of teams (cultural, legal, professional). Based on this, there is a need for a comprehensive analysis of the internal structure of projects and the adaptation of management models to the reality of the crisis.

In view of this, the authors propose to investigate the main aspects of building a cross-border project in conditions of war, in particular through the prism of management functions and the specifics of HR management. Special attention is paid to risk factors that affect personnel stability, communication challenges and the potential of digital solutions. This approach allows us to form a holistic vision of resource management in cross-border projects as an element of hybrid safety and interstate interaction.

#### **3.1. Structure of a cross-border project under martial law from the point of view of management functions**

A cross-border project in the context of the classic “project triangle” takes on specific features, especially in martial law. Unlike local or unilateral initiatives, cross-border projects involve several countries, organizations and teams operating in different legal, administrative and cultural environments. This makes achieving a balance between the main components of project management even more difficult.

The scope and quality of a project in such a context are often determined not only by technical parameters, but also by political, humanitarian or safety objectives. In complex conditions, such as armed conflict, it may be necessary to revise the initially defined results, reduce the scope of work or change the method of achieving goals without reducing their strategic value. This, in turn, affects the resource part, since the new conditions require additional costs, in particular for safety, personnel protection, logistical maneuvers, information technology.

The implementation terms in a cross-border project are usually determined by intergovernmental agreements or the requirements of grant programs. In wartime, meeting schedules is complicated by force majeure, travel restrictions, personnel risks, and infrastructure constraints. This requires the implementation of scenario planning, the creation of backup scenarios, and a flexible approach to time management.

In turn, the financial component becomes the most sensitive element of the entire triangle. In conditions of unstable economic conditions, exchange rate fluctuations, inflation, as well as the need to redirect resources to priority needs, in particular safety, urgent support, etc., the cost of the project

may increase or require redistribution. In such circumstances, the need for open dialogue between partners, constant reporting to donors and the introduction of flexible budget solutions increases.

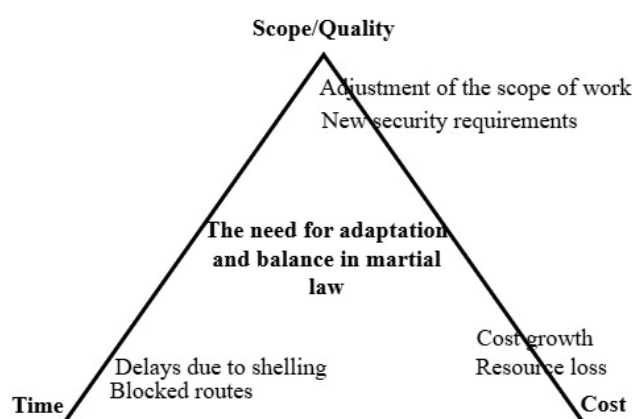
For a cross-border project, an example of its analysis according to the triangle model can be given, which is presented in the form of Table 1.

**Table 1**

Analysis of a cross-border project according to the “project triangle” model

Component	Questions for analysis	Risks	Possible response measures
Scope/Quality	What are the objectives and results defined in the project? What is their priority in a crisis situation? Can they be adapted without losing strategic impact?	Changing stakeholder needs, unavailability of facilities, loss of project focus	Review of the terms of reference, implementation of phased implementation, flexible reassessment
Time/Dates	What are the main project implementation timelines? What delay scenarios are possible and what buffer periods are foreseen? What is the mechanism for responding to changes?	Route closures, personnel relocation, halt of logistics operations	Scenario planning, creation of alternative routes and schedules, remote management
Cost/resources	What is the overall project budget and its structure? What unforeseen costs might arise? Is there a possibility of flexible reallocation of resources?	Inflation, exchange rate fluctuations, property losses, new safety costs	Introduction of a reserve fund, indexation of costs, attraction of additional donors or co-financing

On the Figure 1, the results of the analysis of a cross-border project from the perspective of the “project triangle” are presented.



**Figure 1:** Analysis of a cross-border project from the perspective of the “project triangle”

Thus, in a cross-border project, all three components, scope, timing and cost, are in a constant dynamic balance that requires adaptive management. Changing one of them almost inevitably entails the need to revise the others. Management in martial law involves not only maintaining the balance within the triangle, but also transforming this tool into a system capable of responding to external threats, internal challenges and constantly updating in accordance with the real state of affairs.

Based on the fact that the structure of a cross-border project, by its nature, is a multi-level system that covers not only the technical and financial aspects of cooperation, but also managerial and

organizational elements that ensure coordination between partner countries. In peacetime, such a structure involves a clear division of roles, functions and implementation stages, which are based on international project management standards (e.g. PMBOK, PRINCE2) and partnership principles.

However, under martial law, the project structure undergoes transformations associated with increased risks, uncertainty, limited access to resources, and destabilized communication channels [1, 14].

From the point of view of classical management functions, in particular planning, organization, motivation, coordination, control and analysis, a cross-border project in martial law conditions requires an adaptive and stress-resistant approach.

Planning is moving to a flexible form: scenario modeling, short-term cycles and multivariate solutions. The importance of a “live” plan that can be adjusted in real time is growing.

Project organization involves the creation of a multi-level management structure that takes into account limited personnel mobility, differences in jurisdictions, remote forms of work and the need for constant interaction with military or emergency administrations.

The motivational function takes on new significance, as the team works in conditions of stress, risk to life, loss of stability. Therefore, the issues of psychological support, leadership, trust and awareness of a common goal become priorities.

Coordination in a cross-border project is complicated by differences in cultural codes, languages, digital platforms, as well as frequent changes in external circumstances. It is necessary to create backup communication channels and integrate digital solutions (for example, shared cloud environments, secure messengers).

Control is complicated by the lack of stable performance indicators. This requires the formation of an adaptive system of evaluating results, which is based not only on the performance of tasks, but also on ensuring safety, continuity of processes and maintaining the integrity of the team.

Analysis and reflection in wartime conditions become an important tool for continuous improvement. Studying errors, fixing risks, exchanging experience between teams from different countries create the basis for the sustainable implementation of cross-border projects in the future.

Thus, management functions in a cross-border project implemented under martial law require high adaptability, interdisciplinary nature and the inclusion of anti-crisis management mechanisms. They must take into account both internal challenges, including team coordination and task fulfillment, and external ones, such as dynamic political circumstances, safety risks, logistical and regulatory disruptions. That is why structural analysis of such projects is a key step in building an effective HR model that can function in a crisis environment.

### **3.2. Specifics of human resources management in projects with a cross-border component during armed conflicts**

Human resource management in cross-border projects in conditions of armed conflict differs significantly from standard practices adopted in peacetime. The main difference is that the main attention of management is focused not only on the effective performance of tasks, but also on ensuring safety, maintaining the functionality of team interaction and supporting the psychological stability of personnel. The cross-border nature of such projects creates additional challenges associated with multiculturalism, legal heterogeneity and different levels of access to resources, which is especially complicated in war conditions [1, 15].

The complexity of personnel management increases due to the dynamics of the situation, the presence of threats to the life and health of employees, restrictions on physical mobility, as well as disruption of logistical and communication channels. Team formation in such conditions requires increased flexibility: attracting local personnel, creating mixed or remote teams, delegating some functions to partners in safer regions. Adaptation of personnel selection, training and motivation policies is becoming particularly relevant - with a focus on rapid adaptation, psychological support, intercultural competence and crisis leadership. Communication plays a special role, in particular, multinational teams need stable digital channels, understandable feedback formats and a transparent decision-making system. In conditions of limited infrastructure and periodic communication

interruptions, it is communication flexibility that allows you to maintain consistency of actions and prevent conflicts. The process of managing expectations and responsibility is also complicated, since employees may be under the influence of varying degrees of risk, have limited access to information or operate in conditions of legal uncertainty.

In wartime, personnel policy in cross-border projects should integrate anti-crisis and psychological components, include regular risk assessments for personnel, and provide for flexible forms of support (in particular, psychological assistance, flexible schedules, compensation mechanisms). Project managers must possess not only professional competence, but also the ability to act in conditions of uncertainty, show empathy and build trust between team members located in different jurisdictions and safety conditions.

From the perspective of human resource management of a cross-border project in the safety sector, we will consider each factor in more detail (Table 2).

**Table 2**

Human resource management factors of a cross-border project

Factor	Specification of activities under martial law	Measures to eliminate or prevent
Formation of the team	Involvement of local specialists; mixed (offline/online) teams; delegation of authority across borders	Development of flexible selection criteria; preliminary analysis of local resources; establishment of partnerships with local NGOs
Work organization	Flexible schedule; transition to remote format; adaptation to unstable logistics and mobility	Implementation of online platforms; development of instructions for crisis situations; backup planning of tasks
Communication	Use of digital tools; backup communication channels; cross-language interaction; need for responsiveness	Provide digital safety training; standardize communications; appoint communications coordinators
Motivation and support	Focus on psychological support; regular feedback; compensation mechanisms; increasing trust	Providing mental support; developing well-being programs; regular team satisfaction assessments
Legal and cultural differences	Different legal frameworks for employment; cross-cultural communication; the need to integrate standards	Conduct legal audits; appoint cross-cultural facilitators; adapt HR policies to the local context
Risk Management	Continuous assessment of threats to personnel; formation of a risk matrix; operational decision-making	Formation of continuity plans; development of response scenarios; safety training for personnel
Leadership	Anti-crisis style; empathy; development of trust; ability to make decisions under uncertainty	Increasing the competence of managers in anti-crisis management; creating trusting environments in the team

Thus, human resource management in cross-border projects during wartime requires fundamentally new approaches - the integration of adaptive HR management, digital tools, cross-cultural sensitivity and strategic risk management. The identification of these features creates the prerequisites for the development of universal models of personnel management in crisis conditions and forms a new methodological basis for cross-border interaction.

### 3.3. Identification of risks affecting personnel work in conditions of uncertainty

In cross-border projects implemented during martial law, the effectiveness of personnel functioning significantly depends on the ability of the project organization to timely identify, classify and

minimize key risks associated with the human factor. Given the complexity of the geopolitical context, the multicultural nature of teams and the high level of uncertainty, risk identification becomes a very important component of project management, especially at the level of personnel management [1, 15, 16].

Conventionally, these risks can be grouped into several categories:

- physical risks are associated with a direct threat to the life or health of employees due to hostilities, rocket attacks, mining of territories or destruction of critical infrastructure. In areas of increased danger, even a partial presence of personnel creates the need for constant monitoring, evacuation protocols and a rapid response system;
- psychological risks arise from high levels of stress, emotional burnout, a sense of loss of control and chronic anxiety. This is especially true for employees who work in close proximity to a conflict zone or are forced to constantly adapt to changes. In cross-border teams, this may also be accompanied by a decrease in team spirit and the emergence of tension between team members;
- communication risks relate to unstable internet connections, the lack of reliable channels for information exchange, as well as barriers associated with language, time and cultural differences. In cross-border teams that are spread across different regions and operate in different safety environments, such problems can lead to a loss of coherence, misunderstanding of tasks and a violation of communication discipline;
- legal risks include ambiguity or inconsistency of national and international norms regarding the status of workers, legal protection, mobilization procedures, and the peculiarities of labor relations in a cross-border context. There may also be uncertainty regarding taxation, contract execution, or access to social guarantees for workers performing project tasks in another country.

The main approach to overcoming these challenges is to classify risks according to the criterion of impact on project activities. It is advisable to use a risk matrix, which takes into account the probability of an event and the level of its impact on personnel or the implementation of individual project stages. Based on this, it is possible to form risk profiles, develop response measures (reactive and preventive), and also form adaptive HR management strategies (Table 3).

**Table 3**

Risk matrix of cross-border project

Risk type	Risk description	Probability (1-5)	Impact (1-5)	Priority	Prevention Measures
Physical Risk (War Zone)	Personnel exposure to war zones may result in death, injury, or loss of access to project facilities	5	5	25	Ensure evacuation protocols and ongoing safety monitoring
Psychological burnout of personnel	Prolonged stress, unforeseen circumstances and pressure can lead to a decrease in employee productivity and motivation	4	4	16	Implement psychological support programs and flexible working hours
Communication barriers (language, time)	Language differences, time zones, and different approaches to communication make it difficult to understand each other within the team	3	3	9	Use common communication languages, time synchronization, and standardized channels
Loss of digital	Loss of stable internet or communication blocks task	4	4	16	Provide backup communication



communication/ internet	execution, leads to team isolation and delays				channels (VPN, satellite internet)
Legal uncertainty (contractual issues))	Lack of clear legal regulation can cause disputes regarding working conditions, liability and protection of personnel rights	3	4	12	Lack of clear legal regulation can cause disputes regarding working conditions, liability and protection of personnel rights
Cultural incompatibility in the team	Cultural differences can lead to misunderstandings, conflicts and reduced efficiency of teamwork	2	3	6	Conduct cross- cultural training and facilitation sessions
Mobilization or loss of key specialists	Forced mobilization or forced emigration of specialists complicates the implementation of key project stages and loss of competencies	4	5	20	Form a personnel reserve, flexible distribution of responsibilities, decentralized functions

Thus, systematic identification and grouping of risks allows creating a reliable basis for the formation of a safety-oriented personnel policy in cross-border projects. This, in turn, increases the overall stability of the project team, reduces the number of failures in the implementation of tasks and contributes to the achievement of goals despite the influence of external threats.

### 3.4. Practice of adapting management strategies to the challenges of wartime

In conditions of armed conflict, traditional management models require a significant rethinking. Structured planning, centralized decision-making, and standardized procedures that were effective in a stable environment are ineffective in a situation of high dynamics, uncertainty, and risk. This necessitates the adaptation of management strategies, especially in the field of human resources, to the new challenges dictated by martial law.

In world practice, there is a transition to flexible and adaptive management models that are able to ensure the sustainability of organizations in critical conditions. For example, the experience of implementing humanitarian and stabilization projects in regions affected by armed conflicts (Syria, Afghanistan, Iraq) demonstrates the effectiveness of decentralized team management systems, mobile leadership, and the use of digital platforms for operational coordination. One of the main factors of sustainability in such projects is the development of local human resources, which allows reducing dependence on external specialists and adapting to the local context.

Ukrainian experience in recent years also confirms the effectiveness of anti-crisis and hybrid management, based on the principles of delegation, project autonomy, emotional support of staff and the use of reserve resources. For example, within the framework of cross-border humanitarian initiatives implemented jointly with Poland, Romania or Slovakia, mechanisms for flexible redistribution of functions between partner organizations are often used, depending on the current safety situation. Mental health programs for teams working in crisis conditions are also actively implemented, including online counseling, psychological facilitation and group support.

To ensure the effective functioning of cross-border projects in wartime, it is advisable to implement adaptive management tools that take into account the variability of the environment and the multicultural context of teams. In particular, it is recommended to use scenario planning, flexible resource management, decentralization of authority and digital platforms for coordination. It is important to form mobile cross-functional teams, develop crisis leadership and implement mental

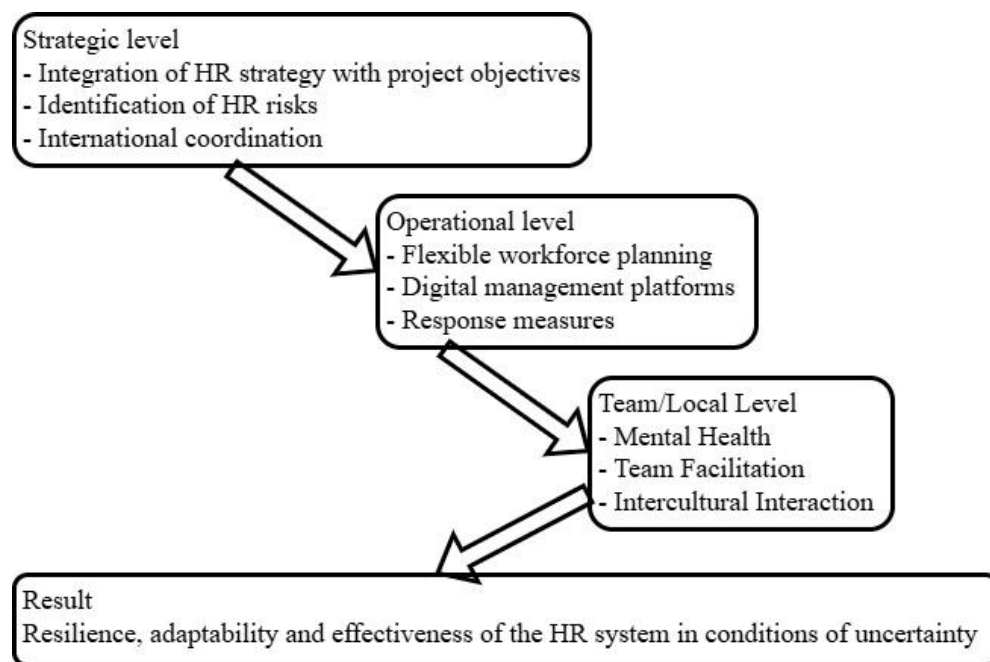
support systems for personnel. In addition, it is necessary to ensure the localization of management decisions taking into account legal and cultural features, as well as have backup plans for business continuity. All this allows you to maintain the integrity of the project, the stability of the team and adaptability to crisis changes.

The generalization of these practices allows us to identify certain universal principles of adaptive management that can be used to form a personnel management strategy in cross-border projects: these are systematicity, flexibility, ethics, transparency, localization, digital readiness and risk tolerance. It is precisely such approaches that make it possible to maintain the functionality of organizational processes even in critical conditions and ensure the continued implementation of strategic goals despite external threats.

### 3.5. Human resource management model in cross-border projects operating in an environment of high uncertainty

The task of forming a unified model of human resources management in cross-border projects is to integrate analytical findings on risks, challenges and adaptation tools in martial law conditions. Such a model is focused on a dynamic, multicultural and risk-prone environment, where the key criteria for effectiveness are not only achieving goals, but also maintaining stability, trust and continuity of interaction within the team.

Conceptually, the proposed model is based on three interconnected levels (Figure 2):



**Figure 2:** Structural model of human resource management in cross-border projects under uncertainty

- strategic – where HR policy is integrated with the general logic of the cross-border project, risks, priorities and coordination channels between partners are determined;
- operational – which involves adaptive personnel planning, implementation of response scenarios, use of digital HR platforms, monitoring, analytics and performance management tools;
- team/local – where an internal environment of support, interaction and microclimate is formed based on the principles of intercultural competence, mental well-being and flexible leadership.

Among the main elements of the model, the following can be distinguished:

1. Integrated risk assessment system for personnel;

2. Flexible management structure with delegation of authority by levels of responsibility;
3. Use of digital platforms for training, communication and knowledge management;
4. Psychological support, facilitation and mentoring programs in the team;
5. Adaptive leadership with an orientation towards values, emotional intelligence and support.

The implementation of such a model allows not only to reduce the level of conflict and personnel losses, but also to create conditions for maintaining staff motivation, increasing their readiness to act in conditions of risk, as well as ensuring the long-term sustainability of the cross-border project as a socially oriented initiative. This approach transforms HR management from an exclusively functional role into a strategic factor for the survival and development of an international team in turbulent conditions.

## **4. Conclusions**

The study analyzes the main components of a cross-border project under martial law, with particular attention to the specifics of human resource management, which helps ensure the sustainability of project implementation, adaptation to an unstable environment, and effective coordination between participants from different legal systems. According to the results of the study:

1. It was established that the structure of a cross-border project in crisis conditions requires the adaptation of classical management functions in accordance with new challenges - increased risk, limited access to resources and a dynamic external environment. This requires flexibility in planning, delegation of responsibility and the application of crisis control and coordination models.
2. The specifics of human resource management in a cross-border context during wartime were studied. It was shown that traditional HR practices are not effective without taking into account intercultural interaction, remote coordination, psychological support and multi-level communication. The stability of the team depends on the implementation of emotionally-oriented leadership, adaptation of motivation policies and flexible recruitment.
3. The main risks affecting personnel - physical, psychological, communication and legal - were identified. A risk map was created with impact priorities and preventive measures were developed to minimize threats and ensure the continuity of project activities even in the face of critical challenges.
4. The practices of adapting management strategies are analyzed. The most effective tools are identified - scenario planning, decentralization, digital solutions, mobile teams, mental health support systems. It is shown that the successful implementation of cross-border projects is possible only if flexible management models are implemented, capable of dynamically responding to changes.
5. A structural model of human resources management in cross-border projects under conditions of uncertainty is developed. A three-level concept of HR management is proposed, which combines strategic vision, operational flexibility and micro-level interaction in the team. It ensures adaptability, psychological stability and functional efficiency of international project interaction.

Further research will be aimed at developing models and methods for managing human resources in cross-border safety projects under uncertainty, which will be based on innovative, sustainable and culturally adapted approaches capable of maintaining the viability of projects even in crisis environments.

## **5. Acknowledgements**

Acknowledgements to the Ukrainian Project Management Association (UPMA), organizational committee of ITPM 2025 and management board of Lviv State University of Life Safety.

## Declaration on Generative AI

The authors have not employed any Generative AI tools in the writing of this paper.

## 6. References

- [1] K. Avdieyeva, D. Kobylkin. Overview of approaches to cross-border project management in the security sector, *Bulletin of the Lviv State University of Life Safety*, 2024, 30, pp. 205-219. DOI: <https://doi.org/10.32447/20784643.30.2024.20>
- [2] K. I. Avdieyeva, D. S. Kobylkin. The basic model of an effective project team for the implementation of international security projects, *PM Kyiv 2024 "Management of projects in the development of society"*, Topic: "Management of projects of the post-war development of Ukraine": theses of reports, pp. 37-41
- [3] N. Volkova. Cross-border cooperation of Ukraine with EU countries in the context of the Russian-Ukrainian war, *Economy and society*, 2023, 48. DOI: <https://doi.org/10.32782/2524-0072/2023-48-52>
- [4] V. V. Zelic. Theoretical principles of implementation of cross-border cooperation of enterprises, *Economy and Society*, 2018, 19, pp. 756-762. DOI: <https://doi.org/10.32782/2524-0072/2018-19-115>
- [5] A. Dunska, G. Zhaldak. Cross-border cooperation: essence and prospects for development, *Entrepreneurship and innovation*, 2019, 7, pp. 56-64. DOI: <https://doi.org/10.37320/2415-3583/7.9>
- [6] N. I. Gornostay, O. E. Mykhalchenkova. State and features of the development of cross-border cooperation in Ukraine, *Science, technology, innovation*, 2023, 2(26), pp. 20-25. DOI: <http://doi.org/10.35668/2520-6524-2023-2-03>
- [7] O. Redkva, V. Tsekhanovych. Cross-border cooperation in Ukraine: perspectives of Euroregion development, *Galician economic journal*, 2020, 64, 3, pp. 52-58. DOI: [https://doi.org/10.33108/galicianvisnyk\\_tntu2020.03.052](https://doi.org/10.33108/galicianvisnyk_tntu2020.03.052)
- [8] Y. V. Okunovska. Cross-border cooperation with Ukraine in wartime, *Bulletin of Vasyl Stus DonNU. Ser.: Political Sciences*, 2022, 7, pp. 70-74. DOI: <https://doi.org/10.31558/2617-0248.2022.7.10>
- [9] N. V. Ivanova, O. V. Minina. Cross-border cooperation between Ukraine and the EU: a mechanism for interaction between the parties, *Problems and prospects of economics and management*, 2021, 2(22), pp. 78-87. URL: <http://ppeu.stu.cn.ua/article/view/219395>
- [10] Y. Zgurska. Cross-border cooperation as a driver for the development of international business tourism, *Socio-economic problems and the state*, 2023, 2(29), pp. 39-47. DOI: <https://doi.org/10.33108/sepd2023.02.039>
- [11] O. A. Kornelyuk, Yu. I. Zavadzka, R. V. Chapko. Forms of implementation of cross-border cooperation in the European Union, *Scientific journal "Innovative Economy"*, 2021, 3-4, pp. 12-18. DOI: <https://doi.org/10.37332/2309-1533.2021.3-4.2>
- [12] O. Kornelyuk, V. Matyushok. Cross-border programs and projects in Ukraine, *International relations, public communications and regional studies*, 2021, 2(10), pp. 199-212. DOI: <https://doi.org/10.29038/2524-2679-2021-02-199-212>
- [13] M. Kobelya-Zvir. Grant programs of cross-border cooperation: opportunities, prospects, obstacles, *Economic space*, 2023, 186, pp. 44-48. DOI: <https://doi.org/10.32782/2224-6282/186-8>
- [14] K. I. Avdieyeva, D. S. Kobylkin. Concept of management of cross-border project teams under risks. XX International scientific and practical conference of young scientists, cadets and students "Problems and prospects for the development of life safety system". Lviv, 2024. P. 269–273.
- [15] D. Bedrii. Classification of conflicts of a scientific project. *Bulletin of Cherkasy State Technological University. Serial: Technical sciences*, 2019, 2, pp. 96-106. DOI: <https://doi.org/10.24025/2306-4412.2.2019.169457>
- [16] E. Danchenko, D. Bedrii, I. Semko. Identification of personnel risks of scientific projects, *Collection of Scientific Works "Project Management and Manufacture Development"*, 2017, 4.64, pp. 18-24