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**THE IMPACT OF THE TRANSITION FROM THE VUCA MODEL  
TO THE BANI MODEL ON MILITARY ORGANIZATION  
MANAGEMENT**

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**Abstract:**

*The article presents a summary of an exploratory study that highlights two modern concepts of contemporary management – VUCA and BANI, tailored to the field of security and defence, and in particular to the field of military organization management. The aim is to determine the main areas impacted in the military organization in the context of this new managerial paradigm – BANI, an analysis that needs to be corroborated with other current concepts in military science theory and practice. Subsequently, the aim is to identify lines of effort that need to be operationalized so that the transition has a minimized negative impact, adapted to the general security context. The role of resilience and education in such frameworks of change is emphasized.*

*Key words: defence; management; BANI model; resilience; VUCA*

## **1. Introduction**

In recent decades, the military organizational environment has been defined by the acronym VUCA (Volatility, Uncertainty, Complexity, Ambiguity) to describe unstable and unpredictable operational environments. This model, which has its roots in the work of Bennis and Nanus (1985) and has been popularized mainly in management literature, has also been adopted by military leaders at all levels to explain the post-Cold War transition [1]. The importance of preparing for VUCA conditions is confirmed in military practice: “Military leaders must be able to do this under volatile, uncertain, complex, and ambiguous (VUCA) conditions” [2].

This paradigm has led to the development of training models focused on critical thinking, creativity, and organizational resilience, but recent changes (pandemic, supply chain crises, hybrid warfare, and cyber threats) show the conceptual limitations of VUCA in capturing certain types of fragility and psychological reactions in complex systems [2], [3], in other words, “VUCA changes the rules during the game, making it difficult to react immediately due to frequent and dynamic changes” [4]. In this context, experts have introduced the BANI (Brittle, Anxious, Nonlinear, Incomprehensible) model as a new analytical framework, considering that we live “in a fragile, anxious, nonlinear, and incomprehensible world, aspects that are visibly reflected in military resource management and strategic decision-making” [5], [6]. The BANI concept is not just a semantic evolution but responds to the need to address the new organizational reality: “The BANI model describes a new world in which the old values and rules no longer apply” [7]. Thus, the impact is not only theoretical but also operational and strategic: „Military leadership in a VUCA world and BANI scenario is characterized by a complex combination of competencies in a personal,



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relational and organizational level. Among them the capacity to think out of the box, to be creative, innovative, intuitive, resilient, flexible and adaptative” [3].

This raises the question of the type of military education required to pursue specialized professions in the field of security and defence, particularly with regard to the initial training of officers. What is the best option? A more general framework that allows for a better understanding of the current operational environment (and implicitly uses adaptability and flexibility in identifying appropriate solutions) or a strictly specialized education, oriented towards the acquisition of a limited field of conceptual frameworks but rich in the internalization of standard operating procedures? The basis for the discussion should also be built on an understanding of the relationship between the military dimension of security and non-military dimensions.

For military organizations, the transition from VUCA to BANI is not just a change in terminology, but an adjustment of analytical tools, training, and decision-making architecture. Recent literature indicates that military leadership must integrate organizational learning competencies, civil-military interoperability, and digital skills to cope with hybrid and non-linear environments; at the same time, studies show that traditional prediction and planning models do not sufficiently cover the psychological reactions of personnel or the infrastructural fragilities revealed in crises [2], [3]. Adopting the BANI model could enable the development of policies and training that target not only the ability to adapt to change, but also the reduction of fragility, the management of organizational anxiety, and the development of rapid sense-making mechanisms in the face of non-linear phenomena.

## **2. Theoretical foundations of VUCA and BANI**

As mentioned earlier, the VUCA model, built on the pillars of volatility, uncertainty, complexity, and ambiguity, emerged in the US military to “describe a more complex multilateral world perceived as resulting from the end of the Cold War” [8]. For the military system as a whole, the adoption of this analytical framework had a dual role: on the one hand, “VUCA provides a lens through which leaders can diagnose the environment and determine the best course of action” [9], and on the other hand, it served as a platform for analysis for a wide range of strategic contexts, from military operations to major organizational changes.

From this perspective, we believe that bibliometric analysis can provide a much more comprehensive qualitative picture of the VUCA concept and its implications for organizational management, regardless of its specifics.

The VUCA concept, first used by the US military to analyse armed combat environments, was first mentioned in a Web of Science indexed scientific publication in 2008, for improving fleet management in railway traction [10]. Since 2008, this conceptual model has been addressed in 864 scientific publications, used to diagnose the environment in which organizations operate in several fields of activity.

The use of the VUCA concept in the security environment has generated 28 scientific articles on Web of Science, published between 2008 and 2025. These publications have been compiled into a database, which has been analysed to highlight trends and the impact of research in the field. Figure 1 contains a diagram of key terms that create links between them, integrating 126 items out of a total of 200 keywords.





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In terms of mapping the specialized literature, Figures 2 and 3 highlight the most cited countries, as well as the most cited scientific publications. It can be seen that the most cited scientific work is affiliated with Finland, although in terms of number of publications, the top five places are occupied by India (7), Romania (6), China (4), the US (3), Germany (2), followed by Finland with one publication. The article published by Finnish authors draws attention to the complex problem that a deficient energy system can trigger, given the increased interconnection of states due to digitalisation and globalisation [16].

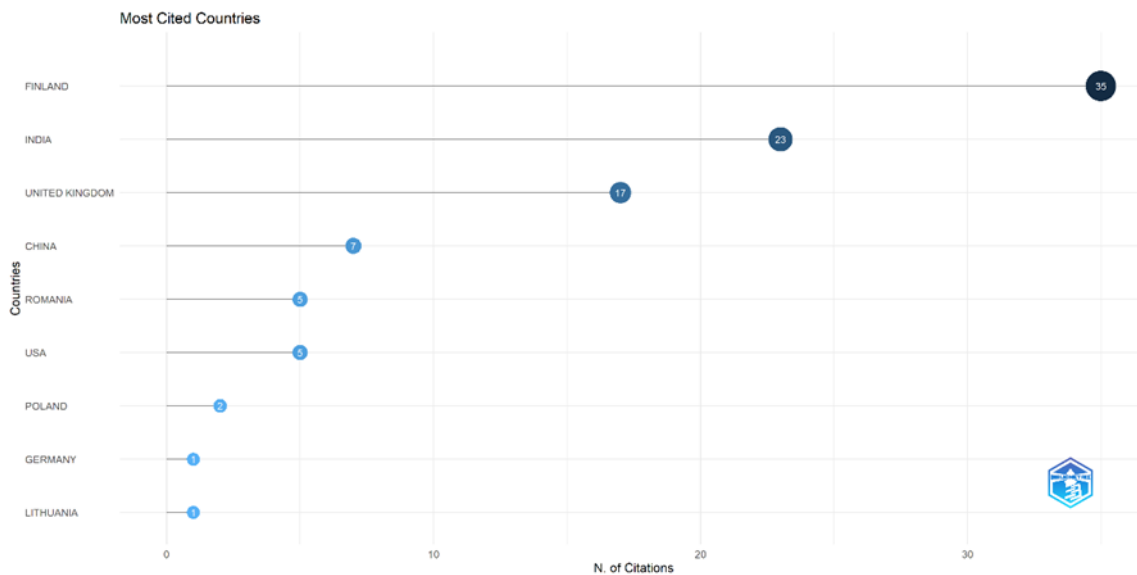
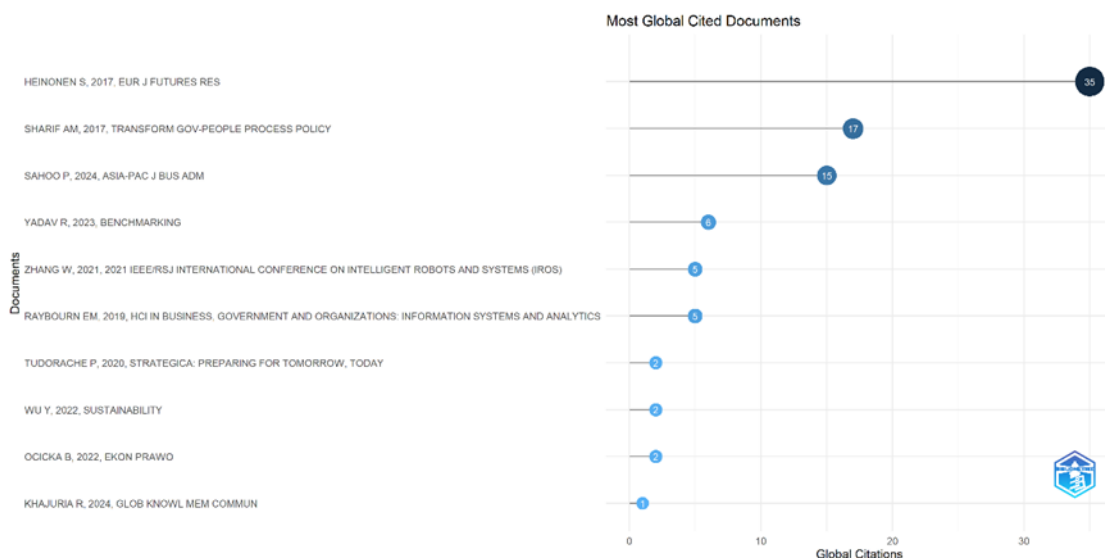


Figure no. 2. Most frequently cited countries

As for Romanian authors, the most cited scientific publication outlined a leadership model whose application gives leaders the ability to be flexible and agile in any VUCA environment. The article also identified strategies used by leaders to cope with the most difficult decision-making contexts they may face in the future [11].





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Figure no. 3. Most cited publications

Figure 3, which highlights the most cited scientific documents, complements Figure 2 with the most relevant works in the field. The second most cited scientific article is affiliated with the United Kingdom, which stands out with a single publication in the field, cited in 17 other works. Using the VUCA perspective to frame food security challenges, the authors emphasize the need for governments to be prepared to deal with a wider variety of external forces, risks, opportunities, and threats in order to mitigate food insecurity [12].

However, the dynamics of recent years—advances in technology, accelerated globalization, hybrid warfare, and overlapping crises—have highlighted the limitations of the VUCA framework. The introduction and conceptualisation of the BANI (Brittle, Anxious, Nonlinear, Incomprehensible) model, according to Jamais Cascio, reflects a shift from the unpredictable to the inexplicable, from uncertainty to collective anxiety: “A VUCA world is one where volatility, uncertainty, complexity, and ambiguity are ever-present. But beyond VUCA, there’s a world that’s brittle, anxious, nonlinear, and incomprehensible: BANI” [5]. Moreover, „the BANI framework highlights the need for future studies to adapt to evolving global dynamics, providing a lens to better understand and respond to the unpredictable nature of our contemporary world” [5].

Recent bibliography mentions that, although literature on the BANI model is emerging in academia, its applications have begun to be tested in organizational management, engineering, education, and sustainable projects [13], [14].

For example, between 2008 and 2025, the Web of Science database indexed nine documents that integrate this model into their analyses. The applicability of the model was tested in higher education in a study that highlights the changing requirements of the modern labour market, particularly in the transition from a VUCA state to a BANI state, highlighting the increased turbulence and unpredictability of the working environment and the emphasis on soft skills [14]. The model has also been mentioned in studies on construction projects or urban regeneration. The transformative potential of AI in facilitating sustainable practices and achieving long-term success in the BANI environment has been demonstrated [13]. Based on the Web of Science database, there are no published scientific articles analysing security in the BANI environment, which qualifies the topic as emerging and an opportunity for research.

The practical importance for military organizations stems from the fact that the BANI model addresses not only uncertainty (as in VUCA), but also the fragility of systems (“brittle”), collective anxiety (“anxious”), the lack of predictable causal relationships (“nonlinear”), and the information overload of leaders (“incomprehensible”). As Schlegelmilch notes, “The BANI model describes a new world in which the old values and rules no longer apply. In the VUCA concept, everything is volatile, uncertain, complex, and ambivalent” [7]. Therefore, the military organization must reevaluate both its prediction tools and the development of resilient and adaptive leadership skills in the context of multiple and difficult shocks.

### **3. The applicability of the BANI model in the field of military organization management**

As mentioned earlier, the BANI model is a response to the limitations highlighted by the old VUCA model, addressing the new realities faced by modern military organizations. Operational situations, the geopolitical context, the proliferation of technology, and changes in the information paradigm have led to the emergence of an environment that authors are beginning to describe as „brittle, anxious, nonlinear and incomprehensible” [15].



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In the following, we will attempt to illustrate how the elements of the BANI model can be applied to the specific managerial processes of the military organization.

### **1. Brittle**

Contemporary military organizations are increasingly vulnerable due to the fragility of their components. Recent experiences have shown that systems considered robust, such as military systems, can quickly collapse under the pressure of severe shocks, such as hybrid attacks, cyber attacks, or unforeseen logistical disruptions. Jamais Cascio emphasized that “brittleness is not just about volatility anymore... it is about a sudden and unforeseen shock to or even the destruction of a seemingly stable system” [15]. Therefore, the “brittle” component requires military leaders to identify critical points, periodically test resilience, eliminate redundancies at all levels of action and in all incorporated systems and subsystems, while developing rapid response scenarios to all internal or external stimuli to the military organization. Addressing this fragility becomes a priority with the emergence of the BANI context.

### **2. Anxious**

In the military environment, anxiety stems both from strategic uncertainty and from the constant emotional pressure on personnel involved in complex or high-risk operations. Operational stress, fear of systemic failure, or difficulty maintaining cohesion in uncertain conditions can quickly undermine morale, cohesion, motivation, and decision-making efficiency, with immediate effects on organizational performance. Schlegelmilch notes that “anxiety... can also be triggered by misinformation and fake news spread online” [7], emphasizing the need for empathetic leadership and psychological support. Therefore, military organization management must include robust policies for psychological support, transparent communication, and the development of a resilient and empathetic organizational climate.

### **3. Nonlinear**

Nonlinearity implies the difficulty of predicting and managing the effects of actions and decisions, as seemingly minor phenomena can produce major changes, and cause-and-effect relationships sometimes become unpredictable. Nonlinear events in the military can bypass traditional risk management, requiring systemic approaches and simulation-based planning [3]. For military organizations, training must include multiple scenarios, rapid responses to unforeseen crises, and the development of organizational intelligence. Rapid paradigm shifts—such as accelerated digitization—deepen the nonlinear nature of the security environment, so that the decision-making process specific to the military organization and reactions in such situations require the use of modern analytical tools, supported by advanced technology and the continuous development of organizational intelligence.

### **4. Incomprehensible**

Incomprehensibility refers to the complexity of situations in which leaders cannot logically and completely anticipate all the variables or risks of an operational context. Cascio emphasizes that “incomprehensibility leaves leaders struggling to make sense of chaos” [15], highlighting the need for adaptability, rapid learning, and the development of skills for interpreting weak signals. In military organizations, this involves promoting an organizational climate open to reconfiguration, rapid decision-making in conditions of risk and uncertainty, and the formation of a culture of tolerance for ambiguity.

Each component of the BANI model puts pressure on the military organization in general, and on military leaders in particular, to develop specific adaptive tools, policies, and behaviours, going beyond classic approaches based solely on robustness and rigorous planning. Leveraging the results of empirical research and integrating the results and tools derived from the bibliometric



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analysis proposed in this study can support the construction of a military management doctrine appropriate to the new reality, contributing to organizational resilience, clarity, and flexibility and, last but not least, validating the usefulness of this model as a tool for reflection and action for modern strategic management.

### **3. Conclusion**

The article demonstrates that the transition from the VUCA model to the BANI model marks a paradigm shift for military organization management. While VUCA allowed military leaders to identify, anticipate, and manage the volatility, uncertainty, complexity, and ambiguity of the operational environment, the current global security context reveals new types of risks: the fragility of critical infrastructures, collective and individual anxiety, the non-linearity of processes, and the increasing difficulty of building explanatory models relevant to decision-making.

Bibliometric analysis and recent studies show that the VUCA model has been widely adopted by the specialist literature, but the experience of recent crises (pandemics, hybrid warfare, disruptions to logistics chains, cyber crises) reveals its limitations in capturing the real vulnerabilities of military systems and psychological reactions in unpredictable situations. The BANI model allows for a superior conceptualization of these emerging risks, focusing attention on preventing systemic collapse and developing adaptive organizational and decision-making mechanisms. The application of the four BANI dimensions reveals the need to recalibrate managerial priorities:

- „*Brittle*”: focus on auditing technical, logistical, and social vulnerabilities, redundancy, and resilience testing;
- „*Anxious*”: implementation of psychological support policies, transparent communication, mentoring, and empathetic leadership;
- „*Nonlinear*”: developing organizational capacity for rapid response, multi-scenario simulation, and adaptive training;
- „*Incomprehensible*”: embracing adaptive leadership, rapidly reconfiguring plans, and promoting an organizational culture of tolerance for ambiguity and uncertainty.

We believe that modern military management needs analytical and operational tools that go beyond classic VUCA approaches. Integrating the BANI model into practice will allow not only anticipation, but also prevention of collapse under the pressure of crises with major impact. The use of empirical research and the transfer of best practices from the international environment support the consolidation of an agile, resilient military management doctrine that is relevant for the 21st century. By accepting resilience as a new doctrinal requirement of modern warfare capabilities, affirmed and explicitly stated in concrete terms, rather than merely understood and accepted implicitly, the systemic, technical, and operational orientation of military organization management (at all levels of management) towards the BANI paradigm becomes a sine qua non condition for the timely transformation of defence, as a specialized structure of society but also as complex organizational processes, in the new complicated conditions of the functioning of society as a whole. One can advance the idea of the emergence of new functions such as CRO (chief resilience officer), similar to recent developments in business organizations. The expected impact, in our opinion, given the particularities of the BANI paradigm, is therefore primarily at the level of human resources,



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followed by structural and functional changes at the level of logistical support and communications systems.

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