

## ***Beyond the Horizon: Training Minds and Systems for Tomorrow's Conflicts***

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### ***Prepared for the Unknown: Training Minds and Systems for Tomorrow's Conflicts***

***(to be decided)***

#### **Authors:**

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**Abstract:** (WIP)

**Bottom-line-up-front:** A comprehensive tactical education, coupled with an unbiased and effective utilization of modern information and communication systems—despite the necessity of accounting for their potential failure—remains indispensable. Mental agility, improvisation, and adaptability, combined with the efficient use of available resources, will be pivotal in addressing the challenges of future conflicts. (WIP)

#### **Problem statement:**

How can emerging technologies alter the requirements for the command-and-control system with focus on information and communication and tactical planning and what has to be done to ensure effective decision-making and combat readiness through training and education?

**So what?:**

The problem statement requires a combination of individual preparation through reading, learning, thinking and creative experimentation, alongside institutional preparation that fosters thinking beyond conventional boundaries by nature. Ensuring this dual approach is essential for meeting the demands of future conflicts effectively and should immediately be implemented in training. (WIP)

### **Full Abstract ENGLISCH:**

Future conflicts will be characterized by an increasing interconnection of technological innovation and military-tactical adaptation, posing significant challenges to military personnel. This paper examines this dynamic tension from two complementary perspectives: the military-technological viewpoint, which identifies requirements for leadership structures, information systems, and leadership relationships in general, and the tactical perspective, which focuses on the challenges of combined arms operations, including their planning and execution.

Drawing on the works of leading thinkers on (*future?*) conflicts, such as P. W. Singer and August Cole, General Mick Ryan, as well as Elliot Ackerman and Admiral (retired) James G. Stavridis, three hypothetical vignettes are presented with specific relevance to the Austrian Armed Forces. These vignettes illustrate the impact of modern emerging technologies—such as artificial intelligence, autonomous systems, and cyber capabilities, particularly in their concurrent application—on fundamental military operations.

Building on this foundation, the two perspectives explore the identified challenges within their respective domains, complementing each other in deriving general conclusions for the training of military leaders. The critical juxtaposition of these positions enables the identification of future issues, highlighting the need to address them in a way that directly enhances the understanding of combat effectiveness. This is achieved by fostering awareness of upcoming requirements for the command system and their subsequent impact on the command process.

### **Full Abstract DEUTSCH:**

Zukünftige Konflikte werden sich durch eine zunehmende Verzahnung von technologischer Innovation und militärischer, taktischer, Anpassung auszeichnen und militärisch handelnde Personen vor Herausforderungen stellen. Dieser Beitrag beleuchtet dieses Spannungsfeld aus zwei komplementären Perspektiven: der militärtechnologischen Sichtweise, die Anforderungen an Führungs- und Informationsausstattung sowie an die Führungsbeziehungen allgemein erkennt, sowie die taktische

Sichtweise, welche sich auf die Herausforderung im Kampf der verbundenen Waffen und dessen Planung und Durchführung fokussiert.

Basierend auf den Werken führender Denker (*kommender?*) Konflikte wie P.W. Singer und August Cole, General Mick Ryan sowie Alliot Ackerman und Admiral (retired) James G. Stavridis werden drei hypothetische Vignetten mit Bezug für die österreichischen Streitkräfte dargestellt. Sie sollen den Einfluss moderner emergenter Technologien wie beispielsweise künstlicher Intelligenz, autonome Systeme, Cyberfähigkeiten und vor allem deren zeitgleiche Kombination auf das grundlegend militärische Handeln skizzieren.

Darauf aufbauend beleuchten die beiden Perspektiven die erkannten Herausforderungen in ihrem jeweiligen Bereich und ergänzen sich bei den allgemeinen Folgerungen für die Ausbildung militärischer Führungskräfte. Die kritische Gegenüberstellung beider Positionen ermöglicht das Erkennen von Fragestellungen, deren Beantwortung die Teilbereiche der Kampfkraft verstehen hilft und weiterführend stärkt. Durch das Schaffen eines holistischen Problembewusstseins werden kommenden Anforderungen an das Führungssystem und fortfolgend auch auf den Führungsprozess dargelegt.