



Royal Netherlands Army



# Enhancing Live Training Exercises with Connected Simulations



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18 November, 2024



## Speaker points

- Live Training Exercises now
- Single domain scenario's -> Connected Simulations
- Implementation
- Benefits
- What you can do?



## Challenges in Live Training Exercises

- Traditional exercises -> single-domain scenarios.
- High logistical costs and complexity.
- Difficulty in integrating real-time data across multiple domains.
- Need for seamless integration across domains.



# Advancing Military Training with Connected Simulations

- Need for advanced, flexible, and realistic training methods.
- Benefits of synthetic wrapping, digital twinning, and adherence to NATO standards.
- Connected simulations improve training realism and readiness.
- Goal: To better prepare our forces for complex, multi-domain operations.



Defensiefotografie Nederland

Martin Bos





## Synthetic Wrapping

### **Definition:**

Using virtual environments to overlay real-world training scenarios.

Enhances live training with synthetic elements (e.g., simulated cyber attacks, UAVs).

**Benefits:** Cost-effective, scalable, adaptable to different terrains and missions.



## Next step: Digital Twinning

### Definition:

Creating digital replicas of physical assets, systems, or environments.

Allows real-time monitoring, testing, and adjustments during exercises.

### Benefits:

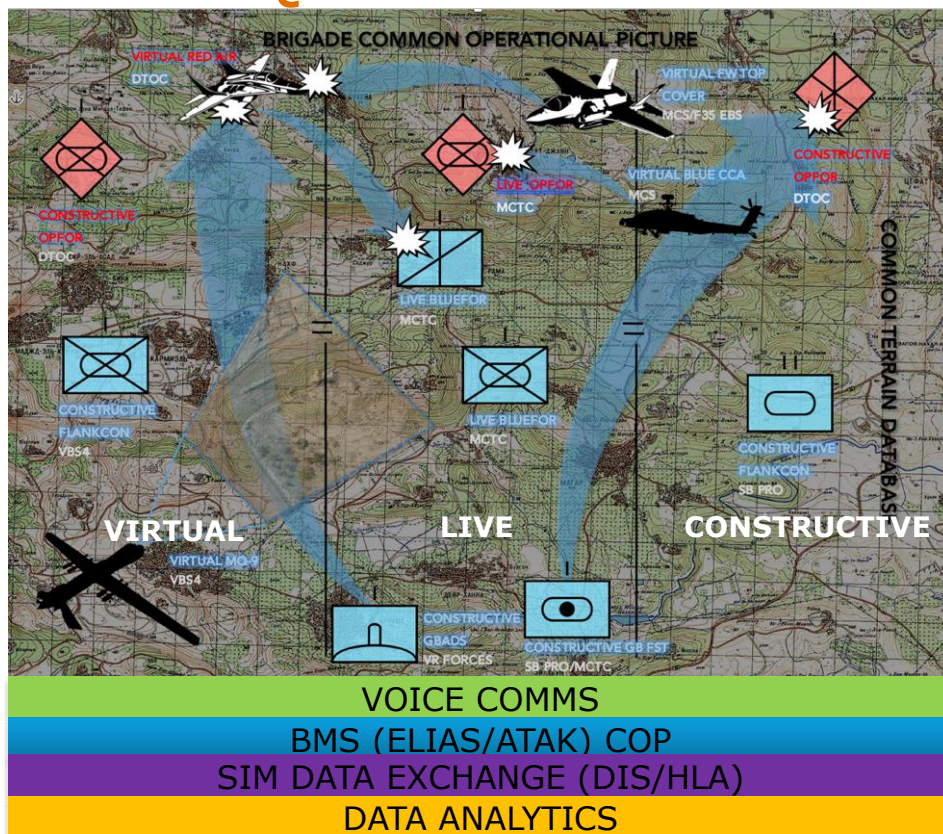
Better preparation, detailed analysis, and improved training efficiency.







# Bold Quest 2024



## Synthetic Wrapping concept

- Virtual Close Air Support
- Virtual Close Combat Attack
- Virtual Ground Manoeuvre Forces
- Virtual UAV's
- Constructive Ground Based Fires
- Constructive Air Defence
- Constructive Ground Manoeuvre





## Benefits

- More effective training with realistic, adaptable scenarios.
- Enhanced data analytics and feedback loops.
- Cost savings through the use of digital twins and synthetic environments.
- Better cross-domain collaboration and interoperability.



## Practical Implementation

- Importance of cross-domain collaboration and interoperability.
- Importance of standardization across NATO forces.
- Compliance ensures seamless integration of different simulation systems.
- Enables multinational exercises with consistent protocols and data-sharing.



## What You Can Do to Support Integration

- Advocate for the adoption of NATO standards in **all** projects.
- Invest in technology that supports synthetic wrapping and digital twinning.
- Encourage cross-domain collaboration during training planning and execution.
- Flexible, scalable IT infrastructure.
- Adherence to NATO standards for secure data exchange.



## Enthusiasm !

