


"Committed to the health of our forces"

# How to use the VR, what to modell in what way in military medicine? – experiences of an exercise

**Operational VR/AI medical training, DAT PoW funded development, and the case for strategic technology governance**

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# Vigorous Warrior

- Biannually carried out – organized by the MILMED COE
- In 2026 in Estonia with approx 3000 participants
- Live –exercise
- 10 days
- 72 hours countinous burden
- On not easy terrain

# Experiments

- **20 experiments focused on:**
- **Forward diagnostics in CBRN response to radiation**
- **Evaluating Mixed Reality Trauma Training to improve battlefield survival rates**
- **Prolonged Care of Casualties in a CBRN Environment**
- **DIANA**



# NATO MILMED COE CONEX - MENTEX

- Experiments
- Potential usage in trainings
- Limits and pitfalls of modern techniques
- Modelling human mindset
- Cognitive warfare

**Experience → integration → field validation → funded development**

# Vigorous Warrior 2026 — Estonia

A field exercise tested endurance, adaptability and rapid redesign of the VR training capability.

**VIGOROUS**

**2026**

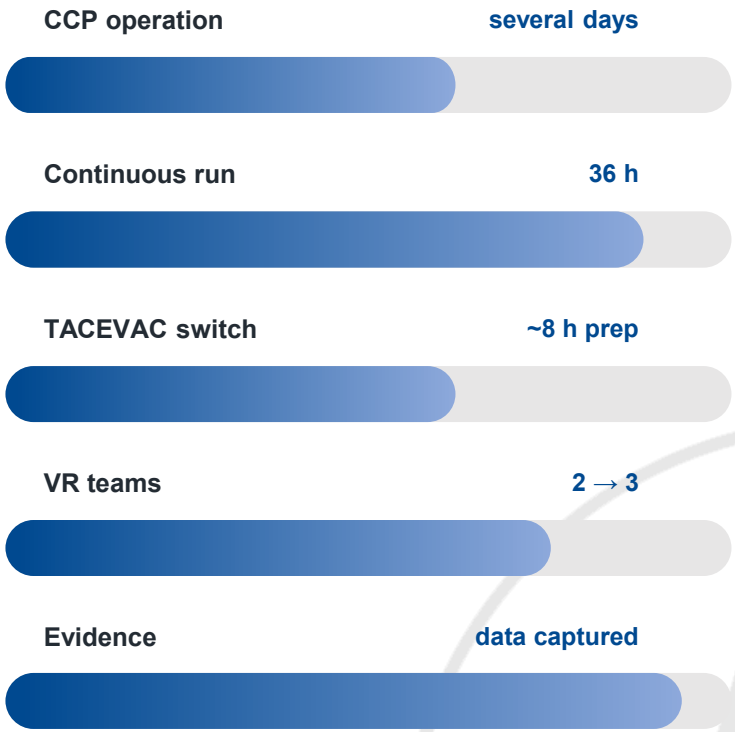
**ESTONIA · VR**

**Publication in preparation**

## Operational proof under pressure

VR operated for days as a simulation capability—not as a short demonstration. When conventional TACEVAC simulation became impossible, the VR setup was redesigned and took over the task in about eight hours.

**Overnight inject modelling enabled the third VR team.**



# Modular capability architecture

BLS + AED is the first automated module. Preparatory work has already started for haemorrhage control on the same platform.

## DEVICE

**Meta Quest 3**

Standalone learner device

Repeatable deployment

## INSTRUCTION

**AI instructor**

Structured assessment

Guidance + feedback

## DELIVERY

**Offline-first**

No continuous network dependency

Works in constrained environments

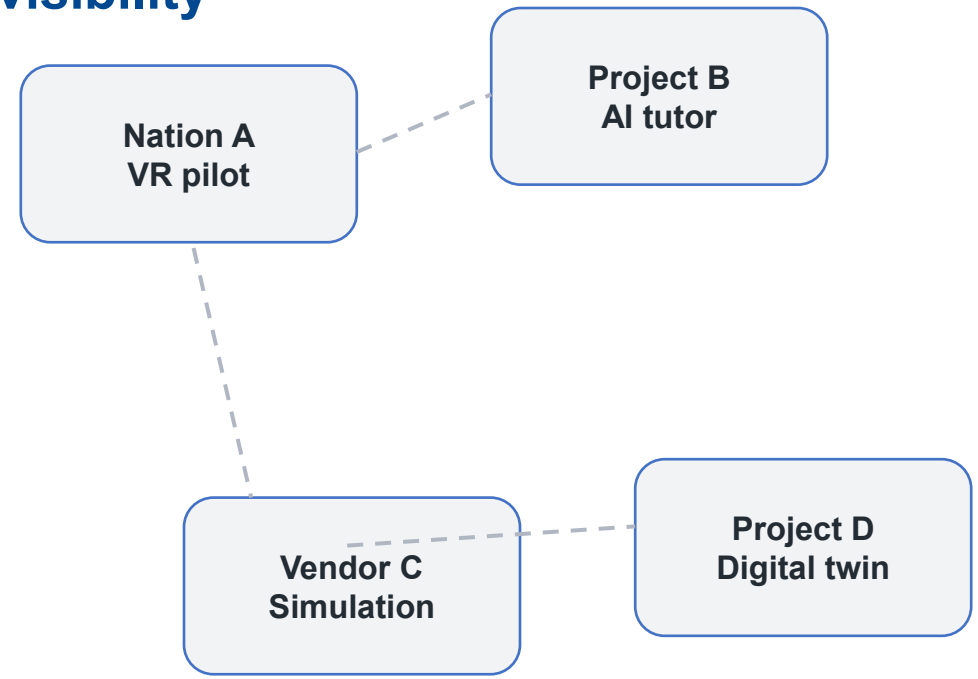
## EXPANSION

**Modular growth**

BLS + AED first

Haemorrhage Control next

# Many good projects — weak enterprise visibility




## Typical consequences

- Parallel development and avoidable duplication
- Different standards, interfaces and data models
- Vendor lock-in and weak lifecycle ownership
- Limited cross-project lessons learned and reuse
- Unclear accountability for technology decisions

**Often there is no CTO — or equivalent technology owner — with the mandate to coordinate the portfolio.**

Governance must reconcile AI rules, cybersecurity requirements, national defence regulation, information classification, data protection and procurement constraints.

**EU AI Act / NIS2 where applicable • national rules • data security**

# CTO / Technology Governance

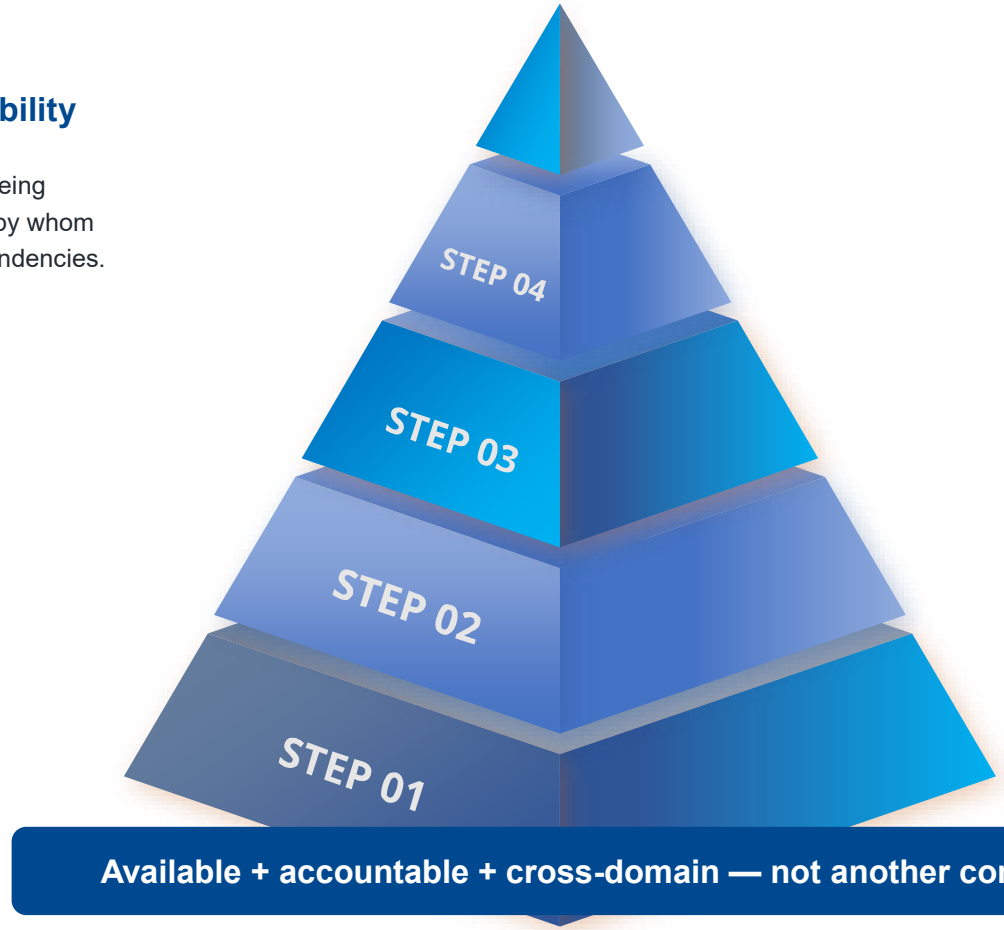
**STRATEGIC TECHNOLOGY OWNER**

### Portfolio visibility

Know what is being developed, where, by whom and with which dependencies.

### Governance & compliance

AI, cyber, data security, classification and national regulatory alignment.




### Reference architecture

Set interoperability, data and interface principles before procurement.

### Lifecycle ownership

Standards, procurement, vendor strategy, sustainment and lessons learned.

**Available + accountable + cross-domain — not another committee**

# Experiences -Feedbacks

- The immerse experience determines the realistic training
- It is the focus that determines the immerse not the more realistic virtual environment
- The Adlerian First Impression / experience

# Potential pitfalls

- In extreme stress the well trained or the instinctual behavior that works – patterns
- The IA can't really weight in decision
- Who to teach the system failure is natural in human functioning – when IA fails it will exaggerate the failure
- What do we consider as reality

## FROM SUCCESSFUL PILOTS TO GOVERNED CAPABILITY

# QUESTIONS?

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