



How to use the VR, what to model 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

"Committed to the health of our forces"

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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 continuous 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

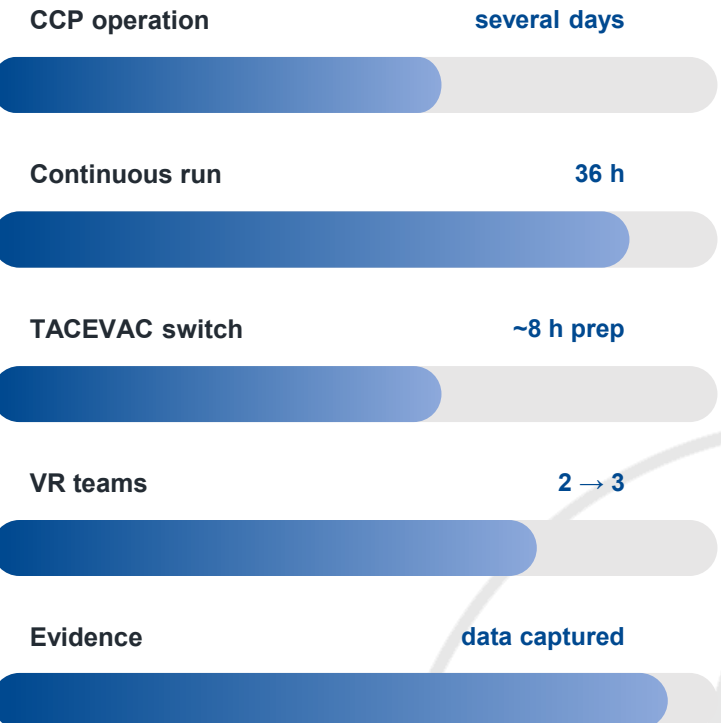
ESTONIA · VR

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.

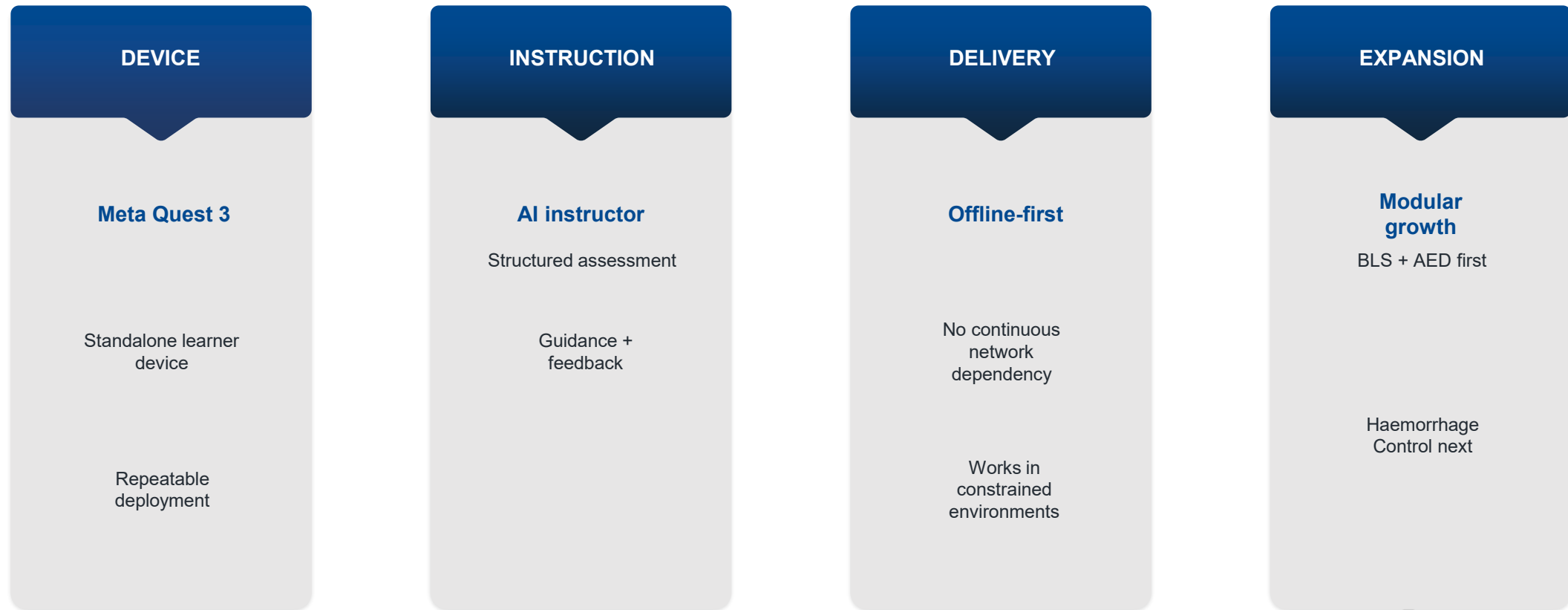
Overnight inject modelling enabled the third VR team.





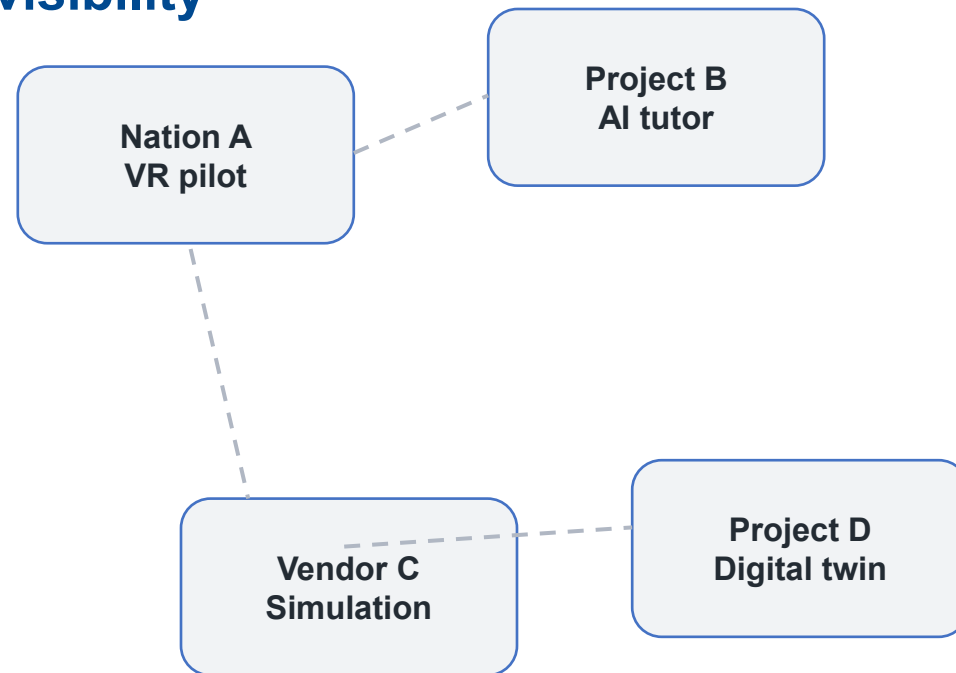
Modular capability architecture

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





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

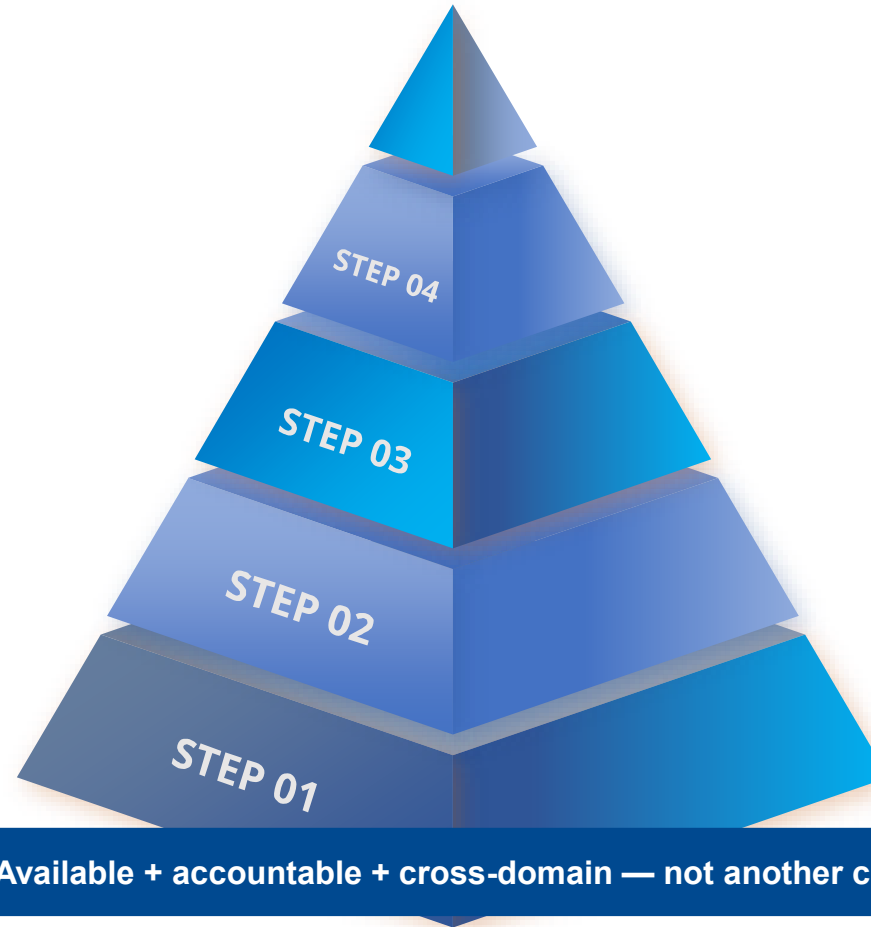
STRATEGIC TECHNOLOGY OWNER

Portfolio visibility

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

Reference architecture

Set interoperability, data and interface principles before procurement.



Governance & compliance

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

Lifecycle ownership

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



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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