



Maximizing the Impact of Immersive Technologies for Training and Education

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Ref: QTSL-820-1987

QINETIQ

XR has the potential to transform Training and Education (T&E) in MOD
but is it effective and what are benefits?

Innovation Space

S&T activity

XR is BAU

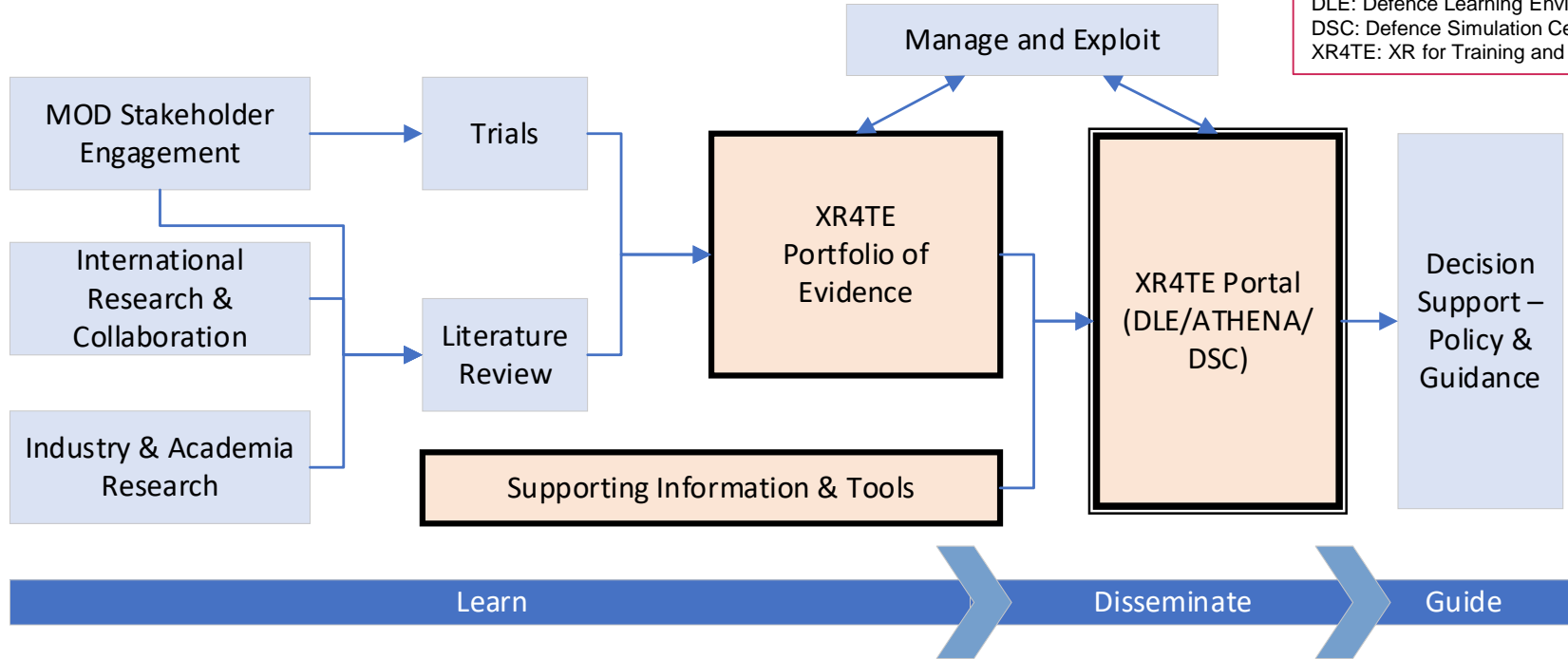


“MOD understands and leverages AR/VR/MR technologies to maximise the benefits for training and education”

1. Assess the state of the evidence relating to the effectiveness of XR technology for T&E
2. Where gaps exist in the literature, generate empirical evidence relevant to the military
3. Generate evidence-based advice and guidance that increases the likelihood of successful XR adoption by the UK MOD

Ensure the research is accessible and digestible

Abbreviations
ATHENA: Dstl research repository
DLE: Defence Learning Environment
DSC: Defence Simulation Centre
XR4TE: XR for Training and Education

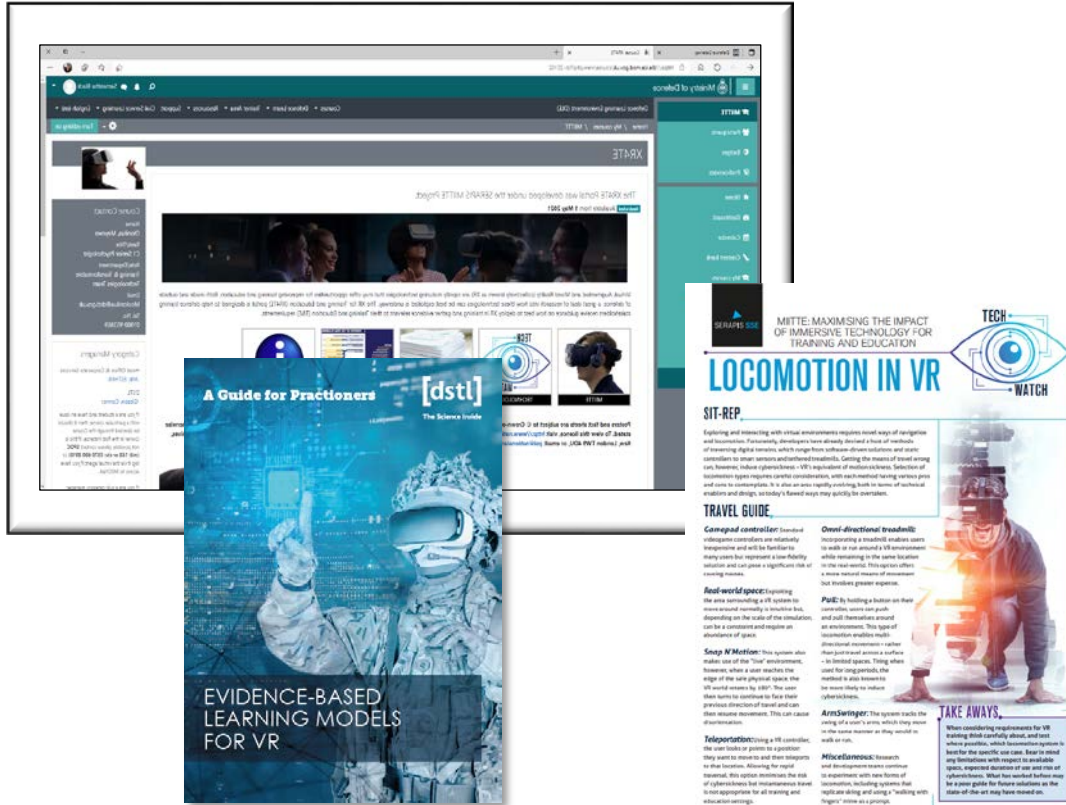


- 160 assets added through literature review and trials
- Now contains over 340 evidence assets
- Search facility included



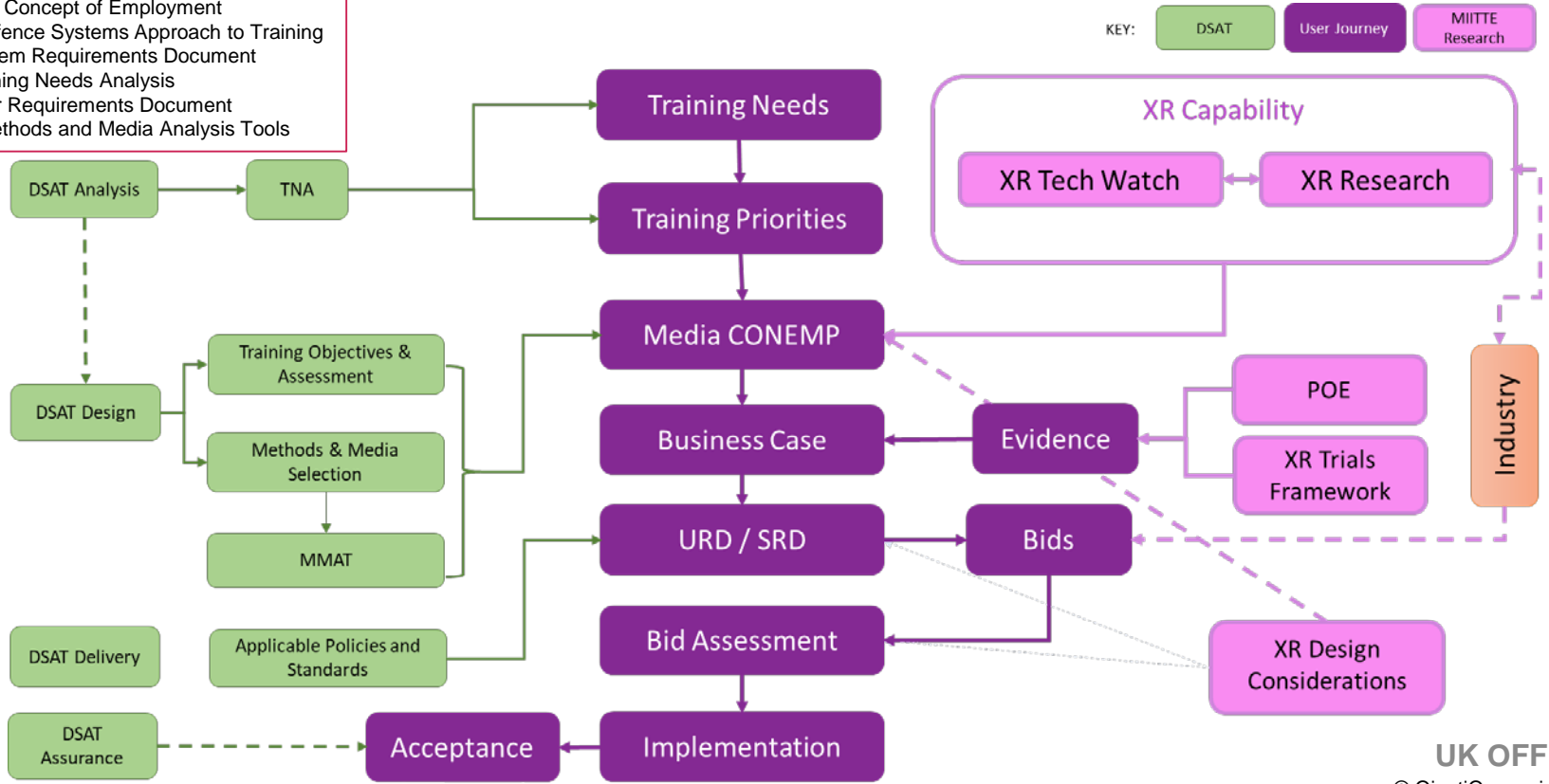
There are still gaps in the evidence and evidence quality varies

	Knowledge	Continuous Psychomotor skills	Discrete psychomotor skills	Procedural skills	Decision-making skills	Attitudes/affective/empatheti	Wellbeing	Evaluation / assessment
Generic	26	6	3	10	14	5	2	0
Individual	109	31	51	90	60	22	13	8
Team	9	7	8	15	22	8	2	5
Group	3	1	0	4	2	1	0	2
Organisation-wide	2	0	0	1	1	1	0	0
Cross-organisation	1	0	0	0	1	0	0	0



- The “front door” to MITTE research
- Hosted on the UK MOD Defence Learning Environment
- Access to the POE
- All research activities summarised
- XR Use Cases and Technology articles

Abbreviations
 CONEMP: Concept of Employment
 DSAT: Defence Systems Approach to Training
 SRD: System Requirements Document
 TNA: Training Needs Analysis
 URD: User Requirements Document
 MMAT: Methods and Media Analysis Tools





XR can be as, or more, effective than traditional training methods



XR will not solve all training problems or benefit every scenario
Suitability will still depend on specific training requirements and priorities



Design of the XR solution could be a key driver in its success

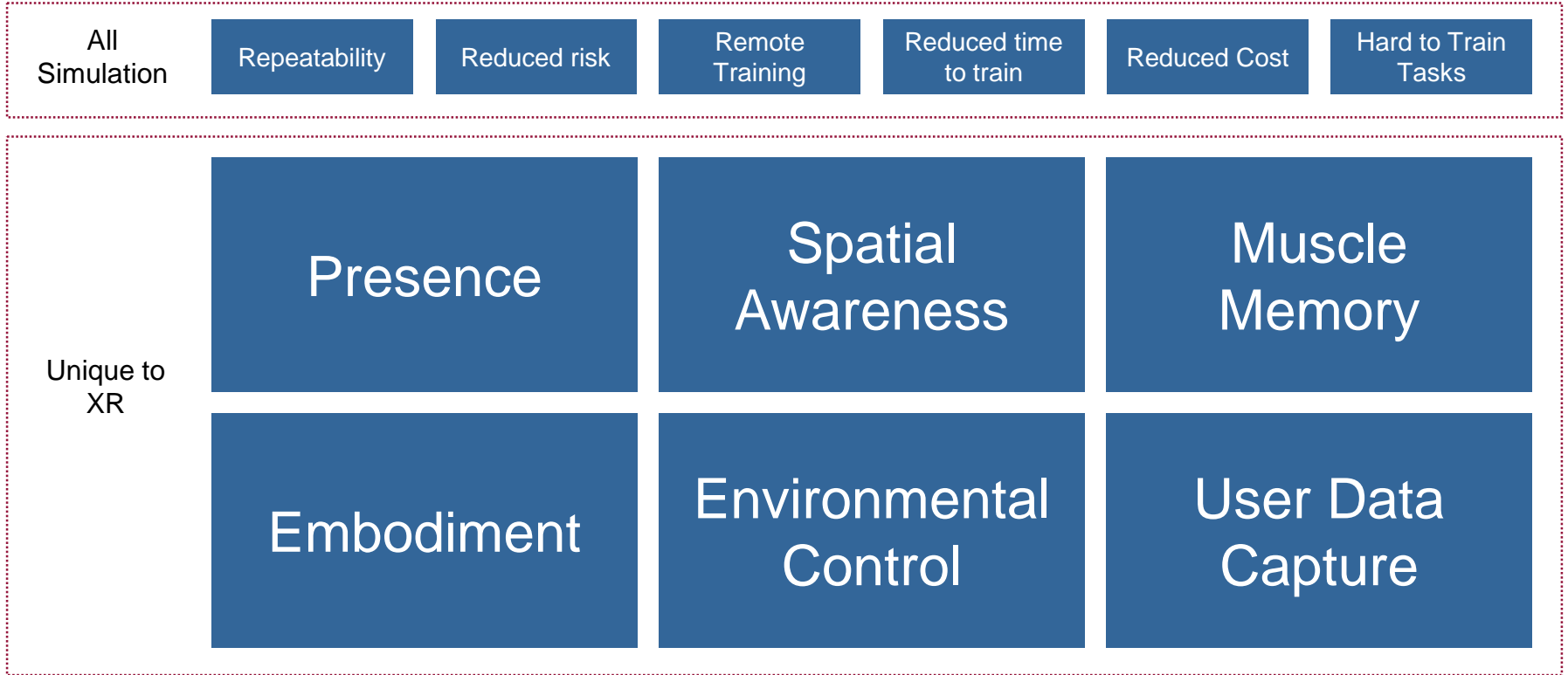


More consideration is needed into how XR is deployed in a blended solution



Identified possible additional benefits of XR (cost, user preference, improved safety)

Features & Benefits of XR





More research is needed to understand and mitigate various issues

SAFETY

SECURITY

COST

CULTURE



Generated evidence that supports the use of XR for certain use cases, using the XR4TE approach



There are some significant gaps in our understanding that need to be addressed

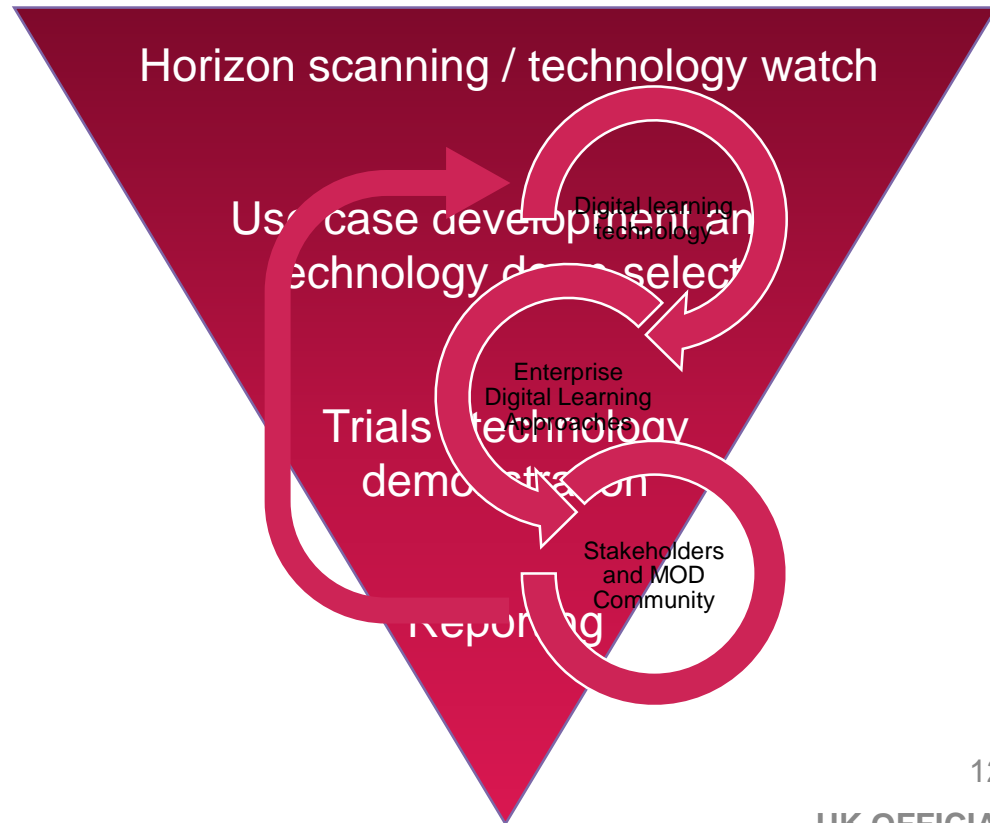


Rapid technology advancement and changing strategic priorities require a change in research focus

Horizon scanning and technology assessment

XR4TE approach development via NATO Modelling and Simulation Group 206

Enterprise digital learning approaches



[dstl] The Science Inside

Discover more



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