Training in the Metaverse: How the DoD is Setting the Standard

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Training in the Metaverse

How the DoD is Setting the Standard

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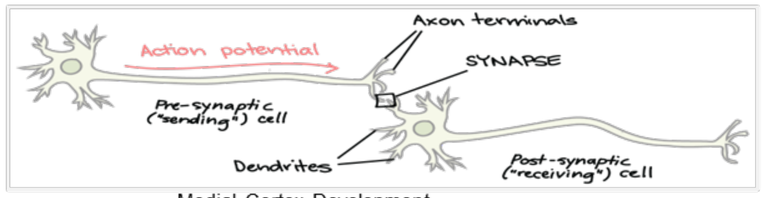
Learning Throughout the Lifespan



Medial Cortex Development

Prefrontal Cortex Development

Synapsis Build
Memory= 5 senses
Synapsis Pruning
Education Modalities
Synapsis Build
Emotion and Logic Development
Synapsis Pruning
Adult Learning Development

Embryo | 5 | 11-12 | 15 | 18 | 22 | 26 | 30

Education Technology Evolution

2004 | 2009 | 2014 | 2018 | 2022 | 2026 | 2030

2022: AF lacks Wifi Internet access in classrooms

2005: **94%** of schools have a classroom with internet access

2007: iPhone is released

2008: Poll everywhere launches

2010: iPad is released

2011: NYC Public Schools order 2000 iPads for students

2014: Apple Watch is released

2014: Google Classroom released

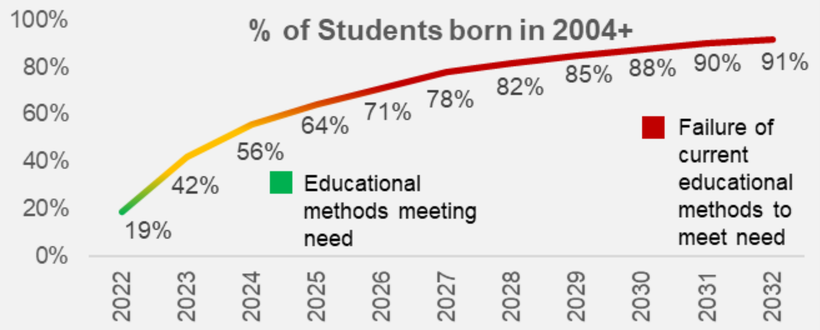
2018: Kitaboo AR turns paper books into interactive eBook

2019: Predictive Learning Analytics

2020-2022 COVID

2020: EdTech Apps

2020: Virtual Meeting apps gain increased popularity



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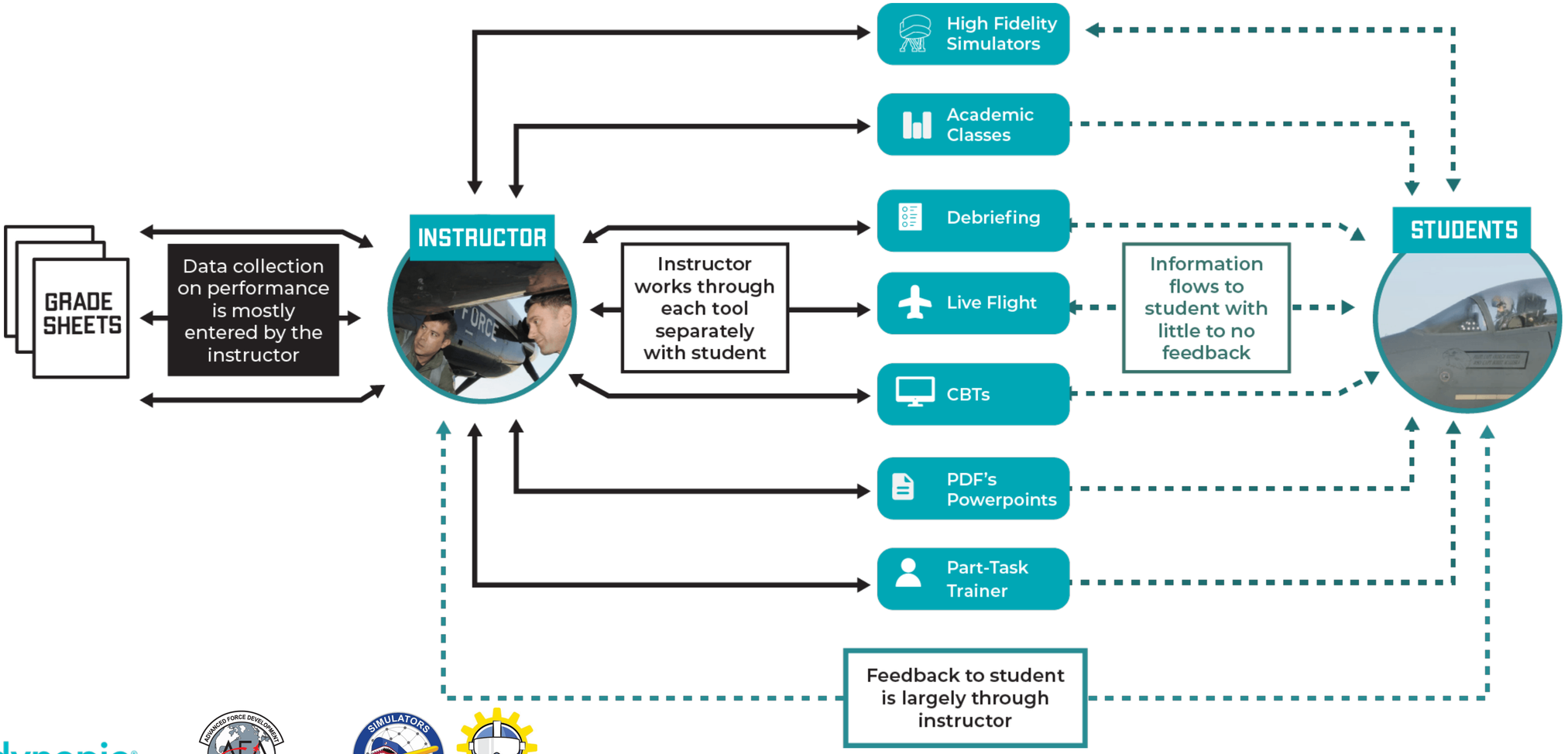
Typical Training Process Today

Stove-Piped Systems. Manual Processes. Difficult to Update. Limited Metrics



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Enter The Metaverse

- Not a new concept but has reached pop culture status
  - Everyone has different definitions!

- A digital representation and network of virtual worlds where social experiences across domains exist

- Training in the metaverse?
  - Simply refers to a digital network where immersive training can live…
  - No single or cohesive metaverse at this point
  - This talk will focus on one aspect of the ‘metaverse’ – Extended Reality (XR)

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SIMULATORS SHARPENING THE WARFIGHTER'S EDGE

SIMS INNOVATION

DoD and XR Training

XR Training is being used across the services!

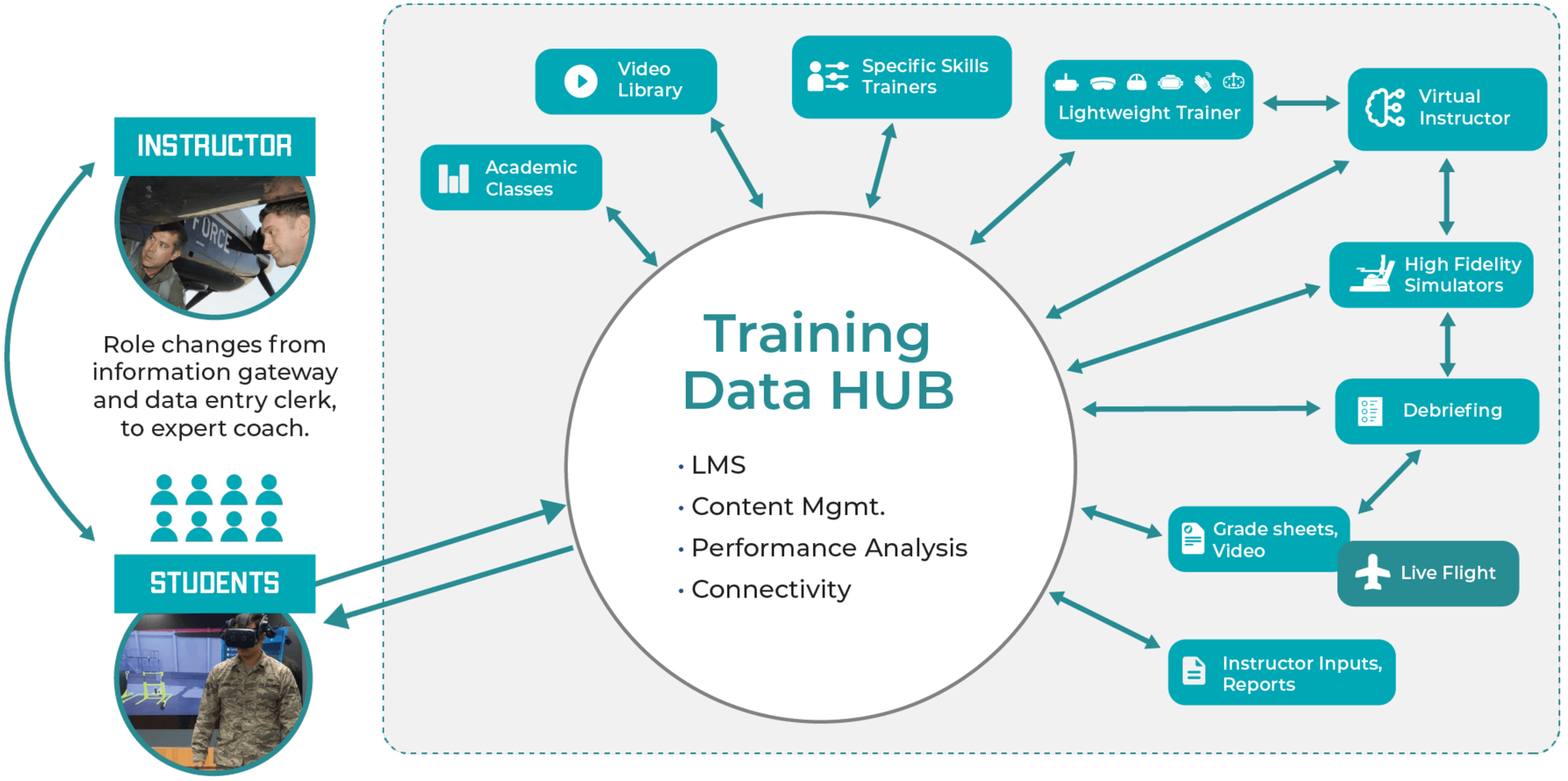
Challenges With XR Training

01 Lack of infrastructure to track, host, and report the training data outcomes

02 XR training solutions are stove-piped

03 Lack of system integration between XR training technologies and the standard LMSs

Future Vision For Air Force Lightweight Sims Ecosystem (LSE)



Future is Data Centric, with networked tools that assist Instructors, and provides students with self-executed training options.

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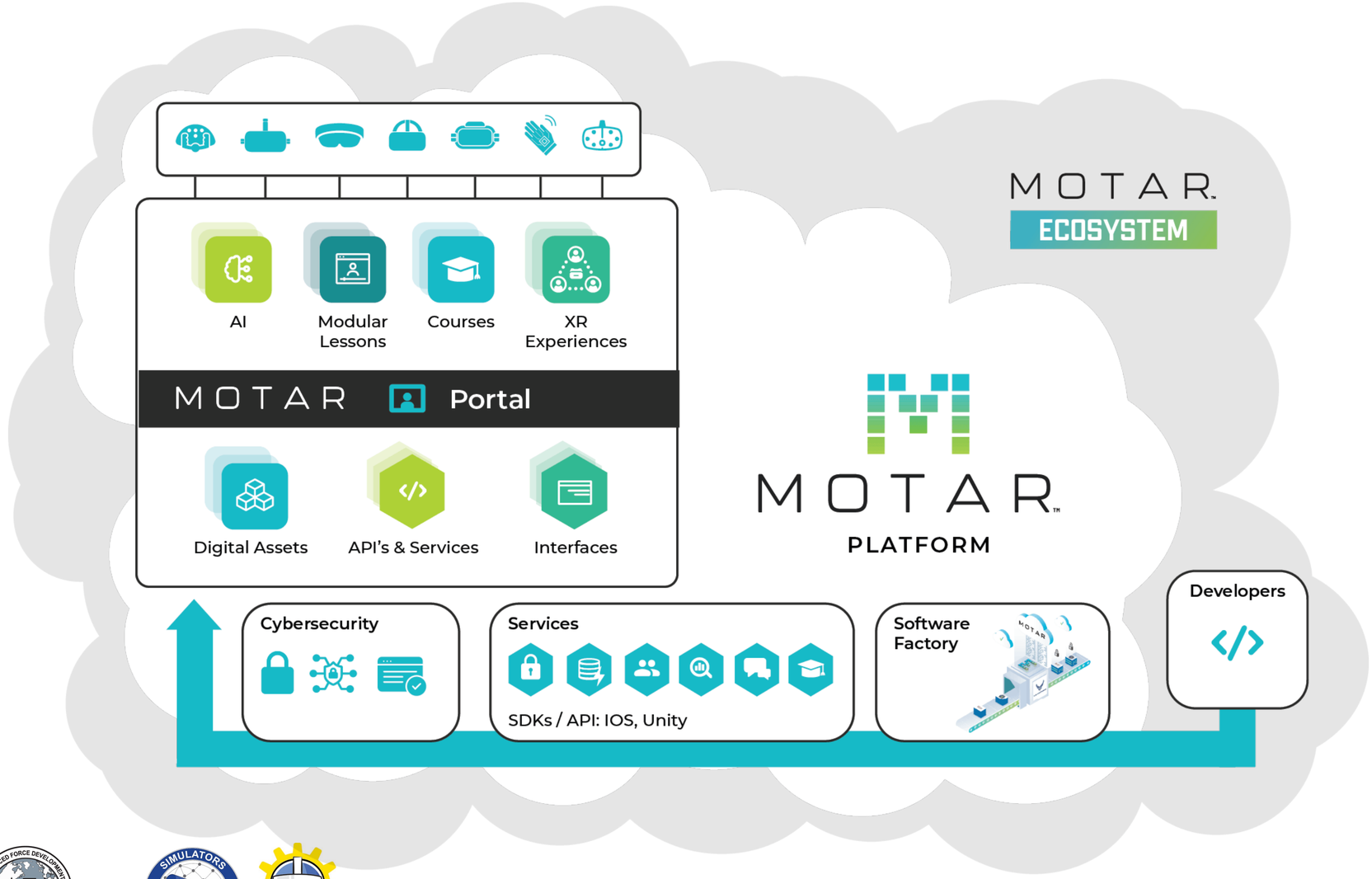
Building an Open Ecosystem



Implementing the Vision

Lightweight SIMS

AI Agents

Images

Map Packs

Videos

Scenes

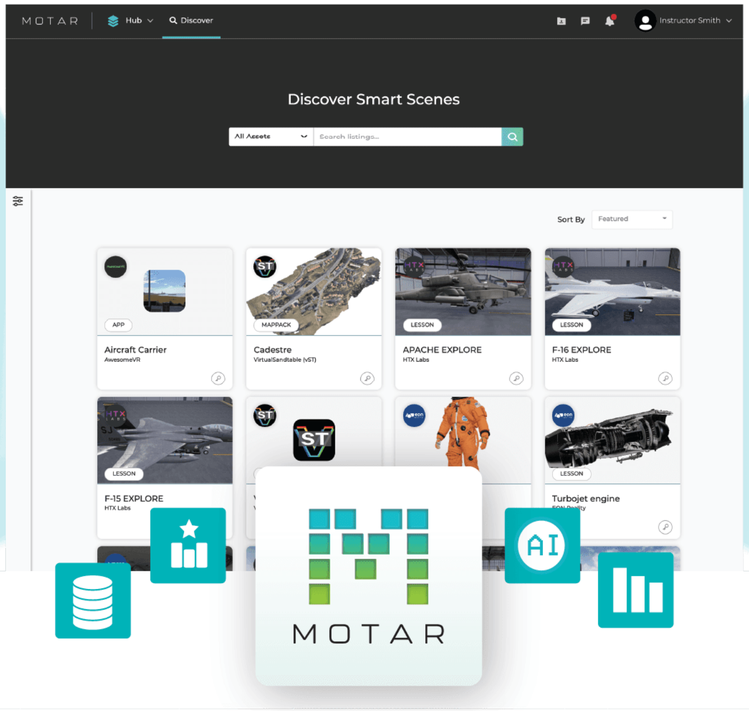
Lessons

Apps

3D Models

Software &
Device Agnostic

MOTAR HUB

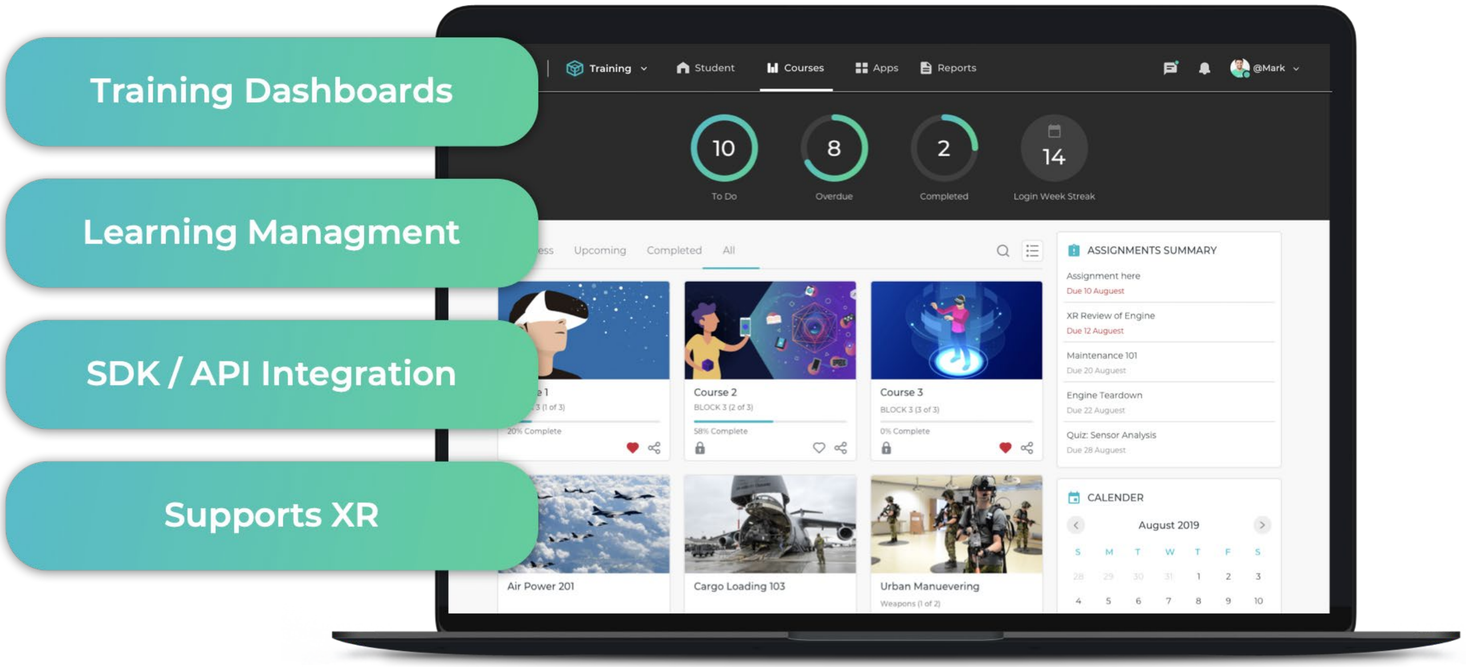


Connected 3rd Party Tools

Modular Open Systems Approach
Open APIs and SDKs

Delivering XR Training

MOTAR is delivering XR content and reporting data through xAPI industry standards for total interoperability



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Realizing Benefits

- Pilot program with MOTAR – Crew Chief Fundamentals Course
  - Powered 4 XR company's training content in one seamless experience
  - Students completed the course 42% faster than traditional instruction
  - No performance trade-offs!
  - Saves approximately $27,000 per airmen

The DoD is revolutionizing the mechanism for delivering and reporting XR training enabling a new metaverse for military training!

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THANK YOU

Questions?

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