CAE**TraxAcademy**™

Faster, better and more efficient pilot throughput.
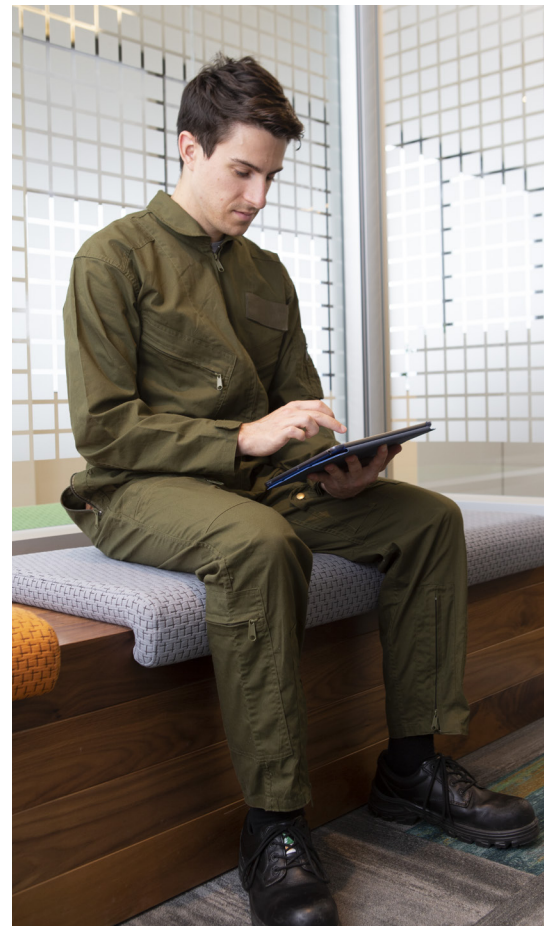
Overview

Military organizations are focused on improving the efficiency and effectiveness of pilot training. To help students gain skills faster and train for events which cannot be easily replicated in the air, new methods and innovative technologies are being explored to streamline and create a more adaptive, student-centered and personalized learning environment, transforming training. CAE's work in digital technologies – Artificial Intelligence, Machine Learning, advanced data analytics, Adaptive Learning and Virtual Reality (VR) courseware is consolidated into the CAE**TraxAcademy**. A student-centric self-paced, instructor-supported training system for integrated, immersive training to optimize pilot training for fixed-wing or rotary wing aircraft. The CAE**TraxAcademy** supports all phases of the pilot journey.

LEARN

The initial phase of the CAE Trax Academy training continuum

State-of-the-art training media including a high-fidelity cross platform courseware and VR-enhanced modules for a visually immersive experience, enables students to **Learn** the training procedure. The CAE**TraxAcademy** Learning Management System (LMS) incorporates Adaptive Learning to capture student performance data and monitor competency acquisition.

Automated AI-based recommendations for personal learning are provided. The LMS interface enables students, inductors and the organization to access training content such as schedules, courseware, and remote instruction easily and on demand.

LEARN —— PRACTICE — PERFORM

CAE

PRACTICE
Consolidating learning

Next, students Practice in the CAESprint Virtual Reality (VR) or other appropriate Immersive Training Device (ITD). The CAE Sprint VR trainer consists of a VR headset with high-resolution out-the-window visuals and 20/20 visual acuity to read the instrument panel is driven by the CAEProdigy image generator for a high-fidelity, realistic virtual environment. Flight controls – stick, throttle and rudder pedals for fixed wing platforms or cyclic, collective and pedals for rotary wing aircraft, combined with physical cue,s create a high-fidelity, affordable yet sophisticated VR flight training device with a small footprint. The CAESprint VR trainer can be equipped to deliver course-ware and automated follow-through lessons. Progress is supported by a virtual coach providing immediate, actionable intervention and CAERise performance assessment to measure achievement.

CAESprint Immersive Training Devices (ITD) — Integral to the CAE Trax Academy

- A range of ITD's from basic to hing-fidelity
- High-fidelity, Small footprint, immersive virtual environment
- Controls can be automated to provide follow-through experience
- Physical controls: force feedback stick/cyclic, throttle/collective, pedals
- CAE Sprint Training Devices can be linked together for multi-crew training
- Realistic immersive environments appropriate to training requirements use VR or MR

PERFORM
Proficiency and crew training

The final stage of the student's journey is to show they have synthesized what they have learned and practiced. CAESprint trainers can also be coupled for collaborative training as pilot and co-pilot/monitoring pilot. The next step is to move to a high-fidelity flight simulator or live aircraft. CAERise supports instructor evaluations and aggregates individual results, allowing trends to be monitored and gaps identified-leading to opportunities for continuous improvement.

CAERise™

It enables objective assessment, data-informed learning and performance coaching, including the data analytics and predictive analysis necessary for continuous improvement.