Overview

CAE Rise is a data-driven training system that leverages big data analytics to make pilot training more efficient and effective. CAE Rise was first introduced by CAE for airline customers and is now available for military customers. CAE Rise gives instructors’ the ability to deliver standardized training and objectively assess pilot competencies using live data during training sessions. CAE Rise fosters student-centric learning, reduces subjectivity in pilot assessment, and helps instructors focus on teaching and instructing. Real-time data is captured during training sessions for immediate evaluation and is then used for objective analysis. Through big data analytics, gaps and trends in performance are easily identified, thus leading to the ability to continuously adapt and improve the training program.

Helping address the pilot shortage

The aviation industry as a whole – civil, military, and business – faces the long-term challenge of producing sufficient numbers of highly-qualified pilots to meet demand. In order for pilot training to be efficient and cost-effective, new training tools and methodologies are needed throughout the pilot training process. Asking what can be done differently to ultimately streamline the path to pilot qualification has led to the development of CAE Rise, a digital training accelerator that helps ensure pilot training is more efficient, standardized and objective. CAE Rise enables training tailored to the individual, helps optimize instructor teaching and coaching, and provides data-driven feedback to the organization for continuous improvement of training plans.

A cybersecure system developed on Microsoft Azure Government

CAE Rise is following NIST 800.171 standard to protect Controlled Unclassified Information (CUI) and is built upon Microsoft Azure Government. Azure has Government regions that are architected and operated to meet the security requirements for the U.S. Department of Defense (DoD) Impact Level 5 data and FedRAMP high standards. Leveraging a strong relationship with Microsoft, the CAE Rise modular architecture can be adapted to your cybersecurity requirements.
### Student-Centric Learning

CAE Rise objectively grades student performance of training tasks and maneuvers according to identified criteria and tracks them over time. Using algorithms to track and calculate deviations, feedback is specific, actionable and detailed. Some of the key benefits to student pilots are:

- Digital lesson plan
- Real-time feedback
- Clear identification of strengths/weaknesses
- Reduced subjectivity in student scoring
- Early intervention and correction
- Tailoring of training program for individual
- Enabling focus of effort for self-learning
- Reliable, consistent monitoring of progress
- Secure digital records

### Enabling Organizational Training Efficiencies

Big data analytics provide insights to continuously adapt and improve organizations’ training programs. Some of the key benefits to military training organizations are:

- Standardized evaluations across instructors
- Improved efficiencies could reduce instructor to student ratio
- Maintains ongoing electronic record of student training - electronic pilot progress record
- Helps highlight best practices in training
- Identification of performance gaps leads to modification/improvements in training
- Evolution to higher consistency, standardization in flight performance
- Enables comparison of performance trends for predictive analysis:
  - Comparison of objective evaluation to instructor evaluation
  - Comparison of individual student to overall group and standards
  - Comparison of instructor trends

### Enhancing Instructor Performance

CAE Rise gives instructors a new approach to objectively assess pilot competencies while facilitating a focus on student interaction and reducing the administrative burden on the instructor. Some of the key benefits to the instructors are:

- Detailed pilot performance is captured, and presented to the instructor in real-time
- Pilot past performance facilitates preparation
- Better focus on student rather than monitoring instruments
- Guides evaluations and brief/debrief sessions
- Data-driven evaluation improves feedback quality
- Framework helps ensure more consistent grading and reduces subjectivity

### CAE Rise Evolution

CAE Rise is one of the first offerings from CAE as part of a significant internal research and development initiative called Project Digital Intelligence, which is a digital transformation project to develop next generation training solutions for aviation, defence and healthcare. For the past several years, CAE has been developing a range of solutions that leverage the collection and analysis of data to create closed-loop training systems that evolve and adapt based on objective data analytics. For the U.S. Army fixed-wing flight training program at CAE’s Dothan Training Center, we are collecting training data on both simulators and aircraft to perform objective data analysis to improve the overall training program. The work done by CAE over the past several years in both the military and civil aviation markets led to the formal launch of CAE Rise in early 2018 in partnership with AirAsia.