

RESHAPING
AVIATION TRAINING
THROUGH INNOVATION

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KNOWLEDGE

03

PRACTICE

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INTEGRATION

Comprehensive Pilot Training Solutions

Innovative Aviation Training Technology
for All Phases of Pilot Development

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Ground School & Questionnaire System

Ensures structured theoretical knowledge acquisition and assessment, enhancing pilot preparedness.

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System Familiarization Training

Provides an interactive way to learn aircraft systems, reducing the learning curve before hands-on training.

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Tablet Procedure Trainer

Allows pilots to practice standard procedures anytime, anywhere, improving efficiency and retention.

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Custom Image Generator

Delivers tailored visual environments for high-fidelity simulation experiences, enhancing realism.

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Virtual Reality Procedure Trainer

Offers an immersive, cost-effective way to rehearse procedures in a controlled virtual setting.

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Mixed Reality Simulator

Combines real-world controls with digital augmentation for an unparalleled mixed-reality training experience.

01

THEORY

Comprehensive Pilot Training Solutions

1.9 Lighting Systems



Figure 1.9.0.1

1.9.1 External Lighting

The following external lights are critical for safe aircraft operations:

1. Landing and Taxi Lights
2. Navigation and Anti-Collision Lights
3. Red Beacon Light
4. Wing Inspection Light

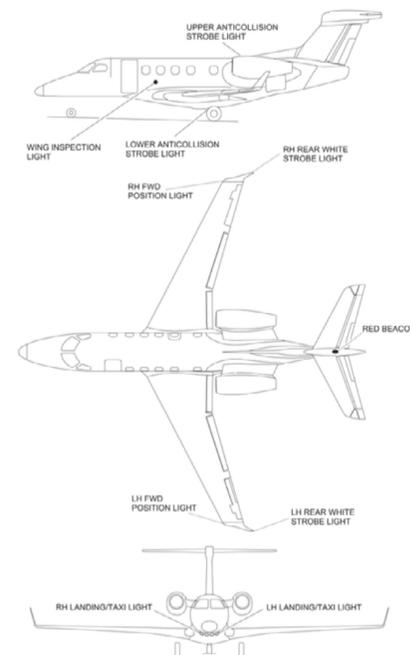


Figure 1.9.1.1

Comprehensive Documentation

Our training materials cover all necessary information for **type rating** and are available in both digital and printed formats. These resources include **illustrations, diagrams, and visual content** derived from 3D models of the aircraft, ensuring clear and structured learning.

Interactive Quizzes and Questionnaires

To enhance knowledge retention, our system offers **customizable quizzes and assessments**, allowing pilots to test their understanding at various stages of training.



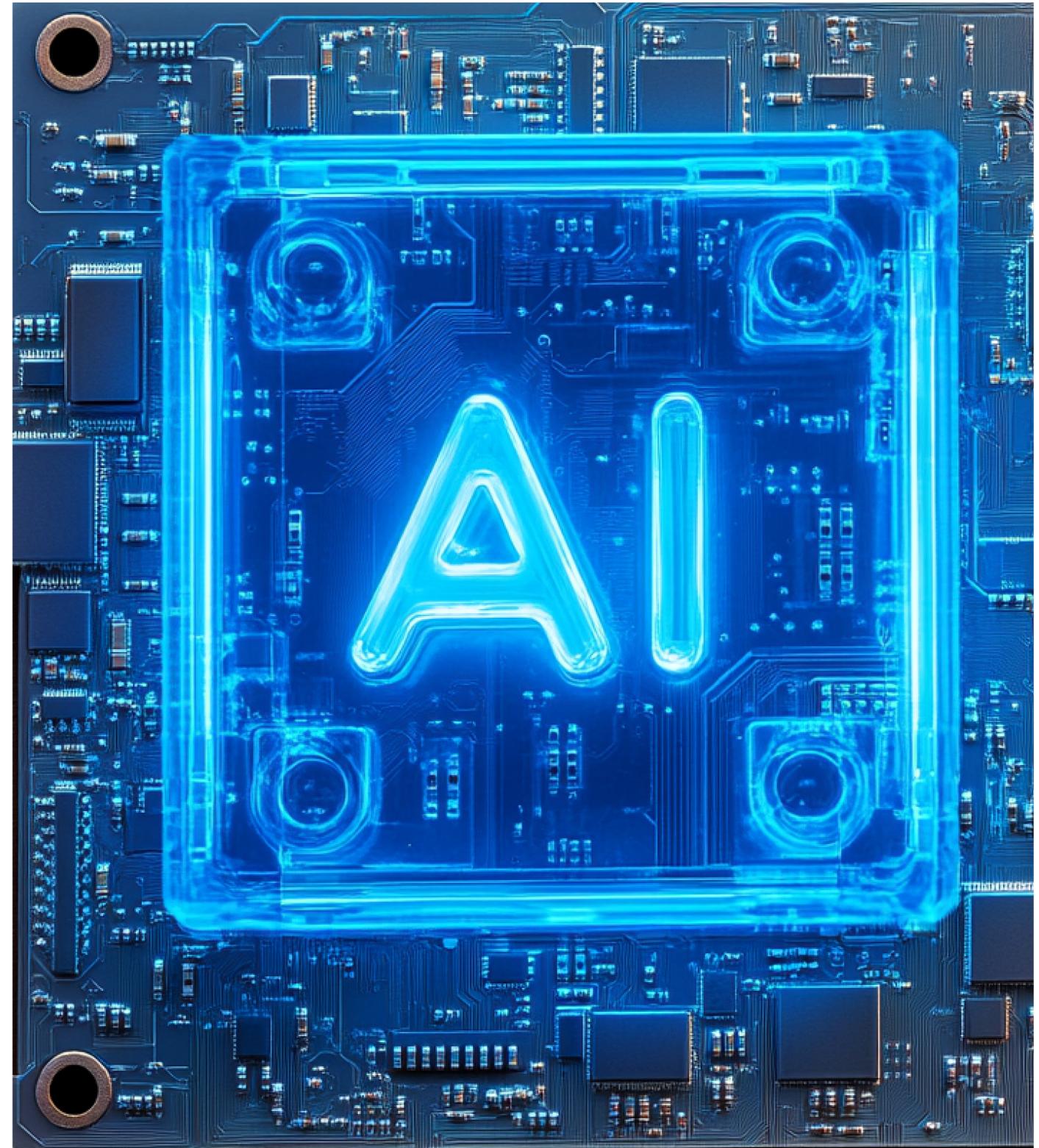


Learning Tracking and Personalized Recommendations

We monitor training progress and provide **tailored recommendations** to reinforce learning, ensuring pilots achieve the required level of competence efficiently.

AI-Powered Assistance

Artificial intelligence supports the learning process by offering **personalized guidance** and adaptive learning paths, making theoretical training more efficient and engaging



02

KNOWLEDGE

System Familiarization Training

The System Familiarization Training is designed to provide pilots with a **detailed and interactive exploration** of an aircraft's systems. Understanding these systems is essential for safe and efficient aircraft operation, and our solution offers an immersive learning experience tailored to modern pilot training needs.



Comprehensive System Exploration

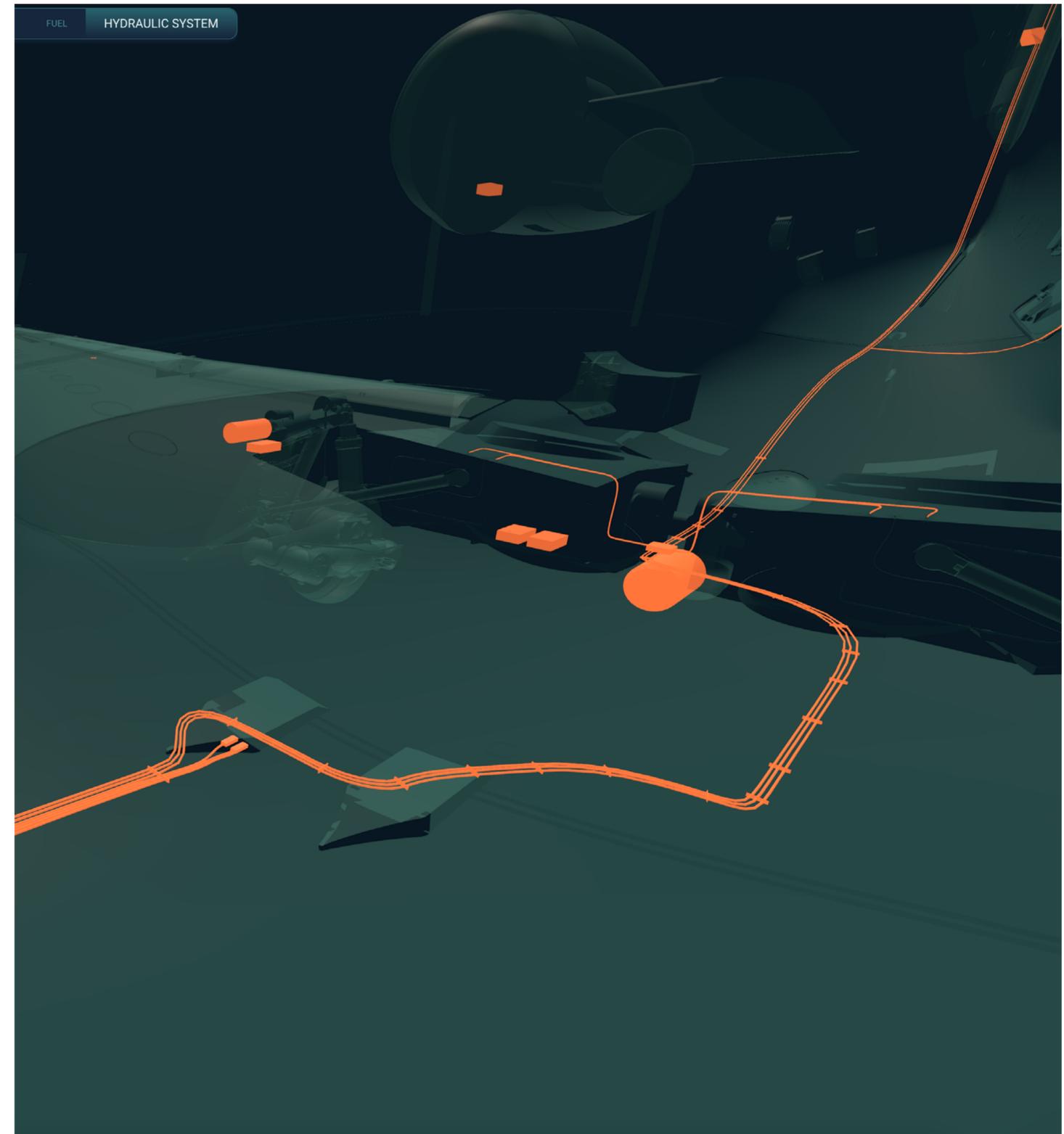
Pilots can explore **aircraft systems in detail**, starting from the **cockpit** and navigating through various components. The interactive interface allows for an in-depth examination of each system.

L_P_BOTTOM_FRAME



3D System Diagrams and Visualizations

The training includes **3D-rendered system diagrams**, enabling pilots to **visualize complex aircraft** mechanisms clearly and intuitively. These visual aids enhance understanding and knowledge retention.

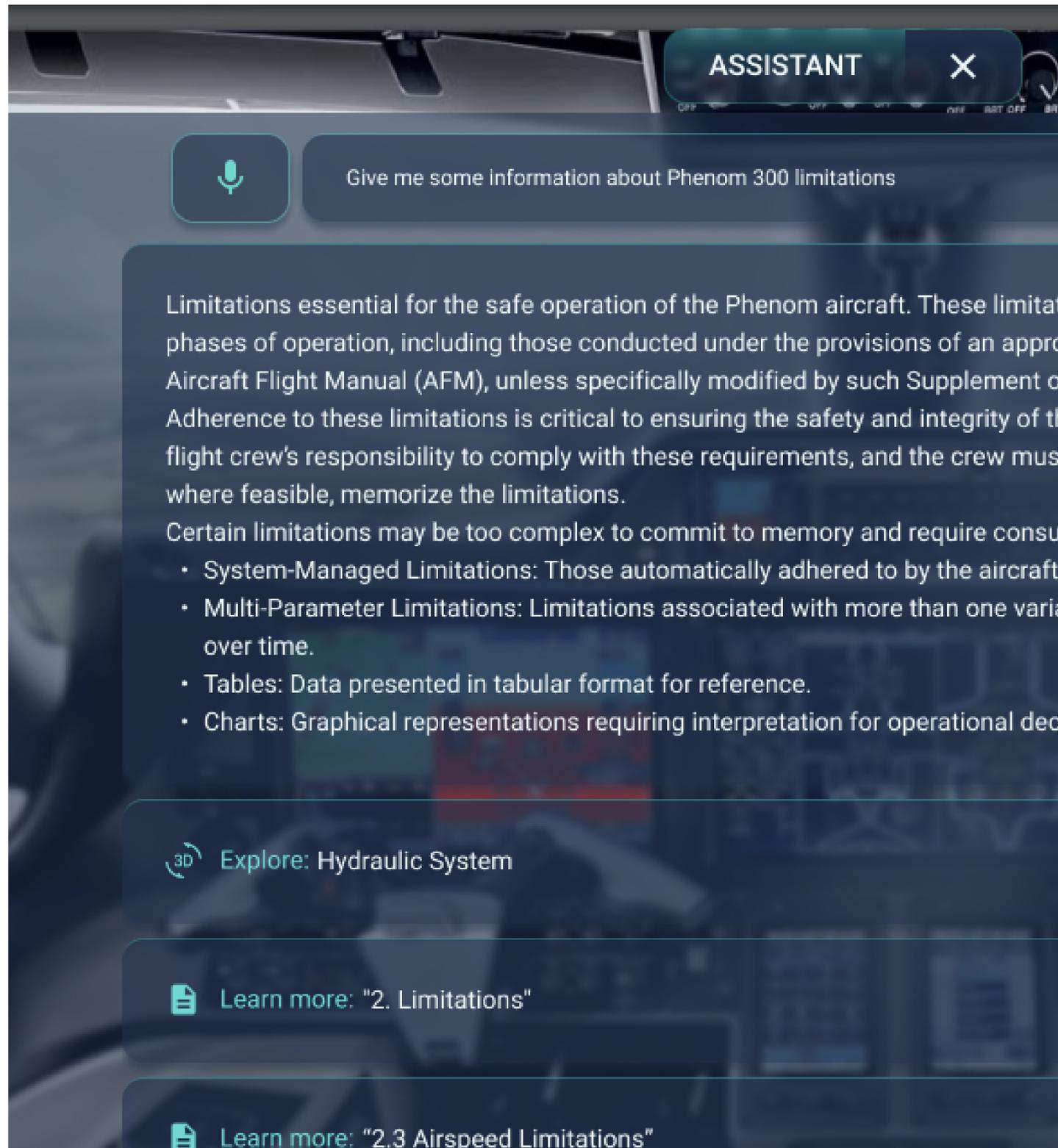


COCKPIT

FUEL

HYDRAULIC SYSTEM





AI-Powered Assistance

Artificial intelligence provides **on-demand guidance**, answering pilots' questions in real-time and offering **contextual explanations** based on the system they are currently exploring.

Integrated Aircraft Manual

The application includes a **complete aircraft manual**, ensuring that pilots have easy access to all necessary documentation within the platform.

The screenshot displays the 'EMBRAER PHENOM 300 MANUAL' interface. At the top right, the title 'EMBRAER PHENOM 300 MANUAL' is visible. Below it, a search bar is present. The main content area is divided into two columns. The left column contains a table of contents for '2 LIMITATIONS (ATA 04)', with '2.1 Introduction' highlighted. The right column shows the '2.1 Introduction' section, including a sub-section '2.1.1 Ambient Temperature Limits'. The text in the right column explains that the chapter outlines operating limitations and that adherence is critical. It lists types of limitations: System-Managed, Multi-Parameter, Tables, and Charts.

EMBRAER PHENOM 300 MANUAL

Search

2 LIMITATIONS (ATA 04)

2.1 Introduction

2.2 Operational Envelope

- 2.2.1 Ambient Temperature Limits
- 2.2.2 Maximum Operating Altitude

2.3 Airspeed Limitations

- 2.3.1 Maximum Operating Speed (VMO/MMO)
- 2.3.2 Operating Maneuvering Speed (VO)
- 2.3.3 Maximum Flaps Extended Speeds (VFE)
- 2.3.4 Landing Gear Operation/Extended Speed (VLO a...)
- 2.3.5 Minimum Control Speeds (VMC)
- 2.3.6 Maximum Tire Ground Speed

2.4 Powerplant Limitations

2.5 Weight and Center of Gravity Limits

- 2.5.1 Takeoff Weight (MTOW)
- 2.5.2 Landing Weight (MLW)
- 2.5.3 Center of Gravity (CG) Envelope
- 2.5.4 Loading Limitations

2.6 Maneuver Limits

- 2.6.1 Prohibited Maneuvers

2. Limitations

2.1 Introduction

2.1.1 Ambient Temperature Limits

This chapter outlines the operating limitations for the aircraft. These limitations must be adhered to when conducting operations under the provisions of an Aircraft Flight Manual (AFM), unless specifically modified. Adherence to these limitations is critical for the safety of the occupants. It is the flight crew's responsibility to have a thorough understanding and, when necessary, to consult the AFM. Certain limitations may be too complex to describe in text. These include:

- System-Managed Limitations: Those limitations that are managed by the aircraft's systems.
- Multi-Parameter Limitations: Limitations that involve the continuous variation of multiple parameters over time.
- Tables: Data presented in tabular form.
- Charts: Graphical representations required for flight operations.

Multi-Platform Accessibility



The training is available on **tablets and web-based platforms**, allowing pilots to study at their convenience, whether on the go or in a structured training environment.



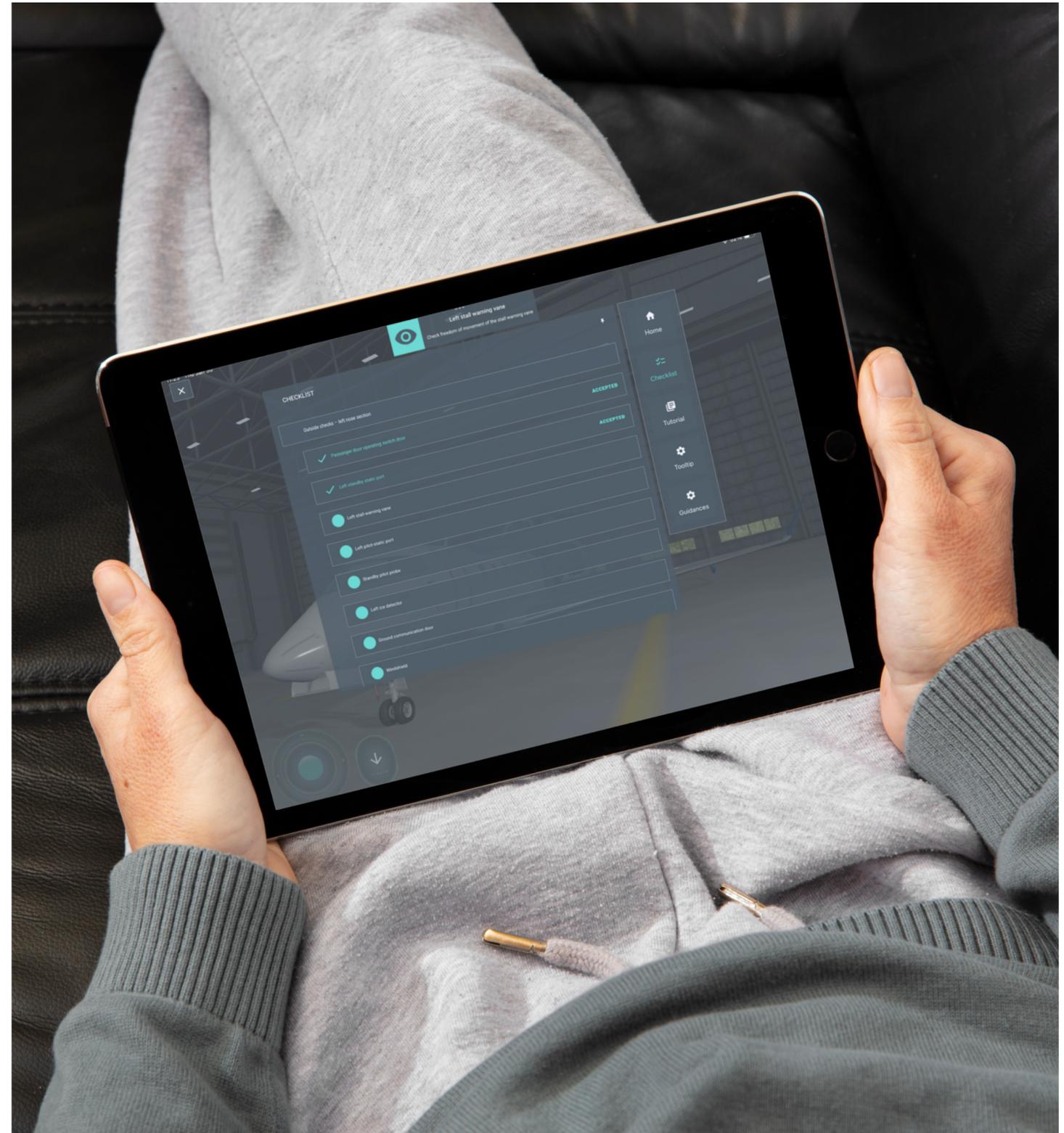
PRACTICE

Tablet Procedure Trainer

The Tablet Procedure Trainer is designed to help pilots **practice and internalize normal procedures and emergency scenarios** using a **tablet-based** solution. This training tool ensures that pilots can refine their procedural knowledge efficiently, anytime and anywhere, without requiring additional hardware.

Accessible Anytime, Anywhere

Pilots can train on **standard operating procedures (SOPs) and emergency protocols** directly on their tablets, making it a **portable and convenient** training solution.





Step-by-Step Guided Learning

Various **interactive guides and structured tutorials** assist pilots in **learning, memorizing, and perfecting procedures**, ensuring accuracy and consistency in execution.

Scenario-Based Training

Pilots can go through **realistic procedural sequences**, reinforcing their ability to respond correctly under different operational and emergency conditions.



04

ENVIRONMENT

Custom Image Generator

The Custom Image Generator is an **Unreal Engine-based** virtual environment developed in-house, providing **highly realistic and fully customizable** simulation environments. This cutting-edge solution enhances pilot training by delivering **true-to-life environmental effects** without the need for third-party rendering engines.

Fully Customizable Virtual Environment

We provide a **flexible, adaptable** virtual world tailored to **specific training needs, aircraft types, and operational scenarios.**







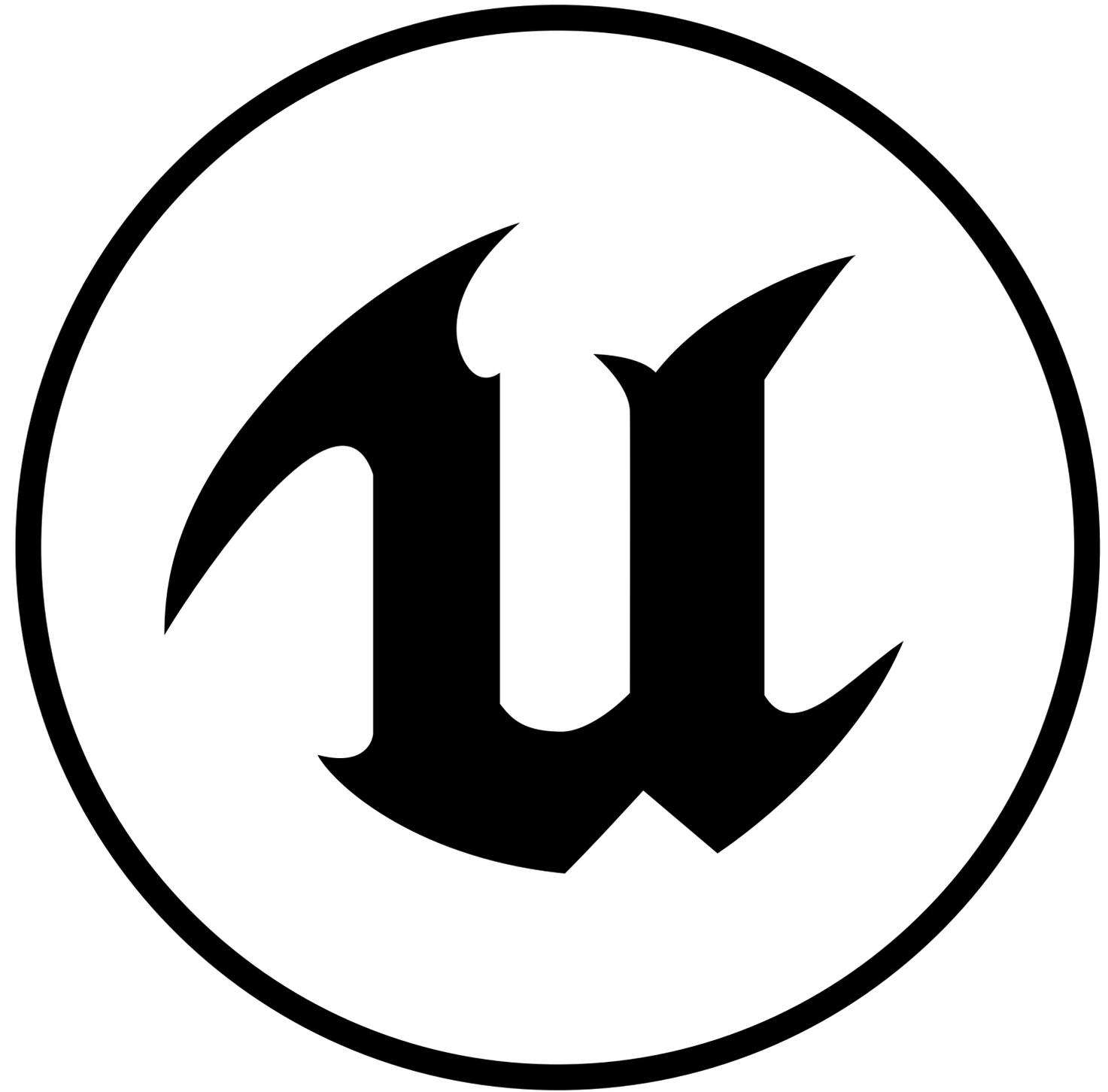
High-Fidelity Realism

Using **advanced rendering techniques**, we accurately model **lighting, weather conditions, atmospheric effects, and terrain** to create an **authentic training experience**



Powered by Unreal Engine

Leveraging the **capabilities of Unreal Engine**, our system offers **seamless integration with training solutions** and ensures smooth, high-quality visuals.





Self-Contained System – No External Engines Required

Unlike other solutions that rely on external rendering engines, our **Custom Image Generator operates independently**, reducing dependencies and ensuring full control over visual fidelity and performance.

A dramatic sunset sky with orange and red clouds. The text "Watch now!" is centered in white.

Watch now!



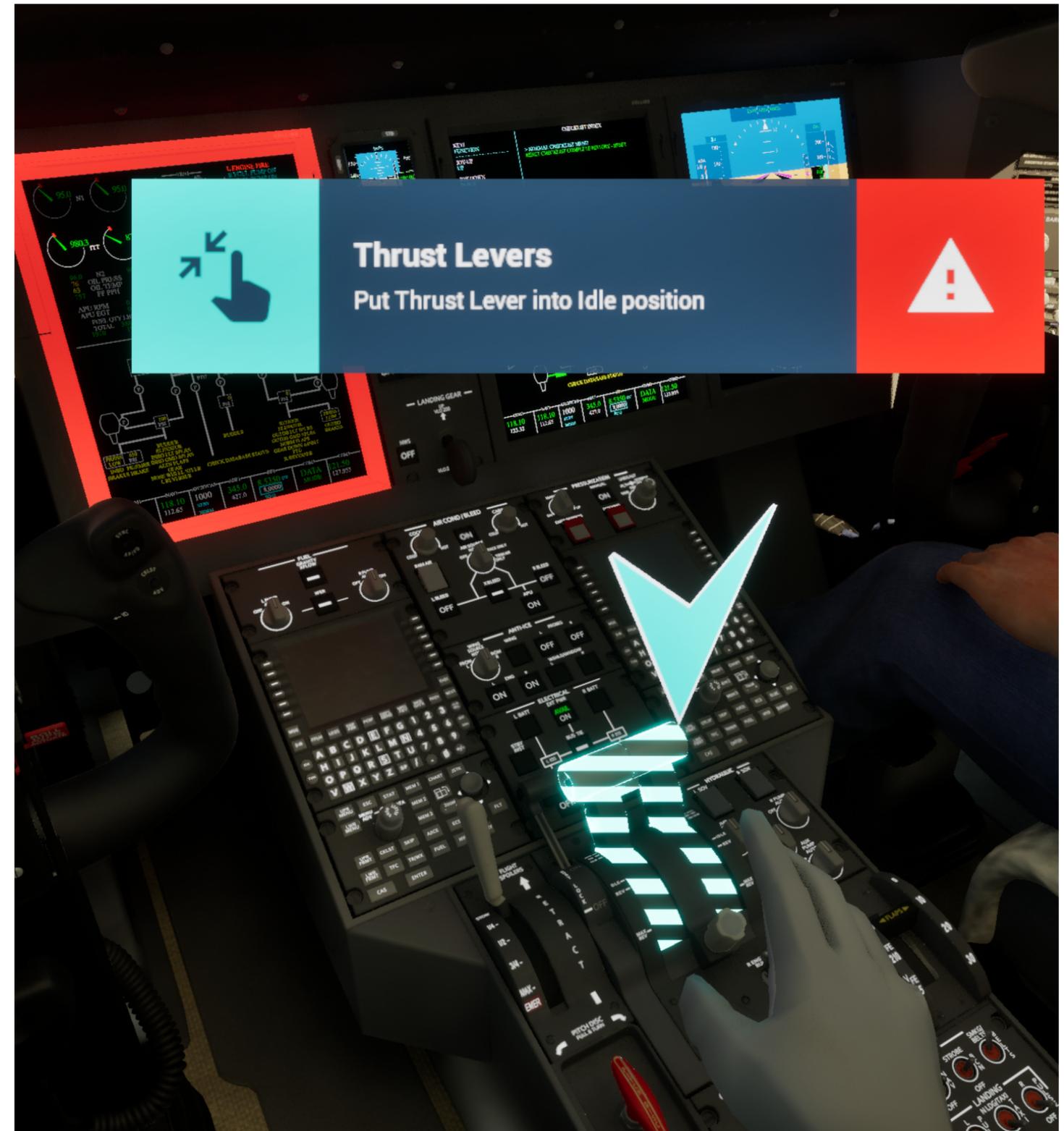
IMMERSION

Virtual Reality Procedure Trainer

The VR Procedure Trainer is an extended version of the Tablet Procedure Trainer, allowing cadet pilots to **practice standard and emergency procedures in an immersive virtual reality environment**. This solution bridges the gap between theoretical learning and hands-on experience, offering a **realistic, interactive, and AI-supported** training environment.

Immersive Virtual Reality Training

Pilots can apply what they've learned on the tablet in a **fully interactive VR environment**, experiencing a **realistic cockpit and operational surroundings**.



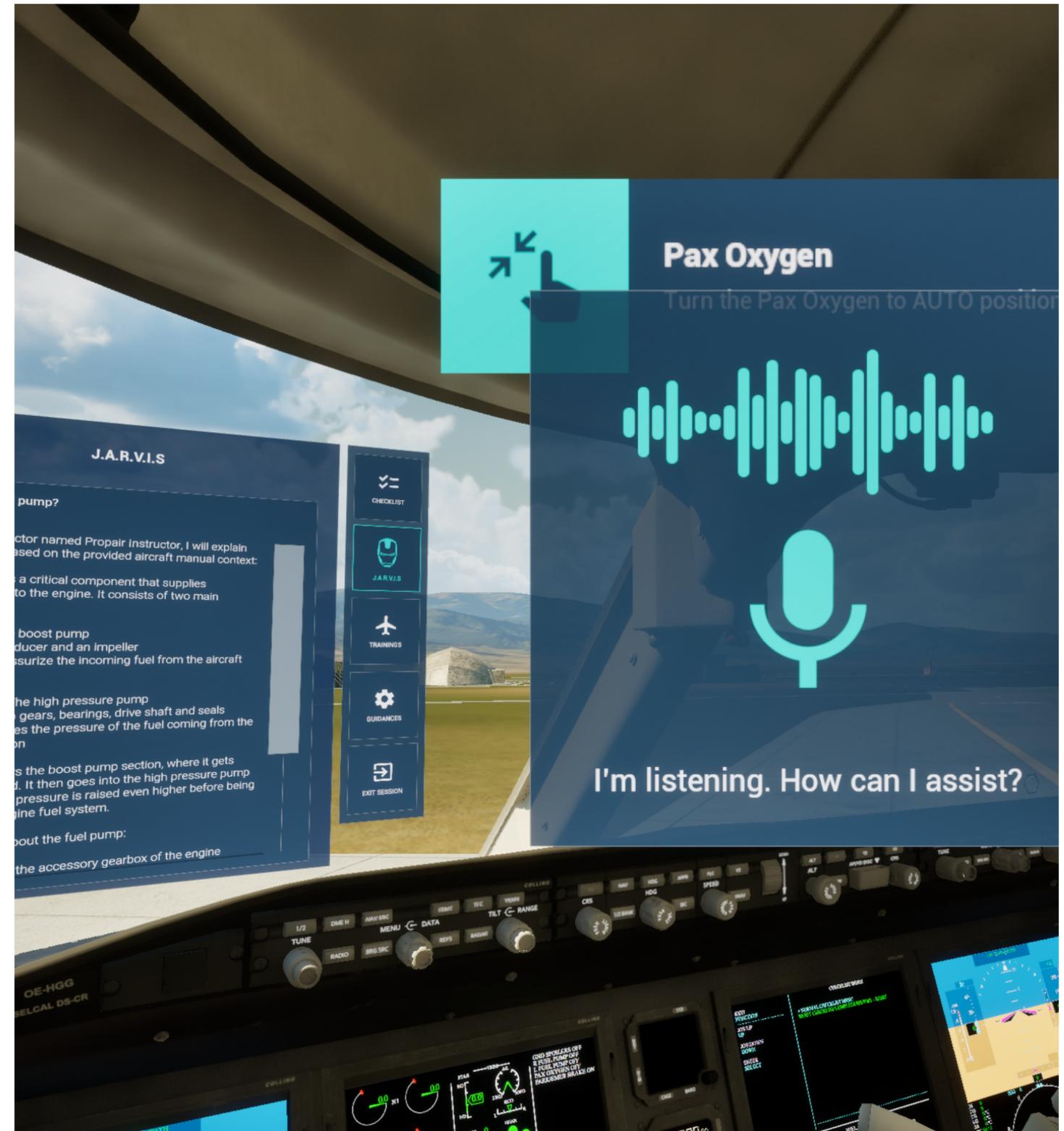


Hands-Free Interaction – No Controllers Needed

Unlike traditional VR solutions, our trainer allows pilots to **control everything with natural hand movements**, including cockpit interactions and outdoor navigation.

AI-Assisted Learning

The AI provides **real-time guidance**, answers procedural or aircraft-related questions, and supports pilots throughout their training.





Co-Pilot Assistance

A virtual **co-pilot** accompanies trainees, executing necessary actions alongside them, providing **verbal communication** to enhance the realism of the experience.



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Watch now!

06

INTEGRATION

Mixed Reality Simulator

PROP AIR FLIGHT

CLEARED TO INNOVATE