



F-35 Training & Trainer Overview Sustainment Industry Day

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Purpose

- **Provide a comprehensive overview of the F-35 Training System elements and describe the kinds of services being requested from industry**
- **The F-35 Joint Program Office is looking for companies who have the ability to operate and manage the F-35 Training Centers which provide training for pilots and maintainers. The training consists of academic and simulator training in an academic facility and supports flying training squadrons**



Background

- **The F-35 Training Continuum was designed to provide training and performance support of F-35 pilots, maintainers, support personnel and instructors for the entire F-35 Air System.**
- **The F-35 Training System delivers mission ready aircrew and Mission Qualified Maintainers (MQM) to safely and effectively operate, maintain, support, deploy, and employ the F-35 weapon system as described in the service mission statements**



F-35 Training Continuum

- **Pilot Training**

- Provides Initial Qualification (IQ) training, Transition training, Continuation Training (CT), Refresher training, and Service-unique training
- Provides individual, group, and team training for pilots through a combination of classroom instruction and flight training with simulators and aircraft, including mission planning, brief, and debrief functions

- **Maintenance Training :**

- Provides Initial Qualification (IQ) training, Transition training, Continuation Training (CT), Refresher training, and Service-unique training
- Provides F-35 unique individual, group, and team training for maintainers through a combination of classroom instruction, hardware training aids, hardware devices, simulations and On-the-job practical experience and includes Propulsion Training as an integrated component of the F-35 Air System

- **Infrastructure training :**

- Essential for maintenance and operation of the F-35, but is not specifically dedicated to pilots or maintainers
- Includes training for Supervisors, Maintenance Control, Maintenance Administrators, Quality Assurance, Supply, ALIS Administrators and other familiarization training
- Made available on-demand via ALIS and can be packaged and distributed in the form of dedicated courses



F-35 Training Centers

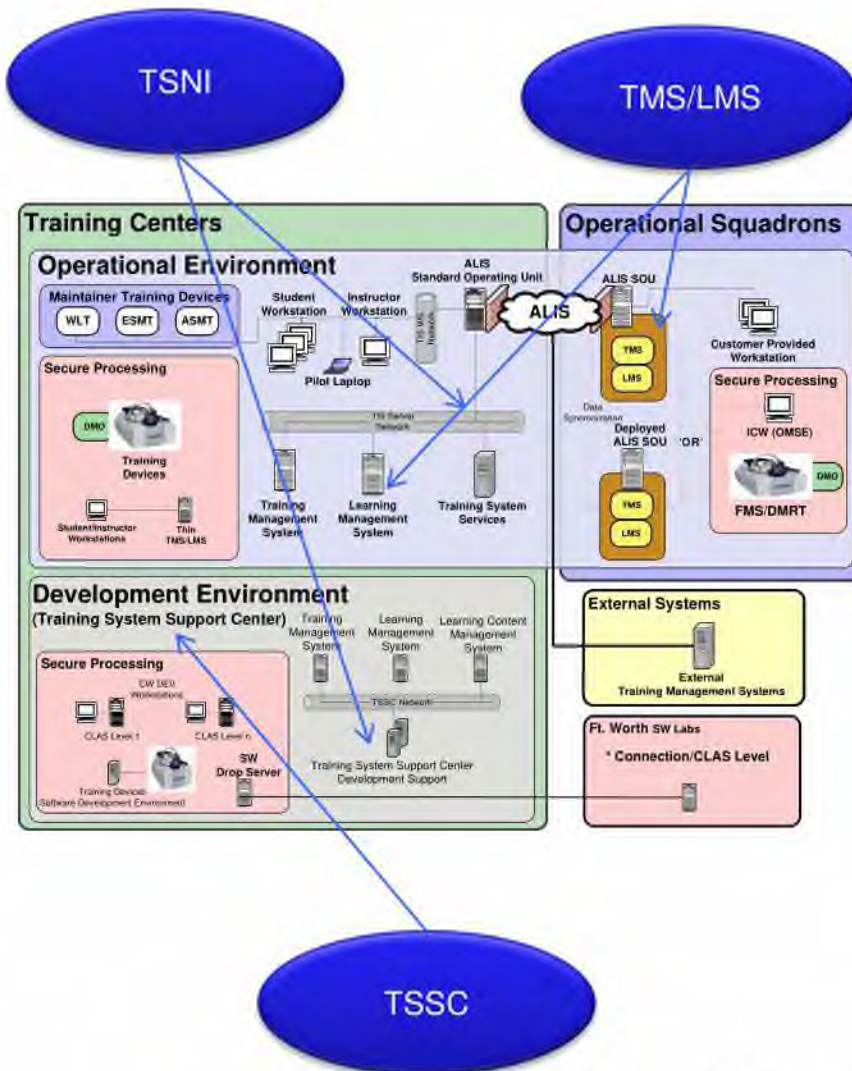
- **The Integrated Training Center (ITC) academic facility and flying training squadrons provide constructive and virtual learning environments for pilots and maintainers**
- **Functions Include:**
 - Training Infrastructure System
 - Training System Operations
 - Pilot Training Devices
 - Maintenance Training Devices
 - Physical, Information, & Operational Security
 - Training System Support Center (TSSC)



Training will be extended to follow-on Pilot Training Centers (PTCs), Maintenance Training Centers (MTCs), and Operational Sites situated in the US and participating countries



Training Infrastructure System



- **Training Management System (TMS)**
 - Performs scheduling/tracking of students, instructors and resources
- **Learning Management System (LMS)**
 - Performs the function of delivering Shareable Courseware Object Reference Model (SCORM) compliant courseware material
 - Records student progress & proficiency throughout the training event
- **Training System Network Infrastructure (TSNI)**
 - Enables components of the training system to process and exchange data within the Training System operational environment
 - Provides connectivity between Training System subsystem applications to facilitate the delivery & sustainment of training



Training Center Operations

- **Provides contractor instructional support, Standards & Evaluation, system and student performance assessment, operations desk, and scheduling support for academics, simulators & training squadrons**
- **Supports operations and maintenance of the pilot simulators, maintenance training devices and training equipment at the training centers**

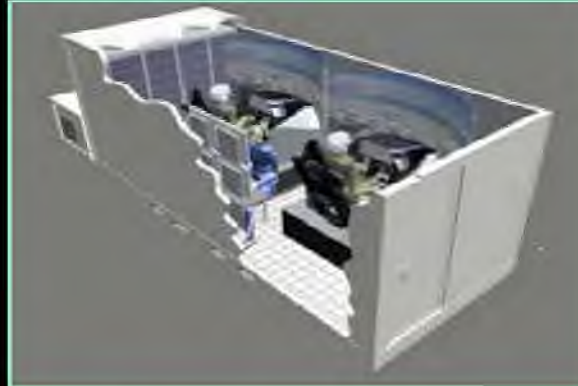


Pilot Training Device Suite



Full Mission Simulator (FMS)

- Primary Flight Trainer
- High-fidelity visual system
- Targeting HMD
- Full Weapons
- High Level Architecture
- Brief/Debrief
- Multiuse of OFP & models



Deployable Mission Rehearsal Trainer (DMRT)

- Common HW / SW Design with FMS
- Limited FOV Visual System
- Packaged in ISO shelter.



Mission Rehearsal Trainer (MRT)

- Common HW / SW Design with FMS
- Limited FOV Visual System (Same as DMRT)
- Packaged for small footprint applications



Maintenance Training Devices Suite

Ejection System Maintenance Trainer (ESMT)

- Used to train:
 - Crew Escape Systems
 - Egress Training
- Cockpit and surrounding area
- Off board ejection seat



Weapons Loading Trainer (WLT)

- Used to train:
 - Weapon & stores loading and unloading
 - Ruggedized wings
 - Hardpoints
- Full-weight training weapons
- Weapon bays
- Internal / Missionized Gun



Aircraft Systems Maintenance Trainer (ASMT)

- Used to train:
 - Diagnostic Principles
 - Maintenance Tasks
 - LRC Locations
- 12 Student Stations
- Single IOS



Engine Assets

- Used to train:
 - Module separation
 - Component Removal & Installation
 - Support Equipment
- F135 Power Module
- STOVL 3BSM
- Lift fan and clutch
- Drive Shaft
- Fan Module



Borescope Simulation Training Device (BSTD)

- Used to train:
 - Defect Identification
- 11 Workstations



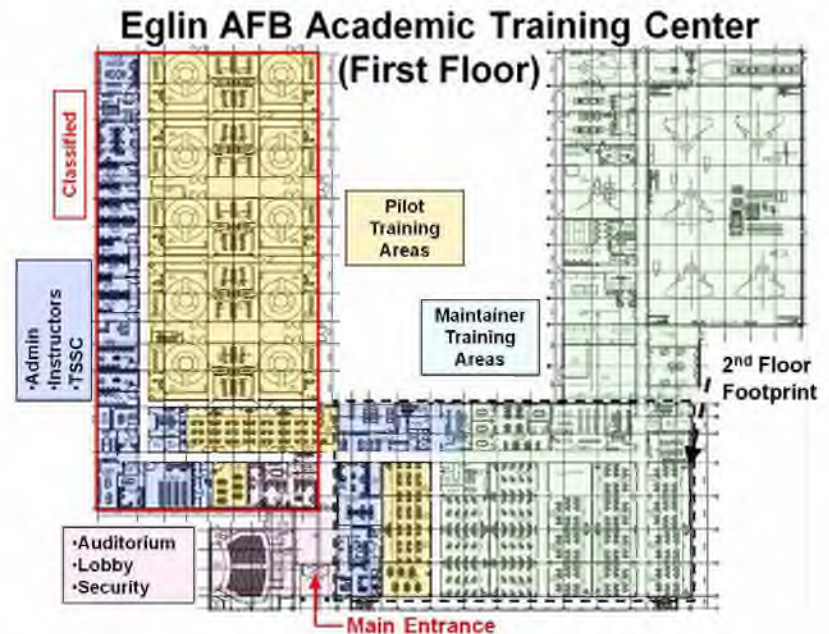
Additional Hands-on Maintenance Trainers are under development:

- Engine Removal & Installation
- Lift Fan Removal & Installation
- Landing Gear Removal & Installation
- Integrated Power Package (IPP)



Security: Physical, Information, & Operational

- Three U.S. Services and eight international participants
- Anticipate future involvement with Foreign Military Sales security assistance programs
- Special Access Programs (SAP) with capability to execute training at multiple security levels
- Comply with U.S. National Disclosure Policy (NDP) and the International Traffic in Arms Regulation (ITAR) requirements





Training Systems Support Center (TSSC)

- Engineering and software development personnel, equipment and support necessary to operate, maintain, integrate, modify, develop and update the Training System equipment (e.g., hardware, software, and documentation)
- Configuration management of course materials (syllabi, courseware, training devices, etc) and manage, and release all operational and product software and hardware baselines
- Manages the logistics support, spares inventory, and scheduled maintenance for all training system components

