

#### AFLCMC... Providing the Warfighter's Edge

# Simulators Division (AFLCMC/WNS) Update

16 June 2021

Col John Kurian Senior Material Leader Simulator Division

1

Cleared for Public Release on 9 June 2021, Case Number AFLCMC-2021-0123



## **2021 SUCCESSES**

AFLCMC... Providing the Warfighter's Edge





KC-135 Contract Award - CAE



Game-Changing Training Technology

10 Contracts Awarded



T-53 ATD Device Delivery – Frasca



F-16 Balad, AB Iraq Device Delivery – L3 Harris



JTC TRS Contract Award – LINK, L3 Harris



C-130J MATS Device Deliveries – Lockheed Martin



## **ACCELERATE CHANGE OR LOSE**



How it relates to Simulators Division and You

AFLCMC... Providing the Warfighter's Edge



General Charles Brown, Air Force Chief of Staff

- Uncontested USAF Dominance is not Assured
  - How should training architectures evolve to ensure success in any high-end fight?
  - Good Enough Today will Fail Tomorrow
    - Simulator Common Architecture Requirements and Standards (SCARS)
    - Common Synthetic Training Environment (CSTE)
    - Digital Engineering
  - We must Collaborate Within and Throughout to Succeed
    - Scale and sustain innovation initiatives
- Empowered Airman can Solve any Problem
  - Trust the Members to 'Run with Scissors'
- Consequences of Failure and Success are Profound



## SIMULATORS DIVISION VISION



AFLCMC... Providing the Warfighter's Edge



To become the premier warfighting digital twin – real, ready, and lethal; capability delivered at the speed of relevance.



- Move from command segregated missions scenarios (stovepipe) to a joint warfighter environment
  - Massive multiplayer option—simulate entire AF going to war

### Enable Train-How-We-Fight vision

- Multiservice, multinational
- Fully live virtual integrated, full spectrum missions

### The Center of Excellence for Simulators

- Go Faster Smarter (AI, VR, quick innovation, new Ctr approaches)
  - Innovation Cell
  - Partner w/ AFRL, DoD Agencies, small business, non-traditionals, Sister Services
  - Explore new game-changing technologies to enhance readiness

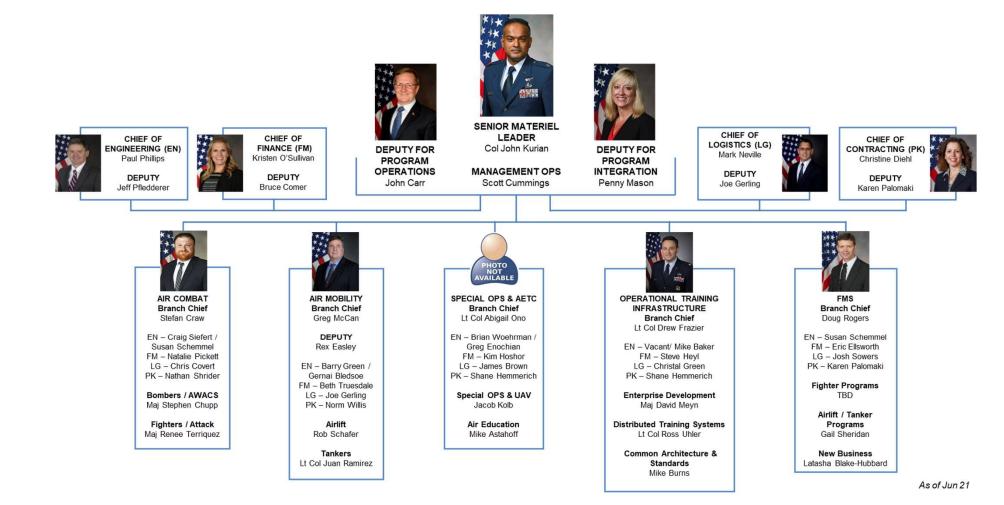


## SIMULATORS LEADERSHIP



5

AFLCMC... Providing the Warfighter's Edge

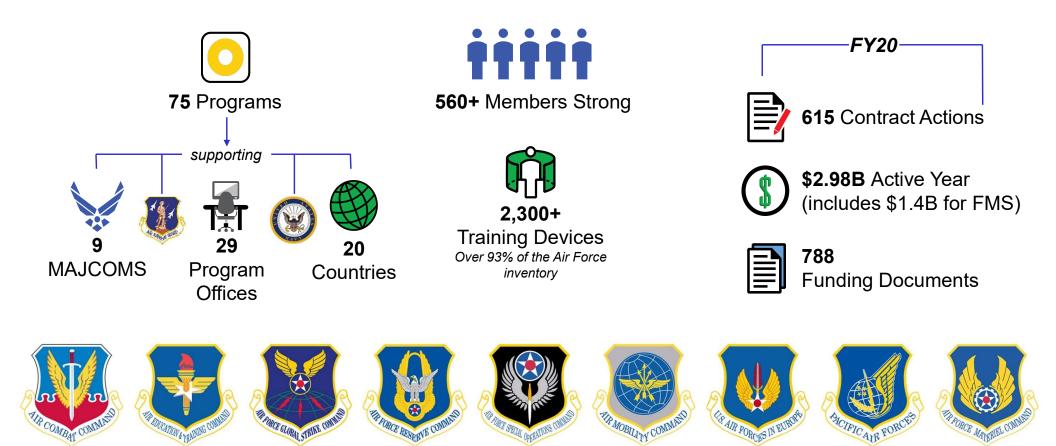




## **SIMULATORS SNAPSHOT**



#### AFLCMC... Providing the Warfighter's Edge



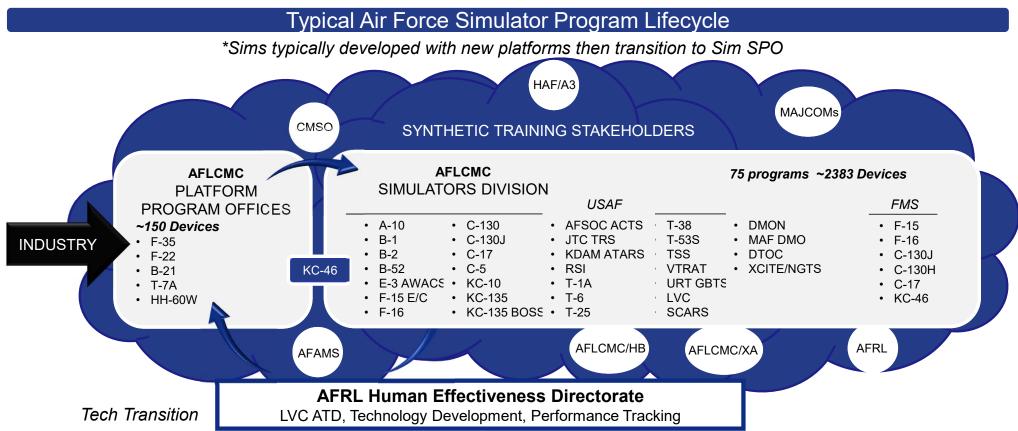
TFICATR FOR



## SYNTHETIC TRAINING ENVIRONMENT



AFLCMC... Providing the Warfighter's Edge



Large Portfolio Touching Virtually Every Aspect of our Warfighters Training Environment

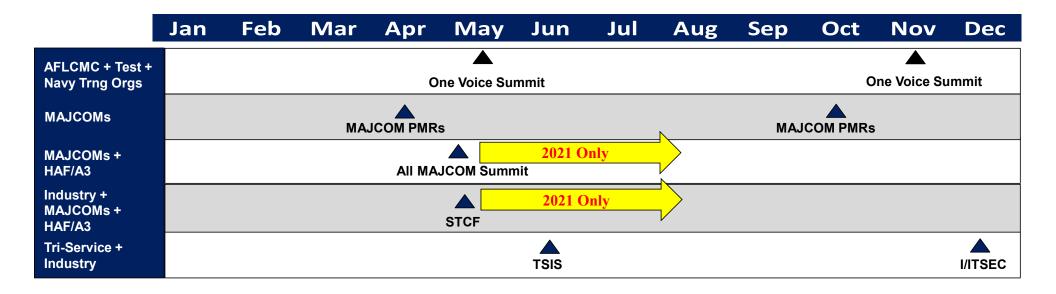
7



## SIMULATORS MEETING RHYTHM



AFLCMC... Providing the Warfighter's Edge



I/ITSEC = Interservice/Industry Training, Simulation and Education Conference

OTI = Operational Training Infrastructure

PMR = Program Management Review

- STCF = Simulation & Training Community Forum
- TSIS = Training & Simulation Industry Symposium

As of Apr 2021







AFLCMC... Providing the Warfighter's Edge

## AF Modeling and Simulation Executive

- Effectively synchronize USAF and USSF investments in M&S
- Lead strategic efforts to reduce costs, shorten schedules and expand capabilities such that DAF readiness is improved to defeat current and future threats
- AF Operational Training Infrastructure 2035 Flight Plan
  - Establishes imperative to train as we intent to fight and 12 lines of effort to provide relevant and realistic operational training environment
- Collaboration Forums
  - Operational Test and Training Cross Function Team (HAF/A3 Led)
  - MAJCOM Summit (Simulators Division Led)

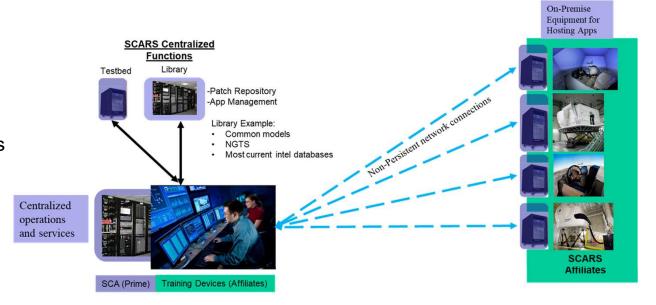


## **SCARS INITIATIVE**



AFLCMC... Providing the Warfighter's Edge

- SCARS is a sustainment initiative to apply enterprise management across the AF Training Systems
- Incrementally establish a common open-systems architecture governed by defined standards
- Operational Training Infrastructure (OTI) end state with SCARS well known standardized security baseline and common DMO Mission rehearsal baseline (same threat signatures & constructive models)
- SCARS Increment 1 (FY21) establishes core infrastructure (centralized and edge components), cybersecurity controls, and digital engineering
- Future SCARS Increments cross domain security, common electronic warfare environment, common constructive threat environment, standardized communication protocols





## **INDUSTRY AND SCARS**



AFLCMC... Providing the Warfighter's Edge

- For the contractors who have contractual requirements to support the SCARS Engineering Capabilities Board, these are the primary areas where the Government needs help from industry
  - Present ideas to the SECB for incorporation into SCARS Standards
  - Pitch ideas for pathfinder projects for studies, prototyping and testing
  - Support the SCARS Standards Maintenance Process to evolve the ideas for incorporation into the standards
  - Provide SCARS Affiliate services as specified in the SECB Charter (2 Feb 2021). Meeting attendance alone does not meet requirements.
- OPE Rollout Schedule, tentative

	FY21 Q4	FY22 Q1	FY22 Q2	FY22 Q3	FY22 Q4
Air Combat	1	2	3	4	4
Mobility		2	1	5	8
AFSOC				4	2



SIMULATORS INNOVATION CELL



• AFLCMC... Providing the Warfighter's Edge

- Goal: Provide repeatable process for Industry (Large and Small) outside of existing WNS contracts to demonstrate technology/products to WNS and user community
  - Initial Demonstration of technology in Innovation Cell's Holodeck
  - If promising, proceed to the AFRL Testbed for more detailed look
  - WNS could either request Affiliate contractor develop the technology or could have AFRL work with Contractor directly
  - Final step is transition the technology into production

Technical Maturity Level (relevant to operational training requirements)



User Buy-In Required to Progress to each Stage







- Compliance to SCARS common control standards will reduce ATO documentation
- USAF is consolidating the number of Authorizing Officials across the Training System Classification boundaries
- DevSecOps will fulfill a number of cybersecurity controls necessary to onboard applications to the SCARS Evaluated Products List (EPL)







### Simulators Division New Business Office

- · Dedicated to developing simulator capability for international partners
- Experience with FMS processes and awareness of industry capability
- Success in combining like country requirements into one contractual vehicle to reduce cost to partnering countries
  - Combines aspects of both bilateral FMS and Cooperative Development Efforts
  - Countries will only pay a portion of the development cost and receive the end capability within a typical FMS Period of Performance



## **VR/MR/AI ROLE IN THE FUTURE**



#### AFLCMC... Providing the Warfighter's Edge



Inside the Air Force's Next-Generation of Pilot Training youtube.com

#### Virtual Reality

- Many Aircrew training devices are currently using AR training modules, particularly for immersive, familiarization training tasks early in the curriculum
- · Pilot Training Transformation is exploring the use of VR in the training curriculum
  - · Pilot Training Next has already implemented
- · Simulators Divison is exploring how VR capabilities can be used as part of the spectrum of training devices
- · Providing lower cost immersive training devices to supplement the high-fidelity simulators
- Artificial Intelligence
  - · Predictive analytics to refine training content for individual students
  - · Virtual instructor to analyze student performance and give feedback
  - · Al controlled virtual entities that play other roles in a training scenario
- Simulators Division is working on a number of training projects involving these elements with different training units and MAJCOMs

### Industry Challenge: How to scale and sustain innovation initiatives



AFLCMC... Providing the Warfighter's Edge

- Telework/Hybrid work environment still in flux
- **Technology is critical enabler**

S AIR FORCE

- Need for VPN with appropriate and robust bandwidth ٠
- Software tools that are current and compatible with Industry ٠

### Leadership focus: Staying Connected

- Extra effort by Team and Supervisors to connect ٠
- Onboarding can be challenging ٠
- Collaboration and teaming is possible in this environment ٠









MSet(S) David Gibsor

Indep

CONVERSATION vith the Diversity and Inclusion Book Club







16



Aug 21 – MAF DMO - Mar 22



17



### **Program Requirements**

Principle Mission: Train in a secure, realistic Networked Environment while reducing risk and operating cost.

**The MAF DMO Contract includes:** Program Management, Operations and Sustainability (DTCN Event Support, Planning/Executing MAF Mission Profiles, DTC Helpdesk Support, Documentation, and Analysis), Interoperability (Standards Development, Test Planning, System Problem Reporting, Configuration Control, and Connectivity with External Networks), Cybersecurity and Security Support, Integration and Test (Certification and Acceptance Testing), Update/Maintain Test and Analytic Tools Capability, Host Code Analysis & On-Site Code Reviews, Website Support, and Logistics Management.

ACQUISITION STRATEGY	PERIOD OF PERFORMANCE	\	MILESTONE	S
		RFI	RFP/FOPR	Award
Competitive Fair Opportunity Selection using TSA III (FAR 16)	Anticipate 5-6 year Period of Performance			
		Aug 20	Aug 21	Mar 22
POINT OF CONTACT	FUNDING	CURRENT CONTRACT/ORIGINAL DEVELOPER/OEM (IF RECOMPETE)		
Organization: AFLCMC/WNS				
Name: Capt Sean Conway	\$30M/year	Northrop Grumman		nan
Email: sean.conway.5@us.af.mil				



## **T-38C TRAINING SYSTEMS**



AFLCMC... Providing the Warfighter's Edge

### **Program Requirements**

**The Principle Mission**: To consistently meet or beat a 95% T-38C ATD availability rate to support fighter/bomber pilot training requirements for weekly normal operations and periodic weekend surge requests.

**The T-38C TS Contract includes:** Contractor Logistics Support (CLS), Training System Support Center (TSSC), Program Management (including cybersecurity and FIAR), and sustainment engineering/modifications.

ACQUISITION STRATEGY	PERIOD OF PERFORMANCE	MILESTONES		
Competitive Fair Opportunity Selection Small Business Set-aside (TSA III)	2-month base transition (01 Mar 22 – 30 Apr 22) Base Year (1 May 22 – 30 Apr 23) Six (6) 1-year options (1 May 23 – 30 Apr 29)	RFI Mar 20	FOPR Sep 21	Award Jul 22
POINT OF CONTACT	FUNDING	CURRENT CONTRACT/ORIGINAL DEVELOPER/OEM (IF RECOMPETE)		
Organization: AFLCMC/WNS Name: Lt Col Juan Ramirez Email: juan.ramirez.3@us.af.mil	~\$111M (including potential modifications) Firm Fixed Price (FFP): Majority of requirements Cost Reimbursable (CR): Contractor travel Cost Plus Fixed-Fee (CPFF): Over and above	Aero Simulation Inc.		



MAN IN THE LOOP (MITL)



20

• AFLCMC... Providing the Warfighter's Edge

### **Program Requirements**

Man in the Loop (MITL) stations will be used to provide manned threat decision making, as well as, High End Advanced Tactics and Training (HEAT2) capabilities in the Virtual Test Training Center at Nellis AFB, NV. First systems installed Q1 FY22. MITL is a government developed and owned system, procured through the Naval Air Warfare Center's Aircraft Division (NAWCAD).

WNS will be contracting for maintenance, cybersecurity, and logistics support - to include, but not limited to:

- Multi-level Security operation Periods Processing from S/SAR to TS/SCI/SAR, and vice-versa
- Scheduled / unscheduled maintenance, tech refreshes, and root cause analysis to resolve issues
- Daily operational checks and cybersecurity support

Cybersecurity Risk Management Framework (RMF) requirements will apply.

ACQUISITION STRATEGY	PERIOD OF PERFORMANCE	M	MILESTONES		
Competitive Fair Opportunity Selection using TSA III (FAR 16)	4 year POP (through end of TSA III) End Date: 31 Aug 2026	Draft FOPR	FOPR	Award	
		Sep 21	Jan 22	Jun 22	
POINT OF CONTACT	FUNDING	CURRENT C DEVELOPER	ONTRACT/		
Organization: AFLCMC/WNS			O E/M (III KI		
Name: Gabriel Myers	\$ TBD				
Email: gabriel.myers.3@us.af.mil	Firm-Fixed-Price Contract	Procurement via NAWCAD (U.S. Navy)		U.S. Navy)	
Email: gabriel.myers.3@us.af.mil					



### **Program Requirements**

Principle Mission: Provide distributed mission operations services to enable realistic training up to S/SAR.

**The CAF DMO Contract includes:** The services for training, scheduling, and distributed mission operations necessary to ensure interoperability and interconnectivity of participant systems in accordance with the Joint Special Access Program Implementation Guide (JSIG).

RFI Aug 19	RFP May 22	Award Jun 23	
Aug 19	May 22	lup 00	
		Juli 23	
		CT/ORIGINAL F RECOMPETE)	
DEVELOP	ER/OEM (II	F RECOMPETE)	
Northrop Grumman		ıman	
		-	
Northrop Grumman			



### **Program Requirements**

Principle Mission: Aircrew Training and Rehearsal Support (ATARS), for AC/HC/MC-130J, CV-22, HH-60G & W, UH-1N and MH-139A

**The KDAM ATARS Contract includes:** Instruction, Contractor Logistics Support (CLS), Training System Support Center (TSSC), Cybersecurity, Financial Improvement Audit Readiness (FIAR), Database Generation Services (DBGS), and Courseware in support of AETC, ACC, AFSOC and AFGSC at Kirtland AFB, Joint Base Andrews, Davis-Monthan AFB, Moody AFB, Nellis AFB, Patrick AFB, JB Elmendorf AFB, Moffett Field, CA, Gabreski, NY, Kadena AFB, Aviano AFB, Maxwell AFB, Malmstrom AFB, FE Warren AFB and Minot AFB.

ACQUISITION STRATEGY	PERIOD OF PERFORMANCE		MILESTONES		
Fair Opportunity Selection (FAR Part 16) TSA III	2-month base transition (30 Jul 23– 30 Sep 23) Base Year (1 Oct 23 – 30 Sep 24) Six (6) 1-year options (1 Oct 24 – 30 Sep 29)	RFI Nov 21	RFP Aug 22	Award Jul 23	
POINT OF CONTACT	FUNDING	CURRENT	CONTRACT, 2/OEM (IF R	ORIGINAL RECOMPETE)	
Organization: AFLCMC/WNS Name: Mila Siglar Email: mila.siglar@us.af.mil	\$TBD Firm Fixed Price (FFP)	CAE USA Mission Solutions Inc.			



## VIRTUAL TEST AND TRAINING CENTER (VTTC) LEAD SYSTEM INTEGRATION (LSI)



AFLCMC... Providing the Warfighter's Edge

### **Program Requirements**

The Principle Mission: Provide high-end advanced training and tactics capability up to TS/SCI/SAR

**The VTTC LSI Contract includes**: Build, operations, and sustainment of a battlespace; key contract support elements consist of development, integration, and test activities; program management; configuration management; modeling and simulation engineering and technical management; network and systems engineering; operations and event/exercise support. Cybersecurity Risk Management Framework (RMF) requirements will apply.

ACQUISITION STRATEGY	PERIOD OF PERFORMANCE		MILESTONES		
TBD	5-year Period of Performance	RFI	RFP	Award	
		Nov 20	TBD	TBD	
POINT OF CONTACT	FUNDING	CURRENT			
Organization: AFLCMC/WNS		CURRENT CONTRACT/ORIGINAL DEVELOPER/OEM (IF RECOMPETE			
Name: Capt Christine Jestice Email: christine_joy.jestice@us.af.mil	\$130M	Northrop Grumman		nan	
	[				



## SIMULATION AND TRAINING COMUNITY FORUM (STCF)



## DATE: August 11

## Featuring

- MAJCOM PANEL
- In depth preview of upcoming WNS Acquisitions



