



# AF Keynote

## Joint Advanced Planning Brief for Industry 16 November 2022

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Chief, Human Systems Division





U.S. AIR FORCE

# Overview



- **Operational Imperatives**
- **Organizational Structure**
- **Human Systems Division Focus**
- **Combat Ready Airmen**
- **On-Going & Near-Term Projects**
- **Female Fitment Update**
- **Air Force Uniform Office**
- **Air Crew Performance Branch**
- **Questions**

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# Operational Imperatives from our Secretary of the Air Force



- **What: *Operational Imperatives (OI) are critical operational capabilities and functions we must invest in to protect our ability to deter conflict and project power against pacing challenges***
- **Why: *China is fielding capabilities designed to defeat our ability to project power in the Western Pacific; Russia is attempting the same in Eastern Europe***
  - ***OI-1: Space Order of Battle***
  - ***OI-2: ABMS/JADC2***
  - ***OI-3: Moving Target Engagement***
  - ***OI-4: NGAD Family of Systems***
  - ***OI-5: Resilient Forward Basing***
  - ***OI-6: B-21 Family of Systems***
  - ***OI-7: Readiness to Mobilize, Deploy, and Fight***



“The heart of our mission is to deter aggression. We don't want to fight wars -- we want to prevent them -- and the way you prevent conflicts is to convince the other side that you have the will to resist and the capability to defeat aggression.” – Secretary Kendall

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# Organizational Chart—Strategic



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**Air Force Materiel Command (AFMC)**  
Commander: General Duke Richardson



**AF Life Cycle Management Center (AFLCMC)**  
Commander: Lt Gen Shaun Morris



**Agile Combat Support Directorate (WN)**  
Program Executive Officer (PEO): Ms. Lea Kirkwood  
Military Deputy PEO: Col Carlos Quinones  
Civilian Deputy PEO: Mr. Kevin Keck



**Legend**

|            |                |           |
|------------|----------------|-----------|
| WP AFB, OH | Robins AFB, GA | Heath, OH |
|------------|----------------|-----------|

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# Organizational Chart Human Systems Division



Senior Materiel Leader/  
Division Chief  
Mr. David McCain



Deputy Division Chief  
Col (Sel) John "Will"  
Southard

**Legend**

|             |            |                |
|-------------|------------|----------------|
| WPAFB       | Robins AFB | Aberdeen, MD   |
| DLA, Philly | Natick, MA | Ft Belvoir, VA |



Chief Enlisted Advisor  
AFE SME  
CMSgt Juan Carlos Cueto

Chief of Engineering  
Mr. Andrew Klein

Chief of Contracting  
Mr. Michael Hill

Chief Financial Officer  
Ms. Deanna Gonet

Chief of Logistics (PSM)  
Ms. Mary Kicklighter

Aeromedical Branch  
Chief  
Mr. Cole Hutchison

Aircrew Performance  
Branch Chief  
Mr. Jason Scott

CBRN Defense  
Systems Branch Chief  
Col (Sel) Paul "Jimi"  
Hendrickson

Combat Ready Airman  
Branch Chief  
Lt Col Joseph Nichols

Egress & Survival  
Branch Chief  
Lt Col Robert Hoggard

Sustainment Branch  
Chief  
Ms. Mary Kicklighter

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# Human Systems Division Structure



## 6 Branches

**AeroMed  
Branch**

**Aircrew Performance  
Branch**

**Chemical, Biological,  
Radiological, Nuclear  
(CBRN) Defense Systems  
Branch**

**Combat Ready  
Airman (CRA)  
Branch**

**Egress & Survival  
Branch**

**Sustainment  
Branch**

**Mr. Hutchison**

**Mr. Scott**

**Lt Col Hendrickson**

**Lt Col Nichols**

**Lt Col Hoggard**

**Ms. Kicklighter**

**Projects**

PLS  
Vascular  
Shunt  
EVAC  
SIT-D  
Three9  
Assays  
AVT  
J-MCIP  
CLC  
APRU

**Labs**

AT Lab  
LSE Lab  
M&T Lab  
AA Lab  
LSS/STAQ  
(supporting  
OBOGS)

**Helmets**

ABH,  
NGFWH,  
Legacy  
Helmets

**Accessory**

ALEP TI  
NFB  
PLZT  
NVG  
DEP  
Nuclear Flash  
Blindness

**Suit**

IAE  
CWAS  
G-Suits  
Anti-Exposure  
A2CU Fit Suit  
Heated Flight  
Clothing

**Accessory**

Body Armor  
Boots/Gloves  
Bladder Relief  
DIU PPM/WS,  
STOPS  
Survival Vest

HCA for Covid-19  
Passengers JUON  
**JPEO JPMs/JPLs**  
Medical Protection  
Rad/Nuc Defense  
Sensors, Special Ops

**Efforts: AF Interest**

Protection: Percutaneous/  
Respiratory/ Collective/  
Chem/Bio Detection/  
Warning/Reporting  
Contamination Mit.  
Medical: Vac; Treat;  
Diagnostic

Physical  
Training Gear

Female Fitment

Female Body  
Armor

GearFit App

**DAF Uniform Office**

Service Dress

Service Dress

Shirt/ Coat

Maternity Uniform

A2CU-Female

Manikin Girdle

FR Product List

Space Force Uniform

Exoskeletons

**Seats**

B-2 SSIP

NGES,

T-38 ESUP

ACES II

B-52 Seat Kit

Seat Harness &

Lumbar Support

**Parachutes**

LPP

BA-X

Harnesses

Drag Chutes

**Gear**

Seat

Survival Kit

NCSR

Covert

Signaling

SEARS

IPLD

**Flotation**

LPU,

Life Rafts

**WML Programs**

AFE

CBRN Def Sys

PS&RE:NVG

**1800+ Items Maintained  
652 Technical Orders**

**Supports Domains:**

Egress  
Survival  
Head Gear  
Body Wear  
CBRN  
Combat Ready Airman

8  
Domains

**Aeromedical  
Labs**

**Head Gear  
(neck up)**

**Body Wear  
(neck down)**

**Chemical,  
Biological,  
Radiological,  
Nuclear**

**Combat  
Ready  
Airman**

**Clothing  
&  
Textiles**

**Egress**

**Survival**

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# Human Systems Division Focus



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- We are “One Team” as we execute our mission
- Our teammates include:
  - Congress, OSD, HAF, USSF, USN, USA, USMC
  - SAE, SAF/AQ staff, DLA, DCMA
  - AFSOC, ACC, AMC, AFGSC, AFGSC, AETC, ANG, AFRC, PACAF, USAFE, etc.
  - HQ AFMC, AFLCMC, AFTC, AFSC, AFRL, AFOTEC
  - Industry Partners
- We will execute all Human Systems Division programs according to our warfighter and taxpayer commitments

**Mission:** *Save & Improve Airmen’s Lives*

**Vision:** *Acquire & Support Human Systems to Enhance Warfighter Performance, Protection & Survivability*

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# Combat Ready Airmen Background & Vision



*Increasing lethality ... Cost effective, modernized equipping of all Airmen*



- **Drivers:** AF/A4 thru 2017 / 2018 Ops & Tactics Group, Inter-service Commonality Memo, NDAA (FY17, FY18 & FY20)
- **Vision:** CRA will develop, acquire, field, and sustain standardized, integrated state of the art equipment for all Airmen to maximize readiness enabling global Air Force Dominance

*Currently no equipment standardization for the majority of our Airmen*

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# Combat Ready Airmen as the Solution



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## VALUE PROPOSITION:

- ✓ Provides Requirements Integration center of excellence
- ✓ Provides Program Office for materiel solutions and OSS&E
- ✓ Presents approved materiel solutions in a 'storefront' approach for AF equipment users
- ✓ Supports equipment users with procurement or ordering vehicle

### KEY DOCUMENTS

- Requirements Document (REQT)
- EMD & Low Rate Initial Procurement Contract (K)
- Approved Product List (APL)



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# On-going & Near-time Projects (FY23-FY24)



| Currently Being Worked by AFLCMC/WNU<br>(FY22)         | Awaiting Action (FY23-24)  |
|--|--|
| <b>Equipment Type</b>                                  | <b>Equipment Type</b>  |
| Cold Weather Safety-toe Boot                           | Polo Shirt   |
| Cold Weather Clothing Modeling & Simulation            | ANG Polar Tactical Airlift Extreme Cold Clothing System Arctic Weather |
| Athletic Footwear Program                              | Mobility Battle Belt   |
| AFRC Quick Don Electrical Hazard Boot (CE Zipper Boot) | Joint Services Mask Leakage Tester Servicing Contract                  |
| Ballistic Combat Shirt                                 | Mobility Vital Torso Protection Hard Armor Adoption Assessment         |
| Ballistic Pelvic Protection                            | Mobility Extreme Cold Operation Clothing System Program                |
| Model Defender Kit                                     | Security Forces Gloves   |
| Wearables  | Acclimate Project  |
| Maternity Uniform Pilot Program                        |  |

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# Combat Ready Airmen Future Wearables



## “Human Performance” Database

Common database that will turn data collected from the wearables into human performance data that can be used to provide real-time information that enhances readiness

## Software Tool

This tool that will be able to translate the data coming from any wearable device into a single standard data format that can be entered into the “Human Performance” Database

## Department of Defense

The Services are moving forward to gain an understanding of joint physiological monitoring capabilities

JPEO CBRND

Combat Ready Airman

AF Physiological Action Team (AFPEAT) Sponsored Efforts

Department of the Air Force

## Solutions Needed

- Detect/alert aircrew in real time to symptoms of hypo/hyperoxia and hypo/hypercapnia
- Measure head level oxygen delivery and perfusion and alert aircrew if it reaches dangerous levels
- Calculate inhalation/exhalation work of breathing
- Early warning for chemical and biological threats
- Joint requirements
- Provide early warning for infection, fatigue, stress and other physiological monitoring capabilities
- Legal and user privacy impacts
- Cybersecurity
- Technology readiness
- Collaboration requirements

Aircrew Physio Monitoring

CBRN Defense

Real-time data for duty performance

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# Female Fitment



## Human Systems Division Female Fitment Goals

- Integrate female fitment into **ALL** current and future HSD programs
- Liaise with HSPO-external organizations and communities

### Near Term Clothing & Textiles FF efforts:

1. Maternity flight suits (1 & 2 piece variants)
2. Advanced Aircrew Combat Uniform - Female
3. USAF Service Dress slacks, blouse, and skirt
4. USAF G-suit redesign
5. USAF Mess Dress Slacks
6. USAF Service Dress
7. USAF and USSF Maternity Service Dress

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# Air Force Uniform Office



## Clothing & Textiles

### Gloves/ Footwear

- AF Safe to Fly Glove List
- AF Safe to Fly Boot List
- DLA Supply: AF Footwear
- DLA Supply: AF Gloves
- Socks
- Dress Shoe cert



### Service Dress Uniforms

- AF Service Dress
- USSF Service Dress
- Maternity
- Optional Service Dress
- Dress Outerwear
- Caps



### Utility/ Flight

- OCP
- Maternity Flight suits
- Flight Suits
- Cold Weather Clothing
- Rain Gear
- Maintainers/Fuel Handlers
- Hats, underlayers



### PTG/ Accessories

- Physical Training Gear
- Optional PTG
- Neck Tab
- Ties



### AF C&T Item Supply Managers (DLA-TS)

- Blankets
- Cloths
- Flags
- SRP
- CAR



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# Specific Clothing & Textiles Requirements



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| Requirements  | End Item  |
|---|---|
| Wool fabric and wool blends   | USSF Service Dress uniform                      |
| Washable stretch woolens and alternatives                             | USSF Service Dress uniform                      |
| Water repellent performance fabrics                                   | Service Dress Coats                             |
| Performance fabrics - athletic  | USAF/USSF optional physical fitness items       |
| Sweater knits or alternative dress knits                              | USSF Service Dress                              |
| Fit/wear test asset prototype manufacturers (small batch, quick turn) | All uniforms – particularly Service Dress Coats |
| Composite toe, ASTM-compliant boots w/zipper for easy on/off          | Boots for emergency responders                  |
| Safe heating technologies   | Extreme cold weather clothing                   |
| Female anthropometric-compliant sized footwear                        | Female boots                                    |
| Improved (quality/reliability) closure systems                        | Protective clothing and accessories             |

**Requirements to be covered in greater detail during Air Force breakout sessions**

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# Aircrew Performance Branch Mission



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**Develop, Acquire, Test, Safe to Fly, Field and Sustain Air Force Uniforms and Aircrew Flight Equipment (AFE) to Increase Warfighter Capabilities**



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# Summary



- **Be ready to support our Air Force Operational Imperatives**
- **We are “One Team” Saving and Improving Airmen’s Lives everyday**
- **Air Force remains committed to executing Combat Ready Airmen initiatives**
- **Great progress has been made for female fitment and uniform projects**
- **Continued strong support for our Air Crew Performance Branch**

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