

Air Force Materiel Command



**Development and
Insertion of Innovative
Technologies Across
the Lifecycle of a
Weapon System**

Janet C. Wolfenbarger
Brigadier General, USAF

Director, Intelligence and Requirements
Director, D&SWS AFSO21 Office

Integrity ★ Service ★ Excellence

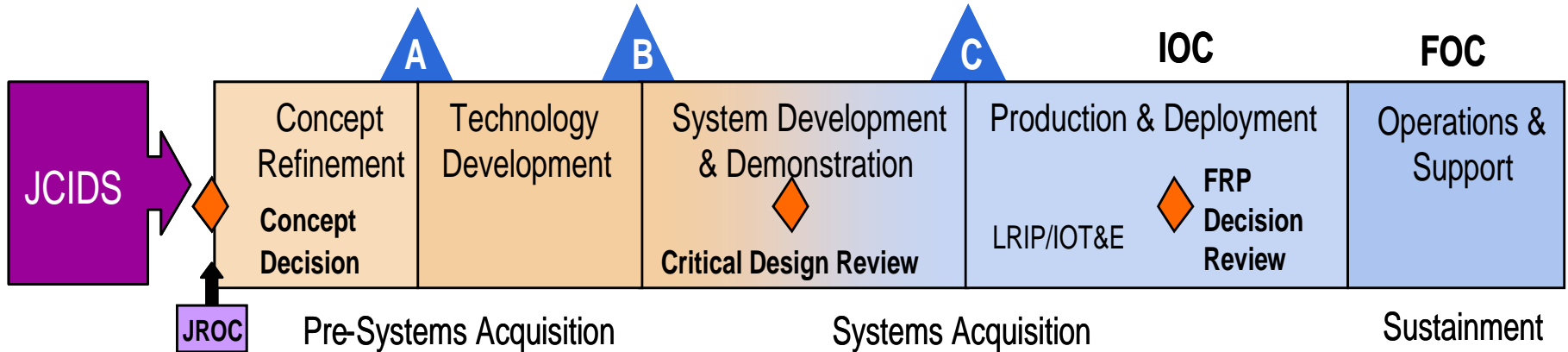


Overview

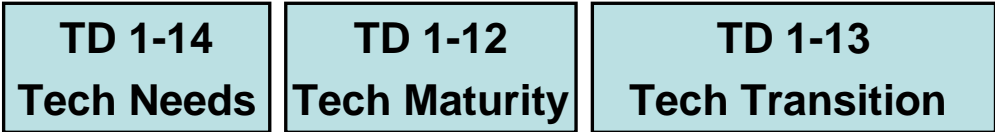
- **Ongoing AF/AFMC initiatives to improve technology insertion:**
 - **Pre-MS B: AFSO21 Develop and Sustain Warfighting Systems (D&SWS) Technology Development (TD) Initiatives**
 - **Sustainment: Sustainment Technology Process (STP) to develop focused sustainment technology investments**



Integrated Life Cycle Management



Development and Sustainment of Warfighter Systems “Technology Development Process”



Sustainment Technology Process



Air Force Special Operations for the 21st Century (AFSO21)/D&SWS

Part of the Answer



Funding Our Priorities

“We will fund transformation through ... **organizational efficiencies, process efficiencies, reduction of legacy systems and manpower** while sustaining GWOT and ongoing operations in support of the Joint Fight.”

- Michael W. Wynne, SECAF

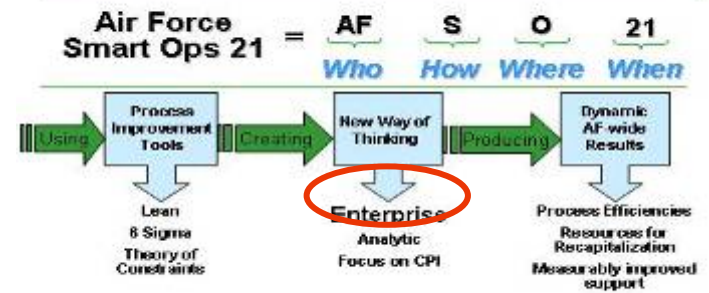


Integrity - Service - Excellence

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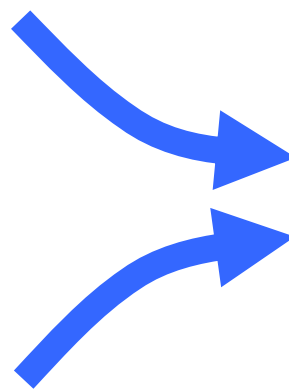


AF Smart Ops 21



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The Status Quo is Out

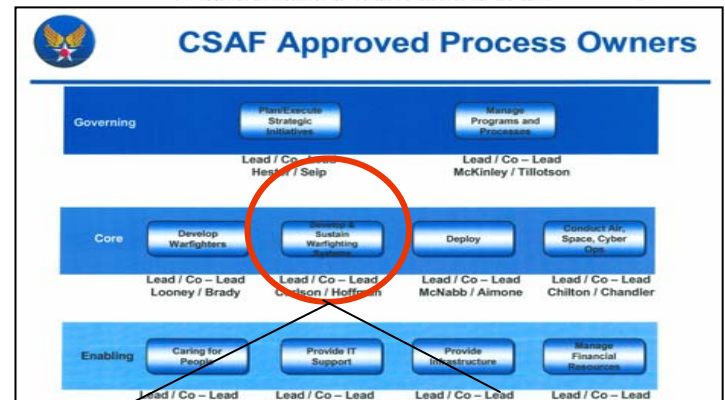


AFSO21

- The USAF will do less with less
- Do what is valued by our customers
- Employ tools and techniques smartly to reduce waste and non-value-added work, to maximize value to the warriors

Integrity - Service - Excellence

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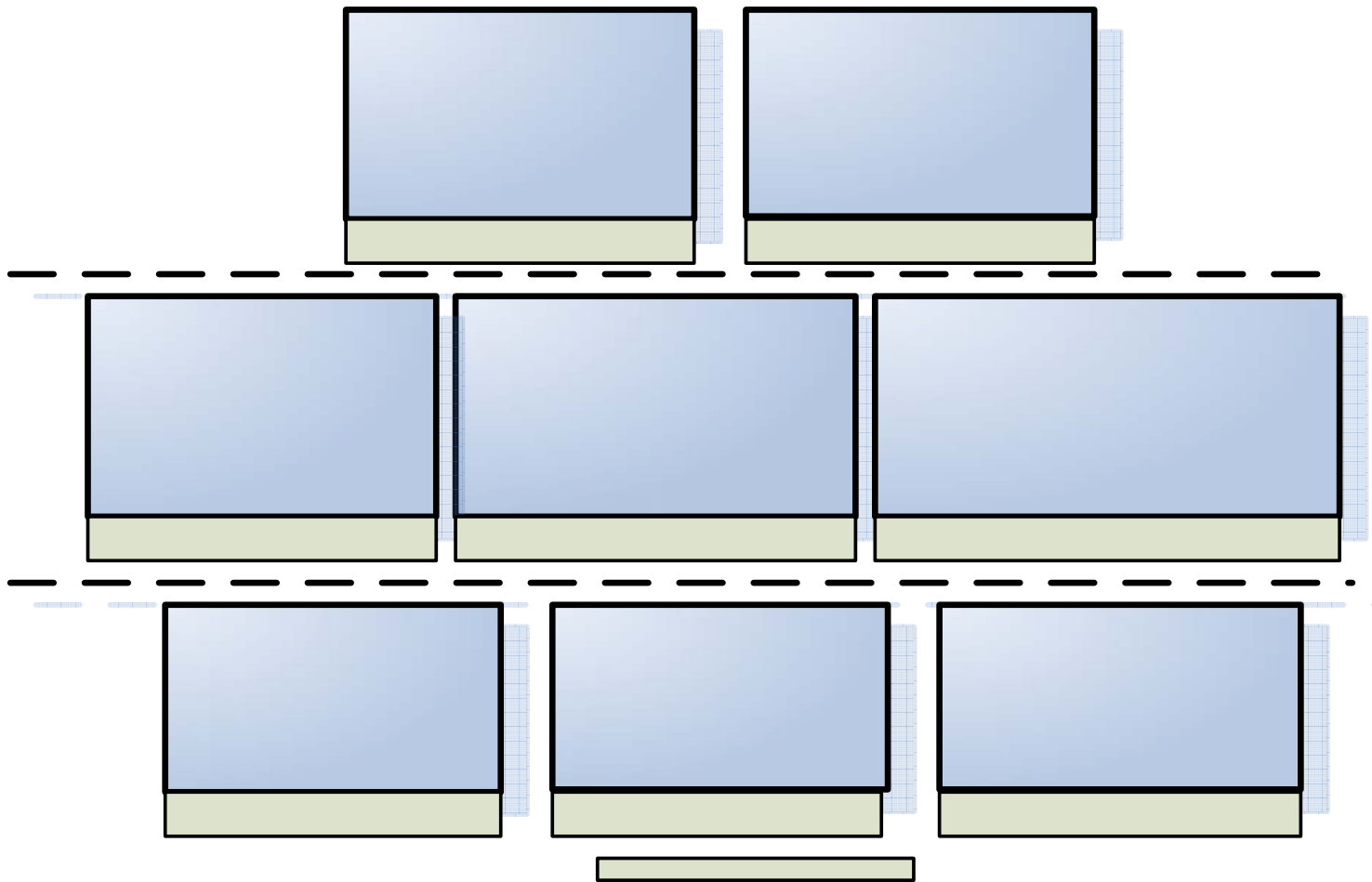
Develop and Sustain Warfighting Systems (D&SWS)



D&SWS Sub-Processes

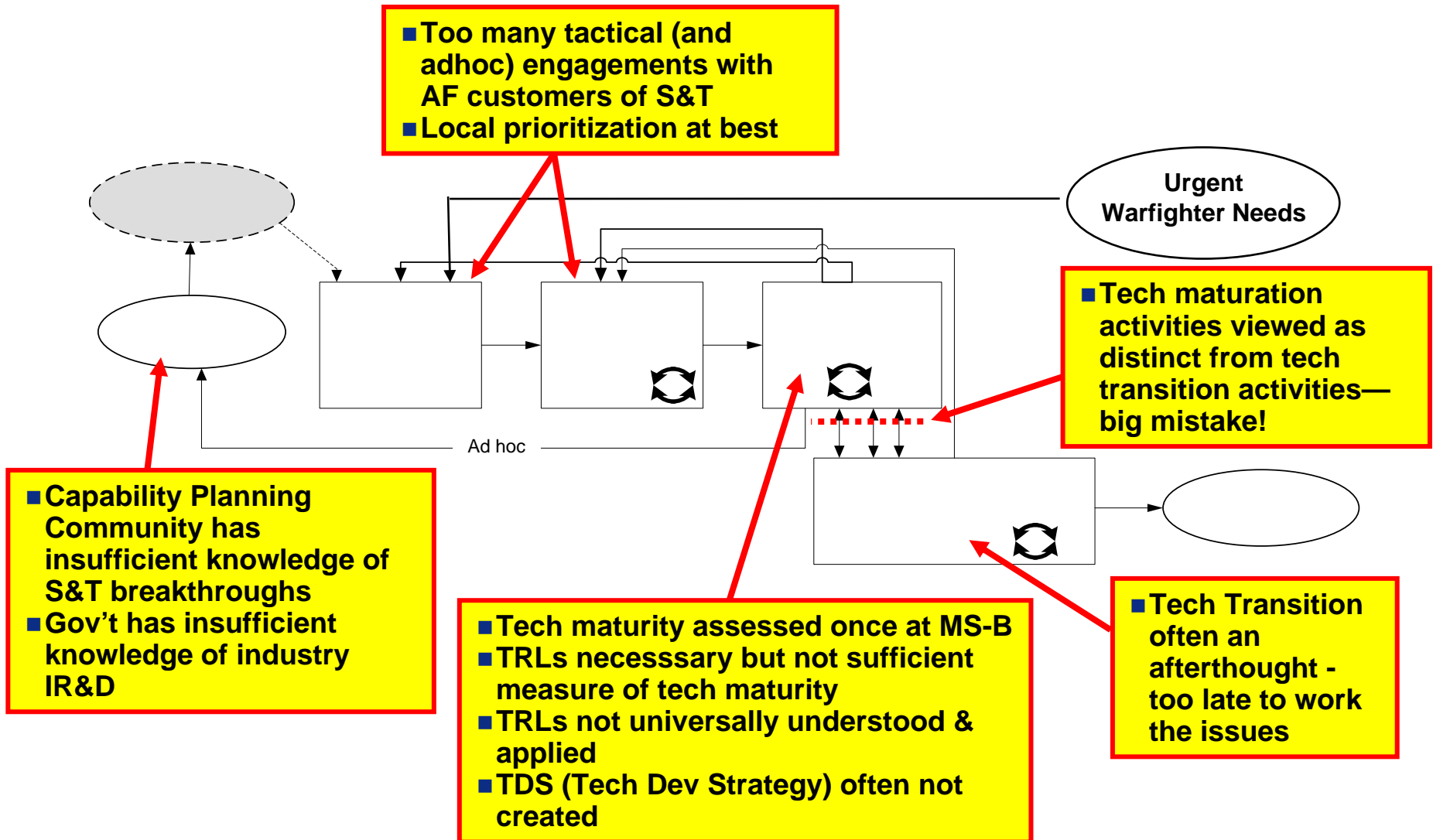
***Sub-Process Owners,* Co-Leads, Design Team Leads**

Process Owner/Co-Lead Gen Carlson/Lt Gen Hoffman
Chief Process Officer Brig Gen Janet Wolfenbarger





As-Is Technology Development Process





D&SWS Technology Development Initiatives



AF-wide process to identify and prioritize tech needs linked to capability gaps and program requirements

Benefits: Best technologies needed to achieve AF's highest priorities receive highest investment priority.

"Tech Push" better influences capability planning.

Establish comprehensive "yardstick" to assess maturity of technologies (more than technology readiness levels: include testability, manufacturability, integratability, supportability, etc)

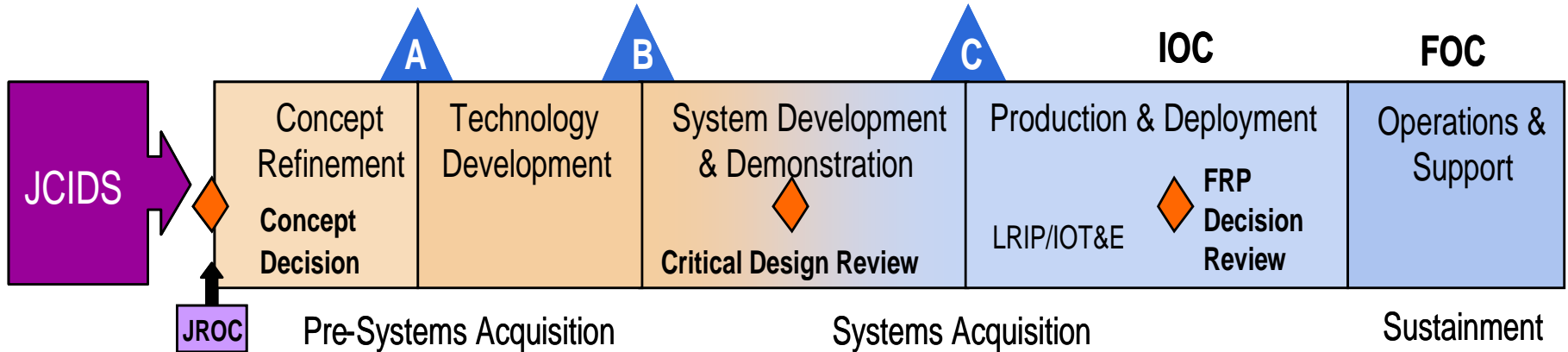


Establish disciplined and collaborative "stage-gating" process to ensure highest confidence in successful technology transition

Benefits: Reverse the trend of starting SDD with immature technologies which cause RDT&E and production cost growth and schedule slips



Integrated Life Cycle Management



Development and Sustainment of Warfighter Systems “Technology Development Process”



Sustainment Technology Process



Strategy Development

Top Down Capability Driven Process to Support Strategic Sustainment Technology Investments

Strategic Drivers

E-Log21

- Reduced O&S Costs and increase system availability

AFMC Balance Scorecard

- Sustain Weapon Systems
- Improve equipment availability at reduced cost
- Enhance Sys Reliability

Customer Needs

- MAJCOMs
- AFMC

AFRL FLTC

- Affordable Mission Generation & Sust

Agile Combat Support

- Agile, Responsive & Effective Sustainment

Strategic Thrusts

• Improve the sustainability of weapon systems, and influence the sustainability of new systems in development

• Improved Inspection, Fault Detection, Prognostics and Diagnostics Capability (Sense and Respond)

• Apply Advanced Practices for Maintenance, Repair & Overhaul, Production Processes, and Supply Chain management

Focus Areas

- Crack & Corrosion Detection
- Coat/Decoat
- NDI
- LO Maintainability
- CBM + Integrity
- Maintenance Shop Improvements
- Aircraft Subsystem Diagnostics
- AGE, Test Equip & Avionics
- Obsolescence Management
- Supply Chain Enhancements

Technology Working Groups

Airframe Sustainment - TWG

Propulsion Sustainment - TWG

MRO&P Sustainment - TWG

Combat Sustainment - TWG



Governance Structure

Strategic Vision & Sustainment Thrust

Senior Sustainment Steering Committee (S3C)
 Chair: AFMC/A4
 Co-Chair: AFMC/A2/5

GO & SES

Members		
AAC/CA	AFRL/CA	NWC/CC
ACC/A4/A8	AFSOC/A4	OC-ALC/CA
AEDC/CA	AFSPC/A4	OO-ALC/CA
AETC/A4	AMC/A4	SAF/AQR
AF/A4 M/A4RC	ASC/CA	SAF/IEL
AFMC/A3/A8/EN/FM	ESC/CA	WR-ALC/CA

Guidance →

Internal Resources

- AFRL
- AFMC Centers
- AFMC Corporate Process
- AFMC CMPs

Advocacy →

External Funding Sources

- MAJCOM, OSD
- Programs

AFMC CMPs

Sustainment Review Group
 Chair: AFMC/A4D
 Deputy: AFMC/A5S

O-6 & GS-15

Members
 SAF/AQRC, AQRT, IEL AF/A4MM, HQ AFMC/A2/5, A3, A4, A8, EN, FM, AFMC Centers EN, XR, XP AFRL/PR MAJCOMs A4, A8

Requirements Generation/Transition Agents

Technology Working Groups	AFMC Centers	MAJCOMS	Outputs <ul style="list-style-type: none"> • High Priority Sustainment Tech Needs • Planning Documents • ID Funding Source
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Accomplishments

- **Expanded S3C membership to include MAJCOMs**
- **S3C approved sustainment technology needs:**
 - **Submitted for OSD transition/sustainment funding sources, i.e., Quick Reaction Funds, Reduction in Total Ownership Cost (RTOC)**
 - **Guided FY09 APOM and FY10 POM (Aging Aircraft and S&T supporting Affordable Mission Generation & Sustainment)**
 - **Funded projects include: Condition Based Maintenance Plus, Non-destructive Inspections, LO Maintainability, and Improved Depot Processes**



STP Next Steps

- **Leverage Industry Research & Development (IR&D) and Small Business Innovation Research (SBIR) Commercialization Pilot Program (CPP)**
- **Technology Roadmap Development**
 - Provides a WBS structured approach to acquire, test, and implement critical sustainment technology to meet a specified capability
 - Utilizing A2/5 modified Capability Based Roadmap Tool
- **STP Performance measures being developed and implemented ECD: Jun 08**
- **Finalizing governance document: AFMCI 61-103; S&T and Technology Transition Planning**



Summary

Objective is to develop and insert innovative technologies across the lifecycle of a weapon system

- **Pre-MS B: D&SWS initiatives focus on identifying highest priority needs, improved technology maturity assessments and establishing high confidence gated technology transition**
- **Sustainment: Strategy-to-task driven process to support cross-cutting sustainment technology investments**

**AFMC and the AF are pressing forward with revolutionary initiatives to
*Develop & Insert Innovative Technologies into AF Weapons Systems***



JANET C. WOLFENBARGER
Brigadier General, USAF
Director, Intelligence and Requirements
Director, D&SWS AFSO21 Office
HQ AFMC/A2/5 and CCO
937-257-3024 or DSN 787-3024
janet.wolfenbarger@wpafb.af.mil