Air Force Communications Agency

Integrity - Service - Excellence

AF IPv6 Transition

Mr Eric Lubeck
AFCA
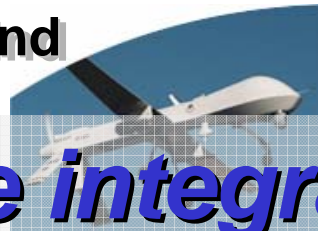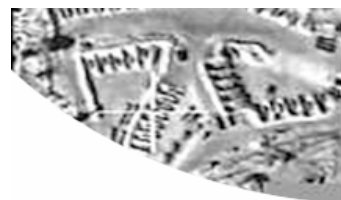**20 Feb 2007**

AFCA's Mission

"*Direct the integration of systems into the Air Force network to achieve integrated and interoperable Air Force CONOPS capabilities*"

Find

Fix

Engage

Target

Reduce the latency in the kill chain

AFCA IPv6 TMO Context

SAF/XC

AFCA IPv6 Transition Management Office

DoD

Policy and Guidance

AFIOC

IA/Security R&D Risk Mgmt

AFSN

IPv6 Address Space Management

MAJCOMs/ Program Offs./ Lead Commands

Implementations Planning/Funding

AFNETOPS

Network Owners

AFRL

NetOps/Net Mgmt Adv R&D

AF Product Centers

Product Improvements

Outreach

Other Services, Industry/Academia

Awareness, Governance, Standards, Architecture, Planning
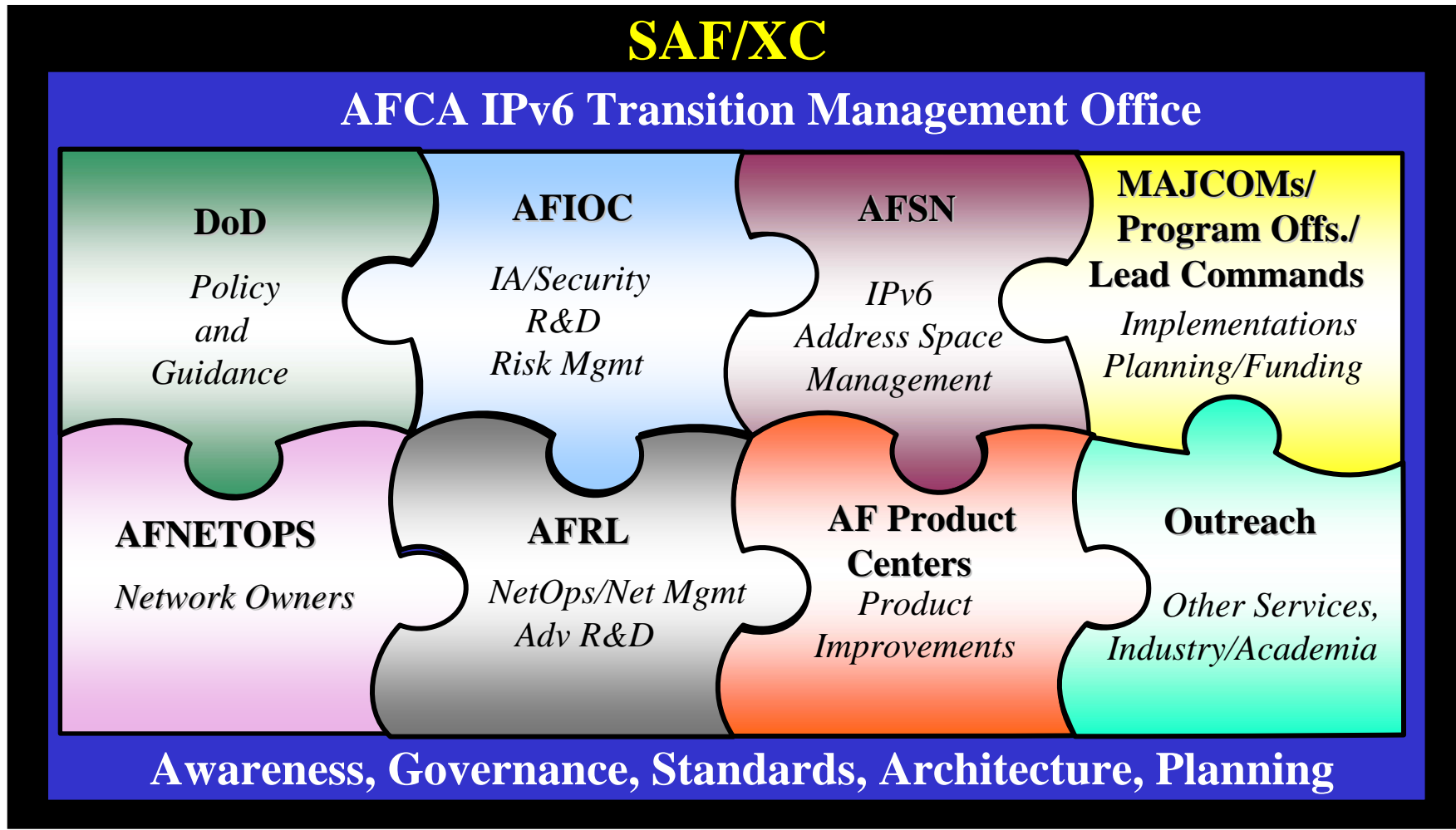
IPv6 Operational Impacts

AF networks of the future will be:

- **Ad-hoc (assembled on the fly) conducive to agile warfighter**
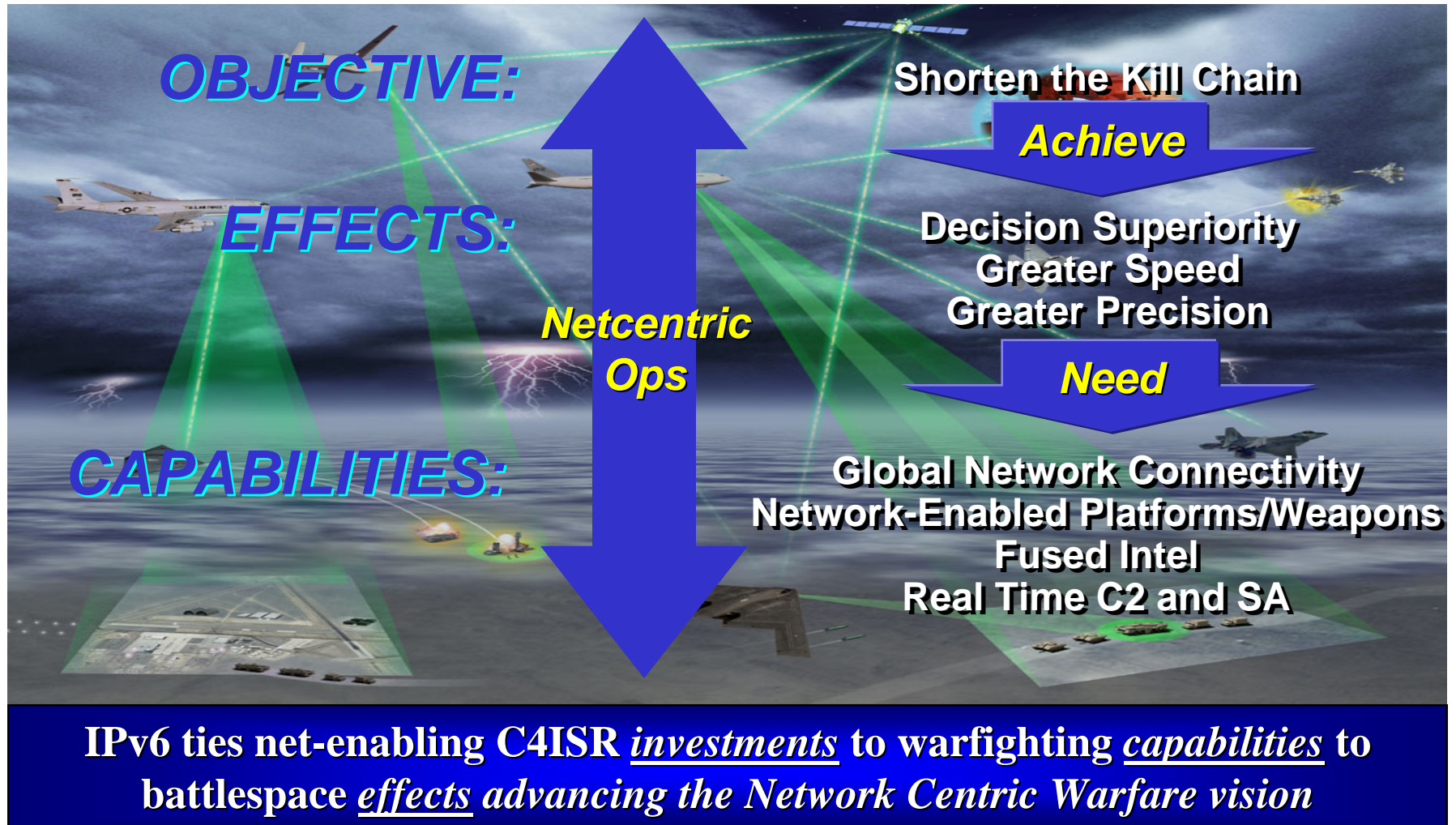- **Self-forming -- able to discover other members of the network and any available resources for information sharing, targeting, weapons deployment**
- **IPv6 capabilities shortens kill chain (F2T2EA)**
  - **Sensor-to-Shooter Network Dynamically Forms to Enable M-2-M Communications**

IPv6 Enables These Future Networks!

Why Transition to IPV6?

OBJECTIVE:

EFFECTS:

CAPABILITIES:

Netcentric Ops

Shorten the Kill Chain

Achieve

Decision Superiority
Greater Speed
Greater Precision

Need

Global Network Connectivity
Network-Enabled Platforms/Weapons
Fused Intel
Real Time C2 and SA

IPv6 ties net-enabling C4ISR *investments* to warfighting *capabilities* to battlespace *effects* advancing the Network Centric Warfare vision

Tiered Approach for Major Programs and Networks

- **Assumption: Focusing on terrestrial today**
- **Tier 0 – Transport**
    - **Combat Information Transport System (CITS), Theater Deployable Comm (TDC), MAJCOM 1st 400' (remaining infrastructure)**
    - **Ground Entry Points, DCGS, TBONE, Sensor Bus (High Side)**
- **Tier 1 – Network Operations/Information Assurance**
    - **CITS Net Management/Net Defense, Active Directory, Public Key Infrastructure, HAIPE 3.0 Upgrade**
    - **Standard Desktop, Air Operation Center Base Security System**

- **Tier 2 – Enterprise Services**
    - **GCCS, GCSS, NCES, TBMCS, all other "major" programs**

- **Tier 3 – Other non mission critical system**

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