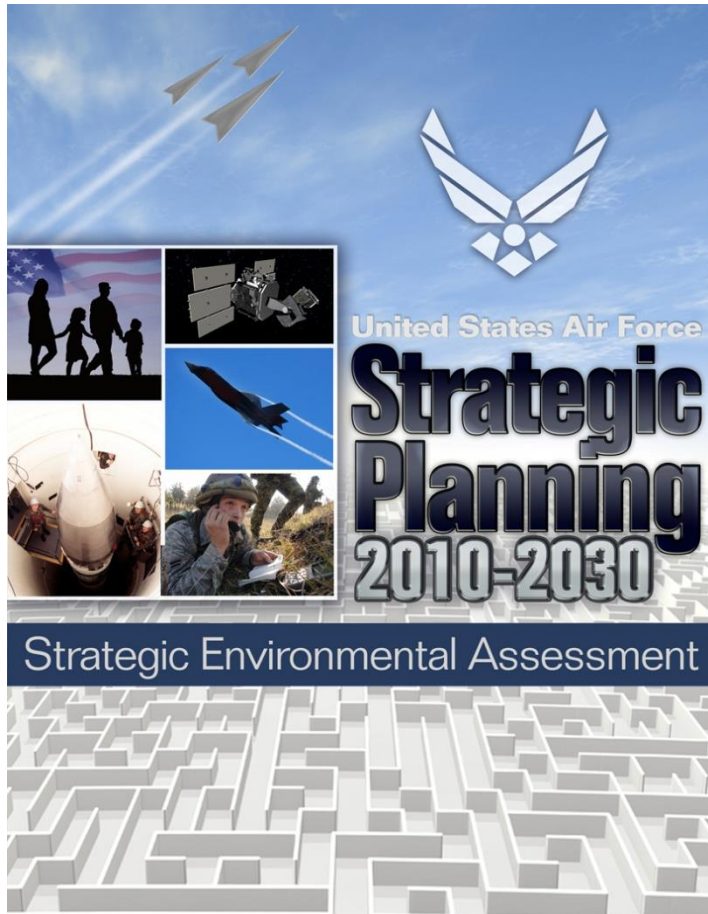


Headquarters U.S. Air Force

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USAF Strategic Planning 2010-2030

Strategic Environment Assessment (AFSEA)



AF/A8XC

Col Greg "Z" Zehner

27 Mar 2013

Briefing Classification: UNCLASSIFIED/

Classified By: N/A

Reason: N/A

Declassify On: N/A



Linking Strategy to Resources thru an End-to-End Process

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AFSEA Purpose

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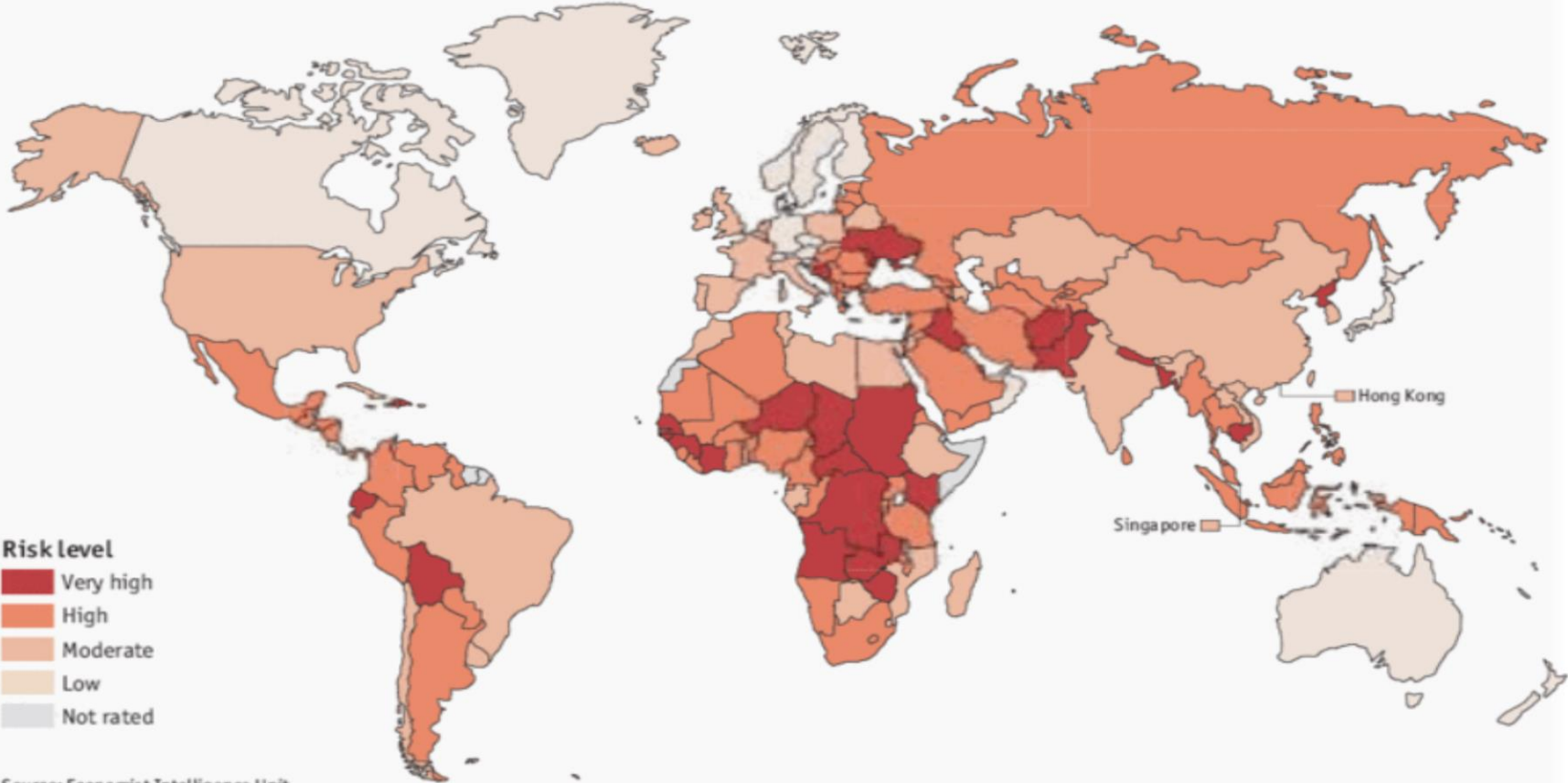
- **AFSEA paints a 20 year picture of the future for USAF strategic planners**
 - **Governed by HAFMD 1-56, drafts AFPD 90-11 & AFI 90-1011**
 - **Signed by Air Force Secretary and Chief of Staff (June 2011); represents the common USAF “baseline” view of the future**
 - **Summarizes**
 - **Credible, expert Defense and Intelligence Community assessments**
 - **Potential strategic and operating environment affecting air, space, and cyber domains**
 - **Most relevant implications for USAF strategic planning**
 - **Constraints / restraints on strategic planning (manpower, fiscal considerations, senior level guidance)**
- **The AFSEA is not**
 - **A separate, unique USAF view of the future**
 - **A comprehensive list of all future USAF demands**
 - **A description of solutions or prioritization of challenges**



The New World Order

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Political Instability Index



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Selected Megatrends

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- **Globalization (politics, economics, demographics, technology access)**
- **Resources (energy, water, arable land)**
 - **Availability, access, distribution**
 - **Global climate change impact**
- **Demographics**
 - **Population growth / aging**
 - **Women's empowerment**
 - **Education**
- **Information**
 - **Cyberspace, global communications**
 - **Technological advancement (computing power, bandwidth, size)**
 - **Privacy vs. security vs. financial impact; public vs. private sector**



Executive Summary

U.S. AIR FORCE

- **Global & international relations trends** (shaped by natural resources, globalization, demographics, information technology, key regional developments, and shifting balances of power) will have **positive and negative effects** on USAF strategic planning
- Barring a breakthrough, **fossil fuel prices** should rise significantly
- **Food and water distribution** will become more uneven
- **Economic growth** threatened by aging industrial world (shrinking labor forces, rising costs of elder care) and growing developing world (outpacing job creation, overwhelming basic services); **international migration** will increase
- Expect **information** volume, exchange, and access to increase
- U.S. should remain the **largest military power** but many (e.g. China and India) are rapidly building capabilities that can lead to balance of power shifts, a more multi-polar world, and potentially adverse changes to traditional alliances and partnerships



Executive Summary

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- Potential future adversaries, including many non-state actors, are gaining the ability to **challenge U.S. military power** in various ways
- **Instability** is increasing in many areas where the U.S. has interests
- **Demand** for irregular warfare, urban and humanitarian operations, special operations, and information gathering **will likely increase**
- Expect **effective deterrence** to become more challenging
- Expected rise in **energy costs** will have significant fiscal impact
- Future trends offer **opportunities and challenges**, especially in technology and changing alliances and partnerships
- USAF strategic planning identifies ways to take advantage of opportunities or mitigate future challenges, within the constraints and restraints of strategic level guidance and future domestic fiscal and human capital trends



USAF Implications

U.S. AIR FORCE

- **Potential adversaries are acquiring means to challenge U.S. military power and threaten the homeland**
 - **More lethal and precise weapon systems and enablers**
 - **Improved capabilities in space and cyberspace domains**
 - **Weapons of mass destruction (WMD)**
 - **New technology: robotics, nanotechnology, biotechnology, cybernetics, energetics, electromagnetic spectrum physics, and advanced propulsion**

- **Operational relevance**
 - **U.S. losing space and cyberspace superiority**
 - **New challenges emerging to U.S. way of war in air (A2/AD strategy), stealth electronic warfare, fighter aircraft**
 - **New / improving threats to forward bases / logistics**
 - **Challenges / opportunities for strategic communications / operational security (OPSEC) related to ubiquitous information transparency**



USAF Implications

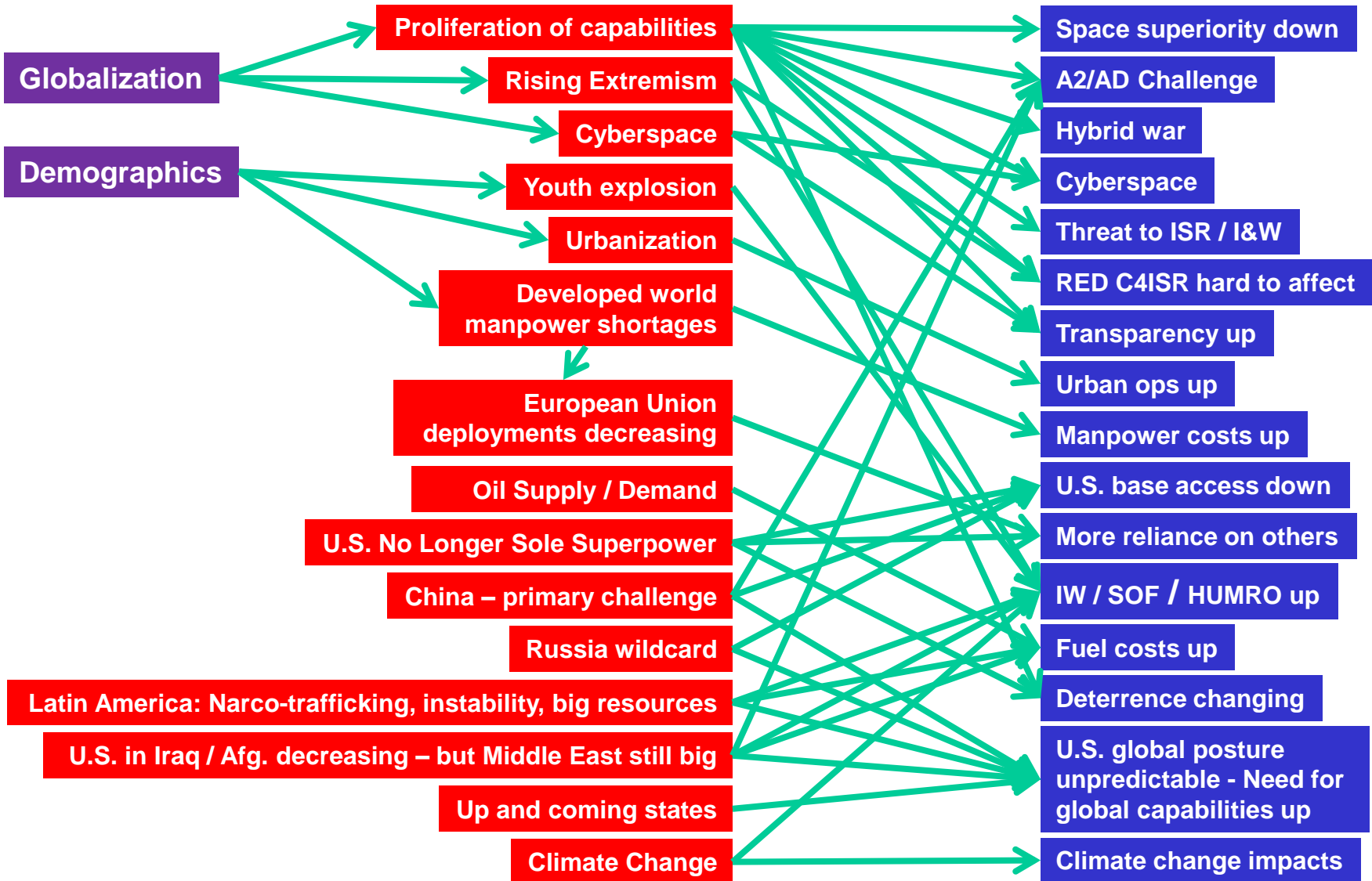
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- **Certain types of operations will likely increase in importance**
 - **Peacetime engagement**
 - **Irregular warfare**
 - **Urban operations**
 - **Humanitarian operations**
 - **Special operations**
- **Effective deterrence will be more challenging for U.S.**
 - **Deterrence efforts need to be tailored to address wide range of actors (what deters one foe may have unintended side effects on others)**
 - **WMD proliferation will enable others to better deter U.S.**
 - **Conflicts over resources / ideology may be harder to deter**
 - **Relative decline of U.S. will make deterrence more difficult**
- **Expected fuel price rises will create major fiscal challenge**



AFSEA 2030 Trends >> Implications

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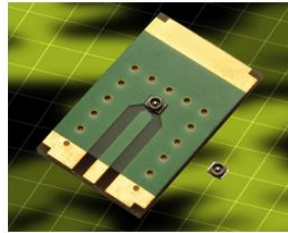
What New S&T Advances Will Create the Next Generation of USAF Capabilities?



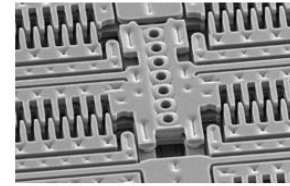
Advanced sensors



Quantum computing



Microwave generators



Micro-mechatronics



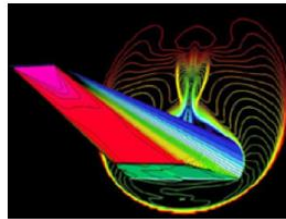
Whole-fusion knowledge



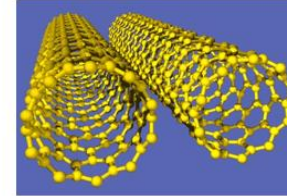
Blended wing-body



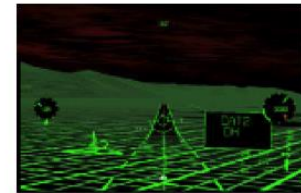
Autonomous refueling



Advanced hypersonics



Nanotailored materials



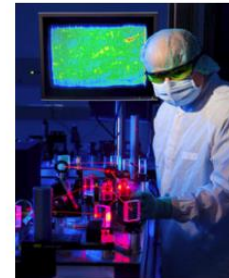
Automotonic systems



Hypersonic strike



Morphing wings



Surface adaptation



Convergent sensing



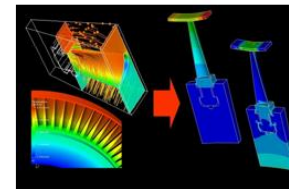
Advanced mobility



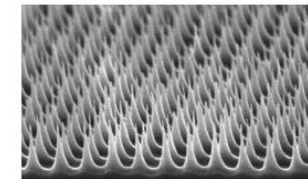
Cyber operations



Man-as-machine systems



Perpetual simulation



Nanostructured surfaces

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Who uses the AFSEA?

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- **Core Function Lead Integrators**
- **Air Force Major Commands**
 - Air Combat Command
 - Air Education and Training Command
 - Air Force Global Strike Command
 - Air Force Material Command
 - Air Force Reserve Command
 - Air Force Space Command
 - Air Force Special Operations Command
 - Air Mobility Command
 - Pacific Air Forces
 - U.S. Air Forces in Europe
- **Air Staff**
 - Air Force Posture Statement
 - Campaign Support Plan
 - Irregular Warfare Plan
 - Strategic Plan
- **Education**
 - Air University
 - US Air Force Academy
- **Others**
 - Joint Services Community
 - Intelligence Community
 - NCR think tanks



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QUESTIONS?

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