United States Joint Forces Command

Joint Operating Environment (JOE)

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JOE Purpose

• Provides the problem statement for the future joint force – the “demand signals” for JCDE
• Reviews the trends from the present out 25 years
• Analyzes operational contexts that will frame the future security environment
• Anticipates disruptions
• Forecasts the implications for the joint force

“We won’t get it all right – but we can’t afford to get it all wrong”
Much will Change
*Trends Influencing the World’s Security*

**Demographics** – Population growth/decline, age disparities, migration, sprawling urban areas

**Globalization** – Rising powers, interconnections, and inequalities

**Economics** – Trade imbalances, rising expectations vs. failing economies

**Resource Scarcity** – Competition for water, energy, food

**Climate Change & Natural Disasters** – Sea level, storms, growing coastal populations

**Cyber** – Exponential growth, advantage, vulnerability

**Space** – More have access, defense of US space assets

**Technology** – Exponential growth, ubiquity, lower cost of entry – to include CBRNE technologies
New for 2010

- China demographics
  - Aging of the population and one-child policy
- Globalization
  - The global impact of Remittances – growth of middle classes
- U.S. financial position and national defense
  - Persistent trade and financial imbalances
  - Revenue falling farther behind government spending – Debt Crisis?
  - Squeeze on Defense Spending
- Water stress in NE and SE Asia
- Conflict in the opening Arctic
- Cyberspace as an avenue of vulnerability
  - Veil of anonymity
  - No “protected zones”
- Operations in space
  - More actors have access to space-based capabilities
  - Challenges to U.S. access
New for 2010

- **Consequential India**
  - Commanding Presence in the Indian Ocean/Confluence of Interests and Worldviews with U.S.
  - Growing Economic Power
  - Greater U.S./India Cooperation (Nuclear Energy, Security, Economics)

- **Mexican security**
  - Drug Problem *Hemispheric* in Nature; Solutions will be as well
  - Mexican government taking risks to combat corruption

- **Iran challenges**
  - Expanding influence in region through proxy forces -
  - Confrontation, economic and political volatility – impending crisis

- **Science and technology**
  - Directed-Energy Systems
  - Robotics
  - Nanotechnology
  - **Nanoenergetics**
  - Biotechnology
Contexts of Conflict and War

- **Competition and Cooperation among conventional (state) powers** will provide a number of challenges and threats to the joint force.

- **Weak, pressured, and failing states** will need engagement and cooperation.

- **Urbanization** will require operations in large, sprawling urban environments – many with modern infrastructure.

- **Threats from Unconventional states and non-state powers** that will confront us with new and innovative ways to wage war.

- **“Battle of Narratives”** will bring populations directly in touch with joint force operations and shape perceptions – local, regional, global.

- **Defense of the US Homeland** will require operations abroad and at home.

**Contexts are the confluence of two or more trends and illuminate why wars occur and how they might be waged.**
Implications – 21st Century Warfare

• Adversaries examine & circumvent how the U.S. wages war
• Adversaries will adapt military practice to:
  – Construct a mix of conventional, irregular warfare, and nuclear threats
  – Blur the line between political conflict and open war
  – Place U.S. forces in strategic dilemmas by developing strategies to avoid our advantages and confront us with their own asymmetries.
• Adversaries will use:
  – Globally ranging networks and open-source capabilities (internet, commercial navigation and imagery).
  – Increasing technical equality to make anti-access strategies challenging in all domains.
  – Mobility, precision, & information while contesting our ability to respond.
• Friction is unavoidable - Surprise will still be a major factor

Must build a force that is Adaptable, Agile, and Resilient
JOE - Future Opportunities

• Professional Military Education
  – PME must develop broad understanding of the world
  – More detailed cultural training and awareness

• Personnel Systems
  – Transform mobilization-based development paradigm
  – Incentivize adaptability and innovation

• Defense Economics and Acquisition
  – Adversaries outpacing our system
  – Tempo of acquisition is having strategic effects

• Training Simulation Systems
  – Advanced systems for ground forces