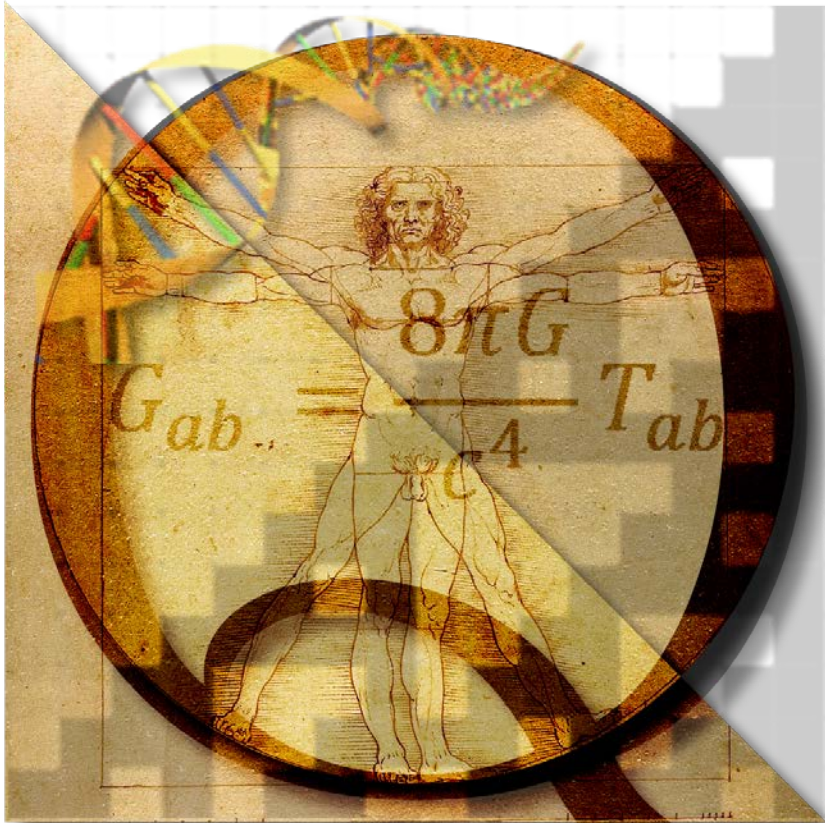


USEUCOM Science & Technology



Science and Technology Vision

An innovative team of experts pursuing technological solutions that sustain and further develop the forces that underpin enduring stability and peace in Europe and Eurasia

“Leveraging technology to make us stronger together”

Steve Spehn
Deputy Science Advisor
ECJ8-C, S&T Branch



United States
European Command
“Stronger Together”

UNCLASSIFIED

EUCOM J8-Q Science & Technology Team

Sourced by RDECOM and NAVSEA
Funded by RDECOM, NAVSEA, and OSD

Fully integrated as EUCOM AOs



James Wiltz
EUCOM Science Advisor



Joe Fagan
TaCBRD OM
Keystone OM



Wayne Weishaar
Senior Naval
Engineer



Mike McGuinness
Deputy Science
Advisor



Steve Spehn
Deputy Science
Advisor (Fwd),
ACE JCTD OM



United States
European Command
"Stronger Together"

UNCLASSIFIED

USEUCOM Challenges

Eastern Flank

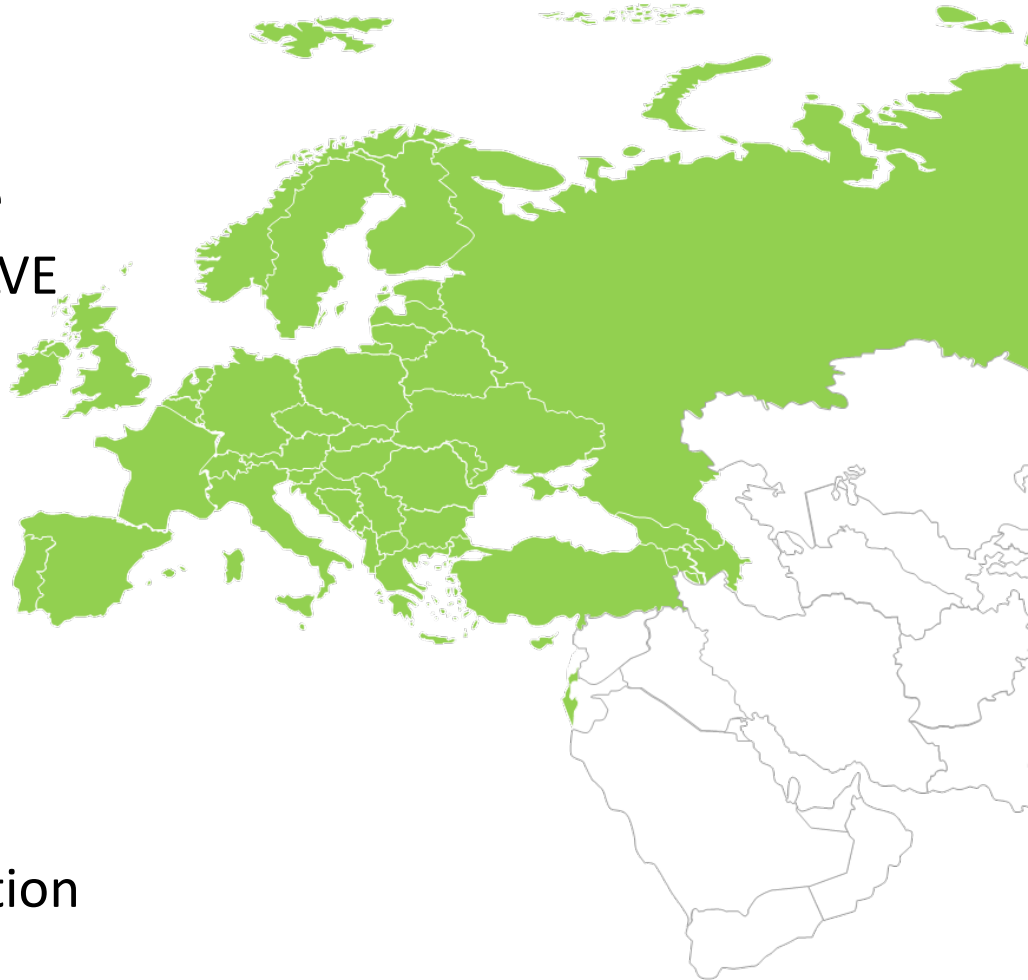
- Revanchist Russia
- Russian invasion of Ukraine
- Operation ATLANTIC RESOLVE

Southern Flank

- ISIL, Foreign Fighter Flow
- Illicit trafficking/migration

Northern Flank

- Arctic expansion/militarization



United States
European Command
"Stronger Together"

UNCLASSIFIED

USEUCOM Challenges

Eastern Flank

- Revanchist Russia
- Russian invasion of Ukraine
- Operation ATLANTIC RESOLVE



United States
European Command
"Stronger Together"

UNCLASSIFIED

USEUCOM Challenges

Southern Flank

- ISIL, Foreign Fighter Flow
- Illicit trafficking/migration



United States
European Command
"Stronger Together"

UNCLASSIFIED

USEUCOM Challenges

Northern Flank

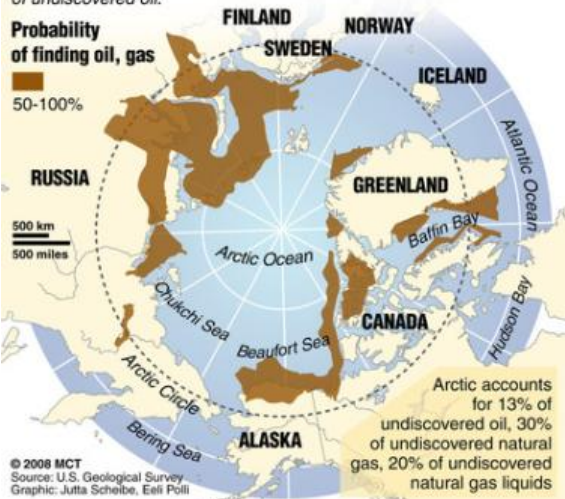
- Arctic expansion/militarization

Oil and gas in the Arctic

Area north of the Arctic Circle has an estimated 90 billion barrels of undiscovered oil.

Probability of finding oil, gas

50-100%



United States
European Command
"Stronger Together"

UNCLASSIFIED

USEUCOM Commander's Priorities

- **Enable the NATO Alliance** to assure, deter, and defend itself against emergent threats.
- **Deter aggression** and malign influence towards Allies and partners across USEUCOM AOR.
- **Ensure** postured and ready forces and strategic access to execute USEUCOM's high priority contingency plans and to support other combatant commands.
- **Preserve** our strategic **partnerships** by:
 - Sustaining relationships with highly capable Allies
 - **Strengthening** recently developed **partner capacity, capability, and interoperability**.
 - Maintaining regional stability and security.
- **Counter Transnational threats** by working with and through allies, partners, the interagency, other combatant command and public-private partnerships.
- Focus on key relationships by:
 - Enhancing security on Europe's **Eastern Flank**.
 - Preparing forward, in, and for the **Levant and Mediterranean**.
 - Strengthening ties with emerging Alliance leaders.
 - Seeking greater cooperation for military support to civil authorities that enable the peaceful opening of the Arctic.



USEUCOM S&T Challenges (1/7)

Integrated Air and Missile Defense: Improve the ability to defend against Large Scale Attacks, Dense Raid Sizes, and Structured Attacks

- **Sensors:** Improve sensing capability of indications and warning of BMD attack, left of launch detection.
- **Trackers:** The ability to track exponentially greater number of targets with increased precision.
- **Defeat:** The ability to engage a greater number of targets with at lower cost.



United States
European Command
"Stronger Together"

UNCLASSIFIED

USEUCOM S&T Challenges (2/7)

Anti-Access / Area-Denial (A2/AD): Anti-access (A2) strategies aim to prevent US forces entry into a theater of operations. Area-denial (AD) operations aim to prevent their freedom of action in the more narrow confines of the area under an enemy's direct control.

- Enhance capability to conduct “standard” operations in an A2/AD environment
- Position, Navigation & Timing
- Command and Control
- A2/AD Defeat



United States
European Command
"Stronger Together"

UNCLASSIFIED

USEUCOM S&T Challenges (3/7)

Intelligence, Surveillance, & Reconnaissance: Improve the ability to detect, locate and monitor transnational threats and increase the availability of persistent ISR assets

- Improve tagging, tracking, locating sensors to allow them to be maintained and deployed at a COCOM level
- Improve availability of persistent ISR assets

Cyber: Provide a Cyberspace Common Operational Picture to ensure freedom of action to support power projection, protect C2, execute networking and engagement activities, defend transactional information



USEUCOM S&T Challenges (4/7)

Electromagnetic Spectrum Management: Provide capability to continue normal military operations in a electromagnetically contested environment

Command and Control Interoperability: Improve capability to leverage partner and allied capabilities to support common goals



United States
European Command
"Stronger Together"

UNCLASSIFIED

USEUCOM S&T Challenges (5/7)

Space Resiliency: Improve the ability for COCOMs to use space in a contested environment against transnational threats.

- Develop low cost, rapid response space launch capability
- Develop modular bus with size, carrying capacity, power, and maneuverability to enable mission oriented “capability sets”- (communications, data relay, optical or electronic ISR sensor) to be plugged in as operationa requirements are generated.



United States
European Command
"Stronger Together"

UNCLASSIFIED

USEUCOM S&T Challenges (6/7)

Counter-Unmanned Aerial Systems

- Improve capability to detect and track all classes of UAVs.
- Improve capability to engage, kinetically and non-kinetically, UAVs which are deemed a threat to US or allied interests.
- Improve capability to prevent adversary capability to, kinetically and non-kinetically, counter US or allied UAVs.



USEUCOM S&T Challenges (7/7)

Maritime Surface and Subsurface Operations: Increased capabilities to perform surface and subsurface operations within contested maritime environments.

- Unmanned Undersea Vehicle technologies
- Communication technologies
- Intelligence, surveillance, target acquisition, and reconnaissance
- Improved detection and tracking of submarines and undersea vehicles



United States
European Command
"Stronger Together"

UNCLASSIFIED

Questions?



United States
European Command
"Stronger Together"

UNCLASSIFIED