

Guardian Force Protection Breakout Session

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JOINT PROJECT MANAGER GUARDIAN

Joint Integrated Base Defense & CBRNE Specialists

SUPPORTING THE WARFIGHTERS

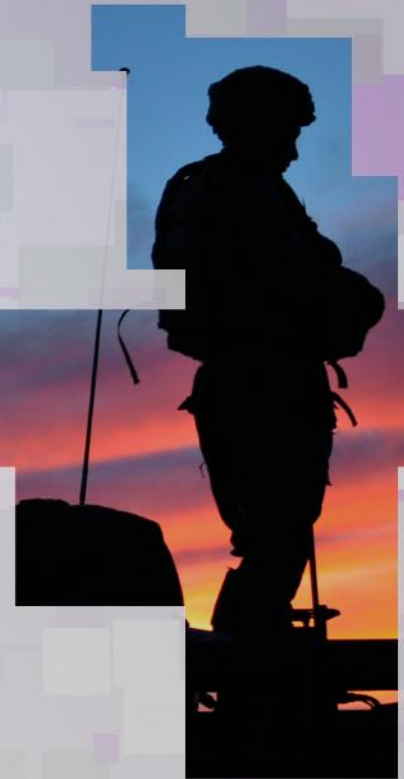
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Purpose

- A Complex Environment
- Current Efforts
- Future Efforts
- Key Enablers

To promote an open forum for mutually beneficial interchange, critical for mission success



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Coalition forces engaged in combat operations have experienced multiple complex attacks.

- These attacks have continued to evolve, including but not limited to:
 - Increased frequency
 - Recon of target
 - Planning and rehearsals

Associated Challenges:

- Sensor integration, cueing and slewing
- Communication
- Common Operational Picture (COP)

Complex Attacks – JB Salerno



Current Problem



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Guardian's Current Efforts



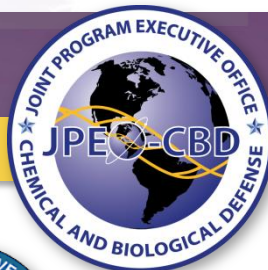
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IBD Trail Boss Concept

- Build partnerships for the integration of technology
- Build consensus for major governance and acquisition decisions
- Responsible for Horizontal Integration across the Enterprise
- Provides all stakeholders with a single accountable point of contact for integration of systems of systems capabilities

Stakeholder Integration

Program Executive Offices (PEOs)



Management & Resourcing



Headquarters

Department of the Army

- G-3/5/7
- G-4
- G-8
- G-6



Warfare is a Team Sport

An Integrated Solution



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Force Basing (FB) Portfolios



IBD

IBD is the materiel component of a mobile operation, base or installation that a Program Executive Office (PEO) would manage that supports the mobile operation, base or installation functional elements of Detect, Assess, Warn, Defend and Recover (DAWDR).

CCI

CCI is the materiel component of a base or installation that a PEO would manage that provides information exchange; establishes, manages, and operates a network to provide data link services; and provides information assurance.

BI

BI is the materiel component of a base or installation that a PEO would manage that supports the base or installation functional elements of supply, maintenance, transportation; life support; food services; personnel services; operational contract support; mortuary affairs; health services support; interment and resettlement; and operational energy.

Each portfolio has its own organization; governance elements; materiel solutions; mature, objective requirements; reference architectures and gap mitigation plans.

Integration Exercise – Ft. AP Hill

Purpose of this exercise was to reduce risk for Integrated Base Defense systems which demonstrated the interoperability of 8 different Rapid Equipping Force systems with the Combat Outpost and Force Protection Systems (COSFPS aka KRAKEN).

- Participants Included JPM-Guardian, REF, Army Test & Evaluation Command, & Asymmetric Warfare Group
- Exercise demonstrated:
 - Integration of Precision Fires Manager and Entry Control Point with KRAKEN
 - Reduction of manned workstations from 8 to 2
 - Demonstrated the ability to use the resident joint battle space command and control software to integrate additional sensor assets
 - Small Tactical Multi-Payload Aerostatic System (STMPAS) Camera

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The exercise demonstrated the integration of a family of 12 various disparate force protection systems into a Common Operating Picture (COP).

- The exercise highlighted the Containerized Weapon System successfully engaging insurgents via streaming video from the Combat Outpost Force Protection System UAVs, UGVs, RAID, CERBERUS and the Force Protection Suite
- These capabilities were integrated into a COP in a base defense operations center to provide enhance situational awareness

Partners



U.S. ARMY
RDECOM



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Live Fire Exercise – Redstone Arsenal



Partners



U.S. ARMY
RDECOM



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Installation Protection Demonstration – Ft. Belvoir, Tulley Gate

Demonstrate improved installation security, emergency response and guard force effectiveness gained from integration and enhanced capabilities of current, selected Installation Protection (IP) programs and technologies employed in a fixed site, CONUS installation operational environment.

- The demonstration included a live demonstration of an integrated system of IP technologies employed to provide installation security and entry control



1 | Early Identification

Long Range T

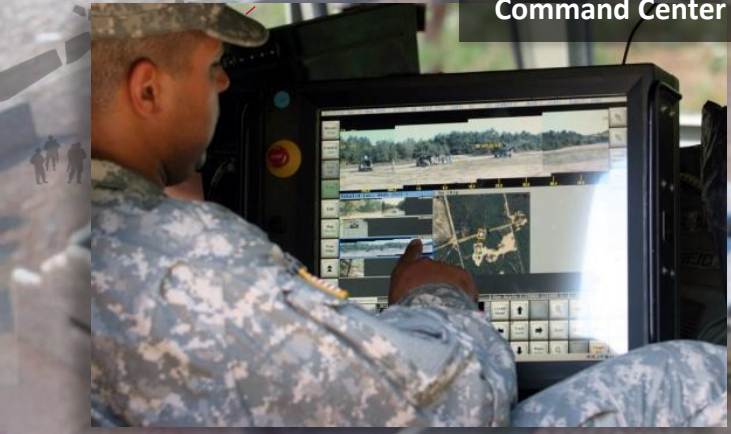


LONG RANGE SENSORS:

- Long Range Cameras
- Unmanned Air Surveillance (UAS)
- Live Aerial Intelligence Surveillance Reconnaissance (ISR) Link



Command Center



Unmanned Air Vehicle



LINEAR SENSORS

- Seismic-Acoustic Point Sensors
- Battlefield Anti-Intrusion System



2 | Fixed Persistent Surveillance

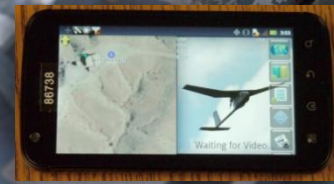




Containerized Weapon System



Quick Reaction & Communication



Guardian's Future Efforts



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IBD Weapon System Review Strategy

- Recapture critical IBD equipment from current warfight
- Conduct 4-phased assessment to determine 'best choice' equipment and kitting strategy
- Document in Combat Outpost (COP)-in-a-box Retention Directed Requirement (COPR DR)
- Develop interim kitting concept that will provide increased contingency base protection until an enduring IBD capability is finalized

Institutionalizing Enduring IBD

Notional Kit System Block Diagram

Perimeter Security/ Persistent Surveillance

FP Suite & RDISS



Entry Control



Barriers



NIIS

Data Fusion



Warning & Alerting



WAVES



AHD

Response



CROWS



SPIDER



LRAD

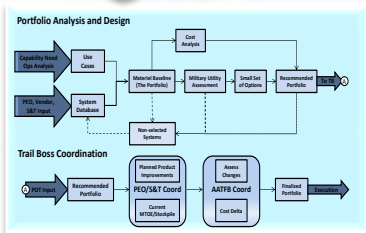
Holistic approach to IBD interoperability

IBD Kitting Process & Facilities Concept

Enter at any step of the process...



1 Requirements



Not a lock-step process

2 M&S



Allows for concurrent operations

3 Integration



8 Sustain/Train - SFSR



7 Field

- Save Lives
- Remove Soldiers from harm's way
- Improve efficiency & effectiveness

4 DT/OT



6 Transport



5 Retrograde, Refurbish, Kit, Store



- Yuma Proving Ground
- AP Hill
- NIE
- Fort Benning
- RSA

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Current CORE & EXPANDED Capabilities - OCONUS

Core Capabilities

- Core and Enhanced packages for bases with < 300 personnel

Expanded Capabilities

- Additional systems to support expansion from very small to large FOBs



Fixed Persistent Surveillance-RAID Towers

Perimeter Security - LKMD/BAIS

CERBERUS

IBD Mission Command & Data Fusion

COSFPS (aka "KRAKEN")

Warning / Alerting - WAVES (RAM Warn)

Perimeter Security - Pan Tilt Zoom Cameras

Entry Control Point

Response Remote Weapons

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Current ENHANCED Capabilities - OCONUS

Enhanced Capabilities

- Enhanced Package provides additional capabilities that provide active defensive response required for bases in non-permissive environments



CBRN Detection



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Integrated Ground Security Surveillance Response-Capability (IGSSR-C)

- A Joint requirement that develops a set of software centric capability solutions that will be scalable, modular, and tailor-able to fixed, semi-fixed, and expeditionary Joint Force installations such as Forward Operating Bases (FOBs)
- The primary capability provided by IGSSR-C is data fusion which supports an integrated joint service/interagency warning architecture
- Support synthesizing data from multiple sensors and will collate collected information, display, transmit, and store data in an FP-COP which removes soldiers from towers
- The Capabilities Development Document currently under DA review



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Guardian's Key Enablers



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Perimeter Security/Persistent Surveillance

- Detect, monitor and track potential adversary's actions that may affect operations
- Dedicated all weather, day/night surveillance, 0-2 km over-the-wire surveillance
- Outside-the-wire surveillance capability 2-10 kilometers
- Encompasses direct fire, indirect fire, air and other (e.g., CBRN ,etc.) threats

Entry Control

- SoS for vehicle and personnel access control
- Isolation of threats from other traffic
- Confirmation of identity/authorization
- Threat spectrum requires maximum automation
- Employs cameras, sensors, barriers, NIIS, biometric and audible systems

Data Fusion

- Seamless integration of data, equipment, communications, procedures and personnel
- Common Operating Picture with all base camp operations
- Decreased response time
- Fires Interoperability (PFM)
- Interoperability with applicable MTOE capabilities for increased effectiveness and efficiency
- Situational awareness distribution

Core Capabilities - continued

Warning and Alerting

- Provides audible and visual warnings and alerts in Near-Real-Time
- Tailorable to specific areas or functions
- Adaptable for changing conditions

Response *

- Lethal and Non-lethal
- Remote Firing Systems
- Networked munitions
- Robotics

* Coordinating with ARCIC on CONOPS (Potential Enhancement)



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- Enhanced Automation, Integration, Interoperability
 - Reduce troop-to-task
 - Reduced training requirements
 - Fusion and full spectrum decision support tools
- Plug-in-play solutions
 - Non Proprietary software solutions
 - Easily sustained and maintained
 - Rapidly deployed and installed
- Highly scalable, Tailorable, Flexible to meet multiple mission requirements



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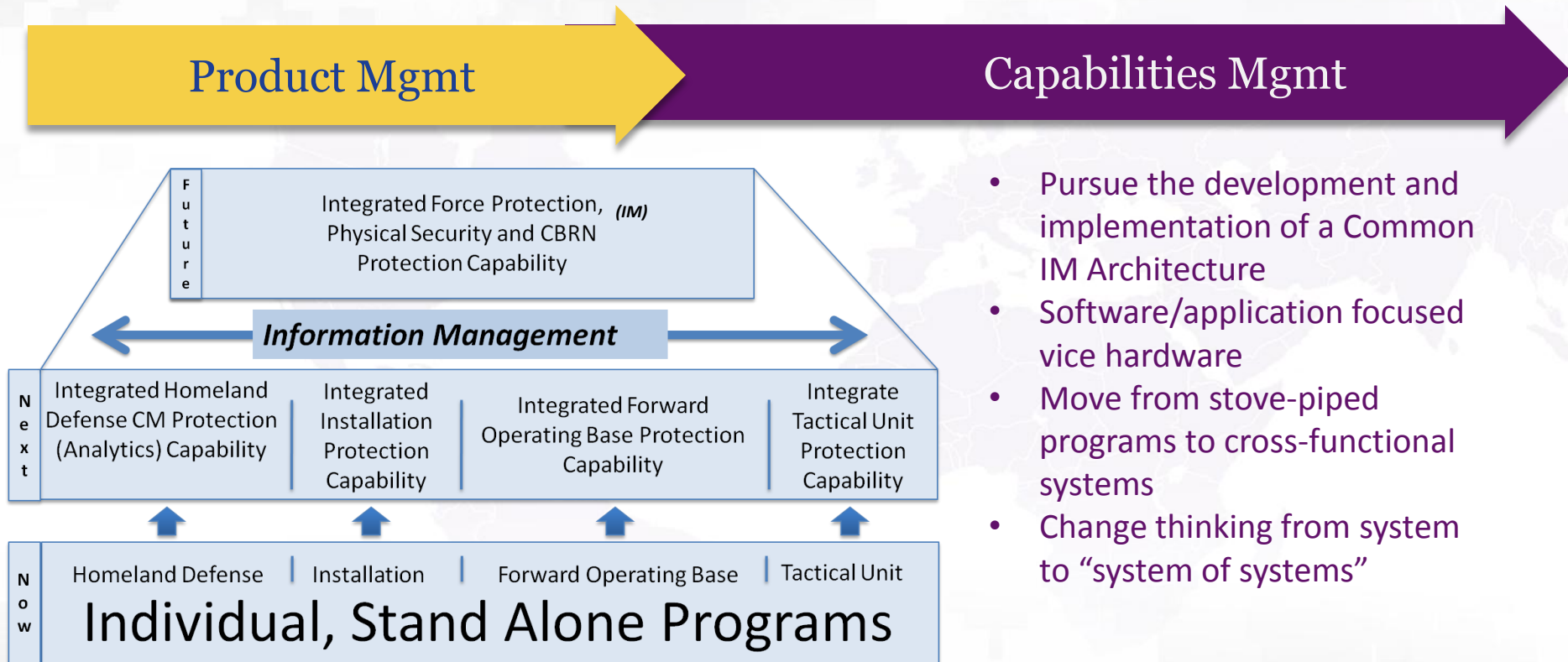
Backups



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Guardian's Strategic Vision

- Strategic Guidance Impacts Guardian's Operational Capabilities
- Strategic Environment Impacts Funding, Oversight & Integration



- Pursue the development and implementation of a Common IM Architecture
- Software/application focused vice hardware
- Move from stove-piped programs to cross-functional systems
- Change thinking from system to “system of systems”



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Guardian's Strategic Vision

Strategic Enablers

- Develop whole-of-government approach to future acquisition
- Efficient and effective portfolio management
- Establish and maintain unity of effort

Integrated Way Forward

- Holistic solutions rather than disparate systems
- Emphasize dual/multi-use capabilities
- Rapid acquisition of protection and response capabilities
- Reduced troop to task ratios by fielding integrated and automated capabilities

Challenges for Industry – Pursue Comprehensive System Solutions

- Open architectures versus proprietary
- Integrated Information Management/Information Technologies
 - Capable of fusion, advanced algorithms and full spectrum decision support tools
- Distributed networks with more focused solutions
- Software and applications versus hardware
- Adjustable sensors and application – accessing cloud data and made available to user
- Reprogrammable networks from remote or central points – information is the key element/critical component

Delivering Integrated System Solutions to Satisfy the Requirements of
Complex Operational Environments



Joint Project Manager Guardian 2012 – 2015 Strategic Plan

This plan presents Joint Project Manager Guardian's strategic vision, guidance, and priorities that enable unity of effort and guide investment and management priorities.



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