



ARMY MODERNIZATION PLAN 2012



U.S. ARMY

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After nearly ten years of conflict, our Soldiers continue to demonstrate incredible skill, courage and determination as they meet each challenge placed before them. We have successfully drawn down forces in Iraq, are executing operations in Afghanistan and are well on our way to restoring balance in our force. In the coming years we will work to maintain unit combat skills as we reconstitute for other missions and deal with the impacts of war. Three documents frame our way forward: the Army Modernization Strategy, the Affordable and Integrated Army Equipment Modernization White Paper and the Army Modernization Plan 2012.

The **Army Modernization Strategy** establishes a goal to develop and field a versatile and affordable mix of equipment to allow Soldiers and units to succeed in full-spectrum operations today and tomorrow and to maintain our decisive advantage over any enemy we face. It lays out the ends, ways and means to execute senior leaders' priorities within projected resources and at prudent risk.

The **Affordable and Integrated Army Equipment Modernization White Paper** challenges us to better align our modernization development community to collaboratively deliver the best possible value for the resources provided.

This document, the **Army Modernization Plan 2012**, stems from the Modernization Strategy and explains how our annual budget request moves the Army towards achieving our objectives. It provides an overview of the Army's Fiscal Year 2012 priorities and our steps to adapt our institutional processes to reform our requirements and resource processes to get the best value and right equipment for our Soldiers.

In building an agile force, able to quickly respond to change in operational environments and against a variety of possible adversaries, we must make the best possible use of our fiscal resources. No significant capabilities decision will be made without a thorough review of costs, projected benefits and the trade-offs to pay for it.

The success of our Army relies on Soldiers as well as the support of Congress and our Nation's citizens. We will continue to improve to more effectively manage the resources that are provided and position our forces for success.


ROBERT P. LENNOX
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EXECUTIVE SUMMARY

The Army Modernization Plan 2012 (ModPlan12) supports the submission of the Fiscal Year 2012 (FY12) President's Budget Request for Army Research, Development and Acquisition (RDA) equipment funds. The ModPlan12 incorporates lessons learned from almost a decade of conflict and provides details of what is required to develop, field and sustain equipment in an affordable, incremental manner. Through its core competencies of combined arms maneuver and wide area security, the Army must continue to enable the United States to prevent and deter conflict, prepare to defeat adversaries in future contingencies, prevail in conflicts that arise and preserve and enhance the All Volunteer Force.

The ModPlan12 summarizes how the Army's equipping RDA budget request is linked to the Army's strategy and reflects an affordable approach using incremental modernization.

Linking Resource Decisions to Army Strategy.

Today we are faced with uncertain strategic and operational environments coupled with declining economic predictions. The Army's modernization strategy and modernization plan reflect these uncertainties and are nested with the Army strategy of rotational readiness. The Army uses the Army Force Generation (ARFORGEN) model to build a versatile mix of tailorable and networked organizations operating on a rotational cycle to provide a sustained flow of trained, equipped and ready forces at a tempo that is predictable and sustainable.

Fiscal Year 2012 Budget Priorities and Objectives. The FY12 equipment budget request reflects the Army's priority materiel programs and highlights the *critical* capabilities we need to give our Soldiers and units the decisive edge in full-spectrum

operations. These strategy-based equipment priorities are needed to (1) Network the Force; (2) Deter and Defeat hybrid threats; and (3) Protect and Empower Soldiers. While preparing the FY12 President's Budget Request, the Army made difficult decisions to not resource promising and needed technologies and capabilities that did not fit within current and projected resource limitations.

Equipment Portfolios. Each portfolio section provides an overview, FY12 planned investments and portfolio accomplishments in FY10 and FY11. The Equipment portfolios reflect the capabilities necessary to succeed in current operations and to prepare our Soldiers and units for future missions in a complex and unpredictable future.

The Science and Technology Program. This section focuses on enabling capabilities that empower, unburden and protect our Soldiers. It builds upon the priorities reflected in previous budget requests with modest increases for force protection technologies, basic research, infrared focal plane arrays and armor materials.

Capability Fielding and Distribution. This section explains how the Army uses its Equipping Strategy to manage equipment and achieve the goals of ensuring that Army units are equipped to mission and building operational depth.

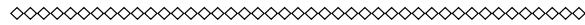
Details on major Army acquisition programs can be found in the 2011 Army Weapon Systems handbook at: https://www.alt.army.mil/portal/page/portal/oasaalt/documents/us_army_weapon_systems_2011_web.pdf

LINKING RESOURCE DECISIONS TO ARMY STRATEGY

LINKING RESOURCE DECISIONS TO ARMY STRATEGY

We can't know with absolute certainty what the future of warfare will hold, but we do know it will be exceedingly complex, unpredictable, and – as they say in the staff colleges – ‘unstructured.’

—**Secretary of Defense Robert M. Gates, West Point, NY, February 25, 2011**

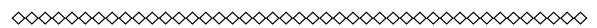


The United States Army is the Nation's principal military force organized, trained and equipped for prompt and sustained operations on land. In conjunction with other services, Army forces are prepared to conduct a wide range of missions at home and abroad in support of national policy and in defense of America's enduring national interests. The Army of today is arguably the best this Nation has ever fielded – an innovative, professional force that has effectively adapted, while at war, to succeed in current operations. Despite tremendous achievements over the last decade, the Army must continue to adapt to changing conditions and new threats with the recognition that one of the few constants in this world is change.

The Army must continue to build upon the lessons it learned during almost ten years of war, but we cannot be ruled by experience alone. We must evolve from the superb Army fighting today in Iraq and Afghanistan to account for a world which continues to change. Over the next decade, the United States will face adversaries who are also informed by the lessons of today's conflicts and our Nation may confront additional challenges brought about by failed economies, toppled governments or devastating natural disasters. Through its core competencies of combined arms maneuver and wide area security, the Army must continue to enable the United States to *prevent* and deter conflict, *prepare* to defeat adversaries in future contingencies, *prevail* in conflicts that arise and *preserve* and enhance the All Volunteer Force as a reflection of a free society. To succeed, the future Army must be organized to support our national strategy, trained to a high-degree of readiness for diverse missions, equipped

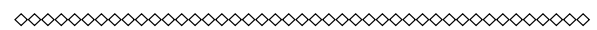
to defeat any potential adversary and manned with experienced, high-quality professionals. Additionally, the Army must set priorities, make prudent choices and modernize in ways that provide the best possible force for the Nation, within available resources.

Executing a strategy of prevent, prepare, prevail and preserve requires the Army to subject its major programs to close scrutiny by measuring them against its core competencies and required capabilities to ensure the proper proportion of effort and emphasis. The Army will have to find ways to economize in all of these areas while also maintaining the quality, focus and professionalism of the All Volunteer Force.



We need an agile system that rapidly develops, purchases and fields innovative solutions for our Soldiers...

—**Army Secretary John M. McHugh**



To be successful in an uncertain future environment, the Army adopted rotational readiness using the Army Force Generation (ARFORGEN) model to *build a versatile mix of tailorable and networked organizations* operating on a rotational cycle to provide a sustained flow of trained, equipped and ready forces for full-spectrum operations and to hedge against unexpected contingencies – at a tempo that is predictable and sustainable for our All Volunteer Force.

equipment and deliver it to units in the first – or Reset – phase of the ARFORGEN cycle.

The Army is also working toward a truly collaborative process for requirements, solutions and resources to prevent stovepipes, reduce redundancies and determine areas for trade space. **Integrated Portfolios** align equipping stakeholders to achieve balance within and across capabilities as envisioned in the Army’s Operating Concept (Appendix C, TRADOC Pam 525-3-1, 19 Aug 10). Equipment portfolios support continuous assessment across capability development, requirements, resourcing, acquisition, distribution, use and divestiture. Each portfolio will have a strategy developed to provide context; outline objectives, methods, metrics and values against which to judge success; describe required resources to execute the strategy over the life of the program; and discuss risk to include operational impacts if portfolio objectives are not met. Implementing these strategies will enable portfolio stakeholders to assess current and proposed capabilities against requirements; fuse and align the modernization community to ensure integration across the requirements, acquisition, sustainment and resourcing communities; and focus on affordability.

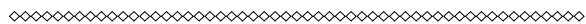
The Army Modernization Strategy (AMS), published in April 2010, describes our strategic requirements and aligns the ends, ways and means to develop and field a versatile and affordable mix of the best equipment available to enable Soldiers to succeed in current and future complex operational environments. This entails four lines of effort:

- **Modernize.** Develop and acquire new equipment or improve, upgrade or adapt existing equipment to meet identified capability gaps and to achieve dominance in core capabilities.
- **Sustain.** Close capability gaps or avoid creating them by extending the useful life

of existing equipment and divest or store equipment providing little value.

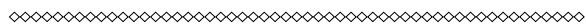
- **Mitigate.** Procure mission-specific equipment for immediate capability needs.
- **Field.** Provide the appropriate quantity and type of equipment to Soldiers and units at the proper time, in accordance with the ARFORGEN model and Army priorities, to enable training, preparation and employment for mission success.

This document, ModPlan12, is informed by the AMS, reflects detailed near-term direction from Army senior leaders and presents a concise plan focused on Army FY12 equipping budget priorities and portfolio overviews. The ModPlan12 incorporates lessons learned from almost a decade of conflict and provides details of what is required



... I’ve met with Soldiers serving in the very center and at the very edges of freedom. They understand the challenges we have, that we face as an Army, and as a Nation. Their expectations of us are as simple as they are profound. They trust that we will provide the resources necessary for them to succeed in the fights in which we are currently engaged; and, they trust that we will have the wisdom and resolve necessary to prepare them for the missions unknown to us today, but which surely await us.

—GEN Martin E. Dempsey



to develop, field and sustain equipment in an affordable, incremental manner to ensure our Soldiers and units have the capabilities they need to be successful across the full range of military operations today and into the future.

For nearly a decade, the Army has been operating at a tremendous pace and the demand for fully equipped forces has stressed our ability to meet the demand for much of this period. The result was a fully committed Army out-of-balance with little strategic flexibility to respond to other contingencies. The Army is making significant progress toward balancing the force and with the continued support of Congress, we are on track to meet our goals for restoring balance. The Army's next challenge in the second decade of the century is to maintain our *combat edge* while we *reconstitute the force* and *build resilience* for the future. We will continue to prepare forces for success in current conflicts; reset returning units; and transform the Army. This includes the way the Army develops, delivers and sustains capabilities and includes transforming the business systems of our generating force with a fully integrated enterprise mindset and approach while reforming the requirements and resource processes. The Army will also continue to support an industrial base infrastructure to sustain current and future capability requirements.

We must provide our Soldiers a decisive advantage in every fight. The Army's strategy is to develop and field a versatile mix of tailorable and networked organizations that operate on a rotational cycle. This

requires balancing development and fielding of new capabilities while modernizing and recapitalizing existing capabilities, equipping our Soldiers with the right capabilities for the current fight and preparing for future contingencies while balancing equipment priorities against other resource requirements. This will enable us to routinely provide combatant commanders trained and ready forces on a rotational basis to operate across the spectrum of conflict.

To continue to fulfill the vital role the Army plays – and has played since 1775 – in national security, the uncertain strategic and constrained fiscal environments anticipated in the twenty-first century demand we adapt our readiness and equipping strategies to become both more balanced and more affordable. This requires an Army Equipping Strategy that provides and sustains equipment to rotational forces enabling success in assigned missions across the spectrum of conflict while simultaneously developing and incrementally improving core capabilities required for success in future operations. The combination of ARFORGEN equipping, incremental modernization and integrated portfolios enables the Army to develop, field and maintain the right mix of versatile and affordable equipment to ensure Soldiers and units will be successful in operations today and in the future.

ARMY FISCAL YEAR 2012 BUDGET OBJECTIVES AND PRIORITIES

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The FY12 equipment budget request reflects the Army's priority materiel programs. In developing this request, the Army made difficult decisions to re-purpose some funds previously programmed for future capabilities to current needs and not fund promising and needed technologies for capabilities that did not fit within current and projected resource limitations.

The Army ModPlan12 strategy-based priorities for modernized equipment are to (1) Network the Force, (2) Deter and Defeat Hybrid Threats and (3) Protect and Empower Soldiers.

The equipment in the Army's FY12 budget request strikes a balance between current and future needs; provides the basis for an affordable equipping strategy over time; reflects Army and Congressional interests, guidance and priorities; and nests with Army Campaign Plan directed capabilities.

The Army has identified seven systems in the FY12 request as *critical* to our success in operations like those in which we are currently engaged and future full-spectrum operations:

Joint Tactical Radio System (JTRS) (\$776M). The JTRS is the Services' future deployable mobile communications family of radios. It provides advanced joint tactical end-to-end networking data and voice communications to dismounted troops, aircraft and watercraft platforms. The primary components of JTRS are a Wideband Data Radio (Ground Mobile Radio), Handheld Manpack Small (HMS) Form Fit Manpack Radio and Rifleman Radio. This system uses Internet Protocol (IP)-based technology to provide network routing, embedded information assurance and provides simultaneous exchange of voice, data and video with multiple channels. The Wideband Data Radio component supports legacy waveforms (Single Channel Ground and Airborne Radio System (SINCGARS),

Enhanced Position Location and Reporting System (EPLRS), Ultra High Frequency (UHF), Satellite Communication (SATCOM) and High Frequency (HF)) for backward compatibility with current force radios and leverages the Wideband Networking Waveform (WNN) and Soldier Radio Waveform (SRW) to meet tactical networking requirements. The HMS Manpack Radio and Rifleman Radio are the primary JTRS capability for tactical operations at the battalion level and below. Both support the SRW capability. The HMS Manpack is a two channel multiband, multimode communications system that supports not only SRW, but interoperates with legacy waveforms as part of its Increment 1 delivery (SINCGARS, UHF SATCOM). The Rifleman Radio is a dismounted Soldier capability that utilizes the SRW to connect the Soldier to their leader. The system provides voice and individual location information, primarily serves the maneuver team formation and provides the rifleman with interoperable capability to the Nett Warrior-enabled leader. The JTRS program is on track to support Ground Mobile Radio (GMR) test events in summer FY11, to execute Rifleman Radio Milestone C test events in FY11 and to execute Wideband Data Radio and HMS Manpack test events in FY12.

- **Warfighter Information Network-Tactical (WIN-T)** Increment 1, 2 and 3 (\$1.3B). WIN-T provides the broadband backbone communications necessary for the tactical Army. It extends an IP-based satellite and line-of-sight communications network through the tactical force, supporting telephone, data and video. The WIN-T Increment 1 (formerly Joint Network Node) began fielding in 2004 to provide a satellite-based IP network down to battalion level. Increment 1 continues to upgrade the fleet to Ka band and exploits the Wideband Global Satellite constellation rather than leased Ku band. Upgrades to Increment 1b

occur in FY12-15 for interoperability with later WIN-T Increments and strategic networks. The WIN-T Increment 1 is post MS C and is scheduled for a full-rate production decision. Plans are being further refined to cascade the WIN-T Increment 1 equipment displaced by WIN-T Increment 2 fielding to meet emerging requirements to include homeland security missions, force structure changes and requirements not addressed in the initial procurement. The WIN-T Increment 2 begins fielding in FY12 to provide an initial on-the-move (OTM) capability extending down to company level for 64 select units with larger throughput to battalion, brigade and division headquarters. It provides a robust line-of-sight transmission network and greater satellite throughput. The WIN-T Increment 2 reached MS C in February 2010 and is scheduled for an Initial Operational Test and Evaluation (IOTE) in FY12. The WIN-T Increment 3 will provide the Joint Command, Control, Communications, Computers, Intelligence, Surveillance and Reconnaissance (JC4ISR) radio which enables an aerial layer to thicken the line of sight transmission network, improve satellite bandwidth efficiency by up to three times and assume the TROJAN SPIRIT and Global Broadcast System (GBS) requirements. The WIN-T Increment 3 is currently in its Engineering, Manufacturing and Development phase and is prioritizing its efforts to develop an airborne tier capability to extend connectivity and provide full network mobility.

- **Ground Combat Vehicle** (\$884M). The Ground Combat Vehicle is the U.S. Army's replacement program for Infantry Fighting Vehicles (IFV) in Heavy Brigade Combat Teams (HBCTs) and the centerpiece of the Army's overall Combat Vehicle Modernization Strategy. Modernization imperatives include improved protection;

mobility and sustainment; mitigation of existing shortfalls; and network integration. Current and product-improved IFVs do not provide the protected mobility required to operate across the spectrum of operations and do not provide the growth potential required to accommodate advances in protection, networking and Space, Weight, Power and Cooling (SWaP-C) technologies. The Army recently released a Request for Proposals (RFP) for the Ground Combat Vehicle IFV, focusing on the "Big 4" imperatives: *Soldier protection; Soldier capacity; Full-Spectrum; and Timing*. Unlike current IFVs, the Ground Combat Vehicle will be designed to deliver a full nine-man squad under armor to the battlefield. This is considered crucial to the Army's ability to conduct fire and maneuver in close-quarters fighting in complex terrain. Modular armor will allow commanders the option to add or adjust vehicle protection armor based on the threat environment. The Ground Combat Vehicle will be designed to incorporate future SWaP-C technologies. In response to the recently released RFP, industry proposals were received on 21 January 2011 and we anticipate contract awards in 3rd Quarter FY11. Ground Combat Vehicle Technology Development Phase will continue through FY12 until completion in 3rd Quarter FY13.

- **Distributed Common Ground System-Army (DCGS-A)** (\$189M). DCGS-A provides integrated intelligence, surveillance and reconnaissance data to airborne and ground sensor platforms and is the Army's component of the Department of Defense (DoD) Distributed Common Ground/Surface System (DCGSS) family of systems. To satisfy information requirements, DCGS-A provides commanders from tactical company-level to Army Service Component Command (ASCC) level access to the Defense Intelligence Information

Enterprise and the tools required to leverage the entire national, joint, tactical and coalition intelligence, surveillance and reconnaissance (ISR) community. The Army is currently updating the DCGS-A acquisition strategy to comply with DoD's revised information technology acquisition process. This will ensure the program continues to develop enhanced analytic capabilities by exploiting emerging technologies and fielding these capabilities to the force consistent with the ARFORGEN process. The Army has incrementally fielded DCGS-A capabilities to deploying forces beginning in 2006. The Army's first "cloud" architecture in Operation Enduring Freedom reached initial operating capability in March 2011. The DCGS-A program will have a Full Deployment Decision in the 4th Quarter of FY12.

- **Joint Battle Command-Platforms (JBC-P)** (\$188M). The JBC-P enables a widely dispersed command and control (C2) capability across all formations and the entire spectrum of joint military operations. The JBC-P is a foundation for achieving information interoperability between joint warfighting elements on current and future battlefields. As the next generation of Force XXI Battle Command Brigade and Below/Blue Force Tracking technology, it will be the principal C2 system for the Army and Marine Corps at the brigade-and-below providing users access to the tactical information necessary to achieve information dominance on the battlefield. The JBC-P consists of computer hardware and software integrated into tactical vehicles and aircraft and is provided to dismounted forces. The capability uses a product line approach to software development to save cost and promote a common architecture. Components include a core software module that provides common functionality required of all platforms and tailored software modules

with unique capabilities for dismounted, vehicle, logistics, aviation and command post elements. Its software is designed for use over the Blue Force Tracking II transceiver and associated satellite networks as well as ground-based networks. The new transceiver allows for a ten-fold increase in data throughput. Other key enhancements include a redesigned, intuitive user interface and faster mapping software to process and display critical graphics quickly. It will be the primary provider and user of digital battle command and situational awareness across the spectrum of operations and will allow Soldiers to more effectively and consistently communicate critical information over networks that connect the most distant and remote locations.

- **Paladin Integrated Management (PIM)** (\$120M). As a critical part of the Army's Ground Combat Vehicle Modernization Strategy, the PIM program funds readily available low risk upgrades that enhance the responsiveness, force protection, survivability and operational readiness of the self-propelled howitzer fleet. The PIM replaces the current M109A6 Paladin and M992A2 Field Artillery Ammunition Supply Vehicle with a more robust platform incorporating Bradley common drive train and suspension components. Stemming from the decision to cancel the Non-Line-of-Sight-Cannon (NLOS-C), a critical capability gap was created that elevated the PIM program to a priority modernization effort. The program has completed contractor testing at government facilities and is expected to be designated as an Acquisition Category I Major Defense Acquisition Program.
- **Kiowa Warrior (KW)** (\$250M). Kiowa Warrior OH-58 model upgrade converts D models to F models with enhanced cockpit sensor upgrades. The Army requires a next

generation capability to satisfy its Armed Aerial Scout (AAS) attack, reconnaissance and security mission requirements within the current and future combat environments. In April 2009, the Secretary of the Army approved a strategy to re-invest in the OH-58D KW helicopter to address obsolescence and sustainment until a viable replacement is procured. The fully funded Cockpit And Sensor Upgrade Program (CASUP) addresses system and armament obsolescence, aircrew survivability and overall aircraft weight to improve the helicopter's performance and update its aircraft mission-design series to OH-58F. The CASUP is not a service life extension program and does not "zero time" the airframe. First unit equipped for the OH-58F KW helicopters is forecasted for FY15. The CASUP is post Milestone B and has entered the Engineering and Manufacturing Development phase of the program. Additionally, the AAS is undergoing its Analysis of Alternatives (AoA).

The Army's FY12 budget requests:

- \$1.3B for Soldier systems which include small arms (individual and crew served weapons), night vision, Soldier sensors, body armor, individual networked C2, organizational clothing and individual equipment and parachutes.
- \$3.6B for mission command to include capabilities such as communications transport, applications and network services.
- \$1.2B for intelligence which incorporates the key components of intelligence, surveillance and reconnaissance collection, exploitation and analysis.
- \$3.0B for ground movement and maneuver which includes the Army's

combat vehicles such as Abrams, Bradley, Stryker and the development of the new Ground Combat Vehicle.

- \$7.5B for air movement and maneuver which includes required capabilities in the reconnaissance, attack, unmanned aircraft systems (UAS), utility and cargo as well as fixed wing mission profiles.
- \$1.4B for fires which includes lethal and non-lethal fires and effects such as radars, cannons, launchers, munitions and automated enablers.
- \$2.3B for enhanced air and missile defense protection that protects warfighters from the effects of ballistic missiles, manned and unmanned aircraft systems, rockets, artillery and mortars.
- \$1.4B for enhanced protection which includes Base Defense, Chemical, Biological, Radiological and Nuclear (CBRN), Explosive Ordnance Disposal (EOD) and Civil Affairs equipment. The protection portfolio also provides capabilities that assure mobility, enhance protection and enable expeditionary logistics and build capacity.
- \$2.2B for transportation systems to include light, medium and heavy tactical wheeled vehicle fleets and the Mine Resistant Ambush Protected (MRAP) family of vehicles.
- \$566M for combat service support programs which includes fuel and water systems, load handling systems, airdrop systems, tool sets, medical systems and many other combat enablers.
- \$1.6B for Army ammunition requirements across portfolios.

The Nation's economic downturn coupled with the successful end of combat operations in Iraq require the Army to maintain fiscal discipline over decreased resources and competing demands. We are reminded that American tax dollars are finite and we remain dedicated to ensuring we are careful stewards of our allocated resources. The challenge we face is to maintain a relevant and balanced force while advancing our equipping priorities even as the pace of operations for the American Soldier and his or her equipment is not predicted to slow anytime soon.

To address challenge, the Secretary of the Army directed Capability Portfolio Reviews (CPR) as a pilot process to holistically examine the requirements that drive capability development, acquisition and sustainment to determine if current and proposed programs were aligned to meet key national and defense strategies and Army plans. These assessments have helped the Army to make capability-based decisions for equipment investments while eliminating redundant or unnecessary requirements. As a result of these reviews, the Army recently identified two programs for elimination: the Surface-Launched Advanced Medium-Range Air-to-Air Missile (SLAMRAAM) and the NLOS Launch

System. Additionally, the Scorpion System has been identified for close out.

In addition to these assessments, the Army is re-examining the way we determine how much equipment to procure and when to procure it. This effort grew from the Army's adoption of the ARFORGEN model. Equipping to the ARFORGEN model would result in the Army procuring and fielding the right amounts and types of equipment at the right time to meet mission needs as opposed to trying to resource 100 percent of required equipment in all units. While the Army will continue to procure all required equipment, this approach allocates materiel effectively and efficiently to support the generation of trained and ready forces while not over-buying for units in the initial stages of ARFORGEN.

The Army leadership believes the thorough examination of equipment portfolios coupled with the implementation of the ARFORGEN equipping model has resulted in a balanced, fiscally responsible FY12 Research, Development and Acquisition request.

EQUIPMENT PORTFOLIO OVERVIEWS

SOLDIER PORTFOLIO

Section I – Overview

The Soldier portfolio consists primarily of small arms (individual and crew served weapons), night vision, Soldier sensors, body armor, individual networked command and control (C2), individual clothing/equipment and parachutes. Together they enable the lethality, protection, situational awareness (SA) and mobility of the individual Soldier. To meet the readiness and modernization objectives of the Army Campaign Plan the Soldier Team focus for FY12 is to:

- Significantly increase dismounted situational awareness by beginning the fielding of the Nett Warrior C2 system to the first two BCTs (both Stryker).
- Support a battalion level in Theater Limited User Test of the Counter Defilade Target Engagement system as the first step in employing this revolutionary Soldier-level precision weapon system.
- Continue fielding Enhanced Night Vision Devices to Special Operations Forces (SOF) and BCTs.
- Execute small arms procurement as informed by the results of a full and open carbine competition while simultaneously improving the current carbine capability for deployed forces.
- Continue efforts to reduce Soldier load through Research and Development in Nett Warrior and body armor as well as procurement of proven light weight items such as the Light Weight .50 caliber (cal) machine gun and the M240L medium machine gun (light).
- Begin fielding Mounted Soldier System providing combat crewmembers and vehicle commanders with increased mission effectiveness on the network-centric battlefield in the areas of C2, situational awareness, communications,

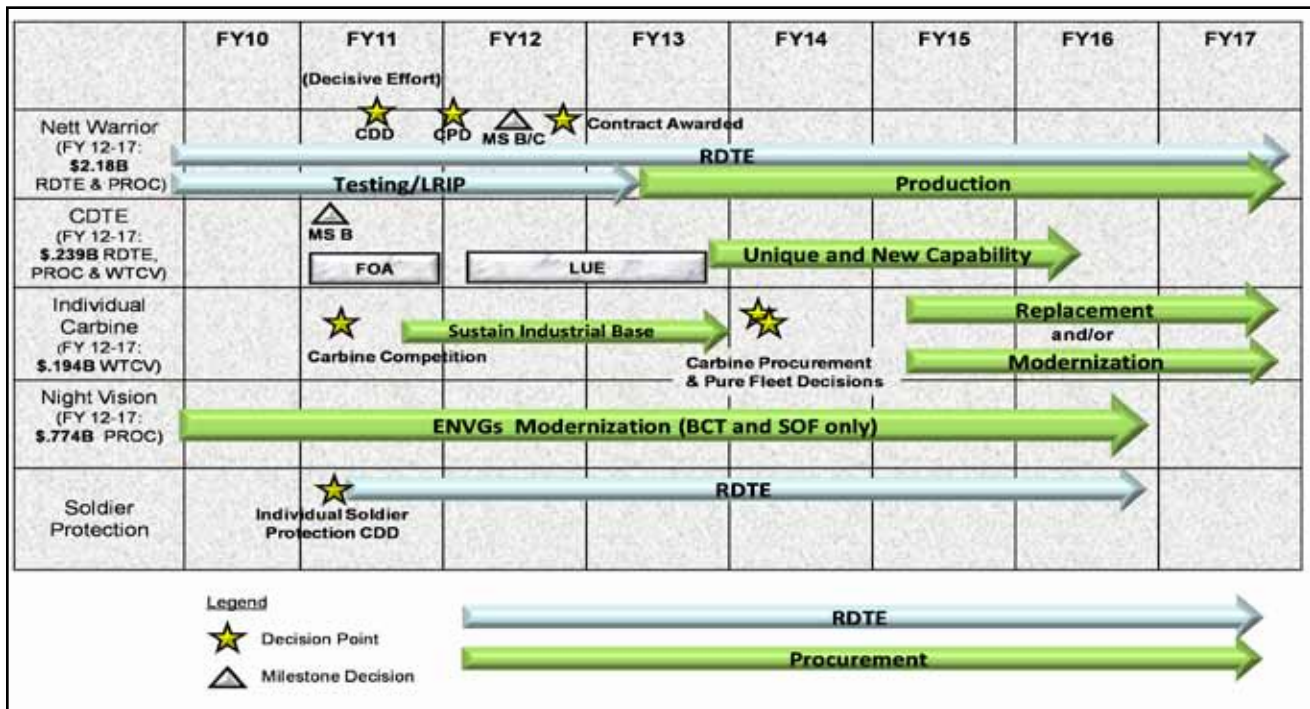


Figure 1. Soldier Portfolio

force protection, survivability, mobility and sustainability.

- Provide Fire Resistant Environmental Ensemble to aircrews improving protection and comfort.
- Continue fielding Operation Enduring Freedom (OEF) Camouflage Pattern Fire Resistant Army Combat Uniforms and organizational and individual equipment to forces deploying to Afghanistan.

Section II – Key Soldier Portfolio Accomplishments (FY10/11)

- In FY10, in response to separate Operational Needs Statements from Theater, the Army significantly reduced Soldier Load in Afghanistan by fielding 501 MK-48 Light Weight Medium Machine Guns in place of the M240B Medium Machine Gun and 44,000 plate carriers in place of the Improved Outer Tactical Vest reducing weight by 3.2 and 10 pounds, respectively.
- In FY11, the Army began converting M4 Carbines into improved M4A1s to pursue a dual-path approach to provide the American Soldier with the best possible carbine. This effort entails making the following three improvements to the M4:
 1. Heavier Barrel
 2. Fully automatic trigger and selector switch
 3. Ambidextrous controls

Capability improvements that these modifications/improvements will yield are: greater barrel life, improved sustained rate of fire, a consistent trigger pull and improved ergonomics and handling characteristics.

- Other FY11 small arms weapons initiatives continue with procurement of the following systems:

- \$28M for 1,700 Light Weight M240 machine guns to further lighten the Soldier's load.
- \$79M for 4,900 additional .50 cal machine guns to support increased requirements for Theater and Sustainment, Protection and Logistics deploying units.

- Continue procurement of Soldier night vision equipment for current Overseas Contingencies to enhance Soldier force protection, lethality and SA in Full-Spectrum Warfare:

- \$12M for 1,009 Sniper Night Sights for SOF, BCTs and Battlefield Surveillance Brigades.
- \$24M for 3,000 Sense Thru the Wall Sensors for deploying BCTs and SOF.
- \$248M for Thermal Weapon Sights (TWS) for deploying Combat Support (CS) and Combat Service Support (CSS) units.
- \$33M for 706 Laser Target Locators for BCTs.
- \$8.5M for 522 Small Tactical Optical Rifle Mounted (STORM) Micro-Laser Rangefinders (MLRF) for dismounted infantry and scouts in BCTs.
- \$21M for 12,177 Green Laser Interdiction Systems for BCTs.

Section III – Key FY12 Soldier Portfolio Investments

- Nett Warrior: Procure 2 x SBCTs.
- Enhanced NVGs: Procure for Deploying SOF and 300 systems per deploying BCT.

- \$186.5M for 15,057 TWS enhancing Force Protection for deploying CS and CSS units.
- \$66.4M for small arms investments. Quantities are dependent upon cost per item as determined through the carbine competition.
- Full-Spectrum dominance Soldier sensors and lasers for deploying BCTs and SOF :
 - \$33M for 714 Laser Target Locators.
 - \$10.2M for 627 STORM (micro laser range finder).
 - \$4.2M for 356 Sniper Night Sights.
 - \$57.5M for 7,293 Sense Thru the Wall sensors.
 - \$25.3M for 14,056 Green Laser Interdiction Systems.
- Field ~ 3 BCTs worth of new parachutes and accessories at \$41.5M.
- \$65M for 4,060 M2 .50cal machine guns – to continue support of deploying units and begin procurement of the new lightweight .50 cal with the initial 750 guns. The light weight .50 cal is approximately 50 percent lighter than the current weapon.
- Procure 26,806 improved M4A1s for \$34.3M and carbine accessories (Close Combat Optics, Rifle Combat Optics, M4 Rails, Close Quarters Battle Kits, Cleaning Kits and Magazines) for \$25.1M. Additionally, we procure M4 product improvement kits to convert 20,563 M4s to improved M4A1s.

MISSION COMMAND PORTFOLIO

Section I – Overview

The Mission Command (MC) portfolio consists of three distinct capabilities: transport, applications and network services. The Warfighter Information Network – Tactical (WIN-T) and Joint Tactical Radio System (JTRS) are the primary transport programs. The Tactical Battle Command (TBC), Global Command and Control System – Army (GCCS-A), Joint Battle Command – Platform (JBC-P) and Global Combat Support System – Army (GCSS-Army) are the key applications. The Army Key Management System (AKMS) and Communication Security (COMSEC) are the key

network service programs. Our intent is to blend these MC portfolio elements into a capability that provides a twenty-first century expeditionary Army with timely and relevant information through seamless connectivity – regardless of echelon, location or mission. To achieve this, the Army will build upon today’s baseline network architecture, align all network acquisition programs, leverage operational lessons learned, capitalize on theater-driven investments, insert available commercial or government technologies and incrementally field increased networking capabilities in accordance with the ARFORGEN cycle.

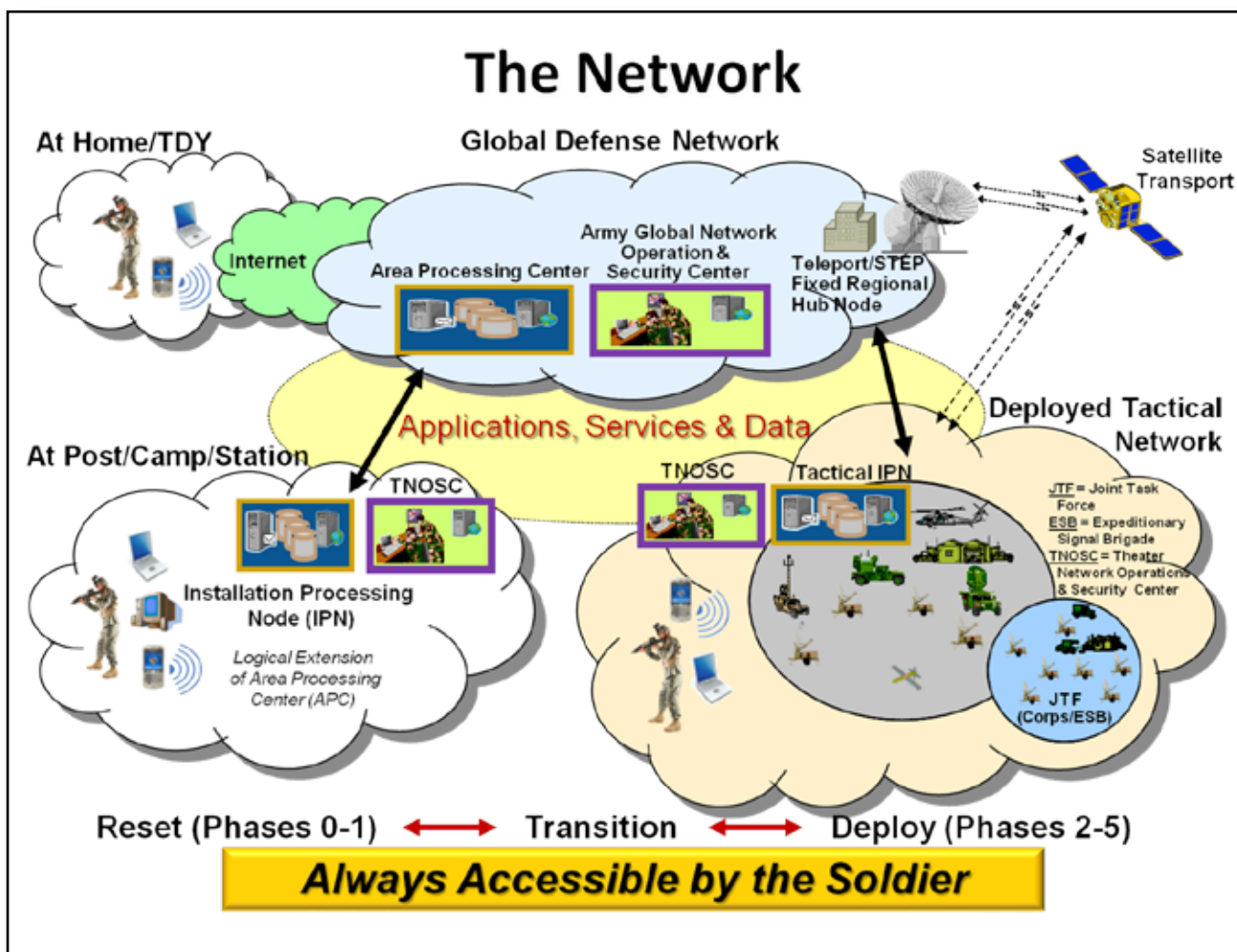


Figure 2. Mission Command Portfolio

The Army's FY12 Network investment reflects a fundamental change in how the Army will field new capabilities to the warfighter. Starting with converging parallel network modernization efforts into one coherent network of sensors, Soldiers, platforms and command posts will be linked by an integrated suite of C2 applications and services connected via a robust transport network. In this way, the Army will rebalance the portfolio to favor procurement of additional brigade sets of equipment rather than long-term individual program research and development efforts. To accomplish this the Army will standardize network components using an overarching architecture, common operating environments (COEs), Commercial Off-the-Shelf (COTS) IT when appropriate and software-definable radio systems. Using a multi-tiered transport network (terrestrial, aerial and space), the Army's goal is to achieve improved networking capabilities through extended coverage area and higher bandwidth for deployed forces.

The Modernization Plan supports the tenants of the Army Network Strategy: 1) Build Capacity. We will deliver a robust network capability to as many formations as possible, extend transport capability to more Forces, improve the Dismounted Soldier Connectivity to include Beyond Line-of-sight (BLOS) and design a scalable but affordable Company Command Post capability; 2) Common Operating Environment Implementation. We will establish common network architecture for WIN-T, JBC-P and JTRS as well as implement a Common Operating Environment (COE) to enable rapid development of software products for the Soldier, platform and command post environments; 3) Enhance Network Integration by delivering an affordable integrated computer system for the platform; and 4) Enhance Mission Command (MC) by collapsing MC functionality into a single software suite for the command post environment and implements a single mobile mission command capability.

The first imperative is to bring the dismounted leader into the Network. The pending deployment of both the JTRS and WIN-T will extend relevant data to our platforms and dismounts, thereby improving situational awareness of the force. Second, to overcome the challenges of rough or mountainous terrain, the Army will deploy the JBC-P system – an incremental but significant upgrade of the warfighter-proven Blue Force Tracking system. Third, WIN-T contains a high-bandwidth on-the-move capability and in the future will add an aerial tier to thicken the network and reduce dependence on satellites while extending operational data to BLOS users.

The Army will consider the greater Network as a combat multiplier which extends from the sustaining base to the single dismounted leader. This all-encompassing view is called the Global Network Enterprise Construct (GNEC). It involves ensuring the deploying/deployed warfighters have greater access to the larger network capabilities and services. Access will be provided by the deployment of both military and commercial satellite long-haul reach-back transport capacity to tactical formations. This capability will thicken the high-capacity tactical satellite network through greater investments in the highly successful Global Broadcast Service (GBS) and Secure Mobile Anti-Jam Reliable Tactical Terminal (SMART-T) satellite systems thus ensuring access to large amounts of operational information from supporting agencies in the U.S. as well as from overhead unmanned reconnaissance and surveillance platforms.

In addition to extending transport across the battlefield, the Army will deliver improved software applications on the Network thereby delivering the right information to the right place at the right time. The pre-eminent effort is to reconfigure legacy Army Battle Command Systems (ABCS) into a standardized set of applications that seamlessly share

data and information on standardized computers in command posts.

Tactical Battle Command (TBC) is the cornerstone of the command post-based C2 system as it converges Army Battle Command Systems (ABCS) and adds capabilities and features over time. The GCCS-Army is the Joint Common Operational Picture (COP) providing situational awareness and enhanced readiness reporting to the warfighter at the strategic level. Simultaneously, JBC-P will continue to develop and field common applications for the mobile environment starting with simple chat, whiteboard and file transfer applications as well as position location data.

The Army Logistical Enterprise will provide mission-critical information from the sustaining base to the tactical edge. The GCSS-Army, a basic cornerstone of the Single Army Logistics Enterprise (SALE), will enable the Army to apply leading web-based applications available commercially to Army logistics. This will allow a fully integrated state-of-the-art Enterprise Resource Planning (ERP) capability to be used by logisticians at all levels – from tactical to national. The SALE encompasses needed improvements on unclassified networks for logistics programs.

On classified network, Battle Command Sustainment Support System (BCS3) links the warfighter with operationally essential logistics information. On unclassified networks, GCSS-Army will replace five separate, outdated logistics information systems with one cohesive web-based system.

Converging current modernization efforts, applying and enforcing technical standards of network components and partnering with industry to leverage commercial advancements are the keys to accomplishing the FY12 Army Network

modernization strategy. This strategy connects Soldiers to the network, provides full interoperability and distribution across the Army, enables C2 on the move and provides full situational awareness across all echelons. It brings the dismounted and mounted Soldier and leader into the network and ensures we provide greater access to mission essential information to the deployed warfighter, now and in the future.

Section II – Key Mission Command Portfolio Accomplishments (FY10/11)

- In FY10, the Army fielded WIN-T Increment 1 to 34 units and upgraded 31 units to WIN-T Increment 1a providing access to both military and commercial satellites. The WIN-T Program Office completed the installation of the 3rd Regional Hub Node at Fort Bragg in September 2010 and fielded 14 Phoenix Satellite Terminals and 139 Global Broadcast Systems to support the growing operational demand.
- Starting in FY10 and ending in FY11, 1,224 BCS3 systems will be fielded to all Army Components to improve unit operational readiness.
- In FY10, TBC achieved interoperability with Tactical Integrated Ground Reporting (TIGR) at the company level.
- Starting in FY10 and ending in FY11, 12,443 Combat-Service-Support Automated Information Systems Interface (CAISI) and 549 Very Small Aperture Terminal (VSAT) Logistic Network Communication systems will be fielded.
- In FY11, the Army will field WIN-T Increment 1 to 34 units, upgrade 27 additional units to WIN-T Increment 1a and complete the fielding of the 4th and 5th Regional Hub

Nodes at Guam and Camp Roberts. The Army will procure one BCT and division set of WIN-T Increment 2 to support the Initial Operational Test and Evaluation (IOTE) in FY12 and will begin the procurement of the WIN-T Increment 1b, which is necessary for interoperability with WIN-T Increment 2. The Army completes the fielding of the Phoenix Satellite Terminal with the procurement of 18 terminals and continues the procurement of the Global Broadcast System with 49 new systems.

- In FY11, the JTRS Rifleman Radio and Ground Mobile Radio are scheduled for Milestone C with low-rate initial production to follow in FY12. The HMS Manpack finalizes its development and testing in preparation for its MS C and low-rate production in FY12.
- Logistics Automation Standard Army Management Information Systems (STAMIS) fielding will be completed in FY11.
- Transportation Coordinator's Automated Information for Movement System II (TC-AIMS-II) fielding will be completed in FY11.
- In FY11, the Army achieved the integration of Personalized Assistant that Learns (PAL) into Command Post of the Future (CPOF).
- In FY11, the Army completed conversion of TBC CPOF and Battle Command Common Services (BCCS) on Combined Enterprise Regional Information Exchange – International Security Assistance Force (CENTRIX-ISAF).

Section III – Key FY12 Mission Command Portfolio Investments

- \$34.8M procures WIN-T Increment 1b to upgrade 35 brigades by FY14.
- \$924.2M procures WIN-T Increment 2 to equip 13 brigades and 3 division headquarters.
- \$775.8M for JTRS funding procures Wideband Data Radio systems, JTRS Manpack radios and Rifleman Radios for fielding to eight BCTs in FY13.
- \$256M for GCSS-Army which will replace the STAMIS family of programs with integrated logistician tools and services starting in FY12.
- \$39.1M for ABCS collapse development and integration efforts to produce a collaborative BC environment for the maneuver, fires and air warfighting functions.
- \$25.9M for mission command essential capabilities within TBC to include joint, inter-agency, intergovernmental and multinational interoperability requirements.

INTELLIGENCE PORTFOLIO

Section I – Overview

The Intelligence portfolio incorporates the key components of Intelligence, Surveillance and Reconnaissance (ISR) collection, exploitation and analysis which are organized into four primary layers: Foundational, Terrestrial, Aerial and Space. The goal of the portfolio is to provide a fully integrated ISR force that optimizes core intelligence capabilities including Full Motion Video (FMV), Signals Intelligence (SIGINT), Geolocation, Human Intelligence (HUMINT), interrogation and source operations. The portfolio also includes a secure ISR communications architecture which is well-synchronized and integrated with the Army's Network initiatives and supports all aspects of

exploitation, analysis and dissemination (Figure 3) to meet the readiness and modernization objectives of the Army Campaign Plan.

As depicted in Figure 3, the Intelligence portfolio provides essential modernization to keep pace with the evolving threat and rapid technology advancements. It equips warfighters with advanced intelligence processing, analytical and dissemination tools. This modernization strategy delivers manned and unmanned aerial ISR platforms and sensors to the warfighter. It also funds essential team oriented signals, human intelligence and counterintelligence (CI) capabilities and Top Secret/Sensitive Compartmented Information communications for tactical ISR systems.

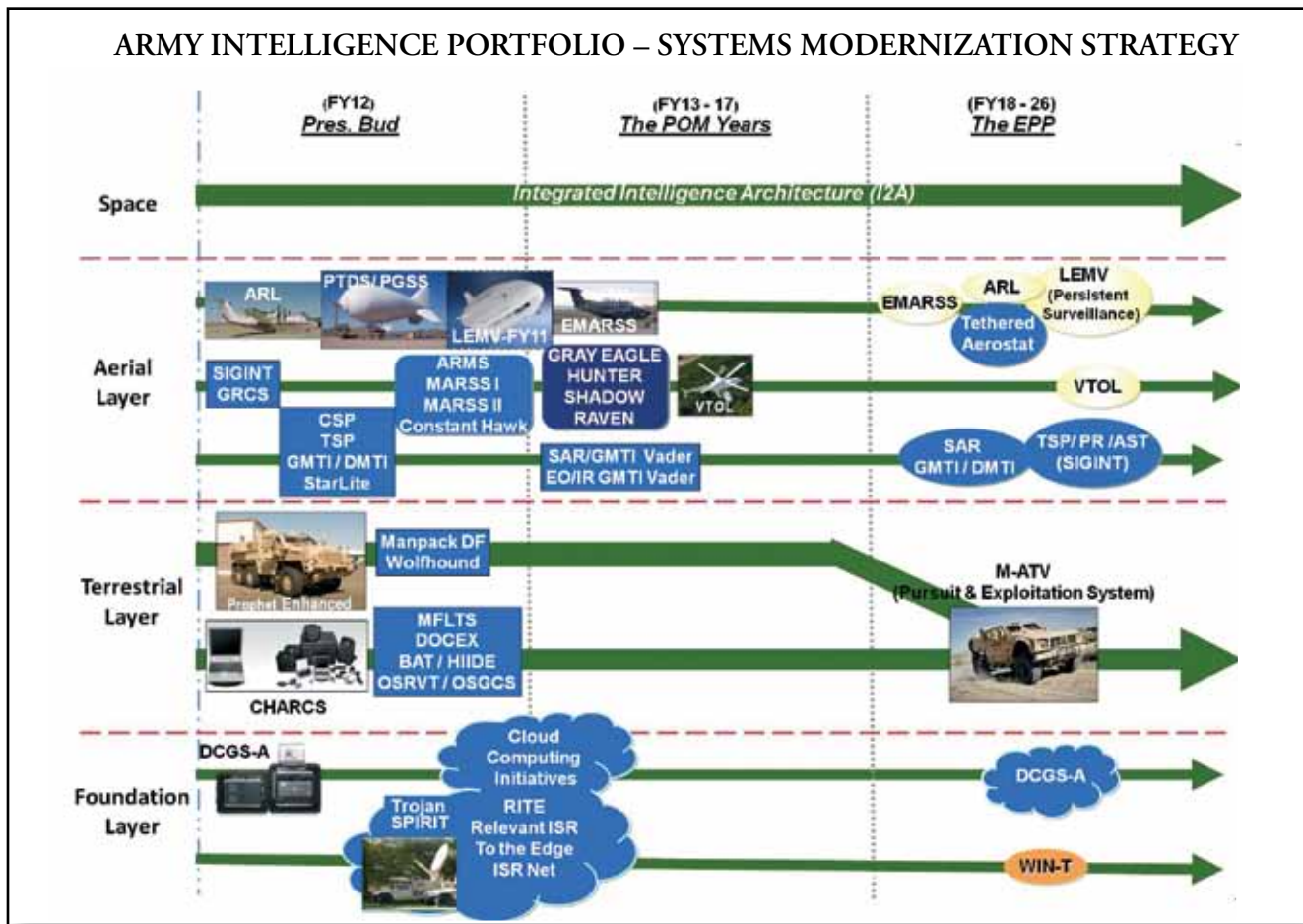


Figure 3. Intelligence Portfolio

This strategy continues investment in tools to enable collection, exploitation and dissemination with precision and speed such as biometrics, identity resolution and counter-deception detection.

Section II – Key Intelligence Portfolio Accomplishments (FY10/11)

- FY10/11: Distributed Common Ground System – Army (DCGS-A): In FY10, 1,942 students were trained in 134 training events, and the following fieldings were completed:
 - 7 DCGS-A Enabled (DE) Analysis and Control Elements
 - 24 DE Analysis and Control Team Enclaves
 - 2 DE Common Ground Stations
 - 43 DE Digital Topographic Support Systems
 - 175 DCGS-A ISR Fusion Servers
 - 1,091 DCGS-A Portable Multi-Function Workstations
- In FY11: DCGS-A OEF capabilities transition to a “cloud-computing” architecture with user gateways provided by DCGS-A systems from Company Intelligence Support Team (CoIST) to the International Security Assistance Force (ISAF) Headquarters. Unit training on the software baseline began in 1st Quarter FY11 and the operational cloud computing capability will reach Initial Operating Capability (IOC) in March 2011.
- FY10/11: Enhanced Medium Altitude Reconnaissance Surveillance System (EMARSS): In FY11, EMARSS achieved Milestone B and entered the Engineering, Manufacturing and Development (EMD) phase with contract award for four EMD EMARSS aircraft. Also in FY11, Resource Management Decision (RMD) 700 increased Army Acquisition Objective from 36 to 48 EMARSS aircraft.
- FY10/11: Guardrail Common Sensor (GRCS) Modernization Program: In FY10, the GRCS recapitalization program modernized the cockpits of 16 GRCS aircraft and began modernization integration on 7 GRCS payloads. In FY11, seven fully modernized RC-12X GRCS systems will be delivered to the field.
- FY10/11: Airborne Reconnaissance – Low (ARL): In FY10, the ARL recapitalization program modernized and standardized the mission payloads on seven ARL aircrafts. In FY11, the ARL multi-functional conversion program will be completed, standardizing the current aircraft fleet of eight ARL with Signals Intelligence/Imagery Intelligence SIGINT/IMINT and Moving Target Indicator (MTI) Radar payloads.
- FY10/11: Unmanned Aircraft System (UAS) ISR Payloads: In FY11, the first Gray Eagle UAS is equipped with the Common Sensor Payload (CSP) FMV and Small Tactical Radar Lightweight (STARLite) synthetic aperture radar system and will be fielded to the warfighter.
- Research, Development, Test and Evaluation (RDTE) effort initiates engineering development of High Definition (HD) video and Target Location Accuracy (TLA) improvements for CSP, enhancements to STARLite range and resolution and initiation of EMD of the Tactical SIGINT Payload (TSP).
- FY10/11: Prophet Ground Signals Intelligence: In FY10, the Prophet-Enhanced Quick Reaction Capability (QRC) was fielded to six BCTs and a Battlefield Surveillance Brigade mounted on Panther Medium Mine Protected vehicles to facilitate operations out of operating bases. In

FY11, a more modular and scalable version of Prophet Signals Intelligence capability will be fielded that is more vehicle-agnostic enabling use on different vehicle types better suited to terrain and conditions in a particular operational environment. The RDTE effort will provide both software and hardware upgrades to the Prophet Enhanced to maintain operational relevance and initiate the establishment of the Prophet System Integration Lab.

- FY10/11: Machine Foreign Language Translation System (MFLTS): In FY10, 494 MFLTS QRC devices were provided directly to the warfighter. In FY11, 102 MFLTS QRC devices will be provided to BCTs in OEF to augment existing linguist support, including deployment of smart phones capable of two-way speech-to-speech translation, representing a significant step forward from previous phrase-based one-way translation devices. The RDTE effort initiates development of prototype software and standardized testing metrics.

Section III – Key FY12 Intelligence Portfolio Investments

- FY12: \$188.7M (\$144.5M Other Procurement, Army (OPA), \$44.2M RDTE) – Distributed Common Ground System – Army (DCGS-A): RDTE funding integrates DCGS-A software and cloud computing capabilities into one baseline capability package, conducts Initial Operational Test and Evaluation (IOTE) and prepares for Full Deployment Decision milestone. The OPA funding procures 372 DCGS-A Portable Multi-function Workstations, 7 DCGS-A Enabled (DE) Common Ground Stations (CGS), 4 DE Analysis and Control Elements, 1 DE Analysis and Control Team – Enclave, 1 DCGS-A Surveillance Information Processing Center in support of 1 corps, 3

divisions, 12 BCTs, 3 Special Operations Brigades, 3 Maneuver Enhancement Brigades (MEBs), 3 Combat Aviation Brigades (CABs), 3 Fires Brigades (FiBs) and other Combat Support (CS), Combat Service Support (CSS) units entering the ARFORGEN Available Pool.

- FY12: \$571M (\$540M APA, \$31M RDTE) – Enhanced Medium Altitude Reconnaissance Surveillance System (EMARSS): The RDTE funding facilitates Developmental, Operational and Limited User Testing. The APA funding procures 18 high-capacity multi-sensor aerial intelligence systems that provide real-time and precision airborne Reconnaissance, Surveillance and Target Acquisition (RSTA)/ISR capability directly to BCT commanders.
- FY12: \$27.6M (APA) – Guardrail Common Sensor (GRCS) Modernization Program: Integrates and fields the final seven modernized (RC-12X) GRCS platforms. The modernized GRCS system provides improved irregular warfare SIGINT support to BCT commanders through better look-down intercept angles and enhanced frequency collection, while maintaining superior full-spectrum, deep-look capability to Echelons Above Brigade (EAB) commanders.
- FY12: \$172.5M (\$136.2M APA, \$36.3M RDTE) – Unmanned Aircraft System (UAS) ISR Payloads: Provides an optimal mix of UAS payloads for the Gray Eagle platform with day/night capability to collect and display continuous imagery, wide-area all-weather search capability, persistent stare, Ground Moving Target Indicator (GMTI) and Synthetic Aperture Radar (SAR). Provides development and procurement of 29 CSP Electro-Optical/Infra-Red/Laser Designator (EO/IR/LD) sensors and 33 STARLite SAR/GMTI sensors for integration and fielding support to the

ARFORGEN schedule. The RDTE funding will facilitate continued improvements to CSP and STARLite and baseline development of TSP.

- FY12: \$85.9M (\$72.0M OPA, \$13.8M RDTE) – Prophet Ground Signals Intelligence: Procures 15 Prophet Enhanced sensors mounted on medium mine protected vehicles (Panther) and 8 Prophet Control systems for fielding to maneuver brigades and Battlefield Surveillance Brigades operating in combat theaters. Funding will also procure 25 next generation receivers and hardware/software improvements to keep

pace with rapidly changing threat technology and tactics, techniques and procedures. The RDTE funding will provide product upgrades for Next Generation Signals to increase the capabilities of the Prophet Enhanced, develop a geolocation capability per Pre-Planned Product Improvements (P3I) requirements, complete the establishment of the Prophet System Integration Lab and initiate integration and testing of a software-defined radio/receiver solution to the Prophet Enhanced sensor.

MOVEMENT AND MANEUVER (GROUND) PORTFOLIO

Section I – Overview

What we are trying to accomplish with the Army’s Combat Vehicle Modernization Strategy:

Heavy Brigade Combat Team – develop and field an integrated Combined Arms Team, linked by the Network, to dominate our enemies with the versatility to conduct missions across the full spectrum of operations.

Stryker Brigade Combat Team – develop and field an integrated Combined Arms Team, linked by the Network, with maximum versatility across the full spectrum of operations.

How do we intend to do it?

Transform – acquire the Ground Combat Vehicle to provide our Soldiers the capabilities they need to fight and win today and in the future;

Replace – our M113 Family of Vehicles (FoV) with a platform able to meet the demands of today’s operational environment;

Improve – our Abrams, non-Infantry Fighting Vehicle (IFV) Bradleys, Paladin and Stryker Vehicles so they remain relevant and capable.

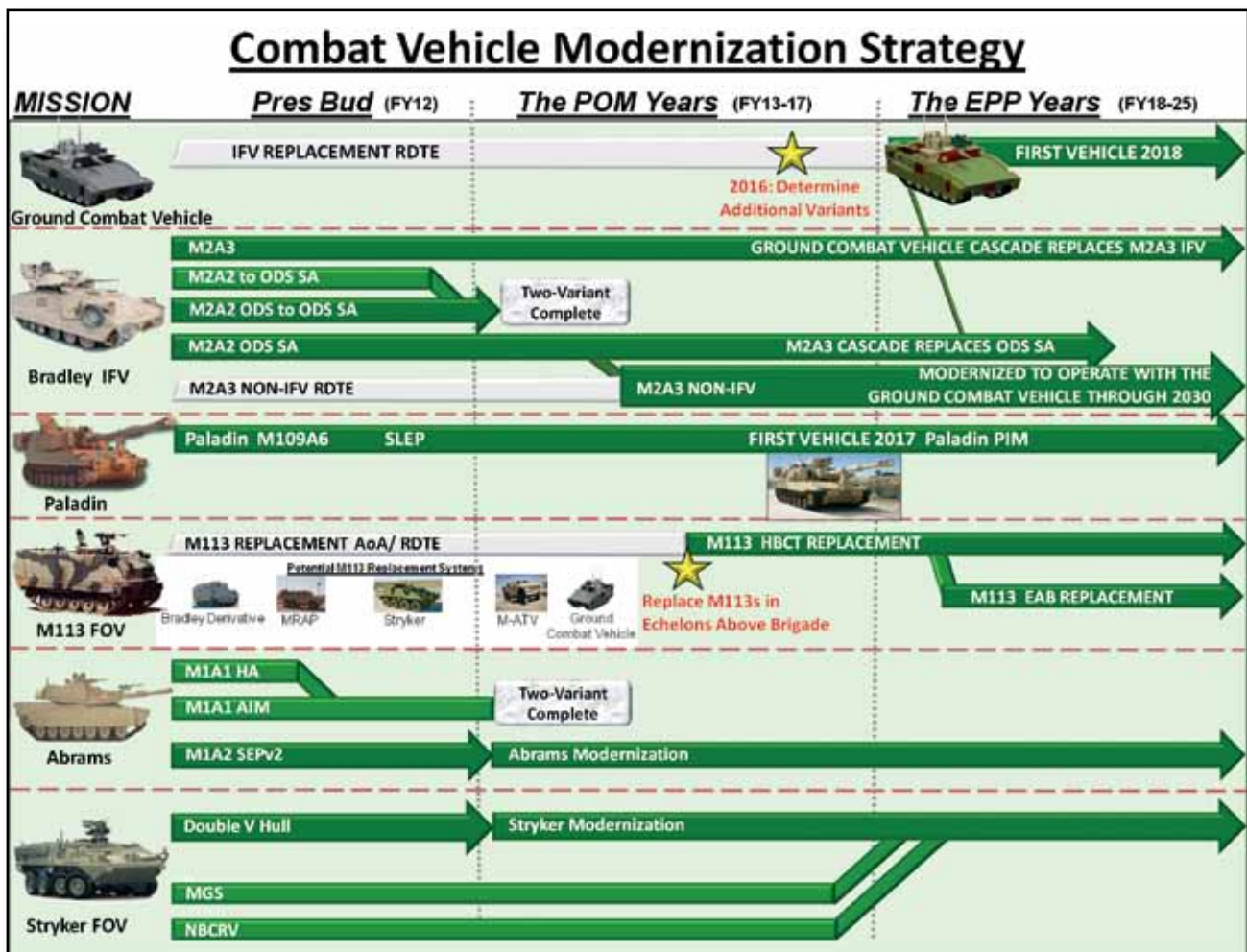


Figure 4. Movement and Maneuver (Ground) Portfolio

Section II – Key Movement and Maneuver (Ground) Portfolio Accomplishments (FY10/11)

- In FY10, to meet the changing operational needs of our deployed warfighters, the Army began an aggressive testing program of the Stryker Double V Hull to field this more survivable vehicle to Afghanistan in FY11.
- In FY10, the Army fielded three Infantry Brigade Combat Teams (IBCTs) with the Mortar Fire Control System-Dismounted (MFCS-D) giving IBCTs the mortar fire control capability previously found only in our heavy forces.
- In FY11, the 1/1 AD HBCT will convert to a Stryker Brigade Combat Team (SBCT) better balancing the Army force structure.
- In FY11, the Army will modernize 1/2 ID (Korea) to the most modern versions of the Abrams tank (M1A2SEPV2) and the Bradley Fighting Vehicle (BFV) (M2A3).
- In FY11, modernization focused on achieving standardization of two variants of our dominant combat maneuver platforms (M1 Abrams Tank and M2 BFV) combined with expansion of the versatile and lethal Stryker Combat Vehicle.
 - Modernization of the older M1 variant is accomplished with M1A1 Situational Awareness upgrade kits while the M1A2 Abrams is upgraded through the M1A2 System Enhancement Program (SEP) kit. Procurement of 87 M1A1 Situational Awareness kits and 21 M1A2 SEP kits provide enhanced situational awareness for operators and command elements, increased force protection and integration optimization between systems.
 - Upgrade kits will make the M2A3 and M3A3 Bradleys compatible with the M1A1 Abrams

and provide greater lethality, survivability and sustainability.

- Stryker program procures 83 combat vehicles in several variants in FY11.

Section III – Key FY12 Movement and Maneuver (Ground) Portfolio Investments

- **Ground Combat Vehicle** \$884.4M Research, Development, Test and Evaluation (RDTE) – Ground Combat Vehicle Technology Development phase will continue through FY12 until 3rd Quarter FY13.
- **M109A6 Paladin and Paladin PIM** \$167.0M Weapons and Tracked Combat Vehicles (WTCV) - \$47M; RDTE - \$120.1M – Procurement begins purchasing the Paladin Digital Fire Control System-Replacement (PDFCS-R). The RDTE funds development and integration of common components into prototype vehicles.
- **M113 Replacement** \$31.4M RDTE – Funds Analysis of Alternatives and pre-Milestone A (MS-A) development activities. The initial focus will be on replacement of M113s within the HBCT potentially with a Bradley derivative using an ARFORGEN equipping model. Echelons Above Brigade (EAB) M113s will be replaced by cascading various existing vehicles (Mine Resistant Ambush Protected (MRAP), Stryker, etc).
- **Stryker** \$886.8M WTCV/RDTE – Procurement buys 100 Nuclear, Biological Chemical Reconnaissance Vehicles (NBCRVs) and supports protection/Overseas Contingency Operation requirements. The NBCRV provides an unprecedented capability to the Joint Force to detect and identify biological, chemical and nuclear hazards, including support of Homeland Defense, for which Double V Hull protection is a minimal consideration. The RDTE efforts

focus on regaining Space, Weight, Power and Cooling (SWaP-C) and Soldier protection (Fire Support Vehicle (FSV) targeting under armor).

- **Abrams** \$358.8M WTCV/RDTE – Procurement completes M1A2SEPV2 multi-year contract. Abrams achieves modular two-variant fleet configuration: 1,547 M1A2SEPV2s and 791 M1A1AIM SA. The RDTE funds the Technology Development phase start for Abrams modernization.
- **Bradley** non-IFV \$263.0M WTCV/RDTE – Procurement completes Army National Guard (ARNG) modernization with 108 M2A2 Operation Desert Storm – Situational Awareness (ODS-SA) kits for 3 separate Combined Arms Battalions (Kansas, Ohio and South Carolina). The RDTE focuses on Bradley non-IFV modernization and pre-Milestone A development.

MOVEMENT AND MANEUVER (AIR) PORTFOLIO

Section I – Overview

The Movement and Maneuver (Air) portfolio consists of required capabilities to include: supporting core aviation programs, utility and cargo, fixed wing mission profiles, reconnaissance/attack, Intelligence, Surveillance and Reconnaissance (ISR) and Unmanned Aircraft Systems (UAS) to meet readiness and modernization objectives of the Army Campaign Plan.

As depicted within the three figures across this section, key objectives and decision points in the

Movement and Maneuver (Air) portfolio are: fully fund the Kiowa Warrior (KW) OH-58F program; fully fund the Apache Milestone C (MS-C) decision; Gray Eagle, UAS, production capability; UH-60 production to meet 13th Combat Aviation Brigade (CAB) growth; and Special Operations increased aircraft requirements. Continue to procure the Lakota, Light Utility Helicopter (LUH) program to support cascading OH-58 aircraft to the training base and fully fund 13th CAB and Special Operations CH-47 aircraft requirements.

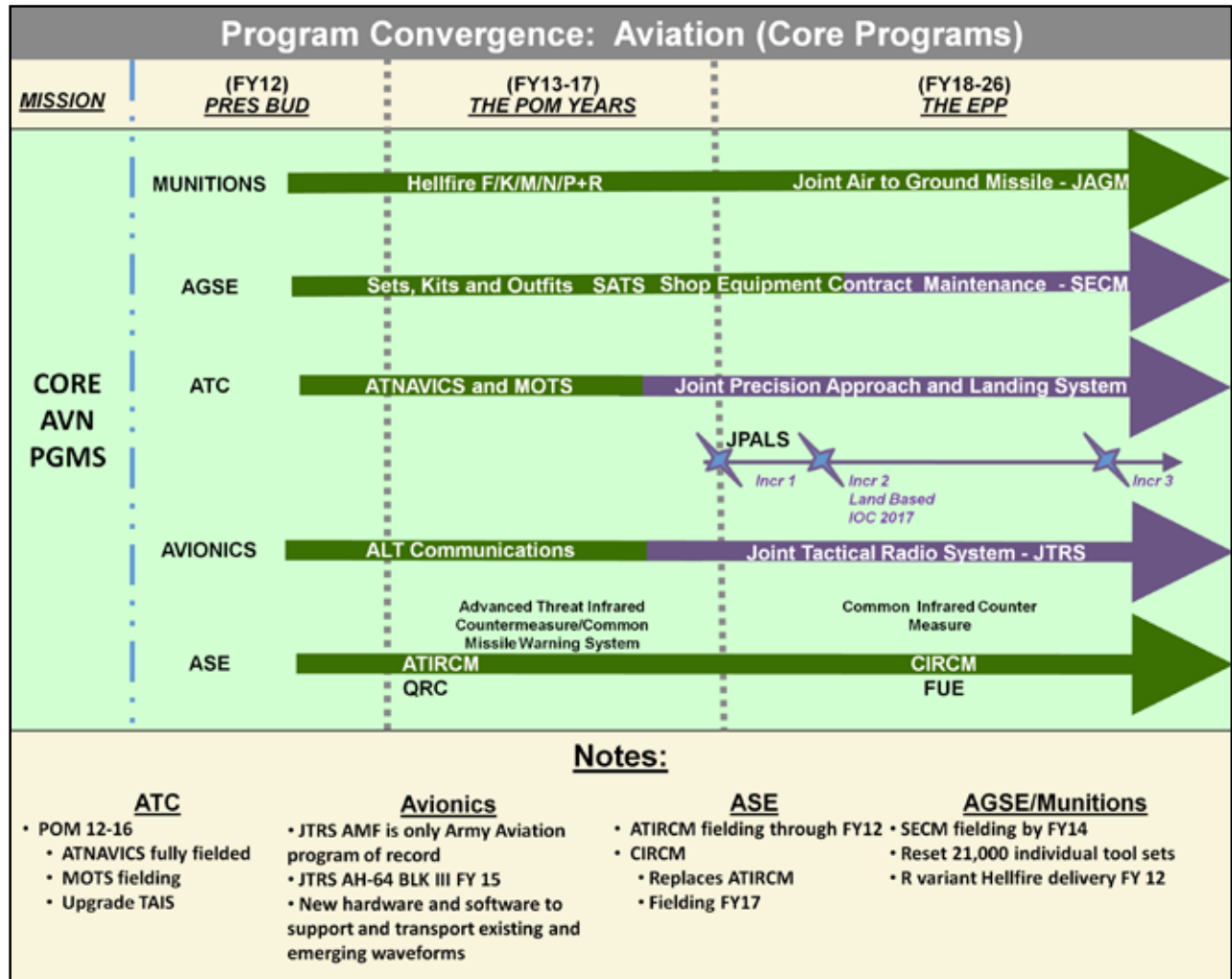


Figure 5. Movement and Maneuver (Air) Core Programs

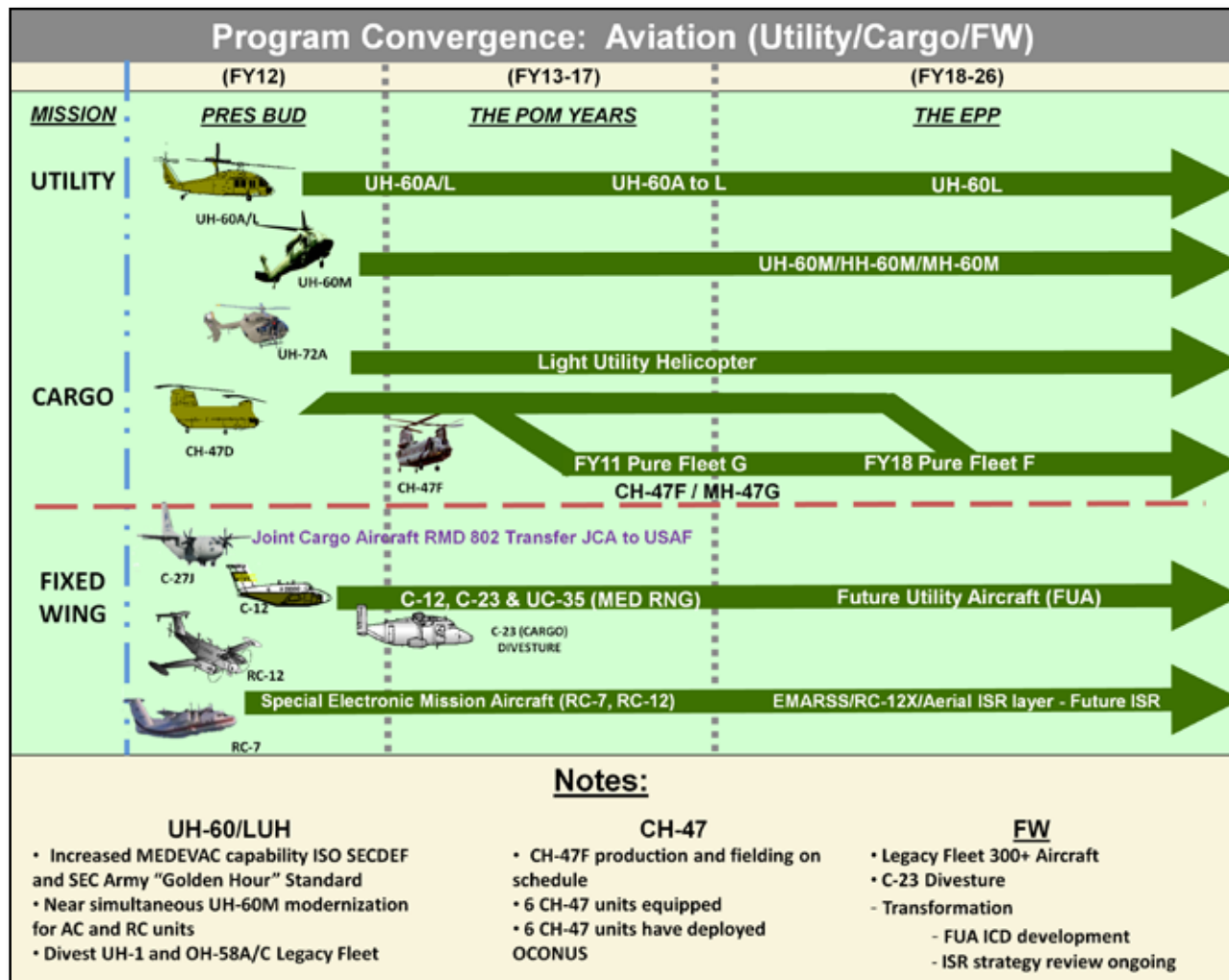


Figure 6. Movement and Maneuver (Air) Utility/Cargo/Fixed Wing

Section II – Key Movement and Maneuver (Air) Portfolio Accomplishments (FY10/11)

- In FY10, the Lakota, LUH-72A, helicopter was fielded to the 20th Support Command (Chemical, Biological, Radiological, Nuclear high-yield Explosives (CBRNE)).
- In FY10, the Army began induction of the first battalion of Apache helicopters for remanufacture to AH-64D Apache Block III.
- In FY10, the Army achieved First Unit Equipped (FUE) for the Advanced Threat

Infrared Countermeasures (ATIRCM) on the CH-47D helicopter.

- In FY10, fielding began for the Digital Data Link (DDL) variant of the Raven System. Two hundred and sixty-five new systems were fielded in 2010. At the same time, 283 Raven B systems were converted to DDL. The DDL increases the amount of channels Raven aircraft use within a single geographic area providing the supported unit increased full motion video coverage across the entire area of operations.

- In FY11, the Army fields the 1-104th Attack Reconnaissance Battalion (ARB) (Pennsylvania ARNG) with AH-64D Apache Block II helicopters and inducts the AH-64A aircraft of the 1-135th ARB (Missouri ARNG) as part of the effort to modernize the ARNG attack helicopter fleet.
- In response to a theater Operational Needs Statement, the Army provided four Tactical Airfield Lighting Systems to Theater Provided Equipment (TPE) in FY11 that enhanced the safety and efficiency of theater airfields in Iraq and Afghanistan.
- To support the Army and DoD leadership emphasis on increased Medical Evacuation (MEDEVAC) Capability, the Army will field MEDEVAC helicopters (HH-60M) to six General Support Aviation Battalions (GSABs) by the end of FY11.
- In FY11, the Army is procuring 29 MQ-1C Gray Eagle Unmanned Aircraft and the associated ground support equipment (\$506.3M). The Army has fielded two Gray Eagle Quick Reaction Capability platoons equipped with four aircraft each (one is in Operation New Dawn (OND) and the other is deployed in OEF). The Army fields the first full MQ-1C Gray Eagle Company to the 1st Cavalry Division CAB 3rd Quarter FY11 and this unit conducts Initial Operational Test and Evaluation (IOTE) and subsequently deploys. At the end state, the Army will have 13 Gray Eagle Companies to include 2 companies in the Special Operations Command. Gray Eagle missions include Reconnaissance, Surveillance, Target Acquisition, Armed Reconnaissance, Signals Intelligence, Communications Relay and Battle Damage Assessment.
- FY11 rotary wing aircraft modernization accomplishments focus on the UH-60 (Black Hawk), CH-47 (Chinook) and AH-64 (Apache) helicopters:
- Black Hawk modernization entails procurement of 48 UH-60M (utility mission) and 24 HH-60M (MEDEVAC mission) helicopters. The M model provides a digitized cockpit, new engine for improved lift and range and wide-chord rotor blades. By the end of FY11, the Army equips five Assault Helicopter Battalions (AHBs) with the UH-60M.
- In FY11, the Army procures 40 F model Chinook aircraft while providing modifications to include a loading system enabling more rapid reconfiguration from cargo to passenger support missions.
- Apache modernization focuses across two levels: procurement of 16 new Apache Block III aircraft and upgrades to existing aircraft to Block II models. Block II modifications integrate Target Acquisition Designation Sight/Pilot Night Vision Sensor upgrades and other safety and reliability modifications. The Block III model is the Army's attack helicopter bridge to the future force providing UAS control capability, a visual near-infrared sensor to aid target acquisition and other force protection and reliability enhancements.

Section III – Key FY12 Movement and Maneuver (Air) Portfolio Investments

- FY12 funding for the Kiowa Warrior (KW) helicopter is \$249.5M. This funding addresses obsolescence and weight reduction efforts for our aging KW fleet. Specifically, it funds the continued research and development of the Cockpit and Sensor Upgrade Program

(CASUP) and procurement of long lead items for the first lot of Low-Rate Initial Production (LRIP), OH-58F helicopters. FY12 funding for the Armed Aerial Scout (AAS) is \$78.7M. This funding supports Research, Development, Test and Evaluation (RDTE) of the program.

- FY12 funding for the Blackhawk helicopter Multi-Year Procurement is \$1.5B. The Army remains on schedule to procure 47 UH-60M and 24 HH-60M aircraft. FY12 is the first year of the Multi-Year/Multi-Service VIII Contract.
- Lakota funding for FY12 is \$250.4M of which

\$214.9M remains allocated for the Army National Guard. The Army remains on schedule to procure 39 aircraft in FY12.

- In FY12, the Army remains on schedule to procure 47 modernized CH-47F and 1 MH-47G aircraft. Funding for this aircraft in FY12 is \$1.4B.
- FY12 fixed wing aircraft will undergo aircraft modifications to include: Global Air Traffic Management (GATM) upgrade, Aircraft Survivability Equipment (ASE) and Blue Force Tracker (BFT) installation.

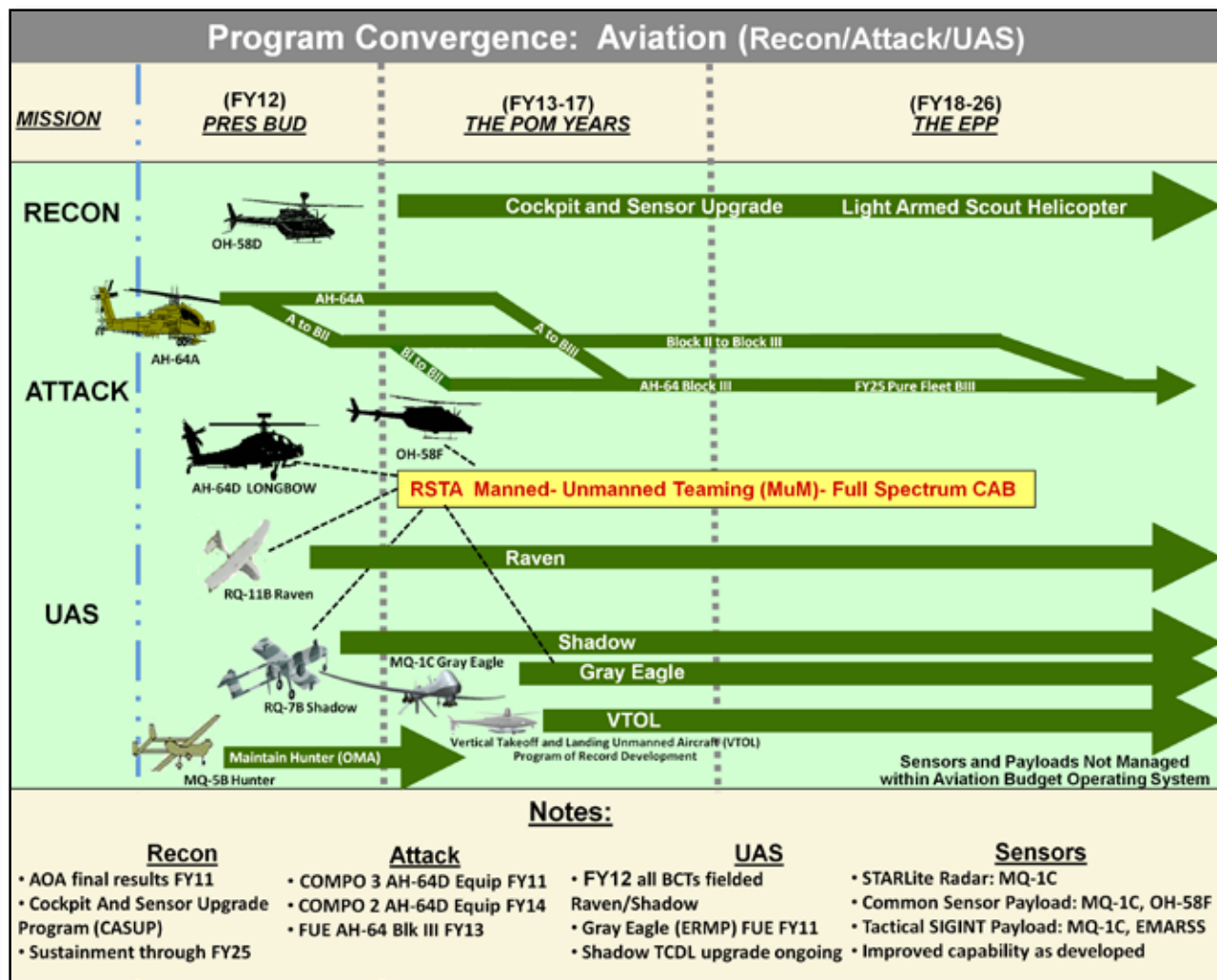


Figure 7. Movement and Maneuver (Air) Recon/Attack/UAS

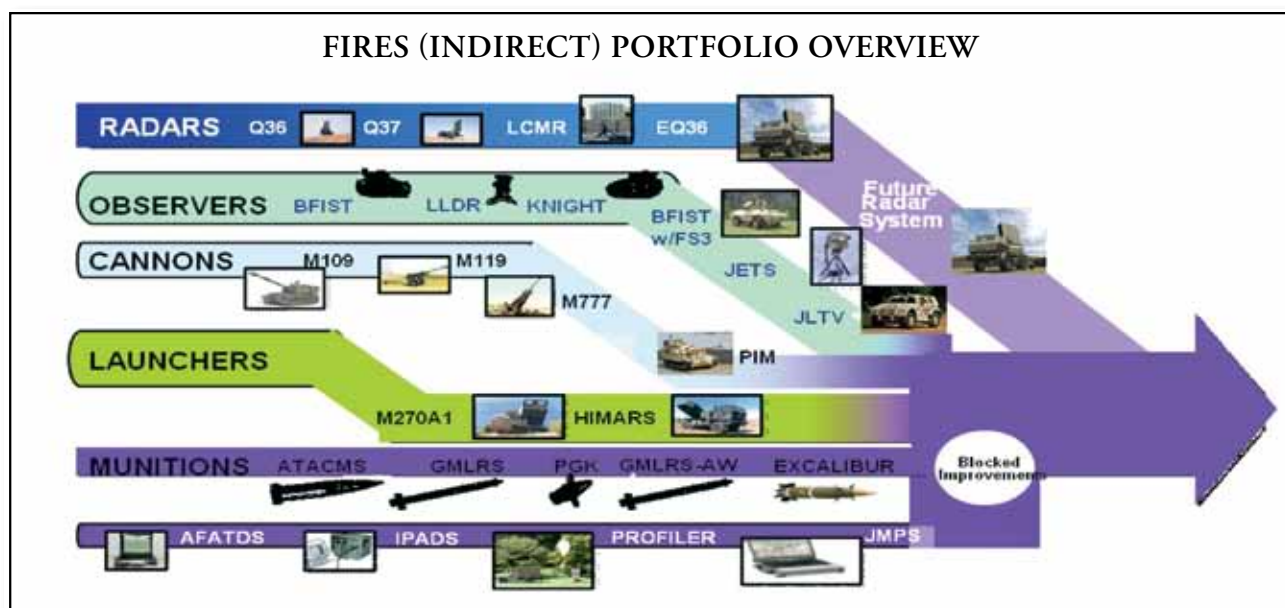
- Apache Block III funding for FY12 is \$800.8M. The Army remains on schedule for Apache Block III First Unit Equipped in FY13.
- FY12 funding for RQ-11B Raven is \$72.7M and procures 424 systems (1272 Air Vehicles) and assumes other hardware costs, including ground control stations, remote video terminal and an initial deployment spares package. In addition, funding answers unit requests for a virtual training device for system operators during the Army Force Generation (ARFORGEN) training cycle.
- FY12 funding for RQ-7B Shadow is \$126.2M. This funding provides modernization of system payload capability, critical upgrades to the Tactical Communication Data Link (TCDL) and more ruggedized aircraft increasing flight time between required maintenance intervals.
- FY12 base budget funding of \$658.8M maximizes the production rate of the Gray Eagle program by procuring 36 MQ-1C aircraft, 18 ground control stations, 18 ground data terminals, 9 satellite communication ground data terminals and other ground support equipment. Under the acceleration, the Army will increase procurement of aircraft and associated ground support equipment in FY12 and FY13 from 27 aircraft per year to the new procurement profile of 29 aircraft in FY11, 36 aircraft in FY12, 28 aircraft in FY13 and 14 aircraft in the final procurement year FY14.
- FY12 funding for Vertical Take Off and Landing (VTOL) UAS is \$24.1M. The VTOL UAS provides the Brigade Combat Team a multi-intelligence platform capable of conducting beyond line-of-sight full motion video, wide area surveillance and signals intelligence. The VTOL UAS reduces the need for burdensome runway and infrastructure requirements and also provides sensor capability expansion given aircraft ability to hover and in flight slow airspeed.
- FY12 funding for Joint Air to Ground Missile (JAGM) is \$127.1M and supports the transition of the Army Hellfire missile to a joint missile system (JAGM also replaces USMC air launched version of the TOW and Navy Maverick missiles).
- FY12 funding for Long Endurance Multi-Intelligence Vehicle (LEMV) is \$42.8M. It provides sustainment to LEMV Airship 1 operations, achieves Initial Operating Capability (IOC) and Fully Mission Capable (FMC) status in OEF and builds additional airships and configurable ISR/communications payloads.

FIRES (INDIRECT) PORTFOLIO

Section I – Overview

To prevail in future operational environments and succeed in a wide range of contingencies, the Army must have a campaign quality, expeditionary Field Artillery (FA) force that delivers and integrates lethal and non-lethal fires to enable joint and maneuver commanders the ability to dominate their operational environment across the full spectrum of conflict.

The FA portfolio consists of required fire support capabilities in the following four areas: FA Sensors, Shooters, Munitions and FA Support (Advanced Field Artillery Tactical Data System (AFATDS), Improved Position and Azimuth Determining System (IPADS), Profiler and Electronic Warfare). As depicted in the chart below, fires modernization efforts will converge to provide a significant capability enhancement to the Fires force.



Acronyms listing for chart

AN/TPQ-36 (Q36)	AN/TPQ-37 (Q37)	Light Counter-Mortar Radar (LCMR)	Enhanced AN/TSQ-36 - (EQ36)	Bradley Fire Support Team (BFIST)
Bradley Fire Support Team w/Fire Support Sensor System (BFIST w FS3)	Lightweight Laser Designator Rangefinder (LLDR)	Joint Effects Targeting System (JETS)	Joint Light Tactical Vehicle (JLTV)	Paladin Integrated Management (PIM)
High Mobility Artillery Rocket System (HIMARS)	Army Tactical Cruise Missile System (ATACMS)	Guided Multiple Launch Rocket System (GMLRS)	Precision Guidance Kit (PGK)	
Advanced Field Artillery Tactical Data System (AFATDS)	Improved Position & Azimuth Determining System (IPADS)	Joint Mission Planning System (JMPS)		

Figure 8. Fires (Indirect) Portfolio

The cost of providing equipment sufficient to meet the threats of an ever adaptive adversary who uses unconventional tactics dictates that the Army meet its objectives by carefully balancing the quantity, quality and management of its equipment. The Fires (Indirect) portfolio is comprised of several types and variants of equipment developed to achieve a vast number of precision and near-precision missions tasked to the Field Artillery mission sets. The key strategic objectives for the Fires (Indirect) portfolio are:

- Develop capable FA sensor systems that provide 360 degrees of accurate target location coverage.
- Development of improved munitions capabilities.
- Seek commonality within Fires systems through modernization/update of FA electronic systems.

Section II – Key Fires (Indirect) Portfolio Accomplishments (FY10/11)

- In FY10, fielded the initial production model EQ-36 radar systems in support of OND and OEF.
- In FY10, revised the Army Acquisition Objective (AAO) requirement for the Light Weight Laser Range Finder from 3113 to 2700.
- In FY10, fielded initial prototypes of the EQ-36 radars that provide 360 degree capability in a medium- to long-range counter fire radar system.
- In FY10, improved crew survivability with the first fielding of the increased crew protection (ICP) cab variant of the HIMARS MLRS launcher to both Active and Reserve Component units.
- In FY11, began initial fielding of the

AN/TPQ-50 Lightweight Counter-Mortar Radar (LCMR) system.

- In FY11, began initial development of the Joint Effects Targeting System (JETS).
- In FY11, improved the Q-50 LCMR capability by doubling the range and accuracy over the previous LCMR version radar system.
- In FY11, Targeting Under Armor-On the Move (TUA-OTM) capability will be retrofitted to the M1200 Armored Knight Fleet which will enable fire supporters to target while being protected under armor and on-the-move with a continuous 360 degree operation of the remote weapon system sensor.
- In FY11, completed competitive prototyping for an alternative warhead variant of the GMLRS rocket which will engage precisely located area targets without using Unexploded Explosive Ordnance (UXO) producing Dual-Purpose Improved Conventional Munition (DPICM) cluster munitions.

Section III – Key FY12 Fires (Indirect) Portfolio Investments

- \$58.0M to develop and procure Lightweight Laser Designator Rangefinder (LLDR) 2H modifications to enhance target location accuracy.
- \$20.4M for (JETS) Research, Development, Test and Evaluation (RDTE).
- \$51.6M to improve M1200 Armored Knight crew survivability with Targeting Under Armor (TUA).
- \$44M to sustain and improve Bradley Fire Support Team (BFIST) Hardware/Software modifications.

- \$231M to sustain procurement of the Enhanced AN/TPQ-36 (EQ-36) radar system.
- \$40.9M to sustain procurement of the Light Counter-Mortar Radar (LCMR) AN/TPQ-50 (version 3).
- \$76.4M to improve Force Protection for High Mobility Artillery Rocket System (HIMARS) and Multiple Launch Rocket System (MLRS) Launchers with Armored Crew Cab.
- \$38.8M to develop and procure Digitization modifications to M119A2 Howitzer for more responsive fires for IBCTs.
- \$7.9M to develop and procure Block III Profilers.
- \$111.7M to develop and procure Excalibur 155mm munitions in accordance with recent Nunn-McCurdy recertification.
- \$42.1M to develop Guided Multiple Launch Rocket System (Alternative Warhead) (GMLRS (AW)) to replace DPICM per the DoD Cluster Munitions policy.
- \$120M for Paladin Integrated Management (PIM) (RDTE).

PROTECTION (AIR AND MISSILE DEFENSE) PORTFOLIO

Section I – Overview

The Air and Missile Defense (AMD) modernization strategy is driven by the complex and changing operational environment – requiring AMD support from tactical through strategic operations – where advancements in ballistic missiles; manned and unmanned aircraft systems (UAS); rockets, artillery and mortars (RAM) threaten our forces and defended assets at home and abroad. The AMD portfolio

consists of required capabilities in the following areas: Ballistic Missile Defense; Counter UAS/ Cruise Missile Defense; Indirect Fire Protection; and command and control (C2).

As depicted in this chart, key imperatives in the AMD portfolio are common battle manager development and fielding, improvement and recapitalization of current systems and fielding capabilities.

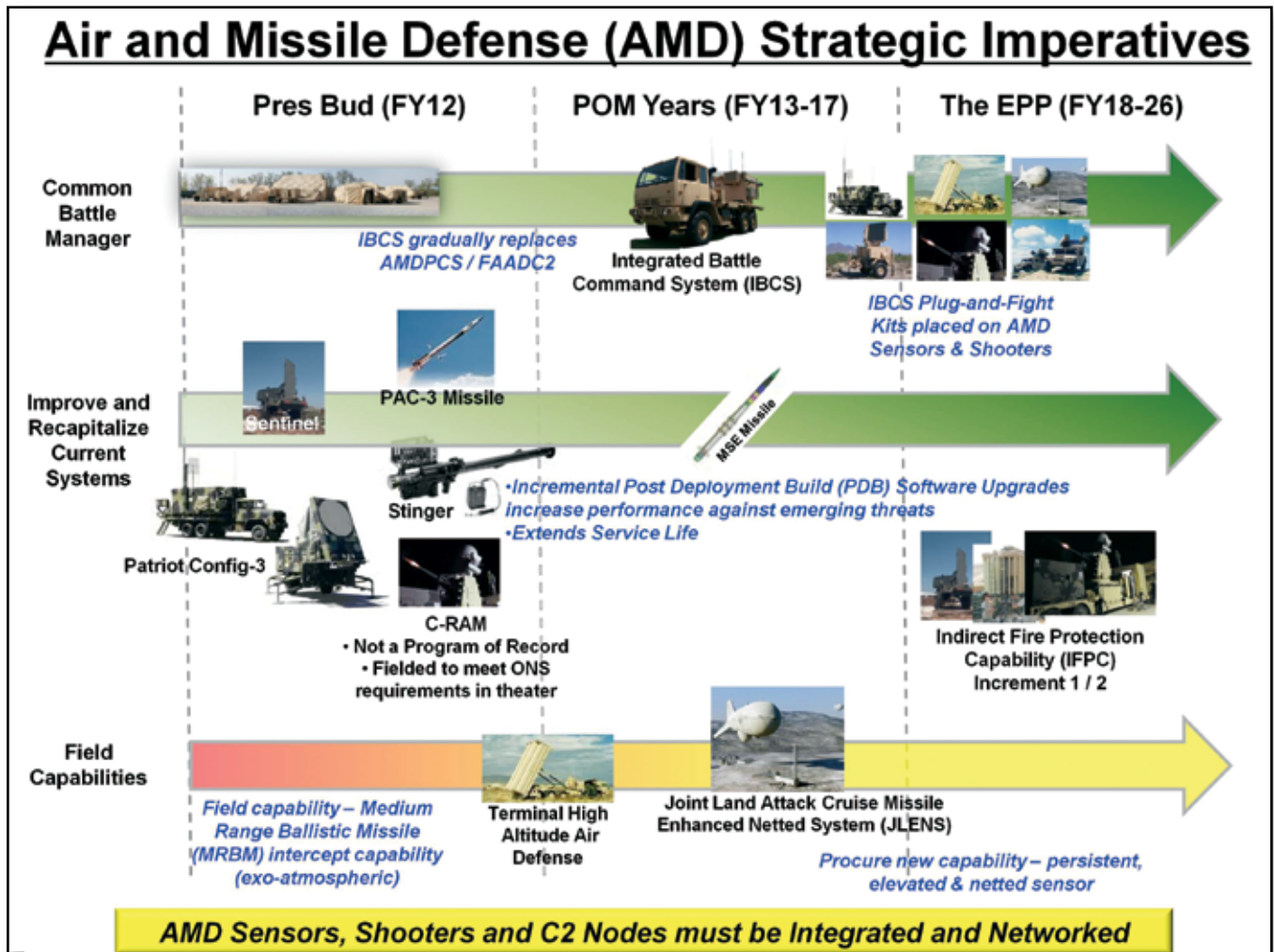


Figure 9. Protection (Air and Missile Defense) Portfolio

Given the trends and essential capabilities for future U.S. Army AMD systems articulated above, the following section outlines the modernization plan for each system in the AMD portfolio. Strategic modernization imperatives for AMD are:

- *Transform:* Develop, acquire and field a common battle manager/C2 node for all U.S. Army AMD forces.
 - Modular, open, net-centric system that is operationally scalable.
 - Fused/integrated Air Picture with fire control quality data.
 - Integrated sensors and weapons on the network through “plug and fight”.
- *Replace and Field:* Replace and field systems capable of meeting the threats of today and tomorrow.
 - Develop and field Joint Land Attack Cruise Missile Elevated and Netted Sensor (JLENS) – a new capability that provides persistent, elevated and netted sensor to counter low-level, low radar cross-section threats.
 - Field Terminal High-Altitude Area Defense (THAAD) – a new capability that provides robust and capable Medium Range Ballistic Missile (MRBM) intercept capability.
 - Develop and procure Indirect Fire Protection Capability (IFPC) – a new capability to provide effective full-spectrum protection for the maneuver force.
- *Improve:* Conduct improvement and recapitalization of current systems so they remain relevant and capable.
 - Improve Patriot missiles: procure next version Patriot Advanced Capability-3 (PAC-3) missile – Missile Segment Enhancement (MSE).
 - Incrementally modernize and upgrade performance of the Patriot system.
 - Increase capability to the Counter-Rockets, Artillery and Mortar (C-RAM) systems deployed in theater.
 - Conduct Service Life Extension Program (SLEP) and capability improvements on Stinger missiles to increase their counter-UAS (CUAS) capability.

Section II – Key Protection (Air and Missile Defense) Portfolio Accomplishments (FY10/11)

- Completed Patriot Pure Fleet in FY10 by upgrading the last of three older Patriot units to PAC-3 capability (launcher upgrades continue).
- Completed fielding of Grow the Army (GTA) battalion #14. The battalion activation ceremony was held on 4 March 2011. By the end of FY11, the Army will complete fielding of GTA battalion #15.
- In FY11, reset began for Patriot equipment operating in the CENTCOM area of responsibility. Prior to this initiative, assets had been in the field for 60 months without reset or recapitalization. The first battalion set of equipment will be complete by 3rd Quarter FY11.
- In FY11, the Army will procure 116 PAC-3 missiles and perform Patriot system upgrades and procured 17 Enhanced Launcher Electronics System (ELES) PAC-3 Missile Systems.
- By FY10, C-RAM provided Sense and Warn capabilities to 27 different sites in Iraq and was actively providing Sense and Warn

- capabilities to 16 different Operation New Dawn (OND) sites.
- By FY10, the Army provided C-RAM Intercept capabilities for six different sites in Iraq, and was actively providing Intercept capability at three different OND sites.
- In FY11, C-RAM will have established Sense and Warn capabilities at 22 OEF sites; supported the transition of OND C-RAM Sense and Warn capabilities to at least 5 Office of Security Cooperation – Iraq (OSC-I) sites and 6 Department of State (DoS) sites in Iraq; and begin redeploying 22 C-RAM intercept systems to CONUS for integration into new developed IFPC/Avenger Composite Battalions.
- In FY10, the Army successfully conducted Reset Induction/Reset fielding of 28 ADAM Cells and 26 FAAD C2 shelters.
- In FY10, the Army fielded a total of four Air and Missile Defense Planning and Control System-B (AMDPCS-Bs) to Patriot Battalions (Composite). This marks the first time AMDPCS has been fielded at the battalion level.
- In FY11, the Army successfully conducted Reset Induction/Reset Fielding of 39 ADAM Cells and 33 Forward Area Air Defense (FAAD) C2 shelters.
- In FY11, the Army will complete equipment modernization of all ADA BDE tactical operations centers (AMDPCS) (Active and National Guard).
- In FY11, the Air and Missile Defense Work Station (AMDWS) will transition to Windows Operating System.
- In FY11, the Army will field the first ADAM Cell to an Army Reserve unit.
- In FY11, the Army will complete Sensor C2 fielding to all division headquarters.
- In FY10, the Army conducted limited reset on a total of 18 Sentinel Antennae Transceiver groups – 14 in Iraq and 4 in Afghanistan, as well as fielded 2 Sentinel systems each to 101st Airborne Division (Air Assault), 10th Mountain Division, 25th Infantry Division (ID) and 1st Cavalry Division.
- In FY10, Sentinel completed the testing and fielding of Sentinel Software v5.8.1 to units deployed in area of responsibility (AOR) in January. This software implemented Air Breathing Threat mode into radar operations, improved Hovering Helicopter Algorithm, C-RAM Radar Element Subset (RES) interface and incorporated Defense Advanced GPS Receiver (DAGR) as alternate timing source.
- In FY10, the Army modernized six Basic Sentinel radars to Improved Sentinel radars into the National Capital Region (NCR) which improved operational capabilities that enhanced target range and classification and radar reliability/supportability via improved electronics.
- In FY11, the Sentinel Radar participated in development testing with IFPC to test newly developed software that will enhance fratricide prevention and improve integration into the Counter-Rocket, Artillery and Mortar (C-RAM) C2 architecture. Software will be released to the AOR and NCR in July and to the remainder of the fleet in September.

Section III – Key FY12 Air and Missile Defense Portfolio Investments

- \$662.2M to procure 88 PAC-3 missiles and 36 PAC-3 launcher upgrades.
- \$406.6M to meet U.S. financial obligations for Medium Enhanced Air Defense System (MEADS) in accordance with current Memorandum of Understanding.
- \$344.7M to continue JLENS Engineering and Manufacturing Development and provide FUE in FY13.
- \$163.9M to complete MSE live fire test/evaluation, ground system integration, corrective actions and complete initial production facilitization in FY14.
- \$118.0M to continue upgrading Patriot (modern man stations, radar digital processor and modern adjunct processor) and complete fielding to the force by FY17.
- \$270.6M continues Army Integrated Air and Missile Defense (AIAMD) development and enables initial deliveries by FY16.
- \$73.5M initiates improvements to the C-RAM systems deployed to theater and acceleration of IFPC Increment II MS-B by FY15.
- \$14.5M to begin SLEP and integrate capability improvements to field 850 Stinger missiles by FY15.

PROTECTION PORTFOLIO

Section I – Overview

The Protection Modernization Plan provides a strategy for the procurement of Base Defense, Chemical, Biological, Radiological and Nuclear (CBRN), Explosive Ordnance Disposal (EOD) and Civil Affairs equipment that is effective, affordable and equips the warfighter with the best capabilities for protection in support of Full-Spectrum Operations. Additionally, the Protection modernization strategy includes engineering equipping functions that assure mobility, enhance protection and enable expeditionary logistics and build capacity. Current modernization efforts include the provision for new and enhanced materiel solutions that will impact force protection warfighting functions in current and future years. Figures 10 and 11 display a projection of selected mature capabilities from current, near- and extended-term perspectives.

Section II – Key FY10-11 Protection Portfolio Accomplishments

- In FY10, the Army fielded over 404 Armored Security Vehicles (ASV) to units. This equipped the Active Component with 87 percent (921/1,056) of its requirement. The Army also retrograded up to 900 ASVs from theater in preparation for a Reset program projected to begin in FY11.
- In FY10, the Army fielded 21 Biological Integrated Detection Systems (BIDS) to 1st and 2nd Platoons of the 354th Chemical Company and 1st Platoon of the 307th Chemical Company. The BIDS are Critical Dual Use (CDU) items that provide increased biological detection in contingency operations as well as in homeland defense Federal Emergency Management Agency (FEMA) regions IV and IX.
- In FY10, the Army provided three Water Well Drilling rigs to support a U.S. Forces Afghanistan Operational Needs Statement (ONS) providing a critical water supply for U.S. forces without interrupting the Afghan water supply.
- In FY10, the Army fielded 201 Skid-Steer Loaders, a new system providing air-droppable, lift and loading capabilities supporting various construction missions.
- In FY11, the Army will field 42 additional BIDS. These systems will complete the final three platoons of the 307th Chemical Company (21 systems) and one platoon for the 308th Chemical Company (7 systems) in FEMA region IX and will add two platoons of capability to the 365th Chemical Company (14 systems) in Salt Lake City, Utah. The BIDS are fully deployable CDU systems that can be used for contingency operations as well as homeland defense.
- In FY11, the Army will begin a Reset program for 900 ASVs retrograded from Operations Iraqi Freedom and New Dawn. Distribution of reset ASVs as well as ASVs from new production will complete the Active Component requirement of 1,062 ASVs and increase the equipment on-hand (EOH) readiness of the National Guard from 21 percent to 60 percent (819/1,356) and the Army Reserve from 42 percent to 70 percent (252/360).
- In FY11, the Army will provide 476 Urban Operations Sets to platoons and squads to enable assured mobility in the urban environment.
- In FY11, the Army fielded 200 Vehicle Sensor Systems, 122 Husky Mounted Detection Systems, 1,934 SPARK II Rollers and 46 Counter Improvised Explosive Device (CIED) Interrogation Arms in support of Route Clearance Packages. The Army projects to field HYEX Type I excavators to provide 26 Multi-Role Bridge Companies with an improved deep excavation capability.

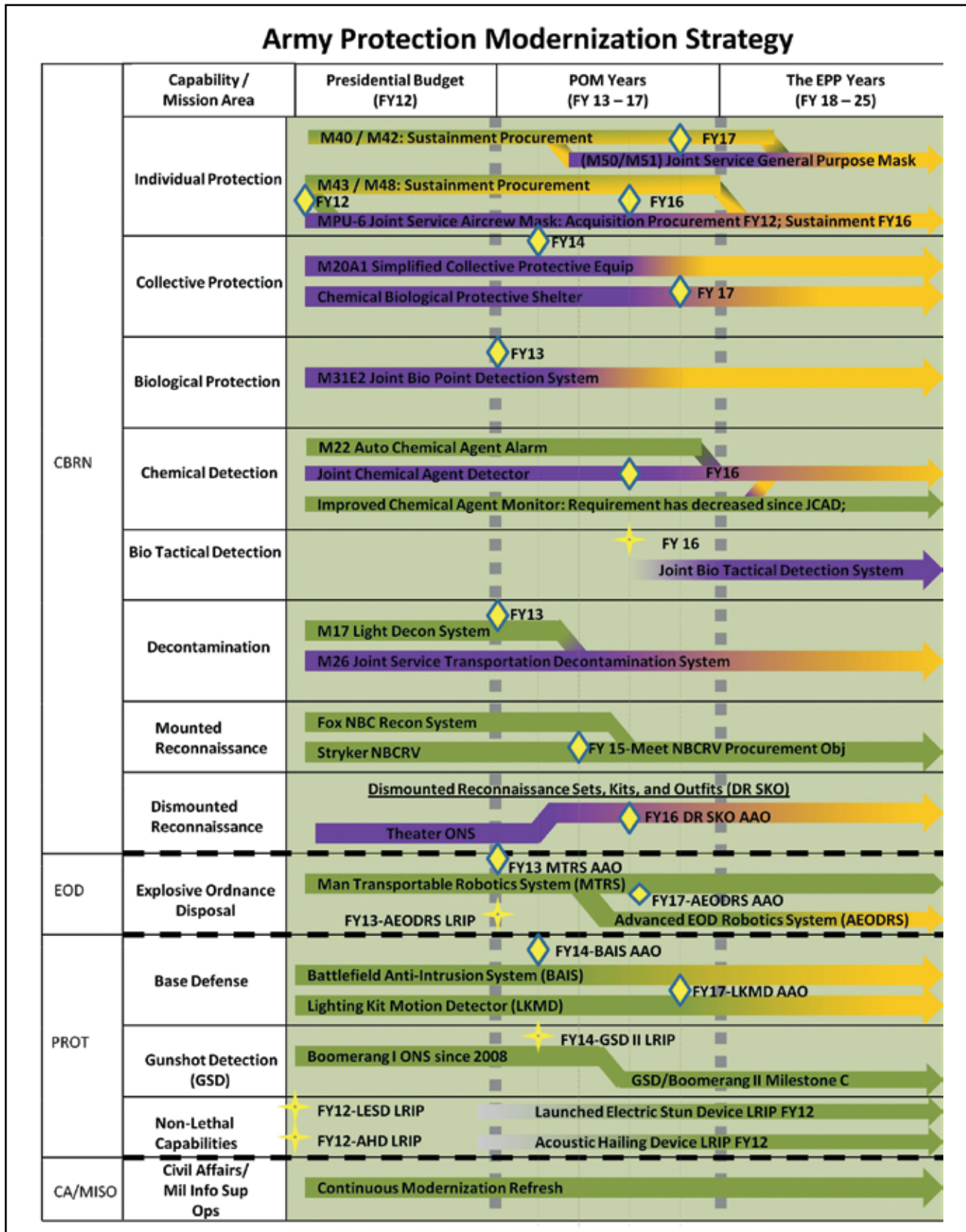


Figure 10. Army Protection Portfolio

Protection Modernization Strategy

Capability / Mission Area	Presidential Budget (FY12)	POM Years (FY 13-17)	The EPP Years (FY 18 - 25)
Assure Mobility	Route Clearance Vehicles	Buffalo: Recap 10 CC by FY15	→
		Buffalo: Recap 10 CC by FY 15	→
		Husky: Procure for 18 CC by FY12, Recap 10 by FY15	→
		Panther: Recap 18 CCs and 63 EOD CO's by FY16	→
	Line of Communication Bridge	LOCB: Procure 83 sets for 26 Bridge Cos/APS by FY16	→
	Improved Ribbon Bridge	IRB: Procure 1582 sets for 26 MRCBs by FY14	→
	Dry Support Bridge	DSB: Procure 108 sets (100%) of the total RQMT by FY14	→
Enhance Protection	Joint Assault Bridge	JAB: Begin production in FY15	→
	Assault Breacher Vehicle	ABV: Procure 159 sets for 24 HBCTs	→
	Spider	Spider: Procure 915 Increment I systems; begin Increment II development	→
Enable Expeditionary Logistics and Build Capacity	Dozer	Dozer: Procure 97% of 1329 RQMT through FY16	→
	Scraper	Scraper: Procures 42% of 747 RQMT through FY16	→
	Heavy Crane	Heavy Crane: Procure 37% of 74 RQMT through FY16	→
	ENFIRE	Partially fund 65% of the 1749 RQMT through FY16	→

Legend

	Projected AAO or Army Procurement Objective (APO)		Army Procurement
	Projected AAO		Joint CDBP Procurement
	Projected Low-Rate Initial Production (LRIP)		Transition to sustainment
	Pre Milestone C		Program merger or divestiture

Figure 11. Army Protection Portfolio

Section III – Key FY12 Protection Portfolio Investments

- Battlefield Anti-Intrusion System (BAIS): Total funding of \$5.3M procures 1,344 systems equipping 16 BCT equivalents and select Combat Support (CS) units at Echelons Above Brigade (EAB).
- Lighting Kit Motion Detector (LKMD): Total funding of \$34.2M procures 7,773 systems and equips 73 BCT equivalents and select CS units at EAB.
- CBRN Weapons of Mass Destruction-Elimination (WMD-E): Base funding of \$2.8M will help to establish the National Technical Nuclear Forensics-Ground Sampling Mission (NTNF-GSM) capability for Nuclear Disablement Teams.
- EOD Transmitter Countermeasure (AN/PLT-5): Base funding of \$5.8M will provide 135 systems to field to 15 EOD companies at EAB.
- Civil Affairs and Military Information Support Operations (CA/MISO): Base funding of \$6.3M procures 119 Mission Planning Kits, 44 Next Generation Loud Speakers and 1 Psychological Operations (PSYOP) Print System which equips 25 CA battalions, 3 tactical PSYOP companies and 1 PSYOP group.
- Armored Breacher Vehicle: Total funding of \$100M to procure 19 systems to field to 4 companies.
- Joint Assault Bridge (JAB): \$50M RDTE to develop prototypes for testing.
- Explosive Hazard Defeat Capability:
 - Recapitalization: \$360.7M to prepare program of record systems for fielding.
 - RDTE: \$113.8M to fund next generation of standoff detection, neutralization and clearance systems.
- Scraper: \$21M to procure 30 systems to field to Army Components 1 and 2.
- D7 Dozer: \$59.5M to procure 172 systems for fielding to all Army Components.
- Instrument Set, Reconnaissance and Surveying (ENFIRE): \$7.5M to procure 36 systems.

SUSTAINMENT (TRANSPORT) PORTFOLIO

Section I – Overview

The Sustainment (Transport) portfolio consists of Tactical Wheeled Vehicles (TWV) and Watercraft.

The TWV portfolio consists of the Light Tactical Vehicle (LTV), Medium Tactical Vehicle (MTV) and Heavy Tactical Vehicle (HTV) fleets and the Mine Resistant Ambush Protected (MRAP) family of vehicles. These TWVs are employed in many roles, including (in part): armament carriers, logistics vehicles, ambulances and command and control (C2) vehicles. The TWVs also serve as a platform for a wide variety of other Army systems. The Army's vision of the truck has evolved in the past decade from an unprotected motorized transport to a protected system capable of operating in a full-spectrum,

non-linear battlefield. To meet the threat on today's battlefields, trucks must now be armored, have the additional capacity and power to carry that armor and be outfitted with a wide variety of Command, Control, Communications, Computers, Intelligence, Surveillance and Reconnaissance (C4ISR) equipment and other mission equipment such as mine rollers and the Common Remotely Operated Weapon Station (CROWS).

The Watercraft portfolio includes the Harbormaster Command and Control Center (HCCC), Logistic Support Vessel (LSV) and Landing Craft Utility (LCU). The HCCC provides C2 tools and sensors to manage watercraft assets. The watercraft fleet consists of the LSV and LCU which both provide transport of combat vehicles and sustainment cargo in various

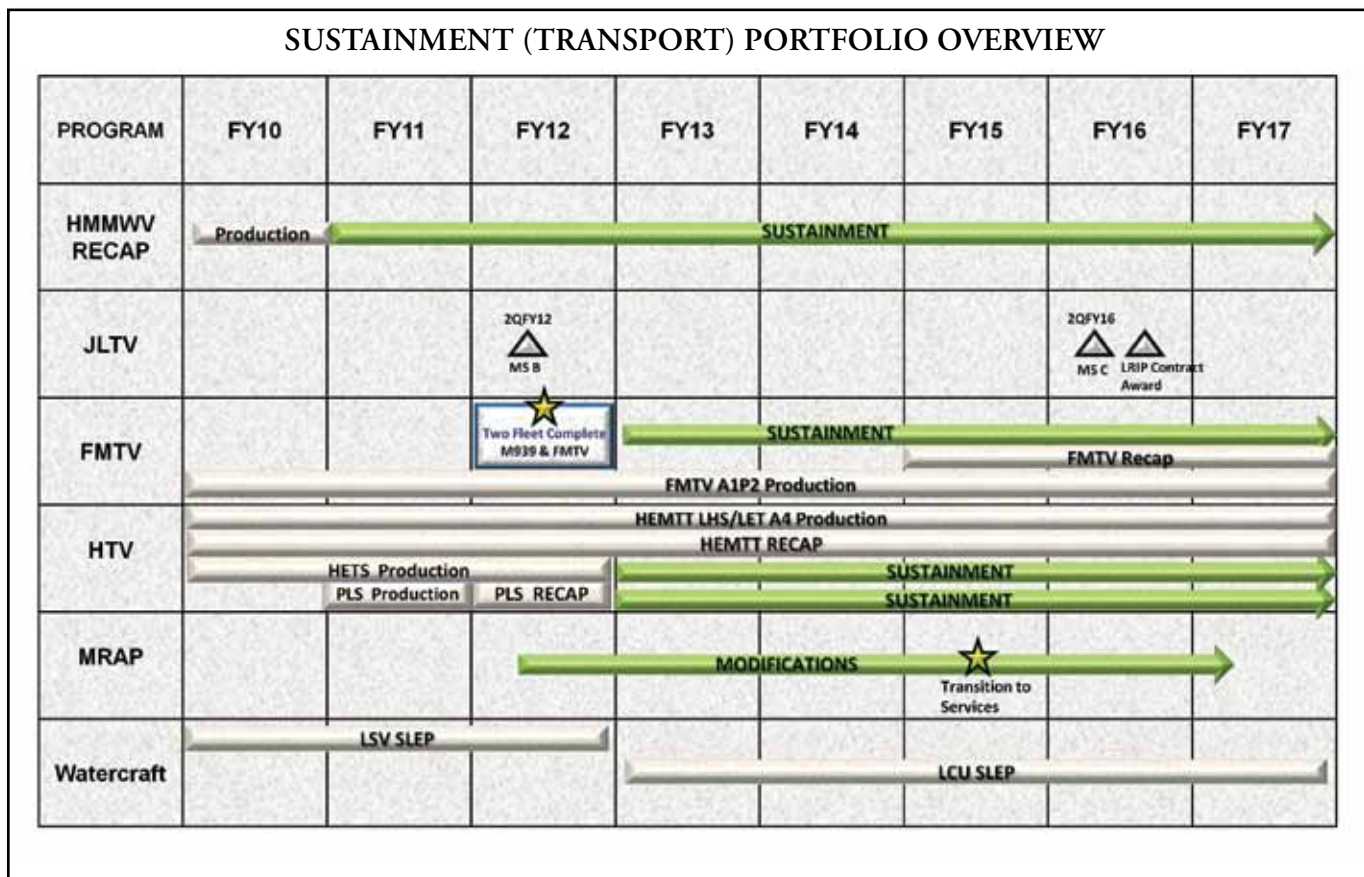


Figure 12. Sustainment (Transport) Portfolio

waterways. The LSV Service Life Extension Program (SLEP) serves to revitalize aging vessels with new and modernized parts.

As depicted in Figure 12, key objectives and decision points in the Tactical Wheeled portfolio include:

- Fully funding Joint Light Tactical Vehicle (JLTV) development and fielding.
- Sufficient Heavy Expanded Mobility Tactical Truck (HEMTT) Load Handling System (LHS)/Light Equipment Transporter (LET) production to fill fleet shortages.
- Modernization of the legacy Medium Tactical Vehicle fleet by replacing M939s with Family of Medium Tactical Vehicles (FMTV).
- Integration of the MRAP fleet as an Army program of record.
- Sustainment of the High Mobility Multipurpose Wheeled Vehicle (HMMWV), HEMTT and Palletized Load System (PLS) fleets through recapitalization (RECAP).
- Sustainment of six LSV vessels through a SLEP modernization to extend their useful life with new/upgraded C4ISR, Force Protection and engineering equipment.
- In FY10 and the beginning of FY11, the entire fleet (34) of Landing Craft Utility (LCU-2000) has been outfitted with the latest Force Protection Upgrades with improved weapon mounts that can accommodate a variety of crew served weapons vice only the M2HB .50 Caliber Machine Gun.
- In FY11, the Army will field in excess of 9,500 TWVs (LTV, MTV and HTV fleets).
- In FY11, the Army will complete the divestiture of legacy MTVs (M35 and M800 series).
- In FY11, the Army will procure over 2,900 trucks and 1,300 trailers within the FMTV. Within the Family of Heavy Tactical Vehicles (FHTV), the Army will procure over 9,500 trucks, trailers and other associated systems.
- In FY11, the installation of the C4ISR upgrades to the entire LCU-2000 fleet was completed.

Section II – Key Sustainment (Transport) Portfolio Accomplishments (FY10/11)

- In FY10, fielded in excess of 5,000 Mine Resistant Ambush Protected All-Terrain Vehicle (M-ATVs) in support of OEF.
- In FY10, completed the depot-level repair (reset) of nearly 2,000 TWVs and the recapitalization of over 6,000 TWVs.

**Section III – Key FY12 Sustainment (Transport)
Portfolio Investments**

- \$172M for JLTV Engineering and Manufacturing Development.
- \$46M to procure 121 HEMTT LHSs to fill unit shortages.
- \$371M to procure 1,038 HEMTT LETs to replace the M916 Tractor in Engineer units.
- \$384M to procure 1,478 FMTV A1P2s to replace obsolete M35 2½T and M809-series and aging M939-series 5T vehicles.
- \$143M to support MRAP modifications on select variants to meet key performance parameters.
- \$157M to recapitalize 413 HEMTTs into armor capable configuration.
- \$252M to recapitalize 588 PLSs into armor capable configuration.
- \$23M to complete LSV SLEP on hull numbers LSV 1 and LSV 2, thus completing the six vessel SLEP program.

SUSTAINMENT PORTFOLIO

Section I – Overview

The Sustainment portfolio consists of the following programs: Modular Fuel System (MFS), Unit Water Pod System (Camel), Load Handling System Compatible Water Tank Rack System (Hippo), Joint Precision Airdrop Systems (JPADS), All-Terrain Lifter Army System (ATLAS), 5K Light Capacity Rough Terrain (LCRT) Forklift, Standard Automotive Tool Set (SATS), Next Generation Automatic Test System (NGATS), Maintenance Support Device (MSD) Version 3, Hydraulic System Test and Repair Unit (HSTRU) MX3, Assault Kitchen (AK) and Multi-Temperature Refrigerated Container System (MTRCS). An overview of each system is below.

- **Modular Fuel System (MFS).** Provides the ability to rapidly establish a fuel distribution and storage capability at any location. It consists of two each 600 GPM pumps/filtration modules and 14 each 2500 gallon Tank Rack Modules (TRM). The MFS TRM, when attached with a HEMTT Tanker, will provide a mobile fuel storage capability for the BCT as well as other brigade units.
- **Unit Water Pod System (Camel).** Provides the Army with the capability to receive, store and dispense potable water to units at all echelons throughout the battlefield. The Camel system consists of an 800 gallon storage capacity tank, heater unit and M1095 MTV Trailer. The Camel replaces the M107, M149 and M1112 series Water Trailers (Water Buffalo).
- **Load Handling System Compatible Water Tank Rack System (Hippo).** Consists of a 2,000-gal, ISO-framed, potable water tank rack. The Hippo will replace the Semi-trailer Mounted Fabric Tank (SMFT) and the majority of the Forward Area Water Point Supply Systems (FAWPSS).
- **10K Joint Precision Airdrop Systems (JPADS).** A high altitude capable, autonomously operated airdrop capability with significantly increased accuracy to a ground location.
- **All-Terrain Lifter Army System (ATLAS).** A 10,000 pound capacity capable of handling fully loaded 463L Air Force pallets. The ATLAS has a variable reach boom for removing items from 20 foot containers and is capable of deploying by air. It replaces the legacy 6K and 10K forklifts.
- **5K Light Capacity Rough Terrain (LCRT) Forklift.** Is C-130 transportable and CH-47 sling-load capable. It fulfills the 4K forklift requirements such as lift capacity, mobility and fording capabilities. It replaces the 4K Rough Terrain Forklift.
- **Standard Automotive Tool Set (SATS).** A base tool set of the most frequently required automotive maintenance tools that can be augmented by modular packages, which are tailored to suit unit mission requirements and organizational design. The SATS replaces Common Number One/Two Tool Sets.
- **Next Generation Automatic Test System (NGATS).** A highly mobile, rapidly deployable, general purpose reconfigurable automatic test system that directly supports testing and screening of Army weapon systems to maintain their readiness to shoot, move and communicate.
- **Maintenance Support Device (MSD) Version 3.** The latest generation, rugged, compact, lightweight, man-portable general-purpose automatic tester used to verify the operational status of weapon systems and to troubleshoot via the Interactive Electronic Technical Manuals (IETM) to isolate faults and determine recommended solutions. The MSD software is used as an uploader/verifier

to restore or provide new software to weapon systems. It supports more than 50 current and future weapon systems.

- **Hydraulic System Test and Repair Unit (HSTRU) MX3.** A robust hydraulic line and hose repair system capable of supporting three trained ordnance/engineers.
- **Assault Kitchen (AK).** The AK is integrated into a HMMWV trailer and cooks and serves unitized group rations. The AK is the solution to fill the existing field feeding shortages and replaces the Kitchen Company Level Field Feeding (KCLFF).
- **Multi-Temperature Refrigerated Container System (MTRCS).** A mobile, multi-

temperature refrigeration system that will provide the capability for transportation and storage of frozen, chilled or semi-perishable ration components simultaneously on a single platform. The MTRCS will replace the current single temperature 8'x8'x20' refrigerated container.

Section II – Key Sustainment Portfolio Accomplishments (FY10/11)

- In FY10, the Army fielded 100 percent of the Forward Repair System (FRS) requirements (1,967). The FRS is highly mobile maintenance system that improves efficiency of the maintenance personnel by reducing the wait time for equipment repair.

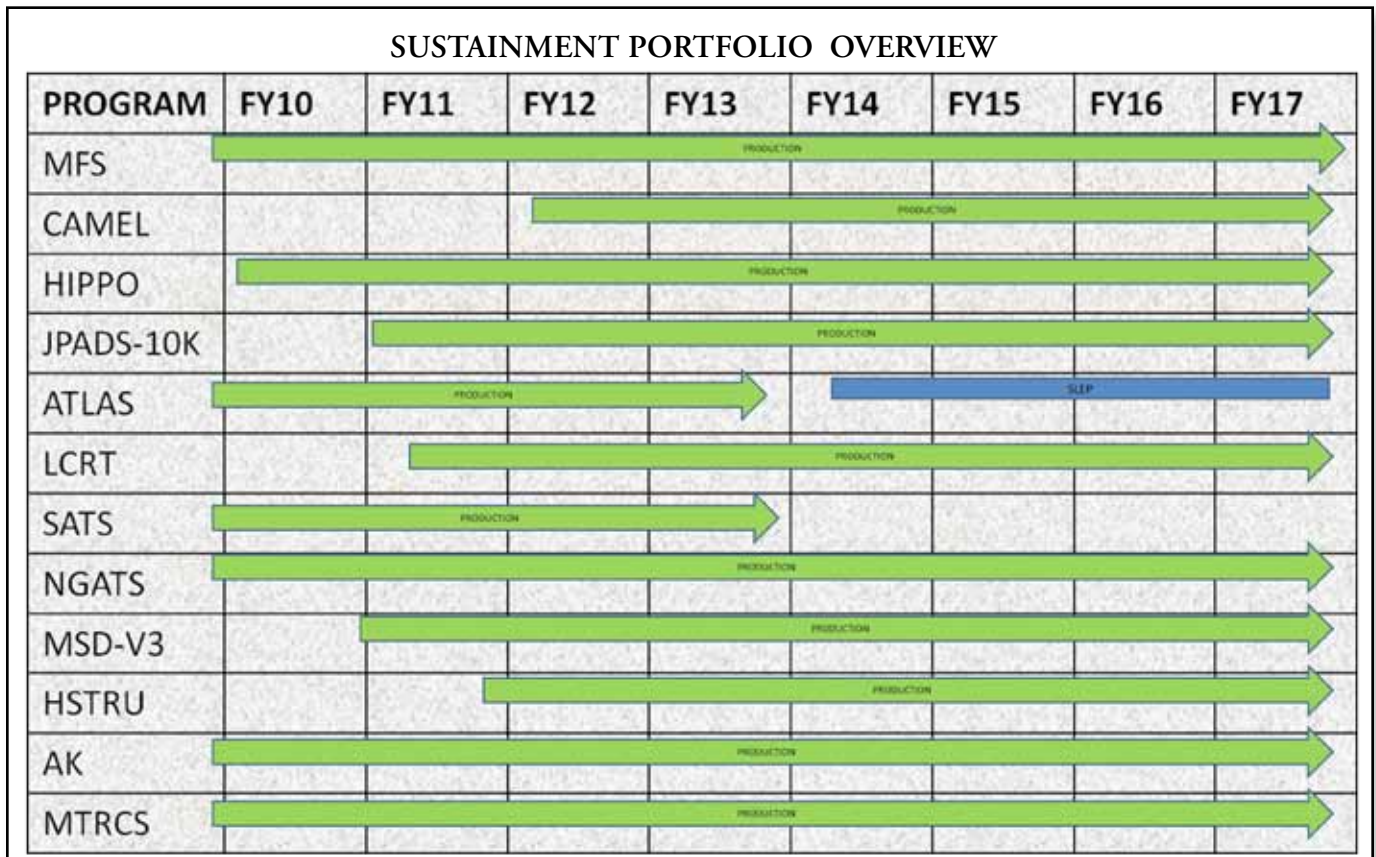


Figure 13. Sustainment Portfolio

- Delivered 84 10K ATLAS Forklifts to Afghanistan in 2010 to equip surge forces to increase the theater's mobility.
- In FY10/11, the Army fielded 100 percent of the Mobile Integrated Remains Collection System (MIRCS) requirements (174). The system is used to enhance the Army's Mortuary Affairs mission capabilities across the spectrum for efficient administrative processing, handling, storage and preparatory shipment of remains and processing personal effects in a safe working facility enabling and optimizing support anywhere in the world.
- In FY10/11, the Army fielded 17 800K gallon Fuel System Supply Points (FSSP) and 16 300K gallon FSSPs to deployed forces in support of the surge. The FSSP provides the Army the ability to receive, store and issue large quantities of fuel anywhere in the world regardless of location infrastructure.
- In FY10/11, the Army completed New Equipment Training and Fielding of Medical Communications for Combat Casualty Care (MC4) to 6 Combat Brigades and Medical teams in 180+ other units (Military Police, Engineers, Aviation and other Combat Service Support (CSS) units) in support of deployment to include and planned upgrades to the MC4 software to 3,500+ systems deployed worldwide. The MC4 is Commercial Off-the-Shelf (COTS) hardware consisting of seven Line Item Numbers (LINs) used to track the medical care of deployed service members electronically.
- In FY11, begin fielding nine Modular Fuel Systems (MFS) for the nine SBCTs. The MFS provides SBCTs the ability to rapidly establish a fuel distribution and storage capability at any location without construction equipment or material handling equipment.
- By the end of 2011, the Army will have fielded 100 percent of the 2K Joint Precision Airdrop Systems (JPADS) requirements (1,548). The 2K JPADS provides rapid, precise high-altitude delivery capabilities to forces without the use of ground transportation.

Section III – Key FY12 Sustainment Portfolio Investments

- \$31.2M to procure 185 Tank Rack Modules and 18 Pump Rack Modules for the Army.
- \$17.6M to procure 141 Camels to replace Water Buffaloes in 8 BCTs and \$23.2M to procure 146 Hippos to replace obsolete Semi-Trailer Mounted Fabric Tanks (SMFT) and Forward Area Water Point Supply Systems (FAWPSS) in 9 BCTs.
- \$16.2M to procure 315 2K JPADS and 77 10K JPADS to support OEF.
- \$10.9M to procure 104 5K forklifts to replace legacy 4K forklifts and \$21.9M to procure 120 10K forklifts to fill Modified Table of Organization and Equipment (MTOE) shortages in 17 BCTs.
- \$16.3M to procure 4 NGATS to replace legacy Direct Support Electrical System Test Sets (DSESTS) in 1BCT, \$33.1M to procure 1,129 MSDs V3 to replace obsolete systems in 7 BCTs and \$4.5M to procure 39 HSTRU to replace obsolete systems in 6 BCTs.
- \$4.7M to procure 74 AKs to replace legacy systems in Special Forces and IBCTs and \$22.1M to procure 96 MTRCS to replace legacy systems.

SCIENCE & TECHNOLOGY PROGRAM

SCIENCE AND TECHNOLOGY PROGRAM

The Army Science and Technology (S&T) strategy supports the Army’s goals to restore balance between current and future demands by fostering invention, innovation and demonstration of technologies for the current and future warfighter. Our vision is to provide enabling capabilities that Empower, Unburden and Protect our Soldiers in an environment of persistent conflict.

The Army S&T program comprises four primary domains: (1) Air to include technologies for manned and unmanned rotary wing systems, air delivered lethality and air platform safety, survivability and protection; (2) Soldier and Small Combat Unit to include technologies for Soldier and Small Combat Unit lethality, protection, equipment, shelters, clothing, food, safety, training and medical technologies as well as initiatives to address Soldier power and to lighten the Soldier’s load; (3) Ground to include technologies for manned and unmanned ground platforms and mobility systems, ground-based sensors and weapons systems, active and passive protection systems and deployable small base protection; (4)

Command, Control and Communications (C3) to include technologies for ground, air and Soldier communications devices and networks, air/space sensor and network payloads and Mission Command (MC).

Each domain is managed as a portfolio of investments in: (1) far-term, basic research for discovery and understanding of phenomena; (2) mid-term, applied research for laboratory concept demonstrations; and (3) near-term, advanced technology development for demonstrations in relevant environments outside the laboratory. Each draws from complementary efforts in other portfolios, and each also benefits from the Army’s investments in manufacturing technology.

The Army has dedicated \$2.3B to these efforts in FY12 building upon priorities reflected in previous budget requests and with modest increases for the development of deployable force protection technologies, in-house/laboratory/university basic research, infrared focal plane arrays and armor materials.

Science and Technology Program	(\$M)
Basic Research (6.1)	437
Applied Research (6.2)	869
Advanced Technology Development (6.3)	977
Total	2,283

Figure 14. Science and Technology Program

CAPABILITY FIELDING AND DISTRIBUTION

CAPABILITY FIELDING AND DISTRIBUTION

The Army aligns capabilities fielding and distribution through the Army Equipping Strategy (https://www.g8.army.mil/pdf/Army_Equipping_Strategy.pdf), the overarching Army Modernization Strategy and refines Army Commands' (ACOM) unit equipping guidance during the semi-annual Army Enterprise Equipping and Reuse Conference (AEERC).

The Army's Equipping Strategy is nested with the Army Modernization Strategy (AMS) and focuses on achieving the goals of ensuring that all Army units are "Equipped to Mission" and building operational depth. Three lines of operation in the strategy are designed to present, describe and organize the efforts the Army will use to achieve these goals. First, unit-based equipping goals establish mission requirements in each phase of ARFORGEN. Next, the Army uses equipment sets and other policies to manage friction inherent in an environment of persistent conflict. Finally, the Army moves from Equipping Balance into a future of Building Enduring Readiness with higher levels of readiness and depth while also modernizing. These lines of operation establish the primary vision and guidelines. The Army has operationalized these concepts, in part through the tremendous work of the Army's Materiel and Readiness Core Enterprises, and in annually updated annexes within the Army Campaign Plan. Most importantly, we will institutionalize the culture of equipment responsibility and accountability in an ARFORGEN-based Army.

The AEERC provides a holistic and strategic venue to review the Army's equipping posture and policies with the objective of influencing and improving the Army's Equipping Readiness. One of the AEERC's goals is to facilitate "Enterprise" approaches by transferring specific equipping functions to the Readiness and Materiel Enterprises

and providing comparative analysis to senior Army leadership. In addition to refining the 21-month distribution plan, the AEERC's main focus is to resolve strategic equipping issues by addressing a variety of Army equipping special topics focusing on strategic policy issues. The AEERC is critical to the Army leadership's efforts to rebalance the force while continuing to support the Army's four imperatives: Sustain, Prepare, Reset and Transform.

The Army has made tremendous progress in establishing a process to implement the Commission on the National Guard and Reserves recommendation regarding improving transparency and accountability of equipment programmed for the Reserve Components. The Army provides quarterly reports to OSD on the funding and delivery of weapons systems and equipment and is institutionalizing improvements through new policies, procedures and automated business intelligence systems. The AEERC and the institution of quarterly updates provides a valuable venue for the reconciliation of equipment prioritization for the three Army components and adjustments to schedules or quantities are vetted with all the stakeholders to ensure we continue to optimize readiness for the Army.

The Army measures success by achieving overall Army readiness while supporting a cost conscious culture. As we move toward the goal of increased readiness, Soldiers and commanders should have clear expectations regarding what levels of equipment they will receive and when they will receive it. Commands and staffs should have a clear understanding of how to allocate equipment using the most efficient and effective means to support Army training and readiness goals. Together, and with the Army's support, this strategy will ensure that the American Soldier remains the best equipped warrior in the world.

CONCLUSION

CONCLUSION

Since we cannot know with any certainty what future operating environment and opponents we will face, our Army's strategy is to develop and field a versatile and affordable mix of equipment to allow Soldiers and units to succeed in full-spectrum operations today and tomorrow and to maintain our decisive advantage over any enemy we face. This strategy takes a balanced and affordable approach by using ARFORGEN equipping to improve or maintain core capabilities, incremental modernization to deliver new and improved capabilities and integrated portfolios to align our equipment modernization communities.

In preparing the FY12 President's Budget Request, the Army has made difficult decisions and not resourced promising and needed technologies or capabilities that did not fit within current and projected resource limitations. The FY12 equipment budget request reflects the Army's priority materiel programs. The Army Modernization Plan 2012 strategy-based priorities for modernized equipment are to (1) Network the Force, (2) Deter and Defeat hybrid threats and (3) Protect and Empower Soldiers.

The FY12 budget request reflects the priority equipment necessary for our Soldiers to succeed in the operations in which we are currently engaged and to prepare for future missions in a complex and unpredictable future.

ACRONYM GLOSSARY

ACRONYM GLOSSARY

AAO	Army Acquisition Objective
AAS	Armed Aerial Scout
ABCS	Army Battle Command Systems
ABV	Assault Breach Vehicle
ACOM	Army Command
ADAM	Air Defense Airspace Management (cell)
AEERC	Army Enterprise Equipping and Reuse Conference
AEODRS	Advanced Explosive Ordnance Disposal Robotic System
AFATDS	Advanced Field Artillery Tactical Data System
AGSE	Aviation Ground Support Equipment
AHB	Attack Helicopter Battalion
AHD	Acoustic Hailing Device
AIAMD	Army Integrated Air and Missile Defense
AIM SA	Abrams Integrated Management Situational Awareness
AK	Assault Kitchen
AKMS	Army Key Management System
AMD	Air and Missile Defense
AMDPCS	Air and Missile Defense Planning and Control System
AMDWS	Air and Missile Defense Work Station
AMS	Army Modernization Strategy
AOA	Analysis of Alternatives
APA	Aircraft Procurement, Army
APC	Area Processing Center
APO	Army Procurement Objective
ARB	Attack Reconnaissance Battalion
ARFORGEN	Army Force Generation
ARGCS	Agile Rapid Global Combat Support
ARL	Airborne Reconnaissance Low
ARNG	Army National Guard
ASCC	Army Service Component Command
ASE	Aircraft Survivability Equipment
ASV	Armored Security Vehicle
ATACMS	Army Tactical Missile System
ATC	Air Traffic Control
ATIRCM	Advanced Threat Infrared Countermeasures
ATLAS	All-Terrain Lifter Army System
ATNAVICS	Air Traffic Navigation, Integration and Coordination System
AW	Alternative Warhead
BAIS	Battlefield Anti-Intrusion System
BCCS	Battle Command Common Services

BCS3	Battle Command Sustainment Support System
BCT	Brigade Combat Team
BFIST	Bradley Fire Support Team (vehicle)
BFT	Blue Force Tracker
BFV	Bradley Fighting Vehicle
BI, BII, BIII	Block I, II, III
BIDS	Biological Integrated Detection System
C2	Command and Control
C3	Command, Control, Communications
C4I	Command, Control, Communications, Computers and Intelligence
C4ISR	Command, Control, Communications, Computers, Intelligence, Surveillance and Reconnaissance
CA/MISO	Civil Affairs and Military Information Support Operations
CAB	Combat Aviation Brigade
CAISI	Combat-Service-Support Automated Information Systems Interface
Cal	Caliber
CASUP	Cockpit And Sensor Upgrade Program
CBDP	Chemical Biological Defense Program
CBRN	Chemical, Biological, Radiological and Nuclear
CBRNE	Chemical, Biological, Radiological, Nuclear, high-yield Explosives
CDU	Critical Dual Use
CENTCOM	Central Command
CENTRIX-ISAF	Combined Enterprise Regional Information Exchange – International Security Assistance Force
CHARCS	Counterintelligence and Human Intelligence Automated Reporting and Collection System
CIED	Counter Improvised Explosive Device
CIRCM	Common Infrared Countermeasures
COE	Common Operating Environment
CoIST	Company Intelligence Support Team
COMSEC	Communication Security
COP	Common Operational Picture
COTS	Commercial Off-the-Shelf
CPR	Capability Portfolio Review
CPOF	Command Post of the Future
C-RAM	Counter-Rockets, Artillery and Mortars
CROWS	Common Remotely Operated Weapon Station
CS	Combat Support
CSP	Common Sensor Payload
CSS	Combat Service Support
CUAS	Counter Unmanned Aircraft System
DAGR	Defense Advanced GPS Receiver
DCGS-A	Distributed Common Ground System – Army

DCGSS	Distributed Common Ground System – Surface System
DDL	Digital Data Link
DE	DCGS-A Enabled
Decon	Decontamination
DoS	Department of State
DPICM	Dual Purpose Improved Conventional Munition
DR SKO	Dismounted Reconnaissance Sets, Kits and Outfits
DSB	Dry Support Bridge
DSESTS	Direct Support Electrical System Test Set
DTSS	Digital Topographic Support System
EAB	Echelons Above Brigade
EAC	Echelons Above Corps
ELES	Enhanced Launcher Electronics System
EMARSS	Enhanced Medium Altitude Reconnaissance Surveillance System
EMD	Engineering and Manufacturing Development
ENFIRE	Instrument Set, Reconnaissance and Surveying
EO/IR	Electro-optical/Infrared
EOD	Explosive Ordnance Disposal
EOH	Equipment On Hand
EPLRS	Enhanced Position Location and Reporting System (radio)
ERMP	Extended Range Multi-Purpose (Unmanned Aerial System) (Gray Eagle)
ESB	Expeditionary Signal Battalion
FA	Field Artillery
FAAD C2	Forward Area Air Defense Command and Control
FAASV	Field Artillery Ammunition Supply Vehicle
FAWPSS	Forward Area Water Point Supply System
FBCB2	Force XXI Battle Command Brigade-and-Below
FEMA	Federal Emergency Management Agency
FHTV	Family of Heavy Tactical Vehicles
FiB	Fires Brigade
FMC	Fully Mission Capable
FMTV	Family of Medium Tactical Vehicles
FMV	Full Motion Video
FoV	Family of Vehicles
FRHN	Fixed Regional Hub Nodes
FRP	Full Rate Production
FRS	Forward Repair System
FS3	Fire Support Sensor System
FSSP	Fuel System Supply Point
FUE	First Unit Equipped

FY	Fiscal Year
GATM	Global Air Traffic Management
GBS	Global Broadcast System
GCSS-Army	Global Combat Support System – Army
GCV	Ground Combat Vehicle
GMLRS	Guided Multiple Launch Rocket System
GMR	Ground Mobile Radio
GMTI	Ground Moving Target Indicator
GNEC	Global Network Enterprise Construct
GPS	Global Positioning System
GRCS	Guardrail Common Sensor
GRRIP	Global Rapid Response Intelligence Package
GSAB	General Support Aviation Battalion
GSD	Gun Shot Detection
GTA	Grow the Army
HCCC	Harbormaster Command and Control Center
HEMTT	Heavy Expanded Mobility Tactical Truck
HEMTT-LHS	Heavy Expanded Mobility Tactical Truck – Load Handling System
HF	High Frequency
HIMARS	High Mobility Artillery Rocket System
HMMWV	High Mobility Multipurpose Wheeled Vehicle
HMS	Handheld, Manpack and Small Form Fit (radios)
HSTRU	Hydraulic System Test and Repair Unit
HTV	Heavy Tactical Vehicle
HUMINT	Human Intelligence
HYEX	Hydraulic Excavator
IBCS	Integrated Air and Missile Defense – Battle Command System
IBCT	Infantry Brigade Combat Team
ID	Infantry Division
IED	Improvised Explosive Device
IETM	Interactive Electronic Technical Manuals
IFPC	Indirect Fire Protection Capability
IFTE	Integrated Family of Test Equipment
IFV	Infantry Fighting Vehicle
IMETS	Integrated Meteorological System
IMINT	Imagery Intelligence
INT	Intelligence
IOTE	Initial Operational Test and Evaluation
IP	Internet Protocol
IPADS	Improved Position and Azimuth Determining System

IPN	Installation Processing Node
IRB	Improved Ribbon Bridge
ISAF	International Security Assistance Force
ISR	Intelligence, Surveillance and Reconnaissance
JAB	Joint Assault Bridge
JAGM	Joint Air to Ground Missile
JBC-P	Joint Battle Command – Platform
JC4ISR	Joint Command, Control, Communications, Computers, Intelligence, Surveillance and Reconnaissance
JETS	Joint Effects Targeting System
JHSV	Joint High Speed Vessel
JLENS	Joint Land Attack Cruise Missile Defense Elevated Netted Sensor
JLTV	Joint Light Tactical Vehicle
JMPS	Joint Mission Planning System
JPADS	Joint Precision Airdrop System
JPALS	Joint Precision Approach and Landing System
JTF	Joint Task Force
JTRS	Joint Tactical Radio System
KW	Kiowa Warrior
LCMR	Lightweight Counter-Mortar Radar
LCRT	Light Capacity Rough Terrain (forklift)
LCU	Landing Craft Utility
LD	Laser Designator
LEMV	Long Endurance Multi-Intelligence Vehicle
LESD	Launched Electric Stun Device
LET	Light Equipment Transporter
LIN	Line Item Number
LKMD	Lighting Kit Motion Detector
LLDR	Lightweight Laser Designator Rangefinder
LRIP	Low-Rate Initial Production
LSV	Logistics Support Vessel
LTV	Light Tactical Vehicle
LUH	Light Utility Helicopter
MARSS	Medium Altitude Reconnaissance Surveillance System
M-ATV	Mine Resistant Ambush Protected All-Terrain Vehicle
MC	Mission Command
MC4	Medical Communications for Combat Casualty Care
MEADS	Medium Extended Air Defense System
MEB	Maneuver Enhancement Brigade
MEDEVAC	Medical Evacuation
MFCS-D	Mortar Fire Control System-Dismounted

MFLTS	Machine Foreign Language Translation System
MFS	Modular Fuel System
MGS	Mobile Gun System
MIRCS	Mobile Integrated Remains Collection System
MISO	Military Information Support Operations
MLRS	Multiple Launch Rocket System
MOTS	Mobile Tower System
MRAP	Mine Resistant Ambush Protected (vehicle)
MRBM	Medium Range Ballistic Missile
MS A	Milestone A (acquisition milestone)
MS B	Milestone B (acquisition milestone)
MS C	Milestone C (acquisition milestone)
MSD	Maintenance Support Device
MSE	Missile Segment Enhancement
MTI	Moving Target Indicator
MTOE	Modified Table of Organization and Equipment
MTRCS	Multi-Temperature Refrigerated Container System
MTRS	Man Transportable Robotics System
MTV	Medium Tactical Vehicle
MuM	Manned – Unmanned (teaming)
NBCRV	Nuclear Biological, Chemical Reconnaissance Vehicle
NCR	National Capital Region
NGATS	Next Generation Automatic Test System
NLOS	Non-Line of Sight
NLOS-C	Non-Line of Sight Cannon
NTNF-GSM	National Technical Nuclear Forensics – Ground Sampling Mission
NVG	Night Vision Goggles
ODS	Operation Desert Storm (Abrams Tank variant)
ODS-SA	Operation Desert Storm – Situational Awareness (Abrams Tank variant)
OEF	Operation Enduring Freedom
OND	Operation New Dawn
ONS	Operational Needs Statement
OPA	Other Procurement, Army
OSC-I	Office of Security Cooperation – Iraq
OSGCS	One System Ground Control Station
OSRVT	One System Remote Video Terminal
OTM	On The Move
P3I	Pre-Planned Product Improvements
PAC-3	Patriot Advanced Capability-3
PAL	Personalized Assistant that Learns

Pam	Pamphlet
PDFCS-R	Paladin Digital Fire Control System – Replacement
PED	Processing, Exploitation and Dissemination
PGK	Precision Guidance Kit
PGSS	Persistent Ground Surveillance Systems
PIM	Paladin Integrated Management
PLS	Palletized Load System
POR	Program of Record
PSDS2	Persistent Surveillance Dissemination System of Systems
PTDS	Persistent Threat Detection System
QRC	Quick Reaction Capability
RAM	Rockets, Artillery and Mortars
RDA	Research, Development and Acquisition
RDTE	Research, Development, Test and Evaluation
RECAP	Recapitalization
RES	Radar Element Subset
RFP	Request for Proposal
RSTA	Reconnaissance, Surveillance and Target Acquisition
S&T	Science and Technology
SA	Situational Awareness
SALE	Single Army Logistics Enterprise
SAR	Synthetic-Aperture Radar
SATCOM	Satellite Communications
SATS	Standard Aircraft Towing System
SATS	Standard Automotive Tool Set
SBCT	Stryker Brigade Combat Team
SECM	Shop Equipment Contact Maintenance
SEP	System Enhancement Package
SIGINT	Signals Intelligence
SINGARS	Single Channel Ground and Airborne Radio System
SLAMRAAM	Surface-Launched Advanced Medium-Range Air-to-Air Missile
SLEP	Service Life Extension Program
SMART-T	Secure Mobile Anti-Jam Reliable Tactical Terminal (satellite system)
SMFT	Semi-Trailer Mounted Fabric Tank
SOF	Special Operations Forces
SRW	Soldier Radio Waveform
STAMIS	Standard Army Management Information Systems
STARLite	Small Tactical Radar Lightweight
STEP	Strategic – Tactical Entry Points
STORM	Small Tactical Optical Rifle Mounted

SWaP-C	Space, Weight, Power and Cooling
TAIS	Tactical Airspace Integration System
TBC	Tactical Battle Command
TC-AIMS II	Transportation Coordinator's Automated Information for Movement System II
TCDL	Tactical Communication Data Link
TDY	Temporary Duty
THAAD	Terminal High Altitude Area Defense
TIGR	Tactical Integrated Ground Reporting
TLA	Target Location Accuracy
TNOSC	Theater Network Operations and Security Center
TPE	Theater Provided Equipment
TRADOC	Training and Doctrine Command
TRM	Tank Rack Modules
TSP	Tactical SIGINT Payload
TUA-OTM	Targeting Under Armor – On the Move
TWS	Thermal Weapon Sights
TWV	Tactical Wheeled Vehicles
UAS	Unmanned Aircraft System
UHF	Ultra High Frequency
USMC	United States Marine Corps
UXO	Unexploded Explosive Ordinance
VSAT	Very Small Aperture Terminal
VTOL	Vertical Take Off and Landing
WIN-T	Warfighter Information Network – Tactical
WMD-E	Weapons of Mass Destruction – Elimination
WNW	Wideband Networking Waveform
WTCV	Weapons and Tracked Combat Vehicles



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