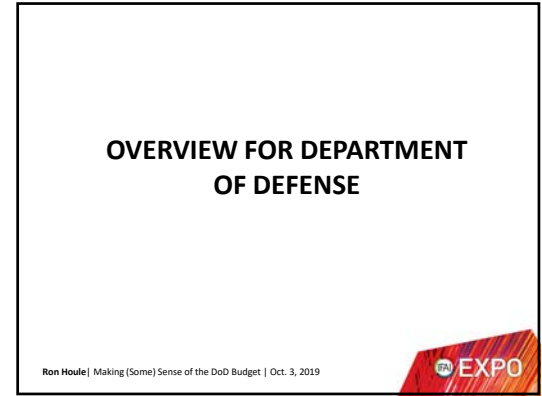




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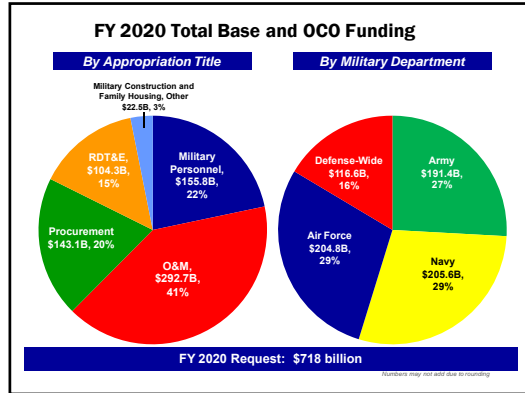
A New Strategy

- As the Cold War ended the United States enjoyed a period of military dominance
- Since then, the United States has experienced damaging trends in readiness caused by budget instability, the decades-long campaign against violent extremism, and an unfocused strategic vision
- China and Russia began developing military capabilities to prepare for future, high-end conflict and to undermine U.S. influence
- DoD developed a new strategy to change course and drive our decisions



The United States faces a fundamentally different challenge

4





5

Enhance Competitiveness Through Emerging Warfighting Domains

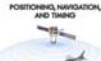
Space Domain: \$14.1 Billion

- Resources the new U.S. Space Force and associated organizations
- Improves satellite communications capabilities; space-based warning, and space launch capacity







Cryptologic




POSITIONING, NAVIGATION, AND TIMING



WEAPON SYSTEMS



INTELLIGENCE



COMMAND, CONTROL, AND COMMUNICATIONS

Cyber Domain: \$9.6 Billion

- Offensive and defensive cyberspace operations; resilient DoD networks, systems; modern multi-cloud environment

Prepare for a complex, unpredictable, and multi-domain security environment

6

Develop and Field Innovative Technologies

Unmanned / Autonomous: \$3.7 Billion

- Enhances freedom of maneuver and lethality in contested environments

Artificial Intelligence / Machine Learning (AI/ML): \$927 Million

- Expands military advantage through the Joint Artificial Intelligence Center (JAIC) and Advanced Image Recognition

Hypersonics: \$2.6 Billion

- Air Force prototyping, Navy Sea-Launched Conventional Prompt Strike, and Army Land-Launched Conventional Prompt Strike

Directed Energy: \$235 Million

- Implementation of directed energy for base defense; testing and procurement of multiple types of lasers; R&D for scalable high-power density applications



Largest research and development request in 70 years

7

FY 2020 President's Budget Military End Strength

Military Component	FY 2018 ¹	FY 2019 ²	FY 2020	FY 2024	Δ FY19-20	Δ FY19-24
Active Components (AC)						
Army	476,179	478,000	480,000	488,000	+2,000	+10,000
Navy	329,867	338,877	340,500	354,000	+1,623	+15,123
Marine Corps	185,518	186,100	186,200	186,400	+100	+300
Air Force	325,880	330,308	332,800	338,800	+2,492	+8,492
TOTAL AC	1,317,444	1,333,285	1,339,500	1,367,200	+6,215	+33,915
Reserve Components (RC)						
Army Reserve	188,811	189,250	189,500	190,500	+250	+1,250
Navy Reserve	58,196	59,074	59,000	59,000	-74	-74
Marine Corps Reserve	38,333	38,369	38,500	38,500	+131	+131
Air Force Reserve	68,703	70,000	70,100	70,300	+100	+300
Army National Guard	335,204	335,500	336,000	338,000	+500	+2,500
Air National Guard	107,469	107,100	107,700	108,600	+600	+1,500
TOTAL RC	796,716	799,293	800,800	804,900	+1,507	+5,607
TOTAL AC + RC	2,114,160	2,132,578	2,140,300	2,172,100	+7,722	+39,522

¹ FY 2018 Actuals
² FY 2019 Proposed FY 2019 NDAA (P.L. 115-232) Authorized Army (Active 487.5K; Reserve 198.5K; Guard 343.5K); Navy Active 336.4K; AF Active 329.1K)

Capacity & Lethality – 39.5K increase by FY 2024

8

Major Investments in the FY 2020 Budget (Base + OCO)

	FY 2019 Enacted		FY 2020 Request	
	Qty	SB	Qty	SB
Aircraft				
F-35 Joint Strike Fighter (Air Force, Marine Corps, Navy)	93	\$11.6	78	\$11.2
KC-46 Pegasus (Air Force)	18	\$2.4	12	\$2.3
F/A-18E/F Super Hornet (Navy)	24	\$2.1	24	\$2.0
AH-64E Apache Attack Helicopter (Army)	66	\$1.5	48	\$1.0
VH-92 Presidential Helicopter (Marine Corps)	6	\$0.9	6	\$0.8
P-8A Poseidon (Navy)	10	\$2.2	6	\$1.5
CH-53K King Stallion (Marine Corps)	8	\$1.5	6	\$1.5
F-15EX	-	-	8	\$1.1
Shipbuilding				
COLUMBIA Class Ballistic Missile Submarine	-	\$3.9	-	\$2.2
CVN-78 FORD Class Aircraft Carrier	-	\$1.7	1	\$2.6
WIRONGA Class Submarine	2	\$7.4	3	\$10.2
DDG-51 ARLEIGH BURKE Class Destroyers	3	\$6.2	3	\$5.8
Littoral Combat Ships (LCS) FY 2019 / Frigate (FFG(X)) FY 2020	3	\$1.9	1	\$1.3
Fleet Replenishment Oiler (T-AO)	2	\$1.1	2	\$1.1
Unmanned Surface Vehicles (USV)	-	\$0.1	2	\$0.4
Towing, Salvage, and Rescue Ship (T-ATS)	1	\$0.1	2	\$0.2

Includes Procurement and Research, Development, Test and Evaluation (RDTE&E) funding
 Numbers may not add due to rounding

9


Major Investments in the FY 2020 Budget (Base + OCO)				
	FY 2019 Enacted		FY 2020 Request	
	Qty	\$B	Qty	\$B
Space				
National Security Space Launch (NSSL) (aka EELV) (Air Force)	5	\$2.1	4	\$1.7
Global Positioning System (GPS) III and Projects (Air Force)	2	\$1.4	1	\$1.8
Space Based Overhead Persistent Infrared (OPRI) Systems (Air Force)	5	\$0.8	-	\$1.6
Ground Systems				
Joint Light Tactical Vehicle (Army, Marine Corps, Air Force)	6,093	\$1.9	4,090	\$1.8
M-1 Abrams Tank Modifications/Upgrades (Army)	168	\$2.7	165	\$2.2
Amphibious Combat Vehicle (Marine Corps)	30	\$0.2	96	\$0.4
Armored Multi-Purpose Vehicle (Army)	197	\$0.8	131	\$0.6
Munitions				
Joint Direct Attack Munition (JDAM) (Navy, Air Force)	43,694	\$1.1	40,388	\$1.1
Guided Multiple Launch Rocket System (GMLRS) (Army, Marine Corps)	8,101	\$1.1	10,193	\$1.4
Standard Missile-6 (SM-6) (Navy)	125	\$0.7	125	\$0.7
Small Diameter Bomb II (SDB II) (Navy, Air Force)	1,260	\$0.4	1,925	\$0.4
Helifire Missile (Army, Navy, Air Force)	6,066	\$0.5	9,000	\$0.7
Joint Air-to-Surface Standoff Missile (Air Force)	360	\$0.6	430	\$0.6
Long Range Anti-Ship Missile (LRASM) (Air Force, Navy)	50	\$0.3	48	\$0.2

Includes Procurement and Research, Development, Test and Evaluation (RDTE&E) funding. Numbers may not add due to rounding.

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**OVERVIEW FOR THE
U. S. ARMY**

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Deploy, Fight, and Win:

Retain overmatch in order to deter, and defeat if necessary, all potential adversaries

Where we are

- Deployed and Committed: 179K
- In more than 140 countries
- Across 6 continents
- Army SDF: 4K deployed in 80 countries
- Worldwide Support to CT Operations



USEUCOM
United States European Command

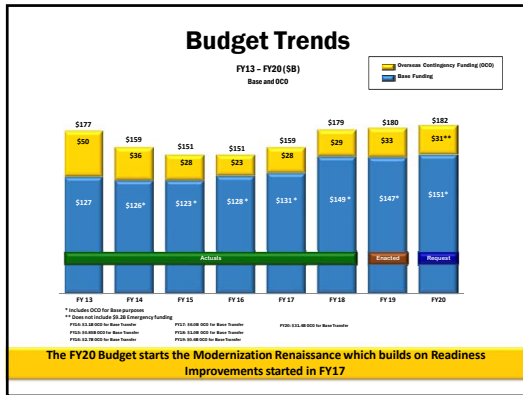
USCENTCOM
United States Central Command

USINDBAPCOM
United States Indo-Pacific Command

The Army of 2028 will be ready to deploy, fight and win decisively against any adversary, anytime and anywhere, in a joint, multi-domain, high-intensity conflict, while simultaneously deterring others and maintaining its ability to conduct irregular warfare.

The Army vision 2038

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FY20 Budget Request

(Base Funding Program)

\$B	FY18 Actuals	FY19 Enacted	FY20 Request
Military Personnel	57.0	59.3	60.4
Operation and Maintenance ¹	60.0	50.9	52.9
Procurement/RDTE	37.0	33.2	34.0
Military Construction/Family Housing/BRAC	2.7	2.2	2.3*
Other Base	1.4	1.4	1.1
Totals	149.0²	147.0³	150.7⁴

Base Request

- The Army's topline base funding grew by 2.5% from the total FY19 Enacted
- The FY20 base budget funds the Army's readiness requirements and the higher end strength:
 - Military Personnel 1.9% ▲
 - Procurement/RDTE (RDA) 2.4% ▲

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Military End Strength


Component	FY18 Actuals	FY19 Enacted	FY19 Updated	FY20 Request
Regular Army	476,179	487,500	478,000	490,000
Army National Guard	335,204	343,500	335,500	336,000
Army Reserve	188,811	199,500	189,250	189,500
Totals	1,000,194	1,030,500	1,002,750	1,005,500¹

- Supports a Total Army end strength of 1,005,500 Soldiers
- Modest growth to enable the Army to continue to achieve readiness in a challenging recruiting environment
- Maintains Active Guard Reserve (AGR) full-time support for the Army National Guard and the Army Reserve

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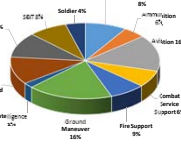
Research, Development, and Acquisition (RDA) Summary

SB	FY18 Actuals	FY19 Enacted	FY20 Request
RDT&E Total	11.4	11.1	12.2
Procurement Total	25.6 ¹	22.1	21.8 ²
Totals	37.0	33.2	34.0



\$34.0 B
Capability Portfolios

- ❖ Fills critical capability gaps and improves lethality in munitions, and air and ground combat platforms
 - Increases modernization of Bradley, Stryker, Abrams and Paladin
 - Increases procurement of critical missiles, M-SHORAD Systems and Blackhawk
 - Accelerates procurement of Manpack Radios, Ground Soldier System, and Signal Modernization Program in support of the Integrated Tactical Network
- ❖ RDT&E: Land-Based Hypersonic Missile, Manned Ground Vehicle, Future Attack Reconnaissance Aircraft, Lower Tier Air and Missile Defense Capability, Integrated Visual Augmentation System (IVAS) Advanced Development



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RDT&E Summary

\$12.2 B
Capability Portfolios

SB	FY18 Actuals	FY19 Enacted	FY20 Request
Basic Research	0.5	0.4	0.4
Applied Research	1.2	0.9	0.9
Advanced Technology Dev.	1.4	1.1	1.1
S&T Subtotal	3.1	2.4	2.4
Modernization/Manufacture	1.9	1.2	2.9
Engineering/Manufacturing Dev.	3.3	3.1	3.5
Testing & Management Support	1.6	1.7	1.3
Operational System Development	1.8	1.7	2.0
Totals	11.4	11.1	12.2

- ❖ Aligns 80% of S&T funding towards the Secretary's six Modernization Priorities in order to deliver concepts and capabilities at the Speed of Innovation
- ❖ Focuses on modernization of Land-Based Hypersonic Missile, Manned Ground Vehicle, Future Attack Reconnaissance Aircraft, Lower Tier Air and Missile Defense Capability, and Integrated Visual Augmentation System (IVAS) Advanced Development to enhance our competitive advantage
- ❖ Continues development of 155mm Self-Propelled Howitzer Improvements, Mobile Protected Firepower, Improved Turbine Engine Program, and Indirect Fire Protection Capability in order to build a more lethal force today against great power competition

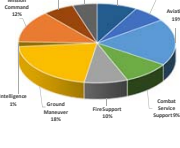
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Procurement Summary

SB	FY18 Actuals	FY19 Enacted	FY20 Request
Aircraft	5.6	4.3	3.7
Missiles	4.4	3.1	3.2
Weapons & Tracked Combat Vehicles	4.6	4.5	4.7
Ammunition	2.5	2.3	2.7
Other Procurement	8.5	7.9	7.5
Totals	25.6¹	22.1	21.8²

\$21.8 B
Capability Portfolios

- ❖ Maximizes procurement of select munitions: Hellfire Missiles; Guided MLRS Rockets, and the Army Tactical Missile Systems (ATACMS)
- ❖ Sustains Apache Remanufacture, Abrams, Chinook Remanufacture and Paladin Integrated Management
- ❖ Accelerates modernization of Stryker Brigade Combat Teams by upgrading Stryker fleets with mobility and lethality enhancements and equips the first of four M-SHORAD battalions
- ❖ Increases procurement of Manpack Radios, Ground Soldier System, and Signal Modernization Program in support of the Integrated Tactical Network



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Select Procurement Quantities (Base and OCO)

Program	Quantities	
	FY19	FY20
AH-64E Apache Remanufacture	48	48
UH-60M Black Hawk	58	75
CH-47 Chinook	7	5
Abrams Upgrade	168	165
Bradley Upgrade/ MGD	167	128
Armored Multi-Purpose Vehicle (AMPV)	197	131
Paladin Integrated Management (PIM)	51	53
Joint Light Tactical Vehicle (JLTV)	3,393	2,570
Guided MLRS Rocket (GMLRS)	7,818	9,570
MSE Missile	240	147
ATACRS	320	320
Stryker Upgrade	82	122
Hellfire	2,309	5,112

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Army Modernization Plan

- Requires a bold shift to fulfill the 2018 National Defense Strategy (NDS) and put the Army on course to achieve its vision of 2028 – an Army with next generation combat systems, modernized doctrine and reorganized formations to fight and win against Great Power Competition.
- Acknowledges our Army is at a strategic inflection point requiring a shift from irregular warfare to large-scale ground combat operations.
- Acknowledges our strategic competitors are building weapons and developing technologies that reduce our long-held advantages and addresses our need to modernize faster than our adversaries.
- Re-assesses Army modernization investment priorities cognizant of downward budgetary pressures and the need to take immediate action with the FY20 President's Budget
 - Reviewed all programs under the lens of its contribution to lethality realigning from lower to higher return
 - Acknowledged continued upgrades to select legacy combat systems provided marginal improvements

Established 8 CFBs to focus on 8 Modernization Priorities.

1. Long Range Precision Fires
2. Next Generation Combat Vehicle
3. Future Vertical Lift
4. Network
5. Air and Missile Defense
6. Soldier Lethality
7. Assured Positioning and Navigation Timing
8. Synthetic Training Environment

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Reform

The Army's Senior Leaders instituted deliberate reform initiatives yielding \$3.6B in FY20

- Business Process Improvements: -\$277.9M in FY20**
 - Contract management – On track to save millions of dollars by reducing contract redundancies and improving competition processes
 - Command Accountability and Execution Review (CAER) – a full spectrum approach leveraging monthly venues focusing on supply chain, transportation and contract management enterprise wide
- Policy Reform: -\$177.9M in FY20**
 - Army Internally realigned its civilian workforce to establish Army Futures Command.
- Better Alignment of resources with the NDS: -\$717.9M in FY20**
 - Army Senior Leaders streamlined Army Logistical Support Operations by eliminating duplicative effort across organizations
- Divestment: -\$2,468.8M in FY20**
 - Army Reduced/Delayed 93 programs and Eliminated 93 programs

"We will need to reform the way we do business. In today's environment, we must make difficult choices and prioritize what is most important to modernize the Army."
Mark T. Esper, Secretary of The Army

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Examples of Reform

- ❖ Section 809 Study
- ❖ Accelerated Procurement Processes and Program Reviews (OTAs, REF, Night Court)
- ❖ Emphasis to Command Post Mobility and Agility
 - ❖ Smaller Footprints
 - ❖ Less Tentage
 - ❖ Increased Mobility
 - ❖ Signal Management Is A Critical Capability

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YOUR FUTURE IS AWESOME

Figures Represent Five-Year Outlook (In Millions)	APPLIED RESEARCH	ADVANCED TECHNOLOGY DEMONSTRATION
Body Armor	43.2	35.4
Vulnerability	64.5	-----
Detection	31.0	8.7
Survivability	21.2	10.7

"Don't skate to where the puck is, skate to where the puck is going to be"
Wayne Gretzky

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Exhibit B.3. RDT&E Budget Item Justification: PB 2020 Army Date: March 2019

Appropriation/Budget Activity: 2002 Research, Development, Test & Evaluation, Army / BA 2- Applied Research R-1 Program Element (Number/Name): PE 0002143A / Soldier Lethality Technology

COST (\$ in Millions)	Prior Years	FY 2016		FY 2017		FY 2018		FY 2019		FY 2020		FY 2021		FY 2022		FY 2023		FY 2024		Cost To Complete	Total Cost	
		Base	OCO	Base	OCO	Base	OCO	Base	OCO	Base	OCO	Base	OCO	Base	OCO	Base	OCO	Base	OCO			
Total Program Element	-	0.000	0.000	115.274	-	115.274	126.345	136.956	142.057	141.390	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	660.024	0.000
J&I: Homeland SATCOM Technology	-	0.000	0.000	4.000	-	4.000	1.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	5.000	0.000
AVS: Soldier Squad Small Arms Ammunition Technology	-	0.000	0.000	18.345	-	18.345	18.316	17.577	14.988	15.145	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	84.371	0.000
AVS: Small Arms Fire Control Technology	-	0.000	0.000	0.000	-	0.000	0.000	4.228	4.122	4.168	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	12.516	0.000
AZ2: Body Armor & Integrated Headset Technology	-	0.000	0.000	8.427	-	8.427	8.081	8.753	8.028	9.027	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	43.216	0.000
AZ5: Soldier Protection Technology - Vulnerability	-	0.000	0.000	8.104	-	8.104	12.200	13.671	15.162	15.330	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	64.527	0.000
AZ6: Soldier Protection Advanced Tech - Detectability	-	0.000	0.000	4.500	-	4.500	5.294	7.181	6.883	6.964	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	30.822	0.000
BB4: Chronomet Soldier Survivability Materials	-	0.000	0.000	4.944	-	4.944	3.944	5.187	5.539	6.616	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	29.230	0.000
BB5: Physical Augmentation Tech for Human Interactions	-	0.000	0.000	1.500	-	1.500	1.500	1.500	1.500	1.517	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	7.617	0.000
BB7: Evaluation Technology for Man-Machine Interface	-	0.000	0.000	1.600	-	1.600	1.600	1.632	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	4.832	0.000
BB9: Human Performance Tech for Mobility & Endurance	-	0.000	0.000	2.500	-	2.500	1.500	1.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	5.000	0.000
BIC2: Next Gen Mobility & Lethality Tech for Warfighters	-	0.000	0.000	5.678	-	5.678	5.221	5.627	2.596	2.625	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	21.947	0.000
BIC3: Soldier Decision Making & Comms Performance Tech	-	0.000	0.000	10.758	-	10.758	9.875	9.992	6.112	6.181	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	42.919	0.000
BIC6: Human Perf. Tech for Warfighter Enhancement	-	0.000	0.000	2.676	-	2.676	2.826	3.395	1.419	1.377	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	11.693	0.000
BIC7: Training Technology (Other than STEP)	-	0.000	0.000	0.000	-	0.000	9.174	11.881	13.306	13.485	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	47.626	0.000

PE 0002143A: Soldier Lethality Technology UNCLASSIFIED Page 1 of 50 R-1 Line #12

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Exhibit R-2A ROT&E Project Justification: PB 2020 Army Date: March 2019

Appropriation/Budget Activity 2061 Z	R-1 Program Element (Number/Name)										Project (Number/Name) PE 0602143A Soldier Lethality Technology	Project (Number/Name) AZ1 Soldier Protection Technology - Vulnerability
	Prior Years	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024		
A23 Soldier Protection Technology - Vulnerability	-	0.000	0.000	8.104	-	8.104	12.260	13.871	15.182	15.330	0.000	64.527

Note
 In Fiscal Year (FY) 2020 this Project was realigned from Program Element (PE) 0602105A Materials Technology
 * Project H5A Materials
 PE 0602618A Ballistics Technology
 * Project H5C Survivability and Lethality Technology

A. Mission Description and Budget Item Justification
 This Project investigates and develops materials, methods, and models that enable design and integration of emerging material technologies into lightweight, flexible and modular Soldier equipment to protect against the range of existing and emerging threats for head, torso, and extremity protection. Specific research thrusts include the development of materials and mechanisms to enhance ballistic protection, computational models and associated experiments to provide a fundamental understanding of material properties and failure mechanisms, as well as correlation to ballistic/blast/blast impact performance of Soldier personal protective equipment (PPE) and improved fibers, composite and ceramic materials. Specific technologies include experimental helmets that reduce impact and blast loading to the head, Soldier torso protection systems to increase protection from ballistic and blast impacts, and novel fibers and fabrics that provide additional survivability mechanisms.

Work in this Project supports key Army needs and is fully coordinated with several PEs to include PE 0602143A (Soldier Lethality Technology) and 0603118A (Soldier Lethality Advanced Technology), and leverages the technical research of several PEs to include PE 0601102A (Defense Research Sciences) / Project AA7 (Mechanics and Ballistics) and 0602144A (Ground Technology) / Project BL1 (Materials and Manufacturing Research Technology).

The cited work is consistent with the Under Secretary of Defense for Research and Engineering priority focus areas and the Army Modernization Strategy.

FY 2020 realignments are due to financial restructuring in support of Army Modernization Priorities.

Work in this Project is performed by the United States Army Futures Command (AFC).

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2018	FY 2019	FY 2020
Title: Soldier Protection Technologies	-	-	4.131

Description: This effort develops integrated lightweight, flexible and modular protection equipment that is tailored to support the Soldier as a system approach for defeat of emerging threats. Research areas encompass high fidelity ballistic impact injury models for hard and soft tissues, novel ceramic architectures to include graded and hierarchically structured ceramics, and novel

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PE 0602143A Soldier Lethality Technology Page 13 of 50

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For More Information


- Visit the website for the Office of the Under Secretary of Defense (Comptroller) at
 - <http://www.defense.gov/cj>
 - Download the Department of Defense's FY 2020 Budget Request



US Department Of Defense
FISCAL YEAR 2020 BUDGET REQUEST
Ensuring our competitive advantage to compete, deter, and win in an era of great power competition.

Office of the Under Secretary of Defense (Comptroller) / CFO
 March 2019


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FOR ADDITIONAL INFORMATION


This overview provides the highlights of the Army's Budget submitted to the Congress as part of the FY 2020 President's Budget. All Army budget materials are available to the public on the Assistant Secretary of the Army (Financial Management and Comptroller) website.

<https://www.asafm.army.mil/offices/bs/content.aspx?what=BudgetMaterials>



Army Strong!
<http://www.army.mil>

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914-806-3775

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Thank You



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See you next year!



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100 Years of Textile Innovation



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