

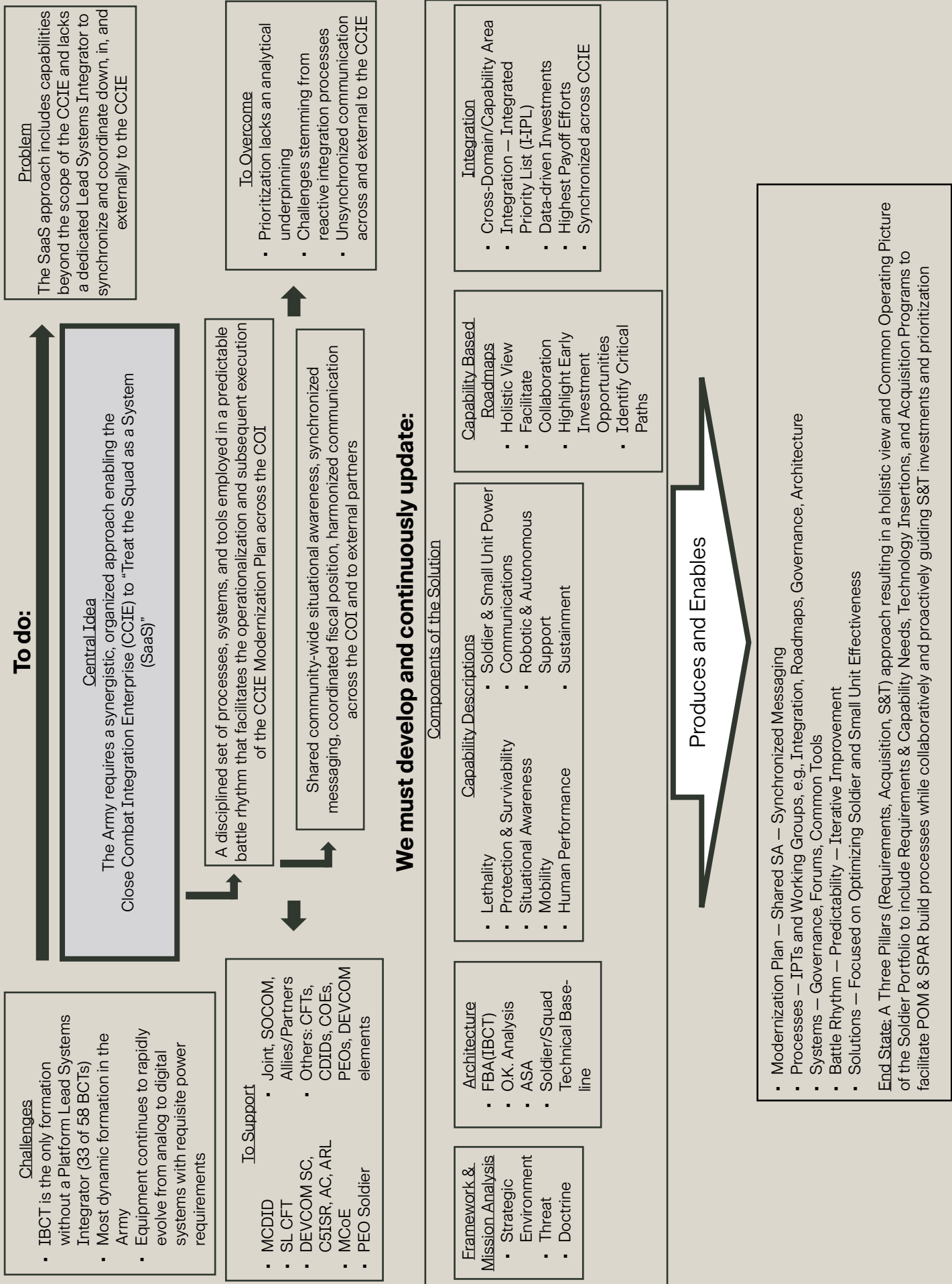
PROJECT POLARIS



**CLOSE COMBAT
INTEGRATION ENTERPRISE**
Modernization Plan 2025 — 2026

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Polaris 25 – 26 Logic Map





POLARIS 25 — 26 FOUNDATION

UNCLASSIFIED

The U.S. Army is undergoing a significant transformation, its largest since the end of the Cold War. This effort aims to revolutionize how the Army operates, leveraging technological advancements in sensing, data utilization, and long-range precision fires to enhance the effectiveness of dismounted infantry formations. The Close Combat Integration Enterprise (CCIE) is driving innovation to integrate breakthrough technology with comprehensive solutions, restoring and maintaining combat power advantages for light infantry forces.

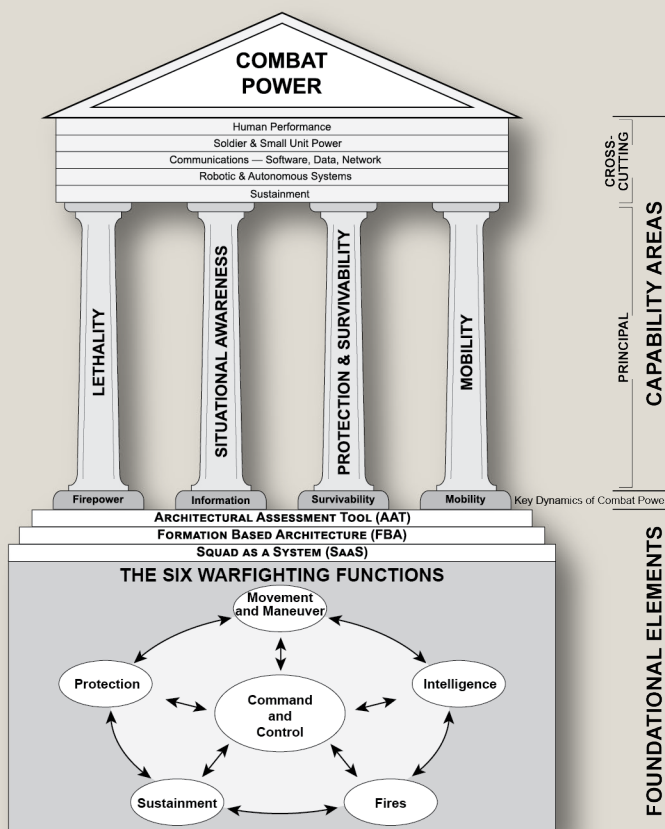
A key component of this transformation is Project Polaris, which provides a template for summarizing materiel development and visualization. The latest iteration, Polaris 25 — 26, adds the essential capability area of sustainment, matures previous elements, and includes standardized terminology, Formation Based Architecture, and dynamic, data-centric roadmaps. By encouraging process modernization and leveraging technological advancements, the Army seeks to maintain its competitive advantage.

To achieve its transformation goals, the CCIE must prioritize and integrate resources, including time, money, and personnel, to maximize gains in combat power for the Infantry Brigade Combat Team (IBCT). This requires innovation in materiel and doctrine to operationalize multidomain operations (MDO), ensuring the Army remains competitive and dominant on the battlefield. Polaris 25 — 26 highlights ongoing efforts, such as next generation systems, comprehensive signature management, situational awareness, and robotic and autonomous systems.

The implementation of Project Polaris benefits from the synchronized involvement of stakeholders from across the acquisition, requirements, and science and technology areas of expertise. By harnessing the energy of Project Polaris, the Army can unlock the full potential of its Soldiers ensuring they remain dominant on the battlefield. The ultimate goal is to provide a detailed blueprint for integration, enabling the Army to achieve its transformation goals and maintain its competitive advantage in the face of emerging threats.

CAPABILITY AREAS

Polaris outlines nine specific capability areas that are crucial for the U.S. Army to achieve superiority across multiple domains. These capability areas are Lethality, Protection and Survivability, Situational Awareness, Mobility, Human Performance, Soldier and Small Unit Power, Communications, Robotic and Autonomous Systems, and Sustainment. These capability areas are interconnected and interdependent. Increasing performance in one area may have intended and unintended impacts on others. The Army's Combat Power (which consists of eight elements - Leadership, Information, Command and Control, Movement and Maneuver, Intelligence, Fires, Sustainment, and Protection) is the aggregated term that captures the sum and interaction of these capability areas. Combat Power is organized around key dynamics of firepower, information, mobility, and survivability, and is used to conduct trade-off analysis, identify development issues, and understand the Army's position in time and space.



Given the general descriptions of each capability area, the goal is to create standardized definitions and metrics. Polaris also highlights the importance of a holistic approach in technical development to integrate these capabilities and achieve superiority across multiple domains.

Lethality

Lethality refers to the capability and capacity to destroy enemy forces, which is enabled by formations maneuvering into positions of relative advantage and employing weapon systems to mass effects. The U.S. Army is currently focusing its lethality efforts on various systems, including small arms, ammunition, and enablers such as next generation of squad weapons, and fire control, as well as crew-served weapons, precision targeting devices, remote weapon stations, mortars, and close combat missile systems. The goal is to reduce redundancies and increase commonality across systems. This results in decreasing size, weight, power, cost, Soldier load, and training burden. To inform current and future capabilities, the Maneuver Capabilities Development and Integration Directorate (MCDID) is conducting a Squad Capabilities Based Assessment, which will help shape the development of lethality capabilities within the Squad and ensure that they meet the evolving needs of the Army.

Protection and Survivability

Protection and Survivability are critical capabilities that focus on shielding military personnel, equipment, and infrastructure from harm or damage, and enabling forces to withstand and persist in the face of threats and hostile actions. These involve the use of various protective equipment and systems, such as armored vehicles, personal protective equipment, and active and passive protection measures. Understanding threats and hazards allows military planners to develop protective measures. Developing protection and survivability capabilities together will improve their integration in future combat situations. Key areas of development include signature management and laser protection. Signature management involves

minimizing the visibility of Soldiers and equipment across various spectrums. Laser protection is necessary to counter enemy battlefield lasers that can cause sensor and ocular damage. Additionally, Robotic and Autonomous Systems (RAS) play a crucial role in enhancing Army survivability by minimizing Soldier exposure to danger, improving situational awareness, and enabling effective manned-unmanned teaming, ultimately leading to safer and more efficient operations on the battlefield.

Situational Awareness

Situational awareness (SA) and situational understanding (SU) are crucial for Soldiers to operate effectively on the battlefield. SA is the perception of environmental surroundings and SU is a deeper comprehension of the situation, including underlying causes and potential consequences. The U.S. Army's Situational Awareness Strategy aims to enhance SA and SU capabilities for dismounted Soldiers using digital systems, artificial intelligence (AI), machine learning (ML), and augmented reality. To achieve this, a Soldier-centered design approach is necessary, emphasizing human performance data and Soldier feedback. The integration of natural perception, enhanced perception, and additional information is critical for shared situational awareness, which is essential for conducting MDO. As the battlefield becomes increasingly complex with the use of drones and robotic systems, Soldiers will need SA and SU to decisively act and react to threats. Advances in AI, ML, and data engineering will enable real-time situational understanding and decision-making. Targeted investments in research and development are necessary to sustain the Army's competitive sensing advantage.

Mobility

Mobility is a critical component of modern warfare, serving as a combat multiplier that enables military units to rapidly deliver firepower and maneuver effectively across diverse terrain and environments. However, the increasing weight and complexity of military equipment has reduced

tactical mobility, affecting human performance and overall task efficiency. To address this issue, the Army must focus on reducing the Soldier's load and increasing mobility with initiatives aiming to explore promising future mobility technologies like robotics and Small Unit resupply. The evolution of tactical mobility technologies over the next two decades will be essential for enhancing operational effectiveness, with near-term goals including integrating load trade-off studies and analyzing the return on investment for innovative technologies. Subsequent objectives will focus on strategic development of RAS, including advancing delivery platforms, sustainable power systems, and leveraging synthetic biology for nutritional support. Ultimately, integrating innovative technologies like AI/ML will be crucial for optimizing operational efficiency and enabling forces to respond and maneuver effectively to evolving threats, with the goal of achieving lethality overmatch and ensuring tactical mobility for Soldiers.

Human Performance

Human Performance is a critical aspect of military effectiveness and the U.S. Army is working to optimize physical, attentional, and cognitive load for Soldiers to enhance their performance in complex and dynamic operational environments. Resources such as the Architectural Assessment Tool (AAT) are being used to provide equipment trade space analysis. Project Polaris is also focused on reducing physical load, with efforts to optimize equipment design, reduce weight, and improve efficiency. Additionally, attentional and cognitive load are being addressed through the development of intuitive user interfaces, optimized information portrayal, and reduced clutter. The goal is to enable Soldiers to make rapid decisions on the battlefield while minimizing distractions and cognitive overload. Data-to-decision (D2D) is also a key aspect of human performance and the Army is working to deliver context-specific data to Soldiers in a timely and usable manner. This requires careful consideration of network, power, computing, and bandwidth requirements, as well as the physical load needed to support D2D systems. Ultimately, the CCIE aims to reduce physical, attentional, and

cognitive load to enhance Soldier performance, speed decision-making, and improve overall effectiveness in MDO.

Soldier and Small Unit Power

Soldier and Small Unit Power is critical to enabling dismounted forces to operate effectively in a multidomain environment, where access to electrical power is essential for advanced electronics and situational awareness. However, the increasing demand for power is outpacing the means of reliable and sustained supply, creating a power dilemma. To address this, current work focuses on developing new energy storage technologies, such as safer and more efficient batteries, and power generation solutions like fuel cell systems. Additionally, efforts are concentrated on improving power management and distribution, including the development of small, configurable charging devices and effective means of power and data management. A comprehensive approach to managing power demand is also necessary, including implementing power management strategies, metering powered systems, and developing efficient tactical energy practices. To ensure that solutions meet the unique demands of the dismounted force, a governance mechanism is needed to coordinate and integrate efforts. This includes assigning responsibility for monitoring power requirements and capabilities development and formulating policy and investment priorities. Ultimately, balancing the power equation is crucial for enabling dismounted forces to operate effectively and achieve greater energy independence. This will require a coordinated, imaginative approach to develop and integrate new technologies and solutions.

Communications – Software, Data and Network

The Army's ability to deliver resilient common data, software, and cloud capabilities rapidly and securely will be crucial to winning on the next battlefield. Success in the future operating environment requires tactical communication systems to be versatile and able to quickly transition from competition to crisis to conflict. To achieve this,

the development of formation based architectures for software, data, and power is essential, with a focus on providing essential services such as secure voice and video, collaboration tools, and a resilient common operational picture. Continued development of the Integrated Tactical Network (ITN), a key Army effort, must provide connectivity and extended range network access to enable shared mission planning and situational awareness, as well as access to real-time joint fires. However, the ITN currently stops short of architecture below the company level, requiring the CCIE to define, develop, and field the D2D infrastructure and processes that provide seamless flow of critical information between Soldiers and units. This infrastructure is critical to enabling speed to decision and achieving a decisive edge in the MDO fight, and its development is essential to mission success.

Robotic and Autonomous Systems

The development of RAS is a key aspect of the U.S. Army's modernization efforts, with the goal of providing Soldiers and Small Units with increased mobility and maneuverability, enhanced situational awareness, and improved survivability. The Joint Concept for Robotic and Autonomous Systems and the Army RAS Strategy have established a foundation for the development of RAS, with five capability objectives and eleven capability needs identified. The MCDID's Robotic Enabled Maneuver Capability Based Assessment and the Autonomy Concept of Need published by AFC in 2025 aim to provide the infrastructure and autonomy necessary for the widespread employment of robotic systems. RAS is expected to play a critical role in future conflicts, with robotic or unmanned systems likely to be the first point of contact with the enemy. The integration of RAS will enable increased lethality, mobility, survivability, situational awareness, and sustainment, with assets such as small unmanned systems being developed to support reconnaissance and surveillance, protection, and tactical decision-making. Coordination across the CCIE as well as externally is critical to ensure the successful integration of RAS with Soldier and unit capabilities, reducing workload and ensuring

decisive overmatch against highly capable enemies.

Sustainment

The U.S. Army's ability to sustain Small Units on the modern battlefield is a critical challenge, particularly in large-scale combat operations where logistics and resupply operations are complex and demanding. The Army's sustainment operations are focused on providing assured resupply to Small Units, which is essential for maintaining operational effectiveness and reducing the risk of Soldiers carrying excessive loads. Sustainment in Polaris aims to address the challenges of this echelon of logistics and resupply, including the development of new technologies such as autonomous vehicles, unmanned aerial systems, and advanced materials to reduce Soldier load. Current efforts include the development of systems such as the Small Multi-Purpose Equipment Transport, Tactical Resupply Vehicle, and Squad Operations Advanced Resupply, as well as initiatives to improve hydration, nutrition, and power endurance for Small Units. Integrating these sustainment technologies into the enterprise poses significant challenges, including determining which technologies to prioritize, how to allocate resources, and how to establish clear requirements and acquisition pathways. Addressing these challenges is crucial for ensuring our forces are adequately supported and equipped to operate effectively in the future operating environment.

FORMATION BASED ARCHITECTURE

The Formation Based Architecture (FBA) methodology has continued to mature since its inception in Polaris 2023. FBA is a comprehensive framework that enables the development of integrated solutions for formations within the IBCT, applicable to all formations regardless of size or scope. The methodology leverages a digital engineering ecosystem to capture and communicate key information, including use cases, requirements, operational views, and systems views. FBA is essential to the Army's Continuous Transformation efforts, which aim to develop the capability to converge effects on land, air,

space, cyberspace information environment, and electromagnetic spectrum. The FBA approach provides a foundation to build capabilities across formations, enabling them to adapt, fight, and win in an MDO environment. The Army is using FBA to inform the development of new capabilities, including the Rapid Capabilities and Critical Technologies Office's Dismounted Common Controller for RAS and to integrate systems capabilities across formations to achieve decisive overmatch. Overall, FBA plays a critical role in the Army's ability to transform and modernize, and its continued development and application are essential to the Army's success in a rapidly evolving operational environment.

INTEGRATION

Integration of programs, projects, and efforts continues to be a significant challenge across the CCIE. Whereas other Program Executive Offices and platform-based programs have dedicated lead systems integrators, PEO Soldier and the CCIE lack this crucial support. In the past, the focus was on individual programs and physical interfaces, rather than digital interconnectivity. As the Close Combat Force capabilities become increasingly digitized, a cross-capability process has been created and is currently in the early stages of implementation to address this challenge on an enterprise-wide scale. This approach will ensure that critical issues like connectivity, power, and data-processing are addressed in a systematic way, ultimately enabling Small Units to achieve a decisive advantage in combat.

For access to Polaris 25 – 26

Department of Defense personnel, request access here: <https://armyeitaas.sharepoint-mil.us/sites/usaasc-peosoldier-polaris>

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