



Future Force Capabilities

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Win in a Complex World



Unified Land Operations

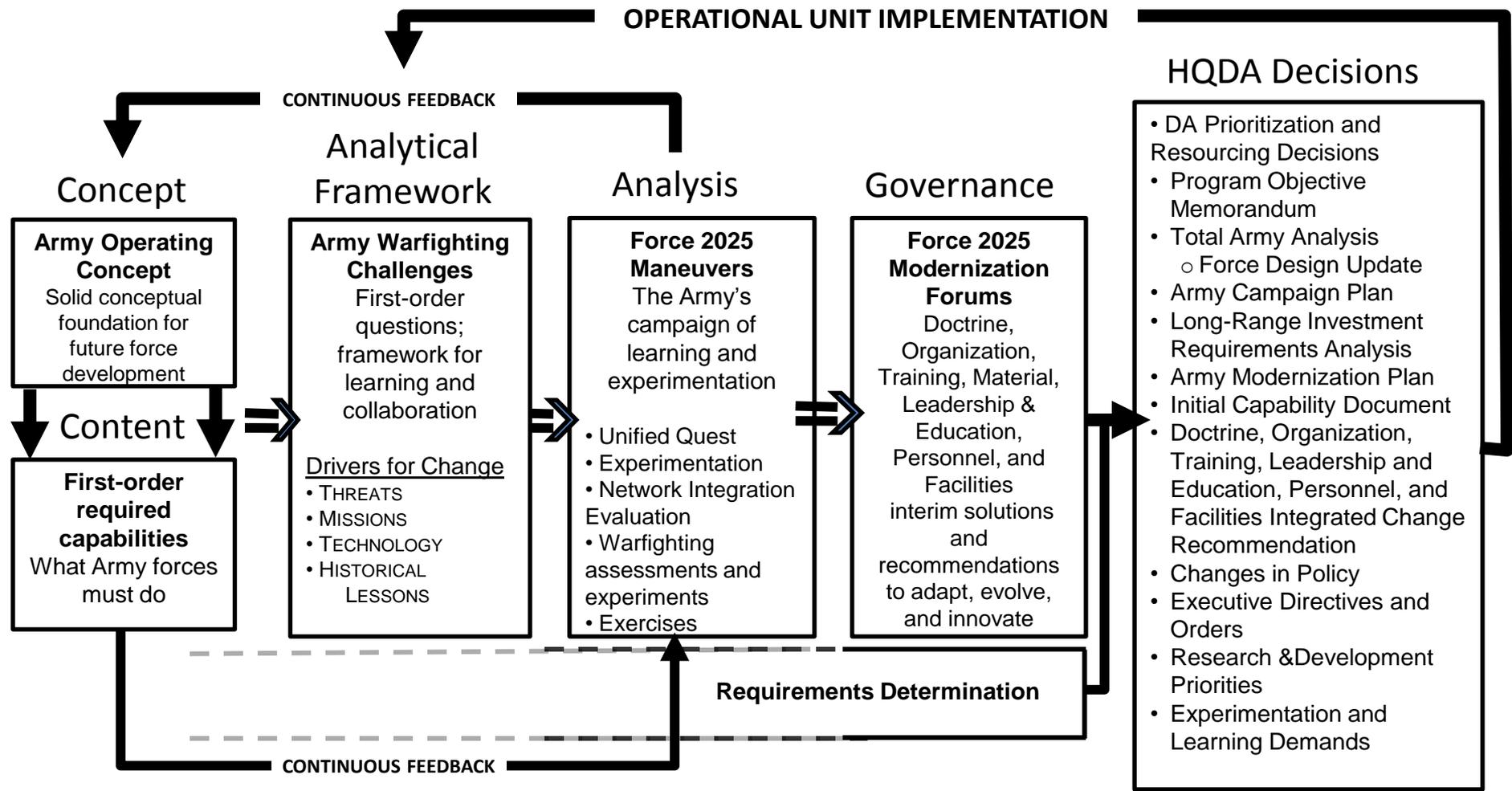
Seize, retain, and exploit the initiative throughout the range of military operations to gain and maintain a position of relative advantage in sustained land operations in support of Unified Action.

Operational Environment

- Increased momentum of human interaction
- Capable, elusive enemies
- Potential overmatch
- WMD proliferation
- Importance of cyber & space
- Dense urban areas
- Tech transfer
- Ubiquitous media



Concepts to Capabilities: Building the Future Force



• Focused and Sustained Collaboration across the Army and Key Stakeholders



Technology First Principles

- (1) Emphasize integration of technology with Soldiers and teams.
- (2) Simplify systems and integrate Soldier training into design.
- (3) Maximize reliability and reduce life cycle costs.
- (4) Design redundant systems that improve effectiveness under conditions of uncertainty.
- (5) Develop systems that degrade gracefully.
- (6) Maintain foundational knowledge to reduce the opportunity for surprise.
- (7) Reduce logistical demands.
- (8) Anticipate enemy countermeasures.
- (9) Ensure interoperability.
- (10) Consider scale and organizational implications.

Technology helps shape the character of war ... there are no silver bullets



Technology focus areas



1 of 3

Mobile protected precision firepower	<ul style="list-style-type: none">• lighter weight and lower volume platforms• increased protection and survivability (e.g. active protection systems)• scalable precision firepower• sensors that can locate and identify threats
Lethality and effects	<ul style="list-style-type: none">• lethal and nonlethal with precision and discrimination• extended range; enhanced precision• mission command systems interoperable with allies• precision guidance systems against moving and stationary targets• directed energy capabilities on mobile and fixed platforms
Logistics	<ul style="list-style-type: none">• lower fuel consumption; decreased waste generation• power saving, generation, and storage• precision resupply (automated ground and air resupply)• systems reliability, maintainability, and resiliency• point of need production (e.g. water and 3D printing)
Manned Aviation	<ul style="list-style-type: none">• advanced vertical take-off and landing technology• range, speed, payload, and performance (future and legacy)• mission command systems



Technology focus areas



2 of 3

Unmanned aerial	<ul style="list-style-type: none">• automation and autonomy• manned-unmanned teaming; universal control systems• self-deployable aircraft• all-weather; global positioning satellite-denied operations• target detection, tracking, and recognition
Unmanned ground	<ul style="list-style-type: none">• squad to brigade combat team level• mounted and dismounted maneuver; manned-unmanned teaming• maintenance and autonomous re-supply• protection (e.g. sense CBRNE; passive control of multiple assets)• optics, information, and targeting capabilities• advanced power supplies• autonomous robotic systems
Information to decision	<ul style="list-style-type: none">• advanced processing and analytic fusion tools• mission command decision aids• simplified networks resistant to cyber attacks• interoperability with joint, interorganizational, and multinational partners• cloud-enabled networks• simple and resilient• mitigate cyber threats



Technology focus areas



3 of 3

Human performance optimization	<ul style="list-style-type: none">• cognitive, behavioral, and learning sciences• improve critical thinking• increase cognitive and physical performance• foster intuition and social empathy• improve health and stamina• enhance leader training• strengthen unit cohesion• blended live, virtual, constructive, and gaming training environments• pre-accessions tools for matching recruit aptitude to specific occupations
Medical sciences	<ul style="list-style-type: none">• prosthetics technology• improved casualty evacuation and treatment at the point of injury• preventative medicine for previously untreatable viruses• traumatic brain injury



Questions/Discussion