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2020-04-27

# Army Modernization: Steps Needed to Ensure Army Futures Command Fully Applies Leading Practices (GAO-19-132)

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# Army Modernization

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## Will Army Futures Command Create Informed Change?

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The Army has a history of unsuccessful acquisition programs. Acknowledging that change is needed, the Army is engaged in a new modernization effort that includes changes to organizations and practices.

This presentation will highlight:

- 1) the changes Army has made to its organizations and practices for requirements and technology development;
- 2) the extent to which these changes meet leading practices for technology development, cross-functional teams, and organizational change; and
- 3) challenges the Army faces in reaching its long-term goals for modernization.

(NOTE: The majority of this material is taken from two GAO reports: [GAO-19-132](#) and [GAO-19-511](#))

In 2017, the Army established six priorities for modernization of its equipment.

- These priorities are due to the shift in focus to near peer competition in accordance with the national defense strategy.

<b>Army priority</b>	<b>Description of priority</b>
Long-Range Precision Fires	Capabilities, including munitions that restore Army dominance in range, lethality, and target acquisition.
Next Generation Combat Vehicle	Manned and unmanned combat vehicles with modern firepower, protection, mobility, and power generation.
Future Vertical Lift	Manned and unmanned platforms capable of attack, lift, and reconnaissance missions on modern and future battlefields.
Army Network	A mobile system of hardware, software, and infrastructure that can be used to fight cohesively in any environment where the electromagnetic spectrum is denied or degraded.
Air and Missile Defense	Capabilities that ensure future combat formations are protected from modern and advanced air and missile threats.
Soldier Lethality	Capabilities, equipment, and training for all fundamentals of combat—shooting, moving, communicating, protecting, and sustaining. This includes an expansion of simulated training.

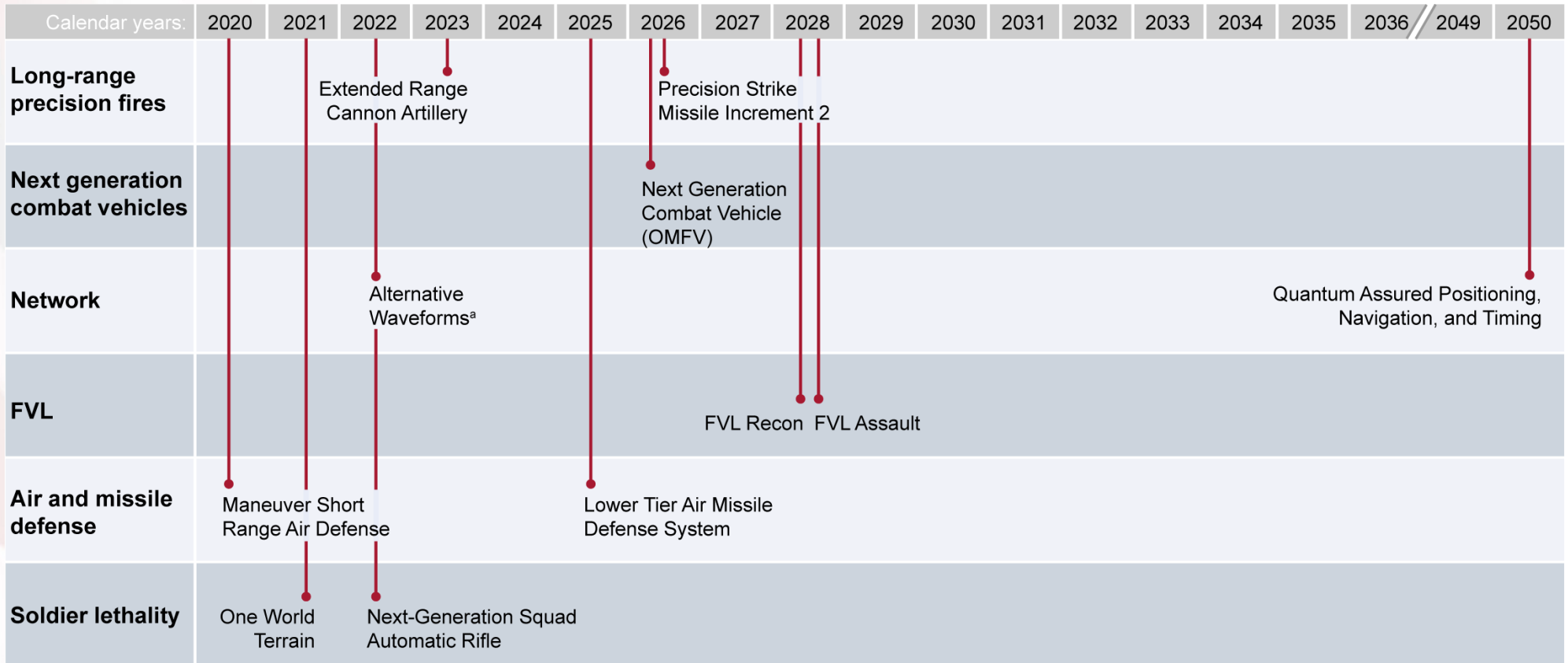
Source: GAO review of Army documentation. | GAO-19-132



# Priorities for Modernization

The Army defined near- and long-term goals for systems across the six priorities.

- **Near-term:** from fiscal years 2019 to 2023, primarily buying existing systems and technologies to fill urgent needs.
- **Long-term:** fiscal year 2024 and beyond, development of new systems and technologies to meet anticipated needs and maintain superiority.



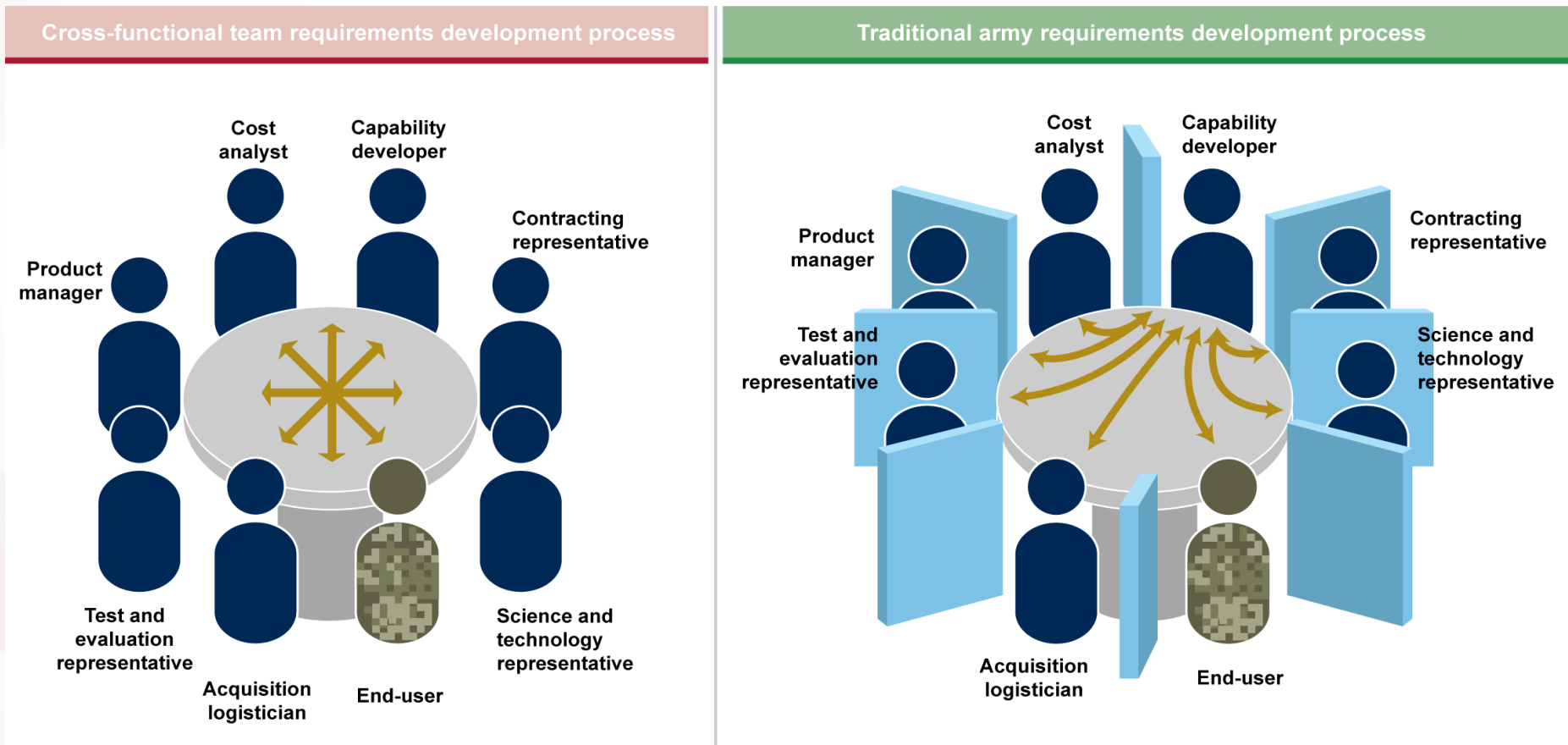
FVL = Future Vertical Lift  
 OMFV = Optionally Manned Fighting Vehicle

Source: GAO review of Army documentation. | GAO-19-132

# Cross-Functional Teams

To increase the efficiency of its requirements development efforts, the Army established cross-functional teams (CFTs) for modernization.

- Each CFT consists of core staff and subject matter experts from across the Army. The goal is to facilitate immediate collaboration as opposed to the more traditional process with each input provided separately.



Source: GAO interpretation of Army information. | GAO-19-502T



# Cross-Functional Teams

The Army created eight CFTs to address the six priority areas:

Army priority	Cross-functional team location
Long-Range Precision Fires	Long-Range Precision Fires – Fort Sill, Okla.
Next Generation Combat Vehicle	Next Generation Combat Vehicle - Detroit Arsenal, Mich.
Future Vertical Lift	Future Vertical Lift – Redstone Arsenal, Ala.
Army Network	Network Command, Control, Communication, and Intelligence – Aberdeen Proving Ground, Md.
	Assured Positioning, Navigation, and Timing – Redstone Arsenal, Ala.
Air and Missile Defense	Air and Missile Defense – Fort Sill, Okla.
Soldier Lethality	Soldier Lethality – Fort Benning, Ga.
	Synthetic Training Environment – Orlando, Fla.

Source: GAO review of Army documentation. | GAO-19-132

In addition to developing requirements, CFTs are to identify ways to use experimentation, prototyping, and demonstrations and leverage expertise from industry and academia.

To consolidate modernization activities the Army created a new 4-star command, Army Futures Command (AFC), which subsumed existing requirements and technology development organizations, including the CFTs.

The command has a number of subordinate components as well as administrative and functional offices:

- Futures and Concepts Center: responsible for identifying and prioritizing capability and development needs and opportunities.
- Combat Capabilities Development Command: responsible for conceptualizing and developing solutions for the six capabilities.
- Combat Systems Directorate: responsible for communicating with the program executive offices and program management offices reporting to the Assistant Secretary of the Army for Acquisition, Logistics, and Technology.
- Medical Research and Development Command: responsible for seeking and developing new medical technologies.
- A number of other organizations including the eight CFTs and legal and other administrative offices.





# Engagement with Small Businesses

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AFC seeks to better identify and develop new technologies for desired capabilities by increasing its engagement with industry, including non-traditional suppliers, and small businesses.

- AFC intends to continue the small business engagement efforts of components integrated into the new command. Organizations transitioning to AFC awarded about \$1.3 billion to hundreds of small businesses from fiscal years 2013 through 2017.
- CFTs are intended to leverage the expertise of industry, including small businesses.
- AFC also includes the Army Applications Laboratory, located with the command's headquarters in Austin, Texas. It provides support and infrastructure to accelerate small businesses' concepts into solutions for the warfighter.
- AFC intends to coordinate with other offices like the Army Office of Small Business Programs and the Office of the Assistant Secretary of the Army for Acquisition, Logistics, and Technology on their small business programs.



## Army has Applied Some Leading Practices

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GAO has developed leading practices for a number of the activities AFC and its CFTs are engaged in. These include leading practices for:

- Technology development
- Establishing cross-functional teams
- Organizational transformation

In our reports we found that the Army's new organizations have applied some, but not all, of these leading practices:

- Cross-functional team pilots generally applied leading practices for technology development, but plan to move into system development earlier than recommended
- Cross-functional team pilots demonstrated some leading practices for effective teams, but should formalize process of identifying and sharing of lessons learned
- Fully incorporating leading practices for organizational transformations could benefit Army Futures Command

We found that the Army's eight CFTs generally applied our leading practices for requirements and technology development efforts.

- **Promoted communication between end-users and requirements developers.** The Army states that teams will follow a methodology of collaboration between warfighters and developers to prepare capability documents. By promoting communication, the CFTs help ensure that resources better match end-user needs.
- **Planned to prototype capabilities as part of technology and product development.** The Army states that CFTs should incorporate experimentation and demonstrations to inform requirements. The goal is to demonstrate new technologies in a relevant environment, such as a highly realistic laboratory setting, before transitioning them to a program.

# GAO Leading Practices for CFTs

GAO has developed eight leading practices for forming cross-functional teams. All eight of the CFTs fully applied four of these practices.

Leading practice	Description	Cross-functional team implementation
Open and regular communication	Efficient cross-functional teams have effective communication mechanisms.	Fully applied
Well-defined team goals	Effective cross-functional teams have clear, updated, and well-defined goals common to the team, team leader, and management.	Fully applied
Autonomy	Effective cross-functional teams are independent and have the ability to make decisions independently and rapidly.	Fully applied
Committed cross-functional team members	Effective cross-functional teams have members committed to the team's goals.	Fully applied

Source: GAO review of Army documentation. | GAO-19-132

- Members of all eight CFTs shared information with each other, sought feedback, and communicated with team leaders and senior Army leadership.
- Army leadership approved the charters for each CFT, ensuring that the goals defined for the teams were linked to the Army's larger goal of modernization.
- The CFT charters give teams the authority to solve problems through market research, prototyping, technical demonstrations, and user assessments.
- All eight CFTs include members with expertise in diverse fields who are committed to achieving team goals.

# GAO Leading Practices for CFTs

All eight of the CFTs at least partially applied the remaining four practices.

Leading practice	Description	Cross-functional team implementation
Inclusive team environment	Effective cross-functional teams invest in a supportive and inclusive team environment where all team members have collective responsibility and individual accountability for the team's work.	Partially applied
Well-defined team structure	Effective cross-functional teams have well-defined team operations with project-specific rules and procedures established for each team.	Partially applied
Senior management support	Effective cross-functional teams have senior managers who view the teams as a priority within the organization and provide these teams with resources and rewards to recognize their work.	Partially applied
Empowered cross-functional team leader	The selected cross-functional team leader should provide clear guidance for team members, be proactive and empowered to make decisions, and provide feedback and developmental opportunities to team members.	Partially applied

Source: GAO review of Army documentation. | GAO-19-132

- The charters for CFTs generally did not address attributes of team environment, such support and trust of team members.
- Some CFTs did not provide training to their members on the operations of CFTs and how they relate to other organizations
- Many members of CFTs “dual hat” and do not have a consistent chain of command that can provide incentives or recognition across all activities.
- We did not find documentary evidence of CFT leaders providing feedback.



# Leading Practices for Organizational Transformation

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GAO developed nine leading practices that can help agencies undertaking transformational efforts such as the creation of AFC and the CFTs.

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## Leading Practices for Mergers and Organizational Transformations

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Ensure top leadership drives the transformation.

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Establish a coherent mission and integrated strategic goals to guide the transformation.

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Focus on a key set of principles and priorities at the outset of the transformation.

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Set implementation goals and a timeline to build momentum and show progress from day one.

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Dedicate an implementation team to manage the transformation process.

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Use the performance management system to define responsibility and assure accountability for change.

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Establish a communication strategy to create shared expectations and report related progress.

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Involve employees to obtain their ideas and gain their ownership for the transformation.

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Build a world-class organization.

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Source: GAO review of Army documentation. | GAO-19-132

As the Army stands up AFC, it has applied some of the leading practices. For example, senior Army officials have provided a clear and consistent rationale for establishing AFC. They also clearly described AFC's mission and a timeline for its implementation. However, AFC has not yet formalized and institutionalized its authorities, responsibilities, policies and procedures.

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While AFC and the CFTs have had some success in developing requirements more quickly they still face a number of challenges:

- **Technology maturity:** the Army has plans to mature technology to a level lower than the threshold recommended by leading practices before beginning system development, a relevant environment instead of operational.
- **Stable leadership** needed to maintain progress: we observed a strong organizational unity of purpose and collaboration from the senior leadership in the Army for AFC, this could change as leadership changes.
- **Requirements personnel:** we reported in 2017 that the Army had shortfalls in personnel for requirements development and has not performed a service-wide assessment of what the total composition of that workforce should be.
- **Collaboration** with other entities: at the time of our review there were significant concerns with AFC's coordination with other Army offices like the Army OSBP and ASA(ALT).
- **Attracting new businesses:** new industry partners are critical to Army achieving modernization but AFC has not yet developed tracking or performance measures to monitor and improve small business engagement.

# Conclusions

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- The Army has made significant changes to its organizational structure, practices, and culture to attempt to increase the speed by which it develops requirements and technology.
- Many of these changes are in keeping with leading practices developed by GAO and others for technology maturation, use of cross-functional teams, and organizational change.
- While the Army has achieved some short-term success with its new approach, sustaining that success in the long-term will require:
  - AFC to mature technologies to the appropriate level of readiness,
  - capture and implement lessons learned from early successes and failures,
  - and formalize the relationships it needs to maintain with other Army and DOD entities.





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