

Engineer Objective Force Concept: "How to Fight"

By Mr. Mike Fowler

As everyone knows, the environment of our world has changed, and the Army is transforming to adapt to this new environment. The Army's goal, referred to as the Objective Force, has led us to look at the Engineer Regiment to examine how engineers will fight in the future.

Objective Force

Before discussing the overarching Objective Force engineer concept, it is imperative that we review how the Objective Force maneuver unit of action (UA) is designed to fight. The Objective Force is a full-spectrum force, capable against an adaptive, learning enemy in all terrain conditions (see Figure 1). It operates with greater effectiveness and versatility and achieves greater empowerment in small-unit tactical operations through improvements in the—

- Development of the situation out of contact.
- Information dominance that allows unprecedented situational awareness and situational understanding.
- Ability to know and use terrain and weather to a degree that removes the enemy's "home court" advantage.
- Standoff destruction of enemy systems.
- Assured mobility that creates a significant mobility differential relative to the adversary.
- Embedded, robust, all-weather, 24/7 intelligence, surveillance, and reconnaissance.
- Ability to achieve assured lethality with a very high probability of hit—and assured kill with an equally high probability of kill given a hit—all beyond the range of the enemy's weapons.
- Ability to achieve three-dimensional mutual support between units on parallel axes while on the move.
- Ability to plan collaboratively and rehearse virtually while on the move, arriving at the objective on parallel axes.
- Precision fire control and distribution when conducting tactical engagements at the small-unit level.

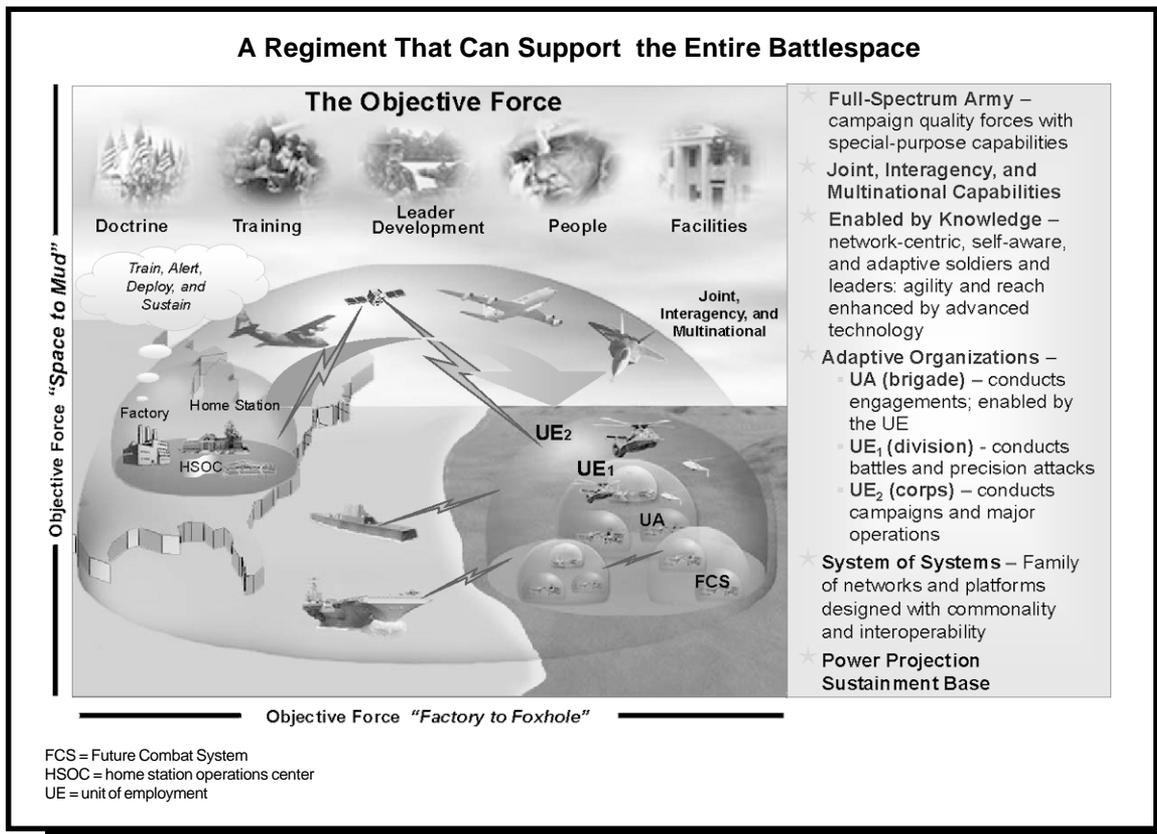


Figure 1

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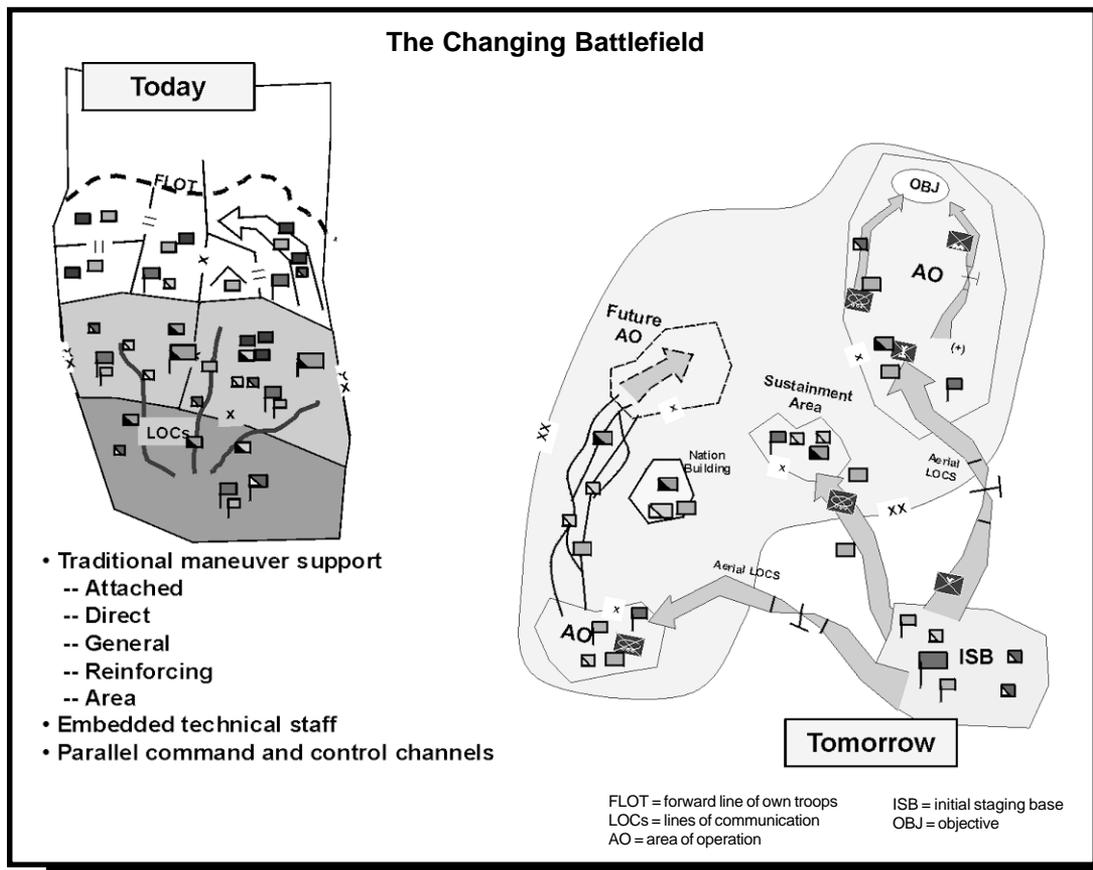


Figure 2

- Standoff detection and neutralization of mines; booby traps; improvised explosive devices; and chemical, biological, radiological, nuclear, and explosive threats.
- Inherent air-ground integration.
- Manned-unmanned teaming with organic unmanned systems.
- Reliability of combat power.
- Seamless transition while in contact.

Ultimately, decisive operations require tactical success in close combat—the capability to seize and control key terrain and to close with and destroy enemy forces. In this sense, close combat actions are the fundamental building blocks for operational success and strategic victory. The Objective Force executes decisive combat operations by denying the enemy freedom of action and destroying him through a series of rapid, violent actions. Future engagements will be characterized by new tactical principles based on the development of the situation out of contact and the balanced combination of standoff capabilities, skillful maneuver, and tactical assault to achieve simultaneous decisions at multiple locations. Continuous integration of powerful, small tactical units—moving along multiple, noncontiguous lines of operation to objective areas that are force-oriented—is the foundation underlying the success (see Figure 2).

Objective Force Engineers

One of the challenges that the Engineer Regiment must address is that under our current structure, engineer units are not responsive, deployable, agile, versatile, or sustainable in the context of the Objective Force. Some overarching concepts have been developed to help eliminate these shortfalls:

- Foundation forces and force pools
- Command and control cells
- Early-deployable detachments (EDDs)
- Construction modules

Foundation Forces and Force Pools

One of the underlying concepts in the Objective Force engineers is the design of foundation forces and force pools. Foundation forces are the building blocks for projecting engineer capabilities into tactical units. They are made up of engineer effects modules (EEMs) and engineer mission teams (EMTs) with a broad baseline capability. The foundation force relies on the force pool to provide mission-specific capabilities. The force pool is the primary force provider, comprised of a modular base structure with a fixed organization of discrete sets of capabilities. This enables rapid force tailoring and a scalable robustness to allow for maximum operational flexibility.

Both organizations have an inherent design for small-unit excellence. In both the foundation force and the force pool, organizations are based on engineer mission forces (EMFs), which are compatible with the engineer battalion of today.

Command and Control Cells

Developing a command and control structure that is projectable and scalable to support the foundation force and force pool concept will be a challenge. This concept breaks out command and control headquarters (HQ) into four cells that vary among the standing (regiment/brigade), foundation force, or force pool HQ. The command and integration cells are the bulk of the standing and foundation force HQ.

- *Command cell*—contains the command group and is responsible for issuing orders, executing current operations, providing the vision for future operations, and providing a command presence.
- *Integration cell*—provides control for current operations and battle tracking, participates in combined arms planning, and produces orders.
- *Technical cell*—provides a specific engineer expertise that analyzes the engineer's common operational picture (COP) and provides technical advice and design to help produce solution sets. This cell, which is also responsible for the reachback for technical assistance, is more robust in the force pool HQ.
- *Sustainment cell*—tracks readiness, plans and coordinates sustainment operations, and anticipates logistical requirements. Engineer regiment and brigade HQ have a larger sustainment cell.

As EMFs are task-organized, the modularity of these cells form together to provide the right HQ structure to support the mission requirements.

Early-Deployable Detachments

A new capability embedded in engineer organizations is an EDD. This capability is a small, rapidly deployed team that enables engineer solutions out of contact and allows precise employment of engineers. The EDD would be organic to organizations with an EMF role and, in some cases, may have duty in a Corps of Engineers role to enhance its professional engineer skills. Once deployed, an EDD begins to build/update the engineer COP for the specific mission, identifies problems, and initiates reach to get the expert centers to develop solutions and shape the engineer battle through identifying contracts and resources available.

Construction Modules

There are several aspects of the construction battalion concept. The first is designing modules that can be easily deployed that will allow the battalion to phase in its capabilities with the maneuver force. The construction EDD is made up of technically trained soldiers who can begin to identify and prioritize the required engineer missions that must be accomplished and begin to reconnoiter possible contract

support. The next step is a skid steer-type platoon. This platoon is equipped with commercial skid steers and a variety of attachments that allow it to begin some limited work. The skid steer operators are trained on heavy construction equipment, so if more robust requirements exist, they can use commercial construction equipment. The primary role of this platoon is to support the first-deployed maneuver forces with unmanned aerial vehicle landing areas, rotary wing sights, forward area rearming and refueling points, and limited airfield repair. As deployment continues, these limited teams are followed by a light air-transportable construction company, which gives additional capability in a deployable package. The company will provide increased airfield repair and main supply route maintenance. The rest of the battalion is comprised of heavier construction equipment that is capable of supporting a sustained military operation.

There are some additional changes that must be addressed to fully embrace the Objective Force. As we look at the current level of construction equipment and the Army dollars that are available to update this fleet, we find that there is a considerable shortfall. This initiative looks at reducing the number of construction equipment items while maintaining the operators, allowing for 24-hour operations. Reduced equipment strengths would then be augmented with rental equipment for surge capability. This would also find efficiencies in deployment and maintenance. This concept will require some major changes. Standing lease/rental agreements must be developed which would require changes to the current acquisition laws. Additional analysis needs to be conducted to determine the optimized amount of equipment for current operations and training. As we rely on industry to support us abroad with equipment, our operators must be readily adaptable to the differences of equipment by manufacturer. One way to help this and to stay proficient with operator skills is to field configurable construction equipment simulators.

Conclusion

The Army is changing. The enemy is changing. The way we fight will change. Engineers in the future will have greater demands forced upon them. Developing solutions out of contact over noncontiguous operations, with a greater reliance on support to future maneuver, are just some of these demands. Engineers may not be organic at all echelons in the future, but engineer requirements will still exist. The Engineer Regiment must be a relevant option for the maneuver commander. It will take the efforts of the entire Regiment to get this change right. The Engineer School must receive your support and feedback to accomplish this challenging task.


Mr. Fowler, a military engineer development analyst, has worked in the Directorate of Combat Developments, U.S. Army Engineer School, and more recently, the U.S. Army Maneuver Support Center, at Fort Leonard Wood, Missouri, for fourteen years. During the past ten years, he has been involved in developing engineer concepts, to include those for Force XXI, the Stryker Brigade, and the Objective Force.