

US Army Brigade Combat Team

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LAV III Stryker operating in Iraq, with anti-RPG mesh fitted. An ongoing criticism of the LAV in urban operations has been vulnerability to RPG fire, larger IEDs and difficulty negotiating very narrow streets. Proponents of the LAV argue that the vehicle is so quiet that opponents can often be surprised by their arrival.



M1131 Stryker Fire Support Vehicle. The FSV is a sensor platform with a laser ranging / designation capability, and a communications package, intended to facilitate direct and indirect fire support.



M1132 Stryker Engineer Support Vehicle. The ESV is intended to support mine clearing and obstacle removal tasks.

(Photos: US Army)

The US Army is reinventing itself through the most radical and deep force structure changes in 60 years. These changes are in part a result of technological evolution and a result of changing styles of conflict. This process of change has resulted in the most acrimonious argument observed in the US Defense debate in many decades. This revolutionary change has lessons for Australia as its force grapples with the changing technology and complexity of conflict. In the US the debate is divided along two principal axes. The first axis is that of the heavy versus the medium/light structure force; the second axis focuses on how to best implement light and medium forces. The eventual outcome will likely be brigade-sized combat elements termed Brigade Combat Teams (BCT). There certainly has been no shortage of opinion on all sides of this complex debate.

The established US Army force structure is the product of direct linear evolution that started during the early years of World War II. Stimulated by conflicts in which the US was pitted against the Wehrmacht, Waffen SS, and Japanese Army/Marines this evolutionary process encountered a succession of conflicts involving Soviet surrogates and the four decades of standoff in Central Europe. Korea and Vietnam were pivotal, with the US fighting derivatives of Soviet doctrine and technology.

The product of this process over several decades was a heavy force structure, characteristically built around specialised divisional size formations. The

M1 Abrams tank, the M109 Paladin, the MLRS rocket artillery system, the Apache/Black Hawk helicopters, and the Patriot SAM system all occupied niches in this model, which provided mobile heavy forces intended to hold enemy offensives, and to provide a manoeuvre force capable of punching through layered Soviet style defensive formations.

This force structure aimed to break the Warsaw Pact in a direct confrontation and execute 'Blitzkrieg' style operations. The land campaigns of 1991 and 2003 in Iraq illustrated the capability of such forces to dominate on the classical manoeuvre battlefield.

The limitation of such a heavy force structure is in its poor strategic mobility and immense logistical tail to support the force with ammunition fuel and other consumables. With such a large fraction of heavy equipment, this style of force requires extensive and slow sealift capability and large secure staging areas through which to deploy. That was not an issue for potential Cold War conflicts as much of the force was pre-deployed, with permanent basing in Europe and South Korea.

The changing nature of conflicts over the last decade stimulated evolutionary changes. The US became embroiled increasingly in conflicts that required rapid deployment of ground forces and, more recently, sustained deployment of forces to secure territory. While well adapted to this regime of combat, the US Marine Corps is much smaller than the US Army and its role centres on amphibious operations rather than general-purpose land warfare.



M1126 Stryker Infantry Carrier Vehicle (LAV-III). The core of the BCT Striker brigades is the ICV, which has a crew of two and carries nine infantrymen .



M1128 Stryker Mobile Gun System. The Stryker brigades will derive much of their fire power from the MGS system, which is equipped with a 105mm gun common to early variants of the M1 Abrams tank. The MGS has a stabilised turret, permitting the three-man crew to fire on the move.



M1127 Stryker Reconnaissance Vehicle. The RV is intended as a platform for deploying six strong scout teams. The baseline vehicle is also common to the M1129 Stryker Mortar Carrier, equipped with a 120 mm and 60 mm mortar for indirect fire roles.



M1135 Stryker NBC Recon Vehicle. The NBC RV is intended to perform nuclear, biological and chemical reconnaissance in contaminated terrain. It includes full NBC capability including an overpressure system.



The succession of conflicts since 1989 also brought significant reductions in the capabilities of opposing ground forces. Hammered for weeks or days by air power delivering precision weapons before a land force made contact, these forces abandoned the Cold War notion of massed tank battles under the deluge of smart bombs raining from the sky.

The US Army thus had to confront two core problems. The first was to achieve strategic mobility so the force could arrive in theatre quickly enough to matter; the second was wasting the world's best heavy divisions against an opposing heavy force 'littered' across the battlefield following aerial attacks.

The Marine Corps coped well with this post-Cold War style of combat. Traditionally an all arms force using combined force formations, and accustomed to using air power as a substitute for heavy land force firepower, the Marines stole the limelight repeatedly.

However, the process of change for the US Army has been painful. With decades of institutional experience centred in divisional sized heavy formations, few in the Army community liked the idea of shifting to a combined arms model – trading away heavy formations for medium and light formations, becoming more like the competing Marine Corps.

The combined arms model closely coupled with supporting air power is hardly unique. Pioneered by the Soviets and Nazi Germany during the lead-up to World War II, air power remained central to Soviet force structure planning until the collapse of the regime. It is a model designed around formations of arbitrary sizes, which provide a balanced mix of capabilities, usually optimised for a specific theatre or opposing formation. A good example would be a Wehrmacht or Waffen SS combined arms formation in 1944, equipped with PzKw V and VI heavy tanks along with SdKfz 251 half-track infantry carriers and support vehicles, Sturmgeschutz III/IV tracked assault guns, Jagdpanzer IV self propelled anti-tank guns, SdKfz 230 series 6x6 and 8x8 armoured cars, and other vehicles.

The Soviets closely emulated this model, using mixed tanks and tracked self-propelled guns with wheeled BTR-60 and tracked BTR-50 personnel carriers until the late 1970s, when the tracked

BMP-1 infantry-fighting vehicle was introduced. The debate over the future shape of the US Army boiled over with the acrimonious public argument over the cancellation of the Crusader Self Propelled Howitzer, this eventually led to the removal of the then Secretary of the Army. Current US Army planning reveals a shift away from heavy to medium and light dominant formations well under way.

Another facet of the US debate about future force structure centres on how to best implement the 'new look' force structure. That debate has been no less acrimonious, and no less protracted.

In the first iteration of the US Army drive for highly mobile forces, the LAV-III 8x8 family of vehicles became the basic platform for the medium brigade force structure. The LAV-III is a redesigned derivative of the existing LAV-25 series, itself an evolution of the earlier MOWAG Piranha 6x6 and 8x8 vehicles. Larger and heavier than the Marine Corps LAV-25 derivatives, the LAV-III is much closer in concept to the ubiquitous Soviet BTR-60 family of vehicles, and the slightly larger Warpac OT-64 series.

This choice was strongly disputed, and continues to be disputed, by the Air Mech Strike (AMS) study group, an association of retired and serving US Army officers, mostly from the airborne division.

AMS argue that the LAV-III is too soft and too heavy, lacks the cross-country and urban terrain mobility of a tracked equivalent such as an evolved M113, and the LAV-III is difficult to airlift. Airlift is a critical consideration for the AMS group, who regard dependency upon C-17 and C-5 airlift as a critical bottleneck in the strategic mobility of the planned medium and light forces. AMS have produced a range of innovative proposals, including the idea of using surplus commercial 747 freighters to lift M113 and Wiesel equipped medium/light forces, to bypass the strategic mobility bottlenecks.

Unfortunately for the AMS group, their arguments to date have not been accepted by the Army leadership, and the focus in the new structure remains on the LAV-III centric model for medium forces.

Long term, the US Army envisages the introduction of the Future Combat Systems (FCS) vehicles as the core capability of the light/medium force structure.



M1134 Stryker Anti-Tank Guided Missile. The ATGM variant is intended to provide a highly mobile anti-tank capability, using a remote control turret with sensors and a pair of TOW missile launcher tubes. The system is intended to supplement the MGS.

M1133 Stryker Medical Evacuation Vehicle. The MEV is intended to carry four patients on litters, and provides space for three medics.

Brigade Combat Teams

The US Army is now in the process of restructuring from a force structure model built around division-sized formations to a one built around brigade-sized formations. Aside from changes in equipment types, this represents the single largest force structure change in the US Army for many decades. The aim is to provide smaller and more flexible self-contained formations, suitable for rapid deployment while permitting the deployment of 'tailored' forces for specific campaigns. Rather than deploying a small number of divisions, a larger number of brigades would be combined to achieve the same numbers but with more flexible composition for the task at hand.

These brigade-sized combat elements are termed Brigade Combat Teams (BCT) and will be the model into the foreseeable future. A key feature is that many capabilities, historically maintained at a corps or divisional level, will be migrated down to the brigade level to facilitate autonomy and deployability.

Three brigade designs have been defined for the BCTs: Heavy (armoured/mechanised), Stryker and Infantry. Commonality across the structure of all BCTs is to be as high as practicable, with differences reflecting role specialisations for specific BCT types.

The Heavy and Infantry brigade structures will have two manoeuvre battalions while the Stryker will have three. The Heavy and Infantry brigades will have an RSTA (Reconnaissance, Surveillance and Target Acquisition) squadron, a fire battalion, a support battalion and brigade troops battalion. In Stryker brigades, an engineer company will replace the troops' battalion. RSTA squadrons or battalions would provide conventional and chemical reconnaissance functions. The brigade troops' battalion would provide command post, liaison, intel and signals capabilities for the brigade.

The Heavy and Infantry BCTs would have manoeuvre elements comprising two combined arms battalions with four infantry or armour companies, plus scouts, engineers and sustainment forces.

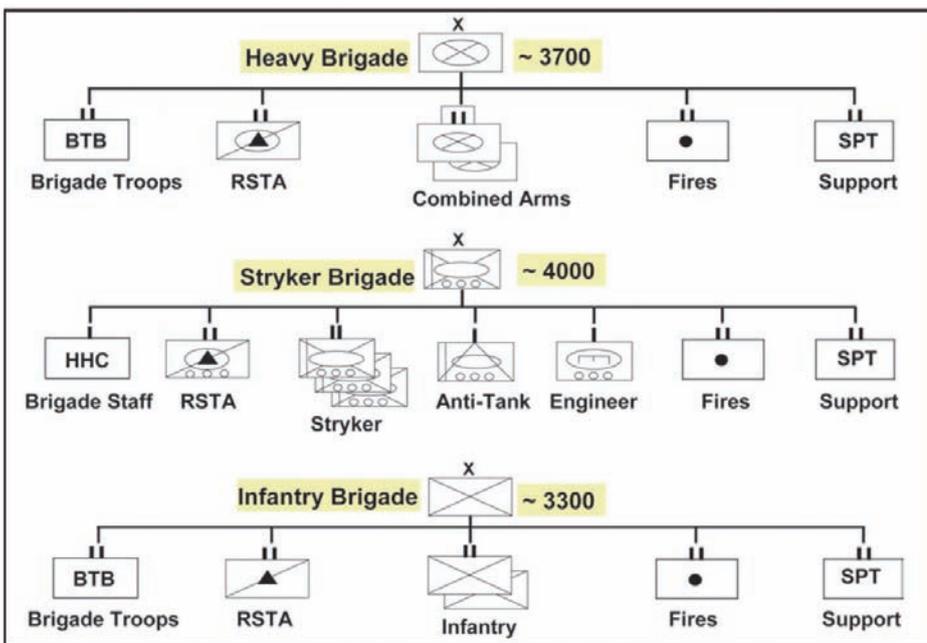
The fires battalions comprise two artillery batteries with supporting acquisition and counter-battery radars.

The restructured brigade model is complemented by a reorganised headquarters model, which replaces the existing corps and divisional headquarters elements.

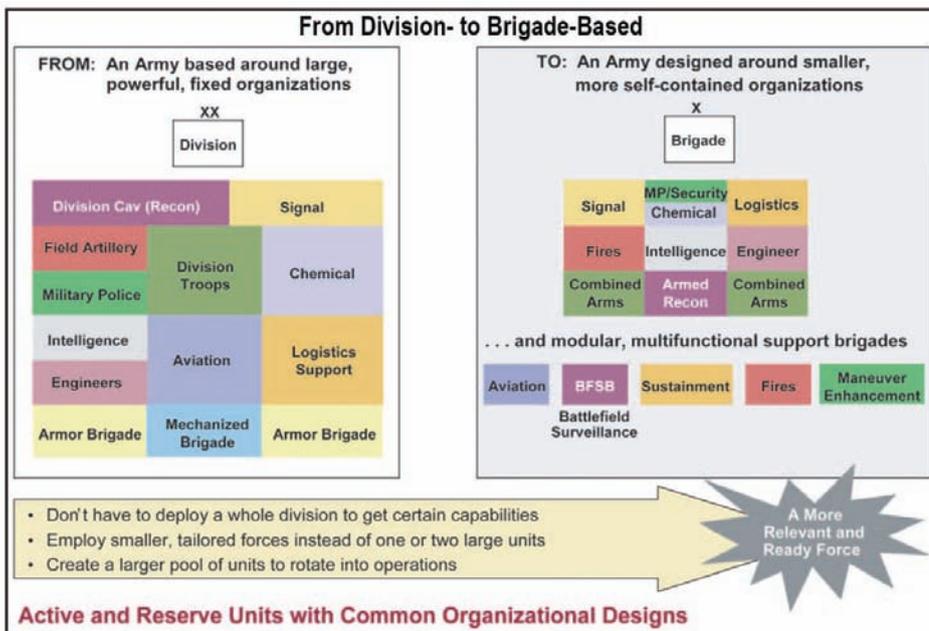
This model is centred on the UEx (Unit of Employment X) scheme, in which a modular and deployable headquarters element with separate command posts control up to six BCTs in combat operations, and possibly more in 'stability' operations (peacekeeping/enforcement). These BCTs are currently Infantry, Stryker, Heavy and in the future FCS equipped.

A mix of Supporting Brigades, comprising Manoeuvre Enhancement, Battlefield Surveillance, Aviation, Fires and Sustainment brigades, further supports the model combining BCTs and UEx headquarters.

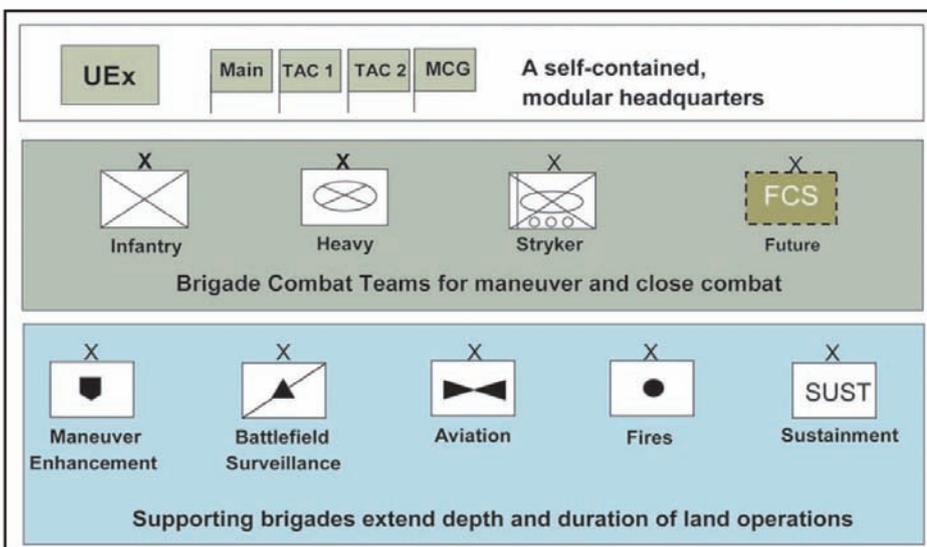
Manoeuvre Enhancement brigades are additional brigade level combat forces intended to preserve freedom of movement for the BCT elements, these include capabilities such as EOD, air defence, chemical decontamination and reconnaissance, and would be tailored to specific environments.



The Brigade Combat Team model (US Army).



Transformation of the divisional model to a brigade model (US Army).



The UEx model (US Army).

Battlefield Surveillance brigades would provide extensive RSTA and intelligence capabilities to support the BCTs.

Aviation Brigades include scout, attack and transport helicopters.

Fires Brigades are intended to provide precision and standoff fire support to BCTs, including close support when in contact with enemy forces.

Sustainment Brigades will provide logistical support for the UEx package in theatre.

Other Structural Changes

The dissolution of the established Army, Corps and Divisional structures in favour of the more granular and flexible BCT model has captured much of the debate, but it is not the only change.

Restructuring and growth of Army Special Operations Forces (ARSOF) aim to enhance Special Forces (SF), Civil Affairs (CA), Psychological Operations (CA), Ranger, and Army Special Forces Aviation (ARSON) capabilities. The emphasis would be not only on strengthening these capabilities but also structuring them in a modular fashion so they can be more easily attached to BCT structured force elements in theatre.

Changes are also planned for organic Air Defense Artillery (ADA) units, which encompass Surface to Air and Anti-Ballistic Missile capabilities.

The legacy model of an organic ADA battalion in each division is being dissolved to provide a pool of ADA battalions attached as required to a deployed BCT centric force element.

Engineer forces would also undergo restructuring. BCTs would have embedded engineer force elements designed to support BCT operations, while additional engineer force elements would be pooled to selectively augment specific formations as required.

Medical units, Signals, Intelligence and Military Police forces would also be restructured to adapt to the BCT model, and some roles changed to better adapt to the current environment.

The legacy US Army Chemical Corps, responsible for NBC protection, smoke generation, chemical reconnaissance, and historically offensive use of CW, would be restructured into company and platoon sized elements, attached as required to BCT formations or used to support homeland defence operations.

Conclusions

There seems little doubt that the new brigade level structure being adopted by the US Army will be better suited to an environment in which multiple conflicts of varying intensity, scale and duration are more likely than the Armageddon scenario of the Soviets rolling through the Fulda Gap.

Indeed, other than an unlikely scenario of a land force invasion of the PRC, there may not be any conflicts in the foreseeable future that fit the pattern of the Cold War. As a result, specialised formations and capabilities built around the Cold War model are likely to become niche capabilities, not sustainable in the longer term.

The challenge faced by the US Army in its transformation process is to ensure that the new model delivers the intended effect. Combined arms forces can work well, as proven by practitioners since the 1940s, but cultural changes and different thinking about how force is applied is paramount. While much of the resistance has been institutional, as changes on this scale are unsettling for any large organisation, an ongoing problem has been reluctance to wind down capabilities that are of limited usefulness in contemporary conflict - the heavy tracked self propelled guns formations are a good example. In this respect, the US Army is going through the same trauma as navies did with the decline of the battleship and heavy battle cruiser.

For the ADF there are many good lessons to be learned from this process in its process of transformation of the Australian Army into a Hardened Networked Army, with the capability and flexibility to deal with a range of combat, peacekeeping and humanitarian exigencies.