Move fast, hit hard

The British Army was looking for a portable yet highly capable anti-armour system. It found it with Javelin

The modern role of the British Army demands weapons systems that are flexible, powerful and portable. This is especially true for those units – such as airborne troops or commandos – that have to move fast yet hit hard. And so the British Army has decided to equip these so-called 'Light Forces' with one of the most capable anti-tank missile systems available today – Javelin.

The Light Forces Anti-Tank Guided Weapon System (LFATGWS) programme was created to give soldiers a lightweight, medium-range weapon that can be carried easily and deployed quickly. The British Army was looking for a system that could be in service soon, while having the capability to remain an effective and competitive system for a service life of 20 years.

The Javelin LFATGWS is planned to enter service in 2005 with Rapid Reaction Forces, including 16 Air Assault Brigade and 3 Commando Brigade Royal Marines.

Javelin exactly meets the requirement. It is a man-portable, fire-and-forget system with a range of up to 2.5km and which can be used from within confined spaces. It can penetrate any known type of armour and can be used in all weathers and battlefield conditions. The weapon is as effective against buildings as it is against armour, and its Command Launch Unit (CLU) can be used as a surveillance system, as well as for launching the missile. All that adds up to a highly adaptable system, so that the soldiers who use it have the maximum flexibility and capability in a highly portable system.

There are other benefits from their point of view, too. Because Javelin is a fire-and-forget system, the gunner can move away from the firing position, or engage another target, as soon as the missile has launched. And there is no effective counter-measure system that works against Javelin.

"Javelin will equip the UK light and mechanised infantry forces with the world's premier medium-range anti-tank capability," said Col John Weinzettle, the US Army Close Combat Missile Systems (CCMS) project manager. "Javelin ensures a single British soldier or Marine can defeat all known armoured vehicles as well as conduct precision engagements of alternate targets such as bunkers, buildings, low flying helicopters and watercraft."

The prime contractor for the system is Javelin Joint Venture, run by Raytheon and Lockheed Martin. They have applied the very latest technology and

manufacturing techniques to the programme, which means that the system is extremely reliable. At the same time, it is designed to require very little maintenance, which keeps costs low. Javelin also has an innovative training system that reduces the number of live firings soldiers need to perform in order to stay effective – which also cuts costs.

Low risk

Cost isn't the only factor, of course. For any government or military organisation, reducing risk is a critical consideration when acquiring a new weapon system. Javelin addresses this issue in the best possible way – by being a fully-developed and proven system that has already demonstrated its capabilities, not just in tests or exercises but when it matters – in actual combat.

Military Off-the-Shelf (MOTS) acquisition is now a leading concept in most countries, not least the UK, and in the case of Javelin, the Ministry of Defence can see a track record of over 4,500 Command and Launch Units and 21,000 rounds built and sold, many hundreds of those rounds having been fired – in international trials, battlefield simulations and in combat, including recently in the Middle East. When up against superior opposition or competing weapons, Javelin has always won.

A further benefit of buying a MOTS system is that it is likely to be used also by other friendly forces and this is certainly true of Javelin. It is already in widespread use by the US military – the Army, Marine Corps and special forces – by four international customers, including Australia, and has been recently selected by the New Zealand Army (see box). That makes for valuable interoperability in multinational operations, such as UN and NATO missions. And it means that future development costs are likely to be spread among a number of governments.

Made in Britain

For all that, in its LFATGWS implementation, this will be very much a British system. The MoD was quite clear that the system would have to be built and supported in the UK, and this focus on UK industry has always been a high priority in Lockheed Martin UK programmes. So the list of British suppliers and partners to the programme is impressively long (see box). It has been estimated that some 300 skilled jobs will be created or sustained in the UK by the selection of Javelin for this programme.

More benefits

There are other benefits for both the companies involved and the UK defence industry in general, too. There will be a considerable transfer of technology from the US to the UK, meaning that UK firms will benefit from US-led research and development. The technology and knowledge gained in areas such as, among other things, the advanced seeker system, will help sustain the UK's competitiveness in world markets.

As if that wasn't enough, being part of the worldwide Javelin programme puts these UK companies in a strong position when the time comes for future purchases of the system – including upgrades – by the UK, US or other governments. In fact, UK industry is already involved in the next round of US Army procurement for Javelin.

"The Javelin system is the world's only validated medium range fire-and-forget anti-armour system," said Michael Crisp, president of Javelin Joint Venture. "I look forward to working with our world-class UK teammates to bring a combat proven, highly effective, low risk, value for money solution to the UK Armed Forces."

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Col John Weinzettle, US Army

New Zealand chooses Javelin

The New Zealand Army has also selected Javelin as its medium range anti-armour weapon. Lockheed Martin is again working with Raytheon to provide Command Launch Units (CLU), missiles, associated support equipment, spares and training.

"Javelin, with its stand-alone surveillance capability, is ideally suited for UN Peace Keeping and Peace Enforcement operations," said Howard Weaver, Javelin Joint Venture vice president. "Additionally, Javelin has tremendous growth potential with the missile's modular construction, CLU software enhancements and its adaptability to a wide range of platforms."

New Zealand intends to introduce Javelin into service in 2004, to coincide with the introduction of the Light Armored Vehicle. Choosing Javelin also gives the New Zealand Army commonality with US Army, Marine Corps and Special Operations Forces deployed throughout the world.

Programme Partners

The Javelin Joint Venture is comprised of Raytheon and Lockheed Martin. For the British Army's LFATGWS programme, they are supported by a number of UK companies providing the following components of the system:

BAE SYSTEMS – seeker.
Brimar – cathode ray tube for CLU.
Cytec – carbon material for composite items.
Express Engineering – precision machined parts.
FR-HiTemp – flex harness assembly and pylon cover.
Gardner Aerospace – mechanical components for seeker head.
Hymatic – high-pressure gas components.
Instro – monopod and tripod support.
Leafield Engineering – design & assembly of missile simulated round.
Lockheed Martin UK Information Systems – indoor trainer.
MB Aerospace – motor casings.
Muirhead Aerospace – servo motor components.
Tanfield Group – vehicle racking.
Thales Optics – precision optical sub-assemblies.
Woven – main cable assembly.