Based on the challenges of extended foot patrols in Afghanistan’s Korengal Valley, members of the Army’s Asymmetric Warfare Group set about to look at ways to make Soldiers more mobile and agile while operating in mountainous terrain. The resulting project, dubbed the Soldier’s Load Assessment, saw an entire ensemble of individual equipment undergoing an evaluation in Afghanistan with two battalions of troops during the summer of 2009. Within weeks of the assessment’s beginning, other units began to seek out the same equipment. Even today, many items from the assessment continue to be sought after by deploying units.

The problem was simple and still remains to this day. The American Soldier is loaded with critical yet heavy lifesaving equipment such as body armor and radios. This makes him sluggish on the battlefield. Even during Viet Nam our Army faced the same problem. In fact, a program called Lightweight Individual Clothing & Equipment (LINCLOE) was initiated in 1965 to rapidly field equipment solutions. Work conducted under this program led to the adoption of lighter equipment manufactured from new materials that were more water and rot resistant. But even earlier than this, work dates back to World War II and BG SLA Marshall’s seminal work, “The Soldier’s Load and Mobility of a Nation”, required reading for any serious student of the tactical fight. Marshall’s analysis revealed that Soldiers who carried more than 35% of their weight were less effective in combat and more prone to injury.

Prior to the Load Assessment, COL Bob Shaw, commander of the Asymmetric Warfare Group, commented on the issue during an interview with Military Times, “We’ve got the enemy running around in a man dress with a gun and flip-flops, able to run up and down the mountains because they live there.” He went on to say, “They’ve got the advantage on us, especially if we are weighted down with all this gear.” “Endurance, agility, being an effective soldier in the mountains…it really has to do with what’s on your back.” His team took these comments to heart when they developed a list of key commercial technologies that could be rapidly fielded to assess their effectiveness at improving Soldier performance.

To get the ball rolling, the AWG utilized a unique capability; an in-house REF Direct Support branch called the Asymmetric Product Office (APO). They can leverage quick turnaround procurement of promising technologies to give our warfighters the edge in the war. AWG/APO was able to leverage their mission partnership with the REF to rapidly turn a materiel response coupled with a non-materiel answer which was to become the Planning Guidance for Lightening the Soldiers Load.

Then, they selected a Brigade from the 4th Infantry Division to conduct an assessment of the equipment under actual combat conditions. AWG also enlisted the assistance of the Johns Hopkins Applied Physics Lab (JHU/APL) to conduct data collection and convert the raw data into usable metrics to support decision making.

To acquire these items from various vendors, kit them, and assist with issue, the REF turned to ADS, who was tasked initially with gathering...
specifications (weights, dimensions, etc) for legacy individual soldier equipment, such as body armor and plate carriers, helmets, boots, packs, and so on. Then they were asked to provide the same information on comparable COTS items for each piece of equipment. In just over a week, ADS gathered the data and submitted it to AWG, who was then able to create a new equipment kit that cut approximately 25 lbs. off a standard Soldier’s load.

The initial contract in January 2009 called for 560 individual kits and ADS was asked to outfit a battalion’s worth of soldiers that were already in Afghanistan. ADS ordered and stored all of the equipment on the contract in their 75,000 sq. ft. kitting warehouse awaiting shipment to theater. Based on specific information for each individual Soldier in the battalion, such as name, rank, boot size, waist size, chest size, duty position (e.g., M240 gunner), etc, ADS created the 560 kits in large kit bags that were secured with TSA locks, and barcoded with the Soldier’s information.

Due to unforeseen delays, the Army’s plan changed and a new unit still in CONUS was chosen to receive the equipment. The Army asked ADS to “unkit” the equipment and move it to Ft Carson, CO for issue there. ADS unpacked the kits, loaded the equipment onto trailers, and sent it to Ft Carson along with a team of six specialists from their headquarters in Virginia Beach to prepare an “issuing facility”, in conjunction with members of the unit and members of the Army’s AWG and REF. In four days, the team was able to outfit the entire battalion of 490 soldiers with the new gear.

During the issue, ADS team members also ensured that sized equipment was properly fitted. Any variance was immediately corrected either with spare sizes that ADS had brought with them or via overnight shipment from various vendors. No Soldier deployed to Afghanistan without his gear or with ill-fitting equipment. This is a testament to the level of expertise that ADS brings to the logistics arena.

To conduct the actual assessment in Afghanistan, AWG deployed a Special Assessment Team (SAT) composed of Subject Matter Experts (SMEs) and Operational Advisers (OAs) who are capable of embedding with units to ascertain the “Combat Effectiveness” of candidate solutions. AWG’s SME/OA’s are all trained Combat Developers whose job it is to conduct product development to meet asymmetric threats and then assess the capability’s utility in the field. During this assessment, the SAT used JHU/APL metrics developed to measure Soldier acceptance, combat effectiveness, and overall durability of the proposed candidate solutions. The SAT deployed two teams to embed with 4-4 IN in both Nuristan (COP Bostick/Kamdesh) and the Korengal Valley.

Numerous lessons were learned from the Soldier’s Load Assessment including the development of a handbook for small unit commanders called “Planning Considerations for Lightening the Soldier’s Load”, which details how to tailor equipment in order to increase mobility and decrease fatigue. Additionally, the data collected is being used to help develop an automated
decision making tool that will take the guesswork out of preparing packing lists. What many do not know is that the assessment was so successful, the Army ordered another 1,500 kits as well as an additional 1,000 plate carriers through ADS.

Mountain boots were also a challenge for this assessment. No single vendor was able to support the totality of the requirement for this specialized footwear. Based on the performance of the various models, requirement specifications were collected and the Army is preparing to field a Berry Compliant solution.

Other technologies from the project have also been adopted by the Army, although, they too may not be the same brand that was used during the initial assessment. For example, units have procured some of the items for issue to Afghanistan-bound troops such as lightweight GPS systems from Garmin and polymer rifle magazines from Magpul. The point being, that as the industrial base continues to develop and refine products, deploying Soldiers can rely on the latest advances.

Now, a year later, and based on feedback from the Soldier’s Load Assessment, ADS now offers an entire complement of equipment that is not only Berry Compliant but also incorporates the latest in Soldier Systems technology.

Berry Amendment compliance cannot be stressed enough. This means that the equipment is manufactured in the USA using American materials. The commitment to quality is not only immediately evident and Soldiers can rest assured that their equipment was crafted by a fellow American.

Additionally, products are now available in the Army’s newly adopted Operation Enduring Freedom Camouflage Pattern (OCP) which is the hugely successful MultiCam® from Crye Precision. This pattern has not only been adopted by USSOCOM but also the Army and Air Force.

ADS’s special skills were crucial to the success of the Soldier’s Load Assessment. They remain poised to rapidly assemble equipment from disparate vendors, kit it, and deliver it for issue at short notice, anywhere in the world whether at home station or in a deployed environment. This is why organizations seeking solutions to unique problems turn to ADS. Combined with their veritable “think tank” of Subject Matter Experts who will assist the client to find solutions for their problems, ADS has a work force with over 1500 years of combined Government and industry experience.

Eric Graves is the Editor of Soldier Systems Daily, a web-based publication of the tactical industry. He is a retired Air Force officer who also saw service as a non-commissioned officer in the US Army. Following his military service he worked for a period in the defense technology arena and started Soldier Systems Daily in 2008.

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