

The Case for Transatlantic Cooperation—A U.S. Perspective

Knowledge-Enabled Warfare • Knowledge-Enabled Logistics • Knowledge-Enabled Business

Michael Wynne

Thank you for that warm introduction, General Sharman [Maj. Gen. Alan Sharman, director general, U.K. Defence Manufacturer's Association]. It's a privilege for me to be here this morning.

General Farrell [Lt. Gen. Larry Farrell Jr., president/CEO, National Defense Industrial Association], it is good to see you as well, and thanks for your continued support of the defense industry.

As I look around, I see people here from the governments of the U.S., U.K. and our allies, as well as many of the industries that have long served the interests of our nations and the NATO Alliance so well. In fact, this great group is one of the best reasons for attending these meetings. You make us realize that despite our different economic and political needs, we share common interests that are a great source of strength for us all.

We all contribute to the common good of global order with representative governments that provide the backdrop for promoting prosperity, security, and individual rights. And we achieve these goals in our own very different ways.

Gatherings like the one today give us the opportunity to discuss those different ways and to search for best practices that we can all use in our home countries. It is important, though, that we take the time to make sure we

Editor's note: Acting Under Secretary of Defense for Acquisition, Technology and Logistics Michael Wynne spoke at the second U.S.-U.K. Defense Industry Symposium on June 2 in London. The one-day event was co-sponsored and organized by the National Defense Industrial Association and its U.K. counterpart, the Defence Manufacturers' Association, in close collaboration with the Defence Export Services Organisation, U.K. Ministry of Defence, and the U.S. Department of Defense Office of International Cooperation.

The objective of this yearly symposium is to facilitate networking between U.S. and U.K. defense and public security companies as well as between industry and government in the two nations. Industrial and government participation is encouraged to support and promote keener awareness of the business operating environments and specific commercial defense opportunities in both countries.

thoroughly understand the best practice and how it would translate in different countries.

That's what I want to talk to you about today—creating the understanding necessary so that we can all work together for the common good.

From the U.S. perspective, transatlantic defense cooperation will continue to play an essential role in furthering global security. We must ensure maximum effectiveness of all participants in the coalition wars that we will fight in the future. Effective industrial cooperation with our allies is a fundamental step in improving joint operational capabilities.

In the past, we cooperated successfully in developing many projects. One recent success story, of course, is the enhanced Harrier vertical-take-off-and-landing aircraft.

In fact, the U.S. and U.K. have been cooperating for well over 100 years. It was you who invented the aircraft carrier back during World War I, and now it is integral to the American fleet.

And we are now working together with the United Kingdom on the Joint Strike Fighter, where you are our Level One partner.

As a businessman, I've developed programs abroad and have great respect for the capabilities of partner nations and industries. The most successful cooperative programs started partnering early in the development phase, where

requirements could be harmonized and costs, technology, and work could be shared equitably.

I know U.K. and European defense industries have much to contribute to U.S. defense capabilities. From technologies such as turbine engine systems, micro-electro-mechanical systems, and composite materials, to subsystems such as high-thrust rocket propulsion systems, to the world-class helicopters produced on this side of the Atlantic, America can benefit greatly through cooperation with our allies.

Unfortunately, we are experiencing roadblocks to this cooperation today—including differing national priorities, governmental processes, and most important, relative investment strategies.

However, even after these roadblocks are removed, we will still have certain impediments to defense industrial cooperation that we will have to work around, such as re-

strictions on certain technology transfers. Despite these issues, our nations' governments and industries continue to make great progress in our cooperative efforts.

In fact, I'd like to point out that transatlantic cooperation isn't just about the big-ticket programs. Data and personnel exchanges and programs such as our foreign cooperative testing are equally important.

Everyone out there who wants to do business with the U.S. Department of Defense, take note: Any product generated in the next few years must move our defense enterprise posture toward the objective of knowledge-based warfare, or it won't reach the field.



The cabin of a CH-47 Chinook helicopter provides 42 cubic meters of cargo space and 21 square meters of cargo floor area and can accommodate two HMMWVs (High Mobility Multipurpose Wheeled Vehicles) or a HMMWV together with a 105mm howitzer and gun crew. The main cabin can hold up to 33 fully equipped troops. For medical evacuation, the cabin can accommodate 24 litters. The Chinook has a triple hook system, that provides stability to large external loads or the capacity for multiple external loads.



Soldiers dismount from a High Mobility Multipurpose Wheeled Vehicle (HMMWV).

Knowledge-Enabled Warfare

The enemies we are fighting now are different. They don't just threaten a country's borders or a particular interest. Instead they aim to destroy the fundamental fabric of our civilization; they want to take away our freedom and our feeling of security.

Therefore, we are moving toward knowledge-based warfare, or knowledge-enabled warfare. In fact, the overriding objective of U.S. defense acquisition is acquiring materiel and systems that enable knowledge-based warfare. This also underscores our approach to logistics, with knowledge-enabled logistics; and our business processes, with knowledge-enabled business.

In the past two-plus decades, the U.S. has evaluated 184 non-developmental items from the U.K. alone. As a result, we purchased more than 50 items for more than \$2 billion from U.K. companies. The return on the cost for testing to the cost avoided in research and technology is enormous.

To continue our successful record of transatlantic cooperation, we must continue to find opportunities to come together and share ideas. Today's symposium is at the less formal end of the spectrum.

Tomorrow, I will engage U.K. representatives at the second U.S.-U.K. Bilateral Defense Acquisition Committee meeting. This high-level government-to-government forum will address difficult issues such as technology transfer and the licensing process.

This and other ongoing meetings, as well as conferences like this, are reasons I am convinced U.S.-U.K. ties are especially strong—and that we routinely have frank and open communications. This is key to resolving the issues and problems that are inherent in any cooperative activity. I would like to thank today's sponsors for bringing us together.

All of this makes the U.S. and its allies and trading partners natural candidates for closer cooperation in the development of technology and equipment. We have cooperated in some successful programs in the past, but we can—and must—do more in the future.

So everyone out there who wants to do business with the U.S. Department of Defense, take note: Any product generated in the next few years must move our defense enterprise posture toward the objective of knowledge-based warfare, or it won't reach the field.

Here's a good example: Last January, we began to require the marking of all of our items with a unique identifier, or UID. It is the defense equivalent of the Universal Product Code, or a bar code.

We also now record the value for that marked part as it comes into our inventory, as part of something we call its "birth record." This record will be a feeder into the asset part of our financial statement, enabling us to have an accurate audit.

Unique Identification

In addition to the unique identification system, we are taking the next step of adding radio frequency ID tags, or RFIDs. Starting in January 2005, we are going to require these smart tags on cases, pallets, and packaging of DoD-purchased items. Though we were slow to start using UIDs, we expect to be on the leading edge for radio frequency identification.

The world's largest retailer, Wal-Mart, figured out before we did that given the scope of our logistics challenge, we need to go the route of the RFID—and quickly. Therefore, we are partnering with Wal-Mart for RFID. Between the two organizations, we will be covering a wide dispersion of manufacturing and distribution.

This will effectively open the RFID market by introducing volumes not expected for years in the future.

This is a partnering opportunity for all of you as well: We'll be looking for your ideas and innovations in UID and RFID technology. Your support to internationalize these approaches will also be of great help.

UID and RFID are just two ways the American military is embracing knowledge-based warfare on a daily basis. This new way of looking at the way we do business requires that we focus on our networking abilities. In other words, we must be network-centric if knowledge-based warfare is to succeed.

Network-centric Systems

If our new systems are not network-centric, and if the information collected by all of our many and growing numbers of sensors is not available to all who could make use of it, then we are not efficiently trading manpower for technology.

In NATO, we all have large legacy forces now. The question is how do we introduce C3I [command, control, communications, and intelligence] systems to legacy systems without having to recapitalize. If increased situational awareness is the key, why can't we embed them in legacy equipment?

The emerging U.S. and likely NATO strategy scope is global. We must arrive quickly, with overwhelming force, having departed on short notice. The demands for information gathering, processing, disseminating, and reprocessing drive us toward networked, interoperable solutions.

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Port theater distribution.

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tually be, an information gatherer for the network. Traditionally, the information those platforms have gathered has been reserved for their own internal use: defense, targeting, and so on.

The U.S. Army's Future Combat System and the Navy's Cooperative Engagement Capability offer examples of the way forward. The basic premise of both of those systems is networking and information sharing.

In fact, that premise underlies our entire push toward knowledge-enabled warfare, which is, with our technological edge, just about any platform—from satellites to submarines, and from unmanned aerial vehicles to infantrymen—that can generate some level of information that can then be turned into intelligence and networked for anyone else in the battlespace to use.

How do we allow our partners to have access to this? Perhaps a thin client arrangement, or maybe a thick client for certain applications.

Logistics

As we continue to move towards this new knowledge-enabled warfare, we must not forget the other cornerstone of operations—logistics. Our military services have come far in reducing the iron mountains of munitions and parts that were necessary in industrial age warfare of the past, but not far enough to meet the new needs of information age warfare.

The Navy needs to buy ships in which the crew can lock the engine rooms during deployment. We don't have airmen servicing the engines of B-52s on global missions; why should we tolerate sailors doing this on destroyers?

The Army needs to field hybrid-fuel, ultra-reliable engines for use across their vehicle fleet. And the Air Force must have expeditionary strike aircraft that don't need to take an entire airbase of parts and technicians with them to remote regions of the world.

There is tremendous opportunity in the logistics technologies—not as glamorous, but very nicely profitable and quite open—by allowing commercial development IT and others to directly transfer.

We need corrosion-resistant trucks, aircraft, and ships. We can't afford to recap at rates of the past; we must be able to keep what we have and not necessarily define its length of life.

We also need expeditionary logistics units that can defend themselves against attacks by insurgents and are protected against theater ballistic missiles. Our ports and offshore sustainment stocks are going to need manned and unmanned maritime surveillance for protection.

This new national security era, with its new international security relationships, demands innovation, practical near-term responses, and efficient resourcing. That's where international industrial partnerships can, and must, play a crucial role.

If allies and partners want to work with us, they have to ask themselves how consistent a particular product is with our goals of providing integrated and efficient logistics; developing and fielding products with a systems engineering philosophy established at the outset; fighting from a position of technological dominance; and rationalizing resources.

As our international partners offer solutions, systems, and capabilities—and we expect brilliance and innovation from them—they must keep our goals and our new approach to fighting in mind. They must reflect on the priority our national leadership has given to military transformation and must remember the basic element of that transformation—knowledge-enabled warfare and all that it entails,

including network centrality; jointness; and multi-mission, multi-Service, and cross-cultural capability.

U.S. Approach to Transformation—Seven Goals

Transformation is not equipment-focused. It's cultural training, tactics, techniques, and procedures. To help those of you who want to do business with the U.S. military, I'll briefly discuss how the Department of Defense is approaching our transformation to be more attuned to securing global security in the 21st century.

We have seven goals that are central to maintaining our path to excellence. It's important that you, our partners, understand them.

They are:

- Integrated and efficient logistics
- Systems integration and engineering for mission success
- Technology dominance
- Resources rationalized



Soldiers unload relief supplies.

- Acquisition excellence with integrity, which is shortening the cycle but holding to high ethical standards domestically and internationally
- A strengthened industrial base, where we pay for performance ensuring a fair return for our industry, encouraging their reinvestment in defense products
- A motivated and agile workforce, using distance learning and Internet Web-based procurement for fielded units.

I'll go into detail on the first four, because I think they're of the most interest to you, our allies and partners.

Integrated and Efficient Logistics

One of the most important areas is integrated and efficient logistics. Our vision for the logistics officer of the future is a person who will be the commander's combat power manager. At his or her fingertips will be a precise account of how much combat power—expressed in terms of combat systems, munitions, fuels, and replacement stocks—is at hand and how much would be expended over a given course of action. Interoperability takes on different, but no less important, characteristics here from those in operations.

Systems Integration and Engineering for Mission Success

We have to reenergize the systems view of integrated architectures by instilling systems engineering best practices at all levels of our architectures. Network-centric, information-age warfighting demands increasingly complex interoperability at the system-of-systems, systems, and component levels.

Technology Dominance

The third area of importance is technology dominance. Warfighters and logisticians must have technologically superior military systems. We in the U.S. fully recognize that our country does not have a lock on leading technologies. Both we and our allies have technologies needed by the other to ensure that coalitions have the best possible equipment—and that it can interoperate.

Rationalization of Resources

Finally, we have rationalization of resources. In the U.S. Defense Department, we are constantly seeking ways to make optimum use of our people, materiel, and money through such means as improving joint-Service use of assets, transforming some of our support functions to industry, and repositioning infrastructure around the world, to better face the 21st-century strategies.

But there is another area that I believe is very important from overall alliance and coalition perspectives, and that is the rationalization of requirements for military assets. Our respective governments spend too much money on duplicating already-existing capabilities or independently developing what is essentially the same future capability.

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Armaments Cooperation an Imperative

These are basically my thoughts on what we in the U.S. Department of Defense, industry, and our allies and partners need to be looking at to enhance global security in this century. I am confident that in the future, armaments cooperation among the U.S., the U.K., and our friends around the world will build on the strong base we have established in the past and that we will realize even more success in the future.

In these troubled times that involve entirely new and uncertain international paradigms, I believe that armaments cooperation is not only desirable, but also an imperative, to reinforce coalitions and the sharing of the mutual defense burden.

Thank you very much for your terrific support of British and United States soldiers, sailors, airmen, and Marines around the world.