
U.S. Perspective on Defense Industrial Base Trends

By

Paul G. Kaminski

Under Secretary of Defense for Acquisition and Technology

[The following is a reprint of a statement by Under Secretary Kaminski presented at the NATO Workshop on Political-Military Decision-making, in Warsaw, Poland, on June 21, 1996. This statement has been published for internal information use in *Defense Issues*, Vol. 11, No. 84, by the American Forces Information Service, a field activity of the Office of the Assistant Secretary of Defense (Public Affairs); *Defense Issues* is available on the Internet via the World Wide Web at http://www.dtic.mil/defenseink/pubs/di_index.html.]

"Today's global economy allows everyone, including potential adversaries, to obtain commercial technology. Therefore, DoD is trying to break down barriers between the commercial and defense industries."

It's a great pleasure to be with you and present some of my views on where I think the defense industrial base supporting our nations is headed.

The Polish-born Nobel laureate Madame [Marie] Curie once said, "One never notices what has been done." My sense is that it is important to stop and think about what has been done in order to see clearly what remains to be done.

In that vein, I think it is instructive to look at the evolution of our commercial and defense industries over the past 50 years. Exactly 48 years ago—June 21, 1948—Columbia Records released the first long playing 33-1/3 record—or what we call an LP in the United States. People who grew up listening to LPs now have to take their own children to a museum to see an LP. Not only that, these children all seem to be wearing a portable compact disc Walkman these days.

The breathtaking advances in the U.S. and Western European commercial economies have been spurred by technological advances—such as the leap from LPs to CDs—and technology has been spurred by ever-increasing investments in research and development. The nature of this growing investment has shifted, though. Defense spending used to be the driving force for innovation in the U.S.; today, the commercial sector is the driving force. In aggregate terms, the U.S. commercial industry surpassed the Department of Defense in R&D [research and development] spending back in 1965. The disparity between the DoD and commercial sector investment in R&D has been growing wider ever since.

Over the past 30 years, the changes in the industrial base that supports the U.S. defense establishment have been as dramatic as the changes in the world order since the demise of the Soviet Union. U.S. and Western European defense purchases have declined while commercial markets have expanded. The rapid growth of the commercial industrial sector is driven by a commercial market flourishing quite independently of the defense sector.

This underlying trend in the economics of the NATO nations is nothing new. The collapse of the former Soviet Union has led to defense budget reductions that have helped speed this already well established trend. Now that I've outlined the past trends, I am going to return to Madame Curie's words and talk about what remains to be done. First, we must continue to move from separate defense and commercial industrial sectors to one, integrated industrial

base; second, we must further defense industry restructuring and consolidation; and finally, we must expand the opportunities for armaments cooperation—and use that cooperation to better integrate and rationalize our industries.

The United States still has a very strong defense industrial base, of course, but as budgets decline and defense plays a smaller role in the U.S. economy, the Department of Defense is increasingly relying on commercial or dual-use technologies, products, and processes. In some leading-edge technologies, critical to success on future battlefields, the commercial sectors of the economy have the advantage—I would include, for example, electronics, computers, information processing, and communications.

In addition, today's global economy allows everyone, including potential adversaries, to gain increasing access to the same commercial technology base. To the extent that commercial technology can enhance military capability, the military advantage will go to the nation with the best cycle time to capture commercial technologies, incorporate them in weapon systems, and field new operational capabilities.

For these reasons, the DoD is pursuing a dual-use strategy to break down the barriers between the commercial and defense industries, to realize the benefits of commercial-military integration in both research and development and in manufacturing, to increase the pace of innovation in defense systems and to reduce the cost of such systems. The bottom line is that we have no choice but to move from separate industrial sectors and marry the momentum of a vigorous, productive, and competitive commercial industrial infrastructure with the unique technologies and systems integration capabilities provided by our defense contractors.

One of the principal objectives of our acquisition reform program is to open the defense market to commercial companies and technology—not only the primes, but subtier suppliers as well. Our acquisition reforms have also increased the opportunity for international armaments cooperation. A good example is our policy favoring internationally recognized commercial specifications over DoD-unique military specifications.

The department is, therefore, adopting the ISO-9000 commercial series of standards as an alternative to the more restrictive military standard, the MIL-Q-9858.

Our Joint Direct Attack Munitions program is a good example of how effective this reform can be. Before we began our program of acquisition reforms, we released a work statement for our Joint Direct Attack Munitions program, or JDAM, JDAM is a program to upgrade the thousands of gravity bombs still in the U.S. inventory with precision guidance systems. The original work statement for JDAM, released before we began our reforms, was 137 pages long and had 87 military specifications. The best bid we got predicted an average unit cost of \$42,000. We re-released our work statement under the new program—it was two-pages long and contained exactly zero military specs. Now, the contractor will be producing the guidance kits at an average unit cost of \$14,000—and a year ahead of schedule.

At the same time that the department is reforming and adopting commercial practices, our industry itself is changing significantly. I think we are all dealing with excess capacity in our industrial bases, and all of us are having to rethink the fundamental structures of our defense industrial complexes. We are seeing mergers and combinations of companies in our country. For many countries in Europe, aerospace firms with long and distinguished histories have been privatized, merged or even closed. Industrial base considerations are more and more important to our national and international security postures.

You should know that in the United States we rely on the private sector to supply our defense goods and services, so we do not often insert ourselves into industry. However, we

have conducted assessments of some sectors of our defense industry to determine what capabilities are essential to support our defense needs, whether or not those capabilities are truly unique and whether or not those capabilities are “endangered.”

To date, the department has completed studies of the industry supporting conventional ammunition, tracked combat vehicles, bombers, helicopters, destroyers, nuclear power plants for submarines, expendable space launch vehicles, the D-5 missile and torpedoes. These studies indicate that although DoD programs will not be sufficient to sustain all of the companies currently engaged in defense-related businesses, the scale and mix of the DoD programs will adequately sustain nearly every required industrial capability. I will tell you that there are virtually no sectors where we have determined that the capability was endangered and that the department should take direct action to preserve it.

I believe we are not quite yet done with defense sector restructuring and consolidation. The drawdown in the U.S. is nearly complete with the fiscal year 1997 budget, and so, from fiscal year 1998 on, we plan to increase our investment to sustain modernization of our military forces. However, our investment outlays—what industry actually receives—lags budgets authority by two to three years due to our full funding policy. The implication is that industry is still working off of dollars appropriated for fiscal year 1994 and will need to deal with a further contraction on the order of about ten percent over the next three years.

This leads me to the third portion of my talk. I believe that national security—ours and that of our friends and allies—now and in the future will increasingly rely on getting the most for our defense investments, and this means more bilateral and multilateral armaments cooperation. The underpinning will be a shift towards giving greater importance to the economic and industrial considerations of material acquisition programs in the future. The convergence of two trends—increasing likelihood of committing forces to coalition operations and reduced defense budgets—make the case for greater armaments cooperation with friends and allies.

Deploying forces in coalition operations with the forces of other countries places a high premium on interoperability—that is, ensuring that U.S. and allied systems are compatible and can be sustained through a common logistics support structure.

In this environment, it is clear to me that we will have to modernize the equipment of our defense forces at an affordable cost and in the end obtain best value for the money.

We need to avoid the inclination to duplicate each other’s capabilities. Instead, we need to think in terms of building on developed capability where possible. To do this, we need to better harmonize requirements from the start and increase the incentives for teaming of our industry—including removing the barriers to international teaming and barriers to commercial industry as well. We need to start doing this much earlier in the initial stages for our new programs.

To help promote new cooperative arrangements, we have initiated four international cooperative opportunity groups [ICOGs]. The goal of these groups is to plan in advance to create opportunities earlier in the acquisition process. The ICOGs are chartered to identify individual programs with high potential for international cooperation in the following areas:

- Major systems (in their early phases);
- Science and technology programs; and
- Advanced concept technology demonstrations.

Each ICOG has compiled a list of programs nominated by the military services and by our embassies around the world. These lists are available for review by our friends and allies. I encourage our allies to develop similar lists.

It has become apparent to me that we need to extend our time horizon five, ten, or twenty years ahead and envision the international environment of the future. To address this challenge, the Defense Science Board is examining the issue of armaments cooperation.

The DSB task force on international armaments cooperation began work in October 1995 and is specifically chartered to identify:

- A model for Twenty-first Century armaments cooperation that preserves effective competition;
- Methods for preserving effective two-way access to critical military technologies;
- Methods to assure maximum leveraging of the commercial industrial base; and
- Approaches for maximizing the involvement of CinCs [commanders-in-chief] in international cooperative efforts.

This forward thinking is an essential component of ensuring future success in international cooperation.

The task force's efforts are still in progress, but the deliberation is focusing on a model that promotes international cooperation and maintains competition throughout the life of a program. Cooperation on common mission problems is central to this new model and should focus on such coalition security needs as:

- Extended air defense;
- Combat ID [identification];
- Coordinated logistics; and
- Interoperable communications.

The task force believes, and I agree, that greater involvement by international industry teams is crucial to the model for Twenty-first Century cooperation. There also needs to be more involvement in subsystems and components than previously realized.

Effective industrial cooperation with the nations of the former Warsaw Pact . . . creates some challenges. In many cases, the defense industries are operating at a fraction of their capacity, are in need of work, but produce products incompatible with Western standards. That problem is further exacerbated by the state of Western defense industry, an industry that is also in the process of shedding its excess capacity. Consequently, the willingness of Western defense industry to invest capital and technology in Central and Eastern European production capacity was significantly limited.

Now, as the economic reforms in this region are starting to show some significant success and there is a promise of investment by the militaries of the region in NATO compatible systems, the situation is changing. American and Western European companies are more willing to invest capital and technology in areas where they can now identify an excellent opportunity for a long-term success for joint ventures. Some of our industrial speakers today

will describe the decision-making process and their rationale for entering into cooperative ventures in Central Europe.

On the government side, the strengthening of our political relationships with the nations of the former Warsaw Pact over the past six years has caused us to open new opportunities for all concerned. The industrial partnerships that are now forming are enabled by this emerging relationship. Bosnia and IFOR [NATO implementation force] have also made a difference in how we view interoperability with our friends in the region. Even before IFOR, our Warsaw initiative was aimed at improving interoperability of command and control systems with the nations of Central Europe. IFOR demonstrated that this need was real. Fundamentally, our command, control, communications, intelligence, and logistics systems must be interoperable. Generally, we are achieving this in IFOR through setting common standards, in our supply coding system and our grading and classification of fuels for example. We are also achieving this by encouraging the teaming of our industries.

We are releasing hundreds of standards that provide the information necessary for manufacturing NATO standard equipment. We have invited the NATO partners to join the CALS [Continuous Acquisition and Lifestyle Support] effort so that they can move toward a common and single use data system for defense armaments.

One program that I am very optimistic about is the Regional Airspace Initiative, or RAI. The goal of the RAI is air traffic control and air sovereignty systems that are interoperable region-wide to include NATO nations. Using commercial off-the-shelf technologies and commercial standards, the RAI will help the Czech Republic, Hungary, Poland, Slovakia, and Romania modernize their systems.

In short, we are providing the tools to partner industries to use in converting to modern systems and standards. But it is a long and difficult road, one that needs to be paved with successes and traveled by partners who have been down the road before. The industries in the United States and in NATO Europe are reaching out to the best and the brightest of their counterparts here. I am looking forward to their succeeding, for their success will serve to cement our friendships and help build more bridges to broaden our relationships.

I know it will not be easy. On both sides of the Atlantic, our defense industrial sectors are downsizing. In the U.S., we still have perhaps another ten percent reduction ahead, and we will continue to face pressures to reduce our defense budget. To deal with this, the U.S. Department of Defense is implementing a dual-use strategy and a broad program of acquisition reform to better integrate our defense and commercial industrial base.

We are also taking steps to create an environment where international partnerships can flourish. I believe we all recognize that we must reach out and exploit technological advances being made at home and abroad. However, unilateral policy changes by the DoD will not be sufficient to bring international industry into full engagement in the U.S. defense market.

Industry-to-industry partnerships must play a key role, as they form the underpinning for international cooperation. Creating these partnerships will be central to the defense trade in the future. This new approach must include cooperation at earlier stages of the acquisition cycle.

Many industries in NATO and Partnership for Peace countries, because of their R&D investment patterns, have developed a superior comparative advantage in particular areas and can fill needs at the major component and sub-system level. To engage these firms, we together must continue to make U.S. companies aware of these industry pockets of excellence.

Armaments cooperation—true cooperation—is a complex and challenging business that will require our best thinking and perseverance to see it to its full fruition. I believe it can and will be done and that we can be successful in bringing to bear the best talent in government and industry in each of our countries.