

A conceptual image showing the silhouettes of several business professionals in suits standing on the curved surface of a globe. They are positioned at various points along the horizon, some facing each other as if in conversation, others looking out towards the sky. The background is a bright blue sky with scattered white clouds. The globe itself is dark, with some lighter patches suggesting landmasses.

International Programs Contribute to Affordability

Craig J. Mallory

The United States has long benefited both economically and operationally from international acquisition programs. As the Department faces an increasingly challenging economic outlook, it is time to view these activities through a new lens. Whether initiating a new program or managing an ongoing acquisition effort, there are opportunities to enhance program affordability through international cooperation and/or sales. If program managers embrace international programs and plan for them, rather than avoiding them as too difficult or as too risky, we can significantly impact program affordability.

International Cooperative Programs

International cooperative programs are potentially powerful tools in the DoD drive for affordability.

An international cooperative program is any acquisition program or technology project that includes participation by one or more foreign nations, through an international agreement, during any phase of a system's life. In fiscal year 2010, DoD concluded 72 agreements for international cooperative programs at a total value of \$2.815 billion, leveraging \$1.072 billion of foreign funds—funds that otherwise would have been paid primarily by DoD. These programs are referred to by OSD and the military departments by a variety of terms: armaments cooperation, international armaments cooperation, defense cooperation in armaments, and international cooperative research and development. Unlike other forms of international programs, such as foreign military sales (FMS) (discussed below), DoD is a full partner in an international cooperative program, providing an equitable share of program

Mallory is a professor of acquisition management at DAU. He has 25 years of international acquisition management experience in the Air Force.

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Figure 1. International Programs through an Affordability Lens



- Access to leading technology
- Access to foreign test facilities
- Use of foreign funded modifications
- Shared risk
- Shared costs (ability to leverage other people's money)
 - Technology development
 - RDT&E
 - Production non-recurring
 - Sustaining engineering
 - Modification/upgrade non-recurring
 - Training and sustainment infrastructure
- Economies of scale
- Lower contractor rates
- Maintain production lines
- Interoperability

of \$25.2 billion of defense articles and services through FMS. FMS programs provide for the transfer of military articles and services to friendly foreign governments and specified international organizations through sales, grants, or leases. They increase the ability of our friends and allies to deter and defend against possible aggression, promote the sharing of common defense burdens, and help foster regional stability. If a partner nation invests in capability that supports U.S. strategic goals in

costs using appropriated funds, with the effort jointly managed by the DoD and a partner nation or nations to meet mutual requirements.

The core objectives of international cooperative programs are:

- operational—to increase military effectiveness through interoperability and partnership with allies and coalition partners
- economic—to reduce weapons acquisition cost by sharing costs and economies of scale, or avoiding duplication of development efforts with our allies and friends
- technical—to access the best defense technology worldwide and help minimize the capabilities gap with allies and coalition partners
- political—to strengthen alliances and relationships with other friendly countries
- industrial—to bolster domestic and allied defense industrial bases

International cooperative programs have several important advantages. They can deliver better technology. They can leverage other people's money in both development and production. They will enhance interoperability and are intended to offer a net advantage to the United States. Detailed information on international cooperative programs can be found in the OUSD (AT&L)/IC *International Armaments Cooperation Handbook* and *Defense Acquisition Guidebook* Chapter 11.2.

Foreign Military Sales (FMS)

While a significant number of major defense acquisition programs have an international cooperative program component, more DoD program managers are involved in executing an FMS program. In 2010 alone, the DoD initiated procurement

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With DoD emphasis on security cooperation and building partner capacity, there have been significant changes to traditional FMS concepts. Title 10, DoD operations and maintenance funding, \$6.4 billion in FY 2010, is now being used to build the capacity of partner nations supporting global war on terrorism operations with implementation through FMS-like procedures. The DoD is more aggressively working with international partners to define military requirements and defense procurements to improve their capabilities in relevant areas vice the past practice of taking a hands-off approach until receipt of a letter of request from a foreign government. This new means of providing capability to our allies recognizes that using Title 10 funds to help a partner nation have the capability to contain terrorism within its borders or in its region is more cost effective than having DoD conduct future contingency operations in those same areas.

In addition to contributing to national security and foreign policy objectives and the overall U.S. economy, FMS programs provide direct economic benefits to the DoD in several ways:

- Create economies of scale in both production and sustainment.
- Spread contractor general and administrative costs across a broader business volume, reducing rates for the DoD.
- Maintain production lines after DoD procurements are complete to allow for future U.S. purchases without a break in production capability.
- Share contractor and government sustaining engineering costs.

- Offer DoD the ability to use foreign-funded modifications and improvements for its own needs.

Clear Mandates to Consider International Cooperation

Congress has long seen the potential benefits to the nation from cooperating with allies in systems acquisition and from foreign sales for both economic and foreign policy reasons. To ensure these benefits are realized, there are clear mandates in U.S. law and DoD directives to consider international programs:

- Title 10 U.S.C. 2350a(e) requires an analysis of potential opportunities for international cooperation before the first milestone or decision point on programs reviewed by the Defense Acquisition Board.
- DoDD 5000.01 and DoDI 5000.02 state:
 - Program managers shall pursue international armaments cooperation to the maximum extent feasible, consistent with sound business practice and with the overall political, economic, technological, and national security goals of the United States. (DoD 5000.01, Enclosure 1, paragraph E1.1.1)

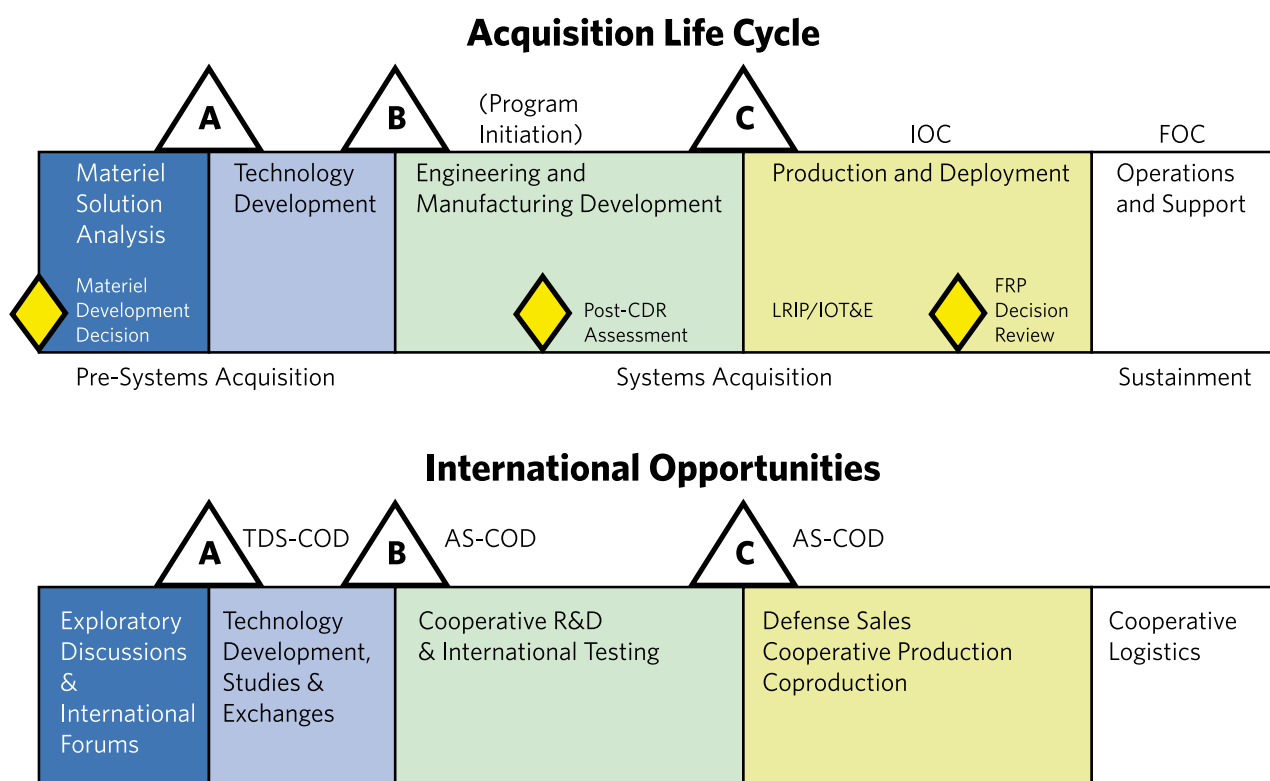
From "The Pentagon's Financial Drawdown"

By Gordon R. England,

Former deputy secretary of Defense
(Op-Ed, *The New York Times*, July 14, 2011)

"Washington must do more to encourage the sale of defense equipment to our friends and allies abroad, like the littoral combat ship, the mine-resistant ambush-protected armored vehicle and a host of other combat and combat-support equipment. Manufacturing equipment for the American and foreign militaries simultaneously saves Washington money because more units are produced and overhead costs are shared, and it creates thousands of American jobs. The savings generated by international sales are too big to ignore, yet in too many cases the Pentagon has been only lukewarm in supporting such sales."

Figure 2. Acquisition Phases with Types of International Cooperation



COD = Cooperative Opportunities Document as required under Section 2350a, 10 U.S.C.

TDS = Technology Development Strategy

AS = Acquisition Strategy

- A preference for a cooperative development program with one or more allied nations over a new, joint, or DoD component-unique development program. (DoD 5000.01, Enclosure 1, paragraph E1.1.18)
- The Technology Development Strategy (TDS) prepared for Milestone A or the Acquisition Strategy for Milestones B and C must address international cooperative opportunities. (DoDI 5000.02, Enclosure 4, Table 2-1)
- Program managers shall pursue opportunities throughout the acquisition life cycle that enhance international cooperation and improve interoperability. (DoDI 5000.02, Enclosure 10, paragraph 5.a)

How You Can Use International Cooperation to Enhance Affordability

Opportunities to use international participation in DoD programs to enhance affordability and reduce DoD costs exist in every acquisition phase. Examples include:

- Technology Development Phase
 - Access to foreign technology can reduce technology development costs and risks
 - Use of foreign-developed equipment can reduce or avoid development efforts
- Engineering and Manufacturing Development Phase
 - Research, Development, Test, and Evaluation costs can be shared
 - Foreign test facilities can be used at reduced-costs
- Production and Deployment Phase
 - Non-recurring production costs can be shared
 - Economies of scale can be realized through defense sales or coproduction
- Operations and Support Phase
 - Improved supportability by maintaining a “hot” production base
 - Cooperative logistics can reduce sustainment costs and create overseas support footprints
 - Non-recurring costs for modifications and upgrades can be shared

These are just examples of potential opportunities for international participation which can have significant financial benefits to DoD. They do not represent an all inclusive list; use your imagination when an opportunity presents itself rather than putting it in the “too hard to do” bin.

Some International Success Stories

Program	Benefits
F-35 Joint Strike Fighter (JSF)	Eight partner nations contributed \$4.2 billion to development, which otherwise would have been paid primarily by DoD; further economies of scale are to be derived through defense sales.
Wideband Global SATCOM (WGS)	Australia contributed \$707 million for purchase and launch of the sixth WGS satellite, which was unfunded by the DoD, in exchange for access to WGS constellation.
Excalibur Precision-Guided, Long-Range, 155mm Artillery Projectile	Sweden contributed technology and \$67 million to Excalibur’s development. Excalibur sales to Sweden and Australia have resulted in production economy-of-scale savings to DoD of over \$25 million.
Multiple Launch Rocket System (MLRS)/Guided MLRS (GMLRS)	Long-standing five-nation coproduction program—shared costs of technical data package maintenance, software updates, and improvements including warhead replacement; economies of scale through defense sales to 15 other nations.
C-130J Block Upgrades	Seven partner nations are collaboratively defining and funding C-130J upgrades. Cooperation is saving the DoD one-third the non-recurring costs for development of Block 7 and 8, or approximately \$100 million.
AIM-120 Advanced Medium Range Air-to-Air Missile (AM-RAAM)	More than 33 countries have purchased AMRAAM, helping sustain strong logistics support and enhancing the affordability of the system for continued U.S. procurement.

How Can We Do This Better?

Many U.S. defense acquisition programs have been successful in capitalizing on international cooperation. But there are actions program managers can take to promote and facilitate international programs including:

- Using OUSD (AT&L), military department, and DoD agency bilateral and multilateral forums to discuss potential international cooperation with partner nations.
- Analyzing international cooperation during Analysis of Alternatives activities including structuring market research to facilitate foreign industry participation or conducting feasibility studies with potential international partners.
- Involving U.S. industry in discussion of potential international cooperation to facilitate development of industry-to-industry relationships.
- Conducting a comprehensive cooperative opportunities assessment prior to Milestone A. If a full cooperative development acquisition strategy is impractical, program proponents should consider alternative forms of international cooperation that could be appropriate for the program to include coproduction, FMS, licensed production, component/subcomponent co-development, or incorporation of subsystems from foreign sources.
- Planning for defense sales by early identification of critical program information—information that if compromised,

IACP Levels

Level I Training

CLI 001

International Armaments Cooperation
(IAC), Part 1

CLI 002

International Armaments Cooperation
(IAC), Part 2

CLI 003

International Armaments Cooperation
(IAC), Part 3

CLM 036 (CLI 007 in future)

Technology Transfer and Export Control Fundamentals

Level II Requirements

PMT 202

Multinational Program Management
(Resident)

PMT 203

International Security and Technology Transfer/Control
(Resident)

Level III Requirements

PMT 304

Advanced International Management Workshop
(Resident)

could cause significant degradation in mission effectiveness.

- Developing a program protection plan, incorporating anti-tamper measures, and encouraging modular architectures which facilitate export versions.
- Deliberately planning activities to comply with international security and technology transfer/control requirements.
- Incorporating international considerations in training and sustainment plans.

Support is available to program managers in identifying common requirements, foreign technology and industrial prowess, partner interest in cooperation, and international strategies.

- Each MILDEP has an international program office (IPO) within their Service headquarters responsible for promoting and supporting international cooperation.
- The IPOs also can assist with international "seed funding" from their International Cooperative Research and Development (ICR&D) programs or access to the OUSD (AT&L) Coalition Warfare Program (CWP) and the Foreign Comparative Testing (FCT) program.
- Security cooperation organizations located in U.S. embassies and foreign officials in Washington embassies also provide avenues to investigate international opportunities.

International Acquisition Career Path (IACP)

International programs are an important but complex undertaking. They can help spread the cost and risk of developing and producing complex defense systems across several nations; can allow access to the best technology worldwide; can ensure interoperability between allied and coalition warfighters; and can improve understanding and strengthen ties with U.S. allies. International programs require specialized training of our acquisition workforce to navigate a complicated and often confusing web of legal and regulatory requirements and processes.

Congress recognized the impact that international programs have on our acquisition workforce and acquisition outcomes in the 1990 Defense Acquisition Workforce Improvement Act (DAWIA). DAWIA required the secretary of Defense to designate acquisition-related positions in specified functional areas leading to the current acquisition career fields. Among the acquisition positions that DAWIA specifically identified were those involving "joint development and production with other government agencies and foreign countries." This requirement was not addressed directly until 2007 when USD (AT&L) created the International Acquisition Career Path (IACP) to ensure cognizant officials are more knowledgeable of various processes and the implications for international programs.

The IACP creates mandatory training requirements for Level II and III Program Management Career Field positions providing support to international acquisition programs and technology projects, where more than 50 percent of the work is related to international activities. Positions requiring mandatory international training are being coded in personnel data systems. IACP standards and mandatory training requirements are contained in the DAU catalog in the Program Management Certification and Core Plus Development Guides. It is expected the IACP will evolve to be more inclusive affecting other acquisition career fields.

Summary

International programs represent a major element of the work performed by the Defense Acquisition Workforce, and we have long benefited economically and operationally from international acquisition programs. However, in today's challenging economic environment, if we view international programs through an affordability lens and plan for them, we can achieve even greater benefits for the DoD and enhance the affordability of our defense systems. There are specific actions that program managers can take to promote and facilitate international programs and opportunities for international participation exist in every acquisition phase. Assistance in identifying and pursuing international programs can be obtained from the MILDEP IPOs. OUSD (AT&L) created the IACP with mandatory training requirements to ensure program managers have the proper skills to capitalize on the benefits of international programs and manage these important undertakings.

The author can be reached at craig.mallory@dau.mil.