STRATEGY RESEARCH PROJECT

THE DEFENSE INDUSTRIAL BASE: POLICY CHANGES NEEDED TO SUPPORT JOINT VISION 2010

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ABSTRACT

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The American Defense Industrial Base is a product of two hundred years of American History. The Industrial Base that was produced as a result of this century's wars and United States Government policy is now undergoing a significant change. The change to the Industrial Base is occurring while the military is transitioning into the Chairman of the Joint Chief of Staff's Joint Vision 2010. The current Administration proposes to shift its emphasis towards increased reliance upon the commercial sector, as has been attempted in the past. Titled the "Dual Use Technology Strategy," the Department of Defense is attempting to leverage emerging commercial research and development technology into existing weapon systems. While this strategy addresses the research and development portion of the Industrial Base, it does not direct attention towards industrial base capability maintenance. The sole means of keeping a capable industrial base is through the analysis of critical industrial processes. After prioritizing the processes, contracts must be issued to ensure that the capability is maintained. A comprehensive Industrial Base strategy is required to ensure the necessary support to Joint Vision 2010.

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The United States is experiencing a fundamental shift in the way it approaches its defense needs. The world order of the past fifty years has changed, and with it the perception held by the United States on how to maintain world stability. As we have experienced at the end of all of our wars, the end of the Cold War requires the nation to examine our defense needs. This process should result in a determination of what the United States requires to meet its security needs, and how we resource it. In a significant shift from our previous post-war examinations, the Clinton Administration decided to shift the focus of this analysis. This time, the analysis examines not only the threats to our security, but adds emphasis to establishing a capability based armed forces. This analysis is in line with our National Security Strategy of Engagement and Enlargement.[1] Complementing the national security strategy is the Chairman of the Joint Chiefs of Staff's Joint Vision 2010. This vision articulates the approach of the United States in meeting its defense needs through the first quarter of the next century. This document continues to spur great debate on how our forces will be structured to meet the challenges of the future. Key to these debates are the methods and policies our nation will employ to equip and sustain the forces that support this vision. The four operations concepts of this vision are: 1) Dominant Maneuver; 2) Precision Engagement; 3) Focused Logistics, and; 4) Full-Dimensional Protection.[2] The third aspect of this vision, Focused Logistics, calls for a small support structure that is responsive to the needs of the combat forces.

Revamping of our logistical support structure also means a restructuring of the way we acquire materiel. This change affects the defense industrial base significantly. The most

immediate change involves new program starts, the size of production runs, and the increasing commercialization (off the shelf) of military equipment. The Defense budget is significantly smaller than it was five years ago.[3] The downsizing of our military has a significant effect on the industrial base. One of the effects is the large number of mergers within the defense industry over the past few years.

The relationship our Government has with American business can be traced to the earliest days of our nation. Our Government, especially since the beginning of this century, has played an important role in regulating and influencing the industries that support our military.[4] Given this history, the current debate on our policies must include the role of Government in maintaining an American industrial base. We must secure our continued dominance on the battlefield. The superiority of our armed forces cannot be compromised. The examination of past Government practices and current policies is required to ensure that we are correctly postured to support Joint Vision 2010 and beyond.

The American Revolution: The Foundation of Our Industrial Base

The Continental Army was financially supported by both the states and the Continental Congress, supplied with anything that worked. Gunsmiths, sundries dealers, wagon makers, wheel-wrights, carpenters, canvas makers and arms' dealers were paid to keep the Army supplied. If a soldier enlisted in the Army with his own serviceable weapon, horse and equipment, it was gratefully accepted by the nation.[5]

The country possessed enough businesses to support the revolution. This is because the needs of the military at the time were met by a commercial economy and life that closely matched that of the military. The United States, as an emerging maritime nation, had shipyards along the Atlantic coast. In a mostly small town and rural environment, personal weapons were an everyday need, as were horses, wagons, canvas, and pioneering tools. Only unique military equipment, such as artillery pieces, bayonets, and military caliber ammunition were difficult to obtain. A separate defense industry was not needed, as every town had its own blacksmith, gunsmith, farmers' market, tailors and stables - enough to outfit the soldiers fighting for the cause. Payment for Government furnished supplies and equipment was accomplished through the state legislatures and Congress. The policies that came as a result of government procurement of supplies did not affect industry as much as they did the corrupt politicians who profited from unfair practices.[6] The Government had no desire to regulate industry, which would affect the economic growth of the nation. Instead, the laws and policies enacted by the Federal Government through the War of 1812 were aimed at introducing impartial business practices into the procurement process.

The war actually helped expand the business base of the country, and started the standardization of arms and equipment. The states and the Congress passed bills authorizing procurements that met published specifications. Sealed bids were submitted by merchants, and the lowest conforming bidder was awarded the contract. At the end of the War, demobilization had little affect on business, as there remained a demand for

supplying the equipment needed to support an Army and Navy while the nation expanded to the West.[7]

Industrial Base of the 1800's: Establishment of Arsenals and Depots

In order to protect the interests of an expanding country, the United States overcame its' distaste for a standing military, and maintained a small professional force, mostly on its frontiers. Supporting this force was a string of government owned and operated foundries and supply depots, one of the most notable being Watervliet Arsenal, New York. The United States' Arsenal system was established in 1812 with the passage of the Ordnance Act, and expanded with an "Improvement Act" in 1815. The Act of 1812 was passed as the United States prepared for war with Great Britain. A survey of the nation's industrial capability showed that the United States could not support a quick mobilization. The Ordnance Corps was established to enable this support. The Ordnance Corps was given the mission of "...providing for and supplying the different armies, forts, posts, magazines, and arsenals of the United States..." [8] Responsible for supervising the manufacture of arms at the national armories, the Chief of Ordnance moved quickly to set up a system of regional arsenals that would provide the Army uniformly manufactured equipment. The harsh lessons of inadequate preparation and resources for mobilizing the Army during the War of 1812 were not going to be repeated by the Government.[9] The arsenals were responsible for turning out cannons, small arms, uniforms and everything else that needed to be manufactured for the Army and Navy. The developments in manufacturing introduced by the arsenal system helped improve the

overall technology base of the United States during the Nineteenth Century. The arsenals were also the research and development bases for military technology. During the Civil War, industrial technology was applied to military uses. Breech-loading rifles, mortars, exploding shells, machine guns, rockets, incendiary weapons, land mines, sea mines, grenades, search lights, balloons, ironclad vessels, railroads and even a submarine were used in battle. American industry was called upon to step up production of all manner of military supplies during the war. In 1862, only 30,000 rifles were produced by American firms, but by the end of the war, the United States had a capacity to produce over 700,000 annually.[10] American dependence upon imported arms and ammunition was ended by 1865, and a permanent American military industrial base was born.

The great American capitalists of the nineteenth century acquired their first great fortunes as a result of the Civil War. The Civil War created a separate market niche, the defense industry, which had not existed prior to the war. This industry, even with some of the original companies (Colt Arms), still markets military technology to the Government. The policies the Government established in the course of the Civil War and immediately after were to establish protective trade barriers, and once again, attempt to rid the Government of influence peddlers and corrupt officials. The industrial base of the United States, however, remained in the hands of the private sector. The exception to this was the arsenal system, which was kept in the hands of the Ordnance Department. The purpose of maintaining the arsenal system was to promote product uniformity, cost and time efficiencies, and to foster greater military technological innovation.[11] The Government relied upon American industry to provide general supplies, including

rations, with a minimum of oversight and regulation. In the 1890's, America joined the world's naval arms race, but, as a reflection of the era, maintained a laissez-faire attitude towards a still expanding industrial base.

Industrial Base of the Early 1900's and World War I

The late 1800's and early 1900's experienced an international naval arms race in which the United States willingly participated. The "Great White Fleet" circled the globe, proving that the United States was indeed, a world power. The United States defeat of the Spanish in the Caribbean and in the Philippines helped to prove this assertion. The first powered airplane flight and introduction of the motor car pushed the demand for military modernization. Industry was there, pleased to oblige. The military demand for adapted technology increased, further defining a specific military manufacturing market. World War I dawned on a United States that still held to the belief of a small standing army, and one that was attempting to modernize, but accomplishing it slowly. President Woodrow Wilson, in his Annual Message to Congress in December 1914, stated:

> "It is said in some quarters that we are not prepared for war. What is meant by being prepared? Is meant that we are not ready upon brief notice to put a nation in the field, a nation of men trained to arms? Of course we are not ready to do that; and we shall never be in time of peace so long as we retain our present political principles and institutions..."[12]

The economy of the United States was mobilized for World War I by Federal agencies devised and staffed primarily by businessmen, at the direction and request of the President. What the United States did, just prior to its entry in World War I, was to

establish Federal control of the economy. In the Army Appropriations Act of August 1916, Congress provided for a Council of National Defense, which consisted of six members of the President's cabinet, chaired by the Secretary of War. The Council's purpose was to act as the President's advisory board for wartime industrial mobilization. This Council was assisted by a National Defense Advisory Commission (NDAC), composed largely of businessmen who served on the commission for a dollar a year and did not require that the members forfeit their positions nor incomes as private citizens.[13] When War was declared, the NDAC assumed responsibility for mobilizing the economy. While the NDAC lacked legal enforcement powers, its influence on the President, Congress, and the Council of National Defense was significant. It remained subordinate to the Council of National Defense. The War Industries Board (WIB), established in July 1917, assumed the duties and role of the NDAC (which was disestablished), but with more authority. The WIB was used by industry as a means of self regulation, with policy developed and written by staff members who came from the same industry they directed. Lacking independent enforcement authority until March 1918, the WIB, through the Council of National Defense, developed and placed price, priority, allocation, and other economic controls on the nation's industries by the end of 1917. Forcing industry and the War Department to cooperate, Wilson effectively laid the foundation for the creation of the military-industrial complex.[14]

The Army, suspicious, if not downright hostile, of civilian institutions was a reluctant party to the Board arrangement. The War Department, with as many as eight semi-independent supply organizations (e.g., Quartermaster, Engineer and Ordnance

Departments), purchased as they wished, thus undermining the stabilizing intent of the boards. In early 1918, Congress and business issued a demand to the President, requesting that he force the War Department to cooperate with the economic boards and committees. The President, unwilling to place the military procurement process under civilian control, chose to raise the WIB to an independent status, responsible to him. This action forced the War Department to comply with the WIB directives, as they were issued under the authority of the President. As the wartime economy became stabilized, industry continued to grow, and the military became a participant in directing where and how the economy would be affected. The military and industry found that their mutual interests could be satisfied by working together.[15] Forcing industry and the War Department to cooperate, Wilson effectively laid the foundation for the creation of the military-industrial complex.[16]

After the war, Congress authorized the Army and Navy to plan for procurement and economic mobilization, to insure that the United States would not be as unprepared for war as it was in 1916. The National Defense Act of 1920 established the Office of the Assistant Secretary of War, responsible for procurement and wartime economic planning.[17] The War Department, under the urging of Bernard Baruch (later of United Nations note), began to plan for economic mobilization. In 1930, the "Industrial Mobilization Plan" became the first official economic war plan written by the military. Although set on the model of World War I, this plan is significant because it was the first time that the United States military recognized that modern warfare required a totally planned and controlled economy. Further, the military realized that they would have to

be subordinated to civilian mobilization agencies.[18] The interwar planning for industrial preparedness was guided by businessmen, and by the late 1930's, the services were better prepared for wartime operations. The turning point in this preparedness came in 1936, when General Craig, the Chief of Staff, and Secretary of War Harry Woodring agreed that practical war plans were needed for the country. The Protective Mobilization Plan (developed with the assistance of the Army Industrial College) was the first war plan written by the United States that was based upon the country's industrial potential. The Government reached agreement with major industries on plans for economic mobilization in the event of war. Part of this was brought about by the need for cooperation in recovering from the Great Depression. Also of note is the fact that numerous industry representatives and executives received reserve commissions and served in the Office of the Assistant Secretary, working on procurement and mobilization plans. The Executive Branch, however, was not the only one interested in Government use of power to affect the economy. The use of military requirements was recognized by Congress as a means of fostering industrial growth, and thus established trade barriers (quotas and tariffs) and directed sources of supply to favored business interests. The pattern of military-industrial relations during the 1920's and 30's foreshadowed what was to be seen during and after World War II.

Government Preparation and Conduct on Industrial Base Issues Through World War II

The United States' leadership recognized as early as 1937 that the nation needed to be prepared for war. Germany, Italy and Japan already started the moves that would lead to

World War. President Roosevelt, sensing that war was more than a possibility, authorized the establishment of a mobilization advisory group known as the War Resources Board (WRB). This board's first chairman was the President of United States Steel Corporation.[19] The WRB reviewed the Industrial Mobilization Plan, and validated the need for a War Resources Administration. This would be the legally empowered agency that directed the economic policies and resource allocations for the country in time of war. Industry received the WRA warmly, volunteering to staff its ranks. The President, however, bowed to Congressional anti-business and banking influence fears, and disbanded the WRB. He did, however, wait for it to complete the Industrial Mobilization Plan review. The administration reverted to the committees and boards that were established during World War I to carry the planning further. The Army-Navy Munitions Board assumed the bulk of the responsibility for industrial preparedness planning until 1942, when the War Production Board was created.

The War Production Board effectively controlled what was manufactured, and in what quantities, through 1945. The American industrial base responded magnificently, launching ships daily, producing tanks and aircraft, as well as all the spare parts to support them, in the tens of thousands. New weapons were tested and introduced. The most significant of these was the Atomic Bomb, which drew on both American industry and academia. The Government and Industry worked well together, insuring that America and its Allies were the best supplied forces in the history of warfare to that time. The speed of production ramp-up and the enormous stockpiles of supplies caused unanticipated problems in industry, mainly, diversion of resources to the civilian market.

This challenge came to national attention as early as 1943, when President Roosevelt appointed an aide to oversee the process of industrial reconversion to a peacetime economy. Teams of engineers were dispatched across the country to study the industrial base and its best alternative uses in a civilian market. The result of most of these studies concluded that there were few conversion opportunities. At the end of World War II, the United States Government held title to a significant portion of the industrial base. The United States owned 90 percent of the synthetic rubber, aircraft, and magnesium industries, and over 50 percent of the aluminum and machine tool industries.[20] The advantage America held over the rest of the world in late 1945 was that our industries were at full production, ready to continue manufacturing anything needed in the world. The world, devastated by seven years of war, needed our products so that they could rebuild. The quick turn of our former ally, Russia, and the spread of communism across Asia and Eastern Europe affected the United States' desire to return to a peacetime economy. However, there were influential people who firmly believed that the United States needed a permanent war economy so that the country would never be caught as it was at the start of the two World Wars.[21] Russia was proclaimed an imminent danger to us and our allies. The threat of atomic warfare stiffened the argument for the need of a strong defense. America chose to fight the Cold War under a new definition of defense - the strategy of containment of communism.

Cold War: Maturity of the Military-Industrial Complex

Throughout the Cold War (1947-1989), the United States fought for a world system that benefited American free enterprise. At the same time, the Federal Government

played a major managerial role in the economy, and helped to create and dispose of a significant portion of the country's wealth. In the aftermath of World War II, defense planners insisted that the United States be capable of rapid expansion of its armed forces. The first Secretary of Defense, James Forrestal, had a sign in his office that reflected the outlook of the Government during this time: "We will never have peace until the strongest army and the strongest navy are in the hands of the world's most powerful nation."[22] As the Chief of Staff in 1946, General Eisenhower wrote a memorandum that provided guidelines for close cooperation among the army, industry, universities, and organizations of scientists so that they would all be considered military assets:

> "The recent conflict has demonstrated more convincingly than ever before the strength our nation can best derive from the integration of all of our national resources in time of war... The future security of the nation demands that all those civilian resources which by conversion or redirection constitute our main support in time of emergency be associated closely with the activities of the army in time of peace."[23]

This memorandum articulated the policy of the Government for the next forty years, that of close association with the institutions which support the military. Legislation passed by Congress tightened this relationship, enacting measures that called for set-asides, subsidies, and preferred tax advantages. This system effectively removed any independent actions on the part of either the Government or industry when it came to supporting the armed forces. The five general policies Eisenhower put into effect matured and are still in effect today:

> "(1) The Army must have civilian assistance in Military planning as well as for the production of weapons...(2) Scientists and Industrialists must be given the greatest possible freedom to

> carry out their research...(3) The possibility of utilizing some of our industrial and technological resources as organic parts of our military structure in time of emergency should be carefully examined...(4) Within the Army we must separate responsibility for research and development from the functions of procurement, purchase, storage, and distribution...(5) Officers of all arms and services must become fully aware of the advantages which the army can derive from the close integration of civilian talent with military plans and developments.[24]

It is interesting that President Eisenhower, in his farewell address in 1961, cautioned the Nation concerning its interests and involvement's. He was alarmed that the United States had an established armaments industry and a defense mindset that influenced all parts of our society - economic, political, and even spiritual. Having implemented the policy that was followed by the Government and Industry throughout the Cold War, Eisenhower became one of its sharpest critics. He was joined by many in politics and academia, who felt that America was behaving no better than the European colonial powers of the previous century. That nothing changed was due to fears of Soviet expansionism, as well as the economic impact a defense industry downsizing would have on the nation. Radical change was not acceptable. The threats to world peace and stability were deemed too great to accept anything except the status quo. United States involvement in Korea, Cuba, Vietnam, Grenada, the Dominican Republic, China and Panama all underscore the threats created by the Soviet Union and its surrogates throughout the forty years of the Cold War. The fall of the Berlin Wall in October 1989 began the collapse of the Soviet Union, and with it, eliminated any direct threats to the United States.

Transitioning from the Cold War to Vision 2010

We have looked at the past so intently because it provides us the opportunity to examine our options for the future. Changing a complex relationship that spans most of the century cannot occur swiftly. Cuts in Defense and attempts at conversion were made three times since World War II, with poor results.[25] This is the fourth shock to the industry in forty years. We are witnessing a revolution in the way our country is approaching defense strategy. We are seeing a change from a threat based force structure to a capability based armed force. The previous strategy had the United States matching potential enemy forces (peer competitors) in size and technology. There are few peer competitors, if any, left for the United States to fear. The current threats, proliferation of weapons of mass destruction and regional rogue states, do not require a large standing armed force. The country, however, does not want to repeat mistakes from the past. This is the dilemma facing the country: What is the industrial base policy need required to support Joint Vision 2010?

The defense industry believes it can transition itself into a competitive industry, given time, management persistence, and realistic expectations. While the actual conversion of plants is seen as unlikely, some large companies have already left the defense industry, most notably Rockwell International and United Technologies.[26] The industry also warns that defense plants cannot be "reconstituted," and once current defense production lines are shut down, the time, political cost, and difficulties of restarting them will prove to be monumental.[27] The industry realizes that decreasing defense budgets means decreasing procurement and research dollars. This reality is easily seen in an examination of the

Defense Investment budget account. From 1989 through 1999, the Defense Department has decreased spending on procurement, research and development, and construction by $79B (a 55 percent reduction in constant dollars) annually.[28] In 1994, as the Defense budget continued to decline, then Secretary of Defense Perry began making the case to the President that increased resources were required to meet the base force as outlined in the Bottom Up Review (BUR). He felt it was important that the President meet his pledge that the United States would maintain a high quality, combat ready armed force.[29] Cuts were made, but they were selective and tied directly to the BUR. The current result is a force that looks similar to that proposed by the previous Administration. Debate continues about the dangers of a 'hollow force', readiness degradation, and foot dragging reluctance to give up the status quo. These arguments will continue until, unfortunately, one side or the other is proven correct by a national emergency.

Current Industrial Base Policies

The United States Government must realize that a quick abandonment of a fifty year set of policies is not possible. Government-Industry partnerships are still strong. The Under Secretary of Defense for Acquisition and Technology, Paul Kaminski, issued a report in February 1995 regarding the Defense Department's strategy on reconfiguring the defense industry. "Dual Use Technology: A Defense Strategy for Affordable, Leading-Edge Technology" describes the Defense Department's strategy of placing greater reliance on the commercial sector of the economy to reduce costs, shorten acquisition cycle times, and to maintain technical superiority in defense equipment. The basic premise of this strategy is to merge the separate defense and commercial bases into

an integrated, national industrial base.[30] The shift in strategy recognizes the potential for rapidly including commercial technology into defense equipment, at lower cost. This approach takes advantage of market driven commercial production processes, as well as lowers the direct research funding costs of the Government. The dual use policy has three major parts:

> "(1) ensure that key elements of the domestic commercial technology base that are critical for national security remain at the leading edge;
> (2) support the transitioning of defense-sponsored technology and the integration of military production with the commercial base, and;
> (3) facilitate insertion of commercial technologies into military systems.[31]

The abandonment of the principle of maintaining a separate defense industry is a major policy shift for the Defense Department. It reflects a belief that Defense is no longer the driving force for technical innovation, but rather, it is the commercial sector. Part of this belief is supported by data that shows industry's current investment in research and development doubles that of the Defense Department.[32] This action is similar to the policies held by the Government in the latter part of the last century. The intent of the Government is to expand industry, with emphasis on consumer products rather than military. This new policy was reinforced by the March 1996 submission of the Secretary of Defense's Annual Report to the President and the Congress. The report states: "...the Department must rely increasingly on the broader commercial world, and less on defense-unique industries, to equip its forces."[33] The new approach under the dual technology policy is the declaration that the Defense Department will develop military-unique capabilities only if existing commercial applications do not meet its requirements. Included in this shift is the realization that the United States will also be

dealing with the international economic community. This policy has significant political opposition, as regional economic interests are affected by this loss of Government generated business. Determining which technologies must be maintained by America has been a contentious issue as well. The Government asserts it will protect those critical industries. The Air Force Association (AFA) argues that the commercial sector cannot meet the military needs such as stealth technology, armor, very high performance aircraft, large caliber weapons, deep earth penetrating munitions, and rocket engines. They make this assertion based upon the belief that there are no commercial applications for these technologies.[34] The concerns raised by the AFA are valid. The systems they identify indeed have no commercial applications. Complete reliance on the commercial sector to meet defense needs is unrealistic, and not part of the DoD plan. The Government Owned-Contractor Operated (GOCO) Plants and the Depot System remain critical elements of the industrial base. The dual use technology policy shifts the research and development initiative from the Government to industry, but does little to affect the Defense Industrial Base production capability. A secure industrial base which supports the continuing military pre-eminence of the United States must meet three requirements: 1) Capability to sustain current forces; 2) Capability to meet extended military operations and military expansion, and ; 3) Capability to design, develop and field new weapons systems.[35] While the dual use technology policy addresses the need for sustaining the R&D portion of industrial base maintenance, it does little to direct attention to the need for industrial capability maintenance. The only way the industrial base can be maintained in a ready state is through the issuance of contracts. The skills

and capabilities of industry can only be kept if they are employed in the business of defense manufacturing. In this argument, the AFA is correct. Contracts issued by the Government are the only means of keeping critical industrial processes current. The American Defense Preparedness Association/National Security Industrial Association (ADPA/NSIA) argues that the current depot maintenance 60/40 law keeps industry from working on contracts to which it is entitled.[36] The Association argues that the law impairs the goal of maintaining a healthy industrial base by limiting the number of contracts awarded to industry, even while the Government is outsourcing many comparable maintenance functions. This statement offers a credible observation. The answer to this argument, however, is the declaration by the Department of Defense of what capabilities it needs to retain within the Depot System. The Depot System is a critical part of the defense industrial base: It is the sole industrial defensive line under the direct control of the Government. The use of this system must be part of the comprehensive policy that supports Joint Vision 2010.

The main thrust of a comprehensive Industrial Base policy is ensure that all three capabilities required of a robust industry are present to support the armed forces of the next century.

Industrial Base Policy Needs to Support Joint Vision 2010

To meet the Joint Vision 2010 principles of battlefield dominance and focused logistics, the Department of Defense policy of increased commercialization must address the components of the Industrial Base other than Research and Development. Leveraging the technology investment dollars is a good beginning, but failure to address production

capability and responsive production capacity flaws current thinking. The Defense Department must accomplish some things it has not been successful with in the past in order to successfully support Joint Vision 2010 with a responsive, capable Industrial Base.

One task that requires attention is the appointment of one responsible office within DOD to manage the Defense Industrial Base process. The Industrial Base is managed by the Under Secretary of Defense for Science and Technology, the Director of Defense Procurement, the Joint Dual Use Program Office, the Defense Logistics Agency, and each of the Services. While there is plenty of data available on the Industrial Base, no one source is analyzing and prioritizing the needs of the nation in terms of the Industrial Base. The attention of the Department of Defense remains fixed on cost reduction versus capability requirements. The Office of the Under Secretary of Defense for Science and Technology should be the accountable and responsible office concerning Industrial Base policy and monitoring. Complementing this assignment of responsibility is the task of prioritizing and issuing contracts to companies owning critical industrial processes. A further problem, requiring great leadership from Congress and the Administration, is the lessening of politically motivated measures imposed upon the defense sector of the economy. Laws covering conditions in the workplace (Davis Bacon Act, Walsh-Healy Act, the Service Contract Act of 1965), small business development (Section 8a, Small Business Act, Small Business set-asides), favoring disadvantaged groups (EEO compliance reviews, labor surplus area concerns, minority business subcontracting set-asides, prison-made products), American companies (Buy American Act, ball bearing and

timing devices, naval vessel construction, US Flag carrier laws, sources for jewel bearings and aluminum ingots, R&D contracting restrictions with foreign sources), and the protection of the environment and quality of life (Clean Air and Water Acts, Noise Control Act, Humane Slaughter Act) all affect the cost and administrative burden imposed on business.[37] While the intention of each of these measures is good, the impact of all makes doing business with the Government almost intolerable. The newer generation of systems was developed by industry, but funded by the Government.

A lessening of industry influence on weapons system requirement generation is also mandated. It has been argued that requirements generation initiatives are not driven by the Government, but by industry. Increasing the use of the commercial marketplace for defense needs will increase the pressures exerted by industry on Congress. This pressure to influence the procurement of unwanted systems will be greater than ever. Current examples are the procurement of unneeded C-130J's cargo aircraft every year, the Marine Corps forced acceptance of the V-22 Osprey, and the Army's Congressionally mandated procurement of additional UH-60 Blackhawks. The danger of political influence demands a capability based force that is well planned and has stable funding. Military requirements need to be originated with the Department of Defense (through the Joint Requirements Oversight Committee (JROC)) and justified to the Congress and the American People.

The definition of the industrial base must be expanded from the FM 100-16 definition: "... the defense industrial base...consists of privately owned and government owned industrial production and maintenance facilities."[38] The expanded definition

needs to include research and development facilities, commercial vendors, and all economic resources that support the armed forces' defense of the nation. This definition sets up the comprehensive Industrial Base policy that is needed to include the entire US business sector as part of the Defense Industrial Base. While this policy is implemented, the administrative bureaucracy needs to be reduced. In spite of all the initiatives of the past eight years, the bureaucracy of the Defense Department acquisition process is not getting streamlined. The administrative process continues as before, with volumous reporting requirements and approval levels. Establishing a single-sector industrial base, and leveraging dual use technology requires a lean and focused Government administration process.

Our nation's history is full of examples showing the Government's involvement in establishing an industrial base to meet our defense needs. For the past eighty years, the Government has regulated the economy, and the defense industry flourished as a result. The ability of the Government to return to laissez faire economics is suspect, even in the Defense sector. The industrial base policy that supports Joint Vision 2010 is in place. This policy, however, requires a critical examination to ensure the removal of any impediments that prevent successful enactment. While the Executive Branch has committed to this policy, the Congress, Industry and the Department of Defense must also join in this commitment for the radical change to occur.

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