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OUT OF THE COLD: A CONCEPTUAL PLAN FOR ADJUSTMENT TO A POST COLD WAR SOCIETY

Christopher J. Gentile
University of Rhode Island

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OUT OF THE COLD:

A CONCEPTUAL PLAN

FOR ADJUSTMENT TO A POST COLD WAR SOCIETY

BY

CHRISTOPHER J. GENTILE

A RESEARCH PROJECT SUBMITTED IN

PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF

MASTER OF COMMUNITY PLANNING

UNIVERSITY OF RHODE ISLAND

1994

MASTER OF COMMUNITY PLANNING
RESEARCH PROJECT
OF
CHRISTOPHER J. GENTILE

Howard H. Foster Jr.

Approved by Major Professor Dr. Howard H. Foster, Jr.

Marcia Marker Feld

Acknowledged by Director Dr. Marcia Marker Feld

ABSTRACT

The end of the Cold War presents a unique opportunity to reinvent American society. In the wake of the Cold War both the problems faced and the resources available to address them are different from those associated with past postwar adjustments. Unfortunately, the adjustment to the end of the war will bring hardship to many. The hardship experienced by defense dependent firms, communities and individuals could delay or halt the transformation of American society.

The study presents an introduction to the issue of post-Cold War defense economic adjustment. It defines a number of techniques for adjustment, presents new domestic considerations for defining American national security as well as identifying the dangers presented by regional conflicts and instability. Among the domestic threat are the cradle-to-grave cycle of poverty, a crumbling national infrastructure, a failure to invest in productive capacity, a failing educational system, and various threats to the environment. Adjustment techniques need to both provide for post-Cold War national security and facilitate a smooth transition of resources once used for fighting the Cold War to other pressing national concerns with out causing an extended period of hardship to those once dependent on defense spending.

The study ends with a conceptual plan for adjustment which provides transition strategies to be used by negatively effected firms, communities and individuals for coping with the negative results of reduced defense spending resulting from the end of the Cold War. The plan will also include conversion strategies to be used as America moves toward a new set of post-Cold War national priorities.

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Chapter One

Foundation

1.1 Overview of Research Topic

This research project will explain the issue of adjustment to the end of the Cold War and then propose new outlets for the resources once devoted to the Cold War. It consists of this introductory segment and two explanatory segments concerning defense spending and national security and the effects of cuts in the defense budget on defense dependent workers, communities, and abandoned facilities. The project will conclude with a summary of findings as a conceptual plan that could provide a framework for future planning efforts.

Post-Cold War Society

We are living in a post-Cold War society. The Soviet threat vanished with the collapse of the Union of Soviet Socialist Republics (U.S.S.R.) on 8 December 1991. The collapse occurred when the leaders of Russia, Ukraine and Byelorussia declared that a new Commonwealth of Independent States was open to the states of the former union. In November 1989 the Berlin wall fell after 28 years as East

Germany lifted emigration and travel restrictions to the West. Any threat of surprise European-invasion has also disappeared. A threat to the free world from the Warsaw Pact is no longer present.

Cold War formally ended with a joint declaration of President of the United States George Bush and President Boris N. Yeltsin of the newly democratic Russia. Text of the declaration was issued at Camp David on 1 February 1992. Russia and the United States are no longer regarding each other as potential adversaries. The declaration characterized the relationship between Russia and the United States as one of mutual respect and a common commitment to democracy and economic freedom. Removal of any remnant of Cold War hostility was asserted as a goal for both countries.¹ The end of the Cold War removed what appeared to many observers to be the last remaining reason for the Department of Defense's elevated budget demands. Unfortunately this may have been an overly optimistic conclusion.

National Security

Cuts in the defense budget, although justified now that the Cold War is over, must not be so severe that national security is compromised. Often economic adjustment discussions ignore this issue. The research project will address positions on the national security issue. One position argues that very deep cuts, even a halving of the total defense budget, will not compromise national security significantly.² This position depends on the use of innovative changes in security

policy and changes in procurement techniques and identification of pork-barrel projects to reduce the defense budget. Another position argues that in the global uncertainty and regional conflicts of today's political climate, the United States must exercise caution in cutting the defense budget.

The argument for deep cuts emphasizes the Cold War arsenal was created at a tremendous cost in both real and intellectual capital. America is doubtless decades ahead of any other power in military technology. Conversion here is called for to cushion the shock to defense dependent workers, firms and communities. Resources once devoted to the building of the Cold War arsenal may now be converted to long ignored civilian projects. Such a conversion will help compensate for the past cost to society for the building of the Cold War arsenal. National security here is defined in terms of economic and social well-being.

The second argument warns that if cuts in the defense budget are too deep the United States may become a "super power without a sword" leaving America unable to carry-out its foreign policy agenda.³ It also warns that the world is changing very quickly and the military that exists today and even the next generation may not be sufficient to guarantee security in the decades ahead. Preservation of defense industrial capacity, as a hedge against unexpected needs, calls for spin-off and diversification into commercial production but only as a short term measure to bridge the gap between peaks in military spending.

Senator of the United States from Connecticut Christopher J. Dodd in testimony before the House of Representatives' Committee on Armed Services hearings on Defense Economic Adjustment and Conversion Program in Newport, Rhode Island warns,

We must not repeat the experience after World War II, when we let our defense industrial base collapse and found ourselves unprepared for the outbreak of the Korean War. We must remain vigilant and prepared to meet any contingency. We must apply the same expertise and ingenuity to the transition of the defense economy as we did to its creation, or we will lose forever these technologies, this industrial base, and important jobs.⁴

Senator Dodd's comments emphasize two points. First, whatever the pace or severity of defense cuts, a defense industrial base that can supply materials for a strong national defense must be maintained. Production facilities such as those used for ship building would take years to retool and reopen should they be needed for a future buildup. Second, "expertise and ingenuity" are required for an effective transition of the defense economy to a civilian economy. The second point supports the assertion of this project that careful planning is required for a successful adjustment effort.

Development of the Cold War Arsenal

The Cold War arsenal represents a dramatic departure from the mass produced overwhelming numbers of weapons used through to the end of World War II. It consisted of a smaller quantity of higher quality weapons with greater

individual capabilities. Three features of Cold War confrontation are cited as accounting for the unique nature of the Cold War arsenal.⁵ First, warfare became airborne with the use of strategic bombers and various types of missiles to deliver ordnance. Airborne warfare required the development of sophisticated guidance and remote sensing capabilities. Equipping the military for these new requirements also created a higher demand for engineers while reducing the demand for troops.

Second, the Cold War was a war of threats, each generation of new weapons forcing the opponent to balance the new threat with their own weapon system innovations. The constant innovation of the Cold War shortened the life span of each successive generation of weapons technology. Again the scientific and engineering expertise required for constant innovation created a more capital intensive production process. More capital was required per unit. Weapons were more lethal and produced in smaller quantities. The cost of production equipment for highly advanced technologies required to produce these weapons increased in each new generation of weapons. As the equipment became more advanced more highly skilled workers were needed commanding increasingly higher salaries. The progression of escalating price tags on increasingly lethal weapons can be illustrated by observing the cost of fighter aircraft since World War II. A World War II P-51 cost roughly \$100,000, while a Korean War F-86 cost roughly \$1 million, and a Vietnam War F-4 Phantom cost roughly \$5 million. Today's F-16 costs from \$15 to \$20 million per copy.⁶

Third, the Cold War arsenal, like other high technology industrial production, requires clean, flexible — and in the case of leading edge weaponry — secret environments. Such factors physically separated the location of Cold War military industrial production facilities from established civilian industrial production areas. Many areas experienced new and great prosperity. The physical separation of Cold War military industrial production has created what is now labeled as "The Gun Belt."⁷ The result of these three factors is a unique type of arsenal. It is airborne, constantly evolving at an ever increasing cost and its production facilities are separated from traditional manufacturing sites.

1.2 Purpose of the Study

Conversion as a strategy for adjustment to the end of the Cold War goes beyond preserving profit for the defense industry, jobs for defense dependent workers, reusing abandoned military facilities, or easing the hardship for defense dependent communities. Post-Cold War economic conversion is a process of social change. It is more than just a move away from a military economy. Defense conversion is a tool that will enable the nation to restructure the economy, create a more just, equitable and sustainable society.⁸ Conversion after the Cold War is an issue of empowerment. The worker, the community, and the defense industry have ability to influence their own futures through alternative use committees and conversion coalitions. They are not at the mercy of the market or the federal

government. Yet, defense conversion does go beyond the individual plights of the displaced worker, abandoned communities or the shrinking defense industry. Conversion also involves wider issues of decision making, and redirection of national priorities.⁹

The foremost purpose of this research project is to expand the reader's understanding of adjustment to the end of the Cold War and then to suggest conversion strategy as a means of paradigmatic-shift. The way in which excess resources are redeployed will suggest the national priority that has replaced the fighting of the Cold War. New priorities could include environmental protection, national economic recovery, or a new war on poverty, illiteracy, drugs, or crime. The direction that defense conversion takes will indicate the new post-Cold War national priority. The conversion process then becomes the process by which the shift from the Cold War military paradigm becomes the new post-Cold War paradigm.

The project will suggest an overriding goal for post-Cold War adjustment policy should be to **preserve national security in this time of many scattered regional conflicts while redirecting newly liberated resources toward pressing societal needs**. Conversion after the Cold War is an opportunity to reexamine the essential course of our society. Joel Yudken notes that neo-schumpeterians such as Richard Nelson, Sidney Winter, Christopher Freeman, Giovanni Dosi, and Nathan Rosenberg would see conversion as the switch from a military technological

paradigm to a civilian technological paradigm.¹⁰ Michael G. Renner also states that economic conversion is most immediately concerned with the shift from military to civilian economy but he goes on to observe that it should also be concerned with the type of economy that emerges.¹¹

Cliches

The issue of adjustment after the Cold War literally embodies many cliches. Defense conversion planning is in fact the creation of "a plan for world peace." This phrase is often used jokingly and is meant to imply that an issue is too complicated, too huge, or pursued by those whose ideals are too lofty to ever come to fruition. Yes, a smooth conversion from the Cold War economy is a lofty ideal, but it can come to fruition. It is complicated but it can be broken down to manageable segments. An issue that can be readily understood is often referred to as "not taking a rocket scientist to understand" but many of conversion's issues do require rocket scientists to understand.

Many questions need to be answered to accomplish the adjustment to the end of the Cold War. Questions include: How did the dependence on military economy develop? Conversion to what? What products, technologies, and organizational structures should replace the war system? Whose jobs will be converted? Who will control the pace and direction of the adjustment?¹² The project will seek to suggest

possible answers. Answers to these many questions will not be the same as they were during adjustment to past wars.

An awesome arsenal characterized the Cold War. So awesome was the arsenal that it made its own use in a hot war impossible. Alas, our adversary is vanquished, a victim of social, economic and political collapse at least partially induced by the building of their own Cold War arsenal. Our arsenal remains intact but its creation did not destroy our Country's stability. Adjustment to the end of the Cold War must be as different as the Cold War was different from other wars.

(1) The first objective of the study is to create a foundation for the discussion of post-Cold War economic conversion. (2) The next objective is to address the obstacles that must be overcome to effectively use resources no longer employed by the military economy. (3) Another objective will then be to reveal some consequences of the necessary economic adjustment to a post-Cold War economy. The study will also explain how the consequences will be intensified if this conversion effort is attempted at the wrong pace or without a very meticulous planning effort at every stage of the process. Also, the project will identify the different actors with a stake in this issue. Awareness of the other actors concerns with this issue could go a long way to finding a solution.

(4) Finally the study will present a coherent and easy to follow overview of the issue of economic conversion after the Cold War. This overview will act as a basis for a conceptual plan. The plan will include alternative conversion strategies

and new policy directions for the Nation and other defense dependent entities to follow. Possible solution will link the individual segments of downsizing defense industries, reemploying displaced workers, reusing abandoned military facilities, and economic adjustment for defense dependent communities to a new national economic policy. It could then provide a framework for future specific planning efforts.

1.3 Methodology

Data used in completing this study was predominantly collected from current literature. Key informant interviews were also conducted with government officials and others concerned with this issue. Base conversion, peace organization meetings, and public lectures were also attended.

1.4 Definition of Terms

Many terms are used when discussing post-Cold War economic adjustment. These terms are often used interchangeably. Yet, each of these terms represents a different strategy for adjustment to the end of Cold War. The terms include such expressions as *adjustment*, *diversification*, *spinoff*, *peace dividend*, *alternative use*, *dual-use*, *conversion* and *peace economy*. The term ***adjustment*** will be used as the umbrella term in this research project. ***Peace dividend*** will refer to resources, no longer needed to wage war, which have become available for peaceful purposes. A

term "*reverse conversion*"¹³ is also used to refer to the shift from civilian to military production that occurred in the 1980s.

Diversification strategies involve divesting the defense firm of some of its military divisions or acquiring or merging with additional civilian oriented businesses. It is usually a reaction to contract reductions that have already occurred. Diversification is a reactionary strategy and consequently requires little advanced planning. The purpose of this strategy is to lessen the effect of lost defense contracts. Defense firms may also diversify within the defense industry to protect themselves from variations in the procurement of individual weapon systems.

Spinoff and diversification both assume that cuts in defense expenditure will be both short term and mild. Diversification does not involve alternative use of products or production techniques nor does it find alternative uses for the work force. It often leaves segments the existing work force inactive and is closely associated with layoffs of defense workers. Engineers and scientists are often preserved to prove to the Pentagon that the firm can compete when spending is resumed at the previous higher levels.¹⁴ When associated with defense dependent communities, diversification refers to the attracting of civilian industries to broaden the production base of the community. Betty G. Lall and John Tepper Marlin provide a simple definition of diversification, "expansion of non-military production."¹⁵

A *spinoff* strategy refers to the technologies originally developed for military applications that will now be applied to civilian uses. Spinoff strategy is used to ride out short term cuts in defense spending without significant changes to the firm's production techniques or work force. The same basic military product is sold to civilian customers. Unlike strict diversification strategies it does involve some alternative use. The purpose is to supplement defense-related contracts and not to replace them. It emphasizes internal development and works best with production technologies rather than specific products.

Closely associated with spinoff strategies is *Dual-use doctrine*, which gives precedence to technologies that serve both national security and commercial competitiveness. Champions of dual-use identify *critical technologies*, which include semiconductor manufacturing, high-performance computing, advanced materials, high-definition display, robotics, optoelectronics, biotechnology and advanced machine tools.¹⁶ Critical technologies are those processes best suited to spinoff strategies.

Humanity's first concept of *conversion* linked with peace came from the great prophet Isaiah who lived in Jerusalem in the latter half of the eighth century B.C.. He writes about the message God gave him about Judah and Jerusalem,

He will settle disputes among great nations. They will hammer their swords into plows and their spears into pruning knives. Nations will never again go to war, never prepare for battle again.

Isaiah
2:4

This is truly a conversion strategy. The weapons themselves will be turned into productive tools for the good of civilian society. Senator George McGovern first introduces the term "economic conversion" to the American people during his 1972 presidential campaign.¹⁷ Conversion strategy seeks to increase capacity for civilian production at the cost of military capacity though it uses existing facilities and work force to the greatest extent possible. Michael Renner defines conversion as "the transfer of resources and the reorientation of productive capacities from military use to civilian purposes."¹⁸ It addresses substantial and extended reductions in defense spending. Unlike diversification or to a lesser degree spinoff, conversion requires extensive planning long before the reductions ever occur to be immediately effective after they occur.

Betty G. Lall and John Tepper Marlin provide a narrower definition of conversion. In this narrow sense conversion means "mandated, employee-driven retooling of a defense plant for civilian reuse."¹⁹ In this narrow sense conversion becomes a labor and infrastructural rebuilding issue. Broadly defined conversion is "the process of moving from a military to a civilian mode of production and other activities."²⁰

Seymour Melman and Lloyd J. Dumas define conversion as "political, economic and technical measures for assuring the orderly transformation of labor, machinery and other economic resources now being used for military purposes to alternative civilian uses."²¹ Melman and Dumas further delineate the productive capacities that must be

converted for successful conversion. Most importantly labor is identified for conversion. Dumas writing separately from Melman²² identifies two factors that decide how smoothly resources can be transferred between any pair of activities. First, is the volume of resources to be transferred. Second, is the degree of similarity between the activities. The first factor, when applied to economic conversion, is determined by the focus of the problem. A nationwide focus would make conversion more difficult than a focus on a single plant. The second factor applies at all levels and suggests that similarity of military activities to civilian activities are proportional to the ease of their conversion.

John Tepper Marlin, writing separately from Lall, defines conversion as "the broad shift of resources from military to civilian production." He goes on to identify two main components of conversion. The first is "helping defense workers and defense dependent communities adjust," the second, "redirecting freed-up resources to meet pressing needs." Finally he comments that "the more overlap there is between these activities the better."²³

Martha W. Gilliland, Patricia MacCorquodale and Jeffrey P. Kash of the University of Arizona define conversion as "the shift of significant monetary and human resources from military to civilian applications of technology" and "hinges on engineering expertise."²⁴ Their definition focuses on the engineer as the link between technology's capabilities and society's needs. They also see "conversion in its largest sense, has the potential to create a different integration of civilian and military

production." The idea of conversion as an integration of military and civilian production provides for spinoff and dual use technologies as part of the conversion process. It eliminates the need to separate military from civilian production.

Joel Yudken defines conversion as "the optimum reallocation of public and private economic assets, from the military to civilian industrial sectors, that enhances national economic performance, environmental sustainability and social well-being." He then adds, "that a crucial criterion is that this be accomplished with minimal dislocation of workers and communities."²⁵ Yudken's definition extends conversion to a component of a complete change in national economic policy including environmental sustainability and social well-being. His is the widest of definitions, raising successful conversion effort to a realization of social change.

The most detailed and process oriented definition of conversion comes from the National Commission for Economic Conversion and Disarmament,

Economic Conversion is the political, economic and technical process for assuring an orderly transformation of labor, machinery and other economic resources now being used for military-oriented purposes to alternative civilian uses. Economically, conversion requires planning for new markets, products and research and development for industrial facilities, laboratories, training institutions, military bases and other military contractors. Politically, conversion is a means for building constituencies for peace in America by providing economic options for those who derive their income and profits from military production. The formal institution of a conversion plan for military facilities requires a preplanning period in which managers and workers develop an inventory of workers' skills, capacities of factories and machines, and match them with the new requirements created by civilian products and markets.

They go on to explain why economic conversion is necessary "to counter fears that peace means depression, and to help repair decay in U.S. industry and

infrastructure."²⁶ They provide both an excellent definition and a clear statement of the necessity for economic conversion. The statement of need could be made more complete by the addition of social decay to the ills that economic conversion could help cure.

There are a variety of strategies for adjustment to the end of the Cold War. They all involve some level of transformation from military production to civilian production. The crucial element is that the same workers and the same production facilities that were engaged in military production are somehow reemployed. Mere redirection of funds to civilian production without guarantees of job security will cause hardship and decay for those dependent on the military. Those dependent on the defense spending will have no choice but to resist conversion efforts. Conversion will become unworkable without the support or worse the opposition of such influential groups as labor unions, defense contractors, and local governments.

1.5 Distinction from Past Postwar Conversions

Being in need of a postwar conversion is not a novel predicament for the United States. The United States has experienced four postwar periods in the last fifty years. They occurred after World War II, the Korean War, the Vietnam conflict, and finally after the Cold War and the Reagan buildup. Conversion in the present postwar period is distinct from past conversion efforts. Of these four postwar periods the one

following World War II is most often cited as successful. Unfortunately the lessons learned after World War II cannot be directly applied to the post-Cold War conversion.

Three main differences, distinguish Cold War conversion from the response to the post war period following World War II. The differences are duration of the war effort, similarity of civilian and military products, and economic environment following the war. First, is the length of the War and more importantly the length of the military buildup for war. World War II lasted seven years starting in 1939 and lasting into 1945 — the United States was involved only five of those years starting on 8 December 1941 — while the Cold War lasted fifty years. Joel Yudken refers to the period following World War II as a "reconversion, which entailed primarily civilian firms switching **back** to their original modes of activity."²⁷ Workers and firms involved in the buildup for World War II were simply reconverting to their former role of civilian production. Dumas also observes,

As the US involvement in World War II expanded, firms normally involved in civilian production began to switch to producing military equipment instead. All of the employees at such firms, from production and maintenance workers to engineers and managers, were accustomed to serving civilian commercial markets. That is what they had spent most of their working lives doing . . . They 'reconverted'. For them, military production was a temporary aberration from the norm of civilian commercial marketplace.²⁸

The response to the end of World War II was a switch back to a familiar form of production for workers in facilities laid out for civilian production. In contrast, many firms and workers involved in supplying armaments during the fifty years of Cold War have never experienced civilian production or marketing.²⁹ The conversion advocate

and planner must help the defense dependent workers, communities, and firms, involved in military production for generations, learn to function in a civilian economy for the first time in their experience.

Second, is the similarity of military and civilian production during the World War II period. In fact there was no sharp demarcation of civilian-oriented and military production.³⁰ Civilian industry converted directly from the production of goods for the civilian market such as automobile and shoes to the necessary means of war such as boots, tanks, and bombers. As the war ended the very same industries reconverted to shoes and automobiles. The bombers became the vehicles of civilian airlines. Expectations of such uncomplicated conversions are no longer realistic due to the complexity and advanced technical nature of the Cold War arsenal. Conversion is possible in the wake of the Cold War but it will require careful planning.

Third, is the difference in the world economy after World War II. After World War II the United States had a huge pent-up market for consumer goods backed by huge accumulated savings.³¹ The situation created by a combination of nationwide rationing and both diverting production away from civilian needs and increasing production to meet the needs of War. The production for civilian use of automobiles, aircraft, houses, and even whiskey was completely halted. Production of virtually every other consumer good was curtailed by a shortage of labor and critical materials allotment. Increased Demand resulted from scarcity of consumer goods and the increased savings resulted from the wages of full employment with little to purchase.

Beyond the domestic cut in civilian production the other industrial powers were devastated by the War with many of their factories reduced to rubble. Worldwide devastation left only the United States to meet the demands of a world rebuilding itself as the war ended. Markets in Japan and Western Europe were open to American exports. Both markets were in desperate need of both consumer goods and capital equipment.

A robust American job market existed after World War II. The GI Bill was the main adjustment program for returning veterans. Guaranteed low-interest mortgages for the purchase of home, business or farm, one year of unemployment benefits, and financial support for four years of education or training were extended to veterans by the GI bill. Low interest loans added to demand for new housing and the variety of durable goods needed to fill them, Unemployment benefits gave veterans a year to find a good job and financial support for education and training took many out of the post-war job market while they pursued their education. Many people withdrew from the work force as the war ended. Approximately three million older workers who normally would have retired if not for the war and younger workers who postponed their educations due to the war dropped out of the work force. Between 1944 and 1947, some 2.7 million women also left the work force.³²

The present post-Cold War conversion effort is set apart from earlier efforts by the fact that no actual war occurred. In the wake of the Cold War the worlds industrial production capacity remains intact consequently American defense industries no longer

needed to produce military products are thrust into a civilian market where strong competition exists. Pent-up demand and savings that existed after World War II are not present after the end of the Cold War. Unfortunately for those involved in "fighting" the Cold War they are set adrift in a world where the countries that did not divert resources to fight the Cold War filled their own needs and the needs of our country left unfulfilled by our own industries. American industries that could have designed, produced and marketed consumer electronics were instead diverted to producing advanced electronics for the Cold War. Instead the Japanese and other foreign competitors filled this market. Firms no longer needed for Cold War advanced electronics production will find it difficult to break into this market years after their foreign competitors.

The market will not solve the adjustment problem unaided by a well planned and executed conversion strategy. Advanced planning for the end of World War II occurred on both the governmental and enterprise level simply because the war was expected to end eventually. The need for planning was clear as the war was seen as a temporary situation. The Cold War was perceived as being of indefinite duration. Few could have predicted the sudden end of the Cold War. With no end to the Cold War in sight there was no corresponding incentive to plan for its end. When the end came immediately apparent was the lack of reaction from the American Public. There were no ticker tape parades or dancing in the streets, nor a negative reaction to the war's atrocities — few if any were widely perceived.

Chapter Two

Post-Cold War National Security

2.1 Converting Foreign Policy

The threat of communism from the Soviet Union no longer supplies the ideological glue for American security policy. As a first step to conversion in the wake of the Cold War, America needs to conduct a reexamination of its role in world politics. America must alter its basic security policy strategy to avoid a mismatch between strategic goals and available resources. A reduction of resources devoted to security policy reflected in a curtailed defense budget will require a reining in of Cold War strategic goals in the form of more restrained security policy objectives. Robin Ranger, former Jennings Randolph fellow at the U.S. Institute of Peace, observes that "The defense strategies and forces that won the war must be adapted to the new international security system created by victory, as well as to reduced budgets."³³

Lasting and effective cuts in the defense budget that will simultaneously continue to bolster national security are required to make economic conversion from

the defense economy to a peace economy after the Cold War possible. A lack of defense budget cuts or ineffective cuts will diminish or destroy any sustained conversion effort. Should the Military Industrial Complex be unable to maintain national security with reduced defense spending the initial military budget cuts following the end of the Cold War will be reduced or eliminated. Conversion will be meager or become impossible due to the abatement or elimination of excess material or intellectual resources should the defense budget return to Cold War levels. Excess resources liberated by cuts in the defense budgets are the essential ingredient for conversion. Without excess resources conversion is simply made impossible. America's foreign policy goals must be reevaluated in the post-Cold War era of defense budget cuts to avoid a means-ends gap that will result in such a breach of national security.

Peace Dividend

Before American security policy can be examined such crucial concepts as the meaning of national security threats and peace dividends must be established. Framed within these concepts are varying notions of national security and peace economy. Excess resources liberated by the arrival of peace are commonly labeled as the peace dividend. A peace dividend must exist within an economy that was previously based on warfare but has now ceased to fight the war. If the United

States has truly stopped fighting the Cold War, conversion advocates should be able to find a peace dividend among those resources no longer required for fighting it.

The peace dividend can be seen in narrow financial terms as the material resources no longer needed to prepare for or engage in a war due to an absence of hostilities and a period of public security. Given the enormity of the Cold War military budget and employment, it is not surprising that there are great hopes for a substantial post-Cold War peace dividend.

It is the likely that both the form and destination of the post-Cold War peace dividend will be surprising to many. It is commonly felt that spending a dollar less on defense will free up a dollar for "social programs."³⁴ Although, social programs are one option for dollars saved by reduced defense spending, social programs will have competition from other policy options including deficit reduction and tax reductions. The number of dollars actually available for any peace dividend policy option is also in question due to the efforts of the Pentagon and a variety of lobbyists to preserve the military budget. Nancy Ettliger writes about the true nature of the peace dividend,

Irrespective of what we may want to happen, what unquestionably remains after the Cold War is not dollars to be spent on wanting programs, but talent and expertise — a human resource base — that has been secluded from civilian life and commercial enterprise. This is the real peace dividend, potentially.³⁵

Jeff Faux president of the Economic Policy Institute states the unlikelihood that any funds will be spent on social programs even more emphatically,

Even if the Congress forced the Pentagon to absorb all the cuts needed to meet the agreed-on ceilings in 1994 and 1995, the result would not provide an additional nickel for long-neglected domestic investments.³⁶

He credits the budget deficit for negating any possible shift of dollars (or nickels) from military budgets to domestic investments.

A more broadly conceived peace dividend offers great possibilities for changing the texture of American society. The change of texture will result from reducing inequalities, shifting national objectives, changing the moral tone — as well as redirecting the flows of governmental spending.³⁷

The size of the dividend depends on the amount of resources actually liberated by changes in Americas security policy and on the potential uses for the dividend. Politically popular alternative uses for such liberated resources will increase the amount of peace dividends eventually made available.³⁸ In many ways economic conversion is the creation of a peace dividend. Without economic conversion strategies liberated resources would linger uselessly no longer needed for warfare but unused in the civilian economy much like the newly unemployed defense worker, or unneeded subcontractor, who now cannot find a place in the civilian economy. Alternative use planning can provide concrete methods for developing such politically popular uses as infrastructural revamping and social development.

Economic conversion planning must also alleviate to the greatest extent possible such politically unpopular consequences of a drop in military spending as

unemployment and dislocation of defense dependent workers. Lisa R. Peattie sites the Cambridge Peace Commission's report on diversification planning has as its main goal: "through long range planning, to forestall business failures and job losses that would result from sudden reductions in military contracts flowing to Cambridge businesses."³⁹ Here a peace organization is alleviating through long range planning such unpopular consequences of a military spending drop as business closing and job loss.

Such main goals would normally seem strange for a peace commission but, it became a main goal undoubtedly to maintain political support for the peace movement within the Cambridge area. Those in jeopardy of losing their livelihood will be hostile to a peace commission pursuing peace at the cost of their jobs or businesses.

Also, reuse of abandoned military bases have been especially successful in limiting negative effects and eventually becoming a greater asset to the community than the former base had been. Industrial and office parks are now located at more than 75 former bases nationally.⁴⁰ Communities will be more willing to give up their now unnecessary bases when informed of the success of base reuse over the last thirty years.

2.2 Threats to National Security

The defense industry plays a role in national security as one interest group included in the Military Industrial Complex. Others of these interest groups include the military services, high government officials, various members of Congress, labor unions, scientists and scholars. Prolonged international conflict of the Cold War since 1945 has produced high levels of military expenditures that have created powerful domestic interest groups who require a Cold War ideology to guard their power and prestige within the state's political and economic structure.⁴¹ Care should be taken when identifying national security threats not to identify a threat simply to advance personal ideologies. This must apply to both those who will benefit from continued military spending at or near Cold War levels and those who would like to engage in a national conversion to a peace economy.

With the collapse of the Soviet Union there is no military power that could successfully conduct a ground offensive against the United States. Also, no other military power can project its conventional forces through out the globe as adeptly as the United States. In sum, no other nation could hope to match our military capabilities for at least a decade.⁴² Yet, the United States spending is more on its military than the next ten nations combined. Also, our military expenditure is four times larger than the next largest military budget. It is also worth noting that these nations are our friends or want to be our friends.⁴³

Lingering Threats

Perhaps peace will reign and there will be no more need for military spending at Cold War levels or perhaps chronic regional and ethnic conflicts will lead to limited yet widely dispersed nuclear exchanges or limited use of conventional weapons as in the Gulf War. There are still many threats on the domestic front should peace reign supreme. Conversion can play a role in addressing these various threats to national security. Threats to national security will be split into two categories. The first are the "classic threats," those traditionally recognized as dangers to America. Next, are the "unconventional threats" those dangers recently identified as the realization of widespread domestic decay and its consequences settles into the consciousness of America. It is this new awareness that adds further impetus to the urgent need for economic conversion.

Classic Threats

Classic threats are defined here as those threats to national security that come from outside the country and pose a danger of physical invasion of the country or of its allies. The hazard may also be to an area the nation considers as strategically important such as Middle Eastern oil fields. Also within this category of dangers are regional conflicts that threaten to reestablish the use of nuclear weapons.

David M. Abshire sees two primary threats to national security in the post-Cold War world. The Western Allies will not be able to manage a safe transition in

Eastern Europe and the former Soviet Union. Atlantic and Pacific democratic allies will develop conflicts among themselves.⁴⁴

He also goes on to suggest six contingent situations that he sees as challenges to United States security. The first two comprise the first primary threat to national security identified above. First is the challenge of a smooth transition of the once communist countries of Eastern Europe to democracy and capitalism. Next comes what he calls "the West's primary security concern" that is the challenge of disorder in the former Soviet Union. It includes both deterrence of nuclear weapons use and containment of nuclear weapons proliferation. Proliferation will also include the dispersion of Soviet scientists to countries seeking nuclear weapons-based power. The other contingencies include a war in the Middle East, renewed conflict in Korea, a conflict in the Taiwan straits involving The People's Republic of China, and finally a nuclear exchange between India and Pakistan.⁴⁵ All these contingencies for regional conflict have a potential for some level of nuclear exchange now or within the next ten years.

A single nuclear exchange would break a forty-eight-year taboo on their use and send a dangerous message to other entities involved in regional conflicts. The message would be especially clear if the use did not meet with an immediate and decisive response from the United States. Worst of all, beyond the obvious human and social cataclysm of any nuclear warfare, it could occur in countries barely able to provide for all its citizens in peacetime.

Alan Tonelson reminds us however that as terrible as the consequences of regional conflicts may be, without the Soviet Union, "few international conflicts will directly threaten the nation's territorial integrity, political independence or material welfare."⁴⁶ There is also reason to question the likelihood that these regional conflicts will escalate to the point of warfare. South Korea, for instance, has twice the population and ten times the economy of North Korea and is most likely capable of dealing with their neighbor's potential aggression.⁴⁷ Whereas North Korea does presently have twice the standing army of South Korea even including United States' troops but United States' F-16s are more than a match for the North's ageing Migs. The United States presences in this area could even trigger a conflict that would have otherwise not occurred. In the wake of Desert Storm many other countries contemplating regional conflict may be hesitant to act for fear of America's swift intervention. The obvious question is: Should America spend billions preparing for regional conflicts that will not directly threaten the country? Military spending in preparation for potential regional conflicts is a particularly dubious allocation of funds when many domestic problems are glaringly obvious; domestic problems that a conversion strategy focused on infrastructural and social restructuring will address.

Many questions are left to be answered by United States policy makers, in the face of regional conflicts. Can the United States deter regional conflicts such as these and still have excess resources to engage in economic conversion? Should the

United States take the responsibility for these regions? Can it afford not to intervene? How much aid should the former Soviet Unions receive from the United States?

Unconventional Threats

Many have identified different threats to national security than those that can be met by investing in an adequate military defense. Robert L. Borosage identifies post Cold War national security threats this way, "Now, as the fog of the Cold War lifts, the real security concerns of this country come into view — our economy, our environment, our education system."⁴⁸ He sees America's real national security threats as coming from within. He is not alone. Mark Levinson writes,

But perhaps our security is no longer to be measured by the size of the military budget. It may be that our country greatest weakness lies in the public realm — the shocking economic inequality, urban centers that resemble underdeveloped countries, rotting roads and bridges, second-rate education and training, shameful neglect of the young.⁴⁹

Again Levinson identifies quite graphically that the real threats to America's security are now coming from domestic social and infrastructural decay.

Our failing educational system has left Americans behind the rest of the world in literacy. Nearly one in five American workers is functionally illiterate. Between 1985 and 1992, one quarter of all students in high school failed to graduate. Every year two million Americans leave school without learning to read or write.⁵⁰ A poorly educated work force will be less able to participate in key

cutting-edge industries and will lead to the further decline of our global competitiveness.

Our children not only suffer from poor education but also from poverty. Almost a fourth of all American children under the age of six live beneath the official poverty line. This figure increases to about half for black children. The number of Americans that fell below the poverty level stood at 31.5 million in 1992.⁵¹ Poverty and failing education are further complicated by the highest rate of crime in the world. A black male child today is more likely to go to jail than to college.⁵²

America has certainly defended itself flawlessly from external threats. Other countries around the world are under siege from their neighbors or are torn apart by civil war. We have been spared these situations for over a century. The end of the Cold War gives America the opportunity to switch our focus from external threats to internal threats to our national security. Hopefully in the wake of the Cold War we will be as successful responding to domestic threats as we were answering external threats. This time the war on poverty, crime, drugs and illiteracy will take place without a Cold War to fight simultaneously. We must be careful not to be overrun by domestic decay while we seek to protect ourselves and our interests from foreign threats.

The Honorable Nicholas Mavroules Representative from Massachusetts,
Chairman, Investigation Subcommittee of the Committee on Armed Services in his

opening statement before hearings held on Defense Economic Adjustment and Conversion Program held on 16 December 1991 in Newport Rhode Island stated,

As we move into the New World order, economic dangers, caused by persistent and massive budget deficits; a national debt of \$4 trillion; with yearly interest payments on that debt approaching \$200 billion; and chronic trade imbalances, are replacing the military threats in our national security. The high levels of defense spending justified in the heyday of the Cold War simply cannot be supported.⁵³

Mavroules points to economic dangers as the new threats to national security in the post-Cold War era. The threats he identified have been blamed at least partially on the creation of the Cold War arsenal. Melman and Dumas clearly attribute the enormous increase in the national debt between 1980 and 1989 to a combination of the Reagan Administration's tax cuts and a military spending binge. They point out that military budgets doubled during this period and that this additional spending lead to a near tripling of annual net interest on the debt from \$53 billion to \$152 billion.⁵⁴

Many problems now identified as the new security threats to the United States after the end of the Cold War have also been identified as results of the creation of the Cold War arsenal itself. Those critics of the Pentagon whom most often point out military spending as a major drain on the civilian economy are known as the "depletionists." They believe that military spending has diverted vital capital, technical and human resources away from productive uses.

Dumas explains that resources employed for military buildup do not contribute to the societal standard of living. He sees the economy as the part of society whose central function is to provide material well-being.⁵⁵ By this definition only those activities that generate material standard of living have economic value. Production of consumer goods and services contribute directly to the material living standard. Producer goods and associated services also contribute but less directly as tools that add to future production capabilities of consumer goods. Mixed goods — consumer and producer goods combined — such as education and health care augment both present and future standard of living.⁵⁶ Production of consumer goods, producer goods and mixed production are contributive uses. Military production neither contributes to the supply of consumer of producer goods thus it is diverting needed resources away from the civilian economy and is a non-contributive use.

Military production may seem to be contributive because resources left idle which are then employed in military production will produce lower unemployment and a greater distribution of income. Nearly every other form of public expenditure creates more jobs, dollar for dollar, than military expenditure.⁵⁷ Renner Quotes U.S. Bureau of Labor Statistics data that shows that for every dollar invested in education and health care 85 cents go to job creation while only 35 cents of every dollar invested in military contracts goes to job creation. He goes on to further illustrate this point by comparing the approximate number of jobs created by a \$1

billion (1989 dollars) investment. Spent on guided missile production 12,100 jobs, on military aircraft production, it creates 18,800 jobs. Spending the same amount on air, water, and solid waste pollution control equipment would yield 22,200 jobs; on local transit, 28,900 jobs; on educational services 84,700.⁵⁸

Military production also produces spinoff technologies like Teflon. The heavy emphasis on research and development in military production creates a national "brain drain" that retards civilian production. Spin-off products and technologies cannot compensate for this retardation. Long lead times of military products, and their secrecy, combined with the narrow specialization of defense products sharply limits spin-offs.⁵⁹ Most military research and development is than a diversion from the civilian economy. The civilian economy is deprived of such critical resources as engineers, scientists and capital as they are diverted to military production. Approximately 30% of the nation's engineers and scientists have been engaged in military research and development for the last three decades.⁶⁰

Resources are being wasted on military production because they are not contributing to the material well being of society. The resources being wasted could be used instead on national infrastructure, education or various social programs. They are the same needs now identified as national security threats.

America's trade imbalance can also be partially attributed to the creation of the military economy. Defense dependent workers received income, **producing demand**, but produced items that cannot be purchased by the civilian public such as

fighter jets or nuclear weapons. Resources diverted from the production of such consumer goods as automobiles, 35 millimeter cameras or consumer electronics left a void thus **limiting supply**. In a closed economic system inflation would result but international trade instead limited inflation and imported goods filled the void left by lack of domestic production. It is important to note that the Japan partially filled the consumer product demand and Germany the producer goods gap — both countries forbidden to participate in significant military buildup since the end of World War II.

The Reagan Administration buildup slashed investments in children, education and training, infrastructure, and in civilian research and development while simultaneously cutting taxes on the rich and doubling the military budget in peacetime. Robert L. Borosage, lists some results of the buildup,

Children weren't given a healthy start. Schools were inadequate. Untrained workers were condemned to bad jobs at bad wages. Laid-off defense workers were abandoned with no place to go. A crumbling infrastructure made our lives harder and our economy less competitive.⁶¹

However, Nathan H. Mager provides an opposing view. He writes,

During the Reagan administration, approximately a trillion dollars was allocated for defense over a four-year period, adding almost 6 percent to the gross national product, providing a direct major spending stimulant with a high multiplier effect, especially because of new technologies involved. These appropriations induced additional capital spending for production of high-technology weapons. They created a demand for a large variety of supplier goods, revived industries suffering from maturation, added life to communities becoming ghost towns, and provided for the blue-collar workers who otherwise would have been cyclically and technologically obsolescent. In spite of the hue and cry about mounting public debt, the defense spending of the 1980s was a major factor in the turnaround growth of the economy in

the United States in 1982, 1983, and 1984. By osmosis, this cycle of high federal deficits, high interest rates, high value of the dollar (attracted by this profit opportunity), and high imports salvaged the economies of most of the Western World, both by stimulating exports abroad and by restraining U.S. competition. It also restrained inflationary pressures in the United States.⁶²

Economic collapse of most of the Western World could certainly be considered a threat to security. Mager sees the Reagan Administration military buildup as salvaging the ailing economies most of the Western World although partially by restraining U.S. competition. The buildup itself preserved national security in economic terms while also producing overwhelming military might.

Bottom up Review

Defense Secretary Les Aspin and the Pentagon have been conducting what was dubbed a "Bottom Up Review." It is a reevaluation of the dangers this country faces and the forces and actions needed to deal with those dangers. Its purpose was to define the strategy, force structure, modernization programs, industrial base, and infrastructure needed to meet new dangers and seize new opportunities of the post-Cold War world. The Bottom Up Review identifies ten "new dangers" that have emerged in the post-Cold War era:

. . . collapse of order and reform in the former Soviet Union; threats to democratic and civil order in the developing world; a weak domestic economy; a lack of international competitiveness; a lack of environmental security; proliferation of weapons of mass destruction from Moscow's central control to the newly independent states or to terrorist abroad; proliferation of such weapons to other countries (like North Korea, Iran, and Iraq); state-sponsored terrorism; ethnic, religious, and internal conflict, as in the former

Yugoslavia; and large-scale aggression or intimidation, like Iraq's invasion of Kuwait.⁶³

The Bottom-Up review identifies domestic decline, classic threats, and environmental security in the most comprehensive assessment of post-Cold War security risks. Yet, the Pentagon proposed to spend less than 1 percent of its \$263 billion budget request on destruction of nuclear weapons in the former Soviet Union, to fund peacekeeping operations, to support economic conversion, and to counter proliferation.⁶⁴

Ideal State of National Security

In the light of these various threats to national security an ideal state of national security would be one that possesses domestic conditions of social, economic, political and ecological harmony. Ideal national security would include a foreign policy agenda that is neither based on, nor results in lasting conflicts between nations along ethnic, gender, or class lines. National security also ultimately depends on not promoting conflicts between humans and their global environment⁶⁵ (i.e. lowering environmental standards to promote reindustrialization). Such an ideal state of national security can serve as a final goal for conversion to a peace economy. A new national security policy will be needed to move the United States toward this ideal security state. It will not be easy to achieve and will not happen quickly. Real lasting changes of any kind seldom are quick or easy.

2.3 United States Security Policy

Layne and Schwartz provide a concise interpretation of America's Cold War security policy. They have labeled it as a "double containment" policy. By integrating both Japan and Germany into a United States dominated anti-Soviet coalition involved in security and economic arrangements, the United States could both contain its former World War II enemies Japan and Germany and its Cold War enemy the Soviet Union. Double containment allowed the United States to reassure Japan's and Germany's neighbors in East Asia and Western Europe that there would be peace in their regions. The United States assumed responsibility for maintaining peace in these areas. Pacification of these areas was seen as key to creating and sustaining an open global economic system vital to American prosperity.⁶⁶ Not surprisingly, the current security policy is also commonly referred to as the "preponderance policy." Two questions arise for those planning for economic conversion. Seymour Melman puts it simply,

If there has been a single defining feature of the United States policy during the Cold War, it has been the relentless effort to hold a position of military and economic dominance in the world . . . Being superior in both guns and butter has been part of the American self-image.⁶⁷

Can America afford to maintain this policy of dominating world economies, while reducing defense budgets and attempting to convert to a post-Cold War economy? Can we still hope to have both guns and butter and have more of both than any other country in the world? The answer is "Yes" but our advantage will be quite a bit slimmer than in the past.

Abshire illustrates this security policy with his statements on the keys to shaping the new security environment after the Cold War. He adds, "and we do want to shape it!" The first key is cooperation and cohesion among the leaders of the three democratic blocs — the European Community, the United States, and Japan. He believes that in the absence of orchestration of the democratic blocs the world will return to the pre-World War I environment of fierce economic competition and destabilizing military relationships.⁶⁸

These comments again illustrate the United States' perceived need to dominate world politics to preserve its economic prosperity and material security in the Cold War period. Alarming, these comments are put forward as keys to the new security environment in the post-Cold War period. Reduced investment of material and intellectual resources in the military will represent insufficient "means" for an attempt to continue this "preponderance" policy. An attempt to continue this policy will establish precisely the type of "ends" that will eventually form a "means-ends gap" depleting any peace dividend gained from the end of the Cold War and thus removing the possibility for conversion. Conversely, if a more modest and less extensive foreign policy agenda is not followed a hollow security policy will result. Grand strategizing and a preponderance policy cannot be supported by declining amounts of troops, hardware and money.

Defining the Role

Defining the role of the Country in the post-Cold War world and the role of the military within the Nation's basic security policy strategy is especially significant to both maintaining national security and liberating resources for conversion.

Defining that role will be particularly difficult. Caroline Ziemke observes,

The Clinton defense establishment faces a daunting task of redefining the role of military force in an entirely new peacetime strategic order and guiding the military services in tailoring their force structures, doctrines, and capabilities to fit it.⁶⁹

It has been observed that a change is needed in United States security policy but it is not happening quickly enough to respond to the pace of change in the global security environment. John D. Steinbruner observes that radical shifts in both technology and politics have "altered the problems of security so extensively that a fundamental redesign of United States' policy is obviously required." He continues, "That revision has not yet occurred and does not appear to be occurring at a rate that is responsive to the pace of events."⁷⁰ Layne and Schwartz go beyond Steinbruner's observations in that they remark,

It is commonly held that the Cold War's end allows the United States to conduct a searching reexamination of its role in world politics. In fact, however, that has not happened and there is no reason to believe it will.⁷¹

Layne and Schwartz see no reason to hope for the reexamination that must proceed any revision and redesign of United States security policy. The conversion advocate or planner, as a first step toward conversion, must demand that the reexamination

and redesign does occur without delay. Toward this goal the conversion advocate should search out policy makers that intend to reexamine America's role in world politics and propose solutions and define new roles that will liberate resources for conversion.

2.4 Toward Solutions

In the wake of the Cold War, America must refrain from the grand strategizing to preserve resources that can then be devoted to long ignored domestic needs. Within its new role the military must maintain a force that can live within its resource constraints, sustain a reasonable pace of modernization, while simultaneously keeping readiness at the highest possible level.⁷² Smaller, lighter, and more flexible forces will be best able to fill this new role. They will require a smaller budget to operate but with greater impact on unconventional missions.

The key to preventing a means-ends gap is a security policy based on **deterrence** not on intervention into regional conflicts. Many potential areas of conflict have been clearly identified. Diplomatic steps taken now could prevent the need for expensive Desert Storm-like interventions in the future.

The choice not to intervene is not to be interpreted as a call to indifference to save money. America's delayed entry into World War II (noted in Chapter One) indicates an indifference to the plight of the Holocaust victims. This past indifference cost millions of civilian lives. Today many lives are threatened in

Yemen and Rwanda and in many other scattered regional conflicts throughout the globe. The cost of our past indifference should weigh heavily on our decision to intervene in these conflicts. A standard needs to be created to distinguish between political conflict and inhumane slaughter.

Strategies of prevention and deterrence are particularly important in dealing with the former Soviet military establishment. Eventually someone will take control over this "over-armed, underfed, and under-scrupled country." ⁷³ If the new leadership is allowed to develop a hostile stance toward the United States a new Cold War could develop or worse a full scale nuclear exchange could take place. Fortunately, it will take years for someone to establish firm control, solve their own domestic problems, and whip their forces into shape. The delay will give the United States the time needed to help shape the redevelopment of the former Soviet Union from totalitarian to democratic government and to solve our own domestic problems through economic conversion strategies.

A decision must be made as to the validity of external threats. They must be weighed against domestic threats such as poverty, crime, homelessness, crumbling infrastructure, loss of competitiveness, and a failing educational system. The severity of each of these threats should relate to the amount of resources devoted to addressing them. Again, a lack of military intervention into regional conflicts does not require a blindness to human suffering. America is able to engage in missions

of humanitarian aid without those missions degenerating into "warlord-hunts" as happened in Somalia.

Chapter Three

Challenges of Conversion to a Peaceful Post-Cold War Society

3.1 Overview

Change is certain, progress is not. Shifting more of the nation's resources from military to civilian uses should eventually make it easier for the United States to generate high-wage, high-skill employment.⁷⁴ Conversion is the process of making the shift of resources to civilian uses. It is a substantial challenge to make this shift as smooth and painless as possible in this time of sluggish global growth when even large civilian companies continue to layoff workers.

An aversion to planning and a simplistic reliance on the market economy to adjust to cuts in defense spending will prevent a rapid reemployment of both real and intellectual capital invested in the military economy. The Cold War economy has produced corporations, scientists, researchers, and workers unable or understandably reluctant to fit into a civilian economy. A weakened free market

civilian economy is less able to absorb the excess capacity that is cast off by the military economy.

Cuts in defense spending have already occurred and will continue to occur in the future. These cuts will cause changes both to the overall economy and more acutely to defense dependent regions. It is not assured that these changes will be for the better. This chapter will convey effects of reduced defense spending and challenges of economic conversion.

Significance of the Opportunity

The end of the Cold War presents an unprecedented opportunity to redistribute human and material resources occupied in fighting this war for nearly fifty years. The redistribution of these resources requires many different planning skills. Careful national and global economic development planning is quintessential for preventing the massive stagnation of the United States' and the world's economies. State and local planners must become aware of the possible effects to their communities. Clever military planning is needed to maintaining an effective military that can react to any threat to the United State or its interests anywhere in the world. Many nonmilitary critical concerns that have been partially or completely ignored during the Cold War can now be addressed.

Planners could have resources never before available to address problems such as urban, environmental, societal and infrastructural decay, which have risen to the forefront of national attention. The newly liberated resources will come mostly

as intellectual, technological expertise and excess real property. Conspicuously less abundant will be new financial resources as the Cold War was paid for at the cost of accruing a significant national debt.

Significant cuts are not certain to continue due to regional conflicts and loss of jobs. Yet, cuts in the defense budget of 50 even up to 90 percent have been suggested. Many cuts are being made and far more are expected. President of the United States Bill Clinton in a speech to Westinghouse, Inc. employees explained that by 1997 defense spending will have been reduced by 40 percent from its 1985 peak.⁷⁵ He goes on to state that cutbacks in military spending

. . . are essential in a world in which we need funds to be reinvested in the domestic economy, and in which the security threats we meet today, while very serious, are different and clearly less expensive than those we faced when the Soviet Union and the United States faced each other across the Berlin Wall with the barriers of the Cold War, and imminent prospect of nuclear war.⁷⁶

The Providence Sunday Journal November 28, 1993 quotes Bureau of Labor Statistics figures,

According to the federal Bureau of Labor Statistics, the estimated \$100 billion reductions in defense spending expected to take place nationwide from 1987 through 1997 is less than one-third of the way along. Only about \$27 billion had been cut through 1992.

From these figures it can be inferred that some cuts have been made but startlingly, they will be eclipsed by the myriad of further cuts that are expected in the next few years.

Spending has fallen dramatically since it reached its peak during the Reagan buildup in 1985. The Pentagon's procurement budget is down from \$127 billion (in 1993 dollars) in 1985 to \$45 billion this year, and is likely to continue to decline by at least 5 percent a year.⁷⁷ Yudken and Markusen point out that the Pentagon's spending on aircraft alone has fallen from \$48 billion in 1985 to \$16 billion in 1993.⁷⁸ More startling, is the amount of hardship these partial cuts have already caused. The cuts are considered partial when compared to anticipated cuts.

There are many difficulties and many unfortunate consequence of reducing the defense budget particularly lacking effective conversion strategies on corporate, community, and national scales. A particularly severe consequence is that the economy will plunge into a deep depression that spreads rapidly over the rest of the world. This circumstance is unlikely but, for those living in heavily defense dependent communities it may seem to be happening to their world.

The localized nature of defense dependence render such macroeconomic cures for unemployment as tax cuts, increased government non-military spending, or increased money supply incomplete solutions because they spread their positive effects over the entire country. Economic policies that average their stimulating effects across the nation cannot reach into specific effected areas deeply enough to prevent regional recession in the event of major military spending cuts.⁷⁹ Added to these macroeconomic solutions is the necessary factor of local economic conversion efforts. Fortunately there are many programs available to aid community and local

business in assessing planning and executing their own particular adjustment efforts which will likely include some conversion strategies.

Two Levels of Conversion

Conversion problems occur on two stratum — a macrolevel and a microlevel⁸⁰. The microlevel challenges of post-Cold War defense adjustment fall into three broad categories — challenges to individuals, businesses, and communities. By contrast, macrolevel conversion pertains to adjustment processes at the level of the overall economy. It involves the relocation of a significant share of societal resources.

The macrolevel confronts the two-fold goal of addressing national security risk on both the international and domestic fronts. These dual national security challenges were addressed at length in chapter 2. Macrolevel strategies involve changes in national taxation policy, civilian economic, educational and social welfare programs, also monetary policy or government loan programs designed to spur private consumption and investment.⁸¹

Macrolevel changes are linked to changes on the local level. Cutbacks in defense spending will necessitate reductions in military personnel abroad and base closing at home. Changes in military contracting to meet the new national security challenge of the post-Cold War world will have effects in all three broad categories of microlevel conversion. State economies are left searching for new sources of

revenues as once prosperous defense dependent businesses and military bases shrink or disappear.

Regional Nature of Microlevel Defense Adjustment Challenges

Viewed from both a national and historical perspective the problems caused by the relatively small reductions in military spending, following the end of the Cold War, would seem less than alarming. Some have trivialized the relevance of Cold War defense spending to the vitality of the national economy — noting that even at the peak of the Reagan buildup defense spending only accounted for 7 percent of the Gross National Product as compared with 18 percent during the Korean Conflict or 11 percent during the Vietnam War. In 1989 the figure had fallen to 6 percent.⁸² Small and gradual cuts in defense spending that at its peak only accounted for 7 percent of GNP do not seem to be a cause for national concern.

In fact from a national perspective Lall and Marlin point toward the size and complexity of military contracting as a barrier to cutting the national defense budget,

Military contracting is a massive business, with the Department of Defense buying goods and services from more than a quarter of a million firms each year for everything from aircraft carriers, to fuel, to "Pampers" for resale at base commissaries.⁸³

Beyond the obvious difficulties of resolving the specifics of the programs that will be cut, the time table, and the location of companies that will lose contracts, there is the further difficulty that these cuts will send repercussions through the entire economy. Few will dispute the local effect that loss of defense contracts and military

bases can have on a community and its ability to collect necessary tax revenues. The enormity of the military industry becomes more apparent when compared with other more familiar industries. Military industry's major contractors and many small businesses make up a larger portion of the United States economy than the auto industry and plays nearly as large a role as residential and commercial construction.⁸⁴ The United States aerospace industry accounts for a bigger portion of United States exports than any other industry and accounts for two-thirds of the world market for commercial aircraft.⁸⁵

3.2 Defense Contractors Challenges

Cuts in the procurement budget are deeper than after Korea and as painful as after Vietnam. Purchases have fallen in real terms from \$106 billion in 1987 to \$76 billion in 1993 and are expected to drop to \$50 billion by 1997.⁸⁶ Cuts in procurement will have the greatest effect on the few defense contractors that supply goods to the Pentagon. Many of these contractors are dependent on military contracts for their survival.

Obstacles to Defense Industry Conversion

Individual corporations, defense related divisions of corporations, plants, and the defense workers essential to the Cold War economy are unprepared to enter the commercial markets of the post-Cold War civilian economy. Defense related firms are

not equipped for commercial markets for several reasons. Defense firms sell their products to the Pentagon, their only client, instead of many consumers or several other businesses as in a commercial market. Defense contractors — even small ones — are weighed down by armies of clerks required to answer the millions of queries from the Pentagon.⁸⁷ Highly focused on costly quality and precision oriented production of a few units, the defense industry cannot easily engage in cost efficient commercial production of many units.

The aerospace industry created by the Cold War economy is highly oligopolistic. It is dominated by a few dozen prime contractors. Military research, development and production work is performed almost exclusively in separate defense divisions of large firms or by entire firms. Some defense contracts are sole-source. Sole source contract consist of a lone firm fulfilling the entire supply of a single product. The B-2 Stealth Bomber was built exclusively by Northrop. Military work is the only option for the few dozen firms that supply the United States with aerospace hardware because of their excessive dependence on government contracts. The government is also dependent on certain prime contractor's survival. General Dynamics produces the M-1 tank and the Trident submarine. If the United States believes these weapons systems are vital to national security, they must ensure the continued success of General Dynamics and other contractors that produce vital defense systems. Contractors are both guaranteed a market and a certain level of profit.

Subcontractors to these prime contractors are usually less dependent on the defense contracts handed down to them. Although, a slowdown for a prime contractor will have wide spread effects among the subcontractors that supply them. One example is the previously mentioned B-2 Stealth Bomber program although exclusively built by Northrop, has a subcontractor web that spans all fifty states. MX missile production was also arranged so that some component of their production took place in every state in the Union.⁸⁸

Other firms that do not directly fulfill military contracts are dependent on supporting subcontractors, their workers, and the needs of military personal stationed on the various military bases throughout the country. Each of these factors becomes an obstacle to a defense industry shift to commercial markets.

Defense contractors also operate in a non-competitive environment due to the "follow-on imperative" — a system of giving defense contractors turns in producing new weapon systems. The Pentagon uses this system of spreading around contracts to ensure the survival and vigor of the few defense contractors that supply most of their needs.⁸⁹ Consequently, a defense contractor that is next in line may receive a contract though it offers a more costly system than another company. The non-competitive environment has limited the defense contractors' development of management expertise in long-range financial planning.⁹⁰ In a commercial market there will be no guarantees of survival or vigor from the client.

Although the expected cuts are at first startling when compared with the peak spending of the 1980s, and conversion to a civilian market seems an insurmountable task, now is not the time for defense contractors to panic. Murray Weidenbaum, in a speech delivered to the Western Economic Association on July 1, 1991 reminds that "the bottom is not about to fall out of the military market, but a period of severe belt tightening has arrived. The defense industry has continued to steadily increase its capacity to produce weapons in spite of a 50 percent decrease in the procurement budget since 1985.⁹¹ The defense industry now has a tremendous overcapacity. Weidenbaum goes on to explain that the most likely outcome of belt tightening "is a substantial decline in the overall volume of defense business for the early 1990s, but with defense spending remaining high by historical standards."⁹² Defense contractors will survive but will be forced to downsize, diversify, increased lobbying efforts, expand foreign weapons markets and engage in mergers to solidify their product domestic markets.

The obstacle to conversion strategy comes if these short-term reactionary strategies are relied upon exclusively. Examples of successful conversions for large defense contractors are few and they are decades in the making. They are also wildly successful when they work. Successes include General Electric's commercial satellite business, TRW's entrance into information services and new car technologies, and Boeing's continued expansion of its commercial airline business. Conversion is a long term strategy not a reactionary strategy. Reactionary strategy options will allow large

defense contractors time and relieve some immediate financial pressures. Time and space that should be devoted to some long term planning to meet America's post-Cold War needs.

3.3 Labor Challenges

The reduction in employment seem to have progressed even more quickly than the cuts in the defense budget. Between 1989 and 1993, 440,000 defense industry workers were laid off, 300,000 soldiers, sailors, and fliers were mustered out of service, and 100,000 civilian Defense Department employees lost their jobs.⁹³ The Bureau of Labor Statistics expects a reduction of an additional two million jobs between 1993 and 1998.⁹⁴ The aerospace industry expects that a drop in aircraft procurement over the last four years will have caused a drop of one third in the aircraft work force or 165,000 jobs by the end of 1993.⁹⁵ Yudken and Markusen predict that "as many as one million civilians workers could lose their defense-related jobs between 1989 and 1995, including 830,000 in the private sector."⁹⁶ They go on to provide a break down of job losses by industry,

In communications equipment, employment is predicted to decline from 349,600 in 1988 to 213,400 in 1994; in guided missiles, from 134,900 to 105,000 and in shipbuilding, from 102,300 to 61,700. Add to that the 320,000 to 550,000 active duty military and Department of Defense personal who will be shed . . .

⁹⁷

Sharpening the torment of unemployed defense workers is the prospect of not finding work for months even years or being forced to tolerate lower paying jobs with

fewer benefits. Solidarity the monthly publication of the United Auto Workers (UAW) cites the plight of laid-off aerospace workers from McDonnell Douglas' St. Louis plant. After a year, 44 percent were still out of work and those that did find work were working for 70 to 85 percent of their previous wages. Many workers were no longer covered by health insurance.⁹⁸ The same is true of Connecticut's Electric Boat workers many laid off from the defense industry will find their way into Connecticut's second leading industry tourism and be forced to take lower paying casino jobs.⁹⁹

Job loss is not limited to those directly involved in the defense industry. A ripple effect from prime contractor layoffs could sweep away several hundred thousand nondefense jobs.¹⁰⁰ Dumas explains one way this ripple effect of prime contractor layoffs will extend job loss beyond military firms,

Not only would those workers laid off from their jobs in military industry suffer, but their loss of income would lead to a cutback in their consumer spending that would also generate further layoffs in industries supplying consumer goods.¹⁰¹

The often overlooked smaller service firms and suppliers are also feeling cuts in the defense budget. Small service firms and suppliers, unlike prime contractors or communities, do not have high priced lobbyists or influential politicians to defend their interests. The Bureau of Labor Statistics estimates that about 286,000 service jobs and 139,000 retail and wholesale trade jobs will be lost in the next five years. Labor Department experts estimate that manufacturing will lose 594,000 jobs in the next five years. Also disappearing are jobs for semiskilled laborers. In 1987 the defense sector

provided 890,000 semiskilled jobs by 1997 this number will have fallen to 437,000 according to the Bureau of Labor Statistics.¹⁰²

These often overlooked workers do have an advantage over highly trained or those more closely aligned with defense production. Their skills are more easily transferred to the civilian marketplace. Landscaping firms for instance that lose maintenance contracts due to military base closing will preform the same service but for civilian customers. Wholesalers and retailers that provide disposable diapers for resale at commissaries to troops families will sell the very same product to civilians.

Unfortunately, the skills of those unemployed workers, engineers, and managers directly involved in defense production are difficult to apply to the civilian marketplace. Those involved in research and development are also in for a difficult time of adjustment. Defense workers generally are highly skilled, older, and more highly paid.¹⁰³ The most difficult adjustment in the 1990s is for the large number of engineers that will be laid off. The Institute of Electrical and Electronics Engineers predicts that 55,000 defense industry engineers could lose their jobs by 1995.¹⁰⁴

3.4 Communities

The true severity of the problem becomes apparent when viewed from the perspective of defense dependent regions. Areas where the military industrial complex and military installations are concentrated will be exceptionally hard hit by a post-Cold War military build down. The Pentagon buys 59% of its arsenal from just ten states:

California, Texas, New York, Virginia, Massachusetts, Ohio, Pennsylvania, Florida, Connecticut, and New Jersey.¹⁰⁵

Regional problems will also be greatly amplified by the very expensive, highly automated, and technically advanced nature unique to the modern Cold War military arsenal and the current economic recession. Regional areas allowed to decay economically as cutbacks in military spending occur will leave those individuals unable or unwilling to migrate to become isolated pockets of unemployed and underemployed workers. Combined with facilities, equipment and land that are being under used or abandoned these labor problems could undermine the entire workings of the defense dependent community. Many pockets of economic hardship and capacity underutilization throughout the country may develop as the build down commences. The considerable public infrastructure, including housing, highways and schools built in communities which are predominantly military oriented could become idle during a major build down.¹⁰⁶ Yet, on average the Nation is in desperate need of these facilities. Communities that become the destination of the displaced defense worker's migration likely will experience overuse and congestion of its infrastructure, adding to the overall inefficiency of created.

3.5 Base Closing

Like most other conversion in the long-term a military base closing is beneficial to the community. According to the Office of Economic Adjustment, the lead

Department of Defense agency for helping communities adjust, more than 90 percent of base conversions have been successful.¹⁰⁷ During the 29 years between 1961 and 1990, 93,424 civilian Department of Defence and contractor jobs were lost but they were replaced by 158,104 civilian jobs on former defense facilities.¹⁰⁸ The challenge comes in the transition period between the communities military dependence and the reuse of the facility for civilian uses.

For most communities the immediate result of a base closure is a decline in population, a loss of jobs and income, and a reduction of tax revenues. The base closure presents immediate planning challenges. Comprehensive plans and zoning ordinances must often be altered to allow integration of a large parcel of land with existing facilities which could include docks, air fields, various structures, and a variety of transportational and infrastructural capabilities.

Complicating the reuse of these facilities is the difficult problem of often dangerous pollution. The Department of Defense has identified over 18,000 sites with potential contamination.¹⁰⁹ The pollution problems include "everything from unexploded ordnance to leaky underground tanks and massive toxic landfills."¹¹⁰ Other common pollutants include solvents and fuels. A further complication comes in the form of regulatory issues of preparing an Environmental Impact Statement (EIS) governed by the National Environmental Policy Act (NEPA) and conformity requirements governed by the Clean Air Act.¹¹¹ As more time passes environmental cleanup costs continue to rise for example the Department of Defense in 1988 estimated

that it would cost \$11 million to clean Pease Air Force Base which closed in March 1991. By December 1992 the estimated cost of cleanup had risen to \$114 million.

Not all base conversions go well. Many bases are in bad locations for civilian reuse. Infighting within the community or lack of broad base of support within the community retard conversion efforts.¹¹² In spite of these problems base closings are less challenging for the community than most other conversion problems because of their very precise focus, aid from the state and federal governments, and the communities level of control over the situation.

3.6 Conclusion

The many challenges of converting the defense economy to a peace economy need to be overcome in order to avoid a continuation of the many hardships that reductions in the defense spending are causing. Essential participants in the conversion process, including managers of defense firms, laborer, and community leaders, will likely become reluctant or even hostile to conversion strategies should peace becomes synonymous with hardship. Peace should not mean unemployment and crumbling communities. Steps need to be taken at all levels to ease the transition for those negatively effected by the defense drawdown. Transition assistance should then be followed by the pursuit long term conversion strategies at both the macroeconomic and microeconomic levels.

Chapter Four

Adjustment Strategies and New Directions

4.1 Overall Goals of the Conceptual Plan

- **Suggest two types of post-Cold War transition strategies for firms, communities, and individuals. (1) Survival strategies to be used immediately to adjust to the sudden changes in defense spending in the post-Cold War period. (2) Bridge strategies such as diversification and spinoff that will be the precursors to long term conversion strategies.**
- **Suggest long-term and far-reaching conversion strategies to enable firms, communities, and individuals to move toward a new set of national priorities chosen by American society.**

Conceptual Plan for Adjustment

The conceptual plan for a post-Cold War society can be summarized into a pair of ends: (1) to ease the post-Cold War transition for firms, communities, and individuals (2) Convert resources and technologies once devoted to fighting the Cold

War to fulfilling a new set of national priorities. The plan will present two sets of options. Transition oriented options and a second set for a post-Cold War policy focusing on peacetime needs of society — the conversion oriented options. The two sets of options will be divided into four sections offering options for the Nation, firms, communities, and individuals.

Transition Options

Transition options will provide time for conversion options to be put in place, prevent further damage, and lead to solutions. Many of these transition options will have painful consequences. The duration of survival oriented transition options use will hinge on how quickly conversion options can be implemented. Many transition options are both quickly workable and lead toward long term solutions. Defense firms selling to other more civilian oriented government agencies are conversion related transition options. The success of conversion oriented options hinge on United States domestic and international promotion of peaceful undertakings such as mass transportation, education, alleviation of human suffering, and environmental protection. The wide promotion of these peaceful undertakings will help create markets for the products and technologies of conversion.

Survival

Initially the actions defense dependent individuals and organizations are forced take in order to survive will be necessarily self-serving. The adjustment concerns of other defense dependant entities will have to be secondary to their own needs. An example of this is the common situation of a large defense contractor laying off many workers to reduce overcapacity in response to reduced procurement by the Pentagon. Such layoffs will preserve the firm's critical mass and thus ensure its own short-term survival but the needs of the employees and surrounding community are neglected. Employees also could pursue self-serving strategies such as demanding large defense firms to engage in conversion strategies that are not profitable in order to preserve their employment. Communities and defense dependent employees seek continued contracts for weapon systems that are no longer necessary to America's national security so that funds will continue to flow into their community and jobs will be preserved.

Fragments of Cold War policy inevitably will linger for a time along with accompanying painful adjustments and reactionary survival strategies such as layoffs and abandonment of facilities. This is to be expected as any truly significant change is accompanied by a painful, yet essential, period of transition. Adolescence is an example of this period of painful transition we are all familiar with during our own human development. The painful transition period is concluded when a goal is identified and then realized.

Conversion is not one of these reactionary survival strategies for the painful transition period. It is a means for identifying and realizing the final goal of peace and prosperity and putting a welcome end to the reactionary period. The danger is that the painful transition period will be allowed to linger on indefinitely. The longer defense dependent communities are allowed to experience unemployment, factories are abandoned and newly completed infrastructure is allowed to sit idle the more difficult it will become to reverse their decline.

Conversion Strategies

As stated earlier the overriding goal for conversion strategy should be to preserve national security in this time of many scattered regional conflicts while redirecting newly liberated resources toward pressing societal needs. The conceptual plan presented here will facilitate this overriding goal by presenting strategy options to be pursued by planners and economic conversion advocates. Five basic steps apply to any firm, community, or to a lesser degree individuals wanting to engage in defense conversion: (1) build a coalition, (2) take stock of entity's present condition, (3) identify alternatives (4) implement the chosen alternatives, (5) evaluate success of chosen alternative.

The options of each defense firm, each defense dependent community, and each individual that owed their livelihood to the fighting of the Cold War will be dictated by the degree to which America shifts its allocation of resources away from

military pursuits and toward answering pressing societal needs. Military contractors, defense dependent communities, and employees will be forced to fend for themselves while America continues to grasp at the last fragments of fighting the Cold War and Cold War policies. In the absence of new national priorities to guide the conversion of American society, those formally dependent on fighting the Cold War will be forced to continue to employ desperate means to ensure their own survival now that the Cold War has ended. Without new priorities some transition strategies will fail. A program such as job retraining can only be effective if opportunities for reemployment exist. Retraining a dislocated defense employee for a new position that does not exist will only result in a more highly trained unemployed person.

The successful conversion strategies are intricately linked with the creation of a new set national priorities that will replace fighting the Cold War. A national goal of a safe living environment for everyone — both organic and social — will lead to a rededication of material and intellectual resources to the development of new environmental technologies, social programs and advanced transportation systems. Realization of new national priorities will create new jobs that require new employees with fresh skills. Some of those employees should be retrained former defense employees. Development of new national priorities will also help focus national programs and allow transition strategies to evolve into conversion strategies.

4.2 American Society

- **Continue to Cut Defense Spending.**

Sustained reductions in defense spending are crucial to continued successful conversion efforts. Without them resources will not be liberated to be used for conversion. Defense spending will not need to fill the role of employment program of federal aid to communities instead it will fill its intended purpose providing for national security.

The first and most important change must come in the perception of American society. Both American policy makers and the American public itself must realize the Cold War is over and more importantly the time of prosperity it brought to so many firms, communities and individuals in the last four decades has also ended. After having won the Cold War United States policy makers need to address the new and different post-Cold War needs of the United States. Especially in the light of continued domestic decay a continued investment in defense at Cold War levels would be like buying a state of the art alarm system for a house whose roof is falling in.¹¹³

Nuclear powers such as China and Russia will require 10 years to organize and buildup a menacing threat to the United States.¹¹⁴ We will certainly have a chance to engage in our own buildup if necessary. It follows that the United States need not maintain military spending at Cold War levels and may continue to cut the defense budget while still maintaining strong national security.

- **American society should aid those displaced by the end of the Cold War.**

Dislocated defense dependent firms, communities and workers are not the only groups suffering in today's economy. The question then arises, "Why should defense dependent firms, communities and workers receive special treatment from the government?" Tremendous public effort and investment went into creating, building, training and educating the firms, communities and workers that help fight the Cold War. The Cold War is over but in its absence the products of America's Cold War effort sit under used or idle. The plight of the defense worker was created by government policies, not by normal market forces.¹¹⁵ America should take responsibility for aiding the transition of defense dependent firms, communities and workers because America created the defense industry and it is responsible for its decline.

- **Reorganize Aid.**

All federal and local programs that strive to aid the transition of defense dependent individuals, businesses and communities should be reevaluated by a federal agency outside of the Department of Defense. An agency outside of the DOD will ensure a complete break from a military agenda. It will emphasize that converted resources will not soon return to military purposes.

Programs that duplicate their efforts or seek contradictory ends should be reorganized for the most effective use of national resources. A successful effort to develop a national coalition and identify new national priorities will help give direction to the review and reorganization of transition and conversion programs.

- **Set New Priorities.**

Three overall national priorities will help direct the choice of individual new directions: (1) economic stability, (2) public health and education, (3) safe environment.¹¹⁶

Economic Stability

- Advanced computer aided manufacturing systems
- Rebuild and repair America's failing infrastructure
- "The design and development of a national or transnational grid for the electronic transmission, processing, storage, and retrieval of information. . ."¹¹⁷
- Provide assistance to firms attempting to regain a share of markets for consumer goods and production equipment lost to foreign competition.

Public Health and Education

- Improved science and mathematics education using skills of dislocated scientists and engineers from the defense industry
- An increased focus on general funding for education

- Provide fellowships to defense oriented scientists, engineers to update knowledge and skills related to new peaceful national priorities.
- Provide retraining for skilled workers to fill newly created civilian jobs in the peaceful economy.
- Use advanced surveillance and security technologies developed for the military to aid in law enforcement and airport security.
- Develop new medical care technologies

Safe Environment for Everyone

- Develop hazardous waste clean-up techniques
- Employ dislocated workers in the huge task of cleaning up abandoned military bases and facilities
- Develop new pollution prevention technologies
- Develop new energy sources and conservation technologies

The above individual strategies represent only a tiny portion of possible uses for the human and technological resources liberated by the end of the Cold War. Time and money are both in short supply in communities that would like to pursue any of these strategies. Communities need aid to make the initial shock of defense cuts less acute and seed money to attract far sighted entrepreneur to begin conversion projects.

Bottom Line for National Policy

- **Continue to Cut Defense Spending**
- **Provide a reorganized program of aid to communities firms and individuals (See Appendix A).**
- **To ensure the successful conversion of defense firms America must assure an effective demand for new products with (1) Establish national goals. (2) Demonstrate a steady commitment to adequate funding. (3) Provide contracts of adequate size and duration to replace reduced military contracts.**

4.3 Defense Dependent Firms

Prime Contractors

Prime contractors face several possible market settings in the wake of the Cold War. They also have several options to cope with the different respective eventualities. Conversion, unfortunately, is the least likely response if Cold War priorities are allowed to linger. The individual transition strategies given have three main thrusts (1) Slow reductions in the United States defense budgets to gain time for other adjustment strategies. (2) Reduce overcapacity to meet shrinking procurement demands. (3) Find new markets for weapons and military technology both abroad and in new domestic markets. The options include downsizing, increased sales in foreign markets, consolidation, diversification, maintenance, modernization and upgrades, and seeking non-defense government contracts.

Significance of prime contractors survival. The shrinking defense budget and the resulting reduction in procurement has resulted in a production overcapacity. Diminishing this overcapacity is crucial to the prime contractors survival and to preserving profits for the shareholders. The survival of these prime contractors critical to the preservation of America's defense industrial capacity and consequently the national security of the United States. Major defense contractor's survival is also integral to the vitality of the surrounding defense dependent communities. Major contractors are a source of both jobs and technologies. In the light of defense contractors importance to every level of American society it must still be remembered that defense companies are commercial businesses who's primary responsibility is to their shareholders.

- **Lobby for procurement of firms weapon systems.**

Lobbying is a strategy used to ensure future weapons procurement business by promoting the firms weapon systems. Lobbying to slow reductions in defense spending is contradictory to a final goal of conversion to a peace economy. Lobbying is a reactionary survival strategy and consequently self serving at the expense of the societies ultimate goal of conversion. It is used to fight defense cut-backs every step of the way and direct remaining defense spending toward the lobbying firm's weapon systems. Major defense businesses will increase full-time professional lobbying staffs as Grumman Corporation did and other firms such as

General Dynamics have gone as far as to move their corporate headquarters to Washington to be nearer decision makers.¹¹⁸

- **Downsize the firm to meet reduced procurement needs.**

The goal of downsizing is to reduce overcapacity and to shrink the firm down to a smaller core defense business. Reduction in size and greater focus on core defense is accomplished by divesting the firm of divisions not crucial to the chosen core defense business. Production employees and layers of middle management identified as unnecessary are removed. The hope is that the firm will maintain its core capacities while shrinking radically in size. Downsizing will result in the gradual layoff of many workers but the failure of a major contractor will result in the, far more traumatic, sudden loss of all jobs at that firm or division. Downsizing will also consist of the abandonment of property and facilities, the release of some suppliers and release of subcontractors so that work can be done in house. Even the best-executed downsizing creates tremendous anxiety and loss of productivity. Mitchell Marks, director of Delta Consulting Group in New York City says, "It's a complete disruption to the work force. It turns a company upside down."¹¹⁹

- **Consolidate with and acquire other defense firms.**

The shrinking defense business can support a fewer total number firms. According to a forecast by the consulting firm of Booz-Allen & Hamilton 75 to 80%

of current U.S. defense contractors will be swallowed up by more aggressive industry leaders or simply exit the market altogether between 1993 and 1998.¹²⁰ Demand for each individual product, such as strategic fighter aircraft, are also able to support fewer individual firms. The defense business base will shrink still further as backlogged orders are filled. Large-scale mergers and acquisitions correlate well with downsizing of the defense firm for eliminating the overcapacity that exists within the defense industry. The main thrust of this strategy is to maintain a critical mass in specialized niches in which the individual firm is strongest.

Acquisitions allow excess production capacity within the industry to be consolidated or removed. An example of this strategy is Martin Marietta Corporation planned acquisition of Grumman Corporation.¹²¹ This acquisition will allow Martin Marietta to eliminate a major competitor and its production capacity from the market. After repeated unsuccessful efforts to purchase Lockheed's and others military aircraft operations General Dynamics Corporation sale of its F-16 fighter division to Lockheed Corporation allowed it to concentrate on its strength as sole source producer of nuclear submarines and main battle tanks.

- **Expand international arms and military technology sales.**

The United States has emerged as the worlds dominant arms supplier.¹²² According to figures compiled by the Stockholm International Peace Research Institute (SIPRI), in 1992 the United States delivered more than 45 percent of all

major combat systems sold worldwide, a level more than four times higher than that of its two closest competitors, Russia and Germany.¹²³ America's former main competitor for international arms export the Soviet Union disappeared with the end of the Cold War. Virtually every big defense company wants to increase its military sales to foreign buyers.¹²⁴ Viewed strictly from a prime contractors perspective international arms sales is an excellent option. It is a powerful means for adjustment to a decreased domestic weapons and military technology procurement. Increased international arms sales could replace lost domestic sales by increasing the potential market for United States arms and military technology. By arming the rest of the world, the defense industry could in turn oblige the United States to increase its own arms procurement to preserve both its own material national security and to limit regional conflicts between well armed combatants.

Two major draw backs to this strategy exist (1) the international market for arms has experienced a steep decline since the end of the Cold War while a military production overcapacity exists in many countries.¹²⁵ (2) Additional arming of the world with American weapons will intensify any regional conflicts making them more difficult to control and causing additional loss of life. An increased level of American military technology available world wide will increase the chance that those technology will fall into the hands of irresponsible governments or dangerous terrorist nations that are hostile to the United States.

- **Expand sales to civilian government agencies.**

Sales to civilian government agencies is a strategy that will work in both transition strategies and as a bridge to conversion strategies. As a transition strategy sales to civilian agencies works to expand markets for the defense contractor. Major defense contractors intimate familiarity with governments procedures make them especially qualified to fill contracts for civilian government agencies. Agencies such as NASA, DOE, USDOT, and the FAA who's needs include high technology and aeronautical equipment will be easiest to supply initially but contracts could spread to the more peacefully oriented FDA or EPA.

Two especially successful examples of firms that have followed this strategy are Grumman Corporation and most especially Rockwell Corporation. A Grumman Corporation subsidiary, which makes the Long Life Vehicle, won the contract to make the new Postal Service mail delivery vehicle in 1986. They will have made 99,150 vehicles under the contract, producing more than 20,000 a year using a General Motors chassis. Sales in 1990 equalled \$391 million.¹²⁶

Transition strategies successful. Since 1986 Rockwell international Corp. has seen its aerospace and defence sales as a percentage of total revenues dwindle to about 34% from 60%. Defense sales as a percentage of total revenues have plunged from 50% to about 19%. Rockwell is NASA's number one contractor but their primary business thrust is in automotive, telecommunications and industrial

automation.¹²⁷ Rockwell International Corp. reported that net income in its fiscal second quarter, ending March 31, 1994 ,increased 13% to \$154.7 million. Earnings per share were 70 cents, up 11% from last year's 63 cents marking the fifth consecutive quarter Rockwell has recorded double-digit earnings per share increase.¹²⁸

Some major defense contractors are now making most of their profit from commercial endeavors. TRW, Inc. Reported a 25.4% increase in first quarter earnings this year (1994) primarily due to continuing growth of the company's air bag business and lower interest expenses. The most encouraging news comes from Raytheon Co. which earned a record \$169.3 million or \$1.25 a share in the first Quarter of this year. The performance was led by its commercial business's record sales and profits. Corporate Jets contributed to Raytheon's record sales for the Aircraft Products segment. Corporate Jet was acquired in August of 1993. Raytheon's electromagnetic Systems Division was chosen to lead a \$18.4 million defense conversion project to develop commercial uses for military telecommunications technology.¹²⁹ Raytheon used downsizing, acquisition and expansion of commercial segments to increase profits and then used some of those profits to pursue conversion strategies. Raytheon is an example of how transition strategies can lead into conversion strategies with profit as the motive and the result. The key to enkindling transition to commercial markets and true conversion efforts

among defense contractors is to show that it can be profitable for the firm and the share holders.

Medium Size and Smaller Firms.

Medium-size and smaller firms are key participants in defense production. The sum of prime contract awards and subcontracts from large firms to small was on the order of \$46 to \$48 billion per year in five years 1986-90, and amounted to 35% to 37% of awards to U.S. business firms.¹³⁰ Often these firms have little experience in commercial production and marketing but many are also involved in some amount of commercial production. Smaller companies also rarely have separate defense divisions although they do keep the civilian and defense accounts separate.¹³¹

Options

- Build on any previous experience in civilian commercial markets.

For many medium-size and smaller firm's managers, production workers and equipment occasionally even the product itself is the same for defense clients as it is for civilian clients. This is frequently the case for service firms. Defense dependent firms have many of the same needs as civilian commercial firms. The defense sector also needs food, stationary, lawn care, gasoline, and all the other goods and

services required by non-defense consumers.¹³² Many service firms that have contracts with defense firms or military bases provide services identical to their civilian commercial counterparts.

Some medium-size and smaller firm's familiarity with commercial production make it more feasible for these firms to enter commercial markets than their larger defense dependent counterparts. Defense dependent medium size and smaller firms have the advantage of possessing skills that are more easily transferable to commercial markets than their large firm counterparts in the defense business. High-tech production and quality inspection equipment bought for defense work has made medium size and smaller firms more versatile and competitive in new high technology commercial markets.¹³³ It is still not necessarily easy for these firms to enter commercial markets but help is available. It requires advanced planning, retraining of managers and engineers and retooling for new products.

- **Seek federal and local aid in market research, marketing, and gain access civilian financial markets.**

Medium size and smaller firms need assistance in three major areas to enter or further penetrate commercial markets: (1) market research, (2) marketing strategies, (3) access to financial assistance and commercial loans. A variety of programs providing technical assistance and loans are available from the Small Business Administration (SBA). The SBA can be contacted by writing to the Small

Business Administration, 409 3rd St., SW, Washington DC 20416 or calling at (202) 205-6665. A list of federal programs is available. It can be obtained by requesting a copy of *Directory of Federal Reinvestment and Transition Initiatives for People, Business, and Communities* from the Office of the Under Secretary of Defense (Acquisitions), The Pentagon, Washington D.C. 20301, phone (703) 695-1470.

Programs are also available on a regional level. In New England the New England Defense Adjustment Project (NEDAP) is creating a test model for multi-state collaboration in defense adjustment. They will focus on expanding the market for environmental and marine technology for Southern New England Firms. The Rhode Island Small Business Development Center (RISBDC) at Bryant College, 1150 Douglas Pike, Smithfield, RI 02917-1282, has also produced a very detailed list of Financing Programs available to small businesses. It is up to the firm that finds itself vulnerable to defense cut backs to seek out the wide variety of technical and financial assistance available.

- **Take part to the extent that their size will allow in the large firm strategies.**

Medium size and smaller firms are often subcontractors to larger firms. They should keep up to date on the steps that larger firms take and then anticipate and adjust to serving larger firms predicted future requirements. Medium size firms may engage in very same strategies that larger firms use.

4.5 Defense Dependent Communities

Significance of Defense Dependent Community's Decay.

The decline of defense dependent communities will have two detrimental effects. First it will lead to national economic inefficiency and second it will lead to continuously worsening hardships for the remaining citizens of the community.

Buildings are left behind as firms close or relocate. The inefficiency comes in two forms. The decaying community is left with excess capacity. Houses are left behind by dislocated workers and their families as they are forced to move to find new employment. The local infrastructure, such as hospitals schools and roads, becomes under used and under funded as the population they were designed to serve dwindles. Communities that receive the sudden influx of firms and people are left scrambling to upgrade their infrastructure to meet the sudden demand. They are duplicating the infrastructure that already exists in the abandoned community.

The abandoned communities and their remaining residents face infrastructural decay as funds from the small population and business community are unable to support the existing facilities. The remaining worker will also be forced to take lower paying service jobs as smaller manufactures and former subcontractors fail due to the loss of defense contracts. Less skilled workers and decaying infrastructure make the community continually less desirable for new businesses relocations. As more firms move and are not replaced it becomes less likely they will ever be replaced.

Options

- **Build a Defense Conversion Coalition.**

Building a Defense Conversion Coalition may seem at first glance an insurmountable task. Contractors, the community, and individuals are scrambling to regroup now that the flow of defense dollars has begun to dry up. They should be eager to participate in shaping the future of the community and protecting their interest in that future.

A firm grasp of how each member of the coalition can benefit is essential to creating involvement in the conversion planning process. The communities conversion plan must have as its priorities wealth for contractors and community and employment for individuals. Every potential member the coalition should be eager to help meet these new priorities. The task of this coalition is two fold first is to coordinate the transition effort and second is to put forward a new set of priorities and then bring them to fruition.

- **Determine defense dependence and vulnerability.**

Once the ax has fallen its to late to plan effectively. Time becomes a scarce resource. The community needs to take a proactive approach. Getting a firm grasp of local economic conditions is a crucial first step. Hopefully this step can be accomplished long before the loss or realignment of a military base or major defense contractor. Overall health and diversity of the local economy can shield a

community from major hardship caused by defense cutbacks. Diversity and defense dependence of the local economy is often difficult to determine but in Rhode Island a survey of Rhode Island employers was taken and the results published in a report entitled *Focusing On The Future* by the Rhode Island Defense Economic Adjustment Project. A given community is able to determine the level of dependence for the employers in their area. A defense cut back will be more harmful if the communities economy is already decline due to other factors or if the economy is healthy but overly dependent on defense business for that well-being. The dependence of the individual firms is also important. A less defense dependent firm will have a milder response to cuts. The health of the surrounding region is also significant. A community located in a growing region is more likely to have a firm expand into their area before significant decay takes place.

- **Determine the type of cuts that are likely to occur.**

The size of the defense cut and its location also will effect the response of the community. A large cut relative to the size of the local economy that occurs quickly and without warning will be much more harmful than a small gradual cut with plenty of advanced warning.

- **Seek assistance at the first sign of trouble.**

In the face of imminent defense cutbacks, immediate pursuit of economic development and emergency relief assistance may be critical for a community which has determined itself to be vulnerable. During the period of time between the announcement of the cutback and delivery of the assistance the community is on its own and deterioration is most likely to occur.

The federal government has several offices and programs that provide aid to communities impacted by base closing and defense industry cutbacks. The major federal agencies that can help communities are: The Department of Defense, Office of economic Adjustment (OEA) and Environmental Security (ES); The Department of Commerce, Economic Development Administration (EDA); Department of Housing and Urban Development (HUD); Department of Transportation, Federal Aviation Administration (FAA); Department of Agriculture, Rural Development Administration (RDA). A complete listing of programs with detailed explanations, requirements, and points of contact provided to communities is available. It can be obtained by requesting a copy of *Directory of Federal Reinvestment and Transition Initiatives for People, Business, and Communities* from the Office of the Under Secretary of Defense (Acquisitions), The Pentagon, Washington D.C. 20301, (703) 695-1470. This directory is vital for any community leader or business owner in a vulnerable community. Another report that may be of interest to policy makers is the Congressional Research Service Report for Congress *Federal Economic*

Adjustment and Conversion Assistance to Communities, Workers and Businesses

Affected by Defense Cuts by Edward Knight. This report examines some of the legislative history of adjustment and conversion programs. It also looks at the thinking behind formation of the programs. It is available through Congressional Representatives's offices.

- **Plan.**

The first step is to (1) build a broad base coalition. Community leader must try to bring all the key players as close together as possible so that the community can speak with one voice. Next the coalition should (2) identify the communities assets and (3) create a vision for the future. Finally the coalition needs to (4) select strategies and (5) an implementation plan and schedule.

- **Find new industry.**

An obvious solution to losing a major defense industry is to attract another industry. A community that has just lost a major defense industry must be cautious in the methods it uses to entice the new industry into their community. Plant relocations and new openings are far fewer than the communities pursuing them. Also, economically distressed areas are not the only ones bidding for firm relocations.¹³⁴ Communities in a better economic shape can offer more to relocating firms forcing economically distressed communities to offer too many

incentives. Common devices such as lower business taxes, tax abatements, low-cost financing, free training, and free land and buildings can negate many of the advantages and benefits the community was hoping to gain. Engaging in bidding wars for firms can have an unexpected and even more terrible consequence. Firms already located in the community can demand a ransom of the same incentives just to stay in the community.

Instead of using costly "smoke stack chasing" devices a community that has recently lost a major defense industry can advertise the strengths they identified earlier in the process. Important strengths are access to markets, skilled workers, low labor costs and reliable infrastructure. The focus should be on a diversified business base with a focus on manufacturing. The focus should be on manufacturing due to the fact that each manufacturing job supports one to two non-manufacturing ones¹³⁵

- **Help resident businesses.**

Businesses that are already in the community can most quickly employ dislocated workers and supply much needed funds to the community with out the lag time associated with new industry or relocations. Communities should provide marketing and financial aid to firms indicated above. Very important is information on local demand for products not supplied locally such products could be supplied more cheaply by a local factory.

- **Reuse abandoned facilities.**

The most important factor, under the control of the community, for successful reuse of abandoned military bases and facilities is early community involvement. Like other conversion efforts the object of conversion must be allowed to remain idle for as short a time as possible. The community must form a coalition to prevent time consuming infighting as conversion efforts move forward. Finally as the community begins to act it must pursue two plans of action. (1) The community should work with political representatives to delay or prevent closing. A delay will provide time for conversion preparations. (2) The community should prepare and regularly update a base conversion plan to be immediately implemented if the base should be abandoned. Assistance with base conversion planning should have already been collected in the communities initial aid seeking process when vulnerability was discovered.

The Bottom Line for Communities

- **Start planning before the next defense cut occurs.**
- **Seek federal aid.**
- **Work with firms to create partnerships.**
- **Promote communities market strength and avoid costly "Smoke stack chasing techniques."**

4.5 Displaced Workers

Displaced workers fates are closely linked to the success of firms and communities in adjusting to defense reductions. Worker will find employment in communities with healthy and diversified business sector.

Options

- **Relocate.**

Displaced workers able to migrate to new locations where their skills can be immediately employed should so that they will remain idle for the shortest amount of time. Excessive labor migration does cause the development of idle infrastructure in the community of departure and over use in the destination but self-interest is the individuals prime concern in the transition period.

- **Seek financial assistance and retraining.**

Assistance is available from many sources. The former employer especially a large defense firm may have retraining programs for new positions within the firm or employment networks to aid in finding leads and training in job hunting skills. Beside the obvious unemployment benefits communities offer. Communities with excessive defense dependence may have special programs for dislocated defense workers. Individuals should take great care to use programs they are confident will

lead to new opportunities and waste time retraining for jobs that do not exist and are not likely to be created soon.

- **Join a variety conversion coalitions.**

The way in which an individual becomes involved in the adjustment process depends on their position in the community. Firms may have some form of "alternative use committee" to direct the firm into the future. Employees should seek out any opportunities that they are given or can create to help direct the future direction of the firm and offer their unique knowledge of the firms production processes and capacity to produce civilian products. In this way the individuals can advocate profitable conversion oriented options that may save their jobs and increase the value of their stock options in the company.

Individuals also should seek out local or national conversion coalitions (See Appendix B and C) or political action groups, even investment groups that focus on firms future oriented products. The individual can add knowledge, political legitimacy and clout to these groups. In this way the individual can influence decision makers both in all levels of government and with the decision makers within the firm.

Bottom Line for Individuals

- **Write personal letters, not a form letters, to your Senator and your Congressional Representative stating your support for Economic conversion.**
- **Learn as much as you can about the issue of conversion in order to make constructive suggestion to your firm and community leaders.**
- **Join alternative use committees at work and political action committees in your community to advocate conversion strategies.**

4.6 Summary and Conclusion

Summary

Post-Cold War defense economic adjustment will come in two forms. First transition strategies to ensure survival during change to a post-Cold War society. The transition strategies, ideally, will be followed by conversion strategies that will lead formally defense dependent entities in new directions toward their places within a prosperous and peacefully society.

America needs to maintain an adequate defense but the new external challenges to America's national security are different than those encountered during the Cold War and less expensive. A continued shift of national resources away from defense spending and toward more pressing domestic concerns will allow conversion effort to proceed more smoothly. The shift of resources should be made as painless as possible by reorganizing available adjustment and reinvestment aid programs. A

single point of contact should be established to direct those seeking aid to the correct agency. After having shifted the resources and eased the transition America finally must set new national priorities with a combined input and effort of firms, local communities, and individuals.

Defense dependent firms need to reduce the overcapacity that developed during the cold war and subsequently develop or expand existing civilian markets through allocating resources to research and development of conversion related technologies. Medium size and smaller firms should take advantage of federal programs to aid the development of new civilian products and markets. The lead of larger firms should also be followed as they enter new markets.

Defense dependent communities should create a coalition to aid in defense adjustment decisions. It should consist of local officials, business leaders and representatives of unions and other groups concerned with the adjustment issue. The coalition should first determine the communities vulnerabilities, strengths and the severity of expected defense cuts. Help should be sought in devising and executing an economic development action plan to expand existing industry, find new industries and reuse abandoned facilities.

Displaced workers fortunes are tied to their communities and firms. Individuals should first seek out any retraining or placement assistance offered by their former firm. Many firms are eager to give such assistance to establish themselves as a considerate employer which will in turn allow them to attract the

best people in the future. Assistance should also be sought from the local community, state and the federal governments. Communities at all level want to limit excessive migration and are again eager to help displaced workers.

Conclusion

To best use this conceptual plan it is important that the reader read the whole plan and not just the element that appears closest to defining the reader's role in the conversion process. Conversion must be a collaborative process between all involved entities if it is to be a true method of paradigmatic shift and not just a method of coping with the transition to a post-Cold War economy. It is important that each entity understand the needs of others involved in the conversion process. It is also crucial that each entity understand the reason behind the other's transition strategies. The responsibility of the federal government, defense dependent firms, communities and individuals goes beyond mere understanding of others priorities. Each entity must shape its strategy to best fit into a unified conversion effort. Individuals, for example who can recognizing that profit for the shareholders drives the decisions of the defense dependent firm will ensure that their recommendation for alternative products will be profitable for the firm and its shareholders. All of the entities must recognize the opportunities that new national priorities of rebuilding national infrastructure or improving education can bring for fulfilling their own goals. The federal government should both welcome and encourage input from

firms, local communities and individuals in choosing among the wide array of choices for a new national direction. Each reader of the plan should pay close attention to the appendices for specific models for action and a large number contacts that will be invaluable for planning and implementing strategies for adjustment to the post-Cold War society.

End Notes

1. Michael Wines, "Bush and Yeltsin declare formal end to cold war; agree to exchange visits," The New York Times, 2 February 1992, Sec: 1 p: 1.

2. Jerome B. Wiesner, Philip Morrison, and Kosta Tsips., "Ending the Overkill." The Bulletin of the Atomic Scientists 49 no. 2, (March 1993): 12. and Kaufmann, William W. and John d. Steinbruner., Decisions For Defense. Washington D.C.: The Brookings Institution, (1991), 72-74.

3. Alan Tonelson, "Superpower Without a Sword." Foreign Affairs, 72 no.3. (Summer 1993): 166-180.

4. U.S. Congress. House. Committee on Armed Services. Investigations Subcommittee. Defense Economic Adjustment and Conversation Program (Newport, R.I.). 102nd 1st Sess., 16 December 1991, 5.

5. Ann Markusen, Joel Yudken. Dismantling the Cold War Economy. (BasicBooks, 1992), 14-15.

6. Don E. Kash, Perpetual Innovation: The New World of Competition (New York: Basic Books, Inc., Publishers, 1989), 158.

7. Ann Markusen, Joel Yudken. Dismantling the Cold War Economy, pp. 170-182.

8. Michael G. Renner, "Conversion to a Peaceful Economy: Criteria, Objectives, and Constituencies," in Making Peace Possible: The Promise of Economic Conversion, ed. Lloyd J. Dumas and Marek Thee (New York: Pergamon Press, 1989), 38.

9. Lloyd J. Dumas and Marek Thee, ed., Making Peace Possible: The Promise of Economic Conversion, (New York: Pergamon Press, 1989), 12.

10. Joel Yudken, Technology Policy and Economic Conversion in the United States: Targeting National Needs for Economic Development(Piscataway: Center for Urban Policy Research, 1992), 20, 25.

11. Michael G. Renner, "Conversion to a Peaceful Economy: Criteria, Objectives, and Constituencies," in Making Peace Possible: The Promise of Economic Conversion, ed. Lloyd J. Dumas and Marek Thee (New York: Pergamon Press, 1989), 38.

12. Michael Renner, World Watch Paper 96 Swords into Plowshares: Converting to a Peace Economy (Worldwatch Institute, 1990), 8.

13. Michael Renner, "More than a Matter of Definition: Diversification, Spinoff, and Conversion." Chap. in Economic Adjustment after the Cold War: Strategies for Conversion. (Dartmouth: United Nations Institute for Disarmament Research, 1992), 25.

14. Michael Renner, "More than a Matter of Definition: Diversification, Spinoff, and Conversion." Chap. in Economic Adjustment after the Cold War: Strategies for Conversion, 34.

15. Betty G. Lall, John Tepper Marlin. Building a Peace Economy: Opportunities and Problems of Post-Cold War Defense Cuts. (Boulder: Westview Press, 1992), 6.

16. Yudken, Technology Policy and Economic Conversion in the United States: Targeting National Needs For Economic Development, 18, 32, 43.

17. Kenneth Geiser, "Converting Economic Conversion: An Argument for Building Broader Coalitions," in Economic Conversion: Revitalizing America's Economy, ed. Suzanne Gordon and Dave McFadden (Cambridge, Massachusetts: Ballinger Publishing Company, 1984), 175.

18. Renner, Michael. "More than a Matter of Definition: Diversification, Spinoff, and Conversion." Chap. in Economic Adjustment after the Cold War: Strategies for Conversion, 33.

19. Betty G. Lall, John Tepper Marlin. Building a Peace Economy: Opportunities and Problems of Post-Cold War Defense Cuts, 5.

20. Ibid., 7.

21. Melman, Seymour and Lloyd J. Dumas. "Bombs into Plowshares: Planning for Economic Conversion." The Nation, 250 no. 15 (16 April 1990): Cover, 522.

22. Lloyd J. Dumas, ed., The Political Economy of Arms Reduction: Reversing Economic Decay (Boulder: Westview Press, Inc., 1982), 27.

23. John Tepper Marlin, "Tell the Pentagon The Cold War Is Over." Challenge, (July/August 1992), 27.

24. Martha W. Gilliland, and others, " Conversion and the Defense Engineer," IEEE Spectrum (December 1992): 26.

25. Yudken, Technology Policy and Economic Conversion in the United States: Targeting National Needs for Economic Development, 23.

26. Congress, House, Committee on Banking, Finance and Urban Affairs, Economic Conversion, 100th Cong. 2nd Sess., 29 June 1988, 443.

27. Ibid., 26.

28. Lloyd J. Dumas and Marek Thee, ed., Making Peace Possible: The Promise of Economic Conversion, (New York: Pergamon Press, 1989), 7.

29. Marvin Waterstone and Andrew Kirby. "Escaping the Conceptual Box: Ideological and Economic Conversion" Chap. in The Pentagon and the Cities, ed. Andrew Kirby, 171-187. (Newbury Park: Sage Publications Inc., 1992), 178.

30. Robert A. Solo, Opportunity Knocks: American Economic Policy After Gorbachev (Armonk: M. E. Sharpe, Inc. 1991), 120.

31. John E. Ullmann, "Building a Peace Time Economy." Technology Review, 94 iss. 6 (1991): 58.

32. U.S. Congress, Office of Technology Assessment, After the Cold War: Living With Lower Defense Spending, OTA-ITE-524 (Washington, DC: U.S. Government Printing Office, February 1992): 7.

33. Robin Ranger, "After the Cold War: A Symposium on New Defense Priorities." Policy Review, Summer 1990, 11.

34. Peter G. Peterson and James K. Sebenius, "The Primacy of the Domestic Agenda," in Rethinking America's Security: Beyond Cold War to New World Order, ed. Graham Allison and Gregory F. Treverton (New York: W.W. Norton & Company, 1992) , 76.

35. Nancy Ettliger, "The Peace Dividend and Defense Conversion in the Context of Corporate Restructuring," Growth and Change 24 (Winter 1993): 110.

36. Jeff Faux, "Back to the Peace Dividend," The New York Times, 13 September 1991, OP-ED.

37. Miller, S.M.. "A Sea of Change Around the World." Social Policy, Spring 1990, 21.

38. Miller, S.M.. "A Sea of Change Around the World." Social Policy, Spring 1990, 26-28.

39. Lisa R. Peattie, "Economic Conversion as a Set of Organizing Ideas," in Making Peace Possible: The Promise of Economic Conversion, ed. Lloyd J. Dumas and Marek Thee (New York: Pergamon Press, 1989), 32.

40. 1961 - 1990, Planning Civilian Reuse of Former Military Bases, Summary of Completed Military Base Economic Adjustment Projects. Office of Economic Adjustment, Department of Defense, Washington, D.C., Spring 1990, 0.

41. Paul A. C. Koistinen, The Military-Industrial Complex: A historical Perspective (New York: Praeger Publishers, 1980) , 1.

42. U.S. Congress. House. Committee on Armed Services. Defense Policy Panel. Potential Threats to American security in the Post-Cold War Era. 101st Cong., 1st Sess., 10, 11, and 13 December 1991, 47.

43. Robert L. Borosage, "Disinvesting In America," The Nation vol. 257 no. 10 (October 4, 1993): 346.

44. Congress. House. Committee on Armed Services. Defense Policy Panel. Potential Threats to American security in the Post-Cold War Era. 101st Cong., 1st Sess., 10, 11, and 13 December 1991, 20-21.

45. Ibid. 23-31.

46. Alan Tonelson, "Superpower Without a Sword." Foreign Affairs, 72 no.3. (Summer 1993): 179.

47. Robert L. Borosage, "Disinvesting In America," The Nation vol. 257 no. 10 (October 4, 1993): 346.

48. Robert L. Borosage, "Time to Commit Politics." Social Policy, Spring 1990, 15.

49. Mark Levinson, "A Peace Dividend for the U.S. Economy?" Dissent, Spring 1990, 141.

50. Peter G. Peterson and James K. Sebenius, "The Primacy of the Domestic Agenda," in Rethinking America's Security: Beyond Cold War to New World Order, ed. Graham Allison and Gregory F. Treverton (New York: W.W. Norton & Company, 1992) , 66.

51. Peter G. Peterson and James K. Sebenius, "The Primacy of the Domestic Agenda," in Rethinking America's Security: Beyond Cold War to New World Order, ed. Graham Allison and Gregory F. Treverton (New York: W.W. Norton & Company, 1992) , 67.

52. Peter G. Peterson and James K. Sebenius, "The Primacy of the Domestic Agenda," in Rethinking America's Security: Beyond Cold War to New World Order, ed. Graham Allison and Gregory F. Treverton (New York: W.W. Norton & Company, 1992) , 68.

53. Congress. House. Committee on Armed Services. Investigations Subcommittee. Defense Economic Adjustment and Conversation Program (Newport, R.I.). 102nd 1st Sess., 16 December 1991, 1.

54. Seymour Melman and Lloyd J. Dumas, "Bombs into Plowshares: Planning for Economic Conversion." The Nation, 250 no. 15 (16 April 1990): Cover, 523-524.

55. Lloyd J. Dumas, ed., Making Peace Possible: The Promise of Economic Conversion, (New York: Pergamon Press, 1989), 4.

56. Lloyd J. Dumas, ed., The Political Economy of Arms Reduction: Reversing Economic Decay (Boulder: Westview Press, Inc., 1982), 1.

57. Lloyd J. Dumas, ed., Making Peace Possible: The Promise of Economic Conversion, (New York: Pergamon Press, 1989), 4.

58. Renner wwp 96 p.19-20.

59. Graham Allison and Gregory F. Treverton, "National Security Portfolio Review," chap. in Rethinking America's Security: Beyond Cold War to New World Order, (New York: W.W. Norton & Company, 1992) , 52.

60. Lloyd J. Dumas, ed., Making Peace Possible: The Promise of Economic Conversion, (New York: Pergamon Press, 1989), 6.

61. Robert L. Borosage, "Disinvesting In America," The Nation vol. 257 no. 10 (October 4, 1993): 346.

62. Nathan H. Mager, The Kondratieff Waves (New York: Praeger Publishers, 1987) , 182-183.

63. John Isaacs, "Bottoms up," The Bulletin of the Atomic Scientists vol. 49 no. 9 (November 1993) 12.

64. Ibid. 13.

65. This view of national security is loosely based on Renner's view of a peaceful economy. Michael G. Renner, "Conversion to a Peaceful Economy: Criteria, Objectives, and Constituencies," in Making Peace Possible: The Promise of Economic Conversion, ed. Lloyd J. Dumas and Marek Thee (New York: Pergamon Press, 1989), 38-40.

66. Christopher Layne and Benjamin Schwartz, "American Hegemony – Without an Enemy." Foreign Policy 92 (Fall 1993) 5-8.

67. Seymour Melman, "How the Military Economy Works: The Firm." Chap. in The Permanent War Economy: American Capitalism in Decline. New York: Simon and Schuster, inc. 1985, 105.

68. Congress. House. Committee on Armed Services. Defense Policy Panel. Potential Threats to American security in the Post-Cold War Era. 101st Cong., 1st Sess., 10, 11, and 13 December 1991, 21.

69. Caroline F. Ziemke, "Rethinking the "Mistakes" of the Past: History's Message to the Clinton Defense Department." The Washington Quarterly, 16 no. 2 (1993): 56.

70. U.S. Congress. House. Committee on Armed Services. Defense Policy Panel. Potential Threats to American security in the Post-Cold War Era. 101st Cong., 1st Sess., 10, 11, and 13 December 1991, 46.

71. Christopher Layne and Benjamin Schwartz, "American Hegemony – Without an Enemy." Foreign Policy 92 (Fall 1993), 5.

72. Ibid., 57.

73. Angelo M. Codeville and others, "After the Cold War: A Symposium on New Defense Priorities." Policy Review, Summer 1990, 6.

74. Lee Smith, "Can Defense Pain be Turned to Gain?" Fortune, 8 February 1993, 84.

75. Defense Reinvestment Taskforce, Office of the Under Secretary of Defense (Acquisition and Technology), A Directory of Federal Reinvestment and Transition Initiatives for People, Business, and Communities (Washington, D.C.: August 1993) v.

76. Office of the Under Secretary of Defense (Acquisition), A Directory of Federal Reinvestment and Transition initiatives for People, Business, and Communities, (August 1993): v.

77. "Still waiting for the bang." The Economist, 329 no.7831. (2 October 1993): 69.

78. Joel Yudken and Ann R. Markusen. The Labor Economics of Conversion: Prospects for Military-Dependent Engineers and Scientists. Piscataway, New Jersey: Center for Urban Policy Research, 1993, 1.

79. Lloyd J. Dumas, "Making Peace Possible: The Legislative Approach to Economic Conversion" Chap. in Economic Conversion: Revitalizing America's Economy Cambridge, Massachusetts: Ballinger Publishing Company (1991) 70.

80. Hugh G. Mosley, The Arms Race: Economic and Social Consequences (D.C. Heath and Company, 1985), 162.

81. Mosley 1985. 162.

82. Alan C. Garner, "The Effect of U.S. Defense Cuts on the Standard of Living." Economic Review, January/February 1991, 37.

83. Betty G. Lall and John Tepper Marlin. Building a Peace Economy: Opportunities and Problems of Post-Cold War Defense Cuts. (Boulder: Westview Press, 1992) 9.

84. Louis Uchitelle, "Arms Makers: Rather Fight Than Switch," The New York Times, 20 September 1992, Sec: C p: 6.

85. Gerald A. Johnston, "The U.S. Defense Industry: National Asset or an Anachronism?" Vital Speeches of the Day, LIX no. 9. (15 February 1993): 287.

86. Lee Smith, "Can Defense Pain be Turned to Gain?" Fortune, 8 February 1993, 85.

87. "Still waiting for the bang." The Economist, 329 no.7831. (2 October 1993): 69.

88. Lisa R. Peattie, "Economic Conversion as a Set of Organizing Ideas," in Making Peace Possible: The Promise of Economic Conversion, ed. Lloyd J. Dumas and Marek Thee (New York: Pergamon Press, 1989), 24.

89. Ann Markusen and Joel Yudken, Dismantling the Cold War Economy (BasicBooks, 1992), 88 - 89.

90. Nancy Ettliger, "The Peace Dividend and Defense Conversion in the Context of Corporate Restructuring," Growth and Change 24 (Winter 1993): 111.

91. George P. Psihas, "Maintaining the Defense Industrial Base: Evolving National Policies Place Defense in Great Jeopardy." Vital Speeches of the Day, LIX no. 6. (1 January 1993): 165.

92. Murray Weidenbaum, "The Future Of The U.S. Defense Industry," Vital Speeches of the Day, 57 no. 23. (15 September 1991): 723.

93. Lee Smith, "Can Defense Pain be Turned to Gain?" Fortune, 8 February 1993, 84.

94. "Big Guns Aren't Sole Casualties," Los Angeles Times, 23 May 1993, Sec: A p: 18 col: 1.

95. Joel Yudken and Ann R. Markusen. The Labor Economics of Conversion: Prospects for Military-Dependent Engineers and Scientists. Piscataway, New Jersey: Center for Urban Policy Research, 1993, 1.

96. Joel Yudken and Ann R. Markusen. The Labor Economics of Conversion: Prospects for Military-Dependent Engineers and Scientists. Piscataway, New Jersey: Center for Urban Policy Research, 1993, 28.

97. Joel Yudken and Ann R. Markusen. The Labor Economics of Conversion: Prospects for Military-Dependent Engineers and Scientists. Piscataway, New Jersey: Center for Urban Policy Research, 1993, 28.

98. "The Best Defense is a Good Conversion: Searching for Jobs in the Post Cold War Economy," Solidarity, September 1993, 10.

99. Lee Smith, "Can Defense Pain be Turned to Gain?" Fortune, 8 February 1993, 89.

100. Lee Smith, "Can Defense Pain be Turned to Gain?" Fortune, 8 February 1993, 84.

101. Lloyd J. Dumas, "Making Peace Possible: The Legislative Approach to Economic Conversion," in Economic Conversion: Revitalizing America's Economy, ed. Suzanne Gordon and Dave McFadden (Cambridge: Ballinger Publishing Company, 1984), 69.

102. "Big Guns Aren't Sole Casualties," Los Angeles Times, 23 May 1993, Sec: A p: 18 col: 4.

103. Joel Yudken and Ann R. Markusen. The Labor Economics of Conversion: Prospects for Military-Dependent Engineers and Scientists. Piscataway, New Jersey: Center for Urban Policy Research, 1993, 2.

104. Joel Yudken and Ann R. Markusen. The Labor Economics of Conversion: Prospects for Military-Dependent Engineers and Scientists. Piscataway, New Jersey: Center for Urban Policy Research, 1993, 28.

105. Lee Smith, "Can Defense Pain be Turned to Gain?" Fortune, 8 February 1993, 85.

106. Catherine Hill, Sabina Deitrick, Ann Markusen. "Converting the Military Industrial Economy: The experience at Six Facilities" Journal of Planning Education and Research no. 11. (1991): 21.

107. Kevin D. Murphy, "Making the Most Of a Base Closing," Governing vol. 6 no. 12 (September 1993): 22.

108. 1961 - 1990, Planning Civilian Reuse of Former Military Bases, Summary of Completed Military Base Economic Adjustment Projects. Office of Economic Adjustment, Department of Defense, Washington, D.C., Spring 1990, 1.

109. Office of the Under Secretary of Defense (Acquisition), A Directory of Federal Reinvestment and Transition initiatives for People, Business, and Communities, (August 1993): III-5.

110. Elizabeth A. Palmer, "Pollution Clogs the Transfer of Land to Civilian Uses," Congressional Quarterly 13 (27 March 1993): 770.

111. Office of the Under Secretary of Defense (Acquisition), A Directory of Federal Reinvestment and Transition initiatives for People, Business, and Communities, (August 1993): III-5.

112. Kevin D. Murphy, "Making the Most Of a Base Closing," Governing vol. 6 no. 12 (September 1993): 23.

113. Suneel Ratan, "Staying Strong Without Breaking The Bank" Fortune, Vol. 127 Iss. 3 (8 February 1993): 92.

114. Ibid. 92.

115. Joel Yudken and Ann R. Markusen. The Labor Economics of Conversion: Prospects for Military-Dependent Engineers and Scientists. Piscataway, New Jersey: Center for Urban Policy Research, 1993, 39.

116. Joel Yudken and Ann R. Markusen. The Labor Economics of Conversion: Prospects for Military-Dependent Engineers and Scientists. Piscataway, New Jersey: Center for Urban Policy Research, 1993, 40.

117. Robert A. Solo, Opportunity Knocks: American Economic Policy After Gorbachev (Armonk: M. E. Sharpe, Inc. 1991), 122.

118. Eric Schmitt, "U.S. Weapons Makers Intensify Lobbying Efforts as Budgets Fall," The New York Times, 6 August 1991, A1 and D6.

119. Samuel Greengard, "Don't Rush Downsizing: Plan, Plan, Plan," Personnel Journal 72 (November 1993): 65.

120. Anthony L. Velocci, Jr., "Industry Plight Driving Antitrust Policy Review," Aviation Week & Space Technology 139 (August 30, 1993): 45.

121. Anthony L. Velocci, Jr., "Consolidation Outlook Stormy," Aviation Week & Space Technology 140 (March 14, 1994): 43.

122. William D. Hartung, "Welcome to the U.S. Arms Superstore," The Bulletin of the Atomic Scientists 49 (September 1993): 21.

123. Ibid. 21.

124. U.S. Congress, Office of Technology Assessment, After the Cold War: Living With Lower Defense Spending. OTA-ITE-524 (Washington, DC: U.S. Government Printing Office, February 1992) , 200.

125. Ibid., 200.

126. Ibid., 208.

127. Anthony L. Velocci, Jr., "Industry Plight Driving Antitrust Policy Review," Aviation Week & Space Technology 140 (April 18, 1994): 48.

128. Anthony L. Velocci, Jr., "Industry Plight Driving Antitrust Policy Review," Aviation Week & Space Technology 140 (April 25, 1994): 23.

129. Ibid., 23.

130. U.S. Congress, Office of Technology Assessment, After the Cold War: Living With Lower Defense Spending, OTA-ITE-524 (Washington, DC: U.S. Government Printing Office, February 1992), 217.

131. Ibid., 221.

132. Diane M. Disney, "Restructuring the Defense Economy in New England," (January 5, 1994): 5.

133. After the Cold War: Living With Lower Defense Spending, 221.

134. Ibid., 179.

135. Diane M. Disney, Restructuring the Defense Economy in New England, 10.

APPENDIX A

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(USPS 087-390)

of a unified, independent state following the defeat of the French in 1954. Since the American defeat—"at the hands of patriots who would not give up because they were fighting for their homeland," according to one young professor—the U.S. embargo has made economic development a practical impossibility.

"And were the Americans any different from the French?" I asked, expecting at least as much animosity toward a European power that had colonized Vietnam for a century, then forcibly resumed control in 1946, even after World War II and the Japanese had driven it out. "Yes," replied another of the historians. "France gave us a great deal: our educational institutions and our political structures. America gave us nothing but a war." His reading of colonial history may have been simplistic, but his point was not a careful reading of history. America had fought to obstruct Vietnamese independence. America had cared not at all about Vietnam itself, either its people or its government. And America, defeated, had created a massive, sustained barrier to Vietnam's economic progress and development. It may have been a one-sided analysis, but there was evidence aplenty—in conversations on the streets of Hanoi, in America's refusal to resume diplomatic relations or let its own citizens phone or FAX Vietnam, in the testimonies of other nations that they cannot engage in full-fledged trade with Vietnam until the U.S. embargo is lifted—that it was not groundless.

The professor's comments did not, however, stop there. He added that it was time to put the past behind. To his obvious bitterness was added a tone, partly pragmatic and partly idealistic, of hope. The United States and Vietnam lost a chance to work together in 1945, at the end of World War II, he and his colleagues said; they foresaw another such opportunity coming (soon, they hoped) and history taught that it could be squandered only at the peril of both nations.

This willingness to rein in bitterness with realism drew into focus one other striking characteristic: the hope that seems everywhere present in Hanoi—in the tables of goods for sale on every sidewalk, in the smallscale construction in each neighborhood, in new products being imported, in the willingness to start American exchange programs and give visas even to the unconnected. Since the onset of doi moi, Vietnam's perestroika, half a decade ago, small scale private enterprise has sprung up everywhere. Sidewalk booths make walking difficult at times and provide Hanoi residents everything from noodles and shuttles to fresh meat and mirrors. People may be poor but they have become hopeful, at times boundlessly so.

Mrs. Glap, a cleaning lady, walked into the "Bar," as Judith, Kristen and I sat wearily but animatedly discussing the day's discoveries late one afternoon. "Vietnam is a poor country, isn't it," she commented. "Yes," replied Judith, "but the people are so good, and they seem happy."

It was as though Judith has raised the watergate. Mrs. Glap agreed: "Yes, we are happy. We can buy things now. A few years ago, nothing was available. Now, if we have money, we can get anything." She became animated. "We believe our government now, because we think it's going to get better. The more time passes, the better it will become."

I found it a provocative conversation. Was he just doing a PR job on a foreigner? Probably not. She knew Kristen well; she had a tough and hardnosed side. Was she alive? Probably so, as all dreamers are alive. But something has happened to waken hope in a people buffeted for years,

over centuries, by foreign nations playing their own ideological and geopolitical games. That hope has spawned new kinds of activity, new directions and new dynamics, both on the streets and in the halls of government.

Is it illusory? Is a new day a dream? Mrs. Glap thinks not. And I hope she is right. ●

THE 75TH ANNIVERSARY OF THE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION COMMISSIONED CORPS

● Mr. BREAUX. Mr. President, I rise today to recognize the outstanding contributions of the National Oceanic and Atmospheric Administration [NOAA] Commissioned Corps on the occasion of their 75th anniversary. Recognizing the long and distinguished history of the NOAA Commissioned Corps, I also salute their predecessor organization, the illustrious U.S. Coast and Geodetic Survey Commissioned Corps.

During the earliest days of this Nation, President Thomas Jefferson, in 1807 established a survey of the coast to foster the main business of this fledgling country, maritime commerce. Once begun, this survey of the coast, called the U.S. Coast Survey, became even more important to the growth of coastal maritime commerce in this Nation. Noting the ever increasing shipping traffic, ever more resources were allocated to the survey and, to bring additional professional engineering expertise into the survey, both Navy and Army officers were assigned. As the coastal ocean surveys grew in scope to cover the Atlantic, Gulf of Mexico, and Pacific coasts, it was apparent that land surveys, also called geodetic surveys, were of increasing importance and, to handle the increased surveys, the Coast Survey was expanded, forming the venerable U.S. Coast and Geodetic Survey [USC&GS]. Land, hydrographic surveys and the new science of oceanography became the province of the professional USC&GS hydrographic engineers and the military officers assigned to USC&GS. During the Spanish-American War, all Navy and Army officers were withdrawn from the U.S. Coast and Geodetic Survey to support the war effort; USC&GS continued the critical science and survey operations using the remaining professional hydrographic engineers as the mainstay for the arduous field and coastal survey work.

With the advent of American participation in World War I, the U.S. Congress passed the act of May 22, 1917, entitled the "Act to temporarily increase the commissioned and warrant and enlisted strength of the Navy and Marine Corps, and for other purposes." In this act, "The President is authorized to appoint, by and with the advice and consent of the Senate, the field officers of the Coast and Geodetic Survey * * *". Noting the wartime survey and mapping requirements, the act also authorized transfer from the

Department of Commerce the vessels, equipment, stations, and personnel of the Coast and Geodetic Survey to the War and Navy Departments. Thus the U.S. Coast and Geodetic Survey Commissioned Corps was forged and the USC&GS Commissioned Corps has served this Nation well since World War I.

Established under the jurisdiction of the U.S. Department of Commerce, the U.S. Coast and Geodetic Survey Commissioned Corps has undergone several reorganizations and name changes. Renamed the Environmental Sciences Services Administration Commissioned Corps in 1965 and, again renamed the National Oceanic and Atmospheric Administration [NOAA] Commissioned Corps in 1970, the NOAA Commissioned Corps carries on the proud tradition of the U.S. Coast and Geodetic Survey Commissioned Corps, providing professional expertise in engineering, science and surveying in support of this Nation's commerce.

NOAA Commissioned Corps officers may be found utilizing their scientific expertise while serving on ships of the NOAA fleet, piloting NOAA helicopters and aircraft, conducting underwater scientific diving projects, serving in both the Arctic and Antarctic science programs and managing remote NOAA field operations. On the land, on the sea and in the air, the officers of the NOAA Commissioned Corps carry on the proud tradition established by the U.S. Coast and Geodetic Survey.

All members of the NOAA Commissioned Corps, this Nation's smallest military service, wear their uniforms with confidence and pride, knowing their accomplishments will contribute to the continued prosperity of this great land. At this juncture in their long and distinguished history, I salute the National Oceanic and Atmospheric Administration Commissioned Corps on the 75th anniversary of dedicated service to this Nation. ●

DEFENSE TRANSITION

● Mr. PRYOR. Mr. President, Americans today are dealing with one of the more radical periods of change in our history—the end of the cold war and the changes in the U.S. military that go with it.

Those changes have already begun, and they have been marked by a downsized military, shrinking defense companies, layoffs, and devastated communities. But today's problems are the tip of the iceberg, to wit:

Thirty-four military bases will be closed, 48 will be realigned, and more will be announced in 1993.

Up to 350,000 defense workers will lose their jobs each year through 1997—that is roughly 1,000 workers a day, or 40 workers every hour.

But with every challenge comes an opportunity. And with leadership and planning, these challenges can be

turned into economic opportunity—opportunity to turn money that was spent on weapons into investments that create economic activity and jobs.

With that in mind, Majority Leader MITCHELL 2 months ago, formed a task force, with me as its chairman, to develop a strategy for the transition from cold war defense spending to domestic necessities at a time when a recession continues and the Soviet threat has all but disappeared.

More simply put, the work of this task force was based on the belief that if we reinvest our defense cuts wisely, we can attempt to create more jobs than we will lose from the defense downturn.

The task force met with more than 60 experts in the last 2 months—experts from the defense industry, from labor and business interests, from State and local governments, from community leaders and from Federal agencies.

What we came up with was a short-term plan of action that fits into a long-term strategy to achieve growth and jobs. These are the elements of the plan:

First, reinvest our human resources: Defense workers deserve more than a pat on the back for years of work in the national defense. This element involves funding for retraining, making retraining programs work better, and giving military men and women incentives to go into public service.

Second, help communities adjust, through support programs that get re-development funds into the communities that need it.

Third, help defense community businesses with Small Business Administration loans and possible tax incentives.

Fourth, assist defense companies to grow into new civilian markets and create new jobs for manufacturing, technology and marketing assistance.

Fifth, make the \$70 billion Government research budget work as an engine for future civilian economic growth. Make more of the innovations support American civilian technology and manufacturing needs.

These proposals are investments that result in future paybacks. They use proven, successful programs that do not create big new bureaucracies. And they create or promote partnerships between Federal, State and local governments as well as between the Federal Government and businesses.

We estimate that this plan will cost \$1.2 billion in the next year. However, the details of any spending programs will have to be worked out during the weeks and months ahead in consultation with many committees and experts.

Sadly enough, the experts we already have consulted tell us the administration is doing nothing to this end. There is no planning, no strategy, no leadership, and as a result, there is no action.

I recently read in a defense publication that our Government has pledged \$85 million in technical assistance to aid the military conversion of the former Soviet Union. It is ironic that the administration is doing this at the same time it has sought to cut in half the \$7.5 billion budget of the Pentagon's Office of Economic Adjustment, and it has sought to completely abolish the Commerce Department's Economic Development Administration. These two Offices are among the few equipped to assist communities in making the necessary transitions I am talking about.

We realize we are working in a very tough budget environment. But our goal is to lay a firm foundation of strong proposals to meet the challenges that lay ahead for America's defense-dependent businesses, communities and workers.

The task force report follows:

U.S. SENATE,

Washington, DC, May 21, 1992.

DEAR MAJORITY LEADER MITCHELL: Few trends today pose greater opportunities or greater challenges to our nation than America's transition from Cold War defense priorities based on the Soviet military threat to domestic peacetime realities during a time of continuing recession.

Two months ago you charged a task force of 21 Democratic senators to develop a strategy for this transition that will minimize the negative impacts of defense spending cuts and optimize the potential for benefits from changing priorities. If we reinvest defense cuts wisely we can create more jobs than we lose from the defense contraction.

The report to follow contains findings and recommendations of the Task Force that form the elements of a short-term plan for transition and a long-term strategy for investment and growth. Much of the report is based on the recommendations of the over 60 experts with whom the Task Force met.

In the weeks to come, Task Force members will receive comments from all interested parties on this report and its recommendations. The Task Force intends to coordinate with and support the efforts of the appropriate Senate committees that will review the Task Force recommendations.

Thank you for this opportunity and for your support of the Task Force's work.

Sincerely,

DAVID PRYOR,
Task Force Chairman.

EXECUTIVE SUMMARY

LOOMING DEFENSE/ECONOMIC CHALLENGES

America is headed into defense spending cuts, job losses, and industrial disorientation—and the Administration is asleep at the wheel. No plan for transition exists. No strategy for reinvesting our resources for the future is in the works. Worst of all, the Task Force documented important areas in which executive departments have hindered defense transition initiatives.

No planning. No strategy. No leadership. And, as a result, no action.

"Change is Needed", was the message the Task Force heard in testimony from over 60 experts from the defense industry, labor unions, state and local governments and action groups, and Federal agencies. Research by the Office of Technology Assessment, Congressional Research Service and the General Accounting Office further emphasized these conclusions and added that

problems facing us today will grow in the years to come.

The outside experts painted a somber picture that was also a call to action:

Defense cuts that will range from \$50-\$200 billion over the next five years means up to 350,000 defense-related jobs will disappear annually, totalling up to 1.4 million jobs by 1996.

Thousands of U.S. companies reliant on Pentagon contracts or subcontracts, must reorient or reduce.

Hundreds of American communities will suffer as military bases and defense plants begin to close or downsize this year.

Defense-related economic dislocations will be magnified by a recession-weakened economy, chronic unemployment, soaring personal and corporate debt, and the export of U.S. manufacturing and technical know-how overseas.

REINVESTING THE PEACE DIVIDEND

Several themes repeatedly emerged in the testimony the Task Force received from outside experts. These themes serve as useful guidelines for considering options for action:

(1) Focus on economic growth/job creation—make investments today that pay dividends in America's future.

(2) Use and improve successful, needed programs—do not create new government bureaucracies.

(3) Take actions this year that steer us toward a long-term strategy for transition into the post-Cold War economy.

Task Force briefers identified three areas to focus its attention.

The first is dislocated military and civilian workers who will need help reinvesting their talents and expertise in productive non-defense jobs.

Second are defense-dependent communities that can benefit from programs to help them plan for the defense downturn and to take action that will allow the community to grow in new directions.

And finally, defense-dependent companies—especially the more agile small to mid-sized firms—can be given incentives to reorient, diversify and become engines for new job creation and economic growth through a number of enabling government actions, programmatic reforms and a view toward long-term investments.

A DEMOCRATIC PLAN OF ACTION

Americans support investing part of the peace dividend in programs and reform that will build a foundation for a stronger domestic economy. The Task Force recommendations answer this call for change and a new direction. Some of the recommendations are:

I—Reinvest Defense Workers in Non-defense Jobs

Help DoD military and civilian employees and defense industry workers make a productive transition that benefits the worker and the economy

Retrain defense workers to become productive in new areas

Make government worker assistance programs work better

Incentives for soldiers and sailors to go into public service (education, health, etc.)

Create incentives for DoD civilians to find new work

II—Help Communities Rebound

Emphasize the importance of planning assistance for defense-impacted communities by expanding the Office of Economic Adjustment

Fight Administration efforts to kill community economic recovery grants and expand the Economic Development Admin-

istration, which helps communities adjust to change

Revive SBA small business loan program designed to help local businesses in transition

Cushion the blow to school districts near base closings with extended Impact Aid

Review tax incentives to spark development in defense-impacted zones.

III—Industrial Diversification, Economic Growth, and Job Creation

(A) Provide Businesses with Marketing, Manufacturing, and Technical Assistance

Help companies diversify and find new markets through "manufacturing extension services"—similar in concept to agricultural extension centers

Support use of advanced technologies by businesses through Regional Technology Alliances"

Encourage fast and flexible response for industry transition through grants for state and regional industrial services.

Help companies find civilian markets abroad

(B) Invest in Technology and Research with Long Term Civilian Pay-offs

Fund and support long-lead research of potential commercial technologies (activities in DoD, Commerce, NASA)

Fund dual-use research projects in DoD that have military and commercial payoff.

Set aside more research funds to give incentives to small business innovation

Redirect defense labs toward helping the civilian economy

Support tax policies that encourage businesses to grow.

TRANSITION COSTS/BENEFITS

Many changes endorsed by the Task Force have no cost. For instance, increasing small business research set-aside requirements would require no new funds but would set aside up to \$500 million more for small enterprises. The same would hold for earmarking certain national laboratory funds for industry coordinated research efforts.

Where increased funding is recommended, sound investments to help today's defense-dependent human, community and industrial resources and will pay dividends for years to come. Such investments today can help set the stage for a sustained economic recovery.

Although many of the Task Force recommendations will need further development during the coming months, the Task Force has made a preliminary cost estimate of \$1.2 billion for all specific program spending elements. The Task Force plans to continue working with the relevant Senate committees and experts to develop specific funding recommendations.

Finally, it should be noted that, understandably, many of the defense transition programs recommended for increased funding and emphasis are located outside the Defense Department. The Task Force is encouraged that many of these programs can be funded using Defense funds for FY93 only. The process of moving this package forward will require cooperation between numerous committees, the Senate Republican leadership and finally, the White House.

In future years, the Task Force strongly recommends that funding and any control over transition programs that should be located in non-defense agencies be transferred to those agencies.

TOWARD THE FUTURE

This report emphasizes the need for comprehensive planning as we reduce our defense spending. The Task Force recommendations are meant to set in motion immedi-

ate, realizable action that will lay a foundation for future efforts to bend growing defense transition challenges into economic expansion and opportunities. Future defense cuts, the shape of the economy, budget law changes, and changes in political leadership could alter the way we can deal with transition issues.

MEMBERS OF DEFENSE TRANSITION TASK FORCE (APPOINTED BY MAJORITY LEADER MITCHELL ON MARCH 3, 1992)

Senator Brock Adams—Washington.
Senator Jeff Bingaman—New Mexico.
Senator John B. Breaux—Louisiana.
Senator Alan Cranston—California.
Senator Christopher J. Dodd—Connecticut.
Senator Bob Graham—Florida.
Senator Ernest F. Hollings—South Carolina.
Senator Edward M. Kennedy—Massachusetts.
Senator Carl Levin—Michigan.
Senator Howard M. Metzenbaum—Ohio.
Senator Barbara A. Mikulski—Maryland.
Majority Leader George J. Mitchell—Maine.
Senator Sam Nunn—Georgia.
Senator Claiborne Pell—Rhode Island.
Senator David Pryor (Chair)—Arkansas.
Senator Donald W. Riegle, Jr.—Michigan.
Senator Charles S. Robb—Virginia.
Senator Paul S. Sarbanes—Maryland.
Senator James Sasser—Tennessee.
Senator Timothy E. Wirth—Colorado.
Senator Harris Wofford—Pennsylvania.

SENATE DEMOCRATIC TASK FORCE ON DEFENSE/ECONOMIC TRANSITION, MAY 21, 1992

I. REINVESTING DEFENSE WORKERS

Summary Findings

According to the Office of Technology Assessment (OTA), roughly 6 million people were employed directly or indirectly in national defense jobs in 1991.

By 1995, 1.4 million defense employment positions will be eliminated at a rate of up to 350,000 per year.

Department of Defense (DoD) military and civilian employees, Department of Energy (DOE) nuclear weapons complex civilians, and defense industry workers will be affected by the reductions in national defense spending.

The Administration took over a year to release \$150 million from FY90 DoD funds to the Labor Department for defense worker adjustment services (Defense Conversion Adjustment Program—"DCA").

To date, the Labor Department has released only \$22 million of the \$150 million, which will expire on September 30, 1993.

Recommendations

A. Fund Worker Adjustment for Peacetime

1. Existing Labor Funds: Continue DCA Program by extending the current obligation of \$150 million through FY 97.

2. Urge the Department of Labor to promote and implement demonstration project grants, especially for in-house retraining by defense firms who are seeking to diversify or foster dual use capabilities.

3. Supplement Labor Funds: In FY 93, transfer additional funds from DoD to Labor to be used through FY 97.

B. Job Retraining Program Improvements

1. Support the ongoing efforts to the Senate Labor Committee to improve the overall functioning of the basic worker retraining program ("EDWAA") and to ensure its relevance to the special needs of displaced defense workers.

2. Amend Title 5 so that EDWAA can be extended to workers at military installations

scheduled for closure or realignment from 60 days to 12 months.

3. Require State EDWAA Managers to urge defense firm employers to provide increased communication on the status of contract terminations, program curtailment, and the end of a production line.

4. Allow States to reimburse their discretionary accounts with Defense Conversion Adjustment (DCA) funds if they have provided "Rapid Response" services to defense workers, and in doing so, contributed to the depletion of their discretionary accounts.

C. Re-orienting Department of Defense Military Employees

1. Support the proposals to provide the Secretary of Defense voluntary early retirement authority to members having between 15 and 20 years of service.

2. Encourage military personnel who retire under the early retirement program to take approved jobs in the public sector by allowing them to increase their military years of service credit by one year for each year of public service up to a total of 20 years.

3. Help military personnel get the training, education, certification, and job placement which may be required for employment in critical public service jobs, such as education, law enforcement, or medical services.

4. Support a one-year leave of absence with pay for a military employee with relatively few transferable skills to pursue courses of instruction or education either within or outside the military.

5. Provide early retirement incentives and transition benefits for reservists.

D. Assistance for Department of Defense Civilian Employees

1. Urge the Senate Governmental Affairs Committee to report legislation on how to provide the Department of Defense with the necessary tools to manage the downsizing of the civilian workforce. Options to consider include retirement incentives, annual leave accrual as retirement service credit, extended health insurance coverage, expanding DoD's Priority Place Program to include all federal agencies, and creating a toll-free information number at OPM.

2. Direct DoD to make an inventory of training programs within the Defense Department training establishment that can provide skill training for jobs in the civilian economy. Upon completion, DoD should identify which programs would be applicable to non-DoD civilian employment. Authorize DoD civilian employees facing separation through a reduction-in-force or base closing action to receive up to one year of skill training in the Defense training establishment while still employed in DoD.

II. HELPING COMMUNITIES ADJUST

Summary Findings

Currently 34 bases are scheduled for closure, 48 bases will be "realigned". Another round of base closures will be announced in 1993. In addition, many defense industry plants are suffering the effects of reduced defense spending. The OTA estimates that over 150 U.S. communities will be hard hit by defense downsizing.

The Pentagon's Office of Economic Adjustment (OEA) is the agency in charge of helping communities plan for base and defense plant closures. It has a staff of 17 and a budget of \$7 million.

The Bush Administration has requested that OEA funding be cut to \$4 million in FY 1993.

The Commerce Department's Economic Development Administration (EDA) provides "economic devastation" grants to help

communities implement their economic development plans.

The EDA has been targeted for termination by the White House since 1981. The White House slowed the release of \$50 million from FY90 DoD funds to EDA until February 1992. As a result, only \$100,000 in EDA funds have actually reached impacted communities to date.

Although few dollars have reached the communities, many promises have been made. The Bush Administration began promoting and committing defense-related EDA funds during the campaign season: New Hampshire/Maine in February, Texas in March, and Arkansas in April.

Recommendations

A. Office of Economic Adjustment (OEA)

1. Increase OEA staff levels and grant authority for community assistance coordination and planning grant administration.

B. Economic Development Administration (EDA)

1. Existing EDA Funds: Extend through FY 97 the spending authority on the current \$50 million schedule to expire on September 30, 1993.

2. Supplement EDA Funds: In FY 93, transfer additional funds from DoD to Commerce for EDA grants through FY 97.

3. Ensure EDA's Position: the Task Force endorses the mission of the Economic Development Administration which has the function of assisting not only defense dependent communities but also communities which experience non-defense related economic distress. The Administration should be directed to clarify and support EDA's long-term mission of providing support for distressed communities and promoting economic development.

4. Require EDA to streamline the application process and press for better coordination with the Office of Economic Adjustment in making the transition from planning to implementation assistance for affected communities.

C. Small Business Administration (SBA)

1. Preferred Loans to Defense Firms: Provide direct, low interest rate loans to small businesses adversely affected by base closings or contract terminations.

2. Government-Guaranteed Loan Program: Provide supplemental appropriations in FY 92 to ensure that adequate resources are available for such loans.

D. Department of Education

1. Direct the Secretary of Education in conjunction with the Secretary of Defense to report annually on school districts which will be adversely impacted by military base closings, realignments, and redeployments.

2. Impact Aid Grants to School Districts: Allow needy school districts impacted by base closings to receive an additional year of phased-out funding. This would be accomplished by allowing payments under Section 3 of Public Law 81-874, the Impact Aid Program, to be based on prior year data in calculating the formulas for distribution of funds for Impact Aid. This would enable eligible school districts to receive Section 3 payments earlier in the school year and allow them to better plan annual operating budgets.

E. Tax Incentives for Community Growth

1. Urge review of various tax incentives to stimulate economic activity in geographic areas hit hardest by the reduction of U.S. defense spending. Tax incentives should target relief for problems caused by worker displacement due to cancellation of government contracts, defense industry downsizing, base closings, and force reductions. However, more importantly, these tax in-

centives should encourage long-term economic growth.

P. Environmental Restoration at Base Closings

1. Encourage joint periodic reviews by the Senate Armed Services Committee and the Senate Committee on Environment and Public Works on the base closing policies and regulations of DoD's Defense Environmental Restoration Program. These reviews would monitor the important funding and regulatory issues that will affect base closing communities, in an attempt to accelerate environmental clean-up ensure rapid public use of closed military installations.

III. INDUSTRIAL TRANSITION, ECONOMIC GROWTH, AND JOB CREATION

A. Industrial Transition and Assistance

Summary Findings

Based on some estimates, DoD outlays for goods and services could decline by as much as 48% over the period 1992-2001.

Many defense firms must diversify into commercial markets and become less defense-dependent to survive.

Small and medium sized defense firms need assistance with sales, marketing, up-to-date technology, and best manufacturing practices to make them competitive and insure successful diversification.

Programs to ease diversification, enhance industrial competitiveness, and create jobs have been under funded.

U.S. programs to provide new overseas markets are much smaller than those of our competitors.

Recommendations

1. Fund Regional and State Manufacturing Extension Services: Ease the transition of defense firms into new markets and bring the overall level of U.S. manufacturing technology up to world class standards through support of manufacturing extension programs assisting small and medium sized firms.

DoC Manufacturing Technology Centers. DoC State Technology Extension Program (STEP).

DoD Manufacturing Extension Program. DoD Regional Technology Alliances: Address common industry transition needs and encourage overall economic activity through a focus on regional industrial clusters. Fund regional efforts devoted to applied R&D, specialized training, market research, export promotion, and tested facilities.

3. Provide DoC Grants for Regional and State Industrial Services Programs: Promote a quick and flexible response to the transitional needs of defense and other industries through support of state and regional industrial services programs.

4. Provide Trade and Export Assistance: Help defense and non-defense firms tap new civilian markets overseas by providing additional funding and technical assistance.

Increase funding for U.S. Foreign and Commercial Service.

Increase funding for the Trade and Development Program.

5. Amend DoD Recoupment Policy: Encourage defense firms to diversify and achieve a payoff for the commercial economy on defense R&D, by revising the policy requiring recoupment of R&D money spent on military technologies that are commercialized.

B. Investment in Growth Technologies.

Summary Findings

Over the long run, investment in economic growth is the only complete solution to lower defense spending and structural economic changes.

The U.S. government spends approximately \$70 billion annually on R&D, over sixty percent of it for defense purposes. As a percentage of GNP, the U.S. spends only two-thirds the amount on non-defense R&D as the Japanese and the Germans.

Economic growth depends on increased productivity, product innovation, and leadership in industries with a high multiplier effect for the economy, all of which create higher wages.

Achieving these factors depends in large part on developing and applying critical technologies which underlie emerging industries with high multiplier effects.

Because of the significant technical risks and financial barriers involved, individual companies are either unwilling or unable to successfully develop many of these critical technologies.

It will be necessary for the government to act as a catalyst as well as a backer in some cases, of U.S. industries' efforts to develop and lead in the application of critical technologies.

Recommendations

1. Critical Technology Partnerships with Industry: Vie for leadership in the industries of the 21st century and create R&D opportunities for defense and non-defense firms through grants to industry-led partnerships developing critical technologies.

Fund DoD Advanced Technology Program (ATP).

Fund Defense Advanced Research Projects Agency (DARPA) Dual-Use Partnerships with Industry.

Support Ongoing Civilian Aerospace R&D Partnerships in NASA.

Initiate National Environmental Technologies Agency (NETA) to Fund Grants for Environmental R&D.

2. Emphasize Dual Use in DoD R&D: Within the DoD R&D budget, set aside additional funds for projects that meet significant defense needs and that have a potential for application in the civilian sector. Such projects would include environmental cleanup, energy efficiency, transportation, computer and communications technology, and others.

3. Increase Small Business Innovation and Research (SBIR) Funding: Capitalize on the resourcefulness of small U.S. companies and increase opportunities in key emerging industries by increasing the set-aside for R&D matching grants to small firms. Focus grants on critical technologies with highest economic potential.

4. Reorient Defense Labs: Redirect these crown jewels of the national R&D infrastructure toward national needs and assisting commercial industry, now that the cold war is over.

Industry-Laboratory Partnership Program: Establish a set-aside fund to support industry-led R&D projects.

Amend Stevenson-Wydler Act: Require "dual-use" R&D be done in partnership with industry whenever possible.

National Academy of Science Study: Commission a study to examine what role the defense labs should fill now that the cold war is over, and how the labs can best fill this role.

5. Fund AgileTech: Help establish U.S. manufacturing preeminence by funding the public-private consortium developing manufacturing concept known as Agile Manufacturing.

6. Extend the R&D Tax Credit: Help make American industry the most technologically advanced in the world through extension of this tax credit for research and development expenditures.

Private Grants for Manufacturing Education and High Skills Retraining: Insure U.S. industry's access to the best scientists, engineers, and managers, through funding of manufacturing education programs administered by the DoD and NSP. Fund NSP administered retraining programs to high skill former defense industry employees making the transition to commercial industry.

8. Extend the Employer-Provided Educational Assistance Tax Credit: Extend this provision to encourage businesses to continually invest in upgraded skills for their employees.

BACKGROUND ON RECOMMENDATIONS—SENATE TASK FORCE ON DEFENSE TRANSITION, MAY 21, 1992

I. REINVESTING DEFENSE WORKERS

According to the Office of Technology Assessment (OTA), in 1991 about 6 million people were employed in defense-related jobs in the private defense industry and DoD uniform and civilian positions. By 1995, as many as 1.4 million defense-related jobs will be lost at a rate of about 350,000 jobs per year.

A. Fund Job Retraining for Peacetime Recommendations

1. Existing Labor Funds: Continue DCA Program by extending the current obligation of \$150 million through FY 97.

2. Urge the Department of Labor to promote and implement demonstration project grants, especially for in-house retraining by defense firms who are seeking to diversify or foster dual use capabilities.

3. Supplement Labor Funds: In FY 93, transfer additional funds from DOD to Labor to be used through FY 97.

Findings

The Defense Authorization Bill of 1990 provided the "EDWAA" program with \$150 million in Department of Defense (DoD) funds earmarked for adjustment services to displaced defense workers. The Administration delayed the transfer of \$150 million in DoD funds and the money did not reach the Department of Labor (DoL) until July, 1991, 9 months after authorization. Another 3 months passed before DOL guidelines were in place. During this one year delay, tens of thousands of defense-related jobs were lost, causing the Department of Labor to expend over \$37 million for needed assistance to displaced defense workers. This limited the EDWAA resources that were available for assisting non-defense workers hit hard by the current recession.

Currently, the \$150 million in DoD funds will expire at the end of Fiscal Year 1993. As of May 20, 1992, displaced defense workers seeking EDWAA services had received a mere \$22 million of the \$150 million earmarked DoD funds. Should September 30, 1993 arrive before the \$150 million is expended, the remaining funds would be returned to the U.S. Treasury rather than reaching the defense workers needing assistance. Due to the delay in the transfer of funds, an extension on the date of expiration for these funds would be appropriate.

The OTA estimates that the \$150 million will provide support for a considerable number of defense workers needing assistance, but that additional funds will be necessary to properly satisfy the full scope of defense reductions. Determining proper funding levels for assisting displaced defense workers remains uncertain, based on the difficulty of predicting future U.S. economic conditions and retraining demands. An improving economy would help to ease the transition for displaced defense workers. However, a continuing recession would increase the demands for EDWAA services,

thus requiring a greater funding contribution. This suggests that a supplement in Fiscal Year 1993 funds should be modest. Supplemental EDWAA funds should be accompanied by report language that urges a prompt transfer from DoD to DoL. In addition, Congress should monitor the rate of spending of such funds to determine if displaced defense workers are being properly assisted during the transition.

The Department of Labor has set aside \$15 million of the transferred \$150 million for Demonstration Project grants. Such grants would attempt to promote innovative worker assistance projects. Guidelines for proposals for demonstration project grants were not circulated by the Department of Labor until April 28, 1992, and no such grants have been approved to date. Demonstration project grants would allow entities outside the DoL, such as State governments, local governments, or private firms to initiate creative worker assistance programs. Constructive use of these grants would include in-house retraining by defense firms who seek to retain their current workforce during diversification.

B. Job Retraining program Improvements Recommendations

1. Support the ongoing efforts of the Senate Labor Committee to improve the overall functioning of JTPA and to ensure its relevance to the special need of displaced defense workers.

Findings

The Task Force was informed at the April 8, 1992 briefing entitled "Private Sector Retraining Issues" that there are some significant problems with existing JTPA programs for dislocated workers. It was stated that these diverse problems are being reviewed by the Senate Committee on Labor and Human Resources. This Committee is studying ways to strengthen JTPA, in the hopes of making this program work better for all workers, including defense employees. The Task Force understands that their efforts include a re-examination of our overall approach to displaced worker policy, perhaps in the context of the North American Free Trade Agreement. In the course of that effort, the Committee on Labor and Human Resources will seek to ensure that future improvements in JTPA take account of the special needs of displaced defense workers.

Recommendations

2. Amend Title 5 so that JTPA can be extended to workers at military installations scheduled for closure or realignment from 60 days to 12 months.

3. Require State EDWAA Managers to urge defense firm employers to provide increased communication on the status of contract terminations, program curtailment, and the end of a production line.

Findings

In 1990, the Base Closure and Realignment Commission announced that 34 military installations would close and 48 would be realigned by 1995. Another round of base closings will be announced in 1993. It has been estimated that 40,000 civilian DoD employees will lose jobs as a result of base closings and realignments. A significant number of these employees will require retraining and other EDWAA assistance.

The advance notification by the Base Closure Commission provides many DoD employees with the knowledge that their jobs will be terminated often 2 to 3 years before a military base closes. However, currently DoD employees cannot receive EDWAA assistance until after they receive a RIP (reduction in force) notice. This notification takes place 60 days before a military instal-

lation closes. An extension of the eligibility date that base employees can receive EDWAA assistance would make these services more proactive to those needing assistance and will capitalize on the opportunity created by the advance notification of base closure decisions. In addition, early access to JTPA assistance will increase an individual's reemployment possibilities and help to reduce the costly and unpleasant scenario of unemployment.

In the case of worker displacement caused by contract terminations, program curtailments, or the end of a production run, the Worker Adjustment and Retraining Notification (WARN) Act requires 60 days notice before layoff, although loopholes in the law make its coverage incomplete. Ideally, workers who receive WARN notices can begin receiving EDWAA services at that time. If the states are prepared to provide rapid response services. Due to the relative uncertainty of defense industry reductions, providing proactive assistance to displaced defense workers is more difficult. However, when defense plant managers should be notified at the earliest possible date so they can begin providing rapid response services to displaced employees.

Recommendation

4. Allow States to reimburse their discretionary accounts with Defense Conversion Adjustment (DCA) funds if they have provided "Rapid Response" services to defense workers, and in doing so, contributed to the depletion of their discretionary accounts.

Findings

Although the DoL indicates that rapid response is encouraged at the state level, current Labor policies are disabling and restrictive in this area. At the April 8, 1992 Task Force briefing entitled, "Private Sector Retraining Issues", the Task Force was informed that an ongoing problem with Department of Labor regulations for Defense Conversion Adjustment (DCA) is that DCA funds cannot be used to reimburse states for rapid response expenditures specific to defense worker assistance. The OTA report states that, "delays in (EDWAA) services are aggravated by the DOL rule that prevents state and local agencies from paying for (rapid response) services up front with their own money and then getting reimbursed." Rapid response services, which include financial and personal counseling, skill assessment, resume writing, and job search skills training, serve as the vital first step in assisting displaced workers. To encourage proactive rapid response services, states should be reimbursed with federal DCA funds for defense-related rapid response expenditures.

C. Re-orienting Department of Defense Military Employees

By the end of fiscal year 1997, the Department of Defense (DoD) expects to have reduced the size of the active duty military by 25 percent or nearly 550,000 positions. During fiscal years 1992-1993, over 236,000 of these reductions will occur. The Administration has also proposed making massive cuts in the National Guard and Reserve components by the end of fiscal year 1993.

To reduce the size of the military services in the past, large numbers of draftees were demobilized. Today, the situation is different because we have an all-volunteer force. To help ease the burden on those who must leave the service through no fault of their own, Congress has enacted a safety net of pay and benefits for military members having less than 15 years of service. In this Congress, proposals are being considered to help smooth the reductions of senior offi-

cers and noncommissioned officers with 15 to 20 years of service and to encourage separating military personnel to pursue public service jobs. These programs will be temporary.

The final briefing of the Worker/Community Group focused on "Preparing Military Personnel for a Civilian Setting." A staff member from the Senate Armed Services Committee described the current benefit programs available to separating military personnel and new proposals to achieve balanced reductions in the military. An official from the Department of Labor described the Transition Assistance Program which provides job search assistance to active duty members scheduled for separation. Finally, a Florida education official described a plan the State has developed to help place ex-military in jobs which may require provisional certification or courses for jobs in regulated industries.

Recommendation

1. Support proposals to provide the Secretary of Defense voluntary early retirement authority to members having between 15 and 20 years of service.

Findings

Congress has provided DoD with a number of tools to plan for the military downsizing and minimize the impact of involuntary separations. In the National Defense Authorization Act for Fiscal Years 1992 and 1993, separation pay and voluntary separation incentives were enacted to ease the burdens on those who leave the military with less than 15 years of service. The Chairman of the Senate Armed Services Committee gave a speech on the Senate floor on February 6, 1992 in which he proposed giving the Secretary of Defense authority to offer early retirement to military personnel having between 15 and 20 years of service. This early retirement authority, available only to members in surplus skill categories, would help reduce the number of senior officers and noncommissioned officers in a compassionate and balanced manner. Individuals who retire under this authority would be eligible for immediate retired pay.

Recommendation

2. Encourage military personnel who retire under the early retirement program to take approved jobs in the public sector by allowing them to increase their military years of service credit by one year for each year of public service up to a total of 20 years.

Findings

Military personnel who will leave the service over the next five years represent an enormous pool of talent. These highly trained and well qualified people could fill critical jobs in our communities in a number of occupations—teachers, law enforcement officials, health care professionals, and community service positions. These retirees who won the Cold War could now redirect their talents and help solve many of our Nation's pressing problems while earning credit toward higher retirement pay.

Recommendation

3. Help military personnel get the training, education, certification, and job placement which may be required for employment in critical public service jobs, such as education, law enforcement, or medical services.

Findings

Military employees leaving the services to fill critical public service jobs may need additional training. Some training for critical jobs can be provided through the military, while other training must be done through

civilian institutions and programs. The Task Force encourages states and localities to cooperate with DoD to enable these individuals to make a smooth transition into public service jobs.

Recommendation

4. Support a one-year leave of absence with pay for a military employee with relatively few transferable skills to pursue courses of instruction or education either within or outside the military.

Findings

Currently, the Montgomery GI bill provides benefits which are available to military personnel for post-service education. This educational leave of absence would enable active duty military members to take educational leave to prepare for critical civilian jobs. This proposal would help military members prepare for new careers before becoming dislocated.

Recommendation

5. Provide early retirement incentives and transition benefits for reservists.

Findings

By the end of fiscal year 1993, DoD plans to reduce the strength and force of the National Guard and Reserve components by 16 percent. If these cuts are approved by Congress, at least 185,000 people will be released from the Selected Reserve.

The Task Force supports a transition plan which ensures a safety net of benefits to personnel in the Selected Reserves who must leave because of the downsizing of the National Guard and Reserve components. These proposed benefits are consistent with programs already authorized or being proposed for active duty.

D. Assistance for Department of Defense Civilian Employees

Recommendations

1. Urge the Senate Governmental Affairs Committee to report legislation on how to provide the Department of Defense with the necessary tools to manage the downsizing of the civilian workforce. Options to consider include retirement incentives, annual leave accrual as retirement service credit, extended health insurance coverage, expanding DoD's Priority Placement Program to include all federal agencies, and creating a toll-free information number at OPM. This effort should be coordinated with the Senate Armed Services Committee.

Findings

While the Department of Defense is carefully planning and managing military force reductions, there does not appear to be a similar effort for civilian employees. Therefore, the Task Force believes that the Department of Defense needs special tools to manage the downsizing of the civilian workforce.

According to the General Accounting Office, DoD expects to reduce its total civilian workforce by 20 percent or 229,000 positions by the end of fiscal year 1997. 87,000 positions will be eliminated during fiscal years 1992-1993. 40,000 jobs will be abolished as a result of base closures and realignments. While these numbers are significant, the actual number of individuals who leave voluntarily or involuntarily will depend on how DoD plans and manages civilian workforce reductions.

On September 28, 1991, three members of the Senate Governmental Affairs Committee, Chairman John Glenn, Senator Sam Nunn, and Senator David Pryor, wrote Defense Secretary Cheney inquiring about the Department of Defense's plans for reducing the civilian workforce. This action was prompted by the previously approved safety

net of benefits (Voluntary Separation Incentive and Special Separation Benefit) for separating military personnel provided in the National Defense Authorization Act for Fiscal Years 1992 and 1993. Six weeks later, a DoD official responded, "Our (DoD's) strategy for reducing the workforce is to encourage voluntary attrition . . . using creative out-placement efforts, such as job fairs and job clubs . . . and the . . . Defense Outplacement Referral System."

The first briefing for the Task Force's Worker/Community Group on April 6, focused on "Displaced Defense Workers: Transition Issues." The General Accounting Office told the members that DoD will not be able to maintain a balanced civilian workforce by following its current approach to civilian force reductions—voluntary attrition, retirements, and a partial hiring freeze. GAO also believes that DoD will not reach the required personnel reductions without handing out RIF (Reduction-in-Force) notices. GAO also has concerns about the future of the DoD civilian workforce. Various service officials interviewed by GAO believe that DoD's approach to civilian reductions will create future skill imbalances, an aging workforce, a gap in experience levels, and a "hollowed" force.

The Federal Managers Association, in its presentation to the Task Force, emphasized that DoD must establish a master plan for "rightsizing" the Defense Department and institute some innovative measures, especially voluntary separation incentives for DoD civilians. FMA believes such incentives will enable DoD to better manage the composition of its workforce and reduce the number of forced separations.

The American Federation of Government Employees, AFL-CIO, represents over 700,000 federal employees, one-third of whom work for DoD. AFGE presented a number of proposals to the Task Force to help DoD civilians through the downsizing. AFGE advocated a safety net of transitional assistance including a six-month salary bonus to retirement-eligible employees, early-out retirement incentives at installations affected by base closures and realignments, extension of Federal health benefits coverage for one year, and elimination of contracting out in DoD until downsizing is completed. To create jobs for DoD dislocated workers, AFGE recommended enhancing relocation assistance, extending the Priority Placement Program, and funding and mandating the environmental restoration of defense facilities.

Because of the general state of the economy, the overall reduction in defense-related jobs, and the decline in the acceptance rate of DoD employees eligible for early retirement from 18 percent to 5 percent, DoD needs to carefully plan for reducing civilian personnel so as to minimize the hardships on civilian employees and their families.

The Task Force has also been alerted to the changes occurring in the Department of Energy (DOE) weapons complex. Several DOE facilities will be closing, thousands of jobs will be lost, and communities will be impacted as a result of reduced nuclear weapons requirements. The unique needs of the DOE workforce must be recognized and appropriate assistance provided to these workers and affected communities during the transition from nuclear weapons production to environmental restoration in the DOE weapons complex.

Recommendation

2. Direct DoD to make an inventory of training programs within the Defense Department training establishment that can provide skills training for jobs in the civilian

economy. Upon completion, DoD should identify which programs would be applicable to non-DoD civilian employment. Authorize DoD civilian employees facing separation through a reduction in force or base closing action to receive up to one year of skill training in the Defense training establishment while still employed in DoD.

Findings

According to the OTA report, "The armed forces are the single largest trainer in the United States." Basic training, specialty training, and on-the-job training prepare soldiers for a variety of military occupations. Many military occupations have direct civilian application such as electrical maintenance, computer operation, air traffic controlling, financial management, firefighting, and medical assistance. OTA notes that even some combat occupations have skills that are transferable to civilian jobs such as hoist operators and survey technicians.

Currently, the Department of Defense does not have a comprehensive inventory of capabilities for in-house training that might be transferred to the civilian sector. Such an inventory and survey of potential civilian applications would be helpful in providing DoD civilians with an opportunity to receive up to one year of in-house training or retraining while still employed in DoD. This would enable civilians whose jobs end to make a smoother transition into non-DoD employment.

II. HELPING COMMUNITIES ADJUST

A. Office of Economic Adjustment (OEA)

Recommendation

1. Increase OEA staff levels and grant authority for community assistance coordination and planning grant administration.

Findings

DoD's Office of Economic Adjustment (OEA) is useful in providing communities with technical assistance and economic development planning grants. In addition, this office is responsible for coordinating a Federal response to community disruption caused by military reductions.

Through research, briefings, and contact with local communities, the Task Force was informed that OEA is a useful and competent office. However, additional resources would be helpful in allowing OEA to better focus its vital planning function. In FY 1992, OEA was budgeted \$7.5 million. Due to a lack of foresight in planning, the Administration's FY 1993 budget request for OEA is \$4 million. This figure should be increased significantly in FY 1993 Defense Authorization and Appropriation bills. The OTA suggests that the greatest demand for government assistance during the defense reductions will take place during FY 1993. Therefore, the important planning and agency coordination function of the OEA must be emphasized through increased funding levels. These funds would reinforce OEA's role in "helping communities to help themselves" by increasing OEA staff and grant authority to better assist in coordinating community planning.

In January of 1992, this small Pentagon office, consisting of 17 professional staff, was providing assistance to over 100 communities nationwide. An increase in OEA staff for community planning assistance would allow this office to become more proactive in providing important planning assistance toward economic development. In addition, targeted OEA regional offices could be operated to allow staff to respond quickly to and interact more frequently with affected communities. Regional offices, if established, should not hinder the grant administration process.

Inevitably, the pace and scope of a community's economic rebound will be determined by the success (or failure) of the OEA's ability to assist communities with the important function of developmental planning. In FY 1992, OEA will administer \$5 million in planning grant authority. This planning grant authority should be increased to allow the OEA more flexibility in providing important community planning assistance.

B. Economic Development Administration (EDA)

To complete the full cycle of federal assistance to distressed communities, the services provided by the Commerce Department's Economic Development Administration (EDA) are essential. Whereas, the OEA helps communities to formulate a comprehensive rebound plan, the EDA is responsible for funding implementation projects, such as architectural and utility renovation and overall industrial development.

In the 1970's, EDA provided an average of \$3.5 million (in 1991 dollars) for each defense-related project assisted. This figure is indicative of the strong federal role in economic development in the 1970's. During the current defense reductions, the need for similar resolve among federal programs should be anticipated and promoted. Unfortunately, upon reviewing the Economic Development Administration, the Task Force concludes that this office is indicative of the current Administration's hands-off approach toward economic recovery.

The Task Force notes that the EDA has not been included in a President's budget request since FY 1981, nor was it included in President Bush's FY 1993 budget. Continued appropriations by the Congress has kept this office open and operational to date. The current Administration, however, did begin to promise federal funds to economically distressed communities earlier this year.

The current Administration's ambiguity on the importance of EDA is of concern considering EDA's significance in completing a successful community assistance cycle. The planning assistance being orchestrated by the Pentagon's OEA is of little value without the implementation function of the EDA. The OTA estimates that approximately 160 communities will require EDA assistance for defense-related projects by 1997. Unfortunately, the EDA's decade of uncertainty (1981-1991) has made this office painfully unequipped to successfully handle even a remote portion of the upcoming community projects. With an annual budget of merely \$12 million for this effort, the EDA will face an overflow of demand from distressed communities that will seek EDA funds to stimulate economic recovery.

Recommendations

1. Existing EDA Funds: Extend through FY 97 the spending authority on the current \$50 million scheduled to expire on September 30, 1993.

2. Supplement EDA Funds: In FY 93, transfer additional funds from DoD to Commerce for EDA grants through FY 97.

Findings

The Administration delayed the release of the \$50 million in FY 1990 DoD funds to supplement EDA assistance grants. These funds did not reach the Department of Commerce until February 1992 and only \$100,000 have actually been distributed to communities in need. The transferred \$50 million will expire at the end of FY 1993. Increasing demand for EDA services should ensure that these funds are rapidly expended, although an extension of the expiration date would ensure that the funds are fully distributed.

Needless to say, if the President's budget request to kill the EDA is approved, this would bring an abrupt end to numerous constructive community assistance programs that will require EDA's implementation assistance. Furthermore, the Task Force notes that the EDA is the only government agency currently capable of providing communities with economic devastation assistance. As a result, current EDA funding levels appropriated by the Congress would be grossly inadequate for providing necessary assistance to communities suffering from defense and non-defense related economic devastation. The Task Force therefore strongly supports supplementing EDA funds for defense conversion assistance. This should take place through a transfer of DoD fiscal year 1993 funds and by increasing EDA's future funding levels. These funds would allow the EDA to better meet the needs of communities formerly dependent on defense spending. In addition, these actions would be consistent with the Task Force's directive of promoting job creation through economic development.

Recommendations

3. Ensure EDA's Position: The Task Force endorses the mission of the Economic Development Administration which has the function of assisting not only defense dependent communities but also communities which experience non-defense related economic distress. The Administration should be directed to clarify and support EDA's long-term mission of providing support for distressed communities and promoting economic development.

4. Require EDA to streamline the application process and press for better coordination with the Office of Economic Adjustment in making the transition from planning to implementation assistance for affected communities.

Findings

Department of Commerce staff have noted that EDA has not issued constructive policy reform since the office failed to receive the full backing of the Executive Branch in 1981. In short, EDA's policies need to be brought into the 1990's, by concentrating more on effective community programs to help local businesses and communities grow. As a result, constructive reshaping of EDA policies is necessary, so they might better reflect current and future needs. In addition, the insecure nature of EDA's annual battle for survival has hindered the office's ability to maintain a fully effective workforce. As the demand for economic development assistance rapidly increases nationwide, it is imperative that the President clearly defines EDA's role and function. This is necessary to ensure that effective assistance can be provided to communities struggling to recover from a dependence on defense spending.

In addition, the Task Force was informed that applying for and receiving EDA funding is a difficult and lengthy process. Months, or even years, can pass before a community actually receives a grant. To date, although communities have sought over \$23 million in EDA funding, only \$100,000 have been distributed. The EDA should strive to streamline the grant application process.

C. Small Business Administration (SBA)

Recommendation

1. Preferred Loans to Defense Firms: Provide direct, low interest rate loans to small businesses adversely affected by base closings or contract terminations.

their group health plan at their own expense, the reality for many displaced employees is that they will not have the money to pay for continued coverage.

Defense cuts also pose a significant problem for military retirees who live in communities where bases are scheduled to close. Retirees and their families lose a major benefit—access to local base hospitals, clinics, and pharmacies. Consequently, they will be forced to turn to CHAMPUS or Medicare both of which require cost-sharing.

To deal with the urgent, immediate needs of those impacted by defense cuts, Congress should consider encouraging the Department of Defense to provide military retirees in base closure areas with alternative health care options which are both accessible and affordable. In addition, Congress should explore the possibility of assisting the numerous defense industry employees who lose their jobs because of defense reductions, and as a result, lose access to their health care coverage.

Overall, the Task Force believes that the need for quality, affordable health care for dislocated defense workers as well as for all Americans would best be achieved through comprehensive health care reform.

2. Property Disposal

For many years, the General Services Administration (GSA) was operating numerous defense-related property disposal programs, including programs to remove DoD property from a military installation after a base closes. However, due to a policy change in 1988, the Department of Defense began controlling the property disposal programs for closing military bases. The responsibility for removing and disposing of base property was delegated to the various Armed Services.

The Task Force was cautioned about a growing concern among local communities regarding Department of Defense property disposal policies at closing military installations. The Congress should review the policies surrounding base property disposal, in an attempt to monitor and expedite the distribution process of former base property.

III. INDUSTRIAL TRANSITION, ECONOMIC GROWTH, AND JOB CREATION

A. Industrial Transition and Assistance

According to estimates of the Brookings Institution, DoD outlays for goods and services will decline over the period FY1992-FY2001 by as much as 48%. The Administration's own budget figures project a decline of 25% in these outlays over the period FY92-97. Because the Defense Department does not maintain comprehensive records of subcontractors, it is impossible to say just how many firms will be impacted, but it will be many thousand if not tens of thousands.

Some large, prime defense contractors are adopting strategies to survive lowered defense spending by down-sizing their operations. Some are trying to increase non-military sales to branches of government other than the DoD. Large prime contractors are less suited for diversification into new commercial markets than the smaller primes and subcontractor, though, and as such they are less likely to pursue this strategy on a large scale.

Recommendation

1. Fund Regional and State Manufacturing Extension Services.

Facilitate the transition of defense firms into new markets and bring the overall level of U.S. manufacturing technology up to world class standards through support of manufacturing extension programs assisting small and medium sized firms.

Findings

Many small defense prime contractors and subcontractors—which account for approximately one-third of DoD purchases—are more likely than large prime contractors to already have commercial customers, and are more capable of diversifying into commercial markets since the equipment, processes, and labor force used to produce items for the military are often the same as those used for commercial production.

Nevertheless, small defense firms particularly need assistance with sales and marketing if they are to successfully diversify into new commercial markets. Moreover, the productivity and competitiveness of small and medium sized defense and non-defense firms could be greatly enhanced if they became familiar with and implemented best manufacturing practices and up to date, off-the-shelf technologies.

The United States has over 355,000 of these small and medium manufacturing firms (SMEs) with 500 or fewer employees each. They employ 8 to 10 million workers, account for more than half of manufacturing value-added in the U.S., and they are the heart of the subtler firms that support defense prime contractors. Nevertheless, SMEs in general lag in the adoption of advanced manufacturing technology, broadly defined—equipment, worker training, shop floor organization, quality, etc.

One way to address these needs is through support of manufacturing extension centers. These centers operate on a model analogous to that of agricultural extension programs which assist farmers with improved agricultural production methods. The U.S. currently spends less than \$100 million per year on manufacturing extension (\$20 mm federal), compared to \$1.1 billion on agricultural extension. The Germans and the Japanese on the other hand, invest heavily in these services for their industries. Japan has a public network of 170 manufacturing support centers (kohsetsushi) which employ 7,000 employees and receive \$500 million per year in federal funding.

Manufacturing extension programs have been endorsed by several OTA reports, the Competitiveness Policy Council, the Council on Competitiveness, the National Academy of Sciences, and a number of industry associations.

Recommendations

DoC Manufacturing Technology Center

Two manufacturing extension programs are currently operated by the National Institutes of Standards and Technology (NIST), a unit of the Commerce Department's Technology Administration. First are the Manufacturing Technology Centers of MTCs. These centers reach out to small and medium-sized manufacturers, help them modernize equipment and manufacturing practices, and thus help them increase productivity and retain jobs. NIST currently supports five MTCs in Ohio, New York, South Carolina, Michigan, and Kansas, and FY 1992 appropriations will allow the creation of new additional centers. MTCs operate with an annual budget of \$6 million each and are funded jointly by NIST and the applicant, usually a nonprofit corporation affiliated with a state government or university. Centers are selected through a competitive process. An expanded number of centers, and closer links with existing state extension activities, could reach significantly more of the nation's small manufacturers and help retain jobs.

The Task Force esupports expansion of this program.

Recommendation

DoC State Technology Extension Program (STEP)

Another Department of Commerce manufacturing extension service program is the NIST State Technology Extension Program (STEP). STEP helps state governments improve the coordination and effectiveness of their technology and manufacturing extension programs. STEP does this by providing small planning grants to the states through a competitive awards process and by holding workshops and related activities to share information among state governments. STEP currently operates on a very low budget—\$1.3 million per year.

The Task Force recommends that funding for this program be expanded.

Recommendation

DoD Manufacturing Extension Program

A DoD Manufacturing Extension Program has also been authorized, but not funded to assist with transitional needs and to modernize the defense industrial base. This program provides matching DoD funds for a wide range of existing state, local, and non-profit programs including in-factory assistance programs, teaching factories, computer integrated manufacturing (CIM) centers, flexible manufacturing networks, and high-performance manufacturing infrastructures. The emphasis of the program is on deploying proven, off-the-shelf technology and manufacturing methods.

Grants are awarded through a competitive process which emphasizes: 1) The need for integrated programs that tackle interrelated problems of training, management, and technology; 2) Strong involvement by key customer firms, manufacturing equipment vendors, and industry and labor groups; 3) potential to reach defense SMEs making the transition to the commercial sector. The program would be operated with close coordination between the Defense and Commerce Departments.

The Task Force advocates funding for this program.

Recommendation

2. Fund Regional Technology Alliance

Address common industry transition needs and encourage overall economic activity through a focus on regional industrial clusters. Fund regional efforts devoted to applied R&D, specialized training, market research, export promotion, and testbed facilities.

Findings

As Michael Porter writes in *The Competitive Advantage of Nations*, highly competitive industries are almost always found in tightly knit clusters (e.g., optics in Rochester, electronics in Silicon Valley, aerospace in Seattle and Southern California). Defense SMEs in a particular sector tend to locate near prime contractors of federal R&D facilities, and thus are often geographically clustered. These regional clusters offer common opportunities and common problems such as transitional assistance, worker training, R&D, export promotion, and the supplier-customer communication necessary to compete in high-value-added commercial markets.

The Regional Technology Alliance program in the Department of Defense (also known as Critical Technology Application Centers) is a way to address these needs. This program, which has been authorized but not funded, would provide federal support for a system of regional, sectorally-based alliances, with top priority for defense-dependent areas. The alliances would be industry led with participation by state

and local agencies and universities. Funds would be awarded on a competitive basis with the federal share of funds equal to 50%.

A particular goal of the program would be the promotion of supplier networks and other forms of inter-firm collaboration. It would also provide applied R&D and shared industrial services oriented to SMEs making the transition from defense to commercial production. Such services would include: testing facilities for new products and prototypes; design and management assistance; education and training; manufacturing extension; market research and monitoring; export promotion; quality testing and standards certification; and other services as determined by member firms.

OTA recommends this approach in *After the Cold War: Living with Lower Defense Spending*, as does the Los Angeles Economic Roundtable in "Transforming a Defense Dependent Industrial Base." Existing alliances are already tackling defense adjustment e.g., Florida's Technology Coast Manufacturing and Engineering Network; Massachusetts' Machine Action Project.

Recommendation

3. Provide DoC Grants for Regional and State Industrial Services Programs

Promote a quick and flexible response to the transitional needs of defense and other industries through support of state and regional industrial services programs.

Findings

Many of the federal programs described above (STEP, DoD Manufacturing Extension Program, Technology Alliances) are decentralized in nature; that is they provide matching federal funds for existing state or regional programs. Because state governmental entities are so close to the problems of firms and workers in their own areas, they can often provide a quicker, more flexible, and more appropriate response to their individual state problems than the federal government can.

To provide additional support for state assistance to industry, and to improve coordination with ongoing federal efforts, the Task Force proposes that a new grant program be developed within the Department of Commerce's State Technology Extension Program. These grants would have three purposes: 1) to promote "one-stop shopping" for companies through the coordination of all Federal and state resources devoted to assisting small defense and non-defense manufacturing firms, including not only technology extension programs but also export promotion services, Small Business Development Centers, worker training programs, and other industrial services; 2) to assist in the creation of industrial services programs in states without them; and 3) to provide direct funding support to ongoing state industrial services programs.

Recommendation

4. Provide Trade and Export Assistance

Overseas markets can provide diversification opportunities for defense firms looking for non-military, commercial opportunities and for non-defense firms looking to expand.

Findings

In an increasingly competitive global economy, exports are fast becoming a major component of business growth. Indeed, during the 1980's, exports provided the engine for U.S. expansion, accounting for about two-thirds of the total growth during the decade. Nonetheless, the U.S. has not yet reached its full potential for exporting, and most other Western industrialized nations export a much higher percentage of their output.

Much of this is attributable to broad political and macroeconomic factors, such as the federal budget deficit and trade barriers abroad. However, it is also clear that U.S. export promotion programs are underfunded and lag far behind those of our competitors. For example:

In FY 1991, according to the General Accounting Office, the U.S. spent \$2.67 billion on export promotion programs. About three-fourths of this amount—\$1.97 billion—is spent by the Agricultural Department.

In 1987, according to the Commerce Department, Canada spent almost \$17 per capita on commercial services, while the U.S. spent \$0.41 per capita to promote industrial exports.

In 1990, according to figures compiled by the Commerce Department, France maintained one foreign commercial officer in Tokyo for every six French businessmen there, and Italy maintained one foreign commercial officer for every two Italian businessmen. The U.S. had one for every 62 businessmen.

Recommendation

Increase Funding for U.S. and Foreign Commercial Service

The U.S. and Foreign Commercial Service maintains a network of offices in the U.S. and in major countries across the globe. By helping U.S. companies expand their contracts in other countries, the US&FCS serves literally on the "front lines" in the export promotion effort.

A 1989 GAO report found considerable disorganization at many posts in the U.S. and abroad. However, the US&FCS has just completed a full-scale strategic review of its mission and operations, including the performance of its computer network, the Commercial and Information Management System (CIMS). The GAO and other observers believe the US&FCS has made strong progress in tightening up its organization. What it lacks now is funding.

For FY 1993 the Administration requested \$115.8 million for the US&FCS, a decrease in real terms from the FY92 level of \$114.1 million. The Task Force recommends a gradual but steady increase in US&FCS funding.

Recommendation

Increase funding for the Trade and Development Program

This program provides financing for feasibility studies and other planning project services for major development projects throughout the developing world. These projects, once underway, often provide a large yield to U.S. exporters. It is commonly estimated that each dollar spent on the TDP program eventually yields approximately \$70 in U.S. exports.

For FY 1993 the Administration requested \$40 million for the TDP, an increase over the FY 1992 level of \$35 million. The Task Force recommends that funding for the TDP program be increased further.

Though not a formal recommendation, the Task Force also believes serious consideration should be given to implementing the Market Development Cooperator Program. This program, established in the 1988 Trade Act, requires the Secretary of Commerce to enter into agreements with non-profit industry associations, trade organizations, private industry firms, and state government departments of trade, to promote non-agricultural exports. This program is modeled after similar programs which have been successfully implemented for the agricultural sector. It has not yet been formally implemented by the Department of Commerce.

Title II of the Omnibus Export Administration Amendments Act of 1991, currently

awaiting a House-Senate Conference, would establish a \$5 million line-item for this program. The Task Force believes this proposal has great merit.

Recommendation

5. Amend DoD Recoupment Policy

Encourage defense firms to diversify and achieve a payoff for the commercial economy from defense R&D by revising the policy which currently requires recoupment of R&D money spent on military technologies that are commercialized.

Findings:

Diversification into the commercial sector is difficult for large prime defense contractors, in part because the technical nature of defense production is different from commercial production, e.g., special processes, equipment, and skills used to assemble large weapons systems such as tanks and aircraft.

Nevertheless, defense contracting as carried out by the large primes is so different from commercial production, primarily because of the many unique requirements that the DoD places on the contractors. These requirements include unique accounting practices, auditing practices, procurement practices, military specifications and standards, and other features unique to the defense business.

The DoD and Congress should work prudently to ease these barriers to civil-military integration. Doing so will decrease the defense dependency of military contractors and make future defense down sizings easier for firms. Moreover, the discipline of the commercial market would be likely to encourage greater efficiency in the defense-industrial base, and the technical advances and revenues flowing from commercial activities would reduce the need for government subsidization of R&D and production for defense goods.

Much work needs to be done to make civil-military integration a reality. The Task Force makes one recommendation in furtherance of this goal, namely that the DoD revise its policy requiring recoupment of government R&D spent to develop defense technology which is later turned into commercial products and sold.

As a matter of law, when defense companies sell defense equipment to foreign countries, the companies are required to add to the cost of any such equipment any non-recurring costs of developing the equipment that were paid for by the U.S. government, and to allow the U.S. government to recoup those costs. E.g., if the U.S. government paid for R&D on the system, then a portion of the R&D must be attributed to all subsequent sales, and that portion is repaid to the U.S.

As a matter of policy, not law, DoD has expanded the recoupment policy to cover components. In the 1980s, the policy was further expanded to cover technology. This imposes a significant paperwork burden on companies, because it requires them to track all technology they use, to determine what was developed at DoD expense, and to add that cost to the price of the product.

The difficulty of tracking components and technology serves as a powerful disincentive to the application of defense technologies in the civilian sector, and adds to the cost of civilian products that use defense technologies.

The Task Force initiative would limit the application of DoD's recoupment policy to those areas where it is required by law (e.g. foreign military sales of specific equipment), so that defense companies would not have to track the use of technology and components. This would encourage DoD companies to apply their expertise in the civilian

sector without the paperwork and financial burdens that have been imposed by DoD's recoupment policy. Such a revision will benefit defense companies which would be more diversified and hence less vulnerable to defense downsizing, and it will benefit the economy in general which will enjoy the fruits of government funded defense R&D.

B. Investment in Growth Technologies

In the long run, adjusting to lower defense spending and to the structural changes that have battered our economy over the last decade can only be accomplished by private and public investment in strategies and programs which create economic growth. Economic growth depends on increased productivity, product innovation, and leadership in industries with a high multiplier effect for the economy, all of which create higher wages.

A comprehensive growth strategy designed to realize all of these goals would necessitate broad recommendations covering fundamental education and training reform, deficit reduction strategies, changes in tax policy and financial regulation to encourage formation of patient capital, strategic trade policy, and a strategic technology policy.

The Task Force charter was not broad enough to make thorough recommendations in all of these areas. Instead, the focus on transition and reorientation led to a set of growth recommendations guided by the concept of reinvesting defense money and resources in projects which offer high potential pay-off for the commercial economy. Central among such projects are efforts to develop critical technologies which underlie the high value-added, high wage, growth industries of today and the next century. In addition to fostering long-term economic growth, such investments will also provide immediate transitional assistance, since these investments mean new R&D opportunities for companies facing the loss of defense projects.

The U.S. Government spends approximately \$70 billion per year on R&D, sixty percent of it for defense related R&D. As a percentage of GNP, the U.S. spends only two-thirds the amount on non-defense R&D as our major competitors the Japanese and the Germans do. Commercial spinoffs of defense research do occur, but relying on spinoffs is not a reliable or efficient way to achieve commercial technological innovation.

While larger overall investment in R&D might be desirable, it is clearly important that with the end of the cold war, the U.S. should be investing a larger portion of its R&D in projects which benefit the commercial economy. Moreover, that portion of the R&D budget which continues to be spent for defense needs should be spent in such a way that it provides greater commercial benefits—so called "dual-use" R&D.

Recommendation

1. Fund Critical Technology Partnerships with Industry

Vie for leadership in the industries of the 21st century and create R&D opportunities for defense and non-defense firms through grants to industry-led partnerships developing critical technologies.

Findings

Because the technical risks and financial barriers to developing critical technologies are so great, no one company has the resources or is willing to take the risks to individually develop some of these technologies successfully. Therefore, it will be necessary for the government to act as a catalyst as well as a backer in some cases, of U.S. industries' efforts to develop and lead in the application of these new technologies.

Moreover, while government substantially directs what defense R&D is performed since it is the ultimate consumer of most defense goods, commercial industry should have a much bigger role in directing commercial needs. Government partnerships with industry are the model to follow for developing many critical technologies. Federal support for commercial R&D can be leveraged and effectively focused if matching requirements are placed on industry recipients. Industry R&D can often be more effective if conducted by consortia and other types of cooperative ventures. Finally, competitive selection of R&D recipients should almost always be the rule when awarding funds.

Several government authorities exist or have been proposed to administer funding for industry R&D partnership programs.

Recommendation

DoC Advanced Technology Program (ATP)

The Task Force proposes a significant expansion of the Advanced Technology Program (ATP), operated by the Commerce Department's National Institute of Standards and Technology (NIST).

Findings

The ATP was created by the 1988 Omnibus Trade and Competitiveness Act and makes awards to companies and groups of companies to support industry-led projects to accelerate the development of important new technologies in such areas as electronics, advanced manufacturing, advanced materials, and bioprocess engineering. Industry shares in funding the projects, and awards are made through a competitive process. The ATP does not support the development of products. Instead, it supports industry-led efforts in the "precompetitive" stage of research, when difficult technical problems must be overcome before companies can turn promising laboratory inventions into successful commercial products. By helping industry with long-term, often economically risky research and development, the ATP helps speed the commercialization of new technologies and helps ensure that American companies get the benefits of American inventions.

To date, the ATP has made two rounds of awards. In March 1991, DOC made its first ATP awards—11 grants totalling \$9 million. In April 1992, DOC awarded 27 new grants based on FY 1991 appropriations. FY 1992 appropriations of \$49 million will fund a third round of awards. Expanded funding would allow the ATP to support many more industry-led R&D projects.

Recommendation

DARPA Dual-Use Technology Partnerships

The task force recommends that an increased portion of DoD budget be devoted to the Defense Advanced Research Projects Agency's program to enter into dual-use technology partnerships with the private sector.

Findings

These partnerships, which are competitively selected by DARPA and are cost-shared with the private sector, generally involve consortia of private sector firms. These partnerships prominently demonstrate the importance of achieving civil-military integration for technological purposes, since they enable DARPA to stay abreast of private sector R&D efforts in critical dual-use technologies where the commercial marketplace, not the defense sector, increasingly drives technology development. Moreover, they enable the private sector participants to develop and apply these technologies both for commercial and defense purposes more rapidly than they could with

only their own resources. Much like the commerce ATP program, the DARPA R&D grants do not support the development of products. Instead, they support industry-led efforts in the "precompetitive" or "generic" state of research.

This program was first authorized in fiscal year 1991 by the Congress. It received a \$50 million appropriation in FY91 and a \$60 million appropriation in FY92. The administration did not request funds for the program in fiscal years 1992 and 1993, but DARPA has faithfully implemented it.

DARPA is using the first two years' funds to set up thirteen consortia in areas such as optoelectronics, electronics, advanced materials and high-speed communications.

The average DARPA investment in a partnership has been \$8 million. In most cases the private sector has at least matched the DARPA investment. DARPA has closely coordinated this program with the Commerce Department's Advanced Technology Program.

Recommendation

Support Ongoing Civilian Aerospace R&D Partnerships in NASA

Findings

An integral part of NASA's mission is to be the catalyst for the development of technologies useful to civilian aviation and space industries. NASA fulfills this role by funding R&D projects in these areas in cooperation with industry. For instance, NASA's Office of Aeronautics and Space Technology conducts research and development on technology which strengthens the leadership of the U.S. in aviation and space use. Technologies development by this office or in development include flight controls for aircraft, technologies for aging aircraft, the next generation Concorde, new launch techniques, and communications technologies.

NASA's Office of Commercial Programs supports efforts to develop the new commercial opportunities that space offers. This office funds a group of Centers for the Commercial Development of Space located at universities around the country, which develop technologies in cooperation with industry including robotics, materials processing in space, and remote sensing technologies.

The U.S. aerospace industry enjoyed a \$30 billion trade surplus in 1991, the largest of any domestic manufacturing industry. As DOD funding of aerospace R&D falls, NASA's role in this area will become even more important. While the Task Force does not necessarily recommend increased funding for the NASA aerospace R&D partnership, it recognizes the critically important role the agency and the space program play in maintaining a strong U.S. aerospace industry, and it recommends continued support for these ongoing efforts.

Recommendation

Initiate the National Environmental Technologies Agency To Fund Grants for Environmental R&D.

Findings

Legislation to create the National Environmental Technologies Agency (NETA) was introduced by Senator Mikulski on April 29, 1992. The goal of NETA is to assist private industry, universities, and nonprofit research centers in developing environmentally sound and energy efficient technologies to help secure America's environmental security and competitiveness.

According to the Organization for Economic Cooperation and Development, environmental technologies currently represent a \$200 billion per year market which will grow to \$300 billion per year by the end of

the decade. The Task Force recognizes the importance of this class of technologies for future U.S. jobs and economic activity. Examples of such technologies include air pollution control products, water treatment equipment, lead-free products, and others.

NETA would be a small independent agency modeled after the highly successful Defense Advanced Research Projects Agency, or DARPA. NETA is designed to reduce bureaucracy by coordinating efforts of other agencies and streamlining support for research and development. Once formed, the Agency would identify areas that need technical solutions and that are not receiving product oriented research.

NETA would provide support for these efforts by offering loans and grants, or by entering into cooperative agreements with the private sector or the university community. NETA would then assist in deployment of these technologies by coordinating exchange of information and by providing the needed technical assistance to transfer these ideas into consumer and industrial products and equipment.

Recommendation

2. Emphasize Dual-Use in DOD R&D

Within the DOD R&D budget, set aside additional funds for projects that meet significant defense needs and that have a potential for application in the civilian sector.

Findings

Given the substantial reductions in defense expenditures anticipated over the next five years, we can no longer expect defense R&D to be performed primarily by defense-dependent firms that invest substantial amounts of their own funds in R&D in anticipation of profitable returns during large production runs.

We will instead need to rely to a much greater extent on firms that are not dependent primarily upon government funding, but which have a strong commercial base. In addition, defense needs will increasingly be met through the application of dual-use technologies and products.

DoD currently invests in R&D on the basis of specific military priorities. In setting priorities, DoD does not take into account potential civilian applications. The Task Force initiative would encourage DoD to increase its investment in technologies which meet significant military needs, but which also have a substantial potential for civilian applications.

The focus would be on areas where industry has been reluctant to invest its own funds because of risk or the long term of research required before payback. This initiative would build on the successful initiation of the Strategic Environmental Research and Development Program, which has led to DoD giving a much higher priority to R&D programs that serve the dual-use objective of military environmental restoration and civilian environmental clean-up.

The Task Force proposal would require DoD to give greater emphasis to areas of defense research which are now under-funded and which have potential civilian applications, such as computer and communications technology related to military logistics, energy efficiency in military transport, energy conservation in military facilities, and DARPA dual-use partnerships.

Recommendation

3. Increase Small Business Innovation (SBIR) and Research Funding

Capitalize on the resourcefulness of small U.S. companies and increase opportunities in key emerging industries by increasing the set-aside for R&D matching grants to small firms. Focus grants on critical technologies with highest economic potential.

Findings

The SBIR takes 1.25% of the extramural research and development funds of agencies having over \$100 million in that budget category, and provides it in three stages of grants and contracts for specific work to small businesses to help commercialize promising technologies/products that Federal agencies think would be helpful for their mission and commercializable. Extramural refers to R&D projects performed outside of government labs. The program is designed to (1) stimulate innovation; (2) assist small businesses in meeting federal research and development needs; (3) encourage minority and disadvantaged persons participation in innovation; (4) increase private sector commercialization derived from federal R&D.

Eleven agencies participate in the program. Five of them—the Department of Defense (DOD), the National Aeronautics and Space Administration (NASA), the National Institutes of Health (NIH), the Department of Energy (DOE), and the National Science Foundation (NSF)—provide over 90 percent of all SBIR funds. Although the Small Business Administration (SBA) is responsible for publishing policy guidelines on and conducting general oversight of the program, each agency maintains its own separate program. The SBIR has three phases to it:

(1) An agency puts out requests for proposals for concepts/products/technologies that they need developed. The agency may award grants up to \$50,000 per proposal to evaluate the scientific and technical merit and feasibility of the concept which is of interest to the agency. This phase usually lasts about 8 months.

(2) Those projects which show potential after the Phase I evaluation can compete to perform principal research and development on the concept for up to \$500,000. Funding for Phase II awards usually lasts 1-2 years.

(3) Ideally, funding for commercialization in the last phase comes from the private sector, though an agency may choose to contract with the small business to manufacture the technology, provided that non-SBIR funds are used.

The Task Force recommends that the percentage of funds earmarked for the SBIR be doubled over a five year period.

Recommendation

4. Reorient Defense Labs

Redirect these crown jewels of the national R&D infrastructure toward national needs and assisting commercial industry now that the Cold War is over.

Findings

Federal defense laboratories at DOD and DOE spend approximately \$10 billion per year and have great expertise in a wide range of advanced technologies. An opportunity now exists to reorient and consolidate many of these laboratories to help American commercial industry. The laboratories already have clear legal authority to work with companies and an increasing need to do so, given that the commercial marketplace increasingly leads in new technological developments; but so far (with only a few exceptions) laboratory assistance to industry has been small. A new funding mechanism is needed which will support industry-led proposals at the federal laboratories.

Recommendation

Industry-Laboratory Partnership Program

Establish a set-aside in DOD's and DOE's defense laboratory budgets to support industry-led R&D projects. Companies and consortia would propose projects on a cost-shared basis, and awards would be made through a competitive process. The compa-

nies would decide with which of the agency's laboratories or laboratory programs they wish to work. We propose an initial set-aside of 2 percent for the first year, 5 percent for the second through fifth years, and 10 percent for subsequent years. During the first year this set-aside would generate about \$200 million for these activities. Agencies and defense laboratories also would be required to set up industry-university advisory committees to advise agency heads on which agency technical capabilities might be of most use to industry.

Recommendation

Amend Stevenson-Wylder Act

Amend the Stevenson-Wylder Technology Innovation Act of 1980, which governs technology transfer from federal laboratories, to require that "dual-use" R&D performed by defense laboratories be done in partnership with industry whenever possible. This step will speed the transfer of technology to commercial industry and will ensure that commercial companies can produce these technologies for the military.

Recommendation

National Academies Study

Commission a study by the National Academy of Sciences and the national Academy of Engineering to examine what role the government labs, particularly defense labs, should fill now that the Cold War is over, and how the labs can best fill this role.

Recommendation

5. Fund AgileTech

Support establishment of the Agile Manufacturing Technology Corporation (AgileTech), a private, non-profit consortia of companies and existing consortia, to pursue the research, development and deployment of the technologies and standards necessary for an agile manufacturing infrastructure.

Findings

A new competitive environment for industrial products and services is emerging, forcing a change in manufacturing. Competitive advantage belongs to "agile" manufacturing enterprises that are capable of responding rapidly to demand for high quality, highly customized products.

Agility requires integrating flexible technologies of production with the skill base of a knowledgeable work force, and with flexible management structures that stimulate cooperative initiatives within and between firms.

Agile manufacturing capability will be crucial for commercial industry, and eventually government R&D on agile manufacturing should feature a prominent role for, if not leadership by, one of the civilian technology agencies. Nevertheless, the DOD—which would fund this program—has a strong interest in agile manufacturing since defense-dependent companies, particularly the small and medium-sized firms that make up the backbone of the defense industrial base, do not have the agility or supplier-customer connections necessary to successfully compete in the commercial sector. Moreover, the defense industrial base of the future must have the ability to respond rapidly to changes in the security threat and ramp-up specialized production if necessary. Finally, a large majority of the initial industry participants in the project are defense contractors (at the prime or subprime level).

AgileTech is an industry-developed, industry driven approach to establishing the manufacturing infrastructure necessary for competitive production over the next decade and beyond. Industry would be required to match federal contributions to the project.

All research, development, and deployment will be done through existing entities.

Recommendation

6. Extend the R&D Tax Credit

Help make American industry the most technologically advanced in the world through extension of this tax credit for research and development expenditures.

Findings

The Task Force found that in addition to providing direct matching and cost-sharing support of industry research, the government should encourage companies to independently invest significant amounts of their own money in R&D. Section 41 of the Internal Revenue Code currently provides a 20% tax credit to companies for the amount of qualified research expenditures which exceed a base level for the company for the year. Research expenditures eligible for the incremental credit consist of (1) in-house expenses for research wages and supplies; (2) certain time-sharing costs for computers used in research; and (3) 65% of the amount paid for contract research. The credit can also apply to certain corporate cash expenditures supporting university basic research.

A provision of the Tax Fairness and Economic Growth Act of 1992, H.R. 4210, would have extended this provision, which is scheduled to expire June 30, 1992; however, President Bush vetoed the bill and Congress was unable to override the veto.

The Task Force believes this provision should be extended.

Recommendation

7. Provide Grants for Manufacturing Education and High Skills Retraining Grants for Manufacturing Education

Engineers and managers heading into industry must be trained in the latest manufacturing techniques if U.S. industry is to lead in world competition. Many manufacturing engineering programs lack funding for advanced curricula and equipment. Moreover, programs need to be closely linked to the industry to insure familiarity with current industry challenges and technologies.

The Task Force recommends a program of matching grants to support new programs or enhance existing programs in manufacturing engineering and management at the undergraduate and graduate level.

Programs funded through these matching grants must combine research, classroom training, and work experience, and have strong ties to industry. Grant recipients would be competitively selected by the DOD—where the program was previously authorized—and by the NSF. The program received a \$25 million appropriation for FY92 but is on the Administration's rescission list.

Grants for Retraining of High Skill Defense Workers

OTA estimates that from 1990 to 1995 as many as 127,000 defense engineering jobs could disappear due to the winding down of established weapons programs, and a scarcity of new programs. Many defense engineers will find that to be competitive in the commercial job market they need new skills or specialties, up to date training, or an advanced degree. Because the NSF has developed an unparalleled interface with the academic community and has tightly integrated science and engineering with educational objectives, it can assist with this transition in several ways.

NSF can work with the academic community and engineering professional societies to establish and develop responsive continuing education and retraining programs

based on existing programs. Effective academic curricula can be developed for mid-career engineers, which build on the knowledge gained through years of experience and are directed toward practical civilian applications. NSF also has unique experience with distance learning programs that can bring courses directly into the work place. This experience allows NSF to offer engineers suitable courses with a minimum of lost work time.

NSF supports ongoing engineering research activities, such as Engineering Research Centers, which carry out work closely connected to civilian industrial needs. These efforts can be supplemented to provide engineers retraining opportunities at centers, engineering schools, and community colleges.

Recommendation

8. Extend the Employer-Provided Educational Assistance Tax Credit

Extend this provision to encourage businesses to continually invest in upgraded skills for their employees.

Findings

As so many of the preceding Task Force recommendation bear out, the watch words for economic strength in America are, technological change. As the pace of technological change increases, workers will have to adapt, learn new skills, and new ways of thinking. While it is in companies' best interest to enable their employees to adapt to this change, it is also in the country's best interest since a highly skilled work force enables our country to support industries which create wealth for us all. Accordingly, the Task Force believes the government should give companies incentives to continually invest in upgrading their employees' skills.

The Internal Revenue Code currently allows employees to exclude from income for tax purposes, amounts paid by their employers for educational assistance provided through an educational assistance program that meets certain requirements. The exclusion is limited to \$5,250 of educational assistance per year. In the absence of this exclusion, an employee generally would be required to include the value of the educational assistance in his or her income, for tax purposes.

A provision of the Tax Fairness and Economic Growth Act of 1992, H.R. 4210, would have extended this provision, which is scheduled to expire June 30, 1992; however, President Bush vetoed the bill and Congress was unable to override the veto.

The Task Force believes this provision should be extended.

Additional Comments

The DOD does not maintain extensive records on its contractor and subcontractor base. Such information could greatly facilitate a more intelligent downsizing designed to minimize damage to the economy. Moreover, this information gap could hamper Congress' efforts to assist firms and workers adversely affected by defense cuts. The Task Force believes the DOD should improve the accuracy and adequacy of data about defense subcontractors.

A second information gap was identified by Task Force member Senator Brock Adams, who also made a proposal to address this gap. Defense firms have indicated that their greatest difficulties in making the transition to commercial sales are: (1) in determining which of their products or services could be competitive and (2) in obtaining adequate information on target markets. Senator Adams proposed that the National Academy of Sciences study the first prob-

lem: Identification of commercial application products/technologies.

Under this proposal, the National Academy of Sciences (NAS) would undertake a 6-month expedited, priority study of the U.S. defense industry to identify those products that hold promise for commercial use, both immediately and given further development. This study would identify the products or technologies that are available for commercial application, the type of government assistance that will be needed, and where the private sector should focus its energies and resources.

Once the NAS study has been completed, information is needed on potential markets. Senator Adams proposes to use the Department of Commerce's Commercial Information Management System (CIMS) to address this problem. CIMS could be used to target foreign markets for the products and technologies identified by the study. This market information would then be made available to any interested company to assist in the transition to commercial sales.

Though not a formal recommendation of the Task Force, we believe this proposal by Senator Adams has merit and deserves further consideration.

LIST OF SPEAKERS FOR DEFENSE/ECONOMIC CONVERSION TASK FORCE BRIEFINGS

Overview Briefing

Ed Knight, Economic Adjustment and Conversion Issues, CRS.

Andrew Mayer, Base Closure Issues, CRS.

Gary Pagliano, Defense Industrial Bases Issues, CRS.

Jeff Hornbeck, Regional Economic Adjustment Issues, CRS.

Jack Moteff, R&D Issues, CRS.

Ann Lordeman, Job Training and Location Assistance Issues, CRS.

Kitty Gillman, Office of Technology Assessment.

GROUP I (WORKER/COMMUNITY)

Displaced Defense Workers: Transition Issues

Edward Gleiman, Staff Director of Subcommittee.

Barry Holman, GAO National Security and International Affairs Division.

Bruce Moyer, Legislative Council for Federal Managers Association.

Beth Moten, Leg. Director for American Federation of Government Employees, AFL-CIO.

James Sommerhauser, Pres. International Federation of Professional and Technical Engineers, AFL-CIO.

Alan Reuther, Leg. Director United Auto Workers.

Private Sector Retraining Issues

Dr. Anthony P. Carnevale, Exec. Director of Institute of Workplace Learning at the American Society for Training and Development.

Peggy Taylor, Associate Legislative Dir. AFL-CIO.

Calvin Hines, AFL-CIO.

Peter Mannella, NY State Dept. of Economic Development and NY State Defense Task Force.

Matt Kane, Staff Economist Northeast-Midwest Institute.

John Lederer, Senior Policy Analyst at Human Resource Policy Studies at National Governors' Association.

Existing Federal Programs

Paul Dempsey, Deputy Director of Office of Economic Adjustment, DoD.

Jim Van Erden, Administrator of Office of Work-Based Learning, DoLabor.

Bob Colombo, Director of Title III, DoLabor.

Steven Brennen, Acting Deputy Asst. Sec. for Program Operations, Economic Development Administration, DoCommerce.

Don Patch, Office of Community Planning and Development, DoHUD.

Mary Lukens, Assoc. Deputy Administrator for Business Development at Small Business Administration.

David Witschi, Director Economic Adjustment Division Economic Development Administration DoCommerce.

Base Closings: A Health Care Crisis for Military Retirees

Chris Jennings, Deputy Staff Director, Special Committee on Aging.

David F. Burrell, CRS, Foreign Affairs and National Defense Division.

Bob Goldich, Foreign Affairs and National Defense Division, CRS.

Rick Storey, Project Leader, Joint Services Group on Health Care Initiatives for Non-Catchment Areas, DoD.

Ron Stephen, Co-Chair of Hospital Subcommittee of Carswell AFB Reuse Task Force.

Repositioning Military Personnel in Civilian Settings

Mary Smith, Education and Public Welfare Division, CRS.

Fred Pang, Professional Staff, Senate Armed Services Committee.

Maj. Bill Crews, Office of Assistant Secretary for Veterans Employment and Training, DoLabor.

GROUP II (INDUSTRIAL/TECHNICAL)

Technology Application and Industrial Expansion Services

Walt Flosila, Head of Montgomery Co. High Technology Council.

Jack Russell, V.P. of Michigan Industrial Tech. Institute.

Joe Houldin, Director of Delaware Valley Industrial Resource Center.

Dr. Robert White, Undersecretary of Technology, DoCommerce.

R&D Policy and Labor Adjustment

Erich Bloch, Distinguished Fellow at the Council on Competitiveness.

Craig Fields, President and CEO of MCC.

Jacques Gansler, Senior V.P. of TASC.

Dr. Roger Nagel, Operations Director of Iacocca Institute at Lehigh U.

Dr. John Alic, Senior Associate at Office of Technology Assessment.

Trade Assistance, Tax Incentives, and Capital Costs

Dr. Gary Hufbauer, Visiting Fellow, Institute for International Economics.

Robert Kuttner, Economics correspondent for the New Republic.

Dr. David B.H. Denoon, Prof. of politics and economics at NY University.

Dr. Ian M. Ross, Chairman of the Nat'l Advisory Committee on Semiconductors.

Julle Gorte, Project Manager with Office of Technology Assessment.

Corporate Diversification/Conversion

Jack Nunn, Senior Analyst with Office of Technology Assessment.

Calvin C. Coolidge, Director of D.C. Office of Texas Instruments Defense Systems and Electronics Division.

Harvey Kreisberg, Director of Corporate Development for ALL Systems.

James A. McDivitt, Senior V.P. of Rockwell International.

PROPOSALS FOR DEFENSE TRANSITION

House Science, Space and Technology Committee

Skip Stiles, Legislative Director.

Robert Palmer, Senior Policy Coordinator.

National Commission for Economic Conversion and Disarmament

Dr. Greg Blichak, Executive Director.

House Armed Services Committee

Larry Smith, Councilor.

Bill Andahazy, Professional Staff.

Chris Aldridge, Professional Staff.

Defense Budget Project

Peter Schmidt, Economic Policy Analyst.

Carol Lessor, Outreach Coordinator.

State of New York

Amy Mall, Legislative Assistant. ●

ECONOMIC RECOVERY AND THE HOUSING INDUSTRY

● Mr. SEYMOUR. Mr. President, there has been a great deal of talk in this body over the past few months about economic recovery, but very little action. Of last, many indicators point to the beginning of an economic recovery, but this week's news from the Commerce Department is cause for alarm.

As you know, the Department reported starts of new homes slowed dramatically last month, dropping 17 percent below the March rate. The March housing start rate, which registered an increase of 74 percent over the February rate, offered a long overdue positive sign of recovery, but this new drop shows just how precarious the recovery is at this time.

Mr. President, leading indicators such as gross domestic product, the unemployment rate, and the Index of Industrial Production all show modest but positive movement in the economy. But the announcement earlier this week by the Commerce Department casts a dark cloud on the recovery. It is very possible that it is only a passing cloud in an otherwise brightening sky. But after last year's failed recovery, we cannot just sit back and wait to see what happens. I hope the forecasts are correct and that this cloud will pass, but we cannot rest easily on hope alone.

Now is time for action to ensure that 1992 will not be a replay of 1991, when the year began with a tentative recovery that did not live up to expectations.

We need to do our part to spur investment in the real estate economy. Specifically, we need to enact a first-time homebuyer tax credit, and we need to do it soon. I and the other members of the Senate Republican Task Force on Real Estate, which is chaired by Senator DOMENICI, have been pressing for the enactment of such a tax credit since the beginning of the year. This is an idea whose time has clearly come.

In fact, one of the very reasons cited for the explosive growth in home starts in March may have been heightened confidence on the part of first-time homebuyers in response to the President's leadership on this issue.

I am afraid, Mr. President, that the Congress is lagging behind the American people who understand how important this tax credit is for those who seek to participate in the American dream of homeownership. Now is the time to listen to the American people

and pass this credit for the good of the economy.

We all know the saying "as real estate goes, so goes the economy." Without a strong recovery in the real estate industry, full recovery for the economy as a whole will be all the more difficult.

I am particularly concerned about my State, Mr. President. As we all know, uncharacteristically, California has been hit harder by this recession than the rest of the Nation. For example, California's unemployment rate stood at 7.7 percent of the labor force in the final quarter of 1991—well above the national average—and, according to some projections, it is expected to remain above 8 percent through this summer.

Well, Mr. President, my first priority, as I consider any legislation this year, is jobs. How can we create more jobs? As I discussed at length before this body 2 months ago, every \$1 million spent in the new home market creates 29.6 jobs, and the same dollar in the resale market will create an additional 22 jobs, so this tax credit is step in the right direction.

Job creation must be our litmus test for legislation this year, Mr. President, and this is one proposal—a tax credit for first-time homebuyers—that clearly passes the test. ●

TAIWAN CELEBRATES MAY 20, 1992

● Mr. BURNS. Mr. President, I rise to note that today, May 20, 1992, marks the second anniversary of President Lee Teng-hui's first term in office and I wish to join my colleagues in wishing President Lee good fortune and the Republic of China continuing political stability and economic prosperity.

When visiting Taiwan several years ago, I was able to spend some time with President Lee. I was impressed. Since then, he has proven to be a successful leader of his nation. Under his leadership, Taiwan's economy has continued to grow, and Taiwan has had an impressively low unemployment rate. Just as important has been the steady progress toward more political freedom and democracy. Taiwan could serve as a model for reform in mainland China.

Our trade relationship with the Republic of China is one that is highly valued by the United States and mutually beneficial. While there have been some trade disagreements between our countries, as there are disagreements between any group of friends, we appreciate Taiwan's willingness to negotiate in good faith with us on these issues.

I would also like to acknowledge Ambassador Ding Mou-shih, Taiwan's representative in the United States. Much of the cooperative attitude and spirit between our countries is directly attributable to his presence. Ambassador Ding and his staff have made the

APPENDIX B



**MAINE
ECONOMIC
CONVERSION
PROJECT**

Thornhurst Road
Falmouth, ME 04105
(207) 781-3947

Director
Susie Schweppe

Board of Directors

Winn Price
Bath Iron Works
Tom Ewell
ME Council of Churches
Jim Mackie
Local 6 IAM
Burt Wartell
Local 6 IAM
Andrew Tonks
Educator
Rep Cush Anthony
Maine Legislature
Jon Reitman
Mediator/Facilitator
Councillor John Nelson
Educator
William Dill
ME Education/Training
Export Program
Rep Carol Kontos
Maine Legislature
Judy Feinstein
Public Health Assoc
Vance Goldstein
Dept Business USM
Nicholas Karvonides
Fiber Materials Inc
Frank O'Hara
Market Decisions
Frazier Kellogg
Resource Economist
Carla Dickstein
Coastal Enterprises Inc

ECONOMIC CONVERSION PROJECT
1992 - 1993 Program

EXECUTIVE SUMMARY

The Situation

We live in an extraordinary time in the history of our state, nation and the world -- a time of enormous and fundamental economic, environmental, social and political change. How we manage change today will define the future for generations to come. A new and rapidly changing post-Cold War world challenges us to revise long-held security concepts and to reorganize our economy from a military to a peacetime mission. Security is being redefined to mean more than military defense and must be held in common to provide for economic, environmental and social well-being. It acknowledges global interdependence and the need for complementary domestic and foreign policies, and international structures and cooperative relationships to integrate all nations and people into world economic and political systems. It understands a balance must be achieved between its interrelated pieces and that Cold War levels of military spending have tilted the scale too far in favor of defense.

In the United States, this imbalance has left us with a legacy of debts and deficits, social and environmental problems, and an ailing economy unable to provide jobs for our people and compete in the global marketplace. To pay for higher and higher levels of military spending, we invested less and less in our domestic strength. The painful consequences of this choice are a weakened economy, environment and people. Just as a healthy business must continuously reinvest in itself, so must a nation. Because we have neglected investment in our economic and social infrastructure, we find ourselves falling further and further behind other nations which have chosen to invest heavily in these areas of their future.

The good news is that now that the Cold War is over, we can rebalance our priorities and investment decisions. We can reduce military spending and free up resources to reinvest in America. But while this is a welcome opportunity, military spending cuts could have a devastating impact on our already troubled economy, particularly on those businesses, workers and communities whose livelihoods depend on defense. Our challenge is to rebalance our priorities and reallocate our resources in a manner that mitigates the impacts and maximizes the opportunities of economic change.

To meet this challenge, we should commit a large portion of the peace dividend to funding initiatives in new national mission areas for the economy such as environment, transportation, energy, housing and education and other areas of infrastructural need. An economic development policy that makes investment in such wealth and revenue-producing initiatives will not only meet our nation's most pressing needs, it will create

Economic Conversion Project

Goals

The Economic Conversion Project is a non-profit, non-partisan organization of Maine people dedicated to creating a sustainable society based on a healthy economy, environment and people. Motivated by this goal and post-Cold War opportunities to achieve it, the ECP facilitates an economic conversion process and partnership between diverse stakeholders that seek to: (1) shift national priorities and resources from defense to domestic purposes; (2) assist defense-dependent industries, workers and communities make the transition to comparable civilian enterprise; and (3) transform our overall economy into one that is equitable and sustainable in the long-term. To achieve this implies the need for new principles, policies, structures and democratic processes that support such an economic shift.

Strategies

*** Education**

Educate ourselves, the public, and policymakers in a way that is personal and empowering to broaden informed public debate and involvement in economic conversion and sustainable development planning and implementation

*** Outreach**

Reach out to all interest groups and individuals with a stake in our common future and bring them to the table to talk, listen, and learn from each other

*** Collaboration**

Encourage all stakeholders to find common ground on which to build a shared vision and collaborative strategies to achieve it

*** Action**

Encourage and provide opportunities for stakeholders to take effective action to influence public policy

Strategic Objectives

*** Partnerships**

Initiate, facilitate and participate in strategic partnerships between diverse stakeholders in the public, private and non-profit sectors to engage in dialogue, find common ground, and collaborate on common economic conversion and development goals and plans to achieve them.

Evaluation & Achievements

The Project holds an annual evaluation and strategic planning retreat to look at where we've been, where we are, and where we want to go. To-date, the Project has set and achieved the following objectives:

- * Initiated and institutionalized statewide economic conversion policy, process and structure
- * Built stakeholder partnerships to collaborate on common economic conversion and development goals and strategies
- * Initiated the creation of the Economic Development Coordinating Council as the institutionalized structure and sustainable development planning process
- * Institutionalized Project input into the formation of public policy
- * Built an informed and involved grassroots and leadership constituency
- * Mobilized broad public, policymaker and institutional support and action for new national priorities, economic conversion, and sustainable economic development

1992-1993 Objectives

- * Translate conversion planning into practical examples of how Maine reduced its defense dependency, saved businesses, jobs and communities, and generated new economic opportunities in the process
- * Empower workers to participate in the change process
- * Develop technical expertise
- * Track and catalog conversion results and transportable models for national replication
- * Expand the participatory base of informed and engaged citizens and policymakers
- * Initiate and institutionalize a State sustainable development policy and create a State Office of Sustainable Development
- * Initiate and institutionalize a State needs-driven industrial policy and investment strategy
- * Persuade the federal government to prioritize economic conversion and sustainable development by enacting policies and investment that support these priorities
- * Strengthen the organization's effectiveness and sustainability by building a broader and more involved constituency base, nurturing unity and leadership, and securing diverse and long-term sources of funding

Goal: Mobilize broad public, policymaker and institutional support for new priorities, policies and investment strategies at the local, state and national levels that enable resource reallocation to areas of need and economic development opportunity.

Program:

- * Real Security '92 Coalition
- * Technology & Industrial/Economic Development Policy Initiative
- * Sustainable Development Policy Initiative
- * Legislative initiation, analysis and advocacy
- * State Needs-Driven Industrial Policy

Organizational Development

Goal: Strengthen the organization's effectiveness and sustainability by building a broader and more involved constituency base; nurturing unity and leadership; and securing diverse and long-term funding sources.

- * Organizational structure - staff, board of directors, committees and partners
- * Community-building and celebration events and communications structure
- * Long-range fundraising plan
- * Annual evaluation and planning retreat
- * Ongoing board education program

2-Year Projected Budget - Jan 1992 - Dec 1993

Projected Expenses

Operating

Director's Salary (24 mos.)	\$ 50,000.00
Fundraising (incl. consultant)	3,000.00
Telephones	6,000.00
Supplies	4,000.00
Postage & Delivery	6,000.00
Capital Purchase (FAX, Phone, Computer)	4,000.00
Equipment Maintenance	1,000.00
Printing	2,000.00
Database Services	1,000.00
Strategic Planning Retreats	1,000.00
Miscellaneous	<u>1,000.00</u>

\$ 79,000.00

Program

Education & Outreach

Resources	2,000.00
Research	10,000.00
Brochure	2,000.00
Newsletter	12,000.00
Annual Reports	3,000.00
Speakers Bureau	5,000.00
Internship Program	15,000.00
TV Documentary, video & discussion guide	5,000.00
How To & Models Manual	3,000.00
Media	2,000.00
Dollar for Dollar Campaign *	95,000.00
Conferences, Workshops & Forums	10,000.00
Travel	7,000.00
Miscellaneous	<u>1,000.00</u>

172,000.00

Economic Conversion 8,000.00

Pubic Policy 1,000.00

9,000.00

\$260,000.00



EIC DEFENSE TRANSITION PROGRAMS

The Economic Innovation Center (EIC) currently has several active and/or emerging Defense Transition Programs. They include the following:

DEFENSE INDUSTRIES ENTERPRISE TRANSITION PARTNERSHIP

A select group of EIC specialist consultants work with key executives from defense contacting firms to accomplish specific business transition development goals. Enterprise Development Teams help articulate a new corporate vision, develop specific long range and intermediate goals, update business plans, prepare supporting plans for new marketing, operations, training, logistics, communications or finance activities.

Major features of this partnership are:

- Defining a company's human, technological, and manufacturing assets and services
- Research to facilitate technology product and service transfer and define new markets.
- Creation of joint ventures, cooperative manufacturing for investment, product development and market enhancement.
- Researching and developing partnership alliances (domestically and globally).
- Development of collaborative business models of how companies might work together to practically apply their resources.

EMERGING TECHNOLOGIES PROJECT EIC/U.S. DEPARTMENT OF COMMERCE ECONOMIC DEVELOPMENT ADMINISTRATION (EDA)

Funding was awarded from the U.S. EDA through a grant submitted by the EIC Technology Advisory Council. In this program, the EIC works with Newport County Rhode Island defense contractors in focusing upon the identification of new emerging technologies that can be refined and marketed by defense dependent businesses and entrepreneurs or co-developers in partnership with other defense or civilian companies.

The project supports research and development assistance with business and marketing plans, and furthering networks for financial and information support as defense contractors analyze and pursue potential opportunities in civilian markets. Current client products include computer systems for waste effluent monitoring and detection, recyclable glass products for construction purposes, medical imaging systems and fax modems, and a variety of other software and manufacturing innovations.

ENTERPRISE CRAFTING PROGRAM

Adaptable to both management and production employee populations, this project specifically addresses the needs of employees whose positions have been terminated due to the defense budget cuts and are considering their own small business. Clients include the Electric Boat Division of General Dynamics.

Preliminary workshops demonstrate practicalities in the creation of a small business as a career direction. The process takes participant from initial examination of preliminary business concepts to the formation of a final business plan and for market-entry decision-making. The program includes a unique individualized micro-market opportunity study to validate a participant's enterprise concept.

EIC/UNIVERSITY OF RHODE ISLAND TECHNOLOGY MATURATION PROGRAM

Through a collaboration with the Research Office at the University of Rhode Island (URI), an EIC Enterprise Development Team has implemented an operational model for the identification, evaluation, selection, and preparation of research developed processes, patents, and services in order to facilitate private business market entry. EIC/URI staff and program clients from the defense and private sector interrelate to apply technologies and products directly to Rhode Island client firms to enable them to acquire potential services and new products.

EIC - CENTER FOR TECHNOLOGY COMMERCIALIZATION (CTC), INC. TECHNOLOGY TRANSITION ALLIANCE

NASA's Northeast Regional Technology Transfer Center has created an alliance with the EIC increasing its effectiveness to provide clients with special research and resources for technology transfer and transition. The CTC offers specific assistance in transferring technology from university and government labs to the marketplace and provides businesses and entrepreneurs access to technologies developed around the globe. This adds to EIC present capabilities to provide readily accessible information concerning existing business ventures, markets, and technology resources essential to creating and nurturing the relationships that strengthen international business.

US NAVY NATIONAL LABORATORY PROGRAM

This project administers political and community support of intentions by the U.S Department of the Navy to consolidate certain advanced research projects in Newport, Rhode Island and to expand the existing facilities of the Naval Undersea Warfare Center (NUWC) near our local Newport Naval Base. As implemented the program will result in Newport being the site for one of four new national laboratories established by the U.S. Department of the Navy.

*For more information, contact:
The Economic Innovation Center
28 Jacome Way
Newport, Rhode Island 02840
Tel: (401) 849-9889 • Fax: (401) 849-0815*

11/4/1993

NEW ENGLAND DEFENSE ADJUSTMENT PROJECT

OVERVIEW OF GOALS AND ACTIVITIES

A. Overarching Goals of NEDAP

1. To develop and test a model for multi-state collaboration in defense adjustment.
2. To develop and manage defense adjustment activities which individual states cannot operate as effectively or efficiently on their own.
3. To develop a three-state coalition with the capacity to become self-sustaining.
4. To develop activities that are small enough in scope to be effectively managed yet substantial enough to have a measurable impact.
5. To recognize that government (and NEDAP) can serve as a catalyst, but that defense adjustment and job development are ultimately the responsibility of the private sector.

B. Purposes of Market Development Model

1. To expand the market for environmental and marine technology.
2. To increase the share of this market going to Southern New England firms.
3. To provide opportunities to link the assets of defense-related firms in this area with those of non-defense-related firms already operating in the field.
4. To develop procedures for collaboration across states, levels of government, and market sectors in areas of economic development.

C. Work Plan

1. Complete a broad scan of the environmental and marine technology sectors.
2. Complete a detailed description of the New England firms, their competitors, the markets, and the technologies involved in marine environmental technology.

3. Strengthen the organizational relationships among marine environmental firms in Southern New England.
4. Assess the competitive position of the Southern New England marine environmental technology industry through an analysis of strengths, weaknesses, opportunities, and threats.
5. Help firms collectively prepare a strategic plan or long-term agenda for enhancing their ability to compete in various market segments.
6. Provide small financial incentives on a competitive basis to groups of firms who join forces to pursue particular opportunities identified through the strategic plan.

In addition to taking these steps, the project will work with regional banks and the Federal Reserve System to identify possible ways of improving the availability of capital to defense-related firms. Also, all of its activities will be evaluated to meet its responsibilities as a national pilot effort in multi-state collaboration.

D. Typical Activities of Environmental/Marine Technology Expansion (EMTEX) Model

1. Compilation of directory of sector-related assets (such as industrial resources, natural resources, higher education institutions, public financing programs, federal laboratories) in the three states.
2. Development and operation of clearinghouse to link these firms and to match their needs and assets as appropriate.
3. Hosting of regional conference(s) or meeting(s) to link defense-related and other firms working in these fields and assist in identification of market opportunities.
4. Development of consortia of firms for market expansion.
5. Provision of technical assistance to EMTEX firms in market research, proposal writing, strategic planning, and accessing capital.
6. Management of competitive program to make matching funds available to help sector-based defense-related firms address the market effectively through such means as market research, marketing strategy, proposal writing, strategic planning, and human resource development.

APPENDIX C

ELIGIBILITY:

• **Individual**

Dislocated workers who are unlikely to return to their previous industries or occupations, including individuals who lose their jobs because of plant closings or mass layoffs, and who have been terminated or laid off, or have received a notice of termination or layoff as a consequence of reductions in Defense spending or by closures of military facilities. These employees include:

- Civilian employees of the Department of Defense (DoD).
- Civilian employees of the Department of Energy (DOE).
- Defense contractors' employees who have been terminated or laid off and who are unlikely to be re-employed in their previous industry or occupation, **and** who are not entitled to retirement or retainer pay related to the termination or layoff.
- Military personnel who are involuntarily separated, who are not entitled to retirement or retainer pay related to the separation, **and** who apply for assistance within 180 days from the date of separation.

• **Grantee Applicants**

States, substate grantees (established under JTPA), employers, representatives of employees, labor management committees and other employer-employee entities. Grants may be awarded directly or through the states.

Applications should be submitted to the Grant Office, Employment and Training Administration, U.S. Department of Labor. Applications must be submitted in accordance with the application procedures published annually in the Federal Register by ETA.

WORKER CONTACTS:

The local agency in your area which administers JTPA programs or your nearest State Employment Service Office.

State Dislocated Worker Contracts numbers are noted on page I-20 of this handbook.

or,

U.S. Department of Labor, ETA
Office of Worker Retraining and Adjustment Programs
Room N-5626
200 Constitution Avenue, N.W.
Washington, D.C. 20210
(202)219-5577

TELEPHONE CONTACTS FOR DISLOCATED WORKERS

<u>STATE</u>	<u>PHONE</u>	<u>STATE</u>	<u>PHONE</u>
Alabama	(205) 242-5415	Nebraska	(402) 471-2127
Alaska	(907) 269-4658	Nevada	(702) 687-4310
Arizona	(602) 542-2484	New Hampshire	(603) 228-9500
Arkansas	(501) 682-3123	New Jersey	(609) 984-3519
California	(916) 324-0712	New Mexico	(505) 827-6866
Colorado	(303) 758-5020	New York	(518) 457-3101
Connecticut	(203) 566-7433	North Carolina	(919) 733-6383
Delaware	(302) 368-6913	North Dakota	(701) 224-3066
District of Columbia	(202) 673-4435	Ohio	(614) 466-3817
Florida	(904) 488-9250	Oklahoma	(405) 557-7294
Georgia	(404) 656-6336	Oregon	(503) 373-1995
Hawaii	(808) 586-9060	Pennsylvania	(717) 787-9282
Idaho	(208) 334-6298	Puerto Rico	(809) 754-4806
Illinois	(217) 785-6225	Rhode Island	(401) 277-3450
Indiana	(317) 232-7371	South Carolina	(803) 737-2606
Iowa	(515) 242-4799	South Dakota	(605) 773-5017
Kansas	(913) 296-5060	Tennessee	(615) 741-1031
Kentucky	(502) 564-7015	Texas	(512) 320-9844
Louisiana	(504) 342-7656	Utah	(801) 538-8750
Maine	(207) 287-1292	Vermont	(802) 828-4177
Maryland	(410) 333-5070	Virginia	(804) 786-4832
Massachusetts	(617) 727-8158	Washington	(206) 438-4631
Michigan	(517) 373-9600	West Virginia	(304) 558-3484
Minnesota	(612) 296-0928	Wisconsin	(608) 266-7406
Mississippi	(601) 949-2128	Wyoming	(307) 235-3601
Missouri	(314) 751-7896	Montana	(406) 444-4500

U.S. Department of Labor, (202) 219-5577
Office of Worker Retraining

SMALL BUSINESS DEVELOPMENT CENTERS-NATIONWIDE
Small Business Administration

DESCRIPTION: The Small Business Development Center (SBDC) program is a partnership between Federal, State, and local governments and institutions of higher education to provide business management and technical assistance to the nation's small businesses.

ELIGIBILITY: No requirements

CONTACT: Small Business Administration
409 3rd St., SW
Washington, DC 20416
(202) 606-4000

BUSINESS DEVELOPMENT ASSISTANCE TO SMALL BUSINESSES
Small Business Administration

DESCRIPTION: This program provides advisory assistance and counseling, dissemination of technical information and training

ELIGIBILITY: Existing and small potential small businesspersons and some community group members

CONTACT: Asst. Admin. for Business Initiatives Education & Training
Small Business Administration
409 3rd St., SW
Washington, DC 20416
(202) 205-6665

SMALL BUSINESS LOANS [7(a) & 7(a)(11)]
Small Business Administration

DESCRIPTION: This program provides guaranteed/insured loans. It also provides direct loans and advisory services and counseling.

ELIGIBILITY: Recipients must be small, independently-owned and operated businesses located in low income areas for 7(a)(11).

AVERAGE LOAN: (7)(a) – \$192,000
(7)(11) – \$68,000

CONTACT: Loan Policy & Procedures
Small Business Administration
409 3rd St., SW
Washington, DC 20416
(202) 606-4000

PROCUREMENT ASSISTANCE TO SMALL BUSINESS
Small Business Administration

DESCRIPTION: This program provides special services to assist small businesses obtain "fair" share of Federal supplies, services, and property sold.

ELIGIBILITY: Recipients for this program must be either an existing or potential small U.S. business

CONTACT: Associate Admin. for Procurement Assistance
Small Business Administration
409 3rd St., SW
Washington, DC 20416
(202) 205-6460

SMALL BUSINESS INVESTMENT COMPANIES (SBIC)
Small Business Administration

DESCRIPTION: This program provides: (1) direct and guaranteed loans, (2) advisory services to establish private investment companies, (3) equity capital, and (4) advice to small businesses.

ELIGIBILITY: The program is open to any chartered small business investment company meeting SBA requirements

AVERAGE LOAN: \$1 million

CONTACT: Director
Office of Operations
Investment Division
Small Business Administration
409 3rd St., SW, Room 6600
Washington, DC 20416
(202) 205-6510

SMALL BUSINESS DEVELOPMENT CENTERS (SBDC)
Small Business Administration

DESCRIPTION:	This program provides assistance for project grants, provision of specialized services, advisory services and the dissemination of technical information.
ELIGIBILITY:	The program is open to any public or private institutions of higher education and renewal of funding to entities currently funded as SBDC
AVERAGE GRANT:	\$972,000
CONTACT:	Small Business Administration Office of SBDC 409 3rd St., SW Washington, DC 20416 (202) 205-6766

**OFFICE OF ECONOMIC ADJUSTMENT
Department of Defense**

- DESCRIPTION:** The Office of Economic Adjustment (OEA), Department of Defense, assists state and local governments plan and carry out community adjustment and economic diversification programs for communities that suffer from economic downturns due to the loss of a military facility or reductions in defense industry contracts.
- ELIGIBILITY:** The applicant must be a unit of state or local government that has formed a broad-based organization to plan for an economic development strategy to deal with the reduction in DoD spending. For Base Closure and Realignment communities, they must show a direct and significant effect from the closure or realignment. For communities dealing with reductions in employment from defense industry contractors, they must show a 2,500-person job loss in an Metropolitan Statistical Area (MSA), a 1,000 person job loss in a non-MSA area, or job loss of 1 percent of the employable labor force in the area, whichever is less.
- CONTACT:** Director
Office of Economic Adjustment (OEA)
400 Army-Navy Drive
Room 200
Arlington, VA 22202-2884
(703) 695-1800
- SIZE OF GRANTS:** \$200,000 – \$300,000
- MATCHING FUNDS
REQUIRED:** 25 percent of the grant in cash or in-kind services
- OTHER RELEVANT
INFORMATION:** There are also two other pilot programs, one for state governments and another for local governments, to do advanced planning for communities that are vulnerable to economic distress from the downsizing of the Defense budget. These programs will be available on a competitive basis and will be published in the Federal Register.

BASE TRANSITION OFFICE
Department of Defense

DESCRIPTION: The Base Transition Office of the Department of Defense was created by Secretary Les Aspin in July 1993 to establish a stronger relationship of assistance for closing military bases. Base Transition Coordinators are located at each closing base from BRAC '88, '91, and '93 until the base is "officially" closed. These military and civilian Transition Coordinators are directly linked to the Office of the Secretary of Defense (OSD) to resolve problems affecting the smooth closure of their assigned bases.

ELIGIBILITY: All domestic military bases on the BRAC '88, '91, and '93 lists

CONTACT: Director
Base Transition Office
The Pentagon
Room 3D443
Washington, DC 20301
(703) 614-8562

OTHER RELEVANT INFORMATION: The Base Transition Office works closely with the Office of Economic Adjustment and the base disposal offices of each of the military services. Transition Coordinators are the first point of contact for a community or business interested in information about a closing base.

TITLE IX, PUBLIC WORKS AND ECONOMIC DEVELOPMENT ACT OF 1965
Department of Commerce, Economic Development Administration

DESCRIPTION: Grants are awarded to help communities respond to major job losses such as those resulting from a natural disaster, plant closing, or base closing. Funds can be used flexibly and are designed to help communities with technical assistance, planning, or actual implementation of an adjustment strategy, including construction of public facilities and the availability of revolving loan funds.

Defense Adjustment Assistance: Economic Development Administration (EDA) programs can be used to assist communities facing economic adjustment problems resulting from base closure and realignment and Defense procurement contract reductions. When EDA assistance is provided under the Title IX programs, virtually all of EDA's program tools may be packaged under a single grant that includes funding for planning/strategy (separate of DoD efforts), technical assistance, construction/public works, revolving loan fund assistance, and training.

The EDA will consider funding applications to support selected steps within the Implementation Plan of the DoD-sponsored base reuse program. The EDA assistance is typically funded under the Title IX Economic Adjustment Program. However, Title I Public Works funds may also be requested for defense adjustment projects if all of the Title I criteria are met. Detailed information on the rules and procedures for EDA programs are contained in the Agency's section of the annual edition of the *Federal Register* (February 4, 1992) in a subsection entitled "Notice of the Availability of Funds" and the *Supplemental Federal Register* (March 10, 1992) in a subsection entitled "Notice of the Availability of Special Defense Adjustment Funds." Copies of those notices can be obtained from EDA at the address listed below or from the regional offices on the following page.

Grants are awarded through two separate programs. The Sudden and Severe Economic Dislocation (SSED) program makes grants to state or local jurisdictions or other eligible public organizations to develop or implement strategies to meet specific needs of a community facing economic dislocation, for example, a base closing. The Long-Term Economic Deterioration (LTED) program is primarily designed to provide local small businesses with revolving loan funds.

ELIGIBILITY: An economic dislocation must satisfy one of the following criteria to be considered for program funds (in exceptional circumstances, the criteria may be partially waived by the Assistant Secretary of Commerce for Economic Development).

(1) If the unemployment rate of the labor market area is equal to or less than the national average, the dislocation must amount to the lesser of 4 percent of the employed population or 1,000 direct jobs.

(2) If the unemployment rate of the metropolitan area is equal to or less than the national average, the dislocation must amount to the lesser of 1 percent of the employed population or 8,000 jobs.

In addition to those two conditions, 50 percent of the job loss threshold must result from the action of a single employer, or 80 percent of the job loss threshold must occur in a single standard industry classification (SIC) [i.e., two-digit standard industrial classification (SIC) code]. Actual dislocations must have occurred within 1 year, and threatened dislocations must be anticipated to occur within 2 years of the date the EDA is contacted.

CONTACT: Director, Economic Adjustment Division
Economic Development Administration
Room 47327
14th and Constitution Avenue, N.W.
Washington, DC 20230
(202) 482-2659

SIZE OF GRANTS:	Strategy Grant	\$30,000
	Implementation Grant	\$700,000
	Loan Fund	\$415,000

**MATCHING FUNDS
REQUIRED:** 25 Percent

**OTHER RELEVANT
INFORMATION:** Grant applications are processed at the Regional Offices. Offices are followed by states they serve.

Philadelphia Regional Office
105 South Seventh Street
Liberty Square Building, First Floor
Philadelphia, PA 19016
(215) 597-4603

Serves Connecticut, Delaware, District of Columbia, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Puerto Rico, Rhode Island, Vermont, Virginia, Virgin Islands, and West Virginia.

Atlanta Regional Office
401 West Peachtree Street, N.W.
Suite 1820
Atlanta, GA 30308-3510
(404) 730-3002

Serves Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, and Tennessee.

Chicago Regional Office
114 North Canal
Suite 855
Chicago, IL 60606-7402
(312) 353-7706

Serves Illinois, Indiana, Michigan, Minnesota, Ohio, and Wisconsin.

Austin Regional Office
622 East Sixth Street
Suite 201, Grant Building
Austin, TX 78701
(512) 482-5461

Serves Arkansas, Louisiana, New Mexico, Oklahoma, and Texas.

Denver Regional Office
1244 Speer Boulevard
Room 670
Denver, CO 80204
(303) 844-4714

Serves Colorado, Iowa, Kansas, Missouri, Montana, Nebraska, North Dakota, South Dakota, Utah, and Wyoming.

Seattle Regional Office
915 Second Avenue
Suite 1956, Jackson Federal Building
Seattle, WA 98174
(206) 553-0596

Serves Alaska, American Samoa, Arizona, California, the Commonwealth of the Northern Mariana Islands, Guam, Hawaii, Idaho, Nevada, Oregon, Washington, the Federated States of Micronesia, and the Republic of the Marshall Islands.

**COMMUNITY DEVELOPMENT BLOCK GRANTS (CDBG)
Department of Housing and Urban Development**

DESCRIPTION:	The CDBG program allocates grant funds (1) to entitlement communities (central cities, urban counties, and metropolitan cities with population of 50,000 or more) and (2) to states for allocation to nonentitlement communities. The purpose of the grants is to promote neighborhood revitalization and community and economic development, principally for low- and moderate-income persons.
ELIGIBILITY:	See above
CONTACT:	Office of Block Grant Assistance Room 7286 451 Seventh Street, S.W. Washington, DC 20410 (202) 708-3587
SUMMARY OF PROGRAM:	Allowable activities include acquisition and disposition of real property, housing rehabilitation, historic preservation, energy conservation, public works, public services, community and neighborhood facilities, assistance to community-based organizations, economic development, dislocation of individuals and businesses, removal of barriers to the elderly and handicapped, planning and urban design, and administrative activities. These flexible funds may also be used to meet the non-Federal share of other Federal grant programs.
SIZE OF GRANT:	\$350,000-\$550,000
MATCHING FUNDS REQUIRED:	None
OTHER RELEVANT INFORMATION:	These funds are already supplied to communities or states. Entitlement communities can use these funds for local "match fund" requirements to receive other federal assistance and for implementation of community reuse plans. In non-entitlement communities, they must contact their state community development office for more information on this program.

RURAL DEVELOPMENT ADMINISTRATION
Department of Agriculture

DESCRIPTION:	The USDA Rural Development Administration (RDA) has various programs available to aid in the development of rural America. For base closure communities, the RDA can provide funds to implement a community's Economic Adjustment Plan. Community facilities loans, rural business enterprise grants, business and industrial guaranteed loans and intermediary relending program loans are among the assistance programs available.
ELIGIBILITY:	Only rural communities with populations less than 50,000 are eligible for assistance from RDA. Each grantor loan program has specific eligibility requirements.
CONTACT:	USDA - Rural Development Administration U.S. Department of Agriculture 5405 South Building Room 5045 Independence Ave., N.W. Washington, DC 20250-3200
SIZE OF GRANT:	Depends on program
MATCHING FUNDS REQUIRED:	Depends on program

NATIONAL ORGANIZATIONS MEMBERSHIP

The following is a compilation of national organizations which focus on economic adjustment and redevelopment support. It includes many contacts that can be of assistance.

American Institute of Architects

National Office
1735 New York Avenue, N.W.
Washington, D.C. 20006
(202) 626-7300
FAX (202) 626-7325

AIA is the national professional association representing architects. Programs include Regional Design and Urban Assistance Teams and the Community Assistance Division which sends teams to communities working on design and/or historic preservation programs. Local chapters in most metropolitan areas. Planning assistance library, consultative services available.

American Society of Landscape Architects

National Office
4401 Connecticut Avenue, N.W.
Washington, D.C. 20008-2302
(202) 686-2752
FAX (202) 686-1001

ASLA is a national professional society that represents the landscape architect profession (over 10,500 members in 46 chapters in North America). The Community Assistance Team conducts special projects which exemplify the profession. Current projects include development of a nature preserve, a land reclamation project, etc. The Information Resource Center answers questions about all kinds of land use planning issues. Publications include: *Landscape Architecture* (magazine) and *Landscape Architecture News Digest* (monthly newsletter).

Business Executives for National Security

601 Pennsylvania Avenue, N.W.
Suite 700
Washington, D.C. 20004-2602
(202) 737-1090

BENS is a national, non partisan trade association that attempts to: (1) build awareness that a vibrant economy is the foundation for real national security; (2) improve the management of our nation's defense; and (3) develop practical steps to prevent the use of nuclear weapons.

Center for Community Change

1000 Wisconsin Avenue, N.W.
Washington, D.C. 20007
(202) 342-0594
FAX (202) 342-1132

The Center is a national not-for-profit organization committed to assisting grass roots organizations which focus on low-income and predominately minority areas. Housing and community/neighborhood reinvestment programs are the primary concern. Publications include *A Citizen's Guide to Creating a Housing Trust Fund*, *The Home Program: A Basic Guide for Community Organizations*, and *Community Change* (quarterly magazine).

Center for Economic Conversion

222 View Street
Mountain View, CA 94041
(415) 968-8798

CEC is a non profit public benefit corporation dedicated to building a sustainable peace-oriented economy. CEC provides on-going start-up conversion assistance to communities and produces two quarterly publications: *Conversion Organizers Update*, an activists update, and *Positive Alternatives*, a conversion policy journal.

Center for Policy Alternatives

1875 Connecticut Avenue, N.W.
Suite 710
Washington, D.C. 20009
(202) 387-6030

CPA is a nonprofit center for progressive policy for state and local government. CPA surveys state legislatures for conversion, diversification, and adjustment activities and publishes periodic state reports on economic initiatives.

The Conservation Fund

1800 North Kent Street
Suite 1120
Arlington, VA 22209
(703) 525-6300
FAX (703) 525-4610

The Funds buys land outright – 258,400 acres since 1986 – for wildlife refuges, parks, and civil war battlefields. Preservation programs also include riversides, wetlands, and greenways. \$122 million land saved for \$63 million investment to date.

Defense Budget Project

777 North Capitol Street, N.W.
Suite 710
Washington, D.C. 20002
(202) 408-1517

DBP is a nonprofit research and analysis organization which examines national security policies and defense spending issues. DBP publishes a number of useful documents and statistics on defense spending projections, impact of downsizing, and current Federal adjustment legislation.

The Development Training Institute

4806 Seton Drive
Baltimore, MD 21215
(410) 764-0786

DTI is a national training organization which offers The Leadership and Management Training Program to directors and community leaders of community development corporations. The five (5) month training session focuses on project planning, financing, and development for community redevelopment and revitalization projects.

The Enterprise Foundation

500 American City Building
Columbia, MD 21044
(410) 964-1230
FAX (410) 1918

The Enterprise Foundation is a non profit corporation created to provide housing for the nation's poor and has aided in the construction and rehabilitation of almost 28,000 homes in more than 100 cities from Baltimore to Los Angeles since 1984. Technical assistance in addition to financing is also provided.

Federation for Industrial Retention and Renewal

3411 West Diversey Avenue
Suite 10
Chicago, IL 60647
(312) 252-7676

FIRR is a membership association of community activist groups many of which work on defense issues. FIRR produces a bi-yearly newsletter to promote the accomplishments and activities of FIRR's members.

Human Resources Development Institute

AFL-CIO Headquarters Building
815 16th Street, N.W.
Washington, D.C. 20006
(202) 637-5189

HRDI is the employment and training arm of the AFL-CIO. HRDI offers technical services and operates special programs to help labor respond to the needs of the unemployed. Contact HRDI to identify the local chapters of the AFL-CIO and for assistance in approaching them.

National Association of Installation Developers

1101 17th Street, N.W.
Suite 1200
Washington, D.C. 20036
(202) 296-9200
FAX (202) 296-0023

NAID is a nonprofit association created in 1976 to support communities in their efforts to make productive use of closed military bases. NAID provides a forum for members to share information of common interest in the conversion, redevelopment, and operation of former military installations. Publications include *NAID News*. Annual conference includes programs on sharing common practices and solutions.

National Commission on Economic Conversion and Disarmament

1801 18th Street, N.W.
Suite 9
Washington, D.C. 20009
(202) 462-0091

ECD is a nonpartisan, nonprofit association that conducts research, educates the public, and publishes a bulletin, *The New Economy*, on the issue of conversion and disarmament.

National Congress of Community Economic Development

1875 Connecticut Avenue, N.W.
Suite 524
Washington, D.C. 20009
(202) 234-5009
FAX (202) 234-4510

NCCED is a non-profit trade association for Community Development Corporations in the U.S. Publications: *Development Times*, monthly newsletter, and *Resources*, quarterly.

National Council for Urban Economic Development

1730 K Street, N.W.
Suite 915
Washington, D.C. 20006
(202) 223-4735
FAX (202) 223-4745

NCUED is a national membership organization representing urban economic development practitioners. *Economic Development* is published twenty-two times per year; *Commentary* is a quarterly journal presenting in-depth articles about innovative and effective programs and approaches in economic development; *Economic Development Abroad* provides a global view of the field bi-monthly; and annual reviews of the federal budget. Technical reports also available. Annual meeting in Spring (Washington, D.C.) and workshops allow practitioners the opportunity to talk with top economic development experts. Technical Assistance Service provides hands-on advice.

National Governors' Association

Center for Policy Research
Hall of States
444 North Capital Street, N.W.
Washington, D.C. 20001-1572
(202) 624-5300

NGA is a membership organization of America's governors. In 1990, NGA's Center for Policy Research undertook a project to look at state policy and program options for easing the transition for defense contractors and subcontractors from defense markets into civilian markets. NGA published a *Governor's Guide to Economic Conversion* in the Fall of 1992.

National Trust for Historic Preservation

1785 Massachusetts Avenue, N.W.
Washington, D.C. 20036
(202) 673-4000
FAX (202) 673-4085

The Trust's Main Street, U.S.A. program provides technical assistance, organizational consulting services, and resource teams to their 31 state affiliates. Individual communities can apply for free assistance through their state affiliate or contract directly with National Main Street Center for assistance.

Northeast-Midwest Institute

218 D Street, SE
Washington, D.C. 20003
(202) 544-5200

The NE-MW Institute is a nonprofit research and public education organization dedicated to the long-term economic vitality of the region. It conducts research, develops public policies, provides technical assistance, sponsors regional conferences, and distributes publications.

The Urban Land Institute

625 Indiana Avenue, N.W.
Washington, D.C. 20004-2930
(202) 624-7000
FAX (202) 624-7142
1-800-321-5011 – general information

ULI is an education and research institute for responsible land use and development. Publications include *Urban Land* (monthly magazine) and *The Land Use Digest*, newsletter (monthly).

State and Local Resources

The following is a compilation of some state and local resources for economic adjustment. While this list is not exhaustive, it does include many of the state, regional and local contacts that can be of assistance. It is organized by geographic region.

Northeast Region

Regional Technical Transfer Center
Center for Technology Commercialization
Massachusetts Technology Park
100 North Drive
Westborough, MA 01581
508/870-0042

Contact the RTTC for information regarding using, transferring, or commercializing NASA's technology.

Regional FLC Coordinator
DOT-Federal Aviation Administration
Technical Center
Attn.: ACL-1, Atlantic City International
Airport
Atlantic City, NJ 08405
609/484-6689

Contact the regional coordinator of the Federal Laboratory Consortium for information regarding the federal technology, small business workshops, and the FLC Locator.

Northeast Manufacturing Technology Center
Rensselaer Polytechnic Institute
CII 9009
Troy, NY 12180
518/276-6682

The center acts as a clearinghouse for New York, Massachusetts, and Maine state and university technology transfer programs.

Connecticut

CT Innovations Inc.
Technology Assistance Center
845 Brook Street
Rocky Hill, CT 06067
203/258-4305

CT Innovations is a quasi-public organization that acts as an information clearinghouse for technology related business programs and activities, provides linkages with federal agencies, and assists in new product market studies.

CT Commission on Business Opportunity,
Defense Diversification, and Industrial
Development
615 Goose Lane
Guilford, CT 06437
203/453-6273

A committee created by the state legislature to study the effects of defense cuts on Connecticut businesses and to make recommendations. The commission was a driving force behind the 1991 act concerning establishment of defense diversification initiatives.

CT Department of Economic Development
865 Brook Street
Rocky Hill, CT 06067
203/258-4201

This department is responsible for all state-level community adjustment assistance. The International Division is responsible for export and investment assistance to communities.

CT JTPA Title III Officer
CT State Department Of Labor
200 Folly Brook Boulevard
Wethersfield, CT 06109
203/566-7433

The Job Training Partnership Act state grantee.

Naugatuck Valley Project
47 Central Avenue
Waterbury, CT 06702
203/574-2410

The NVP is a regional, nonprofit organization in Connecticut that attempts to maintain Naugatuck Valley's industrial base through a variety of retention strategies. The Naugatuck Valley Project has been very successful in organizing community and employee buyout strategies.

Delaware

Delaware Development Office
World Trade Section
820 French Street
Wilmington, DE 19801
302/577-6262

The state-level agency that provides export and international investment assistance to communities.

Maine

Center for Technology Transfer
59 Exeter Street
Portland, ME 04616
207/780-4616

This center focuses on the metal and electronics industries to facilitate the adoption of new manufacturing-management technologies, facilitate joint ventures, disseminate technology-based information, broker industry needs to public sources, and monitor emerging technology.

ME Department of Economic &
Community Development
State House #59
Augusta, ME 04333
207/289-2656

The state-level agency responsible for local economic adjustment assistance, and the agency that provides export and international investment assistance to communities.

ME Economic Conversion Project
Thornhurst Road
Falmouth, ME 04105
207/781-3947

The project works in partnership with diverse constituencies in the public, private, and nonprofit sectors to facilitate education, empowerment, and collaborative initiatives to promote a sustainable future.

ME State Economic Planning
State Economist
State House #38
Augusta, ME 04333
207/289-3261

The state agency responsible for studying the effects of defense spending in Maine and making policy recommendations to the state legislature.

Coordinator of Dislocated Worker Programs
ME Department of Labor
20 Union Street
State House #54
Augusta, ME 04330
207/289-5292

The JTPA state grantee.

Massachusetts

Center for Applied Technology
Bay State Skills Corporation
100 Summer Street, 2nd Floor
Boston, MA 02110
617/292-5100

CAT offers direct technical assistance to firms for application of new technology, equipment updating or acquisition, analysis of work organization, and financial and management analysis of impacts and associated cost/benefit of new technology.

Machine Action Project
1176 Main Street
Springfield, MA 01103
413/781-6900

MAP is an ongoing industry retention, expansion, and early warning network activist group that provides a variety of services to the defense

dependent region and the nation. Some of MAP's ongoing projects include worker vocational training, industrial retention campaigns, business diversification assistance, technology transfer assistance, ongoing research, early warning and industrial network maintenance, and conversion support.

MA Industrial Services Program
One Ashburn Place
Boston, MA 02108
617/727-8158

ISP specialists provide on-site services to troubled firms such as developing business plans, reviewing financial statements, evaluating marketing procedures and assessing operations. ISP can also offer loans to firms through the state's Economic Stabilization Trust.

MA Employment and Training
Administration
Charles F. Hurley Building
Government Center
Boston, MA 02114
617/727-6600

The JTPA state grantee.

MA Office of International Trade
100 Cambridge Street
Suite 902
Boston, MA 02202
617/227-3488

The state-level agency that provides export and international investment assistance to communities.

New Hampshire

NH Department of Resources and
Economic Development
Program Information Officer
Box 856, 105 London Road
Building 2
Concord, NH 03301
603/271-2591

The state agency responsible for coordinating all state-level economic adjustment projects and for providing export and investment assistance to communities.

NH Job Training Council
64 B Old Suncook Road
Concord, NH 03301
603/224-3311

The state JTPA administrator.

New Jersey

Center for Manufacturing Systems,
Technology Extension
New Jersey Institute of Technology
Newark, NJ 07102
201/596-5819

The center helps small and medium-sized manufacturing firms applying known technology solutions to production, operations, and business problems by entering into industry partnerships ranging from consultations to research projects.

NJ Center for Public Dispute Resolution
Department of Public Advocate
Hughes Justice Complex
25 Market Street
CN 850
Trenton, NJ 08625
609/292-1773

The center provides: customized training in dispute resolution techniques; a neutral third party for negotiations and policy dialogues; and assistance to government agencies and courts in developing and implementing case management procedures.

NJ Office of International Trade
P.O. Box 47024
Newark, NJ 07101
201/648-3518

The state-level agency that provides export and international investment assistance to communities.

Program on Regional and Industrial
Economics

Center for Urban Policy Research
Rutgers University
P.O. Box 489
Piscataway, NJ 08903
908/932-4587

PRIE is an academic study group that studies
conversion policy issues.

Technology Extension Center in
Information Sciences
New Jersey Institute of Technology
Center for Information Age Technology
Newark, NJ 07102
201/596-3035

The center provides technical assistance to small
businesses starting to computerize or upgrade their
computer facilities.

New York

Industrial Effectiveness Program
New York Department of Economic
Development
One Commerce Plaza
Albany, NY 12245
518/474-1131

This program helps manufacturing companies
overcome competitive problems and achieve
long-term viability through self-help measures.

Industrial Technology Extension Service New
York State Science and Technology
Foundation

99 Washington Avenue- Suite 1730
Albany, NY 12210
518/473-9796

This program helps to improve the competitiveness
of the state's industrial sector by matching firms
with public and private resources researching,
evaluating, and helping them to implement
improved technical or managerial practices.

NY State Department of Commerce
International Division
Deputy Commissioner
1515 Broadway
New York, NY 10036 212/827-6200

The state-level agency that provides export and
international investment assistance to
communities.

NY State Department of Economic
Development

One Commerce Plaza
Albany, NY 12245
518/474-4100

The state-level agency responsible for all local
adjustment and development efforts. Conducted a
1991 assessment of defense spending in the state.
Also inquire about the Empire State
Manufacturing Service designed to stimulate
industrial modernization in the state. Call directly
at 518/474-1131.

Rhode Island

Economic Innovation Center
28 Jacome Way
Middletown, RI 02840
401/849-9889

The EIC is an operating collaborative of
government, community, educational, and
business entities working towards a prioritized
program for: technological transfer, business
networking, information acquisition,
manufacturing innovation, and establishment of
foreign partnerships.

RI Department of Administration
Division of Planning
Office of Strategic Planning
One Capitol Hill
Providence, RI 02908
401/863-1221

The state-level agency responsible for designing
the state's strategic plan. The agency published
"Defense Spending After the Cold War and The
Rhode Island Economy" in 1990.

RI Department of Economic Development
7 Jackson Walkway
Providence, RI 02903
401 277-2601

The state-level agency responsible for all local adjustment activities and providing information regarding export and international investment assistance to communities.

Balance Of State PIC
101 Friendship Street
Providence, RI 02903
401/277-2090

Private Industry Council for the balance of the state of Rhode Island. Job Training Partnership Act (JTPA) funding recipient.

Providence/Cranston SDA
180 Westminster Street
2nd Floor
Providence, RI 02903
401/861-0800

JTPA funding recipient.

Northern Rhode Island Private Industry
Council
640 Washington Highway
Lincoln, RI 02865-4243
401/333-3944

JTPA funding recipient.

Vermont

VT Department of Economic Development
Pavilion Office Building
109 State Street
Montpelier, VT 05602
802/828-3221

The state-level agency responsible for all local economic adjustment and development efforts. Contact the Director of International Business for information regarding export and international investment assistance to communities.

Mid-Atlantic Region

Regional FLC Coordinator
DoD-Naval Research Laboratory
4555 Overlook Ave., SW
Washington, DC 20375-5000
202/767-3744

Contact the regional coordinator of the Federal Laboratory Consortium (FLC) for information regarding the use of federal technology, small business workshops, and the use of the FLC Locator.

Regional Technology Transfer Center
Mid-Atlantic Technology Applications
Center

University of Pittsburgh
823 William Pitt Union
Pittsburgh, PA 15260
412/648-7000

Contact the RTTC for information regarding using, transferring, or commercializing NASA's technology.

District of Columbia

Center for Dispute Settlement
1666 Connecticut Ave., NW
Washington, DC 20009
202/265-9572

The center offers direct mediation services or mediation training to communities and organizations.

DC Office of the Mayor
Director of Economic Development
1250 I Street, NW
Suite 1003
Washington, DC 20005
202/727-1576

The state-level agency responsible for all local economic development and adjustment activities. The agency also provided export and international investment assistance to communities.

Maryland

MD International Business Development
World Trade Center
7th Floor
401 E. Pratt Street
Baltimore, MD 21202
301/333-8180

The state-level agency that provides export and international investment assistance to communities.

MD Technology Extension Service
Engineering Research Center
University of Maryland
College Park, MD 20742
301/405-3883

The extension service provides access to new technology, guidance in using new technology, assistance prioritizing needs, insight into technology adoption, and training for all Maryland manufacturing firms.

Maryland Department of Economic &
Employment Development
217 East Redwood Street
Baltimore, MD 21202
301/333-6948

This is the state agency responsible for all state worker and business adjustment programs. This agency conducted an assessment of defense facilities, contractors, and subcontractors through an extensive three-part survey.

Pennsylvania

Delaware Valley Industrial Resource Center
12265 Townsend Road, Suite 500
Philadelphia, PA 19154
215/464-8550

One of eight regional, industrial resource centers established by the commonwealth to provide practical hands-on services to manufacturing companies.

Industrial Modernization Center, Inc.
Farm Complex
RD #5, Box 220-62A
Montoursville, PA 17754
717/368-8361

One of eight regional, industrial resource centers established by the commonwealth to provide practical hands-on services to manufacturing companies.

Manufacturers Resource Center
301 Broadway
Bethlehem, PA 18015
215/758-5599

One of eight regional, industrial resource centers established by the commonwealth to provide practical hands-on services to manufacturing companies.

Manufacturing Technology Industrial
Resource Center
631 South Richland Ave.
P.O. Box 5046
York, PA 17405
717/843-5054

One of eight regional, industrial resource centers established by the commonwealth to provide practical hands-on services to manufacturing companies.

Northeast Pennsylvania Industrial Resource
Center
Garden Village Professional Center
Suite 125
West Pittston, PA 18643
717/654-8966

One of eight regional, industrial resource centers established by the commonwealth to provide practical hands-on services to manufacturing companies.

Northwest Pennsylvania Industrial Resource
Center
824 Peach Street
Erie, PA 16501
814/456-6299

One of eight regional, industrial resource centers established by the commonwealth to provide

practical hands-on services to manufacturing companies.

PA Department of Commerce
Office of International Development
433 Farum Building
Harrisburg, PA 17120
717/787-7190

The state-level agency that provides export and international investment assistance to communities.

Southeast Region

Regional FLC Coordinator
Tennessee Valley Authority
400 W. Summit Hill Drive
Knoxville, TN 37902
615/632-6435

Contact the regional coordinator of the Federal Laboratory Consortium (FLC) for information regarding the use of federal technology, small business workshops, and the use of the FLC Locator.

Regional Technology Transfer Center
Southern Technology Application Center
University of Florida, College of
Engineering
Box 24, One Progress Blvd.
Alachua, FL 32615
904/462-3913
(FL) 1-800-354-4832
(National) 1-800-225-0308

Contact the RTTC for information regarding using, transferring, or commercializing NASA's technology.

Alabama

Alabama Development Office
State Capitol
Montgomery, AL 36130
205/263-0048

The state-level agency responsible for all community economic adjustment activities. Contact the Director of International Marketing and Industrial Development for information

regarding export and international investment assistance to communities.

Alabama Productivity Center
University of Alabama
P.O. Box 870318
Room 104, Farrah Hall
Tuscaloosa, AL 35487
205/348-8956

The center brings available expertise and university resources to firms for implementation of new processes, compiling forecasting models, and developing software or prototype software for clients' needs.

Industrial Modernization Program
Alabama Department of Economic and
Community Affairs
3465 Norman Bridge Road
P.O. Box 250347
Montgomery, AL 36125
205/284-8950

The program assists targeted industries that are economically lacking in efficiency due to low productivity, equipment, or methods.

Florida

Florida Department of Commerce
Bureau of International Trade and
Development
331 Collins Building
Tallahassee, FL 32399-2000
904/488-6124

The state-level agency that provides export and international investment assistance to communities.

Florida High Technology and Industry
Council
Executive Office of the Governor
The Capitol
Tallahassee, FL 32399-0001
904/487-3134

This state-level council promotes the development of a diversified, technology-based economy. The Council administers innovative programs in

technology research, vocational education,
economic development, and defense spending.

Georgia

Economic Development Laboratory
Georgia Technology Research Institute
Georgia Institute of Technology
Atlanta, GA 30332
404/894-3830

Using a network of regional offices and field staff, the laboratory provides manufacturers and local communities with information and technical assistance on new technologies, management tools and techniques, and access to problem solving engineering skills.

GA Department of Industry and Trade
Marquis Tower Two, Suite 1100
285 Peachtree Center
Atlanta, GA 30303
404/656-4504

The state-level agency responsible for industry adjustment and providing export and international investment assistance to communities.

Kentucky

Center for Robotics and Manufacturing
Systems
University of Kentucky
220 Robotics Facility
Lexington, KY 40506-0108
606/257-6262

The center conducts research and factory assessments in the areas of metalworking processes, nontraditional manufacturing processes, and electronic manufacturing, among others.

Industrial Engineer Program
University of Kentucky
3860 U.S. Highway 60 West
Owensboro, KY 42301
502/926-4433

University engineers provide technical assistance to small and medium-sized firms.

KY Cabinet for Economic Development
Capitol Plaza
Frankfort, KY 40601
502/564-2170

The state-level agency responsible for local economic adjustment projects. Contact the Director of the Office of International Marketing for information regarding export and international investment assistance to communities.

Technology Assistance Program
P.O. Box 9005
Bowling Green, KY 42102-9005
502/781-7911

The program provides direct assistance and referrals for small and medium-sized businesses interested in increasing productivity and competitiveness by implementing higher technologies.

Louisiana

LA Department of Economic Development
P.O. Box 91485
Baton Rouge, LA 70804
504/342-5388

The state-level agency responsible for local economic adjustment and development projects.

LA Office of International Trade, Finance
and Development
P.O. Box 94185
Baton Rouge, LA 70804-9185
504/342-9232

The state-level agency that provides export and international investment assistance to communities.

Mississippi

MS Department of Economic and
Community Development
P.O. Box 849
Jackson, MS 39205
601/359-3449

The state-level agency responsible for all economic development and adjustment activities. Contact the Director of the Export Office for

information regarding export and international investment assistance to communities.

North Carolina

Industrial Extension Service
North Carolina State University
P.O. Box 7902
Raleigh, NC 27695-7902
919/515-2358

To facilitate economic development and improve productivity and quality, the program provides engineering and management services such as technical assistance, information dissemination, applied research projects, and courses and workshops to businesses, industry, and local governments.

NC Department of Commerce
Director of International Marketing
430 N. Salisbury Street
Raleigh, NC 27611
919/733-7193

The state-level agency that provides export and international investment assistance to communities.

South Carolina

SC State Development Board
Box 927
Columbia, SC
803/734-0418

The state-level agency responsible for local economic adjustment activities and providing information regarding export and international investment assistance to communities.

Southeast Manufacturing Technology Center
University of South Carolina
College of Engineering
Swearingen Engineering Center
Columbia, SC 29208
803/777-9595

The center's primary task is to seek out emerging technologies from federal labs and universities, which can be used by small and medium-sized firms as they evolve technologically.

Tennessee

Center for Industrial Services
226 Capitol Boulevard
Suite 401
Nashville, TN 37219
615/242-2456

The center provides technical assistance by accessing university faculties in engineering, business, and management as well as consultants and center staff members to conduct needs assessments and identify other resources for assistance for in-state businesses.

TN Department of Economic and
Community Development
320 6th Ave., North
Nashville, TN 37219
615/242-2456

The state-level agency responsible for local economic adjustment activities and for providing export and international investment assistance to communities.

Midwest Region

Mid West Center for Labor Research
3411 West Diversey Avenue
Suite 10
Chicago, IL 60647
312/278-5418

A nonprofit organization dedicated to helping industrial communities save manufacturing jobs. In addition to publications such as the "Early Warning Manual," MCLR conducts feasibility, labor impact, and industry retention studies for communities in the region.

Regional FLC Coordinator
DOE-Argonne National Laboratory
Technology Transfer Center
9700 S. Cass Ave.
Building 990, Room M3
Argonne, IL 60439-4841
708/252-5361

Contact the regional coordinator of the Federal Laboratory Consortium (FLC) for information

regarding the use of federal technology, small business workshops, and using the FLC Locator.

Regional Technology Transfer Center
Battelle Memorial Institute
Great Lakes Technology Transfer Center
25000 Great Northern Corporate Center
Suite 450
Cleveland, OH 44070
216/734-0094

Contact the RTTC for information regarding using, transferring, or commercializing NASA's technology.

Illinois

Center for Advanced Manufacturing and Production
Southern Illinois University at Edwardsville
Box 1108
Edwardsville, IL 62026-1108
618/692-2166

Through the center counseling, phone inquiries, and workshops may be conducted in areas such as product development, identification of vendors of new technology and software, business planning, small business development, international trade, and bidding on government contracts.

IL Department of Commerce and Community Affairs
International Business Development Office
100 West Randolph, Room 3-400
Chicago, IL 60601
312/814-7166

The state-level agency that provides export and international investment assistance to communities.

Indiana

Calumet Project for Industrial Jobs
4012 Elm Street
East Chicago, IN 46312
219/398-6393

A nonprofit organization that maintains the longest running on-site early warning network in the

country. The network consists of large manufacturers in the northern Indiana region.

Indiana Business Modernization and Technology Corporation
One North Capitol Ave.
Suite 925
Indianapolis, IN 46204
317/635-3058

Representatives from the ten regional offices visit businesses to help identify and analyze technical and business problems and either provide solution assistance or identify resources that can be used.

IN Department of Commerce
International Trade and Business Development
One North Capitol
Suite 700
Indianapolis, IN 46204
317/232-8845

The state-level agency that provides export and international investment assistance to communities.

Technical Assistance Program
Purdue University
Civil Engineering Building, #G175
West Lafayette, IN 47907
317/494-6258

The program assists Indiana businesses, industries, and governments implement new technologies in the areas of product development, engineering, manufacturing methods, and industrial management.

Michigan

MI International Office
P.O. Box 30225
Lansing, MI 48809
517/373-1054

The state-level agency that provides export and international investment assistance to communities.

Midwest Manufacturing Technology Center
2901 Hubbar Road
P.O. Box 1485
Ann Arbor, MI 48106
313/769-4000

The center provides a variety of services to small and medium-sized tooling, machinery, plastic processes, and metal-forming firms such as problem assessment and solution identification, implementation, and integration.

Technology Transfer Network
Michigan Department of Commerce
P.O. Box 30225
Lansing, MI 48909
517/335-2139

Acts as a clearinghouse for information on the states university-based technology centers.

Minnesota

MN Economic Conversion Task Force
State Office Building
Room 407
St. Paul, MN 55155
612/296-0294

The legislatively mandated task force that studied the impact of defense spending on Minnesota and made recommendations to the legislature.

Minnesota Jobs With Peace
1929 South 5th Street
Minneapolis, MN 55454
612/338-7955

Jobs With Peace is a private, nonprofit organization providing staff support, community education, fundraising, and other activities supporting and promoting economic conversion in Minnesota. Current activities include Unysis site work, producing their newsletter, and developing a plan for future conversion advocacy.

MN Trade Office
1000 World Trade Center
300 East 7th Street
St. Paul, MN 55101
612/297-4227

The state-level agency that provides export and international investment assistance to communities.

Ohio

Center for Mediation of Disputes, Inc.
8 West 9th Street
Cincinnati, OH 45202
513/721-4666

This nonprofit organization offers mediation and consultation services to public and private institutions.

Cleveland Coalition Against Plant Closings
The Regional Industry Center Project
1800 Euclid Avenue
Suite 314
Cleveland, OH 44115
216/566-8100

The Cleveland Coalition provides early warning training for local economic development departments and labor unions. Training includes an early warning manual and checklist they developed.

Ohio Department of Development
Small and Developing Business Division
State Office Tower II
77 South High Street
Columbus, OH 43215
614/644-9599

The state-level agency responsible for all local economic adjustment and development efforts including the 1990 report "Ohio's Changing Defense Procurement Patterns: A Company Perspective".

Ohio Department of Development
International Trade Division
77 South High St., 29th Floor
Columbus, OH 43215
614/466-5017

The state-level agency that provides export and international investment assistance to communities.

Ohio Technology Transfer Organization
Division of Technological Innovation
Ohio Department of Development
77 South High Street, 26th Floor
Columbus, OH 43266
614/466-4286

The organization is responsible for the state's business development needs. It links with all university technology centers.

Wisconsin

WI Department of Economic Development
Bureau of International Development
123 W. Washington Ave.
Radison, WI 53703
608/266-1767

The state-level agency that provides export and international investment assistance to communities.

Mid-Continent Region

Regional FLC Coordinator
HHS/PHS/FDA-National Center for
Toxicological Research
NCTR Drive
Jefferson, AR 72079-9502
501/543-7516

Contact the regional coordinator of the Federal Laboratory Consortium (FLC) for information regarding the use of federal technology, small business workshops, and using the FLC Locator.

Regional Technology Transfer Center
Commercial Technology Services
Texas A&M University System
310 Wisenbaker Engineering Research
Center
College Station, TX 77843-3369
409/845-0538

Contact the RTTC for information regarding using, transferring or commercializing NASA's technology.

Arkansas

AK Industrial Development Commission
One State Capitol Mall
Little Rock AK 72201
501/682-1121

The state-level agency responsible for local economic adjustment activities and providing export and international investment assistance to communities.

Center for Technology Transfer
University Of Arkansas
131 Engineering Research Center
West 20th Street
Fayetteville, AK 72701
501/575-3747

The center helps entrepreneurs develop new ideas and businesses develop marketing plans as well as refer businesses to other resources in the state. The center also provides assistance in industrial and chemical engineering.

Colorado

Accord Associates
1898 South Flatiron Court
Boulder, CO 80301-2869
303/444-5080

An organization that offers mediation services and provides training programs and workshops in dispute resolution.

CDR Associates
100 Arapaho Ave.
Suite 12
Boulder, CO 80302
303/442-7367

Provides training and consultation services to public and private sector organizations.

Governor's Office of Economic
Development
1625 Broadway
Suite 1710
Denver, CO 80202
303/892-3850

The state-level agency responsible for all local economic adjustment and development activities and for providing export and international investment assistance to communities.

Iowa

Center for Industrial Research and Service
500 Iowa State University Research Park
Ames, IA 50010
515/294-0932

The center's staff specialists, private liaisons, and university expertise provides Iowa businesses with problem identification, assessment, implementation, and follow-up services in the areas of productivity engineering, marketing, and management.

IA Department of Economic Development
200 E. Grand Ave.
Des Moines, IA 50309
515/242-4743

The state-level agency responsible for local economic adjustment efforts and for providing export and international investment assistance to communities.

Kansas

Center for Technology Transfer
Pittsburg State University
1701 South Broadway
Pittsburg, KS 66762
316/235-4114

The center provides a variety of technology management services to Kansas firms including design, testing, prototype, product development, and processing assistance through analysis, training, and educational services.

Industrial Liaison Program
112 West 6th Street
Suite 400
Topeka, KS 66603
913/296-5272

The program helps small businesses and entrepreneurs overcome production or technical problems, improve production processes, and capitalize on advanced production techniques and technologies through technical assistance from its two regional offices.

KS Department of Commerce
Trade Development Division
400 8th Street
Suite 500
Topeka, KS 66603
913/296-4027

The state-level agency that provides export and international investment assistance to communities.

Mid-American Manufacturing Technology
Center
8208 Melrose Drive
Lenexa, KS 66214
913/888-5832

This recently created center will attempt to create a "Technology Transfer Delivery System" that will help small manufacturing firms incorporate technology into their operations. The center is also planning to design, build and operate a mobile factory for on-site training seminars.

New Mexico

NM Economic Development and Tourism
Department
1100 St. Francis Drive
Santa Fe, NM 87503
505/827-0300

The state-level agency responsible for all local economic development and adjustment activities. Contact the Director of International Development at 505/827-0309 for information on export and international investment assistance to communities.

JOB TRAINING PARTNERSHIP ACT (JTPA) DISLOCATED WORKER PROGRAMS

DEFENSE DIVERSIFICATION PROGRAM (DDP)

DEFENSE CONVERSION ADJUSTMENT (DCA) PROGRAM

Operated by the Department of Labor's Employment and Training Administration (ETA)
with Funds from the Department of Defense

DESCRIPTION: Provides training and readjustment assistance to workers and military personnel dislocated by defense cutbacks and closure of military facilities; and provides planning support and conversion assistance for diversification of affected facilities within an area impacted by reductions in military expenditures or closure of military facilities.

The programs are tailored to meet participant's individual needs, and emphasis is placed on long-term training (both educational and occupational) that will make the dislocated worker competitive in the workforce of the future.

Retraining Services: May include classroom, occupational skill, and on-the-job training. Basic and remedial education, entrepreneurial training, and instruction in literacy; English-as-a-Second-Language may also be provided.

Readjustment Services: Includes outreach and intake; development of individual readjustment plans; labor market information; job development; job search and placement; supportive services (including child care and transportation allowances); relocation assistance and pre-layoff assistance programs.

Needs Related Payments: Eligible workers who have exhausted their unemployment insurance (UI) may receive needs-related payments to help them complete training or education programs. Payments may not exceed the individual's UI benefits or the poverty level, whichever is higher. To qualify for payments, certain enrollment rules must be met.

Skills upgrading: In addition to the services listed above, skills upgrading may be provided to currently employed workers in non-managerial positions in order to convert a Defense facility and prevent a closure or mass layoff, and to replace or update obsolete skills to facilitate re-employment of such individuals. (DCA grants only).

NOTE: A limited amount of DDP funds may be used to implement high performance workplace and workforce participation systems, and new production technologies to assist conversion efforts.

Missouri

Center for Technology Transfer and
Economic Development
University of Missouri
212 Mechanical Engineering Annex
Rolla, MO 65401
314/341-4555

The center is an umbrella organization providing referral services to small and medium sized businesses for the Manufacturing Research and Training Center, the Missouri Extension Service Teams, and the NASA Industrial Application Program.

MO International Business Office
P.O. Box 1157
Jefferson City, MO 65102
314/751-4855

The state-level agency that provides export and international investment assistance to communities.

Montana

MT Department of Commerce
Business Development Division
International Trade Office
1429 9th Ave.
Helena, MT 59620
406/444-4380

The state-level agency that provides export and international investment assistance to communities.

University Technical Assistance Program
402 Roberts Hall
Montana State University
Bozeman, MT 59717
406/994-3812

Program staff and university faculty provide on-and off-site needs assessments, solution identification, and resource referrals to in-state manufacturers.

Nebraska

NE Department of Economic Development
P.O. Box 94666
State Capitol
Lincoln, NE 68509
402/471-3770

The state-level agency responsible for local economic adjustment activities and providing export and international investment assistance to communities.

Technical Assistance Center Room
W191, Nebraska Hall
University of Nebraska--Lincoln
Lincoln, NB 68588-0535
402/472-5600

The center attempts to improve in-state businesses productivity by providing technical assistance and information on engineering and technical issues.

North Dakota

Center for Innovation and Business
Development
University of North Dakota
Box 8103
(212 Harrington Hall)
Grand Forks, ND 58202
701/777-3132

The center helps conduct product feasibility studies, develop and analyze business plans, prepare financing packages, write grant proposals, and identify problems for entrepreneurs, researchers, small manufacturers, and inventors.

ND Department of Economic Development
1833 E. Bismark Expressway
Bismark, ND 58504
701/221-5300

The state-level agency responsible for local economic development activities. Contact the International Trade Division for information regarding export and international investment assistance to communities.

Oklahoma

OK Department of Commerce
International Division
6601 Broadway Extension
P.O. Box 26980
Oklahoma City, OK 73126
405/843-9770

The state-level agency that provides export and international investment assistance to communities.

South Dakota

SD Economic Development and Tourism
Office
Capitol Lake Plaza
Pierre, SD 57501
605/773-5032

The state-level agency responsible for all economic development and adjustment activities and for providing export and international investment assistance to communities.

Texas

Governor's Economic Transition Task Force
P.O. Box 12428
Austin, TX 78711
512/463-1814

The task force monitors the impact of defense spending cuts in Texas and makes recommendations to the governor.

Technology and Business Development
Center
310 Wisenbaker Engineering RC
College Station, TX 77843
409/845-0538

This program promotes, through its Municipal Assistance, the Technical Assistance, and Research Assistance Programs, the application of technology-related research to increase economic growth and encourage industrial and entrepreneurial development.

TX Office of International Trade
816 Congress, Suite 1200
P.O. Box 12728
State Capitol
Austin, TX 78711
512/472-5059

The state-level agency that provides export and international investment assistance to communities.

Utah

Utah Department of Commerce and
Economic Development
324 South State Street
Salt Lake City, UT 84114
801/538-8736

The state-level agency responsible for all economic development, economic adjustment, and export and international investment assistance to communities.

Wyoming

Wyoming Office of the Governor
Director of International Trade
Cheyenne, WY 82002
307/777-6412

The state-level agency that provides export and international investment assistance to communities.

Far West Region

Regional FLC Coordinator
DoD-Naval Ocean Systems Center
271 Catalina Blvd.
San Diego, CA 92152
619/553-2101

Contact the regional coordinator of the Federal Laboratory Consortium (FLC) for information regarding the use of federal technology, small business workshops, and using the FLC Locator.

Regional Technology Transfer Center
University of Southern California
3716 South Hope Street, Suite 200
Los Angeles, CA 90007-4344
213/743-6132
(CA) 1-800-642-2872
(National) 1-800-872-7477

Contact the RTTC for information regarding using, transferring, or commercializing NASA's technology.

Alaska

State of Alaska
Office of International Trade
3601 C Street
Suite 798
Anchorage, AK 99503
907/561-5585

The state-level agency that provides export and international investment assistance to communities.

Arizona

AZ Department of Commerce
Director, International Business and Trade
3800 N. Central
Phoenix, AZ 85102
602/280-1371

The state-level agency that provides export and international investment assistance to communities.

California

Aerospace Task Force
6922 Hollywood Blvd.
Los Angeles, CA 90028
213/462-5111

ATF is a coalition that attempts to mitigate the problems defense downsizing has on the Los Angeles region. ATF has three principle goals: educate the public, promote diversification, and lobby for adjustment support at the state and federal levels.

CA Commission on State Finance
915 Capitol Mall
Suite 435
Sacramento, CA 95814
916/653-2664

Produced state-level reports on the impact of defense spending in California for 1990 and 1991.

CA Department Of Commerce
801 K Street
Suite 1700
Sacramento, CA 95814
916/322-1394

This state agency provides a variety of services to communities and businesses. CADoC publishes a semiannual newsletter titled "Bear Tracks" and tracks instate technology transfer efforts.

CA World Trade Commission
Director of Export Development
1121 L Street
Suite 310
Sacramento, CA 95814
916/324-5511

The state-level agency that provides export and international investment assistance to communities.

Center For Working Life
600 Grand Ave.
Suite 305
Oakland, CA 94610
510/893-7343

The center offers technical assistance to communities adjusting to base or plant closings. It specializes in peer counseling, labor-management councils, and outreach strategies. The center's primary publications include "Starting Over" a handbook for dislocated workers. It is a how-to book on facilitating job clubs that include participant handouts and worksheets.

Hawaii

HI Department of Business and Economic
Development
P.O. Box 2359
Honolulu, HI 96804
808/548-3048

The state-level agency responsible for all economic development activities. Contact the Trade and Industry Development Branch for information regarding export and international investment assistance to communities.

Idaho

ID Department of Commerce
Division of International Business
700 West State Street
2nd Floor
Boise, ID 83720
208/334-2470

The state-level agency that provides export and international investment assistance to communities.

Nevada

NV Commission on Economic Development
Capitol Complex
Carson City, NV 89710
702/687-4325

The state-level agency responsible for all economic adjustment activities, and for providing export and international investment assistance to communities.

Oregon

Confluence Northwest
P.O. Box 8182
Portland, OR 97207
503/243-2663

This organization offers mediation, facilitation, training, and conflict management systems design.

Oregon Economic Development
Department
International Trade Division
121 SW Salmon, Suite 300
One World Trade Center
Portland, OR 97204
503/229-5625

The state-level agency that provides export and international investment assistance to communities.

Washington

Mediation Institute
605 First Ave.
Suite 525
Seattle, WA 98104-2244
206/624-0805

The institute provides mediators, conducts training workshops, and produces publications on conflict resolution.

Washington Community Diversification
Advisory Committee
Department of Community Development
906 Columbia Street, SW
P.O. Box 48300
Olympia, WA 98504-8300
206/753-2200

This committee published "Diversification: Strategies for Military-Dependent Communities, Firms, and Workers in Washington State." Members of the committee represent a cross-section of military-oriented businesses, economic development authorities, labor organizations, state and local agencies, peace activists, and representatives of the military.

WA Department of Trade and Economic
Development
Import/Export Office
2001 6th Avenue
26th Floor
Seattle, WA 98121
206/464-7143

The state-level agency that provides export and international investment assistance to communities.

BIBLIOGRAPHY

Books

- Barff, Richard. "Living by the Sword and Dying by the Sword? Defense Spending and New England's Economy in Retrospect and Prospect" Chap. in The Pentagon and the Cities, ed. Andrew Kirby, 171-187. Newbury Park: Sage Publications Inc., 1992.
- Campagna, Anthony S.. "The Post-Vietnam Society." Chap. in The Economic Consequences of the Vietnam War. New York: Praeger, 1991.
- Ettlinger, Nancy. "Development Theory and the Military Industrial Firm" in The Pentagon and the Cities, ed. Andrew Kirby, Newbury Park: Sage Publications Inc., 1992.
- Feather, Frank. "Geo-strategic Opportunity Development Corporation (GEODEVCO). "G-Force E-9 Converting Military Waste to Earthly Eco. Development. "Chap. in G-Forces. New York: William Morrow and Company, Inc., 1989.
- Feather, Frank. "Geo-strategic Opportunity Development Corporation (GEODEVCO). "G-Force P-1 Disarming the Planet." Chap. in G-Forces. New York: William Morrow and Company, Inc., 1989.
- Forsberg, Randall. "Security Through Military Defense." in New Agendas for Peace Research: Conflict and Security Reexamined, ed. Elise Boulding, Boulder: Lynne Rienner Publishers, Inc., 1992.
- Gansler, Jaques S.. Affording Defense. Cambridge: The MIT Press, 1989.
- Gansler, Jaques S.. The Defense Industry. Cambridge: The MIT Press, 1981.
- Hall, Peter., Anne R. Markusen. "The Pentagon and the Gunbelt." in The Pentagon and the Cities, ed. Andrew Kirby, 53-76. Newbury Park: Sage Publications Inc., 1992.
- Jacob, Gerald. "The Legacy of the Pentagon: The Myth of the Peace Dividend." in The Pentagon and the Cities, ed. Andrew Kirby, 154-170. Newbury Park: Sage Publications Inc., 1992.
- Kaufmann, William W. and John d. Steinbruner., Decisions For Defense. Washington D.C.: The Brookings Institution, 1991.
- Kirby, Andrew, "The Pentagon Verses the Cities?" Chap. in The Pentagon and the Cities, ed. Andrew Kirby, 1-22. Newbury Park: Sage Publications Inc., 1992.

- Kutiner, Robert. "Security: Military or Economic?" Chap. in The End of Laissez-Faire: National Purpose and the Global Economy After the Cold War. New York: Alfred A. Knopf, Inc., 1991.
- Lall, Betty G., John Tepper Marlin. Building a Peace Economy: Opportunities and Problems of Post-Cold War Defense Cuts. Boulder: Westview Press, 1992.
- Lynch, John E.. Plant Closures and Community Recovery. Washington D.C.: National Council for Urban Economic Development, 1990.
- Markusen, Ann., Joel Yudken. Dismantling the Cold War Economy. BasicBooks, 1992.
- _____. "Government as Market: Industrial Location in the U.S. Defense Industry." in Industry Location and Public Policy, ed. Henry W. Herzog, Jr., and Alan M. Schlottman. Knoxville: The University of Tennessee Press, 1991.
- _____. , Peter Hall, Scott Campbell, Sabina Deitrick. "Why the Gunbelt?" Chap. in The Rise of the Gunbelt. New York: Oxford University Press, 1991.
- Melman, Seymour. "How the Military Economy Works: The Firm." Chap. in The Permanent War Economy: American Capitalism in Decline. New York: Simon and Schuster, inc. 1985.
- _____. "How the Military Economy Works: The System." Chap. in The Permanent War Economy: American Capitalism in Decline. New York: Simon and Schuster, inc. 1985.
- _____. "War Economy and Prosperity." Chap. in The Permanent War Economy: American Capitalism in Decline. New York: Simon and Schuster, inc. 1985.
- Moran, Theodore H. American Economic Policy and National Security. New York: Council of Foreign Relations Press, 1993.
- Mosley, Hugh G. The Arms Race: Economic and Social Consequences. Lexington, Massachusetts: LexingtonBooks, 1985.
- Perot, Ross. "An America that Pays Its Way." Chap. in United We Stand: How We Can Take Back Our Country. New York: Hyperion, 1992.
- Renner, Micheal. "More than a Matter of Definition: Diversification, Spinoff, and Conversion." Chap. in Economic Adjustment after the Cold War: Strategies for Conversion. Dartmouth: United Nations Institute for Disarmament Research, 1992.

----- . "United States." Chap. in Economic Adjustment after the Cold War: Strategies for Conversion. Dartmouth: United Nations Institute for Disarmament Research, 1992.

----- . Swords Into Plowshares: Converting to a Peace Economy. Worldwatch Paper 96, 1990.

Tolchin, Martin and Susan J..Selling Our Security: The Erosion of America's Assets. New York: Alfred A. Knoff, Inc.

Vatter, Harold G. "The War's Consequences." Chap. in The U.S. Economy in World War II. New York: Columbia University Press. 1985.

Waterstone, Marvin, Andrew Kirby. "Escaping the Conceptual Box: Ideological and Economic Conversion" Chap. in The Pentagon and the Cities, ed. Andrew Kirby, 171-187. Newbury Park: Sage Publications Inc., 1992.

Waterstone, Marvin, . "Epilogue: The Pentagon, the Cities, and Beyond." Chap. in The Pentagon and the Cities, ed. Andrew Kirby, 188-203. Newbury Park: Sage Publications Inc., 1992.

Yudken, Joel and Ann R. Markusen. The Labor Economics of Conversion: Prospects for Military-Dependent Engineers and Scientists. Piscataway, New Jersey: Center for Urban Policy Research, 1993.

Government Publication

1961 - 1990, Planning Civilian Reuse of Former Military Bases, Summary of Completed Military Base Economic Adjustment Projects. Office of Economic Adjustment, Department of Defense, Washington, D.C., Spring 1990.

Defense Economic Adjustment: It Works. Office of Economic Adjustment, Department of Defense, Washington, D.C., Spring 1992.

Knight, Edward. "Federal Economic Adjustment and Conversion Assistance to Communities, Workers and Businesses Affected by Defense Cuts." CRS Report for Congress, 8 March 1993.

Payne, Kenneth F.. A Summary of Some Key Provisions of the Fiscal 1993 Defense Authorization and Appropriations Acts. 4 March 1993.

Rhode Island Defense Economic Adjustment Project. Focusing on the Future. February 1993.

- U.S. Code. "National Defense Authorization Act." Congressional & Administrative News, 102nd Cong., January 1992.
- U.S. Congress. House. Committee on Banking, Finance and Urban Affairs. The Economic Adjustment and Defense Industry Conversion Second Session on H.R. 3999. 101st Cong., 2nd Sess., 14 March 1990.
- U.S. Congress. House. Committee on Armed Services. Defense Policy Panel. Potential Threats to American security in the Post-Cold War Era. 101st Cong., 1st Sess., 10, 11, and 13 December 1991.
- U.S. Congress. House. Committee on Armed Services. Structure of U.S. Defense Industrial Base Panel Defense Industrial Base. 102nd Cong., 12 July, 1 November 1991, 23 January, 5 and 19 February, 6, 10, and 18 March 1992.
- U.S. Congress. House. Committee on Armed Services. Investigations Subcommittee. Defense Economic Adjustment and Conversation Program (Newport, R.I.). 102nd 1st Sess., 16 December 1991.
- U.S. Senate. Defense Transition. 102nd Cong., 2nd sess. Congressional Record, (21 May 1992), vol. 138 no. 72 p. S7245-S7258.
- Jones, Wilbur D. Jr.. "Congressional Involvement and Relations." Department of Defense Systems Management College, October 1989.

Periodicals

- Adam, John A.. "Conversion: How Government Can Help." IEEE Spectrum, 29 no. 12 (1992): 46-52.
- _____, Glenn Zorpette and Alfred Rosenblatt. "Defense: How Much is Enough." IEEE Spectrum, 27 no.11. (1990): 30-41.
- Andrews, Edmund L.. "Military contractors still lobby to keep their businesses intact," The Providence Journal-Bulletin, 12 March 1993, Sec: b p: 1.
- Auster, Bruce B.. "A healthy military industrial complex." U.S. News & World Report, 108 no. 6. (12 February 1990): 42-48.
- Bacon, Donald C.. "Closing a Base Opens Doors." Nations Business, May 1989, 11-13.
- Barnet, Richard J.. "The End of the Jobs." Harper's Magazine, 287 no. 1720. (September 1993): 47-52.

- _____. "Still Putting Arms First: The Cold War legacy confronting Clinton, Abroad and at home." Harper's Magazine, 286 no. 1713. (February 1993): 59-64.
- Beall, Christopher. "The hunt for a mission," The Providence Sunday Journal, 28 March 1993, Sec: c p: 1 col: 1.
- _____. "R.I. Conn. relieved to be spared the worst of Defense Department's base closures," The Providence Journal-Bulletin, 13 March 1993, Sec: a p: 1.
- Beers, David. "The Crash of Blue Sky California." Harper's Magazine, 287 no. 1718.
- Bell, Trudy E.. "A Historical Perspective." IEEE Spectrum, 26 no.11. (1989): 42-44.
- Borrus, Amy. "From Bullets to Bullet Trains: It Won't be Easy" Business Week, Iss. 3262 (20 April 1992): 110, 112.
- Borosage, Robert L.."The Kindest Cuts." The Nation, 256 no. 13 (5 April 1993): 437.
- _____. "Time to Commit Politics." Social Policy, Spring 1990, 13-20.
- Boroush, Mark A. and Charlse W. Thomas. "Alternative Scenarios for the Defense Industry After 1995." Planning Review, 20 no. 3. (May/June 1992): 24-29.
- Brinkly, Joel. "U.S looking for new coarse as superpower conflict ends ," The New York Times, 2 February 1992, Sec: 1 p: 1.
- Campell, John M. ""Defense Conversion":What it Means for companies, workers, and communities." Federal Reserve Bank of Boston Regional Review, 2 no. 4 (Fall): 6-12.
- Cheney, Dick. "The Military We Need in The Future." Vital Speeches of the Day LIX no. 1 (15 October 1992): 12-15.
- Chen, Kathrine T.. "Education." IEEE Spectrum, 26 no.11. (1989): 60-63.
- Christiansen, Donald. "Conversion: whose job?" IEEE Spectrum, 29 no. 12. (December 1992): 25.
- _____. "Fighting the New Wars." IEEE Spectrum, 26 no.11. (1989): 25.
- "Clinton pledges aid to areas hit hardest by defense cuts," The Providence Sunday Journal, 14 March 1993.

- "Clinton: The fate of third Seawolf sub remains 'open,' but prospects are poor," The Providence Sunday Journal, 28 March 1993, Sec: b p: 1.
- "Clinton touts high-tech vision," The Providence Journal-Bulletin, 18 March 1993, Sec: a p: 5 col: 1.
- Codevilla, Angelo M. and others. "After the Cold War: A Symposium on New Defense Priorities." Policy Review, Summer 1990, 6-16.
- Cole, Bernard. "DOE Labs: Models for Tech Transfer." IEEE Spectrum, 29 no.12. (1992): 53-57.
- Colt, Tim. "Hood makes a case for the defense," The Providence Journal-Bulletin, 30 March 1993, Sec: e p: 1.
- Crump, Jeffery R. "The Spatial Distribution of Military Spending in the United States 1941-1985." Growth and Change, 20 no. 3. (Summer 1989): 50-62.
- "Defense in the 21st Century." The Economist, 324 no.7775. (5 September 1992): 58-70.
- Donovan, William J. "Quonset's potential remains unfulfilled," The Providence Sunday Journal, 14 March 1993, Sec: I p: 1.
- Ellis, James E., and others. "Who Pays for Peace." Business Week, 2 July 1990, 64-70.
- Fessler, Pamela. "Hill Struggles To Assist Victims Of Post-Cold War Budget Cuts." Congressional Quarterly Weekly Report, 50 no. 10. (7 March 1992): 542-550.
- _____. and Pat Towell. "Senate, House Look for Ways To Cushion Spending Drop." Congressional Quarterly Weekly Report, 50 no. 21. (23 May 1992): 1460-1461.
- Files, Jennifer. "For Peace, dividend is slow, costly" The Providence Sunday Journal, 14 March 1993, Sec: I p: 1.
- Fulghum, David A.. "Defense Conversion Plan Full of Flaws." Aviation Week & Space Technology, 16 November 1992, 18, 19.
- Garner, Alan C.. "The Effect of U.S. Defense Cuts on the Standard of Living." Economic Review, January/February 1991, 33-47.
- David Gold. Review of Dismantling the Cold War Economy, by Ann Markusen and Joel Yudken. In The Bulletin of the Atomic Scientists (May 1993): 45, 46.
- Gramlich, Edward M.. "Distinguished Lecture on Economics in Government, Setting National Priorities: 1992." Journal of Economic Perspectives, 6 no. 2. (Spring 1992), 3-12.

- Hartung, William D.. "Welcome to the U.S. Arms Superstore." The Bulletin of the Atomic Scientists, 49 no.7. (September 1993): 20-26.
- Hiatt, Fred. "Russians say return to Cols War unlikely," The Providence Sunday Journal, 28 March 1993, Sec: c p: 1 col: 1.
- Hill, Catherine., Sabina Deitrick, Ann Markusen. "Converting the Military Industrial Economy: The experience at Six Facilities" Journal of Planning Education and Research no. 11. (1991): 19-36.
- Hughes, David. "Raytheon MMIC Facility Shifts to Civil Markets." Aviation Week & Space Technology, 139 no. 11. (13 September 1993): 54, 58.
- Johnston, Gerald A.. "The U.S. Defense Industry: National Asset or an Anachronism?" Vital Speeches of the Day, LIX no. 9. (15 February 1993): 286-288.
- Kaplan, Gadi. "Preparing for Peace." IEEE Spectrum, 26 no. 11 (1989): 26, 27.
- _____. "Unanswered Questions." IEEE Spectrum, 26 no. 11 (1989): 70.
- Kilborn, Peter T. "Job conversion tough for many skilled workers," The Providence Journal-Bulletin, 5 April 1993, Sec: a p: 1. 36.
- King, Correta Scott. "After the Cold War the People: Correta Scott King on the Peace Dividend." Social Policy, Spring 1990, 29.
- Levinson, Mark. "A Peace Dividend for the U.S. Economy?" Dissent, Spring 1990, 140-142.
- Markusen, Ann. "The Politics of Peacetime Conversion." Harper's Magazine, 285 no. 1709. (October 1992): 25-28.
- Marlin, John Tepper. "Tell the Pentagon The Cold War Is Over." Challenge, July/August 1992, 24-29.
- Melman, Seymour. "America can turn civilian, successfully," Los Angeles Times, 29 December 1992, Sec: b p: 7 col: 1.
- _____. and LLOYD J. Dumas. "Bombs into Plowshares: Planning for Economic Conversion." The Nation, 250 no. 15 (16 April 1990): Cover, 522-528.
- Miller, S.M.. "A Sea of Change Around the World." Social Policy, Spring 1990, 21-33.

- Moran, Theodore H.. "Foreign Acquisition of critical U.S. Industries:Where should the United States Draw the Line?" The Washington Quarterly, 16 no. 2 (1993): 61-71.
- Morrison, David C.. "Cancellation Mismatch." National Journal, 22 no. 36 (9 August 1990): 2114-2118.
- _____. "Cushions for Contractors." National Journal, 22 no. 2 (13 January 1990): 56-66.
- _____. "Gold Plating." National Journal, 22 no. 2 (13 January 1990): 98.
- Morocco, John D. "House Panel Urges Shift to Civilian Work to Preserve Defense Industrial Base." Aviation Week & Space Technology, (20 April 1992): 63.
- _____. and David A. Fulghum. "Saving Industrial Base Key in Bottom-up Review." Aviation Week & Space Technology, 139 no. 10 (6 September 1993): 24-26.
- Mulligan, John. "Aspin outlines short-term cuts in defense," The Providence Sunday Journal, 28 March 1993, Sec: b p: 1 col: 1.
- _____. "Base-closure panel looked elsewhere for big savings," The Providence Journal-Bulletin: Evening Edition, 29 June 1993, Sec: a p: 1.
- _____. "President promises to ease blow of defense cuts," The Providence Journal-Bulletin, 12 March 1993, Sec: b p: 1.
- Murphy, Erin E. "War on Terrorists." IEEE Spectrum, 26 no.11. (1989): 33-35.
- Murphy, Kevin D. "Making the Most Of a Base Closing." Governing, 6 no. 12 (September 1993): 22-24.
- "Nunn challenges Clinton's plans to slash defense," The Providence Journal-Bulletin, 23 March 1993.
- Nunn, Sam. "The Defense Department Must Thoroughly Overhaul the Services Roles and Missions." Vital Speeches of the Day LVIII no. 20 (1 August 1992): 617-624.
- O'Neill, James M. "Federal panel rejects moving subs from Groton," The Providence Journal-Bulletin, 26 June 1993, Sec: a p: 1.
- Palmer, Elizabeth A.. "Pollution Clogs the Transfer of Land to Civilian Uses." Congressional Quarterly, 51 no. 13. (27 March 1993): 770-772.

- _____. "Megaports To Keep Navy Afloat As Other Facilities Close." Congressional Quarterly, 51 no. 27. (3 July 1993): 1755-1758.
- _____. "Criteria, Confusion and Closure." Congressional Quarterly, 51 no. 27. (3 July 1993): 1759.
- Perle, Richard. "How not to spend the 'peace dividend'." U.S. News & World Report, 108 no. 6. (12 February 1990): 47(inset).
- Perry, Tekla S.. "Engineers in Profile." IEEE Spectrum, 29 no. 12. (December 1992): 29-36.
- Phipps, Peter. "Sundlun packages in a little bad with the good," The Providence Sunday Journal, 28 March 1993, Sec: f p: 1.
- Pollin, Robert. "Use Conversion to Create Jobs." The Nation, 257 no. 2. (12 July 1993): 66-68.
- Powell, Colin L.. "U.S. Forces: Challenges Ahead." Foreign Affairs Winter 92/93, 32-45.
- Psihas, George P.. "Maintaining the Defense Industrial Base: Evolving National Policies Place Defense in Great Jeopardy." Vital Speeches of the Day, LIX no. 6. (1 January 1993): 165-168.
- Raskin, Marcus G.. "Disarmament Disarmed?" The Nation, 257 no. 9. (27 September 1993): 316-317.
- "Restructure Defense Don't Convert It." Aviation Week and Space Technology, 30 January 1993, 70.
- Riezenman, Michael J.. "Courage to Convert." IEEE Spectrum, 29 no.12. (1992): 62-68.
- Santo, Brian. "Industry." IEEE Spectrum, 26 no.11. (1989): 52-55.
- Schnieder, Keith. "Military Has New Strategic Goal In Cleanup of Vast Toxic Waste," The New York Times, 5 August 1991, Page 1.
- Segal, David. "The Shell Game." The Washington Monthly, 25 no. 7 and 8. (July/August 1993): 37-43.
- Stevenson, Richard W.. "So Far, St. Louis Handles Arms Cuts," The New York Times, 8 August 1991, Sec: D p: 1.
- Stix, Gary. "Guns to Butter." IEEE Spectrum, 26 no.11. (1989): 45-48.
- Tekla, Perry S.. "Engineers in Profile." IEEE Spectrum, 29 no.12. (1992): 37-45.

- Tooher, Nora Lockwood. "\$300,000 grant will aid laid-off workers," The Providence Journal-Bulletin, 8 April 1993, Sec: f p: 1.
- Tonelson, Alan. "Superpower Without a Sword." Foreign Affairs, 72 no.3. (Summer 1993): 166-180.
- Towell, Pat. "Keeping the Options Open." Congressional Quarterly Weekly Report 51 no.14. (3 April 1993): 847.
- _____. "On Road to Conversion." Congressional Quarterly Weekly Report 51 no.33. (14 August 1993): 2235(inset).
- _____. "Spending: Defense." Congressional Quarterly Weekly Report 51 no.15. (10 April 1993): 893-894.
- _____. "Surprises Are Unlikely as Hill Tackles Defense Budget." Congressional Quarterly Weekly Report 51 no.33. (14 August 1993): 2232-2237.
- _____. "To Soften Hardship." Congressional Quarterly Weekly Report, 50 no. 32. (8 August 1992): 2377.
- _____. "With Defense Dollars To Be Spent, Clinton Has Pick of Programs." Congressional Quarterly Weekly Report 51 no. 2. (9 January 1993): 84-87.
- Thompson, Mark. "Nation braces for base closings," The Providence Journal-Bulletin: Evening Edition, 12 March 1993, Sec: a p: 1 col: 1.
- Ullmann, John E.. "Building a Peace Time Economy." Technology Review, 94 iss. 6 (1991): 56-63.
- Victor, Kirk. "Worries for Workers." National Journal, 22 no. 2 (13 January 1990): 57-61.
- Guskind, Robert. "Picking Up the Pieces." Planning, June 1990, 12-16.
- _____. "Risks by Region." National Journal, 22 no. 2 (13 January 1990): 62-64.
- Voelcker, John. "Reemployment assistance." IEEE Spectrum, 26 no.11. (1989): 52-55.
- Watson, George F.. "Companies in Profile." IEEE Spectrum, 29 no.12. (1992): 37-45.
- Weidenbaum, Murray. "The Future of U.S. Defense Industry." Contemporary Policy Issues Vol. 10, (April 1992): 27-37.
- Wiesner, Jerome B., Philip Morrison, and Kosta Tsips., "Ending the Overkill." The Bulletin of the Atomic Scientists 49 no. 2, (March 1993): 12-23.

- Wines, Michael. "Bush and Yeltsin declare formal end to cold war; agree to exchange visits," The New York Times, 2 February 1992, Sec: 1 p: 1.
- Wolff, Howard, "Learning New Skills." IEEE Spectrum 29 no.12 (1992): 58-61.
- Zorpette, Glenn. "Rethinking Weapons and Strategy." IEEE Spectrum, 26 no.11. (1989): 36-41.
- Ziemke, Caroline F. "Rethinking the "Mistakes" of the Past: History's Message to the Clinton Defense Department." The Washington Quarterly, 16 no. 2 (1993):47-60.

Unpublished Materials

- Disney Diane M. " Defense Economic Adjustment Project: Initial Assessment of Data from Rhode Island Employers." Prepared for Defense Economic Adjustment Project Public Meeting 11 March 1992.
- Disney Diane M. "Rhode Island's Dependence on Defense Spending." Testimony to a Hearing of the Defense Conversion Commission United States Department of Defense 17 September 1992.
- "Economic Conversion Project of Maine Annual Report." 1990-1991.
- Economic Conversion Project 1992-1993 Program Executive Summary
- "EIC Defense Transition Programs," [photocopied]
- Eulogy of Robert Brandenburger. "From Bombs to Trees: New Economic Priorities." in English, Given at the Cranston Public Library. (6 April 1993).
- Griffth, Robert K. Jr.. "Rhode Island Defense Economic Adjustment Project: Overview of Defense Economy and Study." Prepared for Defense Economic Adjustment Project Public Meeting March 11, 1992.
- Laubernds, William L. "Practical Suggestions for Developing Revenues from Surplus Property: A Technical Report.
- "Quonset Point\Davisville Complex Strategic Plan," [photocopied]
- "Southern Rhode Island Defense Adjustment Proposal," 6 March 1992.[photocopied]
- "The Guide to Small Business Financing Programs," [photocopied]