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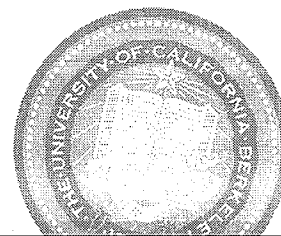
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**DEFENSE INDUSTRY CONVERSION, BASE CLOSURE, AND THE  
CALIFORNIA ECONOMY: CRITICAL ISSUES FOR A  
STATEWIDE STRATEGY**

BY

**TED BRADSHAW, ET AL**

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**Defense Industry Conversion, Base Closure, and the California Economy:  
Critical Issues for a Statewide Strategy**

by

**Ted Bradshaw**

**with Cynthia Kroll, Josh Kirschenbaum, Rokaya Al-Ayat, Mary Corley, Lyn Harlan, Jason  
Moody, and Judith Innes**

**Center for Real Estate and Urban Economics  
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## **Defense Industry Conversion, Base Closure, and the California Economy**

A Series of Working Papers by Ted K. Bradshaw (Project Co-Director), Cynthia Kroll (Project Co-Director), Rokaya Al-Ayat, Mary Corley, Lyn Harlan, Josh Kirschenbaum, and Jason Moody. Judith Innes, Principal Investigator.

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From December 1993 through June 1994, the Institute of Urban and Regional Development (IURD) and the Center for Real Estate and Urban Economics (CREUE) conducted research to provide background for the state's defense recovery strategic planning effort. The research resulted in a final report to the California Trade and Commerce Agency and a set of working papers on prospects for the California economy's recovery from defense cuts. The working papers are jointly published by IURD and CREUE and can be obtained from either institute. The full set of papers includes:

**Defense Industry Conversion, Base Closure, and the California Economy: A Review of the Literature and Annotated Bibliography.**

This work summarizes existing published research through spring 1994 on the defense industry, military base closure, and recovery efforts, with the primary focus on California. An annotated bibliography is appended to the paper.

**Defense Industry Conversion, Base Closure, and the California Economy: A Review of Research and Planning Activities for Recovery**

This paper reviews recent recovery efforts in California among counties experiencing defense industry job losses and communities experiencing base closures. The report also identifies ongoing research efforts on defense recovery topics.

**Defense Industry Conversion, Base Closure, and the California Economy: The Role of Technology Transfer and Emerging Technologies \***

This paper describes technology transfer programs and efforts as they relate to the recovery and restructuring of the California economy.

**Defense Industry Conversion, Base Closure, and the California Economy: Critical Issues for a Statewide Strategy**

Drawing from the three background working papers, this piece identifies critical needs for recovery and suggests some directions for recovery efforts.

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Defense Industry Conversion, Base Closure, and the California Economy:  
Critical Issues for a Statewide Strategy

Abstract

This paper outlines the underlying factors that must be considered for a statewide recovery strategy from defense cuts. There are many opportunities but no easy solutions to the process of reemploying displaced workers, reusing physical facilities and regenerating industrial strengths in areas reliant on defense spending. A recovery strategy must build on an understanding not only of the defense component of California's economy but also of the impacts of a globalizing economy, corporate reorganization and downsizing, the growth of temporary work and virtual corporations, and the potential of information transfer technologies. The state needs a plan that coordinates the many federal, state and local initiatives in order to integrate defense conversion with economic development. Three primary goals of a state strategy are to assist and reemploy displaced workers, to rejuvenate the industrial base and to strengthen community capacity. A key role of state government in meeting these goals is to coordinate multijurisdictional and multiagency efforts that have related goals, to provide information and communication among groups, and to support innovative new approaches for economic development and recovery.

# Critical Issues for a Statewide Strategy

## Introduction

California's economic recovery from cuts in defense contracts and the closure of a substantial number of military bases will require a multifaceted strategy. In our review of available literature on defense conversion and base closure, we found many opportunities, but no easy solutions to the process of reemploying displaced workers, reusing physical facilities, and regenerating industrial strengths in areas that used to depend heavily on defense spending. The analysis completed in this project suggests that creating a new economy for California that is less dependent on military spending and personnel will require coordination and leadership to mobilize available federal, state, and local resources, but if done well it is an opportunity that will result in a California economy that is better poised for global leadership in the 21st century. California is preparing a statewide strategic plan to respond to defense cuts in key industries and to assist communities with bases that are closing. The purpose of this section is to summarize the needs of those hurt by the cuts and to outline a framework for a statewide strategy based on some of the conclusions of the research we reviewed. The premises for such a strategy first require an understanding of the role of defense expenditures as a part of the state and local economies.

*Background.* Declines in the amount of defense spending in California are coming at the same time the state is experiencing other massive economic pressures due to technological and organizational change in the economy and the lingering impacts of the national recession. It would be a serious mistake not to put defense cuts in the context of changes such as these:

- the globalization of the economy,
- corporate reorganization and downsizing,
- growth of temporary work and virtual corporations, and
- the potential of information transfer technologies.

New firms and product lines continue to show great promise in fields as different as electronics, software, biotechnology, communications, energy, transportation, and services. At the local level, retail trade continues to evolve with growth of big-box outlets and regional centers, often promoted by local governments in search of tax revenue even at the expense of downtown businesses. These changes may compound—or mitigate—the effects of defense-related losses. In short, we believe that any recovery strategy from defense cuts must be firmly grounded in an understanding of the new economic base for the state. The success of the California economy with less federal defense spending will depend more on how it prepares for the economy of the 21st century than how it protects the losers of today.

Thus, the literature we reviewed suggests that the only option for reemploying the 300,000-400,000 Californians who have been and will be displaced by the defense cuts is to rejuvenate the civilian economy in its broadest perspective. If the problem is the decline of the narrow and specific market



niche of California defense-related goods, services, and facilities, the solution is the broad and generic restructuring of the economy to take advantage of freed resources and capacity. There is no simple economic pill that will replace what is lost with a new industry, financing scheme, technology transfer program, or jobs program. Reemployment of Californians will require the use of all the economic development strategies we have at our disposal to mobilize the state's considerable resources.

In perspective, defense represents one of the state's most valuable and pivotal sectors, especially in aerospace. While Federal defense spending amounts to only a few percent of the total state economy, defense cuts account for at least 25 percent of the recent drops in California employment. Moreover, the high-paying and technically sophisticated jobs that have been lost or that are at risk are an important human resource assets in the state. In addition, the defense and military jobs being lost disproportionately include a large number of minority and women workers, and defense supports many minority- and women-owned businesses due to the strong equal opportunity programs associated with federal contracts. Losses of employment due to defense cuts, thus, are even more important than just their raw numbers might suggest.

These impacts will be felt differently throughout the state, with no part entirely spared. At the most general level, base closure is concentrated in Northern California, while defense industry cuts are concentrated in Southern California. Rural base closures have a greater local economic shock than urban ones, due to less diversified rural economies. But even within these broad regional patterns, local conditions show unique conditions and require particularly tailored responses. For example, base communities in Southern California, especially in Riverside and San Bernardino Counties, have had to deal with loss of bases and the displacement of large numbers of commuters to aerospace firms in Los Angeles and Orange counties. In addition, the defense industry in Northern California, especially in Silicon Valley, has had to respond to deep cuts in certain firms and industrial sectors, though the overall region is enough diversified that the overall impact is relatively small.

The widespread distribution of the impacts of defense cuts means that the state has a strong stake in responding to the challenge of rejuvenating these economies. However, in order to respond to the diversity of local impacts, state assistance must be coordinated and focused at the regional level. Indeed, regional coordination is already proceeding relatively effectively and in advance of a coordinated state plan through the Regional Technology Alliances and OEA regional planning grants. For example, a number of strong regional cooperative organizations (for example the East Bay Conversion and Reinvestment Commission) already exist and have taken the lead in responding to the challenge of base closure and defense conversion from the regional perspective, effectively melding local resources and opportunities.

While there is need for regional concern and coordination, local community leadership has been found to be pivotal. Since most land use decisions and economic development efforts stem from local communities, involvement of cities and county agencies and local citizen groups in defense conversion efforts is essential. Indeed, community participation is necessary for reuse efforts to be successful and to prevent

unnecessary community opposition to proposed projects. Surprisingly, community conflict may be one of the most significant barriers to base reuse in California and other states, even though the need for cooperative efforts are arguably greater in responding to a base closure than to other community crises. Because of the importance of local cooperation, base reuse and industrial restructuring efforts must build from local collaboration, a premise that is central to recent federal efforts to support defense conversion.

*Overview.* The implication of the premises articulated above is that the state needs a strong statewide strategic plan that coordinates the many federal, state, and local initiatives in order to integrate defense conversion with economic development. The overarching goal is to assist regional and local community efforts to reemploy workers displaced by defense cuts and to rejuvenate the California economy with new technologies, stronger firms, enhanced entrepreneurial opportunities, and quicker response to emerging opportunities. To the greatest extent possible, these efforts should accomplish the following three primary sub-goals:

*I. Assist and Reemploy.* In the short term, efforts need to be concentrated on reemploying workers, especially women and minorities, displaced by base closure, defense firm layoffs or closures, or reductions at firms that supply or service defense contractors. Immediate action is needed to supply services and to help displaced workers find new jobs.

*II. Rejuvenate the industrial base.* Second, over the long run, defense needs to be replaced in the California economy by new industries that can continue to contribute to economic growth, business expansion and creation, and high-wage employment, especially for minorities and women. Bases that are closed are one important asset in the process of generating the economic conditions for new industrial growth.

*III. Strengthen Community Capacity.* Third, community capacity to assist displaced individuals and to rejuvenate the local economy cuts across the short- and long-term goals. Communities can effectively respond to the challenge of defense conversion if they have enhanced information, stronger economic development tools, and state and regional coordination.

## **I. Assist and Reemploy.**

*The Need.* Research has estimated that some 200,000-300,000 civilians<sup>1</sup> either have directly lost or are slated to lose their jobs because of defense cuts and base closures; additional base closures or deeper spending cuts during the next four to five years may increase these numbers. The multipliers from these eliminated defense and base jobs will displace up to an equal number of employees, though the impact is

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<sup>1</sup>The best estimates of direct job loss from 1988-1993 are for about 160,000 jobs in defense industries and civilian jobs at bases. In addition, 73,000 military personnel will be separated or transferred to out-of-state bases. About 100,000 additional jobs are expected to be lost during the next four to five years. While more than half of the defense industry job loss has already occurred, base closures are spread over a longer time frame and many bases have not yet closed. A very high level of uncertainty about the real total impact of defense cuts on job loss remains, however, with some estimates lower and some higher.

probably less, especially at the local level. Moreover, the job losses will fall disproportionately on minority workers and firms.

We found little encouragement that any significant number of the displaced defense workers will find jobs soon in the firms from which they were laid off or on the bases where they worked. Evidence shows that there will probably be a substantial delay between the closing of a base or the termination of work at a defense plant before these facilities host firms or projects that will generate new employment. There is also some evidence that civilian unemployment from closing bases is not going to be as extensive as some feared, and that civilians are retiring or transferring to other federal jobs rather than remaining in the local area unemployed.<sup>3</sup> While this may reflect only the experience of a few bases early in the closure process, we believe that even under the most optimistic conditions 10,000 to 20,000 displaced civilian military base workers in California (out of 27,000 civilians) will still need some assistance to make the transition from military to civilian employment. And since these workers tend to be concentrated in a few areas where bases employed a high proportion of civilian workers, certain neighborhoods and communities will be devastated.

There is worse news in defense industries. The long lines of highly educated and skilled aerospace workers without jobs indicates that job loss is a serious and immediate problem, and corporate layoffs in defense industries may ultimately lay off a quarter of a million Californians. Since multipliers are higher for defense industry jobs,<sup>4</sup> the need to find new industrial sectors to employ these skilled workers is an extremely high priority.

*Early Warning.* The extent and expected continuation of defense cuts means that efforts to halt the process will probably fail. In anticipation of further base closures and the cancellation of defense contracts, it is important to mount effective political arguments and to prepare persuasive studies for BRAC and Department of Defense prior to and after the announcements of cuts in order to best protect state interests.<sup>5</sup> However, these efforts will not stop base closures or defense cuts, because of the overwhelming agreement

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<sup>2</sup>In previous base closure cycles, many bases still had not implemented reuse plans after ten years or more, and as of 1993 at least 25 percent of the 97 bases closed before 1988 have not developed enough to replace lost civilian jobs. Airport and college campus plans are often implemented more readily. (See U.S. Department of Defense, *Civilian Reuse of Former Military Bases: Summary of Completed Military Base Economic Adjustment Projects 1961-1993* (September 1993).

<sup>3</sup>Personal interviews Spring 1994, Castle, Alameda, Mare Island; of an early review of 900 laid-off persons from Alameda, only 10 percent were unemployed. It is expected that the most skilled and the easiest to place persons were relocated first, and that later layoffs will be harder to relocate. As reported in Chapter 1, a Department of Defense study showed that in earlier layoffs 60 percent were transferred, 20 percent retired, and 20 percent displaced.

<sup>4</sup>As shown above in Chapter 1, typical local multipliers for defense contractors are 1.8 to 2.2, while base multipliers are typically lower —about 1.2 to 1.4, depending on the size of the local area. Statewide multipliers are somewhat higher.

<sup>5</sup>Some of these efforts of fighting base closures have been successful, such as the Defense Language Institute in Monterey, which was saved. Realistic approaches are needed.

that extensive cuts need to be made; and the impact on California will be substantial even if the state received just its proportional share of cuts. Continued monitoring of the Base Realignment and Closure Act (BRAC) process and informed public discussion of anticipated cuts will provide an effective early warning that certain communities may experience layoffs and problems. In this report, we have shown that many uncertainties remain regarding the nature and extent of local economic impact due to military cuts, and that communities need the best possible information in order to adequately plan for cuts.

When bases close and plants stop work, the immediate effect is felt by the displaced workers. Efforts should be made to assist displaced workers to make the transition to a new job as quickly and easily as possible. The earlier this process starts, the more effective it is likely to be. The state needs to develop information on likely cuts, and the message needs to go directly to workers at bases that might be closing and in firms that have vulnerable defense contracts. This early warning may reduce some of the denial phase that workers sometimes go through, and it may help some workers create alternative opportunities.

*Job Search.* Without a doubt, the main first need in areas of the state with defense cuts or base closures is to facilitate the transition of workers to new sources of employment, preferably in expanding companies that need trained and reliable workers. The services to assist displaced workers are fairly extensive in California, including strong initial efforts by the Employment Development Department and others to provide immediate and on-site assistance to workers at plants or bases announcing layoffs. However, the experience of base groups has often been that there are many organizations trying to provide services, but these are uncoordinated, overlapping, and occasionally confusing. While progress in facilitating coordinated services is being made, one-stop-shops and other efforts to coordinate assistance are surely beneficial and should be expanded.

The continuing problem of job search programs is that there are too few jobs in which to place persons who need positions. Even in the short term, state economic development programs including business attraction, business retention and expansion, and business creation programs must play an increasingly important role in expanding employment opportunities.

The strategic plan should evaluate the effectiveness of the existing job placement programs and examine the utility of many innovations in assisting job placement throughout the nation. As an example, integrated and intensive job search services that includes everything from resume preparation and job interview skills to much more intensive training and internships or apprenticeships, along with support groups, have had good success in some settings. Often, however, these programs cost more than is available to most displaced defense workers, especially if the displaced worker is not yet in poverty.

Any policy intending to increase job search assistance needs to be balanced by the realization that the number of available jobs in California now is far short of the number of displaced workers who might seek them, and that each job seeker must develop a multi-faceted approach to securing a job when it becomes available or helping to create a job for him/herself. The trend to increasing flexibility in the

application of these programs to dislocated workers needs to continue so that every job seeker can eventually find their desired career path and receive the training and assistance they need.

*Self-Employment.* Displaced workers often have entrepreneurial business ideas that can be turned into self-employment. We know that starting one's own business is both a demanding and a complex experience, but the evidence suggests that self-employment may be necessary for more and more persons sometimes during their career.<sup>6</sup> Small business centers provide information and counseling to assist displaced workers in preparation of their business plans and to secure financing. State and local governments must be more attentive to regulatory barriers to business creation, including the cost and ease of obtaining business permits.<sup>7</sup>

There are two major barriers to self-employment for persons with the adequate skills and a good business plan. The first is to secure financing, which is very difficult without the business having experience and collateral. While the Small Business Administration and state programs are trying to make financing easier, several local economic development organizations have set up revolving loan funds to facilitate funding promising startup companies. The Small Business Administration guarantees loans that assist qualified businesses, and recently new programs have been announced that broaden their services to very small and less developed businesses, which should help displaced defense workers. The state should convene a working group of economic development experts with knowledge about small business financing to explore how the state can leverage current resources to create an expanded loan fund for displaced workers.<sup>8</sup>

The second barrier is marketing products. The state and major businesses should examine how they can further increase purchase of certain standardized products—now purchased largely out of state—that could be produced by local vendors. In the same way that a guaranteed market was essential to the development of California's alternative electricity production industry, market development may be crucial to the encouragement of small business. State coordination of small business sales to foreign countries could also be beneficial to increasing market certainty for entrepreneurial ventures. (The International Trade Office already provides many services for exporters, but many new ventures are unaware of the benefits of these services and the potential that collaboration could have in opening new markets.) Additional market incentives and assistance in accessing diverse markets could be granted to minority- and women-owned businesses.

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<sup>6</sup>See, for example, Gus A. Koehler, *New Challenges to California State Government's Economic Development Engine*, California Research Bureau, California State Library, March 1994.

<sup>7</sup>One entrepreneur reported that he had to go to three offices and pay a \$300 fee to get a business permit for a venture that would create jobs. Wouldn't it be better to make it easy for people to get permits, and then charge them after they get the business going?

<sup>8</sup>Several states have assembled large loan funds from private sources to assist in the economic development in targeted areas (see Ted K. Bradshaw, Nancy Nishakawa, and Edward J. Blakely, *State Economic Development Promotions and Incentives: A Comparison of State Efforts and Strategies* (Berkeley, Institute of Urban and Regional Development, 1993).

Incubators for new firms have proven to be useful in providing both technical assistance to entrepreneurs and helping reduce costs for space. Joint Venture Silicon Valley, for example, has been active in creating specialized incubators for a variety of industries, including environmental technologies. Such incubators can be of most help if they include ongoing business assistance services including financial planning, management skills, and marketing. Whether in a formal incubator facility or in the community as a whole, local areas need to expand on the programs already in place to assist small businesses, and provide services.

*Firm Recovery Programs.* In the short term, firm recovery programs can assist defense workers by helping all kinds of firms expand their employee base. As documented in Chapter 2, Los Angeles and other communities are increasing efforts to assist firms that might employ more workers by a series of programs. These include

- developing a more visible entre for firms seeking assistance — a single point of contact and a network of services.
- providing direct technical assistance to companies in terms of product, technologies, financing, marketing, etc. Assistance is provided to help evaluate potential new directions for firms experiencing cuts due to defense.
- assisting in product development work for firms wanting to diversify.

The short-term advantages of firm recovery and expansion programs are that existing companies are retained and their successful management is utilized in more competitive ways.

*Retraining.* It is probable that some of the displaced defense workers will require retraining. We are cautious about the utility of many training programs because graduates often fail to obtain a good job in the field in which they were trained, leading to disillusionment and frustration.<sup>9</sup> Training in fields for which there are no available jobs has been a problem of some programs, while other programs are closely linked to employer needs for better trained workers. By itself, training is not an easy solution to the displacement of defense workers.

On the other hand, certain types of skill upgrades are required to assist selected defense workers to get into areas with emerging occupations. Certain short-term reemployment opportunities can be combined with training in fields such as toxic cleanup to help rehabilitate closed facilities and to ultimately generate an exportable industry. Retraining will be successful as well in many new businesses taking advantage of technology transfer programs involving defense industries.

*Data.* Assisting displaced workers is hampered by lack of detailed labor market data on the displaced workers, opportunities for reemployment, and the available labor force in nearby communities. Recent experience has shown that bases and reuse agencies are making available good data on the civilian workers being laid off at bases that are closing, but the profiles of displaced base employees contrasts with an otherwise broad labor-force data vacuum on the occupational skills and work interests of displaced

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<sup>9</sup>See, for example, Congress of the United States, Office of Technology Assessment, *Worker Training: Competing in the New Industrial Economy*, 1990.

workers. Detailed information on the location and skills of displaced workers from defense firms has generally not been available. We are concerned that adequate data are not available on the anticipated changes in the state economy and especially sub-county areas, and consequently displaced workers cannot evaluate their opportunities very well. The lack of data on the skills and experience of the available work force prevents job seekers from assessing the amount of competition they will face for jobs in their specialty or to determine if retraining will assist them to obtain one of the available jobs. In addition, better data on available skills of workers may make industry better able to plan expansion.

Moreover, state policy is hampered by the lack of good data on the size and extent of job displacement that is a secondary result of defense cuts and base closures. The methodology of economic modeling provides estimates for job loss and economic decline due to cuts in output from different industrial sectors, but little is known about the industries and employment consequences of these firms. Some, largely dependent on supplying a defense industry or base, will surely suffer greatly, while other businesses will lose only a small part of their revenue. The key questions that need to be addressed are:

Which industrial sectors are the major suppliers or subcontractors to defense contractors? What major sectors supply military bases?

What are the characteristics of these firms, and how will they be affected by defense spending cuts (firm size, location, type of employee, minority or women owned businesses)?

What share of output goes to defense contractors?

What other customers does the firm serve, and how diversified is its customer base?

What are the recovery needs of these firms? Which federal, state, and local programs currently available do they make use of? What other types of programs might be useful to them?

In terms of mobilizing state resources to meet real needs, better data should be available to policymakers. The state should develop uniform reporting standards and collect and publish accurate monthly data from bases and a sample of defense industries in order to gradually reduce the level of uncertainty in discussions of the job loss implications from defense cuts. These base-line data are necessary as well to track the reemployment effort.

## **II. Revitalize the industrial base.**

Second, the strategic plan must consider the long-run effort to replace defense in the California economy by building new industries that can contribute to economic growth, business expansion, creation of new businesses, and high-wage employment, especially for minorities and women. This premise is easier to state than to implement, because states have relatively few tools with which to shape the evolution of the industries in which their residents are employed, and there is extensive global competition for the very types of industries which would most benefit California. Nonetheless, reestablishing a high-end

industrial base is essential to the future of the state and to the reuse of the human and physical resources made available by defense cutbacks. A defense conversion strategy, in this sense, is an economic development strategy that pays particular attention to the redeployment of particular resources in combination with all the other economic development resources in the state.

*Assessments of Resources and Opportunities.* Defense conversion fits into an expanding state economic development capacity aimed at solving critical problems facing businesses as well as attracting new plants. While it is important (indeed, essential) to catalog the resources and facilities that are available due to defense cuts, it is important to also generalize this capacity to include the entire economy of the state. The strategic plan for long-term growth in the California economy requires a frank and realistic evaluation of the resources that are available from the defense sector and the remainder of the state. Some of the resources include:

*Base Reuse.* Closed facilities need to be reused early before infrastructure deteriorates further and opportunities are missed. We agree with the Governor's Military Base Reuse Task Force report that concluded that the closed bases provide communities with an enormous opportunity for economic development in growing urban areas and "a unique opportunity to reinvigorate manufacturing in California,"<sup>10</sup> if these facilities are effectively converted to private uses. The Task Force furthermore set job creation as the over-arching goal:

Net job creation must be the number one coalescing goal of base reuse. Federal, State, and local governments must team up with business to seize the opportunity to convert the economic disaster of base closures into a springboard for economic recovery!<sup>11</sup>

The task is not easy and the success of other efforts gives little grounds for short-term optimism. It is not our purpose to evaluate the recommendations of the Task Force here. While many of the Task Force recommendations have precedence in past efforts and are undoubtedly needed steps that the state must take to reutilize the bases, we want to simply support the concept that the state and local communities must work in partnership to remove barriers to the speedy and effective reuse of bases, and that the state and local communities must advocate additional steps from the Federal government to speed the transition of bases into productive local uses. We agree with the Task Force that base reuse must find ways around unproductive barriers. For example:

Jurisdictional disputes between local governments about base reuse need to be resolved

Duplication and unnecessary regulatory barriers should be eliminated.

Federal requirements for property disposal must be streamlined.

Local planning resources should be adequate to meet local needs.

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<sup>10</sup>California Military Base Reuse Task Force, *A Strategic Response to Base Reuse Opportunities* (Sacramento, Governor's Office, January 1994), p. x.

<sup>11</sup>*Ibid.*, p. xi.



Community redevelopment efforts should be strengthened to deal with base reuse problems.

Base cleanup efforts should be efficient and U.S. EPA delays avoided.

Air emission credits must not be lost through poor planning.

State long-term capital outlays do not always consider potential base uses<sup>12</sup>

The Task Force report lists a detailed and essential agenda to overcome barriers that for the most part covers the essential problems facing efficient and effective reuse of base facilities. In addition, our analysis suggests the benefit of a proactive agenda for stimulating the potential long-term use of base facilities to build the new California economy. A collaborative program of marketing all the state's base reuse assets is an attractive example of how base resources could be developed with additional state assistance. We believe that once base reuse barriers are removed, the public and private sector together can move rapidly to generate new opportunities for California's workforce.

*Human resources.* Building the long-term capacity to be competitive in emerging industries involves extensive support for basic training and education, and efforts to assure that employees are healthy, safe, creative, and ready to work. The state and nation are currently reassessing and revising basic programs in school-to-work and job training, realizing that the nature of work has significantly changed and that current programs do not meet current needs, let alone anticipated needs. Some of the key issues that are being considered include how to make training programs more effective, in light of data that suggest that only 20 percent of trainees in some programs actually get jobs in the field of their training. Furthermore, consideration is being given to the long-range demand trajectories for different types of skills — will declines in other industries add to the surplus of workers in certain skill categories? A related question is if the skills and abilities of displaced defense workers are attractive enough to entice businesses to areas in which they are concentrated. Are the displaced workers able to be retrained into new careers, and if so, which ones would be good fits for different types of displaced workers? How much competition is expected for the proposed new jobs?

A better understanding of the dynamics of the human resources in the state is essential to an effective economic development strategy. The state has long grown by attracting some of the best talent from throughout the nation or world to work in California industry. With cutbacks in many companies, public organizations, and universities, this talent is going elsewhere with significant consequences for the available human resource pool in the state. The retention of available talent is essential, but any long-term strategy must include efforts to continue to attract key people in growing industries. This has proven to be one of the most important economic development strategies available.

The public education system is important in the attraction and retention of skilled persons at the local level and in the preparation of many workers for entry-level support positions. Today, the public

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<sup>12</sup>California Military Base Reuse Task Force, *A Strategic Response to Base Reuse Opportunities* (Sacramento, Governor's Office, January 1994), Executive Summary.

educational system is challenged by the growing number of young persons coming into the schools as well as the diversity of the school population. The large number of children who do not speak English, who live in poverty, or are victims of community social problems makes education harder. These problems are aggravated by job losses in communities due to defense cuts, and effective response to rebuilding the economy requires investment in education. Higher education is facing similar challenges and can offer returns to the new economy in terms of technology and high-skilled workers.

*Infrastructure.* The advantages that established California as the leading high-technology economy in the world are the very advantages that need to be built and strengthened as we face the challenge of rejuvenating the state's industrial base. In particular, we think that the state grew because of a combination of investment in hard and soft infrastructures. The hard infrastructure includes physical systems like water systems, utilities, highways and efficient transportation facilities, communications and media, school and university buildings, public buildings, and recreational amenities. In addition, the soft infrastructure includes the public and private services that make economies work, including research institutions, schools and training programs, venture capital and banking, regulatory and zoning commissions, business organizations and interest groups, publications, public safety, legal protection, and knowledgeable service and supply providers. California invested public and private money in the state's infrastructure for many years, and it paid off in terms of economic growth. However, many reports convincingly show that the infrastructure is broken and is not serving the needs of existing businesses or communities. State budget problems surely dampen any prospect for immediate new investments in the resources that lie at the foundation of any revitalization of the state economy, but without a careful program to evaluate and prioritize the repair of deficient infrastructure, the new economy will not be built in California but in another state with a good infrastructure. If we want to rejuvenate our high-end economy, we must invest in what brought it here in the first place.

Interestingly, many of the infrastructure strengths and deficiencies are closely related to issues of the reuse and conversion of many of the bases and plants from which so many Californians have lost jobs. In particular, base infrastructure is typically inadequate for easy conversion, traffic is a local and regional concern, and environmental problems abound. On the other hand, bases provide many educational resources both for university use and private research, and some significant organizational capacity. Coordination among the agencies and organizations responsible for infrastructure in areas where defense cuts have been most severe is essential to bring new capacity into California.

*New Technologies.* The promise of new technologies to generate large numbers of jobs in California represents the extension of past experiences in which selected technologies in California became national and global leaders. There are a number of ways the state can respond to the challenge of identifying and supporting development of new technologies over the long run. A general approach would be to develop a strategy that is useful to virtually any technology, whereas a targeted approach would identify particular candidate technologies for future growth in California and aim to provide support for their unique needs.

There is no consensus about how to allocate state resources between these approaches. The general approach assures a foundation of support for a new technology market, whereas the particular approach can really help a new industry get started with the prospect of rapid growth of jobs and revenue for the state.

A number of research organizations have compiled lists and assessments of candidate new technologies for California.<sup>13</sup> Many of these lists are very generic and suggest broad ranges of technologies (e.g., composite metals) that have a vast variety of uses and inputs. Other lists fail to show a dispassionate methodology for the selection of technologies and seem to favor the interests of the researchers or their funders. The strategic plan needs to set in motion a process for identifying and evaluating the resources needed for different technologies and strategies that will play a role in reusing base and defense industry capacity. One particularly useful approach is to understand the secondary and tertiary suppliers of defense contractors and to identify industries that also use that supply network. The identification and promotion of that type of industry could help a local economy greatly.

States can play an important role in promoting new technologies. We believe that the most effective technology-promotion programs are built around interdependent economic clusters that have advantages due to a confluence of capacity. Centers of Excellence or Corridors of Opportunity have been used by other states to identify these clusters. The essence of these strategies is that capacity and infrastructure are identified that can contribute to the development and expansion of a particular cluster. Typically, university or other research centers are important anchors to the cluster, with business and government programs concentrated nearby. We think that firms using new technologies need to be supported by integrated technology programs.

*Technology transfer.* The research on technology transfer has documented that there are multiple strategies and conditions under which technological information and innovation moves from research labs to private enterprise. The current federal efforts on creating partnerships that better link research generating organizations with private corporations is a notable and useful step, and California is poised to benefit from many of these initiatives. The early experience of the state has been relatively successful in ARPA competition involving federal funds, and the implementation of Cooperative Research and Development Agreements (CRADA) has linked the national laboratories in the state with many private companies. Cooperation among state agencies, the University of California, private universities, and localities is testimony that these approaches are working and that partnerships can be formed to help facilitate technology transfer, especially involving federal agencies and private companies.

While the state has successfully supported applications for federal funding, there are a number of technology transfer tools available to states that could benefit California. For example, our research noted:

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<sup>13</sup>See attached report by Al-Alat et al.

- Technology offices can provide a range of services to many industries, including linking new technologies to economic development efforts.
- Cooperative research centers link public and private funding for research projects, often involving laboratories.
- Research and Development grants involving state funding.
- Nurturing start-up firms through capital, managerial assistance, incubators, etc.
- Networking and establishing technology-related organizations.
- Technology extension, providing state-sponsored scientists to assist firms in the field
- Technical training for employees.

The research reported that California was active with many of these functions but that other states with much smaller populations spent much more state funds than California. The lack of state funding is compensated for in part by the large number of collaborative ventures involving non-state agencies and the private sector or the number of beneficial projects that accomplish many of the technology transfer functions but as part of programs not identified as such. These programs are intensive in virtually every field where there are strong university, laboratory, and state interests, and they cover virtually the entire industrial spectrum from mining to rocketry. Indeed, it may be that the state needs to assist all these independent efforts and make them more successful rather than to create a technology center on the model of some other states.

*Marketing.* Finally, in terms of rejuvenating the California economy for the long-run utilization of defense industry personnel and facilities, additional attention needs to be given to the role the state plays in marketing the products from California industries. Gaining access to national and global markets is very competitive and costly, and good global marketing is already an arena in which California has some advantages, including an effective foreign marketing program.

In sum, revitalizing the California economy requires long-term economic development strategies that build on the state's assets and invest in public infrastructure and programs to help businesses compete. The decline of the defense industry and the closure of bases do not require an exotic response tailored to a particular sector of the economy. Instead, defense cuts call for good economic development efforts that take advantage of all the state's resources and that position the state in the best position for future technologies and economic growth. Fortunately, many of these efforts are already underway.<sup>14</sup>

### III. Strengthen Community Capacity

The final broad arena in which defense conversion and base reuse can be more effective is in helping communities that suffered from defense losses to rejuvenate their own economies. Recent federal initiatives have placed a great deal of responsibility on the community to diagnose what problems it has,

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<sup>14</sup>See Gus A. Koehler, *State Government and California University Economic Development Programs* (California Research Bureau, California State Library, September 1993).

forge solutions, and build consensus to implement programs with greater flexibility than previously available. This effort is more than just providing funding for local planning, though many communities feel that they need additional resources to meet required planning obligations, let alone desirable ones. Community capacity needs to be enhanced with better information and coordination, stronger economic development tools, and state leadership.

*Better information and coordination.* The complexity of the organizational structures involved in base closure and defense conversion necessitates both more information and better coordination. While the impact of a closed base or plant is most intensely felt at the local community level, experience has convincingly demonstrated that bases and plants are really regional in the location of their labor force, their impact on the environment, and their ties to the extended economy. This means that some form of multi-jurisdictional impact will be felt whenever a plant grows or declines. Local community land use and service provision responsibilities will thus become regional issues as neighboring communities have increasing stakes in bases and plants where their residents work. This tension between local community and region has been most difficult to resolve in the case of base conversion activities where the formation of effective and cooperative joint powers agencies has been difficult at best. It also leads to the difficulty regions have in setting up joint economic development activities that do not suffer from inter-jurisdictional competition. Nonetheless, regional organizations have been formed and usually involve the counties in some administrative role.

A consistent problem for regional and local planning efforts has been to obtain the detailed data needed for careful analysis of both industry and occupation trends, and of subareas of the county. Our efforts to obtain more detailed data from Employment Development Department's (EDD) Labor Market Information were only partially successful, with continuing need for distribution of available data to meet user needs for more specific locational and industrial detail, while avoiding confidentiality problems. Many innovations within the Labor Market Information group are promising easier access for researchers and policymakers at both state and local levels. The most significant are projects to make more data available electronically. A strong user group could work with EDD to facilitate better access to data that is routinely collected by the Department.

Coordination goals also should be pursued by the state. Defense conversion activities decentralized to the local level often operate in a vacuum of information about what other local areas are doing. Several recent proposals around base closures illustrate the difficulty of operating in isolation. For example, several bases have proposed programs to become leaders in environmental cleanup technology and to establish research and entrepreneurial organizations to generate jobs in what is probably a growth industry. However, there is no evidence that environmental cleanup technology could support major efforts at more than one or two centers, and bases should collaborate to make sure that at least one is established. Also there is continuing competition among bases with air strips to utilize these for new aviation purposes which are limited. There is no evidence that the state can play an effective role in

controlling the uses of bases, but there is strong evidence that the state can help share information and technical assistance so that each community works for the best realistic option and cooperates with other communities when it would be in the best interest of everyone if they did so.

*Stronger economic development tools.* Our review of the planning activities in base closure communities and in areas with significant impact from defense industry cuts indicates that these areas have been given good assistance by the Office of Economic Adjustment for planning purposes and that the national experience by OEA in assisting communities is paying off. Communities are organizing and looking to the future and recognizing the barriers that often exist. The OEA assistance, however, has not been fully evaluated in the current round of base closures and the state may want to determine what local efforts have been most effective and what have been of limited value.

A major concern we have, however, is that local communities lack adequate tools with which to rejuvenate their economies in the direction that they plan. Defense conversion agendas are clearly competing with other economic programs both for limited federal resources and for local attention. The strategic plan needs to consider how to strengthen the resources of local base closure commissions and joint powers agencies to enable them to better attract the types of businesses they want.

Several strategies have been used to redevelop an area such as a military base or a region with excess capacity. One strategy is to establish an enterprise zone which offers a variety of tax incentives to firms locating in the area. In California, the state has established a Local Agency Military Base Recovery Area (LAMBRA) program with enterprise zone-based programs that offer significant state tax credits for equipment purchases and for hiring qualifying employees, and various other incentives. In LAMBRA zones as well as Enterprise Zones, local plans and coordinated economic development strategies will be an essential component necessary for qualification.

The up-front financing of public infrastructure is a major problem that needs to be addressed, especially since base infrastructure is in poor condition and may deteriorate rapidly once the military leaves. One economic development strategy is to establish a redevelopment district which can fund its activities through tax increment financing, which allocates the increase in property tax revenues because of development to the district. These tax revenues can often be used to repay bonds and to support economic development programs. In addition, current policy discussions at the Federal level are considering regulations to implement the Pryor Amendment to the 1994 Defense Authorization Act. The findings of our review support extensive efforts by the state to urge federal policies that transfer more of the facilities to communities in the interests of job creation. The transfer of properties to public entities can provide the funding to pay for many of the physical infrastructure upgrades needed to create jobs on the bases. Having facilities that can be used to leverage funds to rehabilitate base facilities is highest priority.

Our purpose here is not to outline the State's economic development agenda but to suggest that appropriate tools be identified and included in the strategic plan.

*State Leadership.* Finally, we believe that the state needs to exercise leadership in the base conversion process. Effective reuse will depend heavily on the clear and frequent articulation of the vision of a growing state economy with a smaller defense sector, and by the demonstration that local communities can actually implement programs to get jobs for displaced workers and to replace declining industries with growing ones. Some of the state leadership role is simply to publicize the accomplishments that are currently being made, while other roles are to help get businesses located in prime places.

The state leadership role in this process has been, and indeed must be, to demonstrate that effective economic development is not simply attracting firms from other places to locate in California, but is more productively the entire process of retaining existing firms even when they are not threatening to leave, helping businesses expand when new opportunities exist, and helping start-up companies begin and grow. These tasks of economic development all can benefit local communities.

*Regional coordination.* Perhaps the highest benefit for defense conversion involving local area response will come from regional coordination. We have stressed above the need for communities and organizations to share information and to build cooperative arrangements that facilitate community goals. The function of coordination is in part to eliminate unnecessary duplication and competition among areas for similar facilities or reuse strategies. For example, in considering base reuse, the limited number of airports, environmental cleanup centers, university campuses, or other selected uses means that each area should be realistic about its opportunity for securing one of these functions. Information sharing about the types of plans and uses being desired, as well as links among the various development locations, will provide more efficiency to the planning and more success to the implementation of each facility.

Regional coordination, we believe, is best an active rather than passive or regulatory objective. Coordinating means the construction of effective partnerships around specific mutually beneficial objectives. We find little justification for programs that aim to coordinate activities by simply requiring that entities report their plans or activities to a central location, or that require the review and signature of an overarching authority. Our review of the process of coordination shows clearly that the process of forming specialized networks in which industry, government, and military reuse entities collaborate on projects can lead to highly innovative and successful projects.

*Monitoring and Education.* The decentralized nature of defense recovery efforts has worked well in generating creative programs tailored to the needs of local areas. However, one factor lacking in many of the local programs is an analytic overview of their successes and problems. A capacity to monitor and evaluate programs at the state level would provide information on what works and what does not, and on which approaches fit best for what geographic or economic settings. A good monitoring and evaluation effort is not a simple task. The creation of this capacity in California would contribute to federal as well as state and local efforts.

## Conclusion

The research we reviewed shows a very clear picture. Defense cuts and base closures are responsible for the loss of 200,000 to 300,000 jobs in California, and there is no easy way to place these persons into alternative jobs. The research firmly establishes that defense conversion and base reuse require a proactive economic development program to generate new jobs. Base facilities and industrial capacity can be reused, but the physical infrastructure available is often inadequate and inappropriate for viable new uses. The most troubling problem is that administrative, legal, and regulatory barriers are often more formidable than physical ones. It was also shown that any progress requires cooperation within and among communities, and where cooperation is lacking, progress is slow. Like other ambitious economic development programs, defense conversion requires a multiplicity of strategies and the pooling of many types of resources by diverse organizations. Regional networks of business and public officials can work together to solve pressing problems that block the creation, retention and expansion, and attraction of businesses.