



AN ECONOMIC GROWTH AND COMPETITIVENESS AGENDA FOR CALIFORNIA

PRESENTED BY:
LIEUTENANT GOVERNOR GAVIN NEWSOM
AUGUST 2011

A Special Thank You from Lieutenant Governor Gavin Newsom to . . .

Governor Jerry Brown
California State Treasurer Bill Lockyer
Assembly Speaker John Pérez
Senate President pro Tem Darrell Steinberg
California State Assembly Republican Caucus
Governor's Office of Economic Development

Silicon Valley Leadership Group
Eric McAfee, Chairman of McAfee Capital

Brookings-Rockefeller Project on State and Metropolitan Innovation
The McKinsey Global Institute

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California Strategies, LLC
Julie Meier Wright, Former Secretary of Trade and Commerce
Eve Maldonado O'Toole

California Business Roundtable
California Chamber of Commerce
The California Labor Federation
California Manufacturers & Technology Association

U.S. Small Business Administration
Export-Import Bank of the United States

There are too many individuals and organizations to list separately, but for the hundreds of you that took the time to work with me on this project, thank you.

From the agricultural plains of the Central Valley to the beautiful Pacific coastline and everything in between, there is no better place to live, work or invest than California. So the final thank you goes to California's most valuable asset: the most skilled, productive and enviable workforce in the nation.



July 29, 2011

Greetings,

For more than ten years, the state of California has lacked a strategic, statewide economic plan. And in the last decade, we have reaped the bitter consequences.

This document, and the actions it calls for, outlines how we can retake control and drive forward again, moving California back into the lead on sustainable growth and real job creation—regaining our leadership role as America's opportunity capital. It marks the beginning of a statewide conversation about how we can win again.

Like the nation at large, California faces enormous challenges. They range from the practically urgent to the strategically profound, and from the depressingly familiar to the wholly unprecedented. None is simple. None stands alone. Yet none is insurmountable.

This strategic shift won't be easy—and it will depend on each of us taking part.

As Lieutenant Governor, I traveled across the state and the country to find out what's working. I studied business strategies, discovered best practices, and spoke with businesses both inside and outside of California. What follows is what I found.

I am confident our state will once again lead the way. We are still one of the largest economies in the world, home to more than 50 Fortune 500 companies, and we lead the nation in venture capital.

California has the highest educated and most productive workforce in the country; we are home to some of the most diverse regions and communities not just in the U.S., but the world. Hollywood entertains the world. Silicon Valley keeps the world connected. And we are the breadbasket of America, with the most abundant and diverse agricultural output the country has to offer—exported around the globe.

California must also get back in the future business. We once led the world in aerospace and we must lead again. The end of the space shuttle program presents a golden opportunity to reinvigorate the industry with traditional and emerging companies that will lead the way for private space travel.

We simply need to rediscover this strength, rediscover our spirit, and stop making excuses and start winning again. Job growth, competitiveness and putting California back on track will take the largest public-private partnership in the state's history, involving every level of government—federal, state, local and tribal. But we are all responsible for California's future.

Please read this document and let us know what you think.

Let's get to work.

GAVIN NEWSOM

Lieutenant Governor

GUIDING PRINCIPLES

California's richly diverse regions and ethnic groups—its more than three million business establishments, its farming communities, tribal nations, and urban enclaves—possess all of the talent, energy, and drive needed to compete and win in the global economy.

And the strength of its \$1.9 trillion economy—the largest in the nation and one of the largest in the world—offers all of the assets and opportunities needed to build the post-recession “Next Economy” that is our common vision and goal.

This agenda does not seek to recreate the past and restore the jobs lost to global competition or to revive the debt-fueled follies of the past. It embraces the shift from a consumption-based economy to a production economy focused on global trade.

In the words of Bruce Katz of the Brookings Institution, “We need a new growth model for the country, one where we export more and waste less, innovate in what matters, produce and deploy more of what we invent, and ensure that the economy actually works for working families.”¹

This document represents a first step—the beginning of the discussion—toward developing that new model.

It articulates a vision for success in building the Next Economy in California guided by a set of principles that must be agreed upon by stakeholders at all levels:

- **GOVERN FOR GROWTH AND ACCOUNTABILITY**

For most of a decade, California has lacked a capable, accountable entity for coordinating action. It must establish one, assign performance metrics, and measure and report progress.

- **PRACTICE PARTNERSHIP**

Collaboration is the new form of competition. State policies should build on and reward public-private/public-public partnerships, regional alliances and boundary-crossing collaboration in all its forms.

- **ENGAGE GLOBALLY**

Today's markets for goods, services, investment and talent are global, and the measure of success is performance on a global scale.

- **BUILD ON INDUSTRY STRENGTHS**

Most growth and innovation emerges from interactions across institutions and businesses. Innovation and production are inextricably linked in the generation of economic growth and prosperity.

- **REMOVE BARRIERS**

Onerous and inconsistent regulations, slow bureaucracies, and misaligned policies at the federal, state, and local levels present real barriers to the speed and agility needed to compete in the global economy.

- **ACT REGIONALLY**

Each region is blessed with unique strengths and competitive advantages often backed by a strong regional agenda. The state must define a value-added role as a partner and enabler of regional and private sector efforts.

- **INVEST IN PERFORMANCE**

In this era of fiscal constraint, the state must act prudently, investing in strategies that promise a solid return.

- **SKILL UP FOR OPPORTUNITY**

Economic renewal will not produce a sustainable society unless it creates broadly-shared benefits. It is critical to align skill development and workforce training with economic development to compete in the global economy.

- **ACT WITH URGENCY**

Global competition and the impact of the Great Recession compel urgent action.

- **SUSTAIN COMMITMENT**

State leaders, regardless of term limits, must develop and sustain consensus behind a long-term strategy.

TAKING STOCK: CURRENT STATUS

The nation's economic recovery remains uneven at best, particularly in California. The recent recession was devastating to the Golden State. California has the second highest unemployment rate in the country at this time, and the deep collapse in home values wreaked havoc on state and local revenues and made California families more vulnerable.

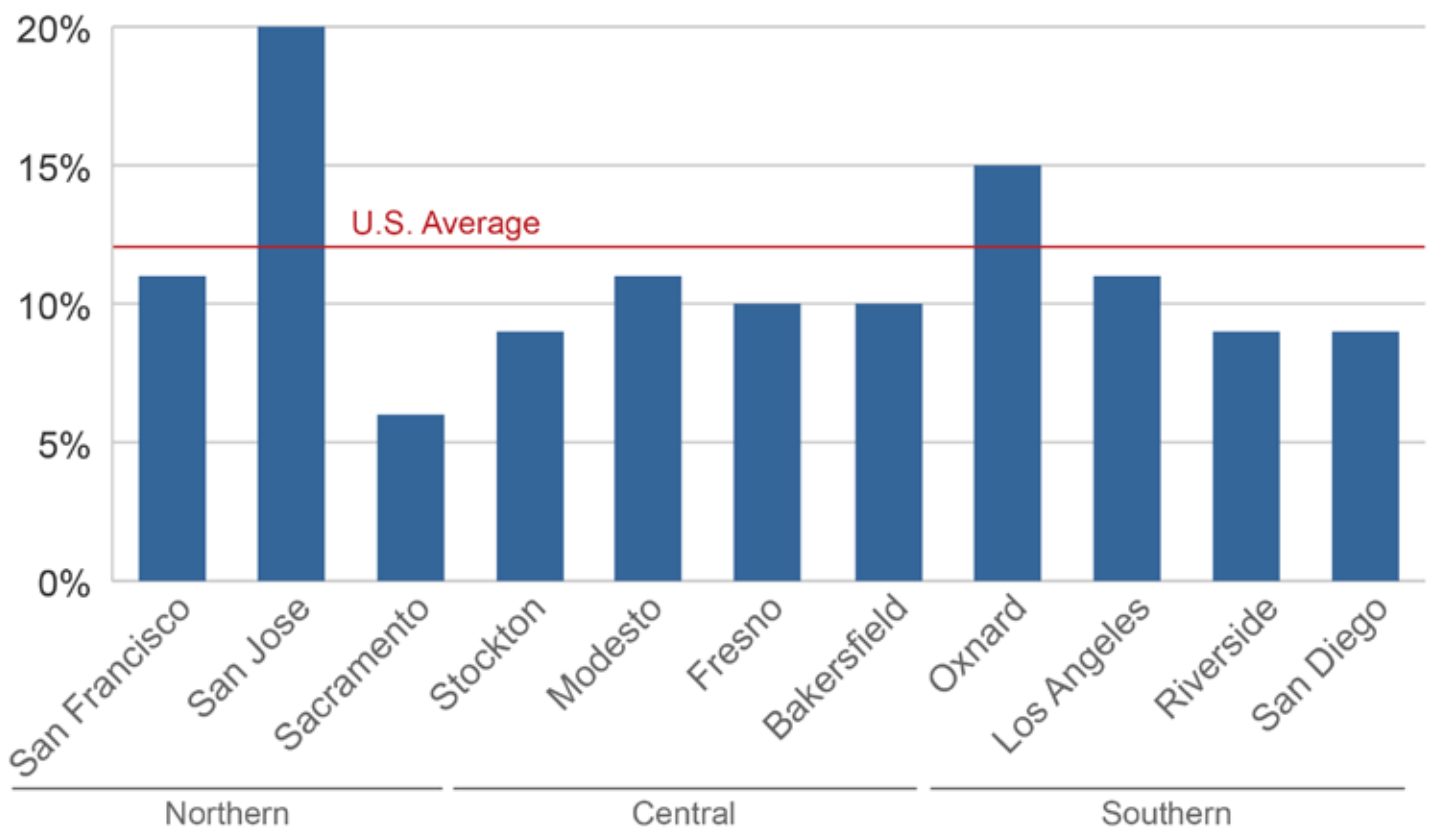
The impact of the recession and the sluggish recovery has generated a sense of urgency to change course. Yet, lest we blame everything on the Great Recession, the economic forces unleashed over the last several years only reinforced the existing trajectory underway before the crisis hit.

Global economic forces shaping the 21st century present mounting challenges and threats to the United States and to California. These underscore the need to move California from a consumption economy to a production economy and open a path to long-term prosperity.

The good news: California is well-positioned to transition to the Next Economy because of the strength and assets of its many distinct metro areas. The state's 26 metropolitan regions are home to 98 percent of its population, jobs, and economic output.² The state's economy is highly driven by the 11 largest metro areas — those that are among the 100 largest metropolitan regions in the nation—which account for 87 percent of all the state's residents, 88 percent of its jobs, and 90 percent of its economic output.

The largest metro regions in the state also house the bulk of the assets of the Next Economy. For instance, the 11 largest metro areas in the state generate 92 percent of the goods and services sold abroad.³ They also attract and retain 89 percent of California's skilled workers, defined as the share of residents who hold a post-secondary degree.

Exports as a Share of Total Output, 2008



Source: Emilia Istrate, Jonathan Rothwell, and Bruce Katz, 2010, "Export Nation," Brookings

Understanding the individual economic performance of the 11 largest metro areas in the Next Economy will help decisionmakers determine how best to tailor key strategies, investment and programs in ways that can help the state's diverse regions thrive in the post-recession climate.

EXPORT-ORIENTATION

By far, greater Los Angeles produced the largest sales volume of exports in the state, ranking second among all metro areas nationally in 2008.⁴ San Francisco, San Jose, and San Diego are also major exporters.

However, nearly all metro areas in the state performed below the national average of 13.1 percent of economic output derived from global exports. The exceptions were the metro areas of San Jose and Oxnard. Nearly 21 percent of greater San Jose's economic output came from exports, ranking it third among the nation's top 100 metros, just behind Wichita and Portland, Oregon.

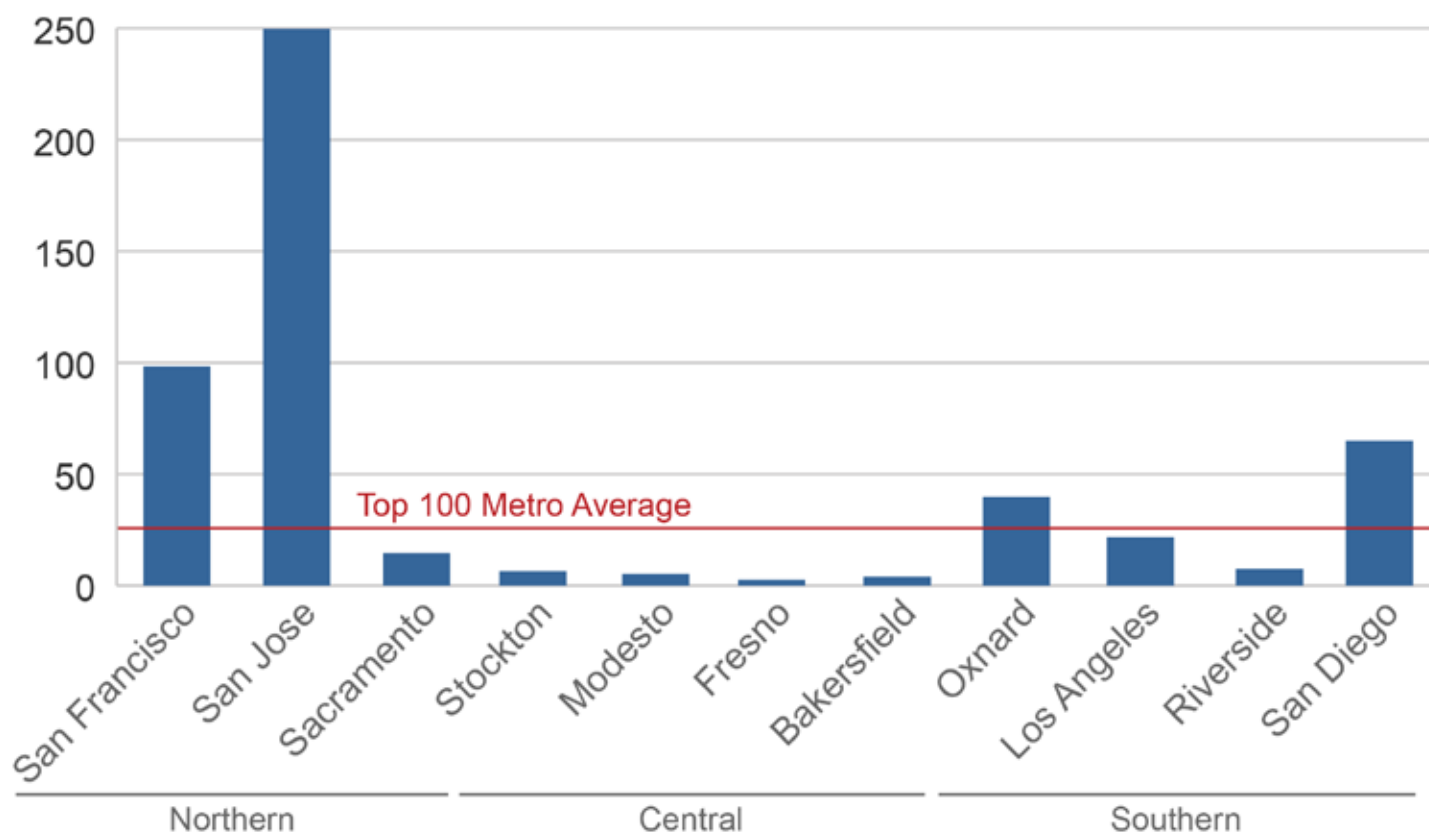
INNOVATION

California is home to the top innovation centers in the nation. The San Francisco, San Jose, and San Diego regions are the state's top generators of patent applications (per 1,000 employees) and high-tech employment.⁵ In fact, San Jose and San Francisco rank first and second nationally in their level of patenting activity. They rank first and seventh in their share of jobs in high-tech industries, which are three times and one-and-one-half times the national average, respectively.

CLEAN ECONOMY

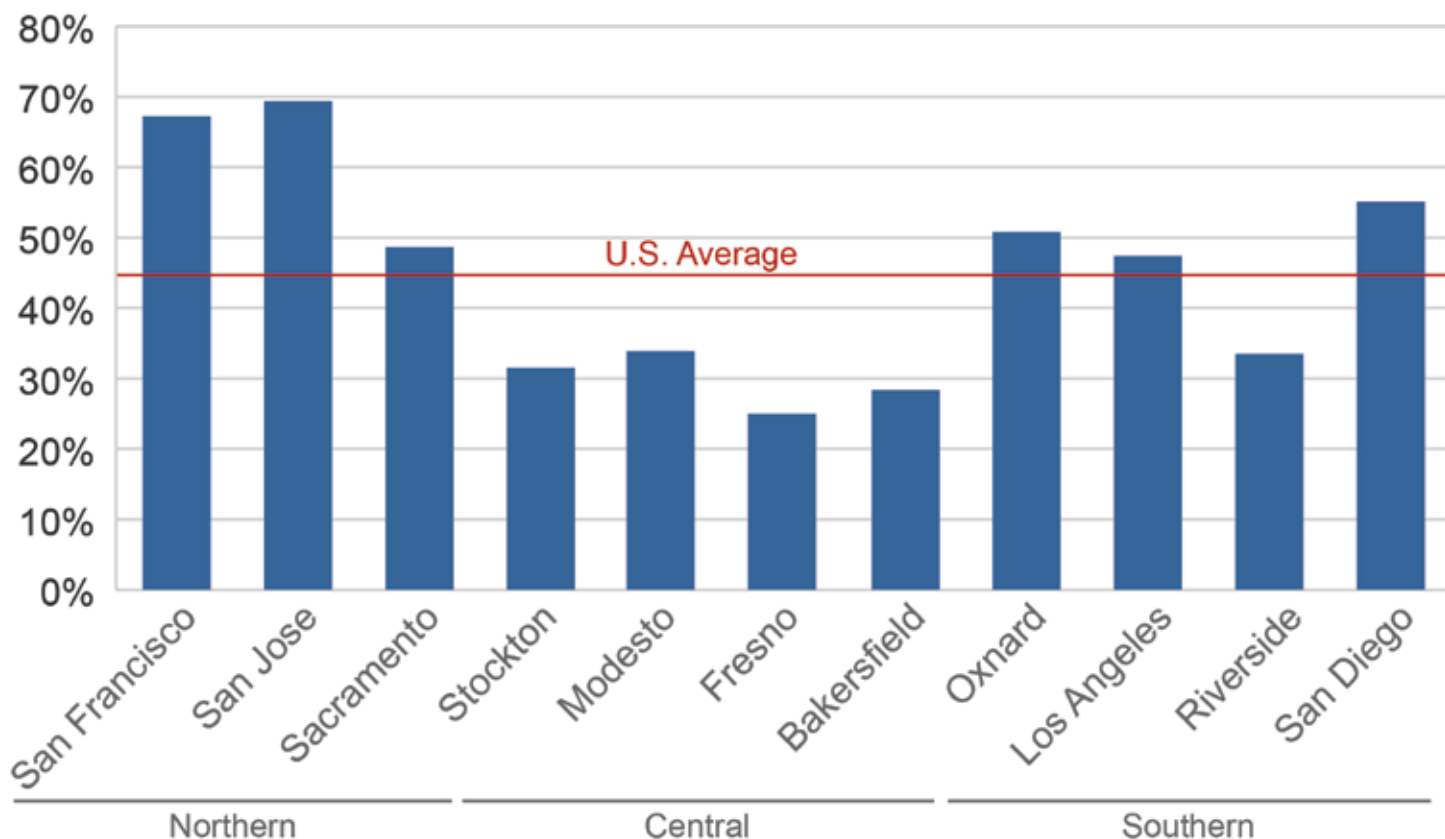
Broadly defining the "clean economy" as that sector that produces all goods and services with an environmental benefit, California is home to 318,000 jobs, more than any other state.⁶ It also ranks first among the 50 states in the number of new jobs in those fields created between 2003 and 2010. Los Angeles and San Francisco are among the largest metropolitan regions in the nation in terms of those sectors, containing the second and sixth greatest number of such jobs among all metropolitan areas in industries such as electric vehicle and smart grid technologies.

Patent Applications per 1,000 Employees, 2009



Source: USPTO, courtesy of the Strumsky Patent Database, UNC Charlotte

Share of Population with at Least an Associate's Degree, 2009



Source: Brookings analysis of 2009 ACS 1-year estimates

Thanks to its large state government presence and burgeoning renewable energy services expertise, Sacramento also ranks high in the concentration of those jobs, third highest among the 100 largest metropolitan areas across the country. California's strong competitive position and head start in developing this fast-growing sector holds tremendous potential for new enterprises, technologies, and high-paying jobs in some of the world's most innovative industries.

EDUCATIONAL ATTAINMENT

With businesses demanding higher skills today in order to compete globally, a person's ability to participate in the Next Economy will be increasingly dictated by his or her skill set and education level.

According to U.S. Census data, the San Francisco and San Jose metro areas rank among the top 10 most educated regions in the country, and San Diego among the top 20, based on attainment of a bachelor's degree or higher.⁷ The rate of college attainment in

greater Los Angeles, Oxnard and Sacramento generally matches the average among the nation's largest urban areas.

High skills do not always equate to a four-year degree, however, particularly for "middle skill" jobs that require post-secondary training but not necessarily a bachelor's degree. A broader measure of educational attainment encompasses associate degrees, as well as four-year degrees. On that measure, almost all of California's metropolitan regions equal or exceed the national average in attainment.

Next Economy Indicators

| | | EXPORTS | | CLEAN | | INNOVATION | | WORKFORCE | |
|------------------------------|----------------------|---|-------|---|-------|--|-------|--|-------|
| Metropolitan area | | Value of exports (in billions), 2008 | | Clean economy share of jobs, 2010 | | High-tech employment as a share of national average, 2009 | | Share of working-age population with at least an associate's degree, 2009 | |
| | | Value | Rank* | Value | Rank* | Value | Rank* | Value | Rank* |
| Top 100 Metro Average | | 10.4 | | 1.9% | | 117.3% | | 50.6% | |
| Northern | San Francisco | 30.9 | 39 | 2.7% | 17 | 166.4% | 7 | 67.2% | 5 |
| | San Jose | 22.8 | 3 | 2.2% | 31 | 333.3% | 1 | 69.4% | 2 |
| | Sacramento | 6.3 | 94 | 4.5% | 3 | 91.6% | 61 | 48.7% | 42 |
| Central | Stockton | 2.0 | 73 | 2.2% | 30 | 33.6% | 99 | 31.5% | 95 |
| | Modesto | 2.1 | 44 | 1.7% | 64 | 38.6% | 98 | 28.4% | 98 |
| | Fresno | 3.7 | 59 | 2.8% | 14 | 45.1% | 96 | 33.9% | 92 |
| | Bakersfield | 3.5 | 52 | 1.1% | 90 | 78.1% | 76 | 25.0% | 99 |
| Southern | Oxnard | 5.5 | 11 | 1.7% | 49 | 132.0% | 16 | 50.8% | 34 |
| | Los Angeles | 78.5 | 46 | 1.7% | 58 | 113.9% | 39 | 47.4% | 48 |
| | Riverside | 11.5 | 74 | 1.9% | 36 | 59.3% | 90 | 33.5% | 93 |
| | San Diego | 15.5 | 67 | 1.7% | 60 | 139.8% | 12 | 55.1% | 21 |

* Rank among top 100 metropolitan areas

Sources:

Exports: Emilia Istrate, Jonathan Rothwell, and Bruce Katz, 2010, "Export Nation," Brookings

Low-carbon: Mark Muro, Jonathan Rothwell, and Devarshee Saha, 2011, "Sizing Up the Clean Economy," Brookings

Innovation: USPTO, courtesy of the Strumsky Patent Database, UNC Charlotte

Opportunity: Brookings analysis of 2009 ACS 1-year estimates

AN AGENDA TO DELIVER THE NEXT ECONOMY

When *Foreign Policy* magazine compiled its 2010 list of the world's most globally influential cities, five of the top 10 were in Asia. "We are at a global inflection point," it concluded. "Half the world's population is now urban—and half the world's most global cities are now Asian."⁸

When the World Bank's Commission on Growth reported two years earlier, Chair Michael Spence, a Stanford University economist, wrote:

“The number of people living in high-growth environments...has increased in the past 30 years by a factor of four, from 1 billion to about 4 billion... There is, perhaps for the first time in history, *A REASONABLE CHANCE OF TRANSFORMING THE QUALITY OF LIFE AND CREATIVE OPPORTUNITIES* for the vast majority of humanity.”⁹

The historic quest by those billions of people to seize that chance—and to do it by massing in cities that rival or surpass the most powerful, most innovative, and most cosmopolitan of our own—is and will remain the dominant disruptive fact of our economic future.

California possesses an abundance of crucial assets for thriving amid this global transformation and for leading, as it always has, America's economic revival. An analysis of annual job growth by the Public Policy Institute of California going back to 1950 found that California's economic performance closely tracks national job growth but consistently outperformed the national average by a small margin for the four decades from 1950 to 1980.¹⁰

But today California struggles to make up lost economic ground. It must develop the new economic model Katz described: turning from a consumption-based economy to a production economy constructed on a few key strategies:

GEAR UP EXPORTS

Next Economy success depends on global trade and production; every sector, every cluster, and every region must embrace exports as a core focus of its economic strategies.

The fastest growth, the largest markets, and the greatest opportunities lie beyond California's borders. In fact, 95 percent of the world's customers live outside of the borders of the United States. The rise of the rest has crossed a critical threshold. Together, China, India, and Brazil now account for one-fifth of global GDP surpassing the U.S. share. They, and the other developing nations not far behind them, are generating the opportunities of tomorrow that we must seize today.

California remains one of the world's most globally connected, globally celebrated states, a leading trader, a hemispheric gateway, a worldwide magnet for scientists, students, entrepreneurs, foreign investment, and tourism. Yet, at the state level, California is not nearly as active and purposeful as others in capitalizing on those strengths and even less so compared to other nations.

To meet the President's call to double the nation's export trade in five years, the state must become a better partner in preserving and enhancing California's position as a preeminent hub in the global economy.

At the simplest level, it must make promoting both trade and its international presence an economic priority undergirded by a plan and performance metrics, bringing scale and efficiency to existing international efforts by regions.

Such a strategy would be of significant benefit to small businesses—which comprise 96 percent of the approximately 56,000 exporting firms in California—as well as firms across all of California's major sectors, from agriculture to advanced technology.¹¹

There are both national and international examples to draw upon for the design. Pennsylvania, for example, has pursued an aggressive and widely emulated export promotion plan for several years and, equally important, tracks its results through a

Pennsylvania: Center for Trade Development

Pennsylvania's Center for Trade Development assists Pennsylvania-based businesses interested in expanding to international markets. It organizes trade missions and sales trips, partnering with its Regional Export Network partners, the Pennsylvania Department of Agriculture, Small Business Development Centers, and the U.S. Department of Commerce.

The Center for Trade Development has 22 foreign trade offices located throughout the world that provide trade representation and support for Pennsylvania businesses. The center also administers the Envoy Program, which provides a "virtual" presence for companies interested in but unable to afford foreign offices. Key is a performance measurement system that establishes clear accountability for outcomes at each level and location, which are assigned annual scores.

This innovative program received a 2010 Innovation in Economic Development Award from the U.S. Economic Development Administration. In FY 2008-09, the center achieved \$454.5 million in assisted export sales, with a \$60 return per dollar of state investment. In 2010, it assisted 1,350 companies generating \$483 million in new export sales supporting more than 6,400 jobs.

Source: Brookings Institution, 2011.

rigorous performance measurement system. The outcome: a \$60 return for every \$1 spent.

On the West Coast, the state of Washington launched a comprehensive, collaborative strategy aimed at achieving \$600 million in new export sales and a 30 percent increase in the number of companies engaged in exporting, with a particular focus on Asia by 2015.

In Europe, Germany's strong economic performance during the global recession was grounded in the sustained export prowess of its advanced manufacturers. The German state of Bavaria's 2008 international strategy specifically aimed to increase the share of exports produced by small and medium-sized firms and grow jobs. As a result, exports account for more than half of all sales in the manufacturing sector and contributed to a significant reduction in unemployment.

Bavaria's approach included increasing the number of international offices, trade missions, export financing, and steps to strengthen exports to specific developing markets throughout the world.

California once was more active in this arena, before ineffectiveness led to dissolution rather than improvement. Some regions of the state, such as San Francisco, and organizations such as TeamCalifornia, have stepped into the void.

But even the strongest exporting regions have room to grow. The Los Angeles-Long Beach-Santa Ana region—the state's leading exporter with \$51.5 billion in sales in 2009—is working with the Brookings Institution to develop a new export strategy focused on clusters with the greatest potential to expand exports.

Its plan should provide a model for a robust comprehensive export strategy for each major region and, collectively, for the state as a whole. California should move forward on the agenda to:

- Create a statewide export strategy that builds on the strengths and assets at the regional level, spanning every significant sector from manufacturing to business services and intellectual property to agriculture.
- Re-establish an official state presence in international markets, beginning with China.
- Address critical supports such as freight and infrastructure capacity.
- Gear strategy and programs to trade in both goods and services including such non-traditional exports as tourism and education.

California has no lack of global savvy, or of highly-effective business and service organizations actively and skillfully furthering trade. It needs to re-establish an effective mechanism for mobilizing consistent, wide-scale action on exports.

Bavaria: Export Hub

The German state of Bavaria is globally known as an export hub and was the third largest German exporting state in 2009, with exports fueling its recovery from the recession. In June 2010, exports accounted for more than half of all sales in the manufacturing sector—an increase that helped to reduce the number of unemployed by 14 percent in one year.

This strength in exports is the result of having a clear strategy based on well-developed market analysis and multiple business support services. For more than a decade, the program has operated based on four pillars: building high-tech centers, targeting support to regional clusters, providing necessary infrastructure and workforce training, and supporting exports from the targeted clusters. In 2008, the government released a new international strategy entitled “Exports Create Jobs,” with the goal to increase the share of exports produced by small and medium-size business.

Bavaria's Ministry of Economic Affairs, Infrastructure, Transportation and Technology is in charge of implementing the state export promotion strategy, in partnership with key public and private entities.

Source: Brookings Institution, 2011.

REINVIGORATE MANUFACTURING

Manufacturing is at the top of China's economic agenda. It's at the top of the U.S. national agenda with the president's recently announced Advanced Manufacturing Initiative that called upon three California institutions—UC-Berkeley, Stanford University, and chipmaker Intel—for leadership in featured roles. And it's also at the top of other state agendas across the country, including the high-tech, high-cost state of Massachusetts.

Manufacturing commands such attention because, contrary to the image of inevitable decline and shrinking significance in the creative knowledge economy, manufacturing remains an indispensable pillar of prosperity. It must stand at the top of the state's economic plan.

Even after significant declines in employment over several decades, California remains a premier location for one of the most sophisticated and diverse manufacturing bases in the world, ranging from the high-tech sectors of computers, electronics, and medical devices to auto, aerospace, defense, apparel and food production.

Manufacturing employs nearly one of every ten working Californians and pays them well above average wages. It also supports an even larger number of jobs in related fields, from designers to stevedores, including a majority of the state's engineers.

Manufacturing accounts for 87 percent of exports from California according to the National Association of Manufacturers, and because of the relentless search for an edge in those highly competitive global markets, it accounts for the majority of private R&D (research and development) spending.¹²

All of it is currently at risk—R&D as well as production jobs. And many products developed in California (because of its large reservoir of venture capital) are produced in other states or countries, resulting in the loss of other potential jobs, as well as tax revenues.

In its 2009 report, "Manufacturing 2.0: A More Prosperous California," The Milken Institute called manufacturing "the canary in the coal mine" for the California economy.¹³ "Our research shows that manufacturing—both traditional and high-tech—still drives California's economy in many ways, but the state is losing ground to other states and nations because of its regulatory climate, tax burden, and reputation as a difficult and costly place to do business."

California must tackle the issues of costs and regulation, as Milken recommended: "Streamlining the regulatory procedures for manufacturers, increasing transparency and accountability in the regulatory process, and encouraging long-term investment through new policy tools—all of (these) can be achieved without relaxing or changing a single regulatory standard."

Washington State Export Initiative

Washington state launched a statewide export initiative a year ago with the aim of increasing the number of Washington exporters by 30 percent and assisting 5,000 firms achieve \$600 million in new export sales over the next five years.

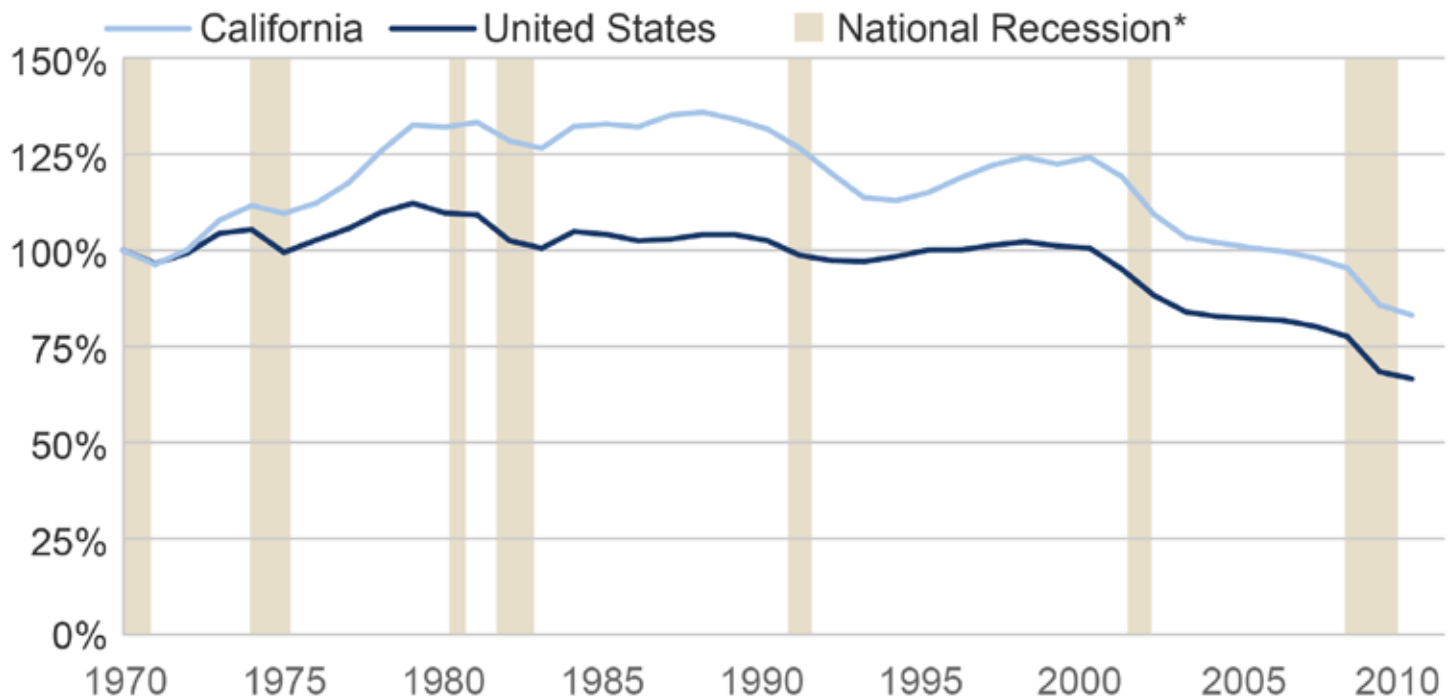
The strategy has three elements: enhancing export capacity through data analysis, training, and buyer matchmaking; engaging the organizations involved in export promotion and economic development across the state; and partnering more closely with the federal government.

The state awarded \$3 million in initial grants on a competitive basis for building export capacity. Recipients were consortiums of entities involved in export promotion based on metropolitan or cluster perspectives.

The state also planned to create competitive programs to enhance exports in the agricultural sector, to attract more foreign students to Washington universities, expand key trading partner relationships through trade missions, and increase engagement with the federal government on transportation.

Source: Brookings Institution, 2011.

Manufacturing Employment, Percent of 1970 Level



* National recession dates as determined by the National Bureau of Economic Research

Source: Brookings Analysis of Moody's economy.com

Other higher-cost states are already taking steps to integrate innovation strategies around advanced manufacturing processes and technology to increase competitiveness. Ohio, for example, has a network of Edison Technology Centers that conduct research and disseminate knowledge to improve production processes and products. Massachusetts introduced a comprehensive Advanced Manufacturing Initiative last year.

National researchers advocate similar state initiatives, as did The Milken Institute, calling on California to establish "a network of education, training, research, and business incubation centers around the state to develop a qualified workforce, to invent and commercialize advanced techniques, and to assist manufacturing start-up businesses."¹⁴

A profile of Los Angeles's manufacturing base by the WhatWorks Collaborative illustrates another key insight into the nature of manufacturing in the Next Economy.¹⁵ "Over the past few decades, Los Angeles has transformed from an area of big branch plants in auto, steel, and aerospace to dispersed networks of smaller manufacturers serving different supply-chain segments and industries," it said. "In fact, over half of the 14,000 manufacturers in Los Angeles County employ fewer than ten workers."

As in L.A., most manufacturers today are small- and medium-sized operations that are often part of extensive and sometimes global supply- and value-chains. They, and their highly skilled workers, must be technologically innovative and capable of adapting quickly to new materials, processes, and business operations.

Providing robust tools and access to cutting-edge research, knowledge, and training to facilitate their development is a key component in a comprehensive manufacturing strategy:

- **ESTABLISH MANUFACTURING CENTERS OF EXCELLENCE** for applied research, education, and training with world-class expertise in products and processes, designed particularly to foster development of supply chain strategies.
- **LEVERAGE OPPORTUNITIES** by filling the information gap that often stands between small firms and their ability to compete. Working with larger, global manufacturers to open doors into supply chains for smaller firms can result in rapid growth. The state can play a role in fostering those linkages and facilitating those relationships as well as helping small firms access capital.

- **TACKLE THE ISSUES OF COST AND REGULATION** by streamlining, simplifying, and aligning California's policies to improve its reputation and business climate—without, as The Milken Institute suggested, compromising its commitment to important community values and policies.
- **MAKE ACCOMMODATIONS** for the growth of manufacturing through land-use planning, zoning, and permitting that make room for manufacturing firms in the landscape of the 21st century, particularly the small and boutique firms that are increasingly prevalent.
- **ADAPT STATE INCENTIVES** and programs to the new era in manufacturing with a focus on reallocating resources for maximum impact.

The manufacturing agenda is of enormous importance for California's competitive position and future prospects. The state needs to design its strategy to bring about a renaissance in manufacturing on a scale commensurate with its importance.

DRIVE INNOVATION

Innovation is the key to American invention, ensuring the United States continues to design and develop the cutting-edge technologies and breakthrough discoveries, products, and services the world wants to buy. This globally traded Next Economy will be driven by an explosion of innovation, especially in advanced manufacturing.

California, and Silicon Valley, wrote the book on innovation. Everywhere, other states and nations are resolved to write the sequel, and they are investing heavily in the capacity to do it.

Throughout the nation and around the globe, tight partnerships between governments and industry are rapidly creating formidable networks of the intellectual, financial, commercial, and workforce assets on which innovation thrives.

And that commitment extends to production—the art and science of making that is the essence not only of the manufacturing sector but of a wide range of sectors, from movies to software to new products in bioscience. The synergies between production and innovation create the environment for economic growth.

Edison Technology Centers and Others

Across the country, a network of manufacturing tech centers drive innovation in manufacturing sectors through applied research, training, and sometimes direct funding. Usually, these centers combine public and private funding, including fees for services.

Ohio's network of Edison Technology Centers is one practical example with seven centers across the state, each focused on a particular realm of manufacturing judged significant to Ohio's manufacturing clusters. The Cleveland Manufacturing Advocacy & Growth Network, for example, works to improve manufacturing processes and productivity, as well as product design and development. It also brokers commercial and university intellectual property in selected manufacturing clusters and delivers programs designed to assist small businesses and manufacturers.

TechSolve in Cincinnati specializes in machining. The Dayton center focuses on advanced materials, and PolymerOhio in Westerville focuses on polymers. Another center provides training and expertise in welding and other forms of materials joining. BioOhio in Columbus works in the bio-life sciences sector with a focus on the manufacturing of products such as medical devices.

The number and range of focus areas in the Edison Centers network is notable. More commonly across the country, a single center provides applied research and technical expertise focused on one sector of particular importance. The Connecticut Center for Advanced Technology working with aerospace and defense suppliers; the Center for Integrated Manufacturing Studies operated by the Rochester Institute of Technology; and the Florida Center for Advanced Aero-Propulsion are all examples.

No applied research network or center of this type in the United States approaches the breadth, depth, reach, and strength of the 59 Fraunhofer Institutes anchored in Germany but with offices around the world, providing applied research to service-sector firms including manufacturing, and leveraging substantial private R&D investment.

Sources: Brookings, London School of Economics, and www.edisoncenters.org

The reality that two out of every three new jobs in the United States—and virtually all of the net new jobs—are created by small business requires rethinking and recalibrating traditional approaches to economic development often dominated by the needs of larger companies. Small business has now become the entrepreneurial center of the Next Economy.

To retain the advantages of being a powerhouse of innovation, California must ramp up its efforts on many fronts: doubling down on R&D, strengthening manufacturing prowess, unleashing more entrepreneurial energy, catalyzing business startups and expansion and, most importantly, taking definitive steps to enable the new by smoothing the way on all of the incremental steps that lie between a brilliant idea and a global brand.

California is the preeminent proof of economist Michael Porter's maxim: "Innovation is the central issue in economic prosperity." No place has innovated better, more consistently, or across more realms than California. San Francisco and San Jose lead the nation in patent applications per thousand employees, and federal laboratories such as Lawrence Livermore and Sandia/California represent enormous intellectual assets, as does the University of California system, which holds one of the largest patent portfolios in the world.

Governments, internationally and in the United States, are rapidly replicating the powerful innovation ecosystem in California. Their methods and their targets of opportunity differ, but they are like-minded in their application of state resources, from tax incentives to public-private investment funds, to support their industries' transformation to global innovation competitiveness.

It is clear that California must devise a 21st century version of the transformative public investments it made over the last century—investments that made California the global epicenter of entrepreneurial innovation.

Improving the business climate for entrepreneurs, start-ups, and small business is key: They generate the lion's share of new jobs. A recent study by the McKinsey Global Institute documented a 23 percent decline in the rate of new business creation in the United States since 2007, a decline that resulted in as many as 1.8 million fewer jobs.¹⁶

Of equal importance is maintaining at peak levels the wellspring of science, technology and business research institutions from which so much of the state's prosperity has arisen.

The California Council on Science and Technology has concluded, "The challenge facing California is not that it has too few

technology initiatives, research assets, or even special R&D funds on the supply side. The problem... is that California does not have an innovation strategy that... connects the demand side more effectively to California's wealth of R&D resources."¹⁷

Innovation cannot be summoned or scripted; it can be fostered, however, through intentional interventions. Both the private and public sectors must become more intentional in that regard, facilitating the collaborations, interactions, and information flows that lead to innovation.

In short, California must become as proficient at playing innovation "small ball" as it is at the power game. Some elements are already in place and ready for ramping up:

- **NURTURE REGIONAL AND CLUSTER-BASED COLLABORATIONS** like San Diego's CONNECT, which has become a global model for its culture of collaboration across industry, universities, researchers, inventors, entrepreneurs, capital and service providers.

The East Bay Green Corridor is on a similar path for green start-ups and growth companies in that region. The state network of Innovation Hubs, or iHubs, if strategically developed, provides a platform upon which to build.
- **DEVELOP MORE EXTENSIVE AND INTENSIVE INDUSTRY-UNIVERSITY R&D PARTNERSHIPS**, including focus on areas such as manufacturing process innovation. One only needs to look at the innovation fostered through partnerships between industry and academia and other research entities, particularly the major federal laboratories, Sandia and Lawrence Livermore, to know that these partnerships work.

Early successes emerging from the four California Institutes for Science and Innovation demonstrate the value of jointly funded collaborations between industry and universities. Expanding R&D tax credits and aligning incentives to speed technology transfer and commercialization also advance this agenda.

Making access to intellectual property emerging from university labs and research centers more standardized and expeditious would be mutually beneficial to all parties, as would standardizing access to research facilities and equipment for commercial projects, with revenues returned to the universities to support STEM education.
- **MAKE R&D RESOURCES ACCESSIBLE TO SMALL BUSINESS, INCLUDING WOMEN- AND MINORITY-OWNED BUSINESS.**

The California State University system is organizing the California Small Business Development Center Network, establishing relationships with key partners including community colleges.

New Mexico has taken a bold step toward making world-class research available to its smallest firms, offering up to \$20,000 in purchased research at its two national laboratories to small businesses facing a technical challenge. It also offers up to \$100,000 in research to consortiums of small businesses with a shared research need.

- **FOSTER CO-LOCATION AND NETWORKING**

through incubators, urban innovation zones, “pre-permitting” zones for manufacturing, large-scale research parks and other mechanisms for bringing together the diverse mix of creative talents and production skills that inspire invention and the incremental improvements that give birth to new firms and products.

- **REVIEW STATE AND LOCAL REGULATIONS AND REQUIREMENTS, AS WELL AS TAX CREDITS AND INCENTIVES** to enhance their effectiveness in supporting the innovation ecosystem.

Some of the most notable examples of state initiatives and organizations at work in this arena—Ohio’s Third Frontier Program, Ben Franklin Technology Partners in Pennsylvania, and the Fraunhofer Institutes in Germany (which dwarfs all United States examples)—share a few key characteristics:

They tend to focus on clusters and sectors deemed to have strong potential and major importance. They all have produced significant, measurable impact and returns on public investment. Structured correctly, investments in these strategies are sound investments with a good potential for return.

Ohio’s Third Frontier Program

Created in 2002, Ohio’s Third Frontier Program is a \$2.3 billion state initiative designed to push forward development of an innovation ecosystem designed to support “the efficient and seamless transition of great ideas from the laboratory to the marketplace.”

Third Frontier supports applied research and commercialization, assistance for entrepreneurs, early-stage capital formation, and expansion of the skilled talent pool needed for technology-based growth.

Its Biomedical Program, Advanced Energy Program, and Advanced Materials Program are all focused on enhancing Ohio’s R&D capacity in significant industry clusters. The Entrepreneurial Signature Program, the Pre-Seed Fund Capitalization Program, the ONE Fund for young entrepreneurs, and the Research and Commercialization Program provide further support for innovation-intensive businesses.

The Third Frontier has produced significant returns on the state investment: The \$681 million expended between 2003 and 2008 resulted in \$6.6 billion in economic activity and more than

41,000 jobs with \$2.4 billion in wages and benefits, which amounts to almost \$10 in return for each public dollar invested. In 2010, Ohio voters extended the program for five more years.

Source: www.thirdfrontier.com

Ben Franklin Technology Partners

Pennsylvania’s Ben Franklin Technology Partners is a model for innovation-focused initiatives on three levels:

First, its vision is clear and concise: “Regional focus. Statewide strength. Global impact.”

One of the oldest technology-focused development programs in the country, Ben Franklin Technology Partners provides access to capital, business expertise and a network of resources to foster innovation and growth for both startup companies and established businesses.

Second, it has returned \$3.50 for each public dollar invested over 25 years; and has had the support of every governor and state legislature elected since its inception.

Source: www.benfranklin.org

South Korea's Industrial Technology Foundation

Over several decades, South Korea has generated one of the fastest rates of economic growth of any nation in history with smart government innovation policies playing a key role.

Its approach has centered on supporting innovation through nimble public-private partnerships, including the Industrial Technology Foundation established in 2001.

It funds public-private partnerships with the goal of achieving world leadership in particular sectors, such as broadband telecommunications, mobile commerce, and telematics. A key focus of ITF is to spur regional innovation cluster development through industry-university partnerships.

In a complementary role, the Korean Information Agency is in charge of working with the private sector and other government agencies to drive digital transformation, including broadband, e-government, RFID deployment, and ubiquitous sensor networks (such as a pilot that deploys wireless sensors on bridges to measure stress and risk of failure).

Source: Information Technology and Innovation Foundation, 2008.

ACCELERATE CLEAN ECONOMY

The transition to a more energy-efficient and lower-impact world is such a compelling environmental imperative and such an urgent economic necessity that it is gathering worldwide momentum.

Propelled by heavy investments by European and Asian governments, by forward-thinking environmental policies like California's, and by visionary venture capitalists, the clean economy already is creating new markets.

The Brookings Institution and Battelle's Technology Partnership Practice recently produced a profile of this emerging sector that documented California's leadership position. It found that more than 318,000 California workers already participate in the clean economy—more than in any other state—and that the largest numbers of jobs are in manufacturing and export-intensive industries.¹⁸

California is recognized as a world leader in environmental advances and the development of clean technology, as high-tech firms in the state move rapidly to expand in areas from solar energy equipment to wind turbines and new types of batteries. The state's culture is particularly attuned to these emerging industries, as voters proved last November by rejecting a ballot initiative that would have weakened the state's long-term commitment to renewable energy sources over this decade.

But the global "race to clean" is heating up, with significant national investments from China to the United Kingdom coming at a time when the lack of national policy in the United States hampers development.

The Brookings-Battelle study provides important insights for crafting policy efforts to accelerate the clean economy in California. The state should consider adopting its recommendations to:¹⁹

- Apply the purchasing power of the public sector to help scale up clean tech through directives to state and local governments to move rapidly to green their operations, fleets, facilities, and construction.
- Safeguard against federal actions that could divert or erode California's leadership position in this arena.
- Address the serious shortage of affordable risk-tolerant capital that impedes the growth of clean economy industries by forming public-private capital pools to fund clean energy projects.
- Expand R&D investments, such as those involved in the extensive partnerships between universities, federal labs, and industry.

Putting the public sector in the lead as an anchor customer for clean technology promises returns on two levels: capturing operating efficiencies for the public sector while supporting the growth and development of key industries.

SolarTech/ CleanTech

SolarTech, a membership group sponsored by the Silicon Valley Leadership Group in California, is known as an example of how a collaborative effort can help to drive the emergence of a new industry.

SolarTech is a “working consortium” composed of member companies engaged in all aspects of developing a sustainable solar energy market. Its committees address such issues as permitting to reduce and remove barriers to purchases of solar energy equipment, establishing standards to make the industry more transparent and understandable for consumers, developing new financing models, improving installation techniques, reducing costs, and improving efficiencies.

Taking a broader focus, the multi-institutional collaborative “CleanTech” in Los Angeles has brought together UCLA, USC, Caltech, the Jet Propulsion Lab, the county’s major economic development players, the city of Los Angeles, the chamber of commerce, and others around the singular purpose of establishing LA as a global leader in research, commercialization, and deployment of clean technology.

Source: www.solartech.org

SKILL UP FOR OPPORTUNITIES

Innovating more, making more, and exporting more will produce another crucial Next Economy attribute: broader opportunities for good-paying jobs at all levels.

Firms that innovate, firms that manufacture and firms that export all tend to create more and better-paying jobs at all levels, from R&D to operations, than those that don’t. However, these benefits will only flow to states, communities, and workers who have the globally competitive skills to secure them.

Despite California’s strong system of public higher education and the superior talent it attracts and produces at the highest levels, the state remains unable to effectively educate and train a workforce skilled enough for the Next Economy, leaving positions unfilled in the midst of record-high unemployment.

Every segment of the education pipeline from preschool through the elementary, secondary, and post-secondary systems is producing an inadequate supply of the skills needed in the Next Economy—from college graduates with bachelor’s degrees to STEM graduates and wind turbine technicians.

And even as the nation’s education performance has steadily slipped in international comparisons, California’s has fallen into the bottom tier—46th among the 50 states on primary and secondary achievement, according to the *Education Week* index of state standing in education.²⁰

The Public Policy Institute of California has projected that the state will face a shortfall of one million college graduates by 2025 unless it substantially increases college enrollment and graduation rates.²¹

The most recent update reconfirmed the projection that if current trends continue in 2025 only 35 percent of working-age adults in California will hold a bachelor’s degree, although 41 percent of jobs will require one.²²

Young adults entering the workforce today are less educated than the baby boomers beginning to leave en masse. Yet now, years before the retirement wave crests and even with high unemployment, employers report trouble finding workers with the skills they need. The growing shortfall—the result, among many factors, of intense fiscal pressure on the education system at all levels—will constrain California’s capacity for growth and prosperity.

While much of the attention rightly focuses on higher education attainment, equal emphasis needs to be placed on credentials and training for middle-skill jobs—those that require more than a high school diploma but less than a four-year degree. The Workforce Alliance predicts that 43 percent of job openings through 2016 will be for middle-skill jobs.²³

The California Workforce Investment Board’s adoption of sector strategies in line with the California Regional Economies Project’s

"Clusters of Opportunity User's Guide" was a significant step to better align workforce development with economic growth. San Diego and the Northern Rural Training Employment Consortium are known as models for implementation.

In the long term, the nation must create a fundamentally restructured system of workforce preparation and life-long training in 21st century skills. In the near term, the network of public institutions and public-private partnerships struggling with these challenges must keep moving in this direction.

The California Community Colleges System—the critical center for the development of technical and "middle skills"—has a task force currently looking for methods to increase retention and graduation rates. Its report later this year should trigger a concerted drive for improvement.

The agenda to repair California's vast education and workforce development system is beyond the scope of this plan. The financial constraints that have produced repeated cuts in education represent a significant barrier. But there are steps to consider as the state reconfigures and realigns its economic development agenda:

- Treat education and workforce development as a critical and integral aspect of economic development.

Bring together knowledgeable leaders from both systems—regional workforce development and training and economic development—to drive movement toward full integration and alignment.

- Consider adopting the recommendations put forward by the Public Policy Institute of California for reducing the state's projected deficit in college graduates.

- Pursue the national push to build skills for middle-skill jobs, including improving retention and graduation rates from community colleges.
- Rebalance the secondary-school system to create more options through Career Technical Education and the establishment of multiple pathways to graduation.

California's public education and higher education systems are its crown jewels—treasures created through far-sighted investments in the past—and the excellence of its university system is central to its economic triumphs. Its decline would be a national tragedy and, given the extensive global connections of California's universities, a loss to the world.

BUILD INFRA- STRUCTURE

The need for adequate infrastructure undergirds every aspect of the Next Economy agenda.

It is not possible to double exports or bring about a renaissance in manufacturing without world-class ports, roadways, and other freight capacities.

It is not possible to build an innovation culture with global reach without the infrastructure to achieve global reach, and it is not possible to reap the benefits of the information age without the capacity to send and receive vast amounts of information.

Chicago's Austin Polytechnical Academy

The Austin Polytechnical Academy in Chicago represents a model for the integration of skills in advanced manufacturing into a secondary-school setting. Austin Polytech sees its mission as educating the next generation of leaders in advanced manufacturing.

Founded in 2007 by the Chicago Manufacturing Renaissance Council—a coalition of leaders from business, labor, government, and the community—this public high school combines a college-preparatory curriculum in pre-engineering with vocational skills

training accredited by the National Institute for Metalworking Skills. Through NIMS, students earn industry-recognized credentials along with their high school diplomas. Partnerships with over 60 firms in the area provide job shadowing, internships, field trips, and other supports for students to explore career opportunities in manufacturing and engineering.

Source: <http://austinpolytech.org/about>

Georgia Work Ready Program

The state of Georgia is experiencing some success in aligning the supply side of worker training with the skill

Devising an approach for shoring up California's infrastructure in this period of financial constraints presents a daunting challenge. But the magnitude of the need requires continuing to work to develop new funding vehicles and avenues for investment.

The farsighted and largely self-financed package of transit and transport projects put together by Los Angeles in its 30/10 project exemplifies the scale needed to build the next generation of infrastructure. The Public Infrastructure Advisory Commission's work to enable new approaches, such as public-private partnership (P3) projects, holds potential, including exploration of infrastructure investments as part of public pension fund portfolios.²⁴

A few steps can align work on this critical agenda with the state's new role in economic development:

- Align infrastructure decisions with regional strategies and plan across disciplines, considering, for example, how transportation funding might benefit development of innovation centers and business clusters.
- Pursue new approaches to financing and the use of public-private partnerships as vehicles for expanding resources.
- Support the development of clean technology with complementary infrastructure such as plug-in stations for electric vehicles.
- Drive the innovation agenda by developing broadband capacity based on the recommendations of the California Broadband Task Force, including stepping up efforts to increase spectrum allocation for mobile users and to accommodate the next wave of entrepreneurial activity and small business growth and lead the movement to make universal access to high-speed broadband for every citizen a reality.²⁵

ALIGN WITH REGIONAL STRENGTHS

In the Next Economy, as a leading business economist has observed, "There is no national economy, but a series of regional economies that trade with each other and the rest of the world, each with its own particular pattern of cluster specialization."²⁶

In other words, urban vigor and metropolitan regions determine economic vigor.

The global economy is increasingly driven by the competition between and collaboration among an international web of high-performing, interconnected metropolitan areas and regions, each serving as the resource base for powerful clusters of enterprises. California, with its diversity of globally competitive business clusters embedded in equally diverse, resource-rich regions is a major node in that web.

Most of its cities and regions, however, suffer from having been shaped by the policies and practices of the industrial economy. They are, in many ways, ill equipped to meet the fast-moving, mobile demands of the innovative, eco-efficient and export-intensive next one.

The key to delivering the Next Economy is to nurture and tap into the unique potential of each region and its clusters of business. And that requires re-thinking and re-calibrating public policy across many dimensions.

demands of real jobs by implementing a "Work Ready" credential for lower-skilled workers.

Georgia is implementing ACT's nationally recognized WorkKeys system for profiling specific skills required for actual jobs, assisting employers in more clearly identifying the specific work skills needed.

A Work Ready Certificate is awarded to workers who meet the basic standards identified by WorkKeys which assesses both hard and soft skills and shores up weaknesses through gap training to raise workers' scores. Georgian workers who earn a certificate can submit it to prospective employers in the hiring process.

Since 2008, 995 Georgia employers have participated in the program.

California can also look to San Francisco's successful Jobs Now program, which provided work opportunities along with wage reimbursements to employers for new hires. From May 2009 through September 2010, 3,740 San Franciscans obtained jobs with 80 percent of the placements in the private sector and 20 percent in the public sector.

Source: gaworkready.org and www.sfhsa.org.

San Diego CONNECT

San Diego's **CONNECT** is also widely recognized as a “best in class” hub whose mission is “catalyzing the creation of innovative technology and life science products.”

Founded by the University of California at San Diego, the San Diego Economic Development Corporation and private sector leaders, the non-profit was created to focus on the commercialization of science and technology discoveries from research institutions. It has assisted in the formation and growth of more than 2,000 companies, and its approach has been widely replicated outside of California.

CONNECT has a strong culture of collaboration focused on the following key components:

- **Business Creation**—accelerating the success of innovators at all stages of growth.
- **Venture Capital**—connecting innovators to the financial resources necessary for success.
- **Educational Curriculum**—accelerating the learning curve of innovators.
- **Washington**—representing innovation companies on Capitol Hill and in Sacramento to remove barriers to commercialization.
- **Recognition and Competition**—promoting discoveries and innovators.
- **Convergence Clusters**—accelerating innovation with shared information and collaboration.

Source: www.connect.org

The California Economic Strategy Panel defined California's economy as an economy of regions in 1996, and followed up with deeper analysis through the “California Regional Economies Project” and “Industry Clusters of Opportunity User Guide” as a resource for planning.²⁷

Grounded in the practical realities, real-world interactions, relationships and transactions of networks of real firms, regional clusters offer a powerful organizing framework for rethinking state economic development policy and programs. “Clusters, in short, provide a timely and useful lens through which to clarify what matters in economic affairs,” as a recent paper from the Brookings Institution put it.²⁸

California can lead the movement to redefine the state role in economic development as supporting regional economies and business clusters.

Clusters run broader and deeper than sectors, knitting together a wide variety of institutions and entities, including university R&D and workforce training, into extensive and often expansive networks. Trade clusters—those that produce goods and services that compete with those produced by other regions and other countries—are “the underlying drivers of prosperity,” in Michael Porter's words.²⁹

The Cluster Mapping Project at the Institute for Strategy and Competitiveness at the Harvard Business School identifies 41 traded clusters, nearly all of which are represented at some level in California, accounting for nearly a third of total employment in 2008. The 4.2 million workers employed in all traded clusters across California in 2008 earned an average wage of \$66,477—substantially higher than the average for all workers.³⁰

Designing a cluster-driven approach as the foundation for the state economic plan requires embracing key principles and approaches:

- State government must adopt a “do no harm” approach to statewide policy, ensuring that whatever policies are adopted are value-added and do not impede the good work being done on the regional level.
- Root state policy in cluster analysis and regional strategies and align state programs with identified clusters, particularly traded clusters where there is measurable evidence of under-capacity.
- Target clusters with state-level significance and attack specific, documented constraints, institutional deficiencies and shortcomings for the reallocation of resources at the state level.
- Use data and rigorous analysis to choose focus areas and design interventions and then track and measure performance relentlessly.
- Adjust state and regional governance structures to foster collaboration.
- Let the private sector lead.

Strategic Plan for Economic Development in Los Angeles County

In 2009, the Los Angeles County Economic Development Corporation engaged more than 1,000 stakeholders to develop what it has described as the first consensus-based comprehensive economic development plan for the region.

The depth and breadth of the countywide effort illustrate why building on the strengths of regions represents a sound approach for developing state-wide consensus that complement, support, and advance regional economic development strategies, such as that devised for L.A. County.

Source: www.laedc.org

Sacramento Valley Vision

Valley Vision in Sacramento represents another version of the consensus building thinking, engagement, and knowledge beneath effective regional strategies. Describing itself as an “action tank,” Valley Vision is a network of individual leaders and experts and organizations engaged in shaping a comprehensive approach to development in the Sacramento region. It serves as a bridge, providing collaborative planning, objective problem solving, and impartial research and information for sound decision making.

Source: www.valleyvision.org

ORGANIZE FOR SUCCESS

To revitalize California's economic competitiveness, its leaders must streamline the clutter of agencies, commissions, offices, and entities engaged in economic development.

The state must reorganize the often overlapping and conflicting missions, regulations, and policies that have produced a frustrating maze too dense to navigate. It must reallocate resources already devoted to these purposes and refocus them on the agenda in this plan.

Establishing a coherent, coordinated structure for carrying out the state role in economic development—a structure with clear lines of authority, clear performance metrics, and clear accountability for results—is basic good governance of the kind that is already enabling many other states to gain ground.

California must devise its own structure with the goal to transform California as much as possible into a “plug and play” environment for economic growth and development, while simultaneously protecting its values and the quality of life in its communities.

Each cluster and region in California operates in a different and increasingly fast-paced, technologically dynamic and highly networked competitive environment. Top-down policies, bureaucratic silos and standardized programs that implement one-size-fits-all approaches to those diverse regions have no place in the new economic model.

What does have a place is an intense reliance on public-private partnerships and collaboration to ensure that public resources are deployed in the service of smart, market-driven strategies, and a flexible, well-coordinated mechanism for aligning state resources.

That work begins by taking stock of the effective efforts already in place, including such initiatives as TeamCalifornia and CalBIS.

A more specific plan for rethinking the structures and designing a new model will draw on work by McKinsey Global Strategies that examined the experience of 25 states attempting this type of transformation, as well as several major cities and countries.³¹ Among its key tenets are these:

- Vest authority in a public-private leadership council strategically positioned at the highest level, consisting primarily of representatives of the state's major business clusters and its economic regions. Next, charge the council with forging statewide vision and priorities, creating a strategic plan for attaining that vision, and offering policy guidance and performance assessments.

A California Council on Jobs and Competitiveness modeled on the President's Council on Jobs and Competitiveness could undertake this mission, providing expertise and recommendations at the highest level of state government.

It must bring together the executive and legislative branches including leaders of both major political parties and representatives of the higher education system, but the majority of its members must come from the private sector, critical business clusters, labor, and the regions.

- Streamline existing delivery mechanisms into a single accountable office that oversees a lean and well-coordinated organization in place of the inefficient array of more than three dozen agencies now engaged in economic development.

An Office of Jobs and Competitiveness should be charged with aligning all the various strands of economic activity, including a thorough integration of trade, tourism, export and foreign direct investment promotion, manufacturing supports, business attraction and retention, and innovation strategies. It, too, must be strategically positioned at the highest level of government.

- Institute rigorous performance metrics, annual measurement, and an annual process rooted in the regions to refresh the state strategy.

As it puts into place this new, streamlined structure for economic development, California must also bring its cumbersome licensing and regulatory processes into the 21st century.

The state must consolidate permitting and regulatory reviews into a single agency and give it the explicit mandate to simplify to the greatest possible extent business development, creation and retention efforts.

The new economic development structure should provide one-stop-shop services for business start-ups, expansions and relocations, helping them navigate the labyrinths of state and local requirements and assistance programs.

To deliver the Next Economy, California must move forward across all of those dimensions.

Singapore Economic Development Board

The Singapore Economic Development Board provides a model worth considering as California seeks to reorganize and refocus economic development at the state level.

It is the lead government vehicle overseeing economic development for Singapore with the mission to “create for Singapore sustainable economic growth with vibrant business and good job opportunities.”

It focuses on three key elements:

1. Attracting foreign investments as a one-stop agency facilitating and supporting local and foreign investors in both manufacturing and service sectors as they move up the value chain.
2. Growing industry verticals or clusters strategically chosen based on their promise for creating good jobs and sustaining competitiveness.
3. Enhancing the business environment by providing feedback from its interactions with business customers to other government agencies to ensure that Singapore maintains a premier business environment.

Among its tools is EDB Investments, its independent equity investment arm that seeks to both catalyze new industry growth sectors and strengthen existing engines of Singapore's economy. EDB Investments has worked with 240 companies over two decades.

Singapore's Economic Development Board sums up its work as guiding: “Singapore's plug-and-play approach to business.”

Source: www.edb.gov.sg

Integrating Tiers of Government—and Cycles of Government

When researchers from the London School of Economics looked into the critical factors that brought about revitalization in a set of European metropolitan regions, they identified as key the level of integration the regions were able to bring about across the “tiers of government,” as the researchers phrased it.

According to the researchers, more than any other observable feature, progress in Munich, Seoul, Barcelona, and Torino has come from aligning “tiers of government” around a shared economic strategy and substantially raising the rate of investment in the productive platform of these metros.

The “tiers of government” encompassed federal, state, regional, and local jurisdictions. Further, shared strategy has been developed by local and regional political leaders from different parties working together. This approach has enabled a “consensus strategy” that provides stability and enables long-term agendas to be pursued.

Source: *London School of Economics and Political Science and Brookings, 2010.*

ORGANIZING FOR JOBS AND COMPETITIVENESS

LESSONS FROM OTHER GOVERNMENT TRANSFORMATIONS

California is working to build an organization capable of supporting job creation and improving competitiveness. Transforming disparate groups of agencies with various economic development related mandates into a focused effort able to deliver jobs and competitiveness will not be easy.

Over the past decade, half of the U.S. states have attempted to transform their governments to low and varying degrees of success. In addition, several U.S. cities and other federal governments have made similar efforts. After reviewing

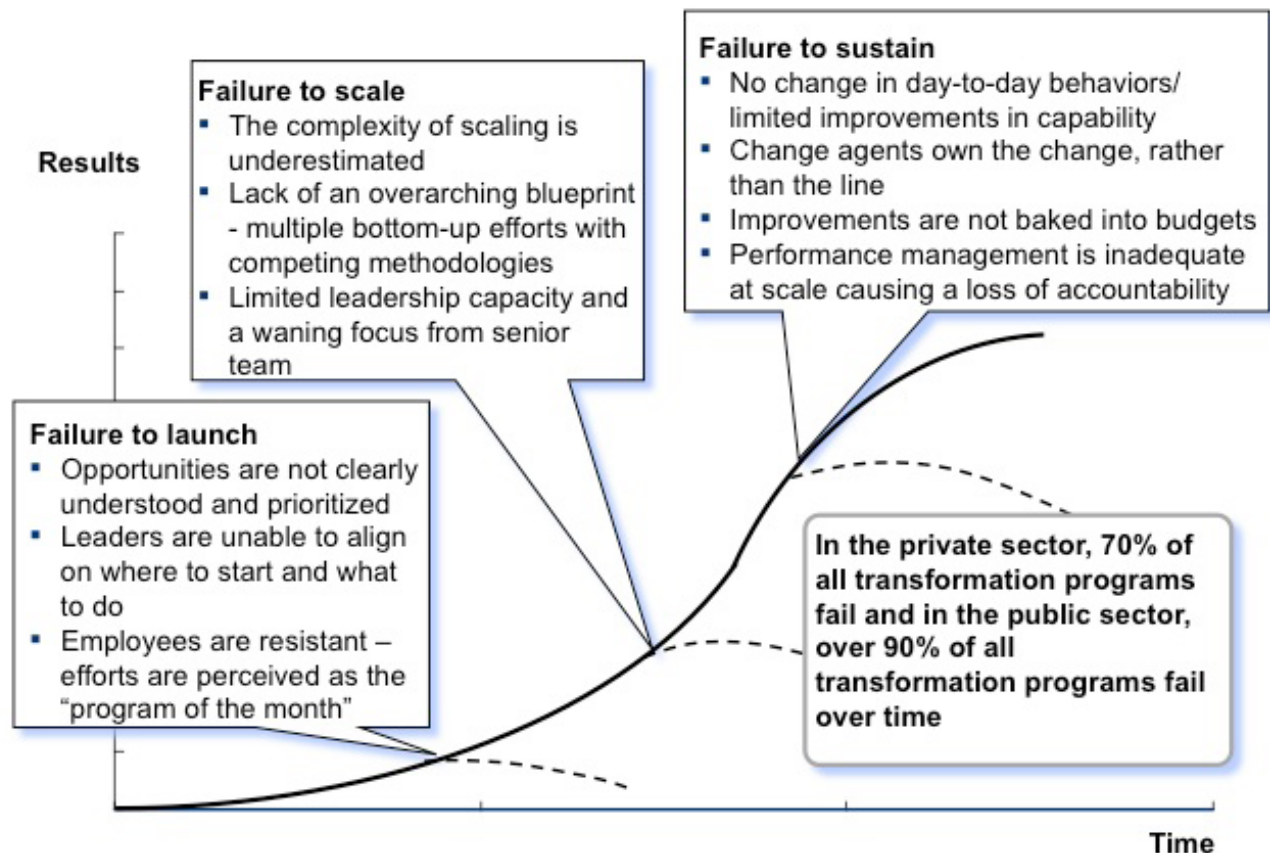
transformation efforts in 25 states, four U. S. cities, and another four countries, McKinsey Global Institute has identified six key elements to making government transformation successful:

1) strong leadership and visible executive sponsorship, 2) clearly defined scope and goals, 3) innovative operational improvement ideas, 4) strategic analytics to support recommendations, 5) ability to secure approval from the Executive and the Legislature, and 6) effective implementation.

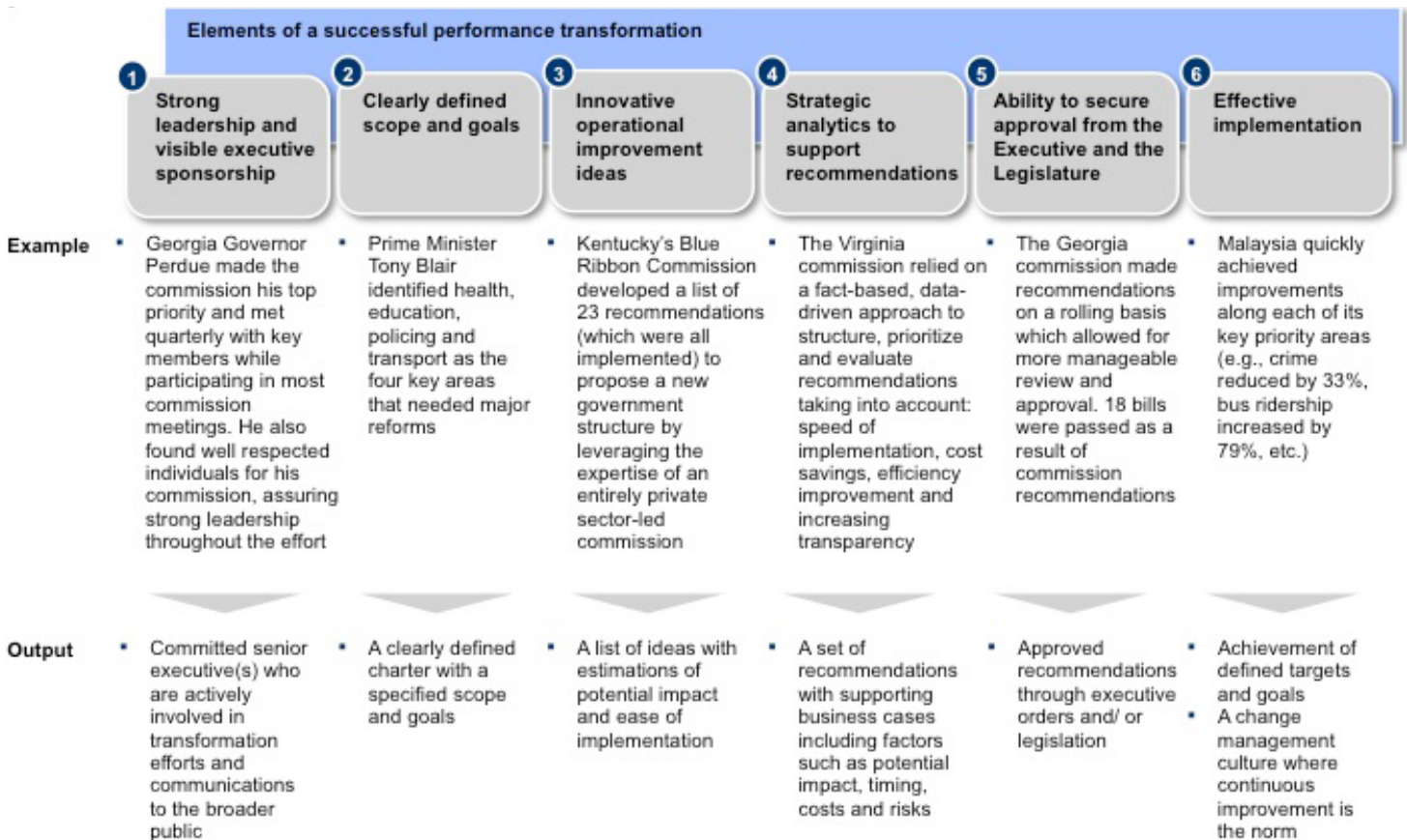
As California prepares to transform how government supports job creation and competitiveness, the lessons from other transformation attempts offer important guidance in how to

PERFORMANCE TRANSFORMATIONS ARE NOT EASY AND OFTEN FAIL FOR VARIOUS REASONS

Performance transformation on results vs. time



CENTRAL TO BOTH APPROACHES ARE SIX KEY ELEMENTS OF A SUCCESSFUL PERFORMANCE TRANSFORMATION



SOURCE: McKinsey analysis

McKinsey & Company

organize for success. The California effort could combine two common approaches, a commission and a delivery unit.

- A commission-led approach- A group of typically 12 to 30 external leaders who provide guidance, ideas, and potential access to private sector subject matter experts, as well as lending credibility to the overall effort. While some commissions have a narrow scope (e.g., New Jersey created a commission focused on privatization), other commissions have a broader scope (e.g., Virginia's commission was tasked with creating efficiencies, improving service delivery, and increasing transparency). Where the commission-led approach is combined with a focus on implementation there is evidence it can be very successful (e.g., Georgia implemented 127 out of 130 recommendations, saving \$700 million over seven years). However, in cases where there is insufficient executive support and/or insufficient focus on implementation (e.g., insufficiently separating harder-to-implement policy recommendations that require legislation from

more operational initiatives that can be implemented directly), results vary.

- Dedicated delivery unit approach: Central to this approach is a group of dedicated resources responsible for leading parts or all of the transformation effort. In some cases this is achieved through the use of a Project Management Office (PMO) that stands alone from the normal agency structure and reports directly to the Governor or his or her designee. PMOs provide analytical support to the transformation effort, develop project plans, work with agencies and departments to ensure successful implementation and, importantly, track progress. In some cases, PMO structures focus on analysis and implementation, with performance improvement ideas generated elsewhere within the government (e.g., Minnesota), and in other cases the PMO also takes responsibility for generating performance improvement ideas (e.g., the U.K.).

GETTING STARTED: ACTION FOR THE FIRST 180 DAYS

The overarching imperative for action is clear: to restore California's economic competitiveness and regain momentum, California must redefine the state role in economic development and a new plan with powerful strategies centered on the pillars of the Next Economy described in this agenda.

The state's role must be anchored in support for its regional economies that are the engines of growth and aligned to build on their diverse strengths rather than setting approaches for them from Sacramento.

It must end outmoded legacy programs and tax incentives that lack measurable outcomes, reinvesting those resources in policies and initiatives more sharply focused on this agenda.

It must rationalize the regulatory system and make it easier to navigate.

Business, civic, and governmental leaders throughout the state have raised a number of ideas that can move California forward. Model practices from regions within California, from other states and nations offer approaches that can be adapted and scaled to California.

Gaining agreement on the precise actions to take to accomplish those goals will be challenging—what programs to cut or fund, what rules to change and how to change them, what legislation and ballot initiatives to propose. But this can be achieved if the focus is maximizing impact on the core drivers of the Next Economy.

To succeed and overcome these challenges, California's leaders must move from platitudes and hard political positions toward consensus, collaboration, and practical action.

Initial recommendations for such action follow, designed to both open the conversation and take the first step. They were selected based on identifying very specific measures that are low-cost, high-impact, and achievable actions that can set the course to success:

STATE INSTITUTIONAL REFORM

Enact a comprehensive legislative reform of state economic development entities to create a market-oriented, performance-driven state model that leverages public and private sector

resources and participation, improves collaboration, eliminates redundancy, and ensures accountability. Targeted for passage: Fall 2011.

- Consolidate and streamline disparate state economic development functions—without increasing existing budget or staff levels—into a single, accountable cabinet-level office, to both serve as the entry point for business assistance and to integrate state efforts in support of regional economic strategies.
- Eliminate the myriad state commissions that have fragmented or overlapping missions.
- Replace state commissions with a public-private advisory group modeled after the national Council on Jobs and Competitiveness to provide ideas, guidance, and access to subject matter experts comprised of leaders representative of the state's regions and economic clusters and serving at the will of the Governor.

Initiate a regular, statewide gathering to review and refresh economic strategy

- Convene the first annual Economic Growth and Competitiveness Summit within 180 days, bringing together leaders from across the state to assess economic policies and practices, seek consensus on specific actions, and establish performance metrics for success.
- Form an Action Team within 90 days to evaluate current state and regional economic data collection, identify critical gaps (particularly in indicators of Next Economy strength), and recommend administrative or policy changes to create a consistent set of measures for accountability and decision-making.

Establish interim "State Regulatory Strike Teams"

- Form a central "Strike Team" within 30 days to serve as the entry point into the state with a mandate to help solve regulatory problems, pending more comprehensive administrative and legislative reforms to economic development entities.
- Assign responsibility to the team for assessing economic impact of major regulatory legislation under consideration to help policymakers understand fiscal and operational impact on the business climate.

- Establish a permanent function in the newly formed state economic development model to address these issues on a continuing basis.

Simplify, align, and eliminate redundant permitting and regulatory processes at the state, county, and municipal levels

- Establish Action Teams within 90 days comprised of business and government leaders to identify specific state and local permitting rules and processes that pose the greatest barriers to speed and certainty as a result of inconsistency and redundancy.
- Identify at least six demonstration counties—four urban and two rural selected based on local commitment to participation from major cities, tribes, and business leadership—to pilot working with the Action Teams to implement recommendations.
- Prepare a report on findings that require state statutory changes, finalized in time for use during the 2012 legislative cycle.

Create a “California Government App Store”

- Establish a technical platform to support development and dissemination of apps designed to support business development and economic growth.
- Launch a competition for programmers to produce tools that help entrepreneurs and businesses navigate government requirements and supports, starting with an App enabling seamless registration for state and local taxes, licensing, and permitting within an individual jurisdiction.

EXPORTS AND TRADE

Guarantee state participation in key international trade and promotion events

- Designate a single point of contact inside the newly created state entity with responsibility for convening and collaborating private sector and regional efforts to ensure complementary state participation and reassert the California brand.
- Involve the Governor and Lieutenant Governor directly in trade promotion efforts—such as attending international events and making personal contacts with business prospects—so that the role of our state leaders is prominent in these trade discussions.

Reestablish a state presence in selected foreign markets – particularly emerging markets – to support both export and inbound investments and business expansion

- Create a China presence for California within 180 days, building on existing efforts of the Yangtze Council and the Bay Area Council, ChinaSF, and LA Economic Development Corporation.

- Form an Action Team within 90 days, including business, university, and governmental leaders to prioritize expansion into additional countries and markets based on California’s major industry clusters, export patterns, and other factors.

Create a California Metropolitan / Regional Export Initiative based on the work underway in Los Angeles and supported by the 2011 National Export Initiative Strategy

- Raise funds and launch a competition for matching grants to metro regions that create and implement an evidence-based export strategy that targets the most export-ready businesses, developed through a 180-day local process.
- Dedicate state Action Teams to support development and implementation in each region of a Metropolitan Export Plan.
- Assign a state-led team to coordinate a high-level interagency group that oversees programs related to exports and foreign direct investment to align in support of the plans.
- Advance applications to the federal SBA State Trade and Export Program for FY 2011-FY 2013 funding and seek other potential federal funding to support implementation of the regional plans.
- Prepare a list of state funding, legislative, and regulatory change recommendations based on those regional plans to be pursued in the next budget cycle.

INNOVATION

Expand on successful commercialization efforts to leverage California’s university patent leadership

- Form an Action Team within 90 days, comprised of representatives from the University of California and California State University systems, businesses, intermediaries, and capital providers, to identify commercialization models for replication in high-impact regions of the state, and potential private financing options to enable implementation.
- Assign the team to propose initial implementation activities on a regional scale that can be taken within 180 days, using existing funding sources and authorities.
- Develop related funding and policy recommendations for the 2012 budget and legislative cycles.

Promote a high-growth entrepreneurial initiative and leverage non-governmental supports

- Launch a “Startup California” initiative within 180 days, building on the existing Startup America Partnership platform. Secure commitments from California firms, intermediaries, and philanthropies to provide financial and in-kind resources.

- Expand the new partnership agreement between the California Small Business Development Network and California State University to include the University of California and California Community College systems.

Seek a branch of the U.S. Patent and Trademark Office in California as one of three new satellites to be authorized

- Support current regional efforts in Silicon Valley and southern California through official state-level advocacy and state-controlled incentives to attract the patent office expansion, reporting regularly on state actions and progress.

Propose to improve or eliminate underperforming state tax incentives

- Form an Action Team within 120 days of researchers to assess existing tax incentives relative to measurable economic impacts and recommend alternative approaches, including evaluating an exchange market model that enables start-up or emerging businesses to monetize credits prior to generating profits.
- Prepare a package of tax incentive reforms for enactment in the 2012 legislative cycle.

MANUFACTURING

Create and advance a “California Made” initiative of industry-neutral permitting, tax, and other policies to make it easier and more competitive for companies to manufacture in California

- Form a 120-day Action Team of business, labor, and government leaders to develop and prioritize highly specific proposals that expedite manufacturing facility development, reduce business risks, create jobs, and increase local revenues, with consideration to:
 - Advance permitting processes for certain land parcels identified by localities – where all levels of government pre-clear environmental and impact requirements to establish an approved profile for a site;
 - Possible manufacturing equipment tax exemptions or other options, and whether appropriate offsets can be identified;
 - Other benefits that help to better align the manufacturer's costs in California with competitor states and countries; and
 - Criteria by which land parcels should be identified and qualified.
- Implement any recommendations within 180 days for which statutory authority may not be required.
- Prepare a legislative package of proposed changes for

enactment in the 2012 legislative cycle.

Promote high school adoption of new manufacturing-oriented apprenticeship and training programs

- Support a pilot high school initiative in at least three California school districts that focuses on advanced manufacturing and engineering, sponsored through partnerships with companies and labor interests.

WORKFORCE DEVELOPMENT AND EDUCATION

Strengthen workforce preparedness through improved integration of training and education systems, linkage with economic objectives, and performance measurement.

- Convene a working group within 30 days, including leaders of the three higher education segments—California Community Colleges, California State University and University of California—along with key policy makers and business leaders, to address funding adequacy to ensure access and affordability for all students. Targeted for action: 2012 legislature or ballot.
- Form an Action Team within 90 days including manufacturing and other business representatives, labor, state university and community college systems, and Workforce Investment Boards to devise a strategy for the integration of workforce development and economic development that aligns with the State's key growth sectors. Report due within 180 days.

FEDERAL ADVOCACY

Many of the policies that disproportionately impact the state's economic future are solely federal government prerogatives that are beyond the control of California government.

However, California's leadership must be proactive in taking positions and advocating on behalf of a federal economic agenda that promotes economic growth and infrastructure development.

New and more sophisticated approaches also need to be used. California will need to reach beyond its own potent delegation – forming active coalitions with similarly-situated states, as well as businesses with a presence around the country to advance a new federal economic agenda.

In addition to leveraging the sheer size of California's 55 members of Congress, the state must work with every California locality and business to advocate together in Washington, D.C. on the shared competitiveness objectives that should be addressed at the federal level.

Considerations should include:

- **Taxation**

California needs comprehensive federal and state tax reform that creates certainty for business and eliminates disincentives to domestic investment. Federal tax policy should align with how other developed nations handle overseas earnings.

Central to the federal tax debate for California is the late annual renewal of the federal Research and Development Tax Credit and other incentives that undermine their intended purpose of generating long-term corporate investment. Also critical is the potential repatriation of foreign earnings by U.S. companies, and finding a balanced solution to bring home \$1.2 trillion from overseas for investment in growing the domestic economy.

The federal tax reform debate will likely continue over several years before a final agreement is reached. However, California should not wait for Washington, D.C. to act nationally before we act locally.

- **Trade**

Free Trade Agreements, currency policy, and enforcement of intellectual property laws abroad are critical to opening new markets for California goods and services. The long-pending Korea Free Trade Agreement alone represents an opportunity for \$2.5 billion in additional goods exported for California. The state must proactively engage in pressing for effective federal action and reform of programs and investments that support an export agenda.

- **Immigration**

While comprehensive immigration reform is a complex political and policy challenge, some aspects of existing programs and policies that erode California's competitiveness can be addressed more readily.

Attracting foreign nationals with entrepreneurial spirit and strong investment capacity is critical to the growth of California's economy. Studies estimate that nearly 40% of technology firms and 52 percent of all Silicon Valley technology firms were started by foreign-born entrepreneurs, and immigrants are almost 30% more likely than non-immigrants to start a business. However, the current EB-5 Visa Immigrant Investor program is underperforming and should be strengthened.

California also benefits from the H1-B guest worker visas to attract skilled workers for the innovation economy. However, the program suffers from a massive oversubscription of the 65,000 quota limit, as well as apparent loopholes in the program that bring in workers with "ordinary skills" rather than the intended engineers and scientists needed to grow California businesses. For FY2011,

enough H1-B petitions were received to reach the annual quota within four months. The state must press for reforms.

CONCLUSION

This agenda would not have been possible without the input and collaboration of hundreds of political and business leaders. While there is a more comprehensive thank you list in this report, there are a few people and organizations that I must recognize here.

First and foremost are Governor Jerry Brown, Anne Gust Brown and his administration for allowing me to lead this effort. California has no better advocate for real reform and leadership than our current Governor.

Next are the members of the California Legislature, foremost among them Speaker John Pérez and Senate President pro Tem Darrell Steinberg, along with members of both parties. It is a rare issue in California when both parties agree that something must change, and change quickly. The growth of jobs and California's need to compete know no political party, and the continued support of both parties is of paramount importance to our success.

A tremendous debt of gratitude is owed to those that have tried to keep economic development on the front burner as the state's efforts floundered in the last decade—the staff at the Governor's Office of Economic Development, the California Association for Local Economic Development (CALED), the Regional Economic Association Leaders of California (R.E.A.L. coalition), and the California Stewardship Council—amongst many others. Once this agenda is adopted, these organizations, in conjunction with California leadership's renewed focus on jobs and competitiveness, will play an important role in our long-term growth and success.

Finally, this agenda would not have been possible without the generous funding provided by the Silicon Valley Leadership Group and California Manufacturers and Technology Association board member, Eric McAfee. In addition, the Brookings Institution provided invaluable guidance and consultation throughout the process through the Brookings-Rockefeller Project on State and Metropolitan Innovation. Furthermore, The McKinsey Global Institute and California Strategies, LLC both provided tremendous support in the development of this document.

The success of this agenda hinges on the continued involvement and cooperation of those already engaged and many more. The process must be transparent and subject to public scrutiny. There is no progress without measurement so for that reason, the actions outlined in this agenda will be posted and updated on the front page of my website. Please visit <http://www.ltg.ca.gov> frequently to provide feedback and track our progress.

ENDNOTES

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ACTIONS

| Task Name | Q1 | | | Q2 | | | Q3 | | | Q4 | | | Q1 | | | Q2 | | | Q3 | | |
|---|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| | Jul | Aug | Sep | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Jan | Feb | Mar |
| Reform | | | | | | | | | | | | | | | | | | | | | |
| 1 Create consolidated "one-stop shop" for jobs and competitiveness | | | | | | | | | | | | | | | | | | | | | |
| 2 Create statewide regional and sector based advisory panel | | | | | | | | | | | | | | | | | | | | | |
| 3 Receive report of Regulatory Reform Working Group | | | | | | | | | | | | | | | | | | | | | |
| 4 Create regulatory strike teams to address business needs | | | | | | | | | | | | | | | | | | | | | |
| 5 Regulatory reform legislative package | | | | | | | | | | | | | | | | | | | | | |
| 6 Government App Development competition | | | | | | | | | | | | | | | | | | | | | |
| 7 Launch Government App Store | | | | | | | | | | | | | | | | | | | | | |
| 8 Annual Agenda Review Summit | | | | | | | | | | | | | | | | | | | | | |
| 9 Receive report of Measurement and Accountability Action Team | | | | | | | | | | | | | | | | | | | | | |
| Trade | | | | | | | | | | | | | | | | | | | | | |
| 10 Receive report of Trade/Export Action Team | | | | | | | | | | | | | | | | | | | | | |
| 11 Governor and Lt. Governor actively participate in international trade promotion | | | | | | | | | | | | | | | | | | | | | |
| 12 Re-establish overseas office in China | | | | | | | | | | | | | | | | | | | | | |
| 13 Re-establish overseas offices in other locations | | | | | | | | | | | | | | | | | | | | | |
| 14 Create CA Metropolitan/Regional Export Initiative | | | | | | | | | | | | | | | | | | | | | |
| 15 Matching Fund Program | | | | | | | | | | | | | | | | | | | | | |
| 16 Dedicated State Action Team | | | | | | | | | | | | | | | | | | | | | |
| 17 State-led SBA application | | | | | | | | | | | | | | | | | | | | | |
| 18 Legislative Budget Regulatory reform package | | | | | | | | | | | | | | | | | | | | | |
| Innovation | | | | | | | | | | | | | | | | | | | | | |
| 19 Receive report of Innovation Action Teams | | | | | | | | | | | | | | | | | | | | | |
| 20 Develop funding and policy recommendations | | | | | | | | | | | | | | | | | | | | | |
| 21 Launch "Startup California" initiative | | | | | | | | | | | | | | | | | | | | | |
| 22 Expand partnership between California Small Business Development Centers and CSU to include UC | | | | | | | | | | | | | | | | | | | | | |
| 23 Seek federal patent office | | | | | | | | | | | | | | | | | | | | | |
| 24 Introduce and adopt legislative tax incentive reform package | | | | | | | | | | | | | | | | | | | | | |
| Manufacturing | | | | | | | | | | | | | | | | | | | | | |
| 25 Receive report of Manufacturing Action Team | | | | | | | | | | | | | | | | | | | | | |
| 26 Develop and implement non-statutory reforms to expedite manufacturing growth | | | | | | | | | | | | | | | | | | | | | |
| 27 Develop introduce and adopt statutory reforms to expedite manufacturing growth | | | | | | | | | | | | | | | | | | | | | |
| Workforce Development and Alignment | | | | | | | | | | | | | | | | | | | | | |
| 28 Receive report of Higher Education Working Group on Access and Affordability | | | | | | | | | | | | | | | | | | | | | |
| 29 Receive report of Workforce Alignment Action Team | | | | | | | | | | | | | | | | | | | | | |
| 30 Develop statutory or ballot proposal for stabilization of higher education funding | | | | | | | | | | | | | | | | | | | | | |
| 31 Education and workforce alignment restructuring proposals | | | | | | | | | | | | | | | | | | | | | |
| Federal Advocacy | | | | | | | | | | | | | | | | | | | | | |
| 32 Omnibus tax reform | | | | | | | | | | | | | | | | | | | | | |
| 33 Federal Research and Development Tax Credit Renewal | | | | | | | | | | | | | | | | | | | | | |
| 34 Trade and Export Policy | | | | | | | | | | | | | | | | | | | | | |
| 35 Immigration reform | | | | | | | | | | | | | | | | | | | | | |

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