BAY AREA COUNCIL
ECONOMIC
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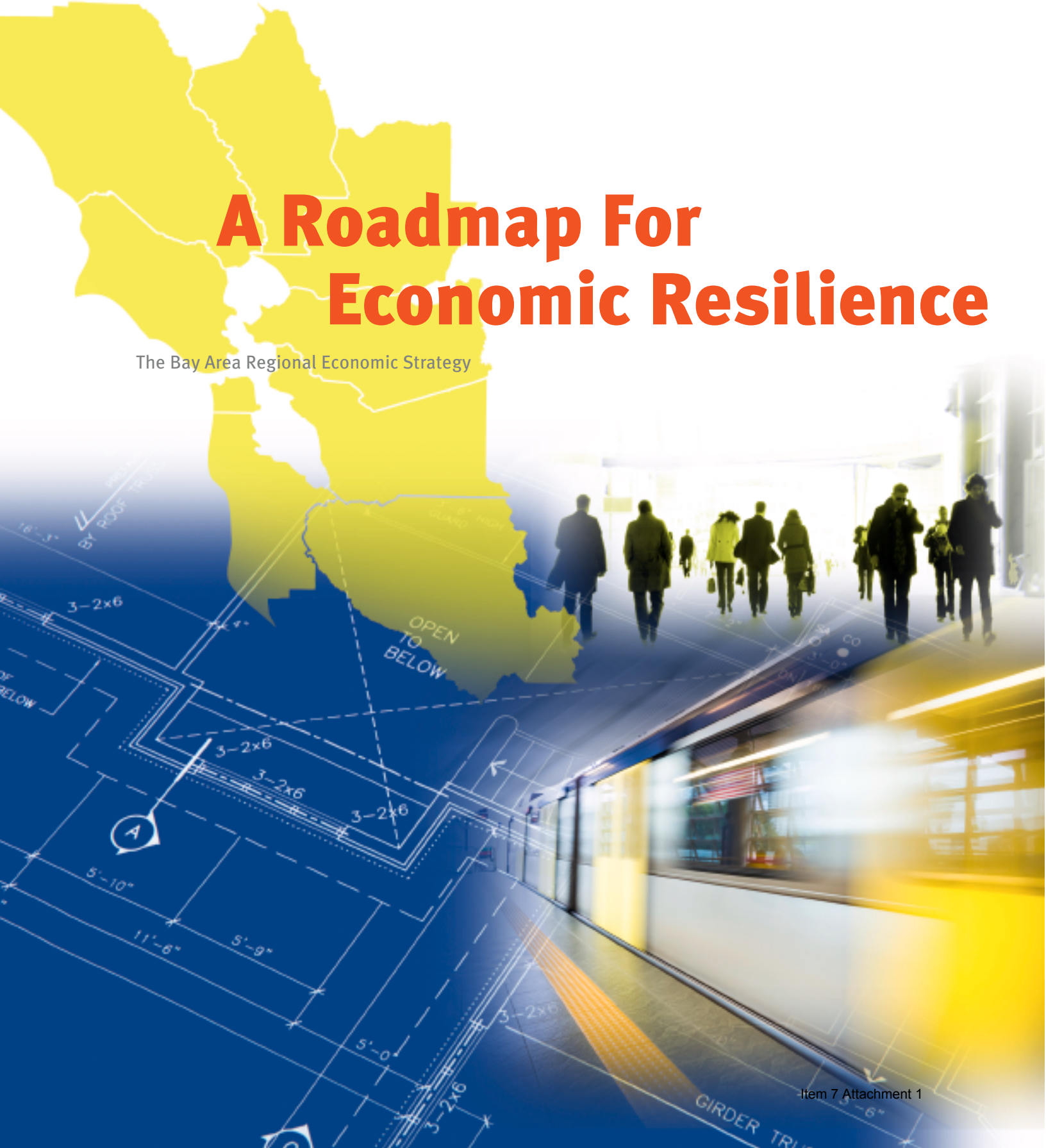
A Roadmap For Economic Resilience

The Bay Area Regional Economic Strategy



Item 7 Attachment 1

A ROADMAP FOR ECONOMIC RESILIENCE: THE BAY AREA REGIONAL ECONOMIC STRATEGY

In 2012, the Bay Area Council Economic Institute published a Regional Economic Assessment, supported by the Metropolitan Transportation Commission (MTC) and the business community, which contained a series of recommendations on economic policy and governance, including the need for the development of a regional economic strategy. It also recommended a deeper conversation between business and government earlier in the regional planning process, such that critical economic objectives are embedded in future regional strategies. Thanks to generous funding from the MTC and in-kind support from the Bay Area Council, the Bay Area Council Economic Institute carried out over a 12-month period the Bay Area Regional Economic Strategy process that has culminated in this roadmap document.

This engagement process brought together the region's business leaders and other stakeholders to identify the top opportunities for securing the region's global competitiveness, broad-based opportunity, and economic vitality.

Given the various regional planning and strategy efforts currently underway, including the update to Plan Bay Area, this project provides perspective from the business community on multiple issue areas. There is an important opportunity to align the findings of this project with the conclusions of work by other efforts on economic policy and governance in the region and the state, for example with the work of the California Economic Summit and the Regional Prosperity Strategy.

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There were many substantive contributors to this project. Tracey Grose (BACEI Vice President) designed and directed the project. Jeff Bellisario (BACEI Research Manager) served as research manager and was a major contributor to the development of the Roadmap document. Matt Regan (BAC Senior Vice President) and Michael Cunningham (BAC Senior Vice President) contributed significantly in the development of the recommendations related to housing and transportation. Sean Randolph (BACEI Senior Director) was a core contributor to the content on infrastructure investment. Linda Galliher (BAC Vice President) and Brianne Riley (BAC Policy Associate) contributed to the recommendations on workforce development. BACEI interns, Carolyn Garrett and Duke Butterfield III, provided valuable research assistance at different phases of the project. Rufus Jeffris (BAC Vice President/Communications Director) provided critical writing and editorial input. Micah Weinberg (BACEI President) provided valuable feedback on the development of this document. The Institute would like to thank the many reviewers in the community who offered helpful feedback on the development of the economic strategy.

ABOUT THE INSTITUTE

Since 1990, the Bay Area Council Economic Institute has been the leading think tank focused on the economic and policy issues facing the San Francisco Bay Area, one of the most dynamic regions in the United States and the world's leading center for technology and innovation. A valued forum for stakeholder engagement and a respected source of information and fact-based analysis, the Institute is a trusted partner and adviser to both business leaders and government officials. Through its economic and policy research and its many partnerships, the Institute addresses major factors impacting the competitiveness, economic development and quality of life of the region and the state, including infrastructure, globalization, science and technology, and health policy. It is guided by a Board of Trustees drawn from influential leaders in the corporate, academic, non-profit, and government sectors. The Institute is housed at and supported by the Bay Area Council, a public policy organization that includes hundreds of the region's largest employers and is committed to keeping the Bay Area the world's most competitive economy and best place to live. The Institute also supports and manages the Bay Area Science and Innovation Consortium (BASIC), a partnership of Northern California's leading scientific research laboratories and thinkers.

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HIGH HOUSING COSTS IN THE BAY AREA HAVE REACHED A CRISIS LEVEL, AND REGIONAL POLICIES NEED TO ADDRESS THIS ISSUE BY INCENTING SUSTAINABLE GROWTH AND COMBATING RESISTANCE TO DEVELOPMENT.

LACK OF INVESTMENT IN THE REGION'S AGING AND OVERCROWDED TRANSPORTATION SYSTEMS IS UNDERMINING THE BAY AREA'S FUTURE PROSPERITY. IN ADDITION, A LACK OF STRONG LINKAGES ACROSS TRANSIT AGENCIES INHIBITS A SYSTEMIC APPROACH TO ADDRESSING THE REGION'S GROWING AND CHANGING TRANSPORTATION NEEDS.

THE BAY AREA REQUIRES REGIONAL COLLABORATIVE ACTION ON WORKFORCE DEVELOPMENT IN ORDER TO IMPROVE PROGRAMMING AND FUNDING EFFICIENCIES AND BETTER SPAN THE GROWING SKILLS GAP.

Recognizes the real INTERDEPENDENCIES that exist across the Bay Area economy.

A REGIONAL

Recognizes the success of the BAY AREA ECONOMY is increasingly reliant on the seamless movement of people and goods around and through the region.

The Bay Area consists of 101 cities, but it is one economy with more than 7 million people living, working and recreating across the region. No city can perceive itself as an island. It's time for policy makers and business leaders to think and act with a regional perspective in order to maximize our many assets and keep the economy growing.

JIM WUNDERMAN
CEO, Bay Area Council

The Bay Area's economic strength lies in the diversity and adaptability of its innovative companies and its ability to attract the best and the brightest from around the world. But the region has a lot to lose. Other vibrant hubs of innovation and opportunity are growing around the world as they develop and invest in infrastructure, education and quality of life.

DR. LAURA TYSON
Professor of Business Administration and Economics, UC Berkeley

This period of remarkable growth is the time to be thinking strategically about how best to position the region going forward, and how best to prepare for the next round of economic cycles.

JOHN WILLIAMS
President & CEO, Federal Reserve Bank of San Francisco

THE REGION'S ECONOMIC DEVELOPMENT REQUIRES FOCUS AND A REGIONAL PERSPECTIVE.

THE BAY AREA NEEDS TO FACILITATE BEST-IN-CLASS INFRASTRUCTURE INVESTMENT TO SUPPORT THE GROWTH OF THE REGIONAL ECONOMY.

Recognizes INDIVIDUAL COMMUNITIES benefit from the economic activity of the region as a whole and therefore need to play a role in meeting the region's needs, such as building diverse housing.

PERSPECTIVE

Recognizes the LABOR FORCE is distributed across the region, typically living and working in different cities.

The Bay Area, with its many diverse communities, has a reputation for the pioneering spirit of innovation that is at the heart of the American dream. We must work together to invest in affordable housing, a learning and engaged workforce, and public transportation to support thriving communities.

BERNARD TYSON
CEO, Kaiser Permanente

The Bay Area is a global economic powerhouse. It is the model high-tech innovation hub, spawning generations of the world's most iconic brands—companies like Intel, Apple, Tesla and Google—and innovative products and technologies. Companies and creative people flock to the region to develop new technology, lead breakthroughs in science, start companies, and drive the continued evolution of the region's open and highly productive innovation ecosystem. The Bay Area hosts high concentrations of federal and private research labs driving radical breakthroughs in science and engineering; attracts nearly half of all venture capital invested in the United States; and has developed a diverse network of highly specialized business services that support the innovation economy. Its universities are among the best in the world. The region's population of early adopters helps drive technological advance and new applications of technology that help improve communities and lives. Many of the region's cities are on the cutting edge of leveraging new technology platforms for improving the delivery of public services. The Bay Area's stunning natural beauty and mild climate only add to its appeal.

And yet, for all its strengths, the Bay Area lacks any cohesive and comprehensive regional economic strategy for sustaining economic growth, weathering business cycles and supporting shared prosperity across the region. Given the regional nature of the economy, its labor pool, housing sheds, job centers and commute flows, viable solutions must reflect a regional perspective.

THE BAY AREA HAS NOT PREPARED FOR THE NORMAL PACE OF GROWTH OVER THE LAST SEVERAL DECADES. This becomes painfully obvious during periods of economic expansion. If not meaningfully addressed, persistent issues around housing, transportation, and the workforce threaten the region's current growth cycle and its ability to rebound into the next growth cycle.

TECHNOLOGICAL ADVANCE is driving change across the economy, disrupting markets and entire industries, promising new opportunities, and adding pressure to the growing skills gap.

THE ROBUST ECONOMIC GROWTH in the Bay Area is one of the strongest in the US coming out of the last recession. Since 2010, Bay Area employment has grown at nearly double the rate of other US metropolitan areas.

THE HOUSING MARKET HAS REACHED A CRISIS POINT. Our region's workforce is commuting longer times, from farther distances, and paying a greater share of household income for housing, reducing quality of life and forcing businesses and families to relocate.

TRANSPORTATION NETWORKS ARE STRESSED. As people are priced out of the region's core, congestion and commute times have increased—over 20% of commutes exceed 45 minutes. BART ridership has risen 55% since 1998, and the system is at capacity during peak commute times.

GAINS IN INCOME FOLLOWING THE RECESSION HAVE BEEN UNEVEN. Income disparities are exacerbated by a growing skills gap. In California, middle-skill jobs account for 50% of California's labor market, but only 40% of the state's workers are qualified.

As uncertainty and volatility increase, how do we grow our economic, environmental and social resilience? Resilience is an ability to recover from or adjust easily to misfortune or change. New opportunities come with change, and they are best leveraged when a community is willing to proactively shape the future. The remaining option is a reactive mode, responding to immediate crises instead of preparing strategically for the future which is inherently different than today.

The purpose of the Regional Economic Strategy Roadmap is to offer concrete actions for growing regional prosperity and a flexible framework for developing actions going forward. Its proposals are evergreen agents of economic resilience, strategies wise in both expansion and downturn, necessary to accelerate the former and dampen the latter. It is a recipe for a robust and enduring regional economy.

A ROADMAP TO REGIONAL ECONOMIC RESILIENCE

Overwhelmingly, the business and other leaders who were engaged over a 12-month process demonstrated a regional perspective in identifying the top opportunities for growing broad-based prosperity in the region and the requirements for success. There was a fundamental assumption that the Bay Area is a regional economy that requires coordinated regional solutions. Five major areas of recommendations are presented below:

1. THE BAY AREA NEEDS TO FACILITATE BEST-IN-CLASS INFRASTRUCTURE INVESTMENT TO SUPPORT THE GROWTH OF THE REGIONAL ECONOMY. *PAGE 27*

Restructure the financing of public infrastructure through the creation of an empowered regional planning, finance, and management entity.

Reform existing public institutions. New mechanisms and processes are needed to expedite critical infrastructure development.

Give the empowered regional entity authority to gain financial support. Funding tools such as expanded tolling on bridges, highway corridors, and express lanes can be leveraged and allocated to key projects.

Drive project delivery. Improve efficiency in the planning and permitting of infrastructure development. Facilitating public-private partnerships can be helpful, as private sector capital and management expertise can deliver superior value for the public.

Develop new sources of traditional and alternative finance to augment public resources.

Bring a regional funding mechanism to the voters. There is opportunity for a realignment of tax structures related to transportation in the region. A shared regional sales tax, gas tax, or vehicle license fee can supplement existing county transportation sales tax measures.

Prioritize spending on key regional infrastructure. Projects such as the connection of BART to San Jose, Highway 101 and Caltrain corridor improvements, a new transbay BART tube, and expanded water transit services should have access to shared regional funds.

2. HIGH HOUSING COSTS IN THE BAY AREA HAVE REACHED A CRISIS LEVEL, AND REGIONAL POLICIES NEED TO ADDRESS THIS ISSUE BY INCENTING SUSTAINABLE GROWTH AND COMBATING RESISTANCE TO DEVELOPMENT. *PAGE 30*

Build sufficient housing stock to meet the demands of a growing regional population and help to fill historic deficits.

The Regional Housing Needs Allocation (RHNA) process needs real teeth. Connecting state and regional government transportation funding allocations to housing production goals can provide an incentive for cities to meet their RHNA obligations. Actual housing production needs to be consistent with local and regional plans within a reasonable timeframe. Otherwise there need to be real consequences, such as loss of local approval authority, state mandated "by right" approvals of housing projects (which removes some discretionary approvals from project review processes), the creation of more "by right" zoning districts, or the creation of a regional hearing body to approve housing developments.

The Bay Area must expand the stock of secondary units or "in-law" units. Legislation should be drafted to expand and simplify approval of "in-law" or Accessory Dwelling Units (ADUs) so more density can be accommodated throughout residential areas in the region, not just on large development sites. A regional fund should be created to help homeowners finance ADU projects.

The fiscalization of municipal land use decisions needs to change. Current tax policy encourages local governments to zone for commercial over residential land uses and must be modified to expand sites for housing.

Reduce the cost of new home construction across the Bay Area.

Encourage streamlined approvals for lower-cost construction types and new building technologies. Streamlining building permitting and codes to allow for various density levels and for new innovations in construction, such as Factory Built Housing, can lower building costs.

Cap impact fees region-wide. The impact fees assessed by cities on new housing are increasingly preventing construction, and new options should be explored for funding community infrastructure so that the costs of promoting livable communities and affordable housing are shared among both existing and new residents.

Reform the California Environmental Quality Act (CEQA). CEQA litigation has become a significant barrier to infill development. A CEQA exemption for new home construction meeting transit-oriented development goals should be created to limit costly lawsuits.

3. The region's economic development requires focus and a regional perspective. *Page 36*

Create the *Bay Area Regional Economic Development Partnership,* a regional body that would sustain the Bay Area's global economic competitiveness.

Create a platform for public-private collaborative action across jurisdictions on regional economic strategy. Creating consistent business permitting guidelines across jurisdictions and aggregating zoning, tax incentive, and local development plans can assist businesses looking to expand their operations in the Bay Area.

Facilitate the growth of Bay Area companies within the region and support the entrance of new companies. A regional partnership could provide a unified voice for communicating the diversity of development opportunities in the region, internally and externally.

Provide local governments with concrete planning and other support to unlock development potential. Due to limited resources, local governments often do not have the capacity to launch major projects that could be of significant benefit locally and regionally. For example, a regional partnership could offer planning and other resources to local development projects around transit hubs and former military bases.

4. The Bay Area requires regional collaborative action on workforce development in order to improve programming and funding efficiencies and better span the growing skills gap. *Page 41*

Establish the Bay Area Collaboration on Workforce Development, a regional public-private collaborative to better connect employers' skills needs and workforce training programs and improve resource alignment.

Create a system for ongoing communication between the region's employers and educator/training community. A collaboration of employers, educators, trainers, and other stakeholders can enable highly adaptive and cost-effective planning for competency development programs driven by the changing needs of employers.

Provide public education and inform public policy. Inform the public and key stakeholders about current economic trends and promising certificates, credentials, and career pathways.

5. Lack of investment in the region's aging and overcrowded transportation systems is undermining the Bay Area's future prosperity. In addition, a lack of strong linkages across transit agencies inhibits a systemic approach to addressing the region's growing and changing transportation needs. *Page 44*

Improve the efficiency of transportation systems in order to support the current economic growth cycle and prepare for the next.

Align the region's 26 transit agencies. A single Short Range Transit Plan for all regional transit services in the Bay Area would enhance regional planning for the transit system, which otherwise could only be accomplished through transit agency consolidation. Given the nature of growth, a regional super agency will be necessary in the long term.

Utilize funds to implement Corridor Operation and Investment Plans. Collaborative planning will ensure that corridor operational and investment strategies are consistent and mutually supportive across jurisdictions in key transportation corridors.

Create an Innovation Incentive Program. Funds should be set aside for grants to Bay Area transportation agencies, cities and counties that propose the most promising applications of technology, incentives, entrepreneurism, and market mechanisms to improve transportation performance.

THE NEED FOR A NEW APPROACH TO REGIONAL ECONOMIC STRATEGY

The Bay Area consists of 101 cities, but it is one economy with more than 7 million people living, working and recreating across the region. No city can perceive itself as an island. It's time for policymakers and business leaders to think and act with a regional perspective in order to maximize our many assets and keep the economy growing.

– Jim Wunderman

CEO, Bay Area Council

The Regional Economic Strategy Roadmap aims to lay the foundation for building the vital feedback loops, resilience, and agility the region requires for securing broad-based prosperity in our communities going forward. The recommendations presented in this Roadmap reflect thoughtful discussions among business and other leaders in the region over the course of a 12-month engagement process. These individuals brought their unique perspectives from their industries and areas of expertise. They also brought their added perspectives as neighbors, colleagues, and parents with a vested interest in supporting the growth of shared opportunity in the Bay Area.

The Bay Area's diverse businesses drive the regional economy and global innovation. They also employ the vast majority of the region's workforce, support local universities and schools, and engage in philanthropic efforts in the community and globally. Many of the region's employers are deeply integrated into the global economy, giving them valuable insight into the quick pace of change taking place in global markets. For example, they see how infrastructure needs (such as transportation systems) are not being met in the Bay Area and how they are in other places in the world.

Bringing together the perspectives from the Bay Area's business community and the public sector is critical for maintaining the Bay Area's economic vitality. Employers are on the front end of recognizing changing skills needs in the workforce. Given the strong economy, Bay Area employers are currently experiencing a recruitment crisis that is deeply exacerbated by the region's housing crisis. As employers expand in the region, transportation systems have not kept pace with growing volumes of commute and other traffic or widening geographic demand.

The Bay Area benefits from enviable economic strengths with its world-class companies, talent, and quality of life. And yet, the Achilles' heel to the region's success is the mix of institutional barriers that inhibit the region from making the investments it needs to support the current growth cycle and future prosperity. In the context of a quickly changing global economy, there is much to be done to address the growing crises in housing, transportation, workforce, and infrastructure. Given the regional nature of these issues, viable solutions must reflect a regional perspective.

The Bay Area must also prepare for the quickening pace of change. Advances in technology are upending industries, spawning entirely new industries, and reshaping our work and home lives. Demographic changes are driving new needs and attitudinal shifts. Our integration with the global economy is also picking up speed. Growth driven by emerging economies is increasing demand for all natural resources, and climate change is threatening communities around the world and around the Bay Area.

As uncertainty and volatility increase, how do we grow our economic, environmental, and social resilience? Resilience is an ability to recover from or adjust easily to misfortune or change. Accepting that change is normal is the first step to being able to recognize the new opportunities that are emerging and to adapt to a new context. The alternative is to remain in a reactive mode, which resigns the region to a highly vulnerable position.

This section briefly describes some of the current strengths, growing pressures, and drivers of change in the Bay Area economy. It lays out the context of other regional efforts underway in the Bay Area and the complementary value this Roadmap brings. Finally, this section presents a framework for approaching a regional economic strategy that aims to develop agility and adaptability in the economy.

THE QUICKENING PACE OF CHANGE AND INCREASING VOLATILITY

Technological advance is driving change across the economy, disrupting markets and entire industries, promising new opportunities, and adding to the growing skills gap. The Bay Area economy has experienced one of the fastest growth rates in the US coming out of the last recession. Since 2010, Bay Area employment has grown at 3.2% annually, double the rate of peer US metropolitan areas.[1] Over the last several decades, the Bay Area has not made the necessary investments to support normal population and job growth, and during periods of economic expansion, this becomes painfully clear around housing, transportation, and workforce needs. These issues, if not addressed in a meaningful way, threaten the region's current growth cycle and its ability to rebound into the next growth cycle.

TECHNOLOGICAL ADVANCES ARE DISRUPTING ENTIRE INDUSTRIES AND ALSO PRESENTING EXCITING NEW OPPORTUNITIES FOR IMPROVING LIVES AND CREATING NEW ECONOMIC OPPORTUNITIES.

Much of this transformational technology is being driven by companies and individuals located in the Bay Area. These developments spur new businesses and jobs, as well as entirely new business models.

We are currently witnessing the reinvention of all industries through smart mobility, cloud computing, social networking, big data analytics, and accelerated technology adoption. This process will continue with billions of sensors covering our landscapes, buildings, homes, clothes, and even bodies. Communication will take place between infrastructure and cars, between machines and people, and between machines.

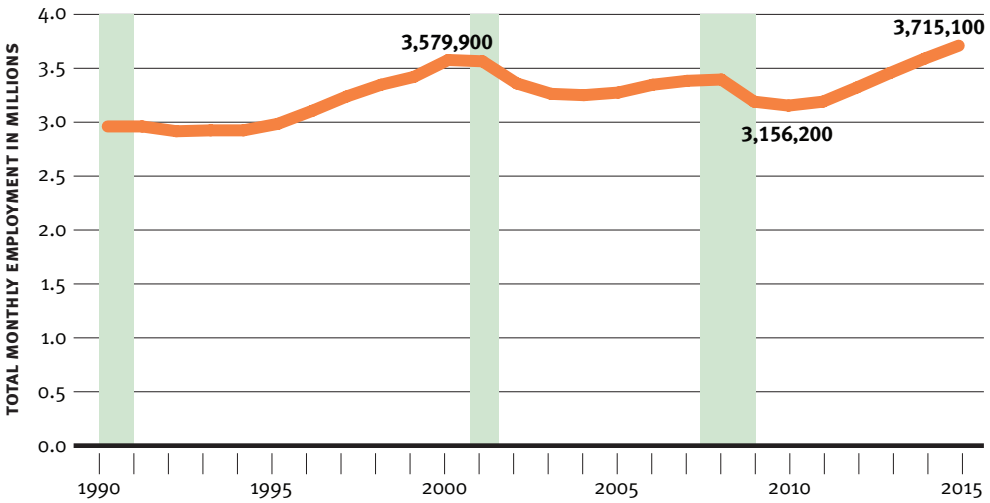
A massive revolution is also taking place in how we make things. 3D printing is now used by artisanal makers spawning new businesses as well as by large-scale manufacturers for the production of sophisticated components. Robotics and human augmentation are changing the factory floor as well as the operating rooms of hospitals. Breakthroughs in nanomaterials are resulting in tiny batteries for tiny devices and paper-thin armor and solar cells. Biology is now programmable: bacteria and yeast are being altered to produce products they would not normally make, such as fuels or drugs.

New platforms are emerging in the region that enable new business and work models. Sharing platforms like Airbnb and ZimRide allow individuals to generate new revenue streams from their own assets, such as an extra room or car. Maker spaces like TechShop and mobile payment systems like Square offer new options for artisanal and freelance activity. Local city governments are creating new systems for providing public services such as waste removal and paramedic services more efficiently,[2] thus also spurring new business activity. Cities such as Palo Alto and San Francisco have hired Chief Innovation Officers who look for ways of opening up municipal data to business in order to improve the delivery of public services.

The expanding application of technology has the potential for increasing productivity and creating new economic opportunities. On the other hand, the spread and development of technology also expands the skills gap and the potential for individuals to be left behind. There is a fundamental need to prioritize the provision of relevant training opportunities that are also accessible in terms of cost and scheduling.

BAY AREA NONFARM EMPLOYMENT

Reported as of June of each year



Note: Shading represents recessionary periods as defined by the National Bureau of Economic Research

Data Source: California Employment Development Department, CES

Analysis: Bay Area Council Economic Institute

This period of remarkable growth is the time to be thinking strategically about how best to position the region going forward, and how best to prepare for the next round of economic cycles.

– John Williams

President & CEO

Federal Reserve Bank of San Francisco

MANY THINGS ARE GOING WELL IN THE BAY AREA

Businesses have taken advantage of technological advances and a robust investment landscape to grow their output and employment.

The Bay Area has witnessed some of the strongest job growth in the nation following the Great Recession. Employment expanded in the San Jose Metro Area by 23.7% from its lowest point in July 2009 and in the San Francisco Metro by 17.6% from its low in August 2010.[3] Together, these two metro areas make the Bay Area one of the five fastest growing economic regions in the country[4]—a product of the region's diverse technology-driven economy and strong global ties.

The region's employment today is at an all-time high. While recent job creation has been strong, the Bay Area economy is witnessing growing volatility in its boom and bust cycles, as evidenced by recent recessions. During the Great Recession, the US lost 8.8 million jobs from its pre-recession peak, a 6.5% drop. Although the Bay Area was slower to slip into the downturn, from peak-to-trough (June 2008 to January 2010), the Bay Area lost over 300,000 jobs, or nearly 9.0% of employment. The bursting of the dot-com bubble in the early 2000s produced similarly steep job losses in the Bay Area, and only recently has employment surpassed the peak of 2001.

METRO ECONOMIC GROWTH

	TOTAL GDP 2014 (BILLIONS)	PERCENT CHANGE 2013-2014
San Francisco-Oakland-Hayward	$412	5.2%
San Jose-Sunnyvale-Santa Clara	$214	6.7%
Los Angeles-Long Beach-Anaheim	$866	2.3%
U.S. Metro Areas		**2.3%**

Source: U.S. Department of Commerce, Bureau of Economic Analysis

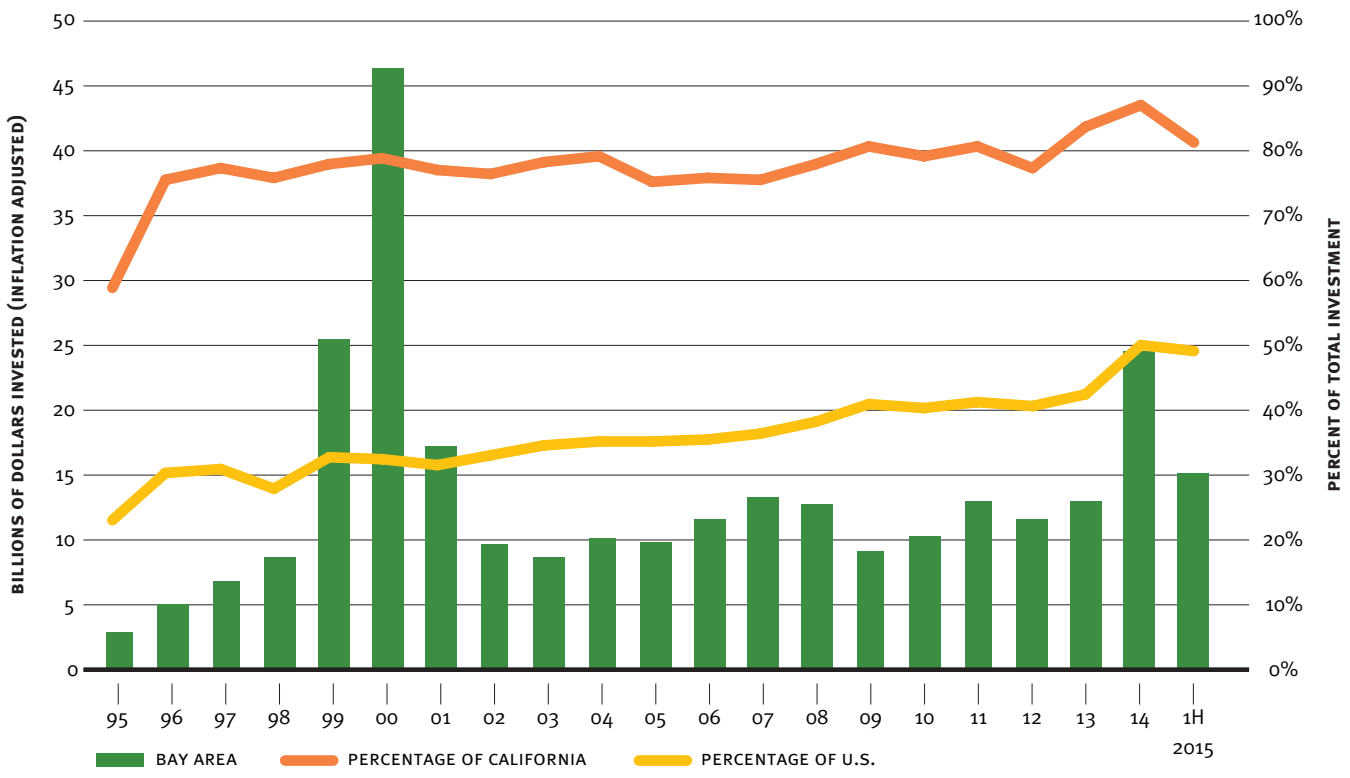
Analysis: Bay Area Council Economic Institute

The Bay Area's economic growth is outpacing other parts of the state and nation. The San Jose Metro gross domestic product increased 6.7% from 2013 to 2014, reaching $214 billion. The San Francisco/Oakland Metro generated economic activity of $412 billion in 2014, increasing 5.2% over 2013. Both metro areas outpaced the Los Angeles area, and the 2.3% increase average for all US metros.[5]

The Bay Area economy benefits from diversity and a high concentration of technology industries. The region is home to headquarters of global companies in retail, finance, healthcare, energy, and many technology and social media giants. Technology is a major driver of the global economy and local job growth. For every job at a technology company, 4.3 new jobs are created across the economy.[6] Highly concentrated, the tech sector accounts for 30% of San Jose Metro employment and 14% of San Francisco Metro Area jobs.[7] Nationally, tech accounts for less than 9% of all employment. Unlike most technology hubs, the Bay Area is not dominated by a single large tech company or sector. In addition to being highly concentrated, the Bay Area's technology industry is highly diverse, spanning hardware, software, biotech, clean tech, communications, and social media. This diversity helps drive innovation as different technologies come together to create entirely new products, and it creates resilience despite major shifts in specific technology areas.

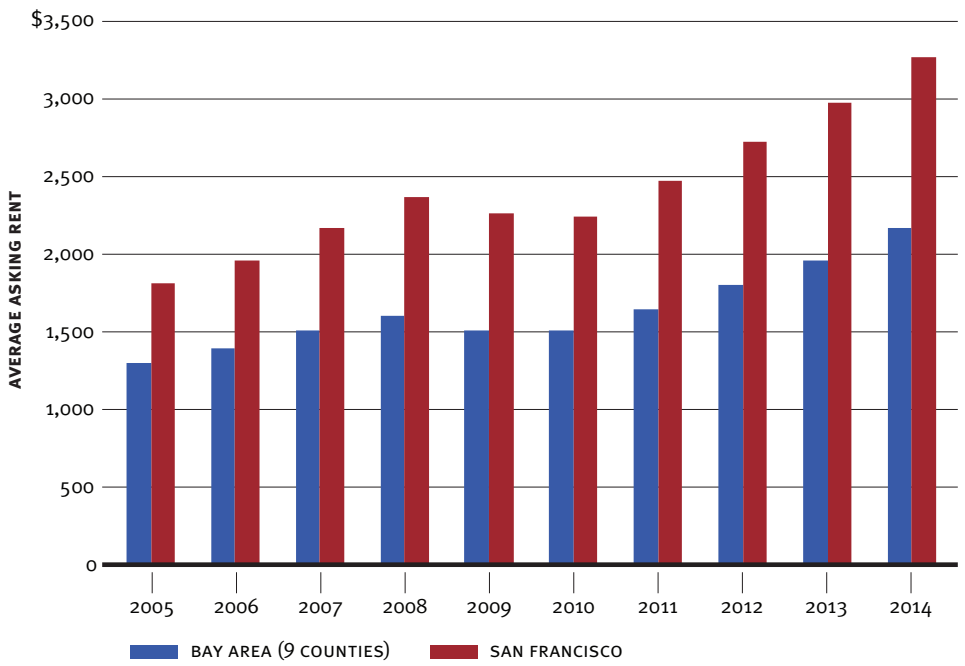
Venture capital investment is robust. Although venture capital investment remained moderate between 2002 and 2013, total dollars invested in 2014 nearly doubled from the prior year, returning investment levels to the lofty heights last seen in 1999. In 2014, venture capital investment in the Bay Area reached $24.7 billion on the heels of large funding rounds for Uber, Lyft, Airbnb, and Dropbox. By the first half of 2015, investment reached $15.2 billion. The Bay Area currently accounts for nearly 50% of total US venture investment. This represents a growing concentration of venture capital activity in the region, rising steadily since the 1990s. Ensuring that this rich resource of venture capital remains in the region requires a committed investment in the region's innovation ecosystem and foundations for sustainable economic growth, such as transportation, housing and workforce development.

VENTURE CAPITAL INVESTMENT



Note: "Bay Area" Includes northwestern California
Data Source: PricewaterhouseCoopers/National Venture Capital Association MoneyTreeTM Report
Analysis: Bay Area Council Economic Institute

AVERAGE ASKING RENT FOR APARTMENTS IN PROPERTIES WITH 50+ UNITS
Bay Area and San Francisco



Data Source: Real Facts
Analysis: Bay Area Council Economic Institute

The Bay Area, with its many diverse communities, has a reputation for the pioneering spirit of innovation that is at the heart of the American dream. We must work together to invest in affordable housing, a learning and engaged workforce, and public transportation to support thriving communities.

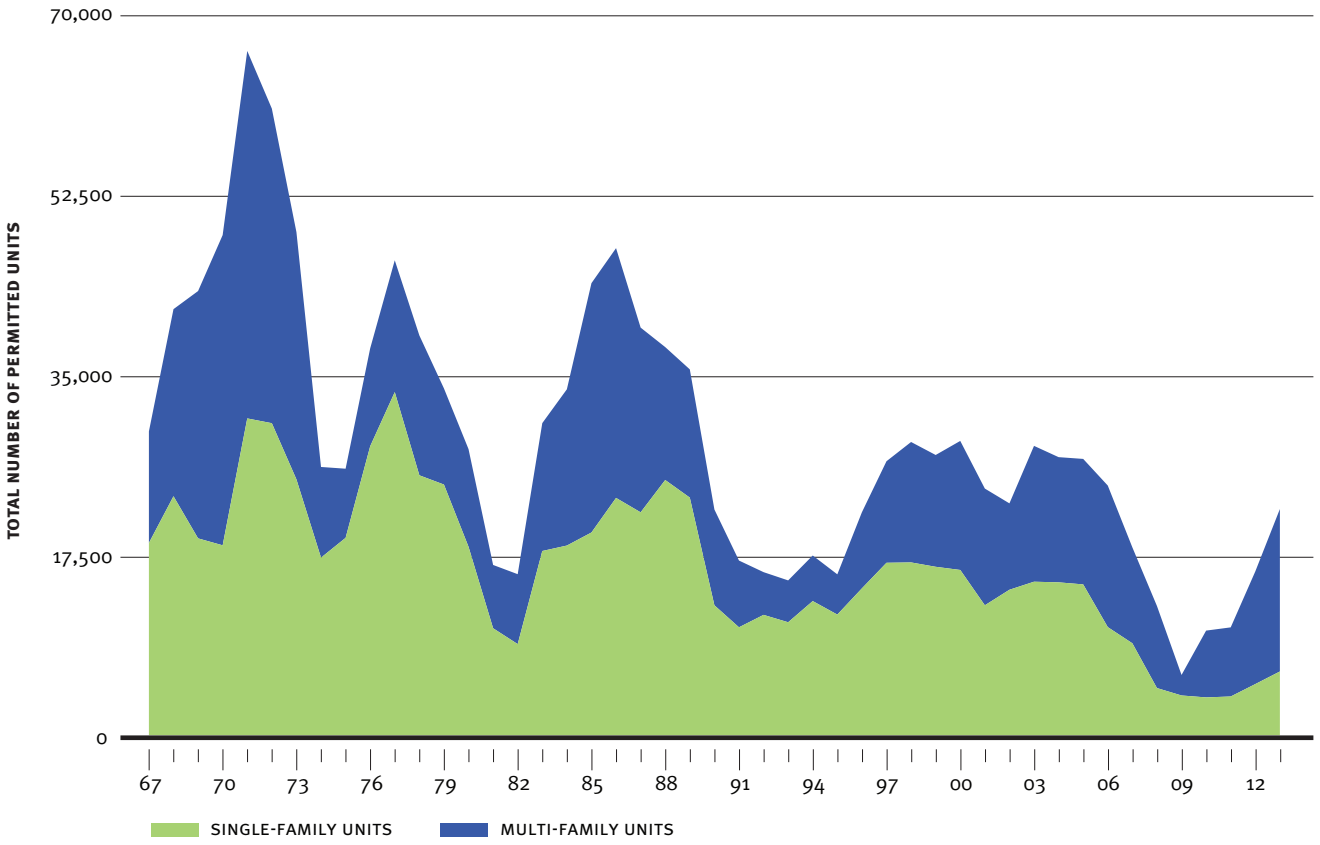
– Bernard Tyson
CEO, Kaiser Permanente

AT THE SAME TIME, SIGNIFICANT PRESSURES ARE RISING THAT ENDANGER THE REGION'S CURRENT GROWTH AND COMPETITIVENESS GOING FORWARD

As jobs and population increase and the housing crisis worsens, traffic congestion is growing, and the severity of the region's infrastructure crisis is becoming evident.

Bay Area housing costs and rent prices are at an all-time high. This is in part the result of building cycles that have experienced lower peaks and deeper valleys over the last decades. Nearly half of Bay Area renters are considered burdened by housing costs: the percentage of Bay Area renters spending more than 30% of their income on rent increased from 28% to 49% from 2000 to 2013.[8] Average rental prices across the nine counties exceeded $2,000 per month in 2014. While housing permits have witnessed a recent uptick, the mid-2000s marked the start of two trends in the Bay Area—a shift from majority single-family to multi-family permits and a slowing down of annual housing permits. These shifts have been most acutely felt in San Francisco, where average rents have increased by nearly 50% since 2010. This steep increase reflects a supply and demand mismatch, as the Bay Area region permitted just 193 housing units per 1,000 new residents from 2012 to 2013; the national average over this period was 384 new units per 1,000 new residents.[9]

BAY AREA HOUSING PERMITS

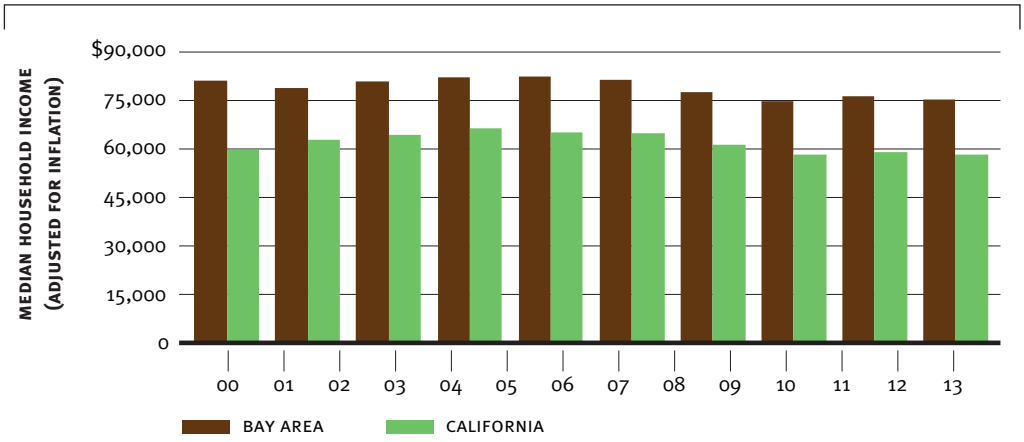


Data Source: California Housing Foundation; Construction Industry Research Board
Analysis: Bay Area Council Economic Institute

Housing supply constraints and the high prices they cause have also forced many Bay Area residents to look for housing outside of high-demand areas, where lower housing costs are accompanied by longer commutes. This dynamic has strained the Bay Area's transportation systems—including its highways and public transit operations—and led to greater congestion and longer commute times. In 2012, over 20% of commuters spent more than 45 minutes on the road to reach their workplaces.[10] The BART system is also at capacity during peak commute times, as its ridership has grown by 55% since 1998; however, only 10% of Bay Area commuters utilize public transit to reach their workplaces.

While workers are making longer commutes, the total number of cars and trucks on the road within the region has also moved above pre-recession levels. Traffic within gateway corridors to the nine-county region is adding to congestion, as 587,000 vehicles traveled between the Bay Area and neighboring counties daily in 2013—the highest level in seven years and a 34% increase since 1992.[11] With more people on the move, traffic congestion has increased and average speeds have fallen. From 2011 to 2013, average daily vehicle hours of delay on I-580 in the East Bay grew by 26%, now making it one of the most congested freeways in the region. In Alameda County, the crossroads of the Bay Area, time spent delayed in traffic jumped from 12% to 22% of total commute time between 2009 and 2013.[12]

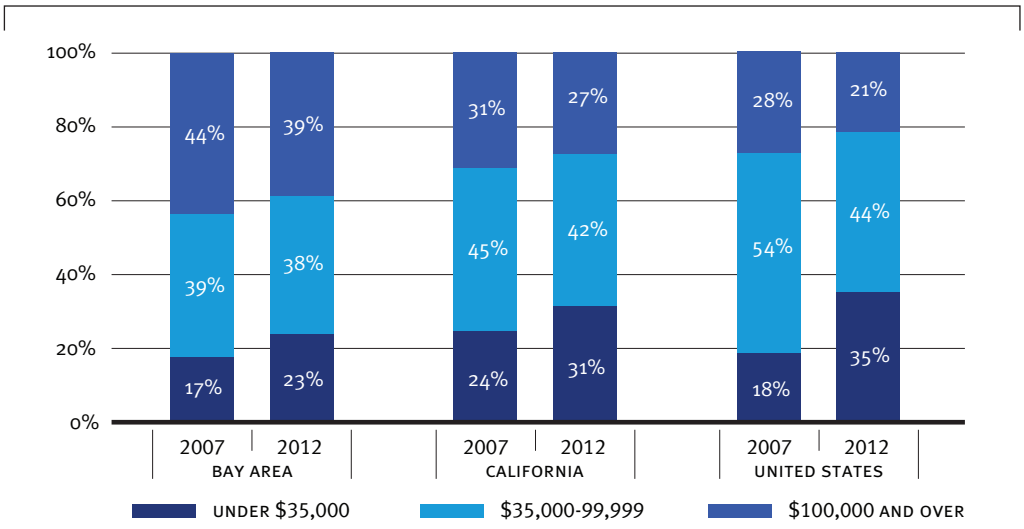
MEDIAN HOUSEHOLD INCOME



Data Source: American Community Survey 2005-2013 1-year Estimates and the 2000 Decennial Census
Analysis: Bay Area Council Economic Institute

INCOME DISTRIBUTION

Distribution of households by income ranges



Data Source: American Community Survey 1-Year Estimates
Analysis: Bay Area Council Economic Institute

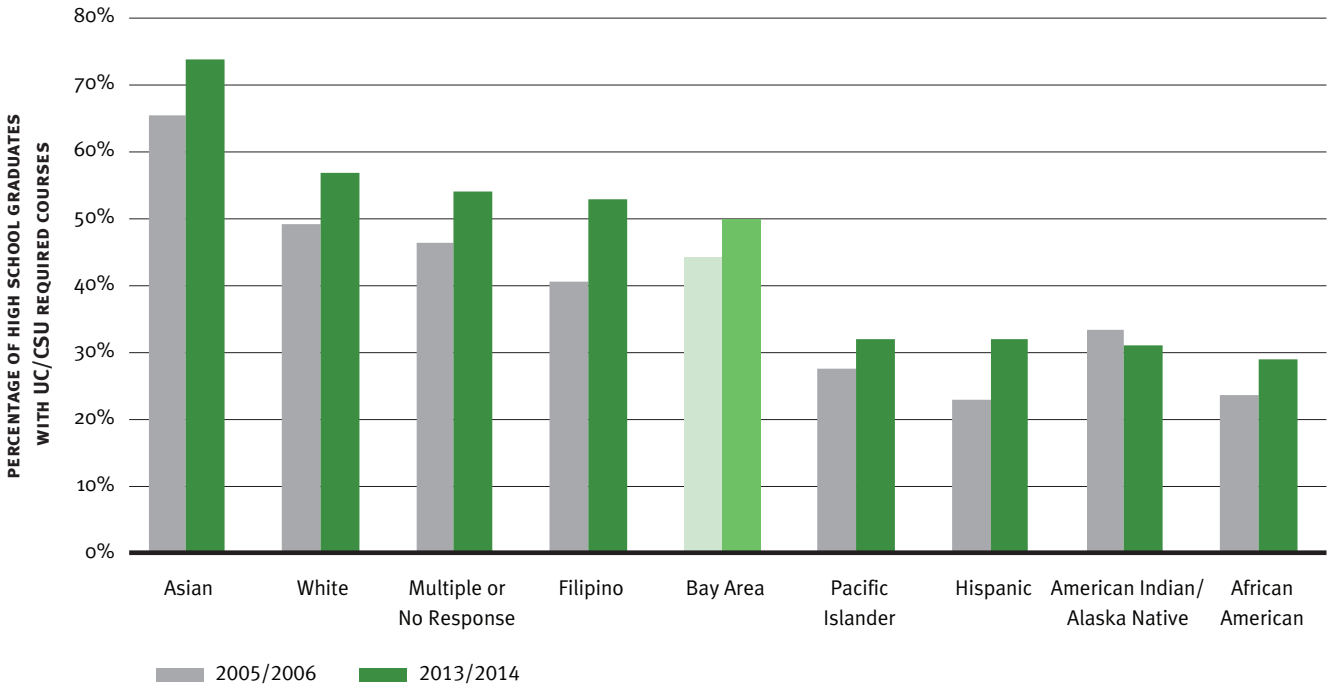
Finally, the region is experiencing growing pressure on the middle class. Over the last 15 years, GDP growth has not translated into growth in middle incomes in the US. The Bay Area is experiencing the same trend. Median household income in the region dropped 9% from 2008 to 2011 and has stagnated since. Statewide, median household incomes are 10% below 2008 levels.

Across the country, the percentage of households with incomes under $35,000 has grown since the last recession. The widening income gap is exacerbated by the lack of skills in the workforce necessary for successful employment in the 21st century economy. In California, middle-skill jobs—those requiring education beyond high school but not a four-year degree—account for 50% of California's labor market, but only 40% of the state's workers are qualified.[13]

This growing income disparity is a problem around the world, as some individuals acquire the skills to compete in the global economy and many others do not. This has serious implications for both the economy and society. According to Christine Lagarde, managing director of the International Monetary Fund, "Put simply, a severely skewed income distribution harms the pace and sustainability of growth over the long term. It leads to an economy of exclusion, and a wasteland of discarded potential."[14]

SHARE OF HIGH SCHOOL GRADUATES MEETING UC/CSU ENTRANCE REQUIREMENTS

Bay Area, 2005/2006 & 2013/2014



Data Source: California Department of Education, Dataquest
Analysis: Bay Area Council Economic Institute

The development of the Bay Area's workforce begins in the region's K–12 schools. The Bay Area has been successful in preparing youth for success in comparison to statewide averages, with a high school graduation rate of 84% and 46% of graduates meeting UC/CSU entrance requirements in the 2013–2014 school year. Statewide, those averages are lower at 75% and 42%, respectively. However, these educational outcomes are not widely shared across income levels or ethnicity. Roughly 30% of Hispanic and African-American students meet entrance requirements for UC and CSU systems, well below Bay Area averages.[15]

THE CURRENT CONTEXT OF REGIONAL EFFORTS UNDERWAY

In 2012, the Bay Area Council Economic Institute produced T*he Bay Area: A Regional Economic Assessment*, a detailed economic analysis of the region, at the request of the Bay Area's regional agencies—the Metropolitan Transportation Commission, the Association of Bay Area Governments, the Bay Area Air Quality Management District, and the San Francisco Bay Conservation and Development Commission—as well as the region's leading business and economic development organizations.

While the region enjoys many economic strengths, issues such as housing cost and availability, congestion, regulatory efficiency, and a lack of strategic focus on regional economic priorities surfaced throughout the analysis. The Regional Economic Assessment found that these issues point to the need for both a more effective partnership between business and government on economic issues and a stronger sense of shared purpose surrounding the region's growth and development.

Several ambitious regional efforts have been launched in recent years that address a range of important issues facing the Bay Area. The Bay Area Council Economic Institute has been engaged in several of these efforts, including Plan Bay Area and the U.S. Department of Housing and Urban Development grant-funded Regional Prosperity Plan. Many valuable sub-regional economic development strategies have also been developed by diverse stakeholder groups.

The regional planning and visioning efforts to date have focused primarily on bettering the environment through reduced vehicle miles traveled and smarter land use patterns, and they have approached the Bay Area's economy through the specific lens of improving career pathways for low and moderate income workers. While these are important and revealing documents, the Bay Area still lacks a clear strategy for supporting economic growth and expanding economic opportunity.

Set within the context of these regional efforts, the intention of the Bay Area Council Economic Institute in the development of the Regional Economic Strategy Roadmap is to bolster the economic leg of the "Three E" stool: Environment, Equity, and Economy. At the core of the process for developing the Regional Economic Strategy Roadmap are discussions with business and other leaders about identifying where they, as employers, see opportunity to grow jobs and the economy in the region, and what is required to achieve success. The strategy presented in this document is the product of many in-depth conversations with business leaders and others from the public and independent sectors. The result of this 12-month effort is a series of cohesive policy recommendations to strengthen the Bay Area's economy and identify tangible actions for regional agencies as they approach the next iteration of Plan Bay Area and other regional strategic efforts.

A NEW APPROACH: BUILDING REGIONAL ECONOMIC RESILIENCE

A healthy economy is one in which things flow easily: people, goods, money, and ideas. It is a dynamic system with diverse elements and actors, each contributing in different ways to growing the benefits to the community and evolving the output and processes of all activities. Essentially, a healthy economy is one that is undergoing a constant state of adaptation to an ever-changing environment. It is evolutionary.

In a context that is always changing, constrained information flows represent a major vulnerability. From any given vantage point in a diverse system, information is limited.

In order to better weather volatility, anticipate change, and prepare for it, the Bay Area needs to develop critical feedback loops across different segments of the economy and community. These diverse information flows provide early warning of change as well as a platform for collaborative action among different stakeholders.

As Nassim Nicholas Taleb eloquently explains in *Antifragile* (2012), volatility can generate losses, but it can also generate wins: "Some things benefit from shocks; they thrive and grow when exposed to volatility, randomness, disorder, and stressors and love adventure, risk, and uncertainty." The result depends on the adaptability of the system to improve from each shock and disturbance. Developing robust feedback loops in a system provides the information for directing adaptation, which builds resilience and drives evolutionary development.

The Bay Area's technology industry has been described as "protean" in its ability to reinvent itself with each major disruptive shift over the decades. In her comparison of the region's tech industry with that of Boston's Route 128, AnnaLee Saxenian, professor at UC Berkeley, described Silicon Valley as a "protean place" *(Regional Advantage, 1996),* setting it apart from other places that have been less able to adapt to major disruptions. The diversity and dynamism of the Bay Area's tech industry has continually enabled it to change its form and adapt to changing circumstances.

The term "protean" comes from the name of a sea god from Greek mythology, Proteus, who could change his form to suit his circumstances. Proteus could also tell the future. So, the metaphor with the region is apt: the more adaptable and dynamic a company, industry, or region can be, the better prepared it will be for the future.

Faced with multiple pressures that jeopardize the region's quality of life and potential for expanding prosperity, the Bay Area must harness its protean resources and take on a sustained adaptive approach to supporting the region's economic success.

BUILDING AN ADAPTIVE AND RESILIENT SYSTEM

The economy is a dynamic system consisting of diverse actors, activities, and interactions. People, goods, money, and ideas move around the system with the purpose of creating new qualitative and economic value. Some economic systems allow for more ease of movement and exchange than others, and some are more adaptive to change and disruption.

Sudden shocks can impact the system:

A natural disaster such as an earthquake or flood can mete out an abrupt blow to economic activity, damaging or even destroying critical infrastructure and other public and private property. In such situations, resources and economic activity are redirected to rescue, safety, and construction while much other economic activity goes on hold.

An economic downturn can hit abruptly, as was the case in the last two downturns in the Bay Area. Within 24 months, 300,000 jobs were lost across the region's economy: key industries, their suppliers, population-serving sectors, and the public sector.

Similarly, periods of rapid economic growth can reveal longer-term investment shortfalls in infrastructure in a region, as job and population growth can outpace the capacity of public infrastructure and the construction of new housing. The inability of the Bay Area to build enough housing and infrastructure over the last few decades has become clear in rising housing costs and roads and transit systems packed beyond intended capacity.

Downturns tend to speed structural changes lingering under the surface. In the case of an economic downturn, jobs are lost unevenly across industries and occupations; some will return and others will not.

Stresses to the system can build over time:

Population growth

Rising housing costs and lengthening commutes

Increasing traffic and travel times

Aging, inadequate road and public transit systems in need of repair and expansion

Climate change resulting in rising sea levels, more frequent droughts, and disruption of agriculture

Zero-sum thinking among stakeholders that inhibits systemic approaches to addressing the needs of the region as a whole

Multiple factors contribute to growing the resilience of a regional economy:

Open communication and collaboration among diverse stakeholder groups

An understanding of national and global trends that are reshaping the competitive landscape

A positive view of opportunities on the horizon

The willingness to make strategic investments

The ability of decision-makers to act in a deliberative manner and look beyond immediate self-interests

Decisions based on reliable evidence and metrics for tracking progress

Openness to change and creative problem solving

Public prioritization of workforce development in order to cultivate resilience at the level of the individual and family

An inclusive and protean view of place, community, and the economy: *"Change is constant, and we're all in it together."*

BUILDING AN ADAPTIVE AND RESILIENT REGIONAL ECONOMY

CREATE A SYSTEM OF VITAL FEEDBACK LOOPS ACROSS DIVERSE STAKEHOLDER GROUPS.	**STAKEHOLDER GROUPS:** Business Public Sector K–12 Education Higher Education Occupational/Vocational Training Environmental Management Non-profit Sector Research Centers/Labs Labor Organizations Others **ENGAGE, CONVENE, AND CONNECT ON AN ONGOING BASIS:** Share observations of changing skills needs and technology trends Collaborate on training curricula Develop a shared system for skill certification in order to ease movement of workers across industries **LEVERAGE TECHNOLOGY FOR ADDED AUTOMATION TO THE FEEDBACK SYSTEM.**
CREATE A SHARED PLATFORM FOR TRACKING ECONOMIC TRENDS AND PROGRESS TOWARD GOALS.	**MAINTAIN A SHARED INFORMATION PLATFORM FOR SUMMARIZING AND REPORTING OUT ON** Findings from stakeholder feedback Economic trends Progress toward meeting stated goals
SUPPORT MOVEMENT AND QUALITATIVE GROWTH OF THE ECONOMY: DRIVE EVOLUTIONARY DEVELOPMENT.	**ECONOMIC MOBILITY:** Raising educational levels vastly reduces vulnerability and improves resilience for the individual and the community. Invest in the development of world-class talent among Bay Area youth and residents at all levels of education, including the retraining and upskilling of adults. **INFORMATION:** Support exchange of insights on changing skills needs between employers and the education/training community. **BUSINESS:** Encourage the creation and growth of business by streamlining permitting and other required processes and regulatory frameworks. **GOODS MOVEMENT:** Invest in the seamless movement of goods to and from the region as well as around the region. **PEOPLE MOVEMENT:** Invest in the seamless movement of people on public transit systems and roads in order to ease commutes and widen the scope of opportunity in the region. **NATURAL SYSTEMS:** Support life as well as quality of life. When properly managed, natural systems can also mitigate impacts of natural disasters and economic loss (e.g., bay wetlands). **REGULATION:** Improve transparency and efficiency. Revise regulatory and legal frameworks appropriately to reflect quickening technological advance.
MANAGE VULNERABILITY WITHIN THE COMMUNITY WITH A SYSTEMS VIEW: VULNERABLE ELEMENTS WEAKEN THE SYSTEM AS A WHOLE.	**NATURAL RESOURCES:** They are limited, though some are renewable. When mismanaged, resource constraints cause stress and conflict. **LIVELIHOODS:** The capacity of individuals to provide for their families varies widely, tends to vary over time, and has a broad vulnerability to shocks. In an increasingly volatile environment, vulnerable populations (children, poor, elderly, mentally ill, and otherwise disabled) must be protected .
BUILD ANTICIPATORY SYSTEMS AND ADAPT IN A MANNER THAT BENEFITS THE SYSTEM AS A WHOLE.	**DISASTER RISK:** Prepare for anticipated natural disasters and climate change adaptation. **EARLY WARNING:** Develop systems for tracking progress and identifying early warning signs. **LEADERSHIP:** With growing uncertainty, complexity, and volatility, leaders must make decisions based on facts and build consensus to address issues that will increasingly span beyond traditional jurisdictions.

Feedback loops can be put into place (and reinforced) to heighten the capacity of a regional economy to better adapt to changing circumstances and withstand the impact of sudden shocks. An ongoing, iterative approach to economic strategy allows for making informed adjustments along the way. This also requires flexibility within institutions and collaboration among stakeholders.

For individuals, businesses, and communities, resilience develops as we grow, gain more knowledge, and develop better thinking and self-management skills. Collaborative exchange has been a driver of human evolution and, as Matt Ridley describes in *The Rational Optimist* (2010), continues today to be a source of growing prosperity. Maintaining a highly interactive system with dense networks of information exchange creates the foundation for this prosperity. Taking an evolutionary view of the economy will help drive adaptability and the qualitative growth of the region's development.

The table on the preceding page outlines five key areas of action for building an adaptive and resilient regional economy. The action described in each area is intended to be ongoing and iterative, with adjustments informed by changing circumstances.

OVERCOMING LEGACY BARRIERS TO BUILDING REGIONAL RESILIENCE

The Bay Area is both blessed and burdened by the diversity of its distinctive towns, neighborhoods, and wider geographical areas. Its urban centers, wine country, and suburban areas offer different lifestyles and reflect a variety of economic circumstances. Even with this diversity, there is a high level of interdependency. For example, nearly half of Bay Area workers cross at least one county line when going to and from work. As job tenure continues to decline, commutes shift around the region at a far faster rate than people change homes. In many cases, wealthy suburbs are largely reliant on the high wages earned in the urban cores. Many suburban-based companies depend on young talent living in vibrant urban centers.

The regional character of the Bay Area economy is sometimes lost on its residents. In a region made up of nine counties and 101 cities, perspectives are sometimes narrow, and political and institutional balkanization is evident in what is otherwise a highly interdependent regional economy.

Looking beyond the nine counties, the successful development of the Bay Area economy impacts the success of the wider Northern California megaregion as well as the state as a whole.

BEST PRACTICES: REGIONAL STRATEGIES AND INNOVATIVE APPROACHES

The Bay Area's economic strength lies in the diversity and adaptability of its innovative companies and its ability to attract the best and the brightest from around the world. But the region has a lot to lose. Other vibrant hubs of innovation and opportunity are growing around the world as they develop and invest in infrastructure, education and quality of life.

– Dr. Laura Tyson

Professor of Business Administration and Economics, UC Berkeley

As the nation emerged from the Great Recession approximately five years ago, cities and regions across the country explored strategies for creating job opportunities and rebuilding their economies. Many of these efforts are similar to the one undertaken by the Bay Area Council Economic Institute, each with the goal of creating an environment to facilitate sustainable economic growth.

This section highlights examples of regional economic strategy processes from across the United States as well as innovative efforts underway in the Bay Area.

EXAMPLES OF SUCCESSFUL REGIONAL ECONOMIC STRATEGIES

Five examples from across the United States are highlighted below and provided important insights in crafting the actions for success that are detailed in the final section. It should be noted that these planning efforts largely occurred at a time when regional economies and the national economy were still experiencing fallout from the recession. In contrast, the Bay Area has produced very strong economic growth in recent years, leading strategic efforts to concentrate on ways for the region to grow smartly and with more resilience going forward.

LOS ANGELES COUNTY STRATEGIC PLAN FOR ECONOMIC DEVELOPMENT
December 2009

Research for the Los Angeles County Strategic Plan for Economic Development began with a survey of more than 5,000 businesses operating in Los Angeles County to determine the health and concerns of industry. This survey led to a general outline that was followed by a series of focus groups and a public input stage during which 1,070 individual stakeholders with cross-sector representation helped to produce an economic development blueprint. This led to a plan with 12 objectives and 52 strategies to achieve goals critical to ensuring a strong, diverse, and sustainable economy. Five core aspirational goals were identified: prepare an educated workforce; create a business-friendly environment; enhance quality of life; implement smart land use policies, and create 21st century infrastructure.

CHICAGO'S PLAN FOR ECONOMIC GROWTH AND JOBS
March 2012

World Business Chicago—the area's business advocacy organization—chaired the plan with a steering committee comprised of the area's key constituencies, including planning organizations, foundations, and labor unions. Working with the Brookings Institution Metropolitan Policy Program, five market levers that drive economic growth were analyzed: economic sectors and clusters, human capital, innovation and entrepreneurship, physical and virtual infrastructure, and public institutions. The plan produced 10 transformative strategies for the future of Chicago and the region, and several initiatives have already been announced: a merger of workforce development programs; business licensing reform; an Office of New Americans strategy for business assistance to immigrants; construction of a new cargo facility at O'Hare to increase exports; and formation of the Chicago Infrastructure Trust to identify and fund city infrastructure projects in partnership with private funders.

CENTRAL PUGET SOUND REGION REGIONAL ECONOMIC STRATEGY
July 2012

The Puget Sound Regional Council created the Prosperity Partnership, a public-private partnership to create an economic strategy for the four-county area. The strategy includes ten targeted industry clusters in the Puget Sound region: Aerospace, Business Services, Clean Tech, Information Technology, Life Sciences & Global Health, Military, Philanthropies, Maritime, Tourism & Visitors, and Transportation & Logistics. Actions completed through the strategy secured the approval of an $8.5 billion statewide transportation partnership package with funding for capacity improvements, freight, and system efficiency.

ATLANTA REGIONAL ECONOMIC COMPETIVENESS STRATEGY
October 2012

The Atlanta regional area consists of 10 counties surrounding the city of Atlanta. The region's competitiveness strategy emphasized four goal areas: workers, business, entrepreneurs, and communities. Planning efforts focused on an inventory of existing initiatives, an assessment of the region's strengths and weaknesses, and a review of economic clusters. The strategy produced numerous metrics for measuring success, including dropping the unemployment rate below the national average, doubling the number of startups coming out of universities and colleges, increasing the percentage of adults holding a college degree, and raising the ACT composite score.

WASHINGTON, DC FIVE-YEAR ECONOMIC DEVELOPMENT STRATEGY
November 2012

The Five-Year Economic Development Strategy came out of a partnership between city leaders and four local graduate schools of business: Georgetown, George Washington, American, and Howard. Seven sectors deemed vital to the area's economy were identified—Federal Government, Higher Education & Healthcare, Hospitality, Professional Services, Real Estate & Construction, Retail, and Technology. Student teams were assembled to analyze each sector and create strategies, which included establishing the most business-friendly economy in the nation, creating the largest technology center on the east coast, ending retail leakage, and becoming a top destination for foreign investors.

Common themes surfaced across each of the regional and city-led efforts referenced, including five pillars of economic development:

Education & Workforce Development

Business Attraction & Retention

Entrepreneurship & Innovation

Infrastructure

Quality of Life

In its 2012 Regional Economic Assessment, the Bay Area Council Economic Institute previously found quality of life and innovation factors to be competitive strengths for the Bay Area. The same study also found that "areas of weakness include high housing costs, infrastructure, K–12 education, and customer service in government interactions." As the Bay Area economy grows, these issues—as outlined previously in Section 1—remain hurdles to the expansion of opportunity and the Bay Area's continued economic success.

INNOVATIVE APPROACHES FROM BAY AREA COMMUNITIES

Not only is the Bay Area home to some of the world's most innovative companies, it is also home to innovative leaders in the public sector. As one of the initial steps in the Regional Economic Strategy Roadmap process, the Bay Area Council Economic Institute led meetings that highlighted local best practices in economic development and identified local priorities and concerns in six sub-regions: the North Bay, San Francisco, the East Bay, Santa Clara County, San Mateo County and Solano County. The following sections highlight the key themes from these six sub-regional meetings. The local best practices examples included in these sections highlight successful initiatives that cross jurisdictional borders or involve innovative cross-sector partnerships.

Enabling the Return of Manufacturing Jobs

Manufacturing plays an important role in the Bay Area economy, as manufacturing-related jobs usually span a wide range of wage and education levels and offer career advancement. The region's technological capabilities, which include its national laboratories and universities, give the Bay Area an important advantage in the creation of new products, and strategic partnerships have played a role in advancing innovation.

San Jose's Environmental Innovation Center provides services for clean tech entrepreneurs and helps contribute to San Jose's vision of a green future. In working with Prospect Silicon Valley, a non-profit technology commercialization catalyst supported by the City of San Jose, big and small companies will be able to demonstrate new technological innovations in a real world setting, helping them bring their products to the market faster.

In the East Bay's Tri-Valley area, the presence of two national laboratories—Lawrence Livermore National Laboratory (LLNL) and Sandia National Laboratories—has generated significant economic benefits as technology advances have resulted in numerous new products being generated by companies throughout the region. Livermore Valley Open Campus, a joint venture between LLNL and Sandia, works to facilitate research cooperation between the labs and industry. Additionally, Tri-Valley's iGATE (a part of the California Innovation Hub program) acts as a business incubator for the labs, offering R&D space to start-ups and helping to license lab technologies for commercial use.

LOCAL BEST PRACTICE:

EAST BAY WORKFORCE DEVELOPMENT PROGRAMS

Innovative programs are now being created across the East Bay to make quality, middle-skill jobs accessible to a broader population, such as:

Design It! Build It! Ship It! is a consortium of 10 East Bay community colleges, five workforce boards, UC Berkeley, CSU Eastbay, East Bay EDA, and other regional partners. The program looks to strengthen and expand training programs in core areas of advanced manufacturing, transportation and logistics, and engineering; implement strategies to help unemployed adults change careers in an efficient manner; and expand access to technical training programs for low-income adults facing educational barriers.

The Oakland-Alameda County Opportunity Youth Initiative has a goal to connect over 2,000 opportunity youth (young people aged 16-24 years who are neither in school nor employed) to training and employment services leading to career employment in the growth sectors of the East Bay economy, as well as those sectors expected to have openings because of retirement.

Meeting Education and Workforce Development Needs

The advancement of high-tech industries throughout the Bay Area has put pressure on labor costs and has created a need for more workers with specific skills. While many academic institutions around the region maintain workforce collaborations with industry, more programs could be focused on creating career pathways for those individuals qualified for middle-wage positions. Education serves as an important first step in facilitating this development.

In the North Bay, Sonoma County and the John Jordan Foundation have created a Career Technical Education Fund to advance industrial arts and science, technology, engineering, and math (STEM) programs by providing to schools $50,000 annually over five years.

In the East Bay, the Diablo Gateways to Innovation Consortium will receive an $8 million grant from the California Department of Education for programs designed to keep students in school and move them toward three high-demand fields: advanced manufacturing and engineering, information and communication technology, and health sciences.

In Richmond, Chevron has decided to tackle education and workforce issues simultaneously by placing a $15.5 million investment into the city. The goal is to create jobs, grow small businesses, expand job-training opportunities, and improve schools over the next five years.

Retaining Existing Businesses and Attracting New Entrants

While talent is often cited as a main reason for businesses locating within the Bay Area, the high cost of doing business is usually mentioned when companies are asked about drawbacks. This issue includes minimum wage requirements, workers' compensation, and high utility costs that impact businesses across the state. Locally, issues with zoning and permitting new development can drive up costs and delay timelines. To address local issues with business attraction, the cities of San Jose, Fremont, and Santa Rosa, among others, have streamlined permit applications and created more flexible land use policies as they deal with a limited amount of land zoned for industrial uses.

The California Environmental Quality Act (CEQA) poses another hurdle for businesses, as development opponents often use it to block or slow projects through litigation. Bay Area cities have utilized more comprehensive planning processes—called Specific Plans—that can allow approval of development over a large swath of land without identifying a specific project. A programmatic Environmental Impact Review (EIR) is often adopted along with the housing, commercial, and industrial development zoned in the Specific Plan. Projects consistent with the development outlined in the plan are able to "tier" off of the programmatic EIR. Rather than completing a full project-level EIR, some of the CEQA requirements are loosened, thus reducing project processing time and cost. The North San Jose Development Project, Redwood City's Downtown Precise Plan, and multiple areas of Oakland have utilized this approach.

To further facilitate development, the City of San Carlos authorized and established a Strategic Property Acquisition Reserve in October of 2010. The purpose of the reserve is to allow the City to purchase parcels of land that can be used for the development of projects that will aid the economic vitality of the city.

LOCAL BEST PRACTICE:

NORTHERN WATERFRONT ECONOMIC DEVELOPMENT INITIATIVE

The northern waterfront is a shoreline of about 50 miles spanning from Hercules to Oakley in Contra Costa County. The primary objective of the Northern Waterfront Economic Development Initiative is to promote economic development along the county's working waterfront by targeting business clusters and protecting industrial land (61 percent of the land is zoned for industrial uses).

The project will seek to cooperate with members from both the public and private sectors who have an interest in the waterfront's economic future. By bringing these interests together, they will be able to better coordinate with each other and share information and ideas about the emerging trends and issues affecting the waterfront. A specific focus will be placed on transportation, land use, environmental regulation, and workforce development issues that influence the waterfront's economic prospects.

Linking Transportation Investments to Development of Housing and Jobs

Multiple projects throughout the Bay Area will give local governments an opportunity to better develop jobs and housing connected to transportation. In the North Bay, cities have been trying to create denser housing near transportation as a way to create more affordable options with limited local traffic impacts. The Sonoma Marin Area Rail Transit (SMART) project will provide residents with their first rapid rail service option, and an opportunity for planners to deliver transit-oriented development.

In Solano County, local leaders are emphasizing the importance of the I-80 corridor connecting Vacaville, Fairfield, and Vallejo. I-80 is currently a heavy freight corridor. A coordinated strategy to attract a variety of businesses to the corridor could enable the county to provide work opportunities to a greater percentage of its residents. The I-80 corridor plan also identifies the need for future transportation to the Mare Island Naval Complex, which has been designated by the Vallejo City Council for industrial land use.

LOCAL BEST PRACTICE:

NORTH BAY LIFE SCIENCE ALLIANCE

The North Bay Life Science Alliance (NBLSA) was established as a collaboration of public and private entities spanning Marin, Sonoma, Napa, and Solano Counties. The Alliance, which is comprised of schools, government officials, the US Commerce Department, and many others, works to spur growth in the life sciences industry.

Life sciences companies create many opportunities and the NBLSA works to maximize the achievement of those opportunities to bring economic prosperity to the North Bay. By promoting life sciences, the NBLSA believes it will help to grow the economy because high-grossing industries, specialized real estate, and strong salaries all create more revenue for local and regional governments, while also enabling job creation across a wide range of positions.

In Santa Clara County, the BART Warm Springs extension offers new connectivity options to Silicon Valley and is the first step in a route to San Jose.

While these transportation projects can lead to new development of both residential and commercial space, the Bay Area's growth potential remains constrained by housing availability across all levels of affordability—particularly workforce housing. This is the goal of Napa County's Work-Proximity Housing Trust Fund. The program seeks to assist low- to moderate-income workers in Napa County who intend to buy a home within 15 miles of where they work. The county provides down payment assistance to qualified buyers through a loan for up to 10% of the purchase price of a home, with the stipulation that the county is repaid 10% of the future sales price when the property is sold. Through this model, the fund will continue to support itself over time while incentivizing Napa County workers to reduce their commutes.

TAKEAWAYS FROM BEST PRACTICES

The examples provided above describe best practices used in regional collaborative efforts from other places as well as local innovative efforts initiated by Bay Area communities. While there is much we can learn from the experiences of other regions, there is also a great deal that communities in the Bay Area can learn from each other. The aim is to capture both dimensions in this document.

The collaborative regional initiatives were undertaken with the aim of strengthening the economy and improving quality of life through a regional perspective and approach. They help demonstrate that collaborative action among private and public sector leaders can create pragmatic action with lasting, positive outcomes.

The Bay Area is not just home to innovative companies and technology: it is also home to innovative public leaders and practitioners. A key component of the Bay Area Regional Economic Strategy Roadmap process was the series of meetings with local stakeholders that took place around the region. The purpose of these meetings was to hear directly from local leaders about the new ideas and best practices they were implementing (often hand in hand with private sector partners) and to hear about what possible actions at the regional level they would find most fruitful.

This feedback from Bay Area communities also served as a point of departure for the policy recommendations presented in the following section. These recommendations not only build from the local best practices, they will also support sub-regional efforts already underway and pave the way for the region as a whole to more formally incorporate coordination into its planning going forward—especially as it relates to communication among agencies, organizations, and levels of government that are working to create a more prosperous economy across the region.

LOCAL BEST PRACTICE:

GRAND BOULEVARD INITIATIVE

The Grand Boulevard Initiative is a program to turn El Camino Real, the most important commercial road on the Peninsula, into a boulevard of meaningful destinations shaped by all the cities along its length. The project consists of a group of 19 different cities, counties, and local and regional agencies united to improve the performance, safety, and aesthetics of El Camino Real, successfully fulfilling its role as the Peninsula's most important arterial road.

The 19 stakeholders are working together to accomplish this goal through the Complete Streets Project, funded by a US Department of Transportation TIGER II Planning Grant. Complete Streets seeks to facilitate the re-design of the roadway to integrate sustainable development and encourage pedestrians, transit, and investment in the El Camino Real corridor.

POSITIONING THE BAY AREA FOR SUCCESS

The Bay Area relies primarily on local sales taxes to fund infrastructure but has little funding at a regional scale to deal with regional projects. The region would benefit by identifying additional funding sources to facilitate needed infrastructure programs at the regional level.

– Ian Parker

Managing Director, Public Sector & Infrastructure Banking, Investment Banking Division, Goldman Sachs

The Bay Area is a global economic powerhouse driving global innovation. The region's diverse business community employs the vast majority of the region's workforce and supports educational institutions and other philanthropy in the region. The Bay Area's business leaders value the region's distinctive assets, but they also feel the negative impacts of the region's housing crisis and strained transportation systems. The high cost of housing is dampening recruitment efforts, and under-developed transit systems have forced some employers to create their own busing operations. Deeply integrated into the global economy, the region's business leaders also see how other places in the world are catching up with the Bay Area and learning quickly how to prepare for the future through investments in education, infrastructure and quality of life.

In order to ensure the Bay Area's economic vitality and resilience despite increasing boom and bust cycles, public and private sector leaders must come together around pragmatic solutions to persistent issues and barriers to success. The centerpiece of the Regional Economic Strategy Roadmap is the compilation of recommendations from the Bay Area business community that is presented in this section. Over the course of 12 months, the Bay Area Council Economic Institute engaged with business and other leaders in a series of 11 interactive meetings to identify the top opportunities for growing broad-based prosperity in the region and the requirements for success.

Overwhelmingly, the gathered leaders demonstrated a regional perspective in addressing the challenges and opportunities facing the Bay Area. There was a fundamental assumption that the Bay Area is a regional economy that requires coordinated regional solutions. Five major areas of recommendations are presented below:

1 Secure the Future through Critical Regional Infrastructure Investment

2 Change the Math for Housing Development in the Bay Area

3 Form the Bay Area Regional Economic Development Partnership

4 Create an Adaptive Regional System for Workforce Development: Producing World-Class Skills and Expanding Opportunity

5 Drive Greater Efficiency in the Bay Area's Transportation System

Many of the following policy recommendations fit the framework of Plan Bay Area and can help inform regional planning agencies as they develop an updated plan by 2017. Other recommendations are presented as key strategies that can be pursued to support the Bay Area's long-term economic resilience and prosperity. Together, the five policy areas represent the central themes that emerged throughout the in-depth engagement with the region's business leaders.

But first, some thoughts on regional governance.

While the Bay Area has no formal regional government with broad powers delegated to it, regional governance exists in the multiple regional agencies with policy-making power. Dating back to 1970, the Metropolitan Transportation Commission (MTC) has authority over regional transportation planning, and the Association of Bay Area Governments (ABAG) has land use authority. Even with their regional missions, these organizations often protect the influence of cities and counties in the region through their deliberative processes. In MTC's case, its governing commission is largely composed of supervisors from the Bay Area's nine counties, while ABAG was created by local governments and has an executive board composed entirely of locally elected officials.

Finding the appropriate balance between maintaining the influence of local governments while inserting a greater degree of pragmatic regionalism into the Bay Area's governance structure can be a first step in tackling many of the regional policy issues identified through this research and engagement process. This approach, where local priorities give way to regional thinking, has been successfully implemented by Portland and Minneapolis-St. Paul.

Portland's regional government, Metro, is responsible for land use and transportation—much like the Bay Area's existing regional agencies—though with one major difference: Metro is the only directly-elected regional government in the US. Metro's authority covers three counties and 25 municipalities, and its seven-member board has representatives elected from six districts and a council president elected region-wide. Unlike other regions that have councils of governments made up of representatives from each municipality, Metro's council members do not actively advocate for the interests of any one city or county. Minneapolis-St. Paul has a comparable system with its Metropolitan Council, which is the region's metropolitan planning organization, the operator of a regional transit system, and the regional housing and redevelopment authority. The governor appoints its 17-member policy-making board, with elected officials playing a role only within advisory committees.

The models utilized in Portland and Minneapolis-St. Paul provide examples of non-traditional regional governance structures that have been sustained for decades. However, both Portland and Minneapolis-St. Paul are relatively small regions in comparison with the Bay Area, and their constituencies are fairly homogenous. Even with their success, these models have not been replicated elsewhere.

Looking across the country, regional governance takes many shapes and forms, and is often a complicated balancing act between the interests of local governments, state government, and regional stakeholders. The Bay Area governance structure is even more complex due to its fragmented system of 26 independent transit operators and individual planning departments in over 100 cities across nine counties. While MTC and ABAG do provide a measure of consolidation at the regional scale, there is need and opportunity to develop a stronger regional approach to addressing critical needs related to infrastructure, housing, workforce training, and economic development.

1 Secure the Future through Critical Regional Infrastructure Investment

CONTEXT AND GOALS

Infrastructure has important implications for a community's vitality. The most recognizable involve the bridges, roads, and transit systems that facilitate the movement of goods and people. Public water systems and flood protection agencies often go unseen, but provide safe and reliable drinking water and keep communities safe. Other types of infrastructure include public buildings such as schools, hospitals, and administrative buildings, and the 21st century infrastructure comprised of the wires and cables that deliver communications services and electricity to homes and businesses. The quality and resilience of this infrastructure is critical to the shared prosperity and economic competitiveness of the region and the state.

A recent California Forward analysis has found that California faces an infrastructure finance requirement of $853 billion over the coming decade.[16] Of this, $495 billion can be financed through currently identifiable funds, leaving a deficit conservatively estimated at $358 billion. This estimate is consistent with earlier findings by the Bay Area Council Economic Institute and the Berggruen Institute on Governance.[17] The greater part of this deficit—nearly $300 billion—is in transportation, which remains a critical need as the state's population expands and businesses continue to grow. The balance of the deficit is in water and school facilities.

Addressing these challenges in the Bay Area is compounded by three factors: a decline in state and federal investment in transportation, a fragmented local governance system for infrastructure, and the lack of a sufficiently empowered regional authority that can manage and invest in infrastructure on a comprehensive level.

Transportation infrastructure poses particular challenges in the Bay Area, where issues of mobility and congestion are significantly impacting the region's productivity, quality of life, and its competitiveness in attracting and retaining a diverse, high-quality workforce. The challenges to our transportation system are acute. While the region is continuing to attract companies and talented people today, it is also losing people and opportunities due to the confluence of high housing costs with worsening mobility. This poses a choice for residents and would-be residents: pay sky-high housing costs or commute long distances through thickening traffic.

State and federal funding for transportation is closely linked to gasoline taxes. California's gas tax—the nation's fourth highest at 42.35 cents per gallon—has not been raised since 1994. At the national level, the federal gas tax has not been raised since 1993, and would need to be increased over 12 cents per gallon (from 18.4 cents to 30.7 cents) just to restore purchasing power to 1993 levels. In addition to inflation eroding the purchasing power of these taxes, the gas tax is also becoming a less effective mechanism for meeting the state's transportation needs because it will steadily generate less revenue as cars become more fuel efficient and electric vehicles gain in popularity. The California State Transportation Agency estimates that by 2030, as much as half of the state revenue that could have been collected from the gas tax will be lost to fuel efficiency.[18]

While the Metropolitan Transportation Commission does have regional authority for transportation planning and disbursal of bridge toll revenues, a growing proportion of the region's transportation funding stems from county-specific sales tax measures. With many infrastructure decisions made on the local level by county transportation agencies and local transit operators, the region suffers from the absence of an integrated regional strategy, the ability to execute on a regional level, and creative alternatives for how infrastructure can be developed and financed. Each is necessary, however, as the region's population and economy continue to grow—with vulnerable populations feeling the greatest pressure—and as public funding from state and federal government fails to keep up.

Challenges to the region's water infrastructure are also rising as the state grapples with a fourth year of drought. California's reservoirs began the 2014–2015 water year at just 36 percent of their capacity,[19] agricultural losses have exceeded $2 billion,[20] and nearly 20,000 jobs have been lost throughout the state.[21] California's six major water projects average 76 years in age, and each delivers less water today than in the past. Partly due to this aging infrastructure, California's water system loses up to 228 billion gallons annually through leaks alone, more than enough to supply Los Angeles for an entire year.[22] Compounding the problem, local and state mechanisms for funding water projects have not kept up with demand.

Revenues from local water bills provide approximately 84 percent of the state's annual water investments. These funds are supplemented by intermittent general obligation bond issuance at the state level. For example, the passage of Proposition 1 in 2014 authorized $7.5 billion in state bonds, but equates to only about 25 percent of one year's spending in the water sector. In the Bay Area, 10 major water agencies maintain and provide the bulk of the region's water infrastructure and supply. This fragmented system with siloed funding has resulted in limited regional coordination for how to best manage and pay for the Bay Area's water infrastructure going forward.

The policy recommendations outlined here target three critical goals:

Create best-in-class infrastructure investment in the region—across all infrastructure categories—to support improved mobility, economic competitiveness, and better security and quality of life for Bay Area residents.

Develop new mechanisms to expedite and accelerate investment in infrastructure critical to regional mobility, including a second transbay tube; BART's extension to growing job and housing centers; Caltrain corridor improvements and extension into downtown San Francisco; and expansion of the regional ferry system to serve more communities in the North, East, and South Bay.

Complete regional, multi-agency projects that improve water supply resilience to drought by creating new water systems, upgrading and linking existing systems, and addressing climate change.

STRATEGIES AND ACTIONS

The decline of state and federal funding for transportation requires a greater local and regional will to fund, finance, and develop infrastructure and essential services. For water infrastructure, more coordinated regional investment actions are needed to act as a link across water agencies and jurisdictions. To maximize the resources available to the region, ensure their efficient use, and comprehensively manage the development of regional infrastructure, the Bay Area requires the following:

Regional organizations with increased authority to prioritize, invest in, and manage infrastructure;

New sources of both traditional and alternative finance to augment public resources.

ACTION 1: ***Separately, or by augmenting an existing regional body, create a regional infrastructure financing authority, and empower it to play a stronger role in regional transportation finance and planning.***

The financing of public infrastructure should be restructured through the creation of an empowered regional planning, finance, and management entity with the abilities to prioritize investments at the regional level, attract and leverage funding from a range of sources, and allocate resources based on integrated regional strategies. Those resources should be accessible to participating regional partners, and should be strategically deployed to support a portfolio of projects, including Enhanced Infrastructure Finance Districts (EIFDs). In this regard, the authority could effectively become a "bond bank," receiving seed funding and lending to public sector entities looking for capital that may not be available at cost-effective rates in traditional funding markets.

The tools available to the authority should include the ability to go before voters to gain financial support, as well as other methods of traditional public finance, which could include expanding tolling of bridges, highway corridors, and express lanes. The tools should also include authority for design/build and authority to facilitate partnerships that engage private sector capital and management expertise to support regional infrastructure priorities, particularly where a project's life-cycle costs and benefits can be shown to deliver superior value for the public. In this respect, the authority would be similar to the California Infrastructure Bank or the National Infrastructure Bank recently proposed in Washington, D.C., and to organizations such as Partnerships British Columbia in Canada that have developed successful track records of attracting and leveraging private resources.

While not appropriate for every project, when properly structured, alternative procurement methods such as public-private partnerships (P3) have demonstrated their value around the world as sources of project finance and management that can supplement public funds and deliver significantly improved operations and maintenance outcomes, particularly on projects over $100 million. This occurs through risk transfer/sharing with the private partner and performance contracts that preclude change orders. This model ensures that the private sector partner is accountable for maintenance over the life of the contract (in contrast with public procurements where maintenance is often lacking or deferred).

In the Bay Area, the leading P3 project currently underway is the Presidio Parkway, linking the Golden Gate Bridge with San Francisco through the Presidio. While work will continue into 2016, the Parkway has been essentially delivered on time and on budget; preliminary estimates show it will have saved taxpayers $178 million and provided critical infrastructure sooner than would have been possible through a traditional public procurement.[23] This contrasts dramatically with other recent, high profile public procurements in the region.

The success of this project and others privately operated and maintained, such as the recently completed Oakland Airport Connector, suggests that a more empowered regional infrastructure body should have the capacity to systematically evaluate the merits of public funding versus private finance in the development of future projects and should serve as a resource in this regard for local jurisdictions in their planning. This could be done by MTC itself or by a special-purpose infrastructure commission with public-private staffing that is linked to MTC and the Association of Bay Area Governments.

ACTION 2: *Provide the regional infrastructure financing authority with enhanced power to acquire funding.*

As gas tax revenues continue their slow decline, public agencies around the state have looked to other avenues to fill transportation funding gaps. The Bay Area has been particularly successful in creating new revenue streams, as the region's major source of shared transportation infrastructure revenue comes from Regional Measure 2, passed in 2004 to increase bridge tolls by $1.00. Between 2004 and 2014, the Bay Area Toll Authority has collected annual toll revenue in a range between $112 million and $126 million.[24] At the county level, sales tax measures have been key to maintaining and expanding transportation systems. For example, Alameda County passed an $8 billion, 30-year transportation expenditure plan to fund countywide projects through an increased and extended sales tax in 2014. Funding available to the counties through sales tax measures is far larger than that brought in through regional bridge tolls.

Given that many of the Bay Area's key transportation projects in coming decades will cover multiple counties—such as the extension of BART to San Jose, Caltrain corridor improvements, and a new transbay BART tube—a larger level of funding should be available at the regional level that can help to prioritize projects and move them over funding hurdles. A regional gas tax or a large-scale funding mechanism measure, similar to Measure R in Los Angeles, should be put to the voters. It should identify the uses to which the funding would be allocated—including multiple infrastructure and housing categories based on input from regional leaders—and be tied to an implementation design that calls for life-cycle performance, productivity, environmental and user satisfaction, and quality of life considerations.

The success of such a measure will depend on a highly transparent process and require an educational effort with the public to increase awareness of infrastructure needs and of how infrastructure is financed and delivered. Funding, however, should flow from MTC only to local governments that implement best practices in project delivery. This would include analyses of the life-cycle costs and construction timelines of multiple alternative financing and project delivery mechanisms, thereby ensuring the most efficient use of public resources.

Another potential source of funding could stem from a regional use fee on vehicle miles traveled. In 2014, Governor Brown signed a law that set up a commission to study a road usage charge and establish a pilot program by January 1, 2017. Other states have also begun to test usage charges. In 2015, Oregon debuted its pilot program, in which 5,000 volunteers pay 1.5 cents per mile driven and are refunded each month what they paid under the state's 30-cent gasoline tax. Given its confluence of transportation funding needs and the fact that it is home to many companies producing the technologies required to track miles traveled, the Bay Area is well positioned to begin piloting this new user fee model in California.

ACTION 3: *Coordinate the design, financing, and building of large-scale water recycling, desalination, and storage infrastructure through a regional entity.*

Over the past decade, the Bay Area's water agencies have made strategic investments that have improved regional water supply resilience to drought and earthquakes. Notable projects include the SFPUC Water System Improvement Program, the Santa Clara Valley Water District-City of San Jose Silicon Valley Advanced Water Purification Center, the Los Vaqueros Reservoir expansion, the Freeport Regional Water Facility, regional reliability interties, and others. However, addressing large-scale challenges such as climate change and population growth will require improved regional collaboration. The creation of new water supplies through recycling and desalination, for example, will require new purification, conveyance, and storage infrastructure on a scale most effectively met through a regional approach. Region-wide maintenance initiatives that reduce water losses in the distribution and storage system could also be addressed through this model. The Bay Area's local water agencies should utilize regional coordination—through a Joint Powers Authority with an ability to capture private financing or an Enhanced Infrastructure Financing District to leverage existing revenue streams—to design, finance, and build new capital-intensive regional water assets.

ACTION 4: *Support lowering the voter threshold for county infrastructure tax measures to 55 percent.*

To increase the amount of traditional finance available for regional infrastructure, regional leaders should support lowering the threshold for voter approval of county sales tax measures for transportation and other infrastructure finance from two-thirds to 55 percent, with a guaranteed sunset provision in each measure passed. This will increase the flexibility and opportunity for communities to create new user fees and taxes, with assurances of appropriate oversight for how the funds are used and a requirement that funding and the strategies it supports be periodically reviewed and reapproved.

ACTION 5: *Establish a separate environmental review process for infrastructure.*

Delays caused by California Environmental Quality Act (CEQA) review and CEQA-related lawsuits unnecessarily impede the delivery of infrastructure that is needed to support mobility and other economic and public policy priorities. A 2012 study by law firm Holland & Knight, LLP found that 36 percent of all CEQA-related litigation involved public works projects.[25] These delays can be avoided, and the integrity of the environmental review process maintained, by creating an environmental review process specific to key infrastructure. MTC should also be empowered to produce regional transportation planning documents, similar to the Area Specific Plans being used for housing and other development, which can expedite the environmental review process.

ACTION 6: *Plan for resiliency in all infrastructure decisions.*

With systems for flood control and transportation in the region extremely balkanized, a correlated strategy that plans simultaneously for both is needed. While partnerships are already being formed to protect infrastructure around flood plains—especially with regard to the BART and highway systems—no formalized regional approach for disaster preparedness or remediation has been established. Because existing regional entities cannot organize efficiently to disperse money in times of disaster, a regional capacity should be established within MTC or the proposed infrastructure investment authority that provides the ability to assemble and disperse funding both for preventative infrastructure measures and after a natural disaster.

2 Change the Math for Housing Development in the Bay Area

CONTEXT AND GOALS

When the Sustainable Communities and Climate Protection Act (SB 375) was signed into law in 2008, its principal objective was to align regional transportation plans with housing and land use policies, with the end goal of reducing the levels of greenhouse gas (GHG) emissions caused by traffic and congestion. Each Metropolitan Planning Organization (MPO) in the state was tasked with designing a Sustainable Communities Strategy (SCS) that would result in specified GHG reductions, as set by the California Air Resources Board. MPOs have the authority to use various incentives and/or mandates to ensure local compliance with the SCS.

To comply with SB 375, the Metropolitan Transportation Commission and the Association of Bay Area Governments adopted a Sustainable Communities Strategy, Plan Bay Area, in 2013. Plan Bay Area charts a course for facilitating the region's future population growth by planning for more housing and transportation choices within locally identified Priority Development Areas (PDAs). The Bay Area is now two full years into its SCS, and implementation has been slow—especially as it relates to creating more units to affordably house residents across all income levels. The region permitted just half of the housing units needed in the 2007–2014 Regional Housing Needs Allocation (RHNA) cycle, which identifies the total number of new housing units that the Bay Area needs in each city.[26] While this RHNA period occurred within a deep recession and followed a Bay Area housing boom, recent housing production has lagged job growth as lenders and developers exhibited caution coming out of the recession.

The region is now outsourcing a portion of its housing obligations to cities in the Central Valley, which are currently experiencing construction booms. This has added to the in-commute of workers from outside the region into the federally designated nine-county Bay Area, from as far away as Stockton, Hollister, and Patterson. Now over 3% of the Bay Area workforce commutes from outside the region.[27] Intra-regional commute times are also rising, and data has shown that Bay Area freeway delays due to traffic congestion have increased by nearly 40 percent from 2010 levels.[28]

While the region's strong economy in recent years has contributed to runaway housing costs, an inability for the Bay Area to increase its housing stock—especially for affordable rental units—has exacerbated a supply and demand mismatch. Plan Bay Area is not properly equipped to address this crisis. The various carrots, sticks, and levers that were supposed to incent sustainable growth are either not being employed or they are not sufficient to combat restrictive planning and zoning standards and resistance to new development at the local level. The target-setting and planning processes of Plan Bay Area also do not sufficiently recognize or consider the many economic factors that drive demand for housing and where it should be situated.

PLAN BAY AREA HOUSING PROJECTIONS

	2010 (actual)	2015	2020	2030	2040	Total Increase (2010 - 2040)
JOBS	3,385,300	3,669,990	3,987,150	4,196,580	4,505,230	**1,119,930**
% ANNUAL GROWTH WITHIN INTERVAL		1.6%	1.7%	0.5%	0.7%	

	2010 (actual)	2015	2020	2030	2040	Total Increase (2010 - 2040)
HOUSING UNITS	2,786,000	N/A	2,956,000	3,201,000	3,446,000	**660,000**

HIGH GROWTH SCENARIO ESTIMATES

	2010 (actual)	2015 (projected)*	2020	2030	2040	Total Increase (2010 - 2040)
JOBS	3,385,300	3,759,912	4,187,476	4,478,072	4,913,882	**1,528,582**
% ANNUAL GROWTH WITHIN INTERVAL		2.1%	2.2%	0.7%	0.9%	

	2010 (actual)	2015	2020	2030	2040	Total Increase (2010 - 2040)
HOUSING UNITS	2,786,000	N/A	3,104,518	3,415,712	3,758,574	**972,574**

*From 3,722,900 Bay Area jobs in June 2015, assumes 2% annual growth extended over remainder of the year.
Data Sources: California Economic Development Department, CES; Association of Bay Area Governments, Projections 2013; and Plan Bay Area
Analysis: Bay Area Council Economic Institute

To combat these issues, the policy recommendations outlined here target three critical goals:

Build—not plan, or zone, or even permit—but build sufficient housing stock to meet the demands of a growing regional population and to fill historic deficits.

Reduce the cost of new home construction across the region.

Find new mechanisms to fund and/or subsidize infrastructure development and housing construction so that the burdens as well as the benefits of creating livable communities and affordable housing are shared among both new and existing residents and property owners.

STRATEGIES AND ACTIONS

GOAL 1: *Build—not plan, or zone, or even permit—but build sufficient housing stock to meet the demands of a growing regional population and to fill historic deficits.*

Plan Bay Area significantly underestimated job growth between 2010 and 2015, a gap that could reach 90,000 jobs by year-end if current trends persist. If this level of underestimation is extrapolated over the life of Plan Bay Area, the region could have 400,000 more jobs than predicted by 2040. Today, total Bay Area employment is 3,722,900 and could rise to nearly 4,914,000 by 2040 under a high-growth scenario (compared to the 4,505,230 jobs projected in Plan Bay Area).

Given how actual growth has exceeded past forecasts, the update to Plan Bay Area needs to account for a stronger rate of growth for population and jobs than earlier forecasts. The distinctive characteristics of the Bay Area make it a strong attractor of global business, and this shows few signs of abating near-term. In fact, the June 2015 UCLA Anderson Forecast predicts California job growth of 2.1% in 2016 and 1.3% in 2017, led by even stronger growth in the Bay Area.[29]

Housing affordability is a key aspect to achieving strong economic growth. Plan Bay Area originally estimated that 660,000 units would be needed by 2040, but that level of housing production would not be enough to sustain a higher-than-expected level of employment growth. An alternative high-growth scenario is presented in the table above with estimates for job growth and housing needs. This high-growth scenario offers a plausible course for the region's growth—one that is within the reasonable range of possible employment outcomes. It is not meant to replace the projections made in Plan Bay Area, but it can inform the dialogue around future regional housing supply. It indicates a need of 972,500 housing units built by 2040 to accommodate strong regional economic growth.

However, this analysis does not address the historic regional housing deficit that makes the Bay Area one of the most expensive places to live today. A March 2015 analysis by the Legislative Analyst's Office reported that 51,550 additional units of housing were needed each year between 1980 and 2010 over five of the Bay Area's nine counties. These 1,546,500 total units would have allowed the region's housing prices to remain in line with national trends. While filling this deficit by 2040—along with keeping up with regional growth—presents a daunting task, addressing just 20% of this historic under building, or 309,300 units, would help to alleviate upward pressure on housing prices. Thus, the Bay Area will need 972,500 new housing units built by 2040 to meet the needs of a growing economy and an additional 309,300 units to address historic building deficits. In total, the region should have a goal to build 1,281,800 units by 2040

STRATEGY #1: ***The Regional Housing Needs Allocation (RHNA) process needs real teeth.*** *Cities that meet their RHNA obligations should be financially rewarded, and there should be real consequences for failing to permit the required number of new housing units, such as loss of local approval authority, state mandated "by right" approvals of housing projects (which removes some discretionary approvals from project review processes), the creation of more "by right" zoning districts, or the creation of a regional hearing body to approve housing developments. Further incentives should be awarded to cities that streamline the approval process for new housing and bring units to market faster and at lower cost.*

IMPLEMENTATION ACTIONS:

The One Bay Area Grant (OBAG) funding process must be reformed. Currently, OBAG funds reward "jurisdictions that accept housing allocations through the Regional Housing Need Allocation process" with grants for transportation infrastructure. It is not enough to have RHNA compliant General Plans if communities proceed to ignore them. In the last RHNA performance report, none of the nine Bay Area counties made their RHNA numbers. Of the region's 101 cities, just seven reached their RHNA number, and only one of those, Milpitas, contained a Priority Development Area (PDA). The current strategies are neither creating enough housing nor creating the appropriate incentives to locate it within PDAs.

OBAG funding must be more performance based. Those cities that produce the most housing should get the most transportation funding. In addition, cities that accept OBAG grants should repay them if the requisite number of housing units is not permitted within a given timeframe of the plan's completion—18 months, for example. Currently 50% of OBAG grants are distributed on a flat population formula and only 25% are awarded based upon past housing production performance. This regime rewards counties for doing nothing other than being more populous than their neighbors.

County Congestion Management Agencies (CMAs) that receive OBAG funding and are responsible for distributing it locally must monitor housing production at the local level and report progress on a regular basis to the Metropolitan Transportation Commission (MTC). CMAs must also inform local communities if they are not on track to meet their RHNA obligations.

Within each county, cities should have the authority to trade their RHNA obligations—and connected OBAG funding—to neighboring municipalities that may be more receptive to new development. Currently, San Mateo, Solano, and Napa counties have developed "sub-regions" that allow cities within those counties to trade RHNA obligations, and the county distributes transportation dollars accordingly. If adopted in all nine Bay Area counties, this "trade and build" system will result in county RHNA systems that have greater probability of reaching housing targets than the city-centric regime in place today. A more expansive "trade and build" strategy could also include sales and payroll taxes that are collected at the state level and partially funneled down to the jurisdictions in which they were produced. Connecting these dollars to the achievement of local housing production goals would require changes to state land use laws to allow housing allocations to be exchanged for portions of these revenues.[30]

All other MTC regional discretionary funds should be awarded on a performance basis. Only jurisdictions that have met or are on track to meet their RHNA obligations should receive MTC discretionary funding. If a community decides not to shoulder its share of the region's housing needs, that community should not receive discretionary transportation funds.

Association of Bay Area Governments (ABAG) and MTC planners should monitor the time it takes to approve permits for new housing and reward those cities that streamline the process and move the quickest.

The words "Priority Development Area" must have some meaning. If local governments do not approve projects consistent with local zoning and PDA requirements, their authority to approve or deny housing projects should be limited in order to ensure that housing is produced as needed for the good of the region. Options include "deemed approved" housing approvals subject only to safety and building code standards; "by right" development where housing can be built with ministerial review only; and remanding housing decisions to a regional body. These tactics can help in meeting the housing needs of the region even in the face of local project-by-project opposition within cities and towns or overly restrictive local codes and fees that stop production. If housing production cannot be compelled in Priority Development Areas, it will not occur, and the regional housing crisis will continue.

STRATEGY #2: ***The Bay Area must expand the stock of secondary units, junior units, "in-law" units, and other similar uses of homes and lots as an additional housing resource.*** *This is a quick and inexpensive way to add housing in a very short amount of time.*

IMPLEMENTATION ACTIONS:

Model legislation should be drafted to expand and simplify approval of "in-law" or Accessory Dwelling Units (ADUs) in all residential zoning districts throughout the Bay Area, including junior/studio units that have their own facilities either connected to or separate from the main residential unit. This language can be taken to all 101 cities for approval. Adoption of this law will mean that smaller landowners and homeowners can participate in solving the region's housing crisis. New housing units can be delivered at substantially reduced costs, within existing infrastructure and existing structures or on underutilized land. Furthermore, the time from inception to delivery of units is significantly reduced.

Cities should be rewarded financially for adopting such legislation. The City of Berkeley recently allowed the construction of second units with only a building permit if they meet certain physical requirements.

Regional agencies and banks should work together to create innovative ADU loan products to help homeowners and small landowners finance ADU fees, designs, and construction. Cities could also explore programs similar to the Property Assessed Clean Energy (PACE) model that is used to finance residential energy efficiency and renewable energy upgrades. This strategy would reduce up-front costs to homeowners through a loan that is repaid with property tax payments over time. At a minimum, regional entities and local governments should provide homeowners with technical guidelines and design assistance where possible.

Regional and local governments should work with respective utilities to find solutions to the high costs of adding new service to ADUs.

STRATEGY #3: ***The update to Plan Bay Area must have a strong foundation in the economic realities of development.*** *There are too many instances in the first iteration of Plan Bay Area where development densities were recommended for locations where they were not viable given market conditions. Expected housing density in Priority Development Areas should be re-evaluated based on the PDA feasibility study currently being completed.*

IMPLEMENTATION ACTIONS:

All Priority Development Areas should be reviewed from a development perspective concerning their capacity to accommodate the growth allocated to them. Work to identify feasible housing types should be funded in all PDA planning grants where this analysis has not already occurred. While housing market conditions are not static, the current housing cycle shows that even at high rent levels, certain types of development are not economically feasible in parts of the Bay Area. While planners face a challenge in both preserving the local character that residents enjoy and responding to regional pressures, in order for PDAs to be successful, planning must take into account market-based housing demands and the economic considerations of developers.

ABAG has more planning capacity than most cities in the Bay Area. It should form a Planning Task Force that includes ABAG staff and Bay Area developers. This Task Force can act as a consultant to small communities to effectively develop PDAs. Roles for the Task Force would include assisting in the creation of Area Specific Plans that respond to market realities of construction cost and building type; drafting ADU ordinances that expand housing production onto smaller single and multi-family housing sites; and supporting large projects, such as base reuse, to help facilitate their development in a manner that meets regional goals. The Task Force should include experienced developers with extensive local knowledge and understanding of the regional market.

ABAG and MTC planners should conduct an inventory of large developable sites, including but not limited to former military bases, that have thus far not been developed. The Planning Task Force must review the status of these sites and recommend what if any action is required to speed up the permitting timelines. Coordinating planning oversight with the Bay Area Regional Economic Development Partnership (as proposed in an earlier recommendation) would create a structure for matching the region's housing goals and building activity with broader economic development activities.

STRATEGY #4: ***The fiscalization of municipal land use decisions needs to change.*** *When Proposition 13 passed in 1978, revenues to local government were cut by about 57%.[31] This forced towns and cities across California to look for new sources of funding for essential services, and to avoid land uses that generate more demand for services than tax dollars. Local governments turned to job-generating uses, hotels, and retail as preferable fiscal alternatives to housing in the creation of their local general plans. Local jurisdictions keep a much greater percentage of sales taxes and transient occupancy taxes than property taxes, and as a result they now zone far too much land for hotels, stores and auto dealerships. The demands for services such as libraries, schools and other essentials are proportional to the housing in local jurisdictions, so even office uses are seen as preferable to housing because workers who go home at the end of the day to a different jurisdiction do not generate those demands locally. The notion that housing does not pay for itself may reflect reality in some instances, but as prices have risen in many areas of the region, housing increasingly generates sufficient taxes to support a broad array of services for cities.*

IMPLEMENTATION ACTIONS:

The region needs to develop a much stronger regional planning process that ends the competition among cities over a limited supply of retail and auto rows. Each county should establish retail clusters in "Economic Zones" or "Priority Retail Areas" and establish a revenue-sharing model to spread the sales tax dollars across multiple neighboring jurisdictions. With less competition and more coordination around retail development, land use decisions could be optimized, resulting in greater opportunity to both fund and build housing.

A full regional inventory of all underutilized or vacant land needs to be undertaken, with a focus on land set aside by cities for retail, industrial, office and hotel use. Where it would be consistent with the goals of the Sustainable Communities Strategy, land that has not been developed within a specific time frame (e.g., three years) should be rezoned for housing.

GOAL 2: *Reduce the cost of new home construction across the Bay Area region.*

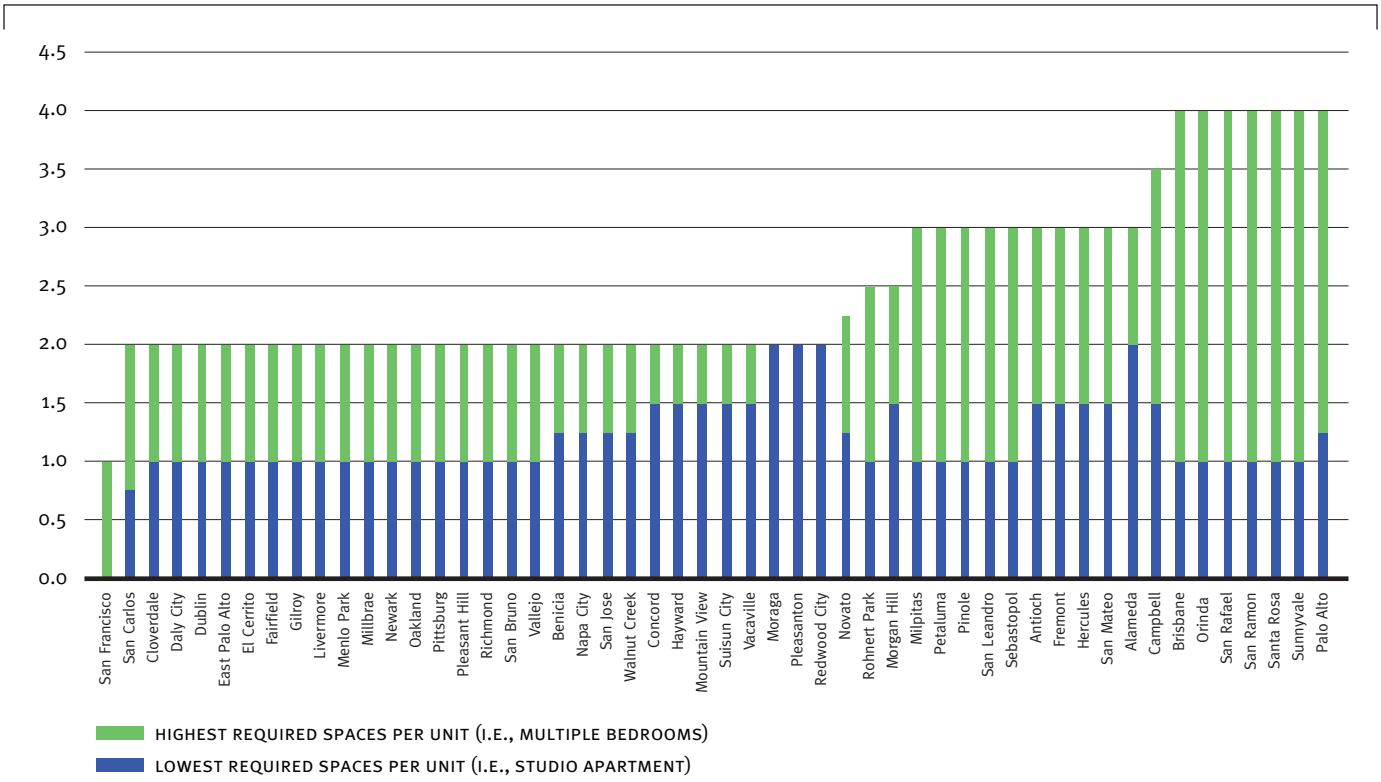
STRATEGY: *Policymakers need to reconsider discretionary costs added to the fixed costs of construction, especially if the construction of more housing—and particularly more affordable housing—is a priority. The cost of constructing a new home is driven by many factors: supply and demand, materials costs, labor costs, land acquisition costs, financing costs, parking mandates, municipal fees, lawsuits, and time. Some of these costs are inflexible, and there is little that can be done to change them via public policy. But other costs are driven by policy choices. Policymakers need to review some of these choices and make changes.*

IMPLEMENTATION ACTIONS:

Encourage streamlined approvals for lower-cost construction types and new building technologies. Streamlining building permitting and code interpretations to allow for quick delivery of four- to seven-story buildings (which are more cost-effective than high rises) and new innovations in construction, such as Factory Built Housing (FBH), can lower building costs. FBH reduces project delivery time, lowers loan costs, and can reduce overall construction costs by 20%.[32]

Across the Bay Area, cities are assessing impact fees, community benefits agreement payments, and other exactions on new housing construction. These fees add up to be a considerable portion of the costs of new construction. In San Francisco, for example, a new unit that might sell for $700,000 may include over $100,000 in fees assessed to the developer. These fees pay for services such as fire, police, schools, and parks that existing residents enjoy, but because of Proposition 13's limitation on property taxes, they rarely pay enough to cover their costs. Increasingly, fees are also being assessed to fund development of affordable housing because cities find it easier to ask homebuilders and new residents to pay for these needs. These impact fees have allocated the cost for community infrastructure and service investments to new development, slowing the production of all housing and driving up the price of each unit delivered. Existing landowners are not paying their fair share to solve the regional housing problem, and they are benefitting from scarcity through the skyrocketing values of their homes and land. Community benefits should be paid for by the entire community, not just by new development and particularly not by badly needed workforce housing. This system needs to be rethought to spread that burden, as too often such fees add significant costs to housing construction and prevent new homes from being built. Policymakers should place a region-wide cap on impact fees and other exactions while exploring the other funding options for community infrastructure, community benefits, and affordable housing detailed in Goal 3 of this policy recommendation. Only cities that agree to the fee cap should be eligible for MTC discretionary funding.

RESIDENTIAL PARKING MINIMUMS BY CITY



Data Source: MTC Survey of Bay Area Cities' Parking Requirements Summary Report, 2012

Item 7 Attachment 1

A report conducted by Holland & Knight, a law firm with extensive experience with the California Environmental Quality Act (CEQA), analyzed 15 years of published opinions in CEQA litigation at the Court of Appeals and the California Supreme Court.[33] Among the many findings of the report, the clear majority of cases (62%) litigated under CEQA involved urban infill development. Another recent report released by the non-partisan Legislative Analyst's Office found that it takes, on average, two and a half years for a local agency to approve new housing that goes through the CEQA process. If urban infill and pedestrian-focused development is the response to climate change and environmental degradation, CEQA has become a threat to that response and therefore a threat to the environment. State leaders must reform CEQA immediately to reduce construction delays, bring down costs, and allow for more urban infill development. State law should be changed to create a new categorical CEQA exemption for new home construction that meets PDA requirements (or their equivalent in other SCS areas).

To reduce opposition and challenges (including CEQA litigation) to new developments, a regional coalition should develop a public outreach plan to educate the region's residents on the benefits of housing production and regional planning. It can also inform them on what happens when the Bay Area fails to cooperate region-wide to build housing.

Outside of CEQA reform at the state level, local jurisdictions can modify their zoning and density bonus ordinances to move housing developments more quickly through often lengthy approval processes. Density bonuses allow rental and condominium projects a density increase (e.g., through additional floors) of up to 35 percent if a project contributes to the supply of affordable housing in the community. Although existing state density bonus law has had some positive impact, it clearly does not go far enough in adding affordable homes to the region: it does not limit local government zoning that discourages housing and charges high fees to new developments—which stop many projects before they get started—and it does not limit discretion to deny or refuse to approve housing projects that require public approval (which the vast majority do). The region should consider means of preventing city bodies with approval authority from denying needed housing projects, either through a "deemed approved" mechanism that limits the ability to deny or condition a project until RHNA goals are achieved, or by giving up approvals to a regional permitting authority that would come into play if local governments are not approving projects in compliance with their RHNA requirements. Special focus should be placed on PDAs, where dense, affordable housing proposals often face significant opposition from within the community. If a myriad of local zoning, fee, and other policies are preventing housing from coming to market, this will be demonstrated by a failure to produce the RHNA obligation. That failure would trigger a "deemed approved" or regional oversight hearing body to intervene.

It costs an average of $38,000 to build a single underground structured parking space in San Francisco.[34] When access ramps are included, a parking space needs 330 square feet of valuable real estate. Many new developments are required to build as many as four parking spots per unit. New regional policies must part from the outdated thinking that new homes, particularly urban infill transit-oriented development, must have minimum onsite parking requirements. Policymakers should review and seek to reduce or eliminate minimum parking requirements for all multi-family new construction within PDAs.

GOAL 3: *Find new mechanisms to fund and/or subsidize infrastructure development and housing construction. It will not be possible to meet the region's Plan Bay Area targets without such tools.*

STRATEGY: ***Establish powers to acquire funding and assemble the necessary land for development in urban areas and in Priority Development Areas.*** *With the loss of over 400 Redevelopment Agencies (RDAs) across California in 2012, it was estimated that California's affordable housing developers lost $1 billion annually in funding to build much needed housing.[35] RDAs also had the power to assemble the sorts of small and oddly shaped parcels that are common in urban areas and create one developable plot of land. Absent that power, it becomes more difficult for developers to acquire land to develop in urban areas and in Priority Development Areas.*

IMPLEMENTATION ACTIONS:

Replace the tools lost with the dissolution of Redevelopment Agencies, by creating local agencies that allow for land assemblage, the power to collect tax increment to fund housing and blight remediation, and the authority to issue tax increment bonds. These agencies must have strict fiscal controls and a clearly defined list of projects that qualify for funding. These agencies should also have the ability to fund school infrastructure to meet the educational demands that additional housing places on communities. The authorization for Community Revitalization and Investment Authorities under the recently signed Assembly Bill 2 is a good example of a partial replacement for Redevelopment Agencies. It allows local governments to use tax increment revenue to improve infrastructure, assist businesses, and support affordable housing in disadvantaged communities that meet specific threshold conditions.

The formation of Enhanced Infrastructure Financing Districts (EIFDs) will be beneficial in replacing a portion of Redevelopment Agency funding; the establishment of these districts must be fast-tracked within the region by educating governmental entities of their uses and benefits. EIFDs have the power to:

Adopt an infrastructure financing plan, by act of a county or city legislative body, instead of requiring a vote by two-thirds of the electorate;

Issue bonds for a period of up to 45 years, secured by tax increment financing, contingent on a vote of 55 percent of the electorate instead of two-thirds;

Serve a broader range of purposes than traditional Infrastructure Financing Districts (e.g., funding transit priority projects, low- and moderate-income housing, environmental remediation, etc.).

Expand funding for the State Infrastructure Bank and a new regional infrastructure investment authority (as detailed in the section titled Securing the Future through Critical Regional Infrastructure Investment) to fund more projects, including those that incorporate housing.

Incent or empower local government jurisdictions to assemble and bank developable land for housing. Assembled parcels can facilitate the development of multi-family projects and enable the region to more efficiently meet its RHNA targets.

In summary, given the depth of the region's housing shortage, even if the many recommendations above were adopted in their entirety, the region would still not get to the point where the amount of new units produced would be sufficient to stabilize home prices or bring them down to a level where they would be affordable to the majority of Bay Area residents. For that to happen, there needs to be a paradigm shift in how new housing is planned and permitted in the Bay Area. This would likely require limiting the ability of local jurisdictions to deny new housing starts if they have not met or are not on track to meet their RHNA obligations. That may take the form of a regional "by right" or ministerial approval process for all plan-compliant projects or the creation of a regional review body that has approval powers and is free from parochial politics and pressures. Crises require bold actions. Without them, things will continue to get worse.

3 Form the Bay Area Regional Economic Development Partnership

CONTEXT AND GOALS

The Bay Area's regional governance structure consists of four pillar agencies, each with a distinct mission and authority. Transportation is handled by the Metropolitan Transportation Commission (MTC); land use by the Association of Bay Area Governments (ABAG); air quality by the Bay Area Air Quality Management District (BAAQMD); and the bay front by state agency San Francisco Bay Conservation and Development Commission (BCDC). Each aims to maintain a regional perspective, given the Bay Area's interconnected transportation, housing, infrastructure, and workforce needs. However, sustaining the region's economic competitiveness is not central to the planning efforts and decision-making of any of these regional agencies, the business community is largely uninvolved, and local leaders have no formal forum to engage in discussions on the economy and job growth at a regional level.

If the Bay Area were a country, its economy would rank 23rd in the world. The region's robust innovation economy facilitates the exchange of ideas and collaboration within the Bay Area as well as with other innovation hubs in the world. While the regional economy is currently very strong, the next downturn is around the corner. Greater economic resiliency can help soften the blows of downturns, and it can be achieved through collaborative regional action that identifies and supports the development of new economic opportunities as they arise.

The Bay Area economic engine is powerfully self-propelled in many ways, but given the regional nature of the economy, labor market, housing needs, and infrastructure needs, as well as the quickening pace of change in the global economy, the Bay Area would benefit from a regional approach to competiveness and quality of life issues. Parochial interests (at the local level and even within regional agencies) can stunt the progress that is required to sustain economic vitality and grow broad-based opportunity in the region. There are many issues involved, including land use planning, workforce skills development, transportation planning and investment, environmental quality, communications infrastructure, and quality of life.

Unlike most economic regions that concentrate around a single major city, the Bay Area economy consists of three major cities, nine counties, and nearly 100 smaller cities. Each local government in the region has its own strategy for attracting and retaining jobs, with little coordination across the region and competition between jurisdictions at many times. Many of these local efforts have been successful in creating an environment more conducive to economic growth—as outlined in Section 2—though a more regionalized approach can serve to complement and strengthen these initiatives. A regional economic development body would also assist with the retention and expansion of existing regional employers and support the attraction of new employers—large and small—to the Bay Area.

A regional approach could support the development efforts of Bay Area communities with limited means to connect with economic opportunities in the region and help to align their efforts with the strategic needs of the region. A regional body could also assist localities with planning services and project financing. For example, the East Bay city of Richmond can greatly expand its economic potential with two new regional assets that are being planned—the Berkeley Global Campus at Richmond Bay and a new ferry service to and from San Francisco. The Global Campus will attract universities from around the world that are looking to establish a presence in the Bay Area, as well as private sector research partners. The region's transportation needs are growing, and ferries are an under-developed resource for moving more people across the bay.

Despite this significant potential, the City of Richmond has very limited resources for the planning and infrastructure investment required to best leverage the potential benefits to the city, the county, and importantly, the region as a whole. A regional economic development approach could facilitate more collective thinking within important regional corridors—in this case, Richmond acts as a connector to Marin County via the Richmond-San Rafael Bridge and to Solano County via the I-80 corridor. Similar cross-county corridors exist on I-580/I-680 in the Tri-Valley, along I-680 and I-80 between Solano and Contra Costa counties, and on the I-880 corridor between Alameda and Santa Clara counties.

The area around the Daly City BART station provides another example where regional support could translate into local and regional benefits. Currently, the land around the station is underutilized, but with planning and financing support from a regional body, the city could better leverage the area for greater economic benefit. It could also serve as a regional model for transit-oriented development.

The establishment of a regional economic development partnership in the Bay Area would target the following goals:

Promote faster and less costly parcel development, financing, and project delivery in the region.

Facilitate growth of Bay Area companies within the region and support the entrance of new companies.

Create strategies for the location of jobs in relationship to regional plans for transportation, housing, and workforce development.

Attract global businesses to locate within the Bay Area through effective communications and an initial point of regional contact.

STRATEGY

The current governance structure of the region lacks an agency dedicated first to the economy. A regional body should be created to focus on how to build and sustain the Bay Area's global economic competitiveness, with a focus on facilitating strategic business growth and job creation. While cities and businesses will continue to have their individual interests and perspectives, global and national economic competition is increasing between major economic regions. In this environment, a city-by-city approach is no longer adequate to ensure that the region's assets are effectively presented to potential external partners and that they are deployed to ensure the Bay Area's competitive advantage.

Examples of Regional Economic Development Organizations in California

Other regions in California and around the country have Economic Development Corporations (EDCs) that serve as platforms for strategic cooperation between government and business in order to promote economic competitiveness.

Within the state, best practices can be drawn from the **Los Angeles Economic Development Corporation** (LAEDC). LAEDC utilizes a regional—though single county—strategy that incorporates business assistance and attraction programs, economic research and analysis, real estate advisory services, trade and investment assistance, and public policy leadership.

A key feature of LAEDC is its subsidiary, the Los Angeles County Public Landowners Assistance Network (L.A. PLAN). L.A. PLAN forms public-private partnerships that both maximize the value of publicly owned real estate assets and advance the public sector's economic development and job generation priorities. It assists municipalities and other public entities throughout Los Angeles County, helping them to think more strategically about their real property holdings by

Matching underutilized public property and businesses looking to expand or relocate;

Developing a strategic asset management plan for publicly owned land parcels;

Implementing the strategic asset management plan through planning, infrastructure development, project management, and permitting assistance.

LAEDC also has a business-oriented program for site selection, linked to L.A. PLAN, which stands out as a model for public-private cooperation for economic development. LAEDC's services in this area range from assisting cities in planning for public lands to working with businesses to locate sites for development and the tax credits to finance them. These strategies have been successfully utilized to facilitate the creation of regionally significant industry clusters, for community revitalization purposes, and to speed development efforts that would have otherwise taken years to complete.

The **San Diego Regional Economic Development Corporation** (SDEDC) provides another useful example. SDEDC serves local companies by providing assistance with business expansion plans, organizing programs to help retain businesses, and advocating for policies that enhance the region's economic competitiveness. SDEDC is also actively involved in marketing the region, highlighting its workforce talent and quality of life, in order to attract new investment and new companies to the San Diego area.

CREATING A REGIONAL ECONOMIC DEVELOPMENT ORGANIZATION IN THE BAY AREA

While two other major economic hubs in the state, Los Angeles and San Diego, have regional organizations dedicated to advancing their respective economies, the Bay Area lacks such an entity. Consideration should be given to the establishment of a regional, public-private collaborative effort dedicated to advancing the Bay Area's national and global economic competitiveness. The organization, with the proposed name ***Bay Area Regional Economic Development Partnership***, would have three core missions: marketing the region to businesses and investors, creating a platform for ongoing engagement between business and government on regional economic priorities, and enabling the strategic development of public land.

Communicate the region's attractiveness to businesses and investors.

Undertake a communications effort to expand the global awareness of the Bay Area brand, its distinct assets, its diversity of locations for business activities, and its innovation ecosystem.

Provide global businesses with an initial point of contact in the region and information on the region's economy to make it easier for businesses to move to and operate within the Bay Area.

Create a platform for public-private collaboration on regional economic strategy.

Aggregate public planning and development goals, and convey that information to developers and businesses looking to expand their operations.

Help local governments create consistent business permitting guidelines across jurisdictions and set goals for streamlining development permitting processes.

Create ongoing dialogue between businesses, local government, key stakeholders, and regional agencies about changing needs and new strategies related to workforce, infrastructure, communications connectivity, and other issues. This would include linking with regional workforce development efforts development efforts as described in a later section.

Act as a regional clearinghouse on land availability, zoning, permitting, tax incentives, and local development plans throughout the Bay Area.

Assist businesses looking to expand within or enter the region through site selection services and consulting.

Build technical capacity within local Bay Area economic development efforts, and help communities combine public and private capital for projects when necessary.

Facilitate the unlocking of the potential of the Bay Area's public land.

Identify underutilized public property and potential businesses that could put those properties to greater economic use.

Coordinate and consult with local governments to target the best uses of public lands, which might include residential, commercial, or industrial uses.

Assist in planning and permitting for military base redevelopment.

IMPLEMENTATION

Economic development organizations can be effective in mobilizing collaborative action between business and government, but most such groups around the country are driven by a prominent city or county agency. The Bay Area's diverse character and nine counties bring added complexity to how a Bay Area regional organization is formed, governed, and funded.

ORGANIZATION AND GOVERNANCE OF A REGIONAL ECONOMIC DEVELOPMENT PARTNERSHIP

Most regional economic development entities today are part of a group of 380 federally designated Economic Development Districts (EDDs). These districts—composed of multiple local jurisdictions—have access to federal funding and are often part of a larger regional planning organization or regional council of governments. For example, the Puget Sound Regional Council in Seattle utilizes the Economic Development District designation to tackle regional issues in transportation, growth management, and economic development. Under the federal statute instituting EDDs, their governing bodies must contain at least one private sector representative and a simple majority of elected officials.

Economic Development Corporations provide a more flexible development model, as they are generally housed apart from their regional government partners. Across the country, a wide spectrum of EDC organizational structures exists, from public-private partnerships to quasi-governmental entities. At one end of this spectrum, the San Diego Regional EDC receives funding and direction from private sector members and a small group of public partners. On the opposite end of the spectrum, the New York City EDC operates much like a city agency while organized as a non-profit group. Between these two lies the Los Angeles EDC, which receives nearly half of its funding from private member sources and over one-quarter from the county and local cities.[36] While each of these three organizations has similar goals, their respective models provide distinct lenses through which to view economic development.

RECOMMENDATION FOR IMPLEMENTATION: For the Bay Area Regional Economic Development Partnership to have the broadest reach and an ability to utilize a wide variety of public policy levers, it should be organized as a public-private partnership separate from existing agencies. It could also apply for status as an EDD to access federal funding. In combining the business community's perspective on job creation with the public sector's ability to assist in the delivery of key services—such as transportation and workforce skills development—a Bay Area regional partnership can address economic issues on multiple fronts.

Given the Bay Area's combination of regional agencies that deal with housing, land use, transportation, and environmental issues, it is important that the functions of the Bay Area Regional Economic Development Partnership be placed appropriately within the existing structures—building off of existing expertise and not duplicating functions. Specifically, the Association of Bay Area Governments (ABAG), Metropolitan Transportation Commission (MTC), and Bay Area Council (BAC) all have interests in economic development, and each should play key roles in the formation of the partnership.

For the proposed public-private partnership model to be governed successfully, it must be composed of balanced interests from both the public and private sectors while maintaining a makeup that is truly regional. The governing commission should collaborate directly with MTC, ABAG, BAC, and the Governor's Office of Business and Economic Development, and should be formed as follows:

> Each Bay Area county's Board of Supervisors should appoint one individual to the governing commission of the Bay Area Regional Economic Development Partnership—a total of nine members. This appointment should be filled by someone who has strongly demonstrated a regional perspective.
>
> From the private sector, the Bay Area Business Coalition,[37] the voice of the regional and sub-regional business interests in the Bay Area, should appoint another eight members.

This makeup of 17 members would bring together the region's business community and the public sector to engage perspectives from across the region. To create a governance structure that reflects regional priorities and goals—as opposed to only local priorities—appointees should be active participants in economic development (from either a public or private sector viewpoint), with broad regional experience in business retention/attraction, workforce development, housing development, or infrastructure planning.

FUNDING A REGIONAL ECONOMIC DEVELOPMENT AGENCY

Linked to the organization and governance of a regional economic development agency is its funding model. Whereas other county- or city-specific EDCs have been created and funded through legislative action,[38] a Bay Area regional organization has no counterpart regional government entity with taxing authority to act as a funding source. Instead, a Bay Area agency could be funded through a combination of business partner contributions and innovative public funding streams, which might include:

Funding awards created by the state;

Regionally-pooled taxing mechanisms; or

Contributions from local governments.

A funding mechanism through state government could be beneficial in developing a regional economic development agency for the Bay Area and for other regions in the state. One model that could be applied in California comes from New York State, which created 10 Regional Councils in 2011 to develop long-term strategic plans for economic growth. The councils are public-private partnerships made up of local experts and stakeholders from business, academia, local government, and the non-profit sector. Employing a bottom-up economic development model, each council develops strategic plans with specific projects tailored to the region's unique strengths and resources.

To fund the projects included in each region's plan, New York has instituted a consolidated funding application that allows Regional Councils to use one application to apply for a menu of state funding available through grants and tax credits. Through the first four years of funding, the state has awarded nearly $3 billion for job creation and community development. In 2014, the state awarded over $700 million to 852 projects sponsored by Regional Councils. These projects range from funding for the construction of a nursing innovation lab and training center, to manufacturing facility modernization, to the redevelopment of vacant industrial sites.

A regional funding stream could also support the *Bay Area Regional Economic Development Partnership*. Existing Bay Area regional agencies do not currently levy any taxes, though the Metropolitan Transportation Commission does have authority to implement a gasoline tax within its nine-county jurisdiction. MTC and ABAG also receive ongoing revenues from federal, state, and local government for the development of regional projects. An economic development partnership could request and access a small portion of these funds based on specific project needs. Other potential sources of revenue on a regional scale could stem from vehicle registration fees, business licensing fees, bridge toll increases, or even a region-wide sales tax. New taxes to fund economic development are complicated by the need for voter approval and restrictions on allowed uses. However, a regional pool of money could be applied outside of state authority and would not be subject to state budget and appropriation cycles.

A local funding approach—similar to that utilized by LAEDC—would entail cities and counties contributing annually to the budget of the regional development partnership. This approach works in Los Angeles, because the cities and county are potentially able to recoup those costs and see further benefits through tax receipts. With LAEDC bringing more business to the area, sales and property taxes levied at the county level should see commensurate increases with economic activity. While this model is appropriate for EDCs contained within a single county, a Bay Area regional economic development agency would have no means of distributing increased tax revenue to constituent governments without a new taxing tool.

To better accomplish the task of matching costs and benefits, a regional tax—such as a sales tax measure—would need to be established. Under a regional taxing structure, all cities could contribute to the agency's annual budget, and all would benefit through sales tax growth when applicable, similar to the model of tax increment financing. In this way, participating local governments could share in the benefits brought about by the economic development partnership even if the distribution of projects and business openings is not even across every jurisdiction.

RECOMMENDATION FOR IMPLEMENTATION: For the Bay Area Regional Economic Development Partnership to be funded sustainably, a combination of local and state funding avenues should be explored. This model would produce a base amount of funding through business partner and local government contributions and would draw on a state-level financing structure that can facilitate large-scale project development.

This type of bottom-up approach—similar to that enacted in New York State—gives the state authority to award grants for implementation based directly on regional determination of the best course of action. If a similar model were implemented in California—marrying regional control with state funding oversight—it could act as a partial replacement for the redevelopment agencies that were dissolved by California's 2011 Budget Act. Prior to their dissolution, redevelopment agencies controlled approximately $5 billion per year in tax revenue to be used for affordable housing, transportation, and development projects.[39]

Funding can be bolstered by a statewide corporate income tax check-off, which would allow the state's corporations to voluntarily contribute resources to the state's economic development entities—including the Bay Area Regional Economic Development Partnership, as well as existing EDCs, such as LAEDC and SDEDC. This approach would allow economic development organizations to capture a small amount of funding from the businesses they are designed to assist. Legislation enabling this program can also incorporate new EDCs in regions of the state that currently do not have an organization filling this capacity—or make permanent the regional work already being done through the California Economic Summit process.[40] To track the effectiveness of this program, the state should develop a methodology for regional economic development organization to uniformly track job creation efforts.

4 Create an Adaptive Regional System for Workforce Development: Producing World-Class Skills and Expanding Opportunity

CONTEXT

The Bay Area has one of the most dynamic labor markets in the country today. The unemployment rate in all of the region's nine counties was below the statewide average of 6.2% in May 2015. In San Francisco, the unemployment rate was just 3.4% in the same month.[41] While the conversation around the Bay Area's workforce often focuses on technology companies in heavy competition for top technical talent, the region has a highly diverse economy, and employers across all sectors face challenges in finding workers with the skills they need.

As tools and industries change, jobs and the skills required for those jobs also change. Increasingly, these changes are creating mismatches between the skill sets of workers and those required by the region's employers. This is the case for growing technology companies as well as for established employers in the public and private sectors. The growing skills gap has major implications for middle-wage opportunities, where employers are challenged to fill available positions. Many sectors also face an aging workforce with large numbers of key employees nearing retirement, and the pipeline for skilled replacement workers is not sufficient.

The current models for training and retraining workers present a major challenge. According to California's Strategic Workforce Development Plan 2013–2017, "California's workforce institutions and problems are siloed." Career Technical Education (CTE) programs "are not linked into coherent career pathways," and, "California's system of basic skills education is failing most students."[42]

As a result of the disconnections across the diverse mix of educational systems, training facilities, and workforce development organizations, programmatic decision-making in the Bay Area takes place without a strategic approach focused around a regional vision. Coordination across education providers, employers, and Workforce Investment Boards (WIBs) is weak. The varied funding streams and grants from federal, state and local sources that flow into the education and workforce development space are siloed as well. As a result, few common agendas and no broad regional strategy can emerge.

Only a few workforce development efforts are informed by active collaboration with employers. For example, the East Bay Leadership Council has assembled a task force to strengthen the partnership between industry and education. At the high school level, the Linked Learning initiative combines rigorous academics, demanding technical education, and real-world experience to build the skills necessary for viable careers today. In a new initiative, the Bay Area Community College Consortium has expanded its previous role in regional career technical education curriculum approval to oversight of the state grants allocated to its 28 member colleges. The goal is to better meet regional employer needs while avoiding duplicative efforts in curriculum development and program offerings.

The Bay Area's labor market is regional, but current workforce development efforts are limited to specific places within the region. While employers can engage with community colleges and WIBs to address workforce gaps, these efforts often occur at minimal scale with one employer working with a single program. Particularly in the area of technical training, this lack of regional vision creates duplicative programming and gaps in the region's workforce investment programs.

In addition to challenges within the education and training system, the Bay Area's high cost of housing contributes significantly to the challenges faced by employers. This is the case for recruiting highly skilled workers coming from outside the region as well as for retaining employees currently in the Bay Area who have the ability to move to places with lower costs of living—either by changing employment or by transferring within their organizations. This makes finding and keeping talent in the Bay Area more challenging.

STRATEGIES

To address these issues, the Bay Area requires a workforce strategy that can quickly respond to changing skills needs in the labor market and, therefore, best position individuals for success and best support the viability and competitiveness of the region's employers.

STRATEGY #1: *Establish the Bay Area Collaboration on Workforce Development*

Given the pace of change in the skills employers need and the realities of the geographic scope of the region's labor market, the Bay Area should establish a regional public-private collaborative effort around workforce development. This collaboration can create an ongoing dialogue between the region's employers and the education community about changing workforce needs and how best to deliver the necessary training to Bay Area workers.

Employers are on the front edge of recognizing changing workforce needs. Sometimes these changes are particular to a specific industry, but in most cases similar shifts in needs are taking place across sectors.

Regional collaboration will create a better understanding of how to span the skills gap in the region. Synergies across sectors can be identified, relevant curricula can be collaboratively developed among employers and education and training organizations, and facilities can be shared. The ongoing feedback loop between employers and educators can build efficiencies in the labor market and training systems. It can also help develop career pathways within and across sectors, providing greater seamlessness for workers to move across different sectors with qualifications that translate more easily.

The Bay Area Collaboration on Workforce Development should have three central goals:

Create vital regional feedback loops.

Provide public education and inform policy advancement.

Improve resource alignment.

Each goal is outlined below along with concrete actions for implementation.

Create Vital Regional Feedback Loops

A systematic approach to workforce development would provide vital feedback loops to job seekers, students, educators, trainers, and other stakeholders, enabling highly adaptive and cost-effective planning for competency development programs. Some programs must be built to address unique or one-time needs. Others could be developed with a highly evolutionary framework that would allow for continual adjustment driven by the changing needs of employers.

The regional workforce collaboration would target the following tasks on an ongoing basis:

- Identify common areas of needed skills among Bay Area employers.
- Determine what skills development would be feasible for current workers, in order to "upskill" in their current jobs, and how this training could be efficiently developed and delivered region-wide in a collaboration among employers and educators.
- Develop career pathways within and across sectors that will enable workers to move across different sectors, and establish standardized skills qualifications to facilitate this movement.
- Determine what specific training should target earlier stages of the educational and training pipeline and how employers can help shape this curricula in collaboration with K–12 schools, community colleges, and other institutions.

ACTION: *Incentivize private sector engagement in regional workforce development efforts.*

To better leverage public resources and improve the efficacy of workforce development programs, public funding models for workforce development need to better reflect the reality that labor markets are regional. The governor, legislators, and relevant state agencies can incentivize regional collaboration through workforce development funding programs, such as the Career Technical Education Incentive Grant Program, which spurs partnerships between school districts, colleges, and business.

The business community needs to play a leading role in regional collaborative workforce efforts and should be eligible for public funding to develop and manage such cooperative systems. Funding could then be made available to businesses willing to offer apprenticeships, internships, or training programs themselves. Incentive funding should also be available to businesses that are willing to provide faculty development opportunities that would increase the quality and relevance of career technical education curricula. Typically, attempts to involve the business community in the workforce system have tended to be limited in scope and not sustainable. Incentivizing business to engage and stay engaged will benefit education programs, training providers, and the regional and state economies.

Provide Public Education and Inform Policy Advancement

The gathering and sharing of information related to changing employer needs and the collaborative development of curricula for the ongoing adaptation of the region's workforce is vital for success. The public must be made aware of how the demand and course content is changing for different degrees, certificates, credentials, and career pathways and what new opportunities are emerging. This is also the case for apprenticeships, internships, and other opportunities for career advancement.

The Bay Area needs a regional resource for the following:

Ongoing mapping and public education on changing workforce needs in the region based on employer engagement and economic analysis;

Accessible analytic resources to track and communicate workforce trends in the region.

ACTION: *Develop and maintain a regional web-based resource for communicating workforce trends and training opportunities.*

The regional workforce collaborative should develop an accessible web-based resource for communicating information on industry, occupational, and other workforce trends. Labor market information would include feedback from ongoing employer engagement regarding projected needs for identified knowledge and skills in the workforce. The online tool would also provide a resource to identify training opportunities in the region for new workforce entrants as well as seasoned workers seeking new skills.

The web-based resource would provide educators and trainers with the information they need to align programs with employer needs and provide workers, students, and families with the information they need to make wise choices about careers and career pathway programs. This resource could also help employers make site selection decisions.

Improve Resource Alignment

Creating greater alignment across workforce development efforts—through collective actions to identify regional workforce issues, strategic solutions, and metrics for outcome measurement—will allow public and private sector stakeholders to maximize their efforts in a more coordinated manner across the region. Greater alignment will create greater transparency for individuals, employers, and program administrators about the region's training opportunities. Transparency and coordination can improve cost efficiency, as unnecessary duplication of programming can be reduced or eliminated and more resources can be directed to improving and expanding the upskilling of current employees.

ACTION: *Develop and implement a plan at the state level for better alignment across workforce-related programs, including mechanisms to share education and workforce data.*

Relevant state agencies and departments should catalog all state and federally funded programs related to workforce development and then require that coherent regional systems be formed from those multiple existing programs. Some momentum stems from the recent reauthorization of the federal Workforce Innovation and Opportunity Act (WIOA), which requires states to enhance coordination across workforce development providers through a unified strategic plan for core programs.

The current fragmented and piecemeal approach to workforce development is counterproductive and results in redundancies and inefficiencies. California has 15 community college economic development regions, 49 workforce investment boards, multiple adult education and career technical education programs, and other ad hoc groupings for programs such as the federal Trade Adjustment Assistance Community College and Career Training Grant Program (TAACCT) grants and the state Career Pathways Trust grants. Each of these programs does have its strengths, though regional collaboration would allow these providers to integrate the best practices from around the region into their programs. The many overlapping regional agencies and coalitions create significant duplication and inefficient use of resources, and greater regional coordination would allow them to combine, where practical, to create programs that more directly address employer and worker needs. Additionally, employers seeking to connect with a coherent system find the current ecosystem logistically challenging and lacking in sustainability.

STRATEGY #2: *Build a World-Class Workforce in the Bay Area*

In addition to the Bay Area Collaboration on Workforce Development proposed above, much can be done to support the development of world-class talent in the Bay Area. While the region benefits from many top schools, many more struggle with limited funding and high proportions of students from disadvantaged families.

For decades, the Bay Area has benefited from its ability to attract the world's top talent to its universities, companies, and research centers. However, as opportunities improve in other places in the world and housing costs become a bigger barrier to recruitment in the Bay Area, investing in the development of talent across all skill levels at home becomes that much more important.

To do this requires a systemic approach and a longer-term view that emphasizes high-quality early childhood education, universal STEM programming, and stronger professional development for K–12 teachers. Best practices in education and training—whether developed by employers or educators—should be explored and widely published. This, combined with establishing common success metrics and curriculum standards, provides a framework for the accountability necessary for a higher return on investment at all levels of education. The following state policy actions can help to accomplish this goal.

ACTION: *Realign incentive structures related to workforce development funding.*

Creating new incentives for all stakeholders involved in the workforce development system will go far in addressing workforce needs. There is ample opportunity for aligning incentives across educational institutions, students/workers, and employers.

California funds many workforce and community college programs on a per student basis, meaning these programs have little incentive to align their offerings with the needs of employers. For example, courses in computer-aided design (CAD) may do a better job of fulfilling unmet industry demands when compared to other courses that may have existed for a long time, but community colleges have no incentive to expand their CAD course offerings. Other states provide differential levels of funding depending on the cost of the program and the degree to which it meets industry demand.[43] By realigning the state funding structure, incentives can be created for college and vocational programs to adjust curricula more quickly to match the skills needed by employers.

Even with this incentive on the supply side, students may need a push to actually enroll in these career pathway programs. More state funding dollars can be set aside for tuition and fee reimbursements to students who successfully complete programs in areas of critical skills needs.

Tax incentives for employers that participate in apprenticeship programs—especially in manufacturing—can be useful in bridging the skill and generational gaps going forward. Funding options should also be considered to better integrate industry professionals who possess significant experience into career technical education instructional programs.

ACTION: *Allow community colleges to offer multiple four-year degree programs.*

In early 2015, California community college officials gave approval for 15 community colleges to offer four-year degree programs—joining more than 20 other states in expanding the degree-granting ability of community colleges. It is estimated that these new programs could provide thousands of workers in technical fields at roughly half the cost of attending a California State University campus,[44] creating new opportunities for more students to enter the workforce with a four-year degree. However, each district is limited to just a single four-year degree program, significantly diluting the potential impact of broadening community college offerings. Where appropriate and with proper evaluation, community colleges should be allowed to offer multiple four-year degree programs in order to best match the advancing workforce needs of local industries.

5 Drive Greater Efficiency in the Bay Area's Transportation System

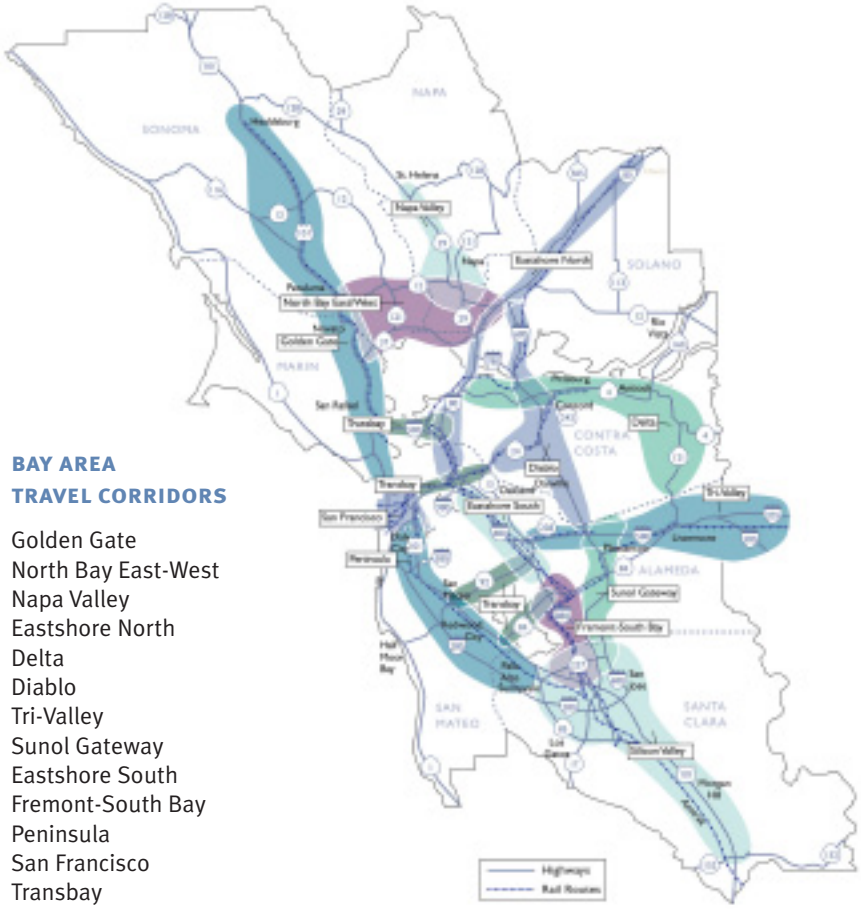
Context and Goals

The transportation system serves multiple economically significant functions—it moves people to their places of work every day and is the network by which goods are moved through supply chains to their end users. If the system serves these functions well, it will enhance economic activity and facilitate a robust economy. When regional transportation systems struggle to seamlessly move goods and people, economic activity is hindered and productivity is lost.

The Bay Area's current transportation system is increasingly plagued by congestion and delays, creating lost time for Bay Area workers and lost dollars for the region's businesses. While congestion is closely linked to strong economic activity—which the Bay Area has exhibited since the Great Recession—the region's transportation systems are overcrowded and becoming a limiting factor for the Bay Area's future economic prosperity. Vehicles in key highway corridors leading to job centers in San Francisco and Silicon Valley are at a near standstill during rush hour. Trucks carrying goods from the Central Valley dot the region's gateway corridors, but are often traveling in heavy traffic. And the region's two major commuter railways—BART and Caltrain—are carrying "crush loads" and confronting maintenance issues at a growing rate. While gridlock continues to worsen, Bay Area transportation operations and improvement remain driven more by adherence to past practice, outdated agency boundaries, and institutional convenience than by a customer-focused imperative with urgency to improve mobility.

Ambitious action and investment in the Bay Area's transportation system is required to position the region for success going forward. Long-term, large-scale transportation solutions—funding mechanisms and specific projects—are highlighted in the section titled Securing the Future through Critical Regional Infrastructure Investment. These ambitious strategies would have significant positive impacts on the Bay Area's global competitiveness and prosperity, but they require long timelines.

In the short and medium term, there is much that can be done to mitigate the growing pressures on the region's transportation system and vastly improve efficiencies. The policy recommendations outlined here focus on near-term opportunities for regional planners to exercise greater leadership in bringing increased efficiency to the transportation network. These recommendations target three key overarching goals. Each goal includes a metric for tracking success. The strategies and actions detailed below are interrelated and will impact more than one defined goal.



BAY AREA TRAVEL CORRIDORS

Golden Gate
North Bay East-West
Napa Valley
Eastshore North
Delta
Diablo
Tri-Valley
Sunol Gateway
Eastshore South
Fremont-South Bay
Peninsula
San Francisco
Transbay

Source: Metropolitan Transportation Commission

As an innovation hub, the Bay Area has an opportunity to leverage cutting-edge technology to improve the performance of our existing infrastructure – such as creating new ways to leverage regional transit systems, carpools and metering.

– Paula Downey

President & CEO, CSAA Insurance Group

GOAL 1: *The Bay Area's transportation system should provide effective regional transportation that enlarges the labor market available to employers and the range of employment opportunities available to workers.*

METRIC 1: *Increase access to jobs within a 45-minute commute.*

One critical function of transportation is to enable efficient labor markets by connecting employees to jobs. A more efficient transportation system allows a worker to commute a greater distance in a given period of time, gaining access to a larger universe of potential jobs. Similarly, a more efficient transportation system effectively increases the available labor market present to an employer, providing greater ability to recruit workers with necessary and valuable skills.

GOAL 2: *The regional transportation system should provide reliable travel times that enhance productivity.*

METRIC 2: *Improve travel time reliability on highways and regional transit by reducing the peak period regional buffer time index by 20%.*[45]

The travel time reliability of the transportation system affects business productivity. When travel times are unreliable, workers will occasionally be late for work, miss meetings, and add unproductive buffers to their travel times. In turn, employers will be deprived of person-to-person collaboration time, and meetings will be rescheduled or duplicated due to absences. Conversely, when travel times are reliable, employees and employers can make more productive use of their time.

GOAL 3: *The regional transportation system should provide reliable inter- and intra-regional goods movement.*

METRIC 3: *Reduce travel time spent in congestion by 20% to increase travel time reliability in key goods movement corridors.*

Movement of goods is a critical, often underappreciated, component of the transportation system that is a real economic driver. The MTC Regional Goods Movement Study Update 2009 reports that 40% of the Bay Area economy is in sectors and activities that are reliant upon goods movement.[46] Over 80% of goods are moved by truck on highways and roads, primarily on the same highways that are heavily congested with commute traffic.[47] Slow and unreliable travel times impose direct costs on movers of goods and their customers. Ultimately, higher goods movement costs and less reliable goods movement travel times have two harmful effects. For sectors such as local-serving retail that are tied to place, the result is higher costs to consumers and lost sales (as was the case with the port slowdown in 2015). For sectors such as manufacturing and distribution that are not necessarily tied to place, inefficient goods movement depresses the attractiveness of the Bay Area as a place to invest and do business.

STRATEGIES AND ACTIONS

STRATEGY #1: *Corridor and System Investment*

As the Bay Area population continues to grow, and travel times and distances grow with it, continued investment is needed to expand transportation capacity and improve operational performance. Efficient regional transportation corridors are of particular economic importance, because labor markets and economic activity occur at the regional level, irrespective of local jurisdictional boundaries. Forty-seven percent of commutes in the region cross at least one county line, and this share has increased over time.[48] This dynamic makes the current transportation governance structure—organized by county lines—incongruous with meeting the demands of a regional system.

The Metropolitan Transportation Commission has identified 14 key travel corridors within the Bay Area. Ten of these corridors cross at least one county line, while just four—San Francisco, Highway 4 (Delta), Eastshore South, and Highway 29 (Napa Valley)—are contained within a single county. One of these corridors, the Tri-Valley I-580 corridor, explicitly extends all the way to Tracy, outside of the official nine-county Bay Area region, in recognition of the reality that many Bay Area workers live in San Joaquin and Stanislaus counties due to their more affordable housing. This dynamic also exists in two other corridors, with large numbers of workers commuting into the Bay Area from the Sacramento region on the Eastshore North corridor and from San Benito and Santa Cruz counties on the Silicon Valley corridor.

These corridors also represent the foundation of the intra-regional goods movement trucking system. Additionally, inter-regional goods movement that facilitates trade with other domestic regions and foreign nations is principally served by two major corridors: Interstate 80 through Alameda, Contra Costa, and Solano counties, and Interstate 880/580 from Alameda County into San Joaquin County.

Improving transportation performance on these commute and goods movement corridors requires that an entire corridor be treated as a system, with a consistent operational vision and a set of mutually consistent and reinforcing investments. Planning and project funding, however, primarily occurs at the county level, overlaid by the planning and funding decisions of individual regional transit agencies. This structure may have been sufficient in an earlier time when labor and economic markets operated at a smaller scale, largely confined within a given county, and when the regional highway and transit system had excess capacity. For decades now, this has not been the case. Transportation planning and funding responsibility and authority can be reformed, through the actions below, to align with the needs of transportation system users.

ACTION 1.1: *Program funds to implement corridor operation and investment plans.*

The Regional Transportation Plan (RTP)—which identifies and funds projects of regional importance—should have a strategic priority to direct investment toward implementing corridor improvement strategic plans that provide a consistent approach and mutually reinforcing strategies along the full length of a corridor and across all of its jurisdictions. For each identified travel corridor, constituent counties and MTC should develop a Corridor Operation and Investment Plan. For the three corridors that serve inter-regional travel, the corridor plan should include the counties and regional transportation agencies outside the MTC region. These plans would be a counterpart to county transportation plans, with a focus on the highway, arterial, and transit systems that service the corridor.

Collaborative development of a corridor plan will ensure that operational and investment strategies are consistent and mutually supportive, and it would also provide an avenue for planning strategies to be developed with jurisdictions outside the nine-county Bay Area. The RTP should give funding priority to those projects included within corridor plans. Implementation of a corridor planning requirement can be reached by agreement among affected jurisdictions, by MTC policy, or by a state law.

ACTION 1.2: *Unite regional transit.*

The Bay Area has 26 separate transit agencies, each with ownership of a service territory defined long ago for political reasons. In many cases, these boundaries represent local transit needs, but—with the exception of a very small number of regional operators—they were not intended to and do not represent or serve the regional transit market. In response, operators have cobbled together an ad hoc regional "system" through arduously negotiated inter-operator agreements. Between these ad hoc regional services and the small number of regional operators, the Bay Area appears to have an extensive regional transit network; however, it is one that is rife with limitation. The network provides no system-wide coordination, inadequate ability to identify and fill regional gaps, narrow ability to optimize or coordinate competing services, underutilization of regional transit assets due to the imposition of competitive restrictions, and no coordinated branding or marketing. Interaction between regional services and local services is further complicated by this fragmentation; as a result, connecting between regional and local transit often requires two separate fare payments, inconsistent discounts, and excessive waiting time due to uncoordinated schedules.

To best identify and most efficiently coordinate regional transit, MTC has the opportunity to exhibit regional planning leadership by engaging more directly with local planning processes and utilizing its transit funding for key connection projects. Every four years, each public transit agency in the Bay Area prepares a Short Range Transit Plan (SRTP). The SRTP lays out the agency's performance goals, operational plans and financial capacity for the upcoming 10 years and is used as an input to regional transportation planning and programming activities. In order to ensure that regional transit services are appropriately coordinated, and that promising transit markets that cross operator boundaries are served, the Metropolitan Transportation Commission should engage in the SRTP processes for all regional transit services in the Bay Area, with the goal of preparing one short range plan for the entire region. A more integrated approach would provide a heightened degree of regional planning for the transit system, which otherwise could only be accomplished through transit agency consolidation.

STRATEGY #2: *Leverage and Improve the Existing Transportation System*

The Bay Area's extensive transportation system—comprising 51,000 lane-miles of highway, 42,600 lane-miles of local streets and roads, 364 miles of passenger rail track, and 4,332 transit vehicles—is the result of tens of billions of dollars of investment over many decades. However, these investments have delivered a system that is not equipped to handle the demands that a robust Bay Area economy places on it. The existing transportation system is not just over used; it is also under maintained, which negatively affects system performance and creates large financial obligations in the future. While it is necessary to continue to invest in system expansion, it is also necessary to begin to focus equally on getting more value from the existing system through maintenance and incremental investments.

ACTION 2.1: *Invest in the most productive transit routes.*

The Bay Area operates, at substantial cost, a very extensive public transit network, but it still struggles to accommodate growing ridership. While several recommendations presented in this document will help create a more customer-friendly transit network, investing to meet existing demands can help to attract greater ridership. In 2013, Plan Bay Area estimated a $46.5 billion expense to rehabilitate and replace worn out transit equipment, a price tag that exceeds the financial ability of the region to fully absorb.[49] Transit capital replacement funds should be targeted at the transit systems and routes that carry the most passengers and that provide the greatest congestion relief for parallel roads. Funds can be further targeted at vehicles and equipment that will ensure on-time performance and relieve overcrowding.

ACTION 2.2: *Use regional funding for adaptive ramp metering.*

A substantial amount of highway congestion is created by vehicles merging into heavy freeway traffic—even where there is sufficient highway capacity for additional vehicles. Ramp meters are a simple, inexpensive, and proven solution, and MTC and county agencies are completing a regional effort to fully deploy ramp metering. Traditional ramp meters that have been installed in the Bay Area use controllers with fixed timing, allowing cars to enter at a fixed rate, regardless of whether highway traffic is heavy or light. Switching to adaptive controllers on ramp meters will substantially improve system performance at minimal cost. MTC should set aside regional funds in the RTP to upgrade all ramp meters to adaptive controllers and should require that all Corridor Operation and Investment Plans include local agreement to upgrade controllers.

ACTION 2.3: *Use regional funding for advanced arterial signalization.*

Local arterial streets are the backbone of the local transportation system for auto and bus trips, often connecting several jurisdictions. Arterial operation is often sub-optimal, however, because traffic signals are poorly timed—both within and across jurisdictions—and traditional signal controllers have limited functionality. Advanced traffic signal controllers can be networked together and receive real-time inputs from traffic monitoring equipment, allowing them to dynamically optimize signal timing across an entire arterial network in response to current conditions. In order to spur advanced signalization efforts, MTC should set aside a pot of regional funds for this purpose in the RTP and should allocate the funds competitively to sub-regional consortia of local governments.

STRATEGY #3: *Move More People on Highways*

Strategic investments in highway capacity and the use of adaptive ramp meters will increase the vehicle throughput of highways, but additional efforts to facilitate higher vehicle occupancy levels can increase the number of people being moved. The biggest opportunity is to encourage carpools, vanpools, regional express buses, and employer shuttles. Fortunately, employers and entrepreneurs have proactively stepped forward to optimize the customer interface for ridesharing through, for example, custom-routed private shuttles and dynamic ridesharing applications. Public transportation agencies can take advantage of these private initiatives and, at relatively little expense, create conditions that will allow ridesharing to flourish.

ACTION 3.1: *Expand Park and Ride.*

Park and Ride lots at convenient locations near busy commute freeways are at capacity, limiting the opportunity for commuters to leave their single-occupant vehicles and join a higher occupancy vehicle. MTC should ensure that all Corridor Operation and Investment Plans evaluate and prioritize opportunities to create new Park and Ride lots, and Caltrans should issue a policy that makes Park and Ride a priority use of vacant or underutilized Caltrans property.

ACTION 3.2: *Increase carpool lane enforcement.*

The Federal Highway Administration has alerted Caltrans that many California carpool lanes are over capacity and are not providing expected travel time-savings to users. In the Bay Area, 52% of carpool lane miles failed to meet federal performance standards for traffic speed in the second half of 2013.[50] One way to address this problem is to make sure that ineligible vehicles are not using carpool lanes. Caltrans should invest in new technologies and systems to significantly increase enforcement against carpool lane violators and should report quarterly to the MTC Operations Committee on the performance of Bay Area carpool lanes.

ACTION 3.3: *Revoke permission for hybrids to use congested carpool lanes.*

In order to encourage adoption of hybrid and electric vehicles, California allows a limited (but large) number of these vehicles to use carpool lanes even when carrying only one occupant. On congested carpool lanes, these hybrid and electric single-occupant vehicles contribute to congestion and erode time savings, without contributing to higher person throughput. State law specifies that Caltrans can revoke permission for these hybrid and electric cars to use congested carpool lanes, but it has yet to do so. If Caltrans does not act, the Legislature should delegate the authority to MTC (and to the respective regional transportation agencies in other parts of the state).

ACTION 3.4: *Increase occupancy requirement and transition to express lanes.*

Where all other strategies—violator enforcement, elimination of hybrid and electric vehicles—are insufficient to maintain a substantial travel time advantage for carpool lane users, Caltrans' final tool is to increase the required occupancy level (for example, requiring three passengers in a carpool rather than two). Caltrans should do so, as needed. If Caltrans does not act, the legislature should delegate the authority to MTC. Where excess capacity is expected after increasing the occupancy requirement, MTC and Caltrans should simultaneously convert to express lane operations that allow other vehicles to pay a toll to use the lane.

STRATEGY #4: *Innovation and Customer Focus*

For at least the past half century, transportation infrastructure and public transit services have been planned, funded, delivered, and operated by government agencies, through processes developed and overseen by government agencies. In many ways, this has been an extraordinarily successful system, connecting urban areas with highways and their neighborhoods with streets and transit. As the transportation challenges of urban areas have become more complex and more difficult and expensive to address, however, and as the economy and employment market—and, hence, commutes—have become more dynamic, the limitations of this unresponsive "central planning" model of transportation are becoming inescapable.

A simple project to add a new express lane by restriping within the existing highway footprint can take eight to 10 years. More complex projects involving structures or earthwork, such as reconstructing an interchange, can easily take 15 years from conception to opening. While the Bay Area has an expansive public transit network, travelers are forced to fit their trips into the routes, fare structures, and transfer policies of over two dozen independent operators, each with its own protected operating territory. Public bus transit is still primarily provided with large buses operating on fixed routes, resulting in low-mile-per-gallon vehicles often hauling empty seats, while travelers find that services that actually meet their needs are not available at the right time or on the right route.

An alternative experience, reflecting a responsive, customer-centric transportation system, is represented by private services such as Lyft, Uber, and Sidecar. These systems are designed not to accommodate the strictures of decades-old government planning and funding programs, but rather are relentlessly focused on understanding and meeting the needs of their customers, even as those needs change from moment to moment. These mobility services help to fill in gaps in the region's transportation system, for example by bridging the last mile when taking public transit. Public transit must confront the challenge of becoming more customer-focused so as to best leverage the public investment in this infrastructure. The region's public transit system needs to identify its unique value proposition and embrace opportunities for collaboration with private services.

ACTION 4.1: *Create an innovation incentive program.*

In order to promote and facilitate the adoption of innovative strategies to improve transportation performance, MTC should set aside funding in the Regional Transportation Plan for a competitive Innovation Incentive Program. Funds should be used to make grants to Bay Area transportation agencies that propose the most compelling, creative, and promising applications of technology, incentives, entrepreneurism, and market mechanisms to improve transportation performance. For example, grants might address some of the following:

- Reducing the cost, and improving the speed, comfort, and convenience, of public transportation services in suburban or rural areas that are costly and difficult to serve through fixed-route transit;
- Use of data to tailor transportation services to customer needs and desires;
- Incentives that encourage travelers to voluntarily change their behavior in ways that benefit system performance;
- Leveraging entrepreneurial providers of transportation information and services;
- Challenge grants, similar to the US Department of Education "Race to the Top," that identify a desired outcome and that grant an award to the agency that has adopted the most creative and effective reforms to achieve that outcome.

In order to ensure that funded projects both reflect the most creative implementation of technology and innovation and can be implemented by the recipient agency, MTC should assemble a review panel comprised of half technology and innovation practitioners and half public agency representatives to judge applications based on customer-facing goals, such as throughput and customer experience. In order to drive timely adoption of innovation, funds should be front-loaded to the first 10 years of the Regional Transportation Plan, rather than being spread thinly across the entire 25-year period.

ACTION 4.2: *Establish systematic approaches for deploying new technologies and practices in transportation systems.*

To best prepare for the future, the Bay Area would benefit from a more coordinated and seamless planning effort across jurisdictions, which can produce rule changes, update operating metrics, and support pilot projects for efficiency-increasing technologies and practices. Such an ongoing regional effort can drive greater efficiencies in planning for smart transportation.

The rapid uptake of electric vehicles in the Bay Area is already creating the need for new infrastructure in the form of charging stations and integration with electric grid operations. Planning has begun for the next wave of transportation technology, as self-driving cars are being pioneered and tested in the Bay Area. A movement toward a usage fee based on vehicle miles traveled—as discussed in the recommendation Securing the Future through Critical Regional Infrastructure Investment—would also utilize new technologies and require new planning processes.

The Bay Area's infrastructure and public policy should better reflect this innovative spirit by supporting the testing and deployment of new transportation solutions. The North San Jose Transportation Innovation Zone, an 11-mile stretch of roadways that has been utilized as the testing ground for new transportation technologies, offers an example of how public agencies can provide opportunities for piloting new technology and practices to better meet users' needs and to help spur innovation and entrepreneurship locally.

APPENDIX A

MEETINGS WITH LOCAL BUSINESS AND ECONOMIC DEVELOPMENT GROUPS

Local leaders shared their best practices and innovative solutions that could be replicated by other communities the region. They also discussed what region-wide efforts could be useful for addressing the region's needs and growing economic prosperity.

San Mateo County – July 7, 2014

Cheryl Angeles – San Mateo Chamber of Commerce

Susan Barnes – Bay Area Entrepreneur Center

Rosanne Foust – SAMCEDA

Jim Cogan – Menlo Park Economic Development Director

Edesa Bitbadel – San Carlos Economic Development Manager

Sean Brooks – Redwood City Economic Development Manager

East Bay – July 22, 2014

Darien Louie – East Bay EDA

Stephanie Couch – Institute for STEM Education

Betsy Cantwell – Lawrence Livermore National Lab

Rich Seithel – Northern Waterfront

Randy Iwasaki – Contra Costa Transportation Authority

Mike McGill – East Contra Costa

Stephan Baiter – Workforce Development Board of Contra Costa

Keith Archuleta – East Bay Leadership Council

Kristin Connelly – Contra Costa Economic Partnership

John McManus – Cushman & Wakefield

Steve Tessler – East Bay Manufacturing Group

Janet Huan – Contra Costa Office of Education

Jessica Pitt – Design It! Build It! Ship It!

Art Dao – Alameda County Transportation Commission

Kristin Spanos – Alameda County WIB

Mike Heenemann – Port of Oakland

Matthew Davis – Port of Oakland

Ross Chittenden – Contra Costa Transportation Authority

Santa Clara County – July 23, 2014

John Lang – Chief Economist, City of San Jose

Edith Ramirez – Economic Development Planner, City of Morgan Hill

Christina Briggs – Economic Development Manager, City of Fremont

Greg Matter – Corporate Real Estate Strategy, Jones Lang LaSalle

Ruth Shikada – City Manager, City of San Jose

Chris Burton – Business Development Manager, City of San Jose

North Bay – July 29, 2014

Cynthia Murray – North Bay Leadership Group

Rob Eyler – Sonoma St. University

Ben Stone – Sonoma County Economic Development Board

Cecilia Zamora – Latino Council of Marin

Brian Ling – Sonoma County Alliance

Jonathan Coe – Santa Rosa Chamber of Commerce

Jennifer La Liberte – Napa Economic Development Division

Andy Fegley – Marin Association of Realtors

Coy Smith – Novato Chamber of Commerce

San Francisco – August 11, 2015

Ted Egan – Chief Economist, City of San Francisco

Joe D'Alessandro – President, San Francisco Travel

John Martin – Director, SFO

Mike Futrell – City Manager, City of South San Francisco

Dennis Conaghan – Executive Director, San Francisco Center for Economic Development

Solano County – September 17, 2014

Jim Spering – Solano County Supervisor

Dan Keen – City Manager, City of Vallejo

Jeremy Craig – Finance Director, City of Vacaville

David White – City Manager, City of Fairfield

Robert Bloom – Director, WIB of Solano County

Audrey Taylor – Competitive Ready

Steve Lockett – Associate Director, Venture Catalyst at UC-Davis

Sandy Person – Solano County EDC

APPENDIX B

STRATEGIC ENGAGEMENT PROCESS MEETINGS

Each meeting included members of the Bay Area Council as well as other regional leaders from the business community and public sector. Participants discussed what opportunities they saw for growing economic resilience and prosperity in the region. They identified the requirements for best leveraging these opportunities, and then they prioritized the actions they defined.

Bay Area Council Executive Committee Meeting – November 25, 2014

Teresa Briggs – Vice Chair, West Region and San Francisco Managing Partner, Deloitte LLP

Paula Downey – President and CEO, CSAA Insurance Group, a AAA Insurer

Mark Holman – Partner, A.T. Kearney Inc.

Mary Huss – Publisher, San Francisco Business Times

Robert James – Partner, Pillsbury Winthrop Shaw Pittman LLP

Janet Lamkin – California State President, Bank of America

James Levine – Managing Partner, Montezuma Wetlands LLC

John Martin – Director, San Francisco International Airport

Peg McAllister – Senior Vice President, Lee Hecht Harrison

Deborah Messemer – Managing Partner, KPMG LLP

Perry Pelos – Head of Commercial Banking, Wells Fargo & Company

Bay Area Council Economic Institute Board Meeting – April 2, 2015

Mark F. Bregman – Ph.D., Chief Technology Officer, NetApp

Hon. Keith Carson – Chairman (Alameda County Supervisor District 5), East Bay Economic Development Alliance

Michael Covarrubias – Chairman & CEO, TMG Partners

Christopher DiGiorgio – Chairman, Tech Museum of San Jose

Rosanne Foust – President & CEO (Redwood City Councilmember) , San Mateo County Economic Development Association

Jim Henry – San Francisco Market Managing Partner, PricewaterhouseCoopers LLP

Mary Huss – Publisher, San Francisco Business Times

Nanci Klein – Deputy Director, Office of Economic Development, City of San Jose

Ted Lempert – President, Children Now

Steve Levy – Ph.D., Director & Senior Economist, Center for Continuing Study of the California Economy

Peter A. Luchetti – Partner, Table Rock Capital, LLC

Jeremy Madsen – Executive Director, Greenbelt Alliance

Lenny Mendonca – Director, Emeritus, McKinsey & Company

Olga Perkovic – Senior Vice President, San Francisco Bay Area Metro Leader, AECOM

R. Sean Randolph – Ph.D., Senior Director, Bay Area Council Economic Institute

Ezra Rapport – Executive Director, Association of Bay Area Governments

Laura D'Andrea Tyson – Ph.D., Professor of Business Administration & Economics, Director of the Institute for Business & Social Impact, University of California Berkeley, Haas School of Business

BAC Housing Committee Roundtable – April 28, 2015

Christian Cebrian – Cox, Castle & Nicholson LLP

Tim Colen – SFHAC

Michael Covarrubias – TMG Partners

Rachel Flynn – City of Oakland

Bob Glover – BIA Bay Area

Kristen Hall – Perkins+Will

Amanda Monchamp – Holland & Knight LLP

Luther Jackson – NOVA Workforce Investment Board

Cynthia Kroll – Association of Bay Area Governments

Kristina Lawson – Manatt, Phelps & Phillips LLP

Jim Lew – Wells Fargo

Gregory McConnell – Jobs and Housing Coalition

Jeremy Madsen – Greenbelt Alliance

Lenny Mendonca – McKinsey

Matt Nichols – City of Oakland

Hon. Julie Pierce – City of Clayton

John Rahaim – City and County of San Francisco

John Rennels – Bay Area Rapid Transit District

Andrew Sabey – Cox, Castle & Nicholson LLP

Sonja Trauss – SF Bay Area Renters' Federation

Therese Trivedi – Metropolitan Transportation Commission

Deborah Tu – Signature Development

Tom Vanderheiden – Beneficial State Bank

Kyle Vinson – Goldman Sachs & Co.

Micah Weinberg – Bay Area Council Economic Institute

Ashur Yoseph – AECOM

Infrastructure Roundtable – May 6, 2015

Ignacio Barandiaran – Arup

Andrew Fremier – MTC

Jeffrey Heller – Heller Manus Architects

Carolyn Horgan – Blue & Gold Fleet

Liam Kelly – KPMG

Richard Kerrigan – Project Finance Advisory Ltd.

Peter Luchetti – Table Rock

Megan Matson – Table Rock

Stefan Parche – Amber Infrastructure

Ian Parker – Goldman Sachs

Fred Silva – California Forward

Stan Taylor – Nossaman LLP

BAC Transportation Committee Roundtable – May 12, 2015

Bruno Cohen – CBS

Jim Bourgart – Parsons Brinckerhoff

Caitlin Adair – Google

Jim Allison – Capital Corridor Joint Powers Authority

Chuck Morganson – HNTB

Derek Banta – UPS

Darlene Gee – HNTB

Emily Castor – Lyft

Galen Wilson – Goldman Sachs

Joshua Channell – HNTB

Stan Taylor – Nossaman LLP

Janikke Klem – Tech CU

Jeffrey Heller – Heller Manus Architects

Kyle Vinson – Goldman Sachs

Lina Bardovi – RidePal

Michael Conneran – Hanson Bridgett

Nile Ledbetter – SFO

Rahul Chandhok – San Francisco 49ers

Sandra Boyle – Cushman & Wakefield

Sara Gigliotti – Transbay Center

David Beaupre – Port of San Francisco

John Eddy – Arup

Steve Heminger – MTC

Val Menotti – BART

Chuck Morganson – HNTB

Jessica Stanfill Mullin – League of California Cities

Peter Meier – Paul Hastings LP

ENDNOTES

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