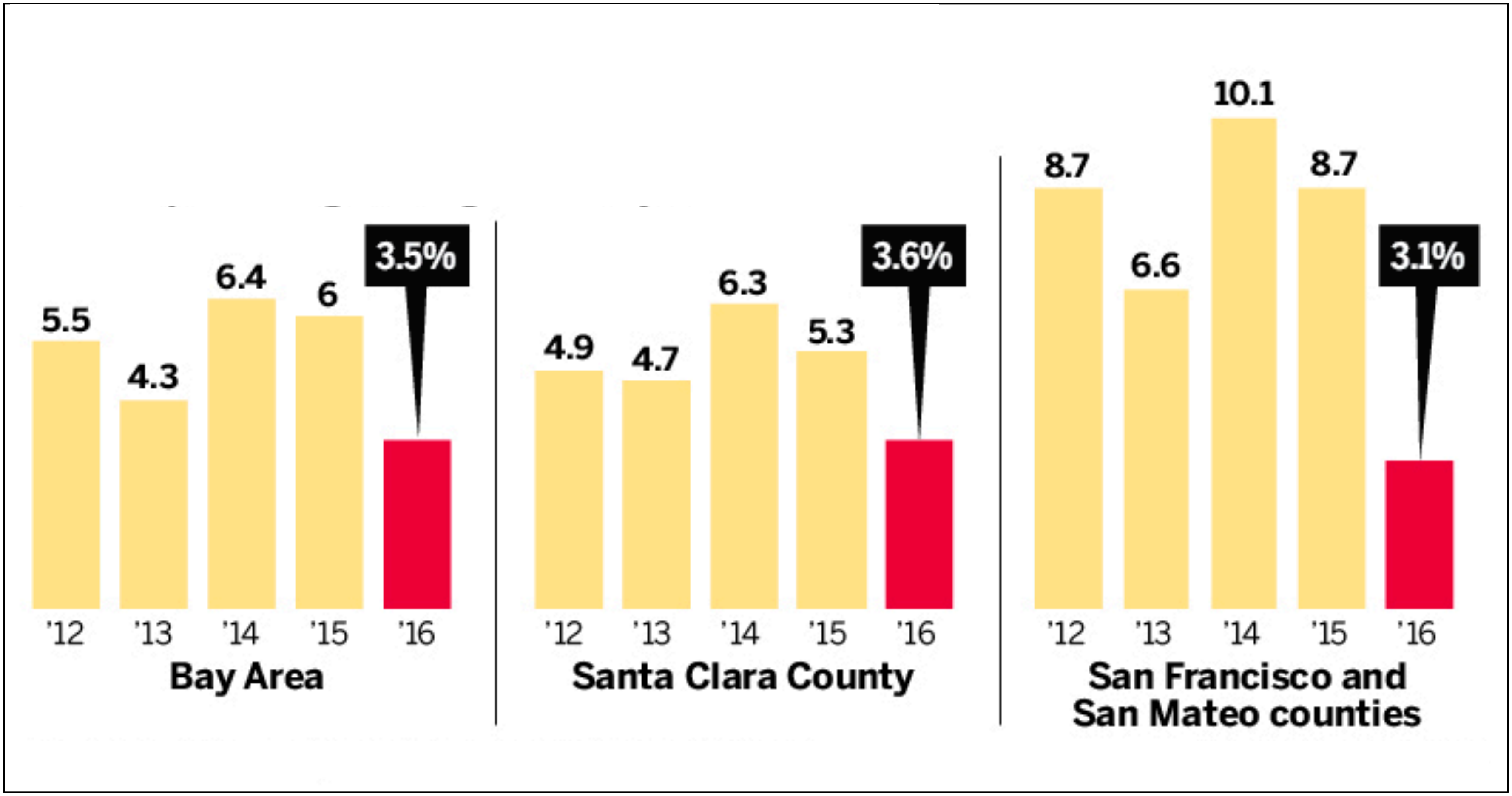
SILICON VALLEY
Trends and Challenges

Russell Hancock
President & Chief Executive Officer
Joint Venture Silicon Valley
Institute for Regional Studies

Joint Venture
SILICON VALLEY

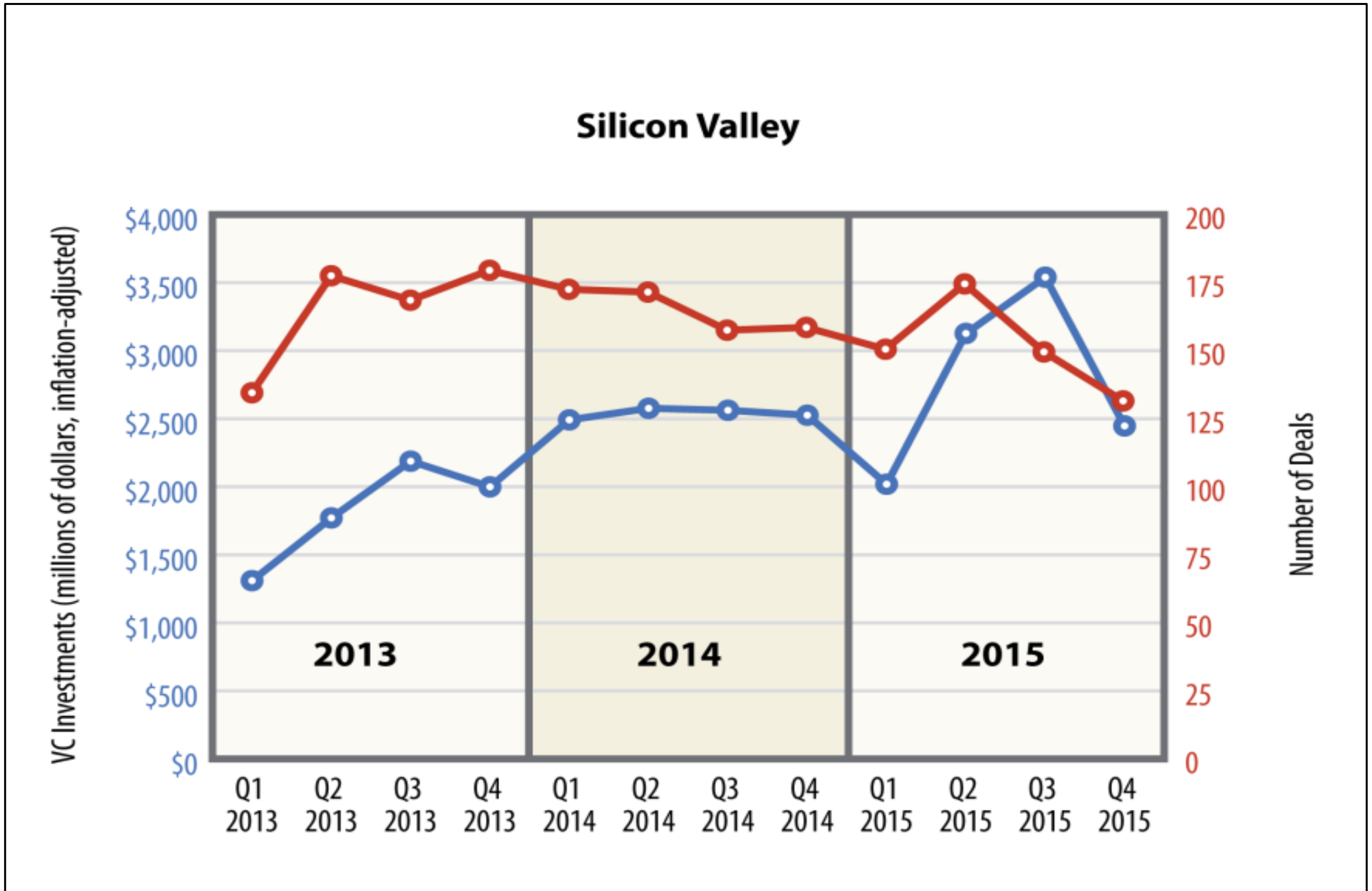
Annual Percentage Change in Tech Jobs



2017 Q1 Layoffs (Tech)

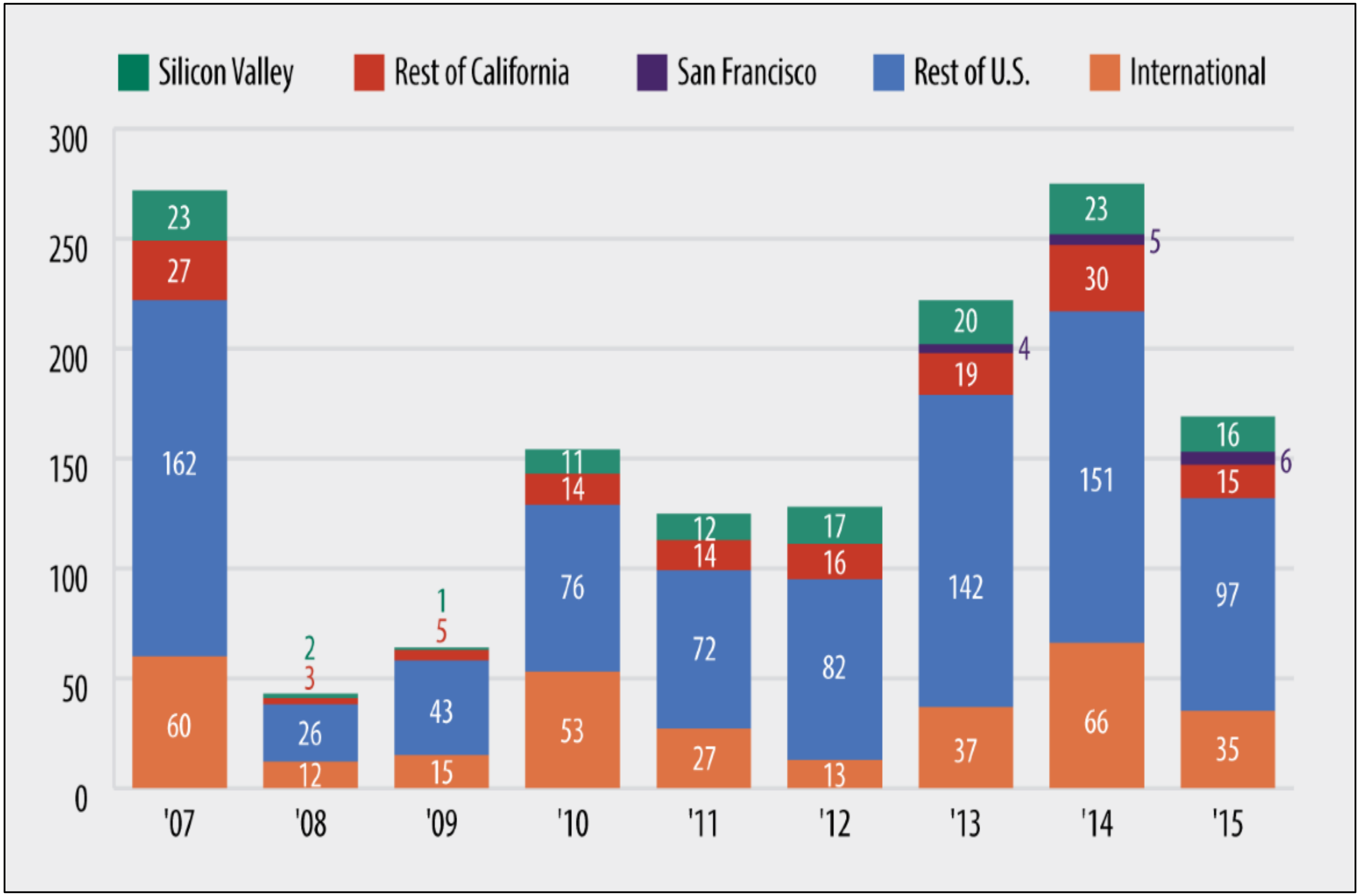
Oracle	443
Visa	213
NetApp	160
Theranos	150
Marvell	139
SunPower	116
Violin	106
Google	94
Pandora	91
AOL	80

VENTURE CAPITAL, 2015: 4TH QUARTER DOWNTURN



Source: Venture Monitor report by PitchBook and the National Venture Capital Association

IPO, 2015: TAPERING



BAY AREA COUNCIL

IMMEDIATE RELEASE
March 30, 2017

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40% Considering Leaving in the Next Few Years as Bay Area's Housing, Traffic & Cost of Living Woes Go Unaddressed

Millennials Leading the Way at 46%

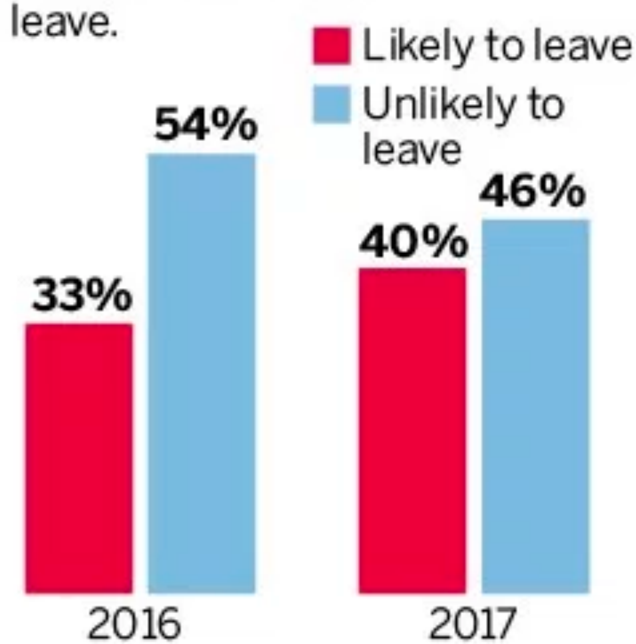
SAN FRANCISCO—A growing number of Bay Area residents, led by millennials (18-39), to greener (or less expensive) pastures as the region's housing and traffic crises combi astronomical cost of living take their toll, according to results of the 2017 Bay Area Co released today. The poll found that 40 percent of respondents are considering leavin in the next few years, with millennials leading the way at 46 percent, along with thos biggest share of their income on housing.

"Losing our youth is a very bad economic and social strategy," said Jim Wunde CEO of the Bay Area Council. "But until we get serious about building the hou going to continue seeing our region drained of the young and diverse talent t the Bay Area an economic powerhouse. We know what the solutions are – and reduce fees and regulatory costs – we just need the political will here make them happen. It can be done, it must be done and we're working

Housing and rent costs were listed as the most important problem by question, followed by traffic, other housing problems (like availabilit

WANTING TO LEAVE

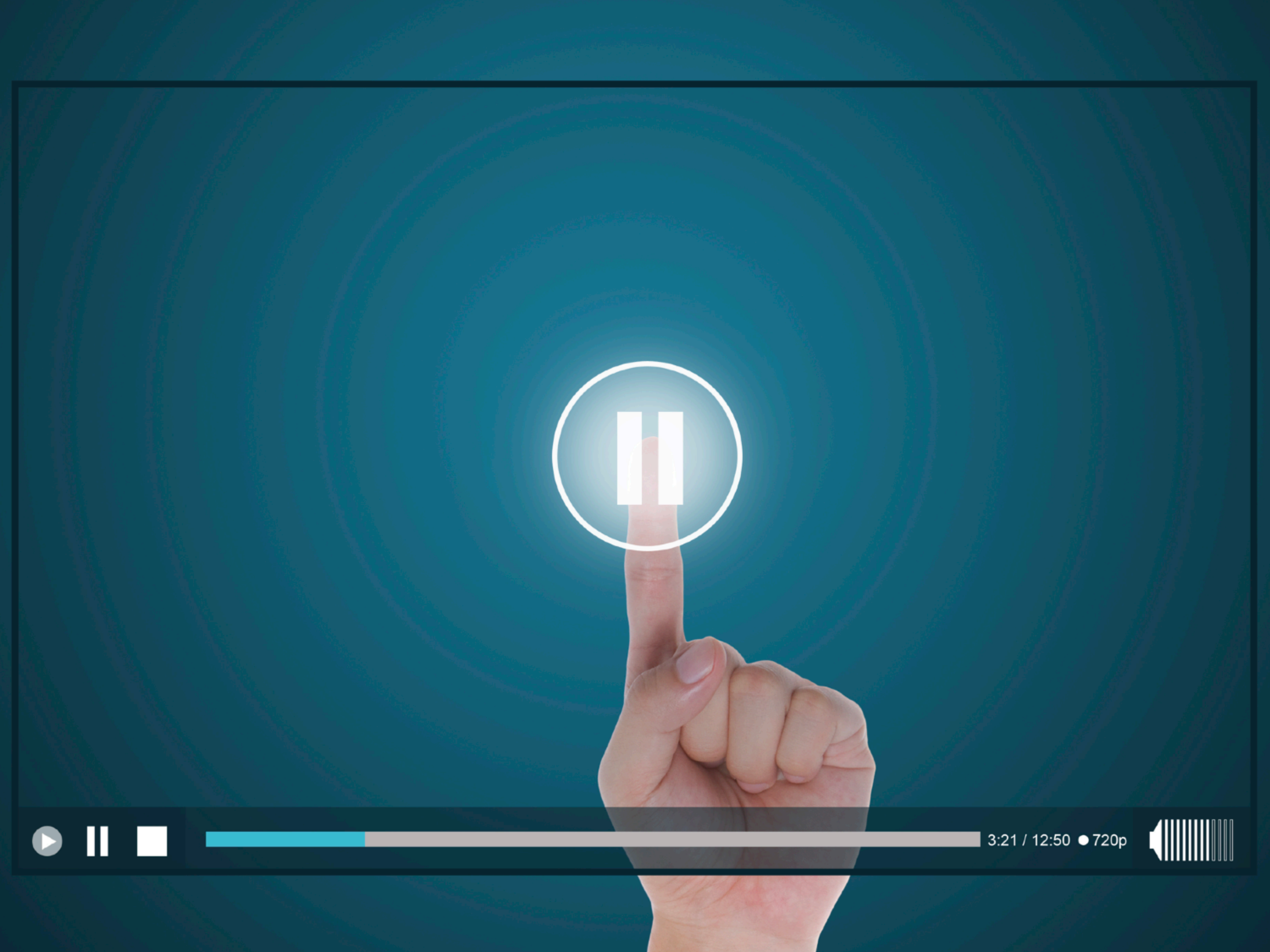
The gap has narrowed sharply between those who say they are likely to leave the Bay Area in the next few years and those who say they are unlikely to leave.



Source: Bay Area Council poll of 1,000 Bay Area residents conducted at the end of January. Margin of error was +/- 3.1 percentage points.

BAY AREA NEWS GROUP

Is winter coming?


3:21 / 12:50
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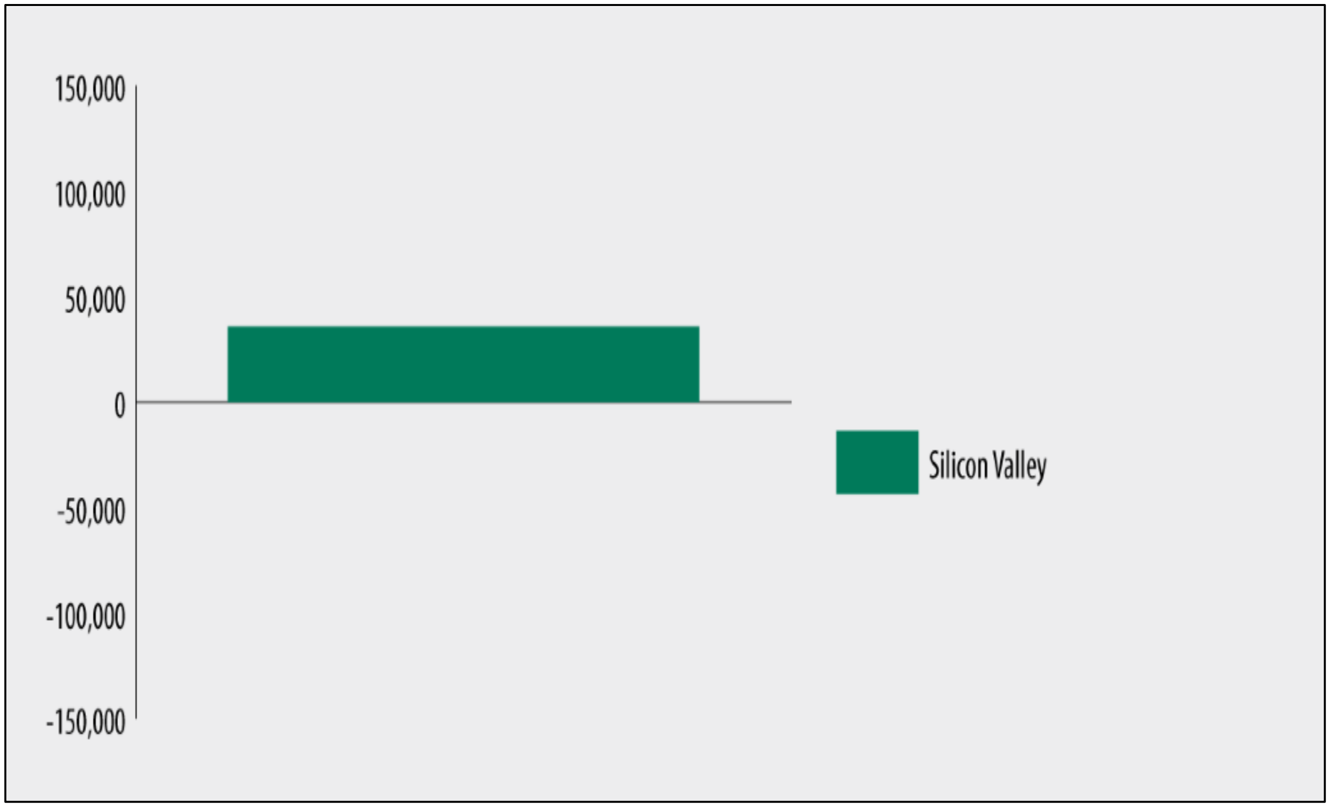
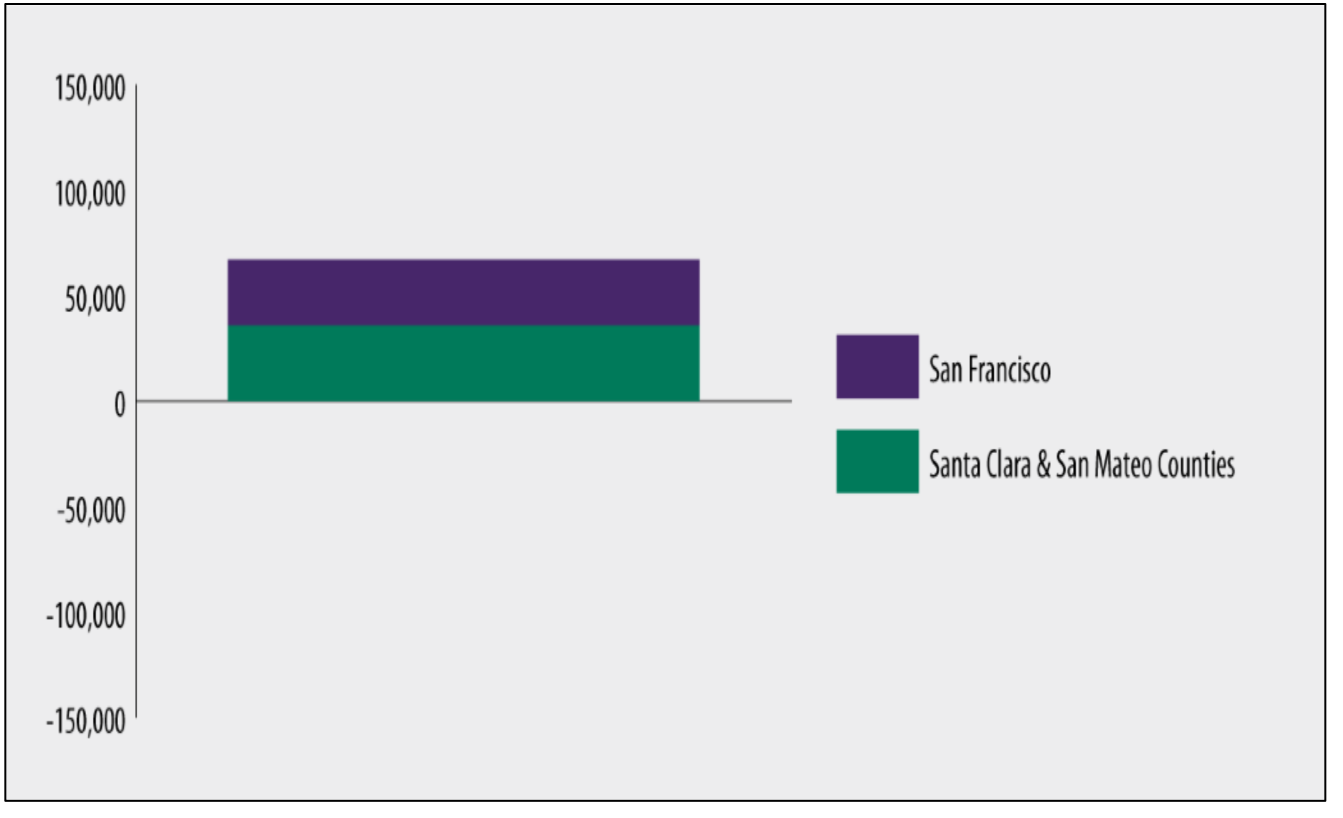
JOB GROWTH

Annual Change in Total Number of Jobs, 2016



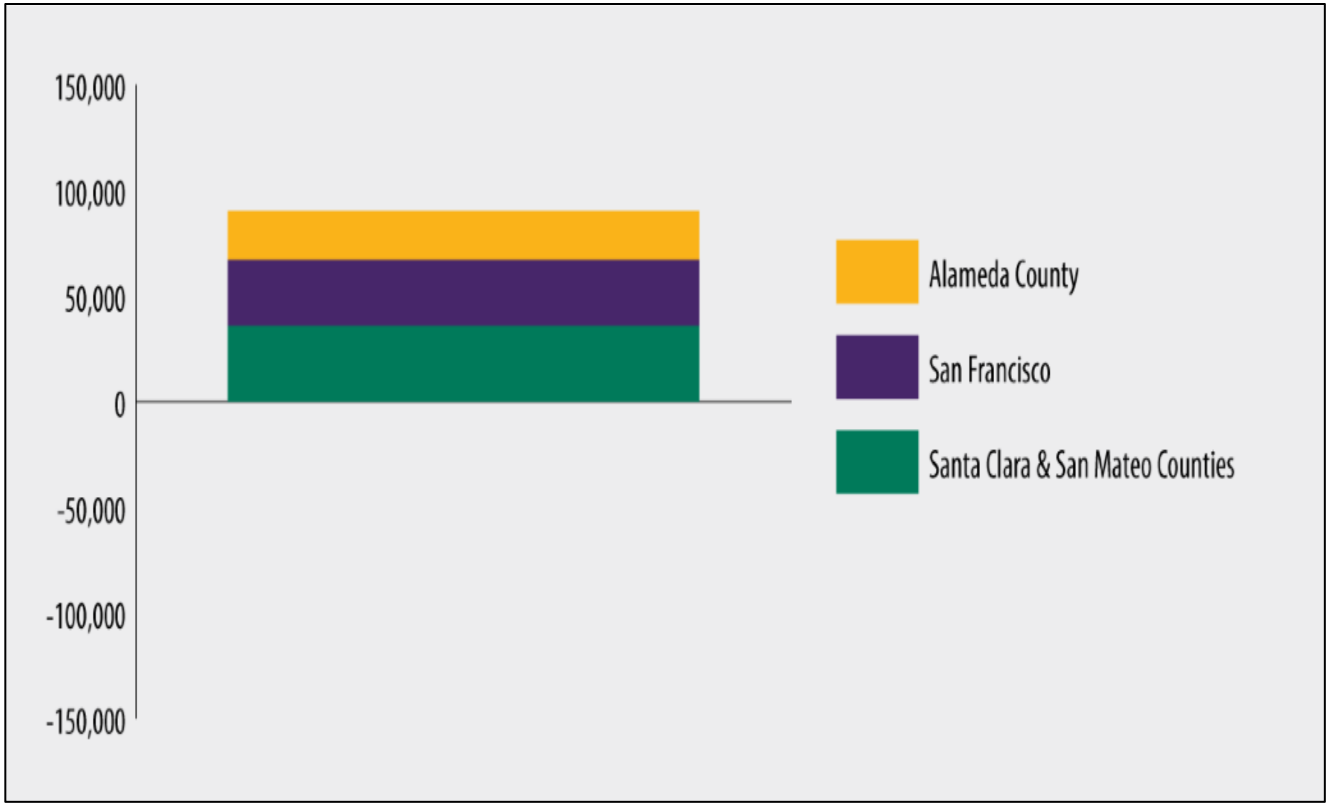
JOB GROWTH

Annual Change in Total Number of Jobs, 2016



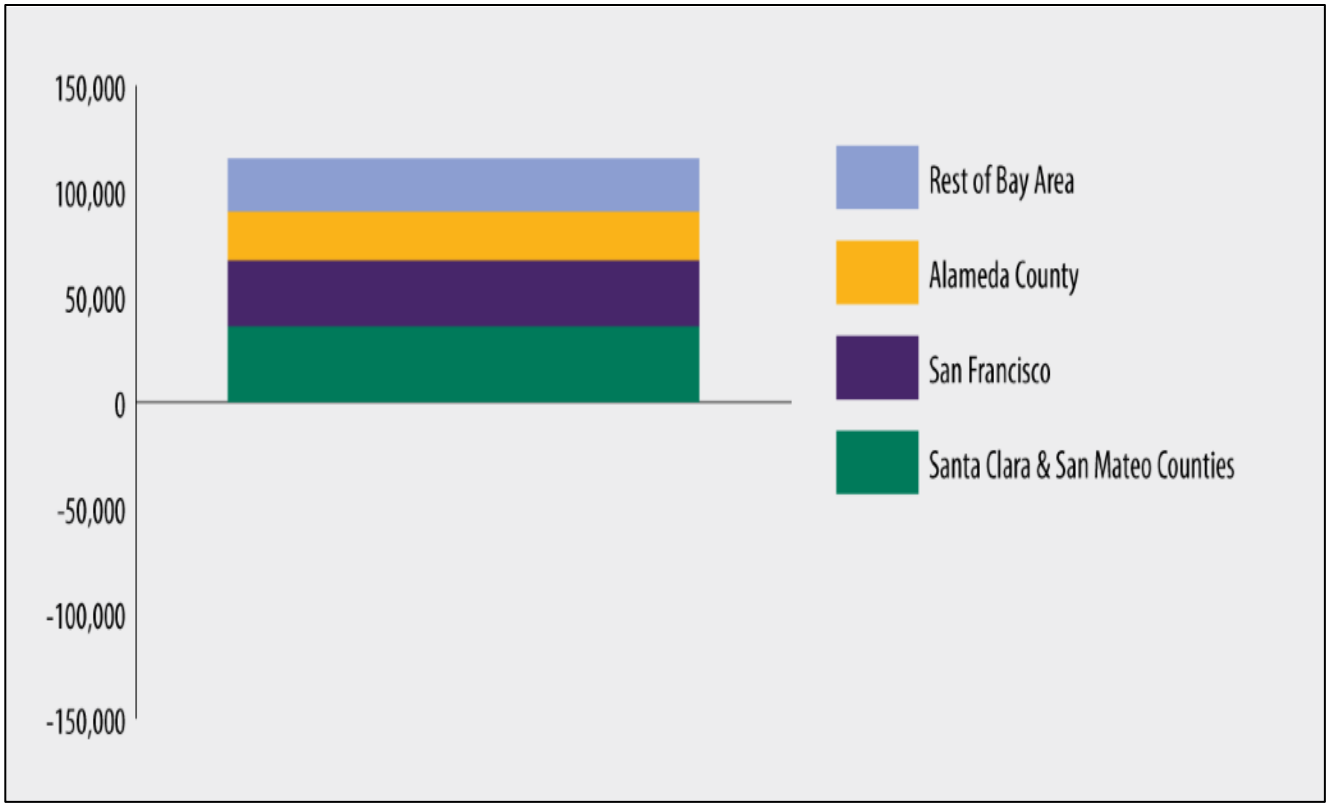
JOB GROWTH

Annual Change in Total Number of Jobs, 2016



JOB GROWTH

Annual Change in Total Number of Jobs, 2016

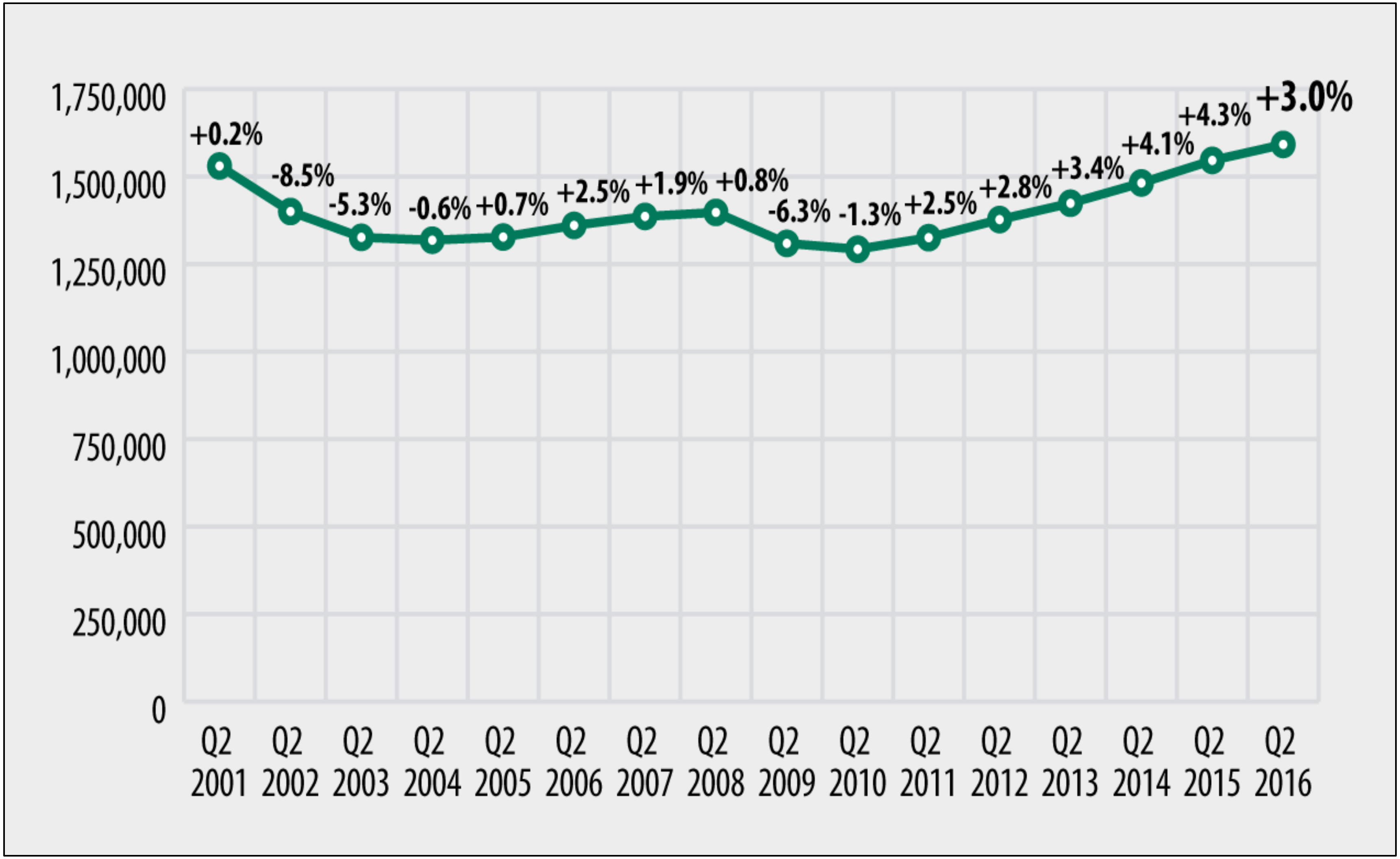


TOTAL NUMBER OF JOBS
9-County Bay Area

+115,390

+3.1%

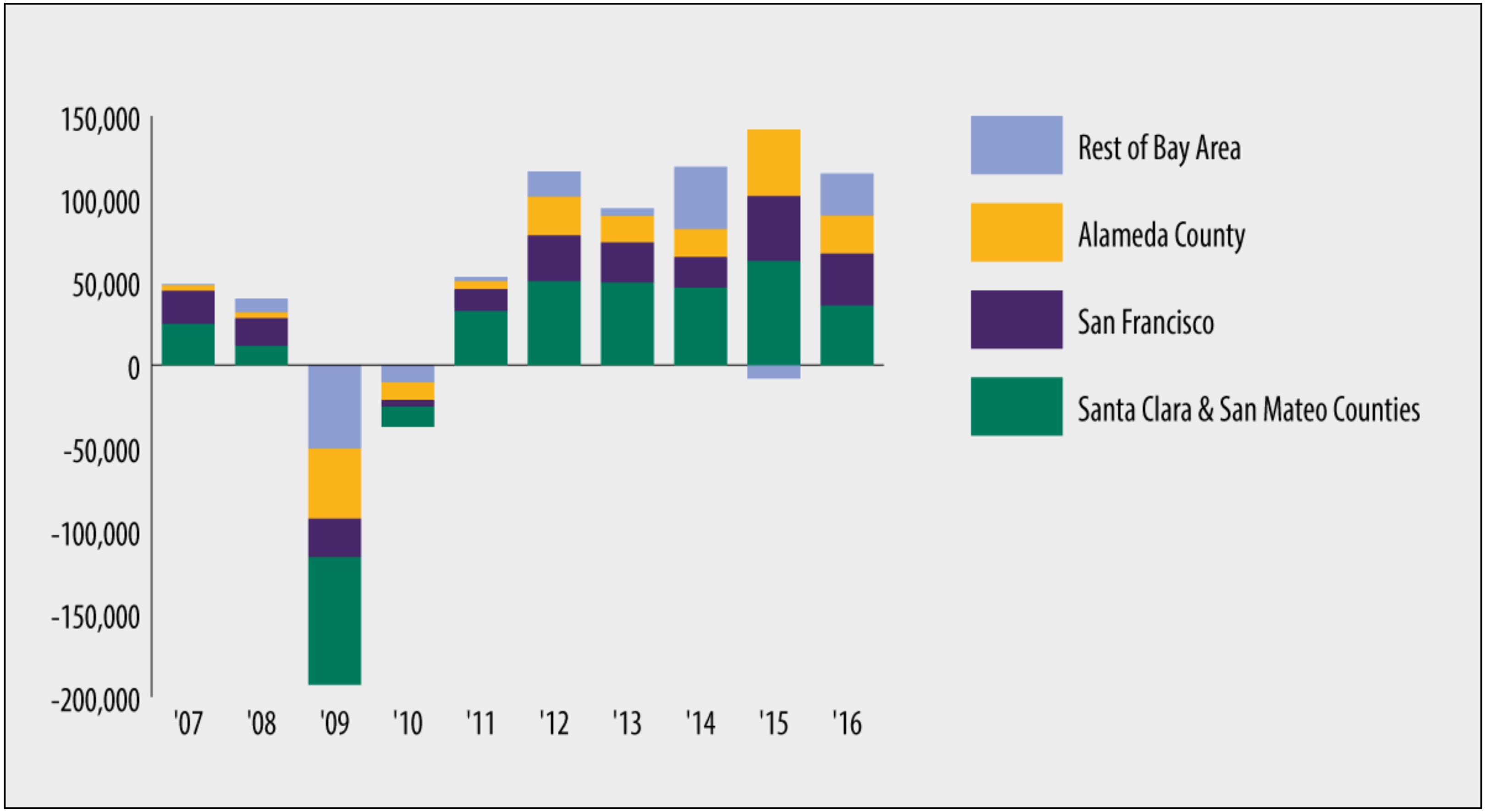
JOB GROWTH



1,750,000
1,500,000
1,250,000
1,000,000
750,000
500,000
250,000
0
+0.2%
-8.5%
-5.3%
-0.6%
+0.7%
+2.5%
+1.9%
+0.8%
-6.3%
-1.3%
+2.5%
+2.8%
+3.4%
+4.1%
+4.3%
+3.0%
Q2 2001
Q2 2002
Q2 2003
Q2 2004
Q2 2005
Q2 2006
Q2 2007
Q2 2008
Q2 2009
Q2 2010
Q2 2011
Q2 2012
Q2 2013
Q2 2014
Q2 2015
Q2 2016

JOB GROWTH

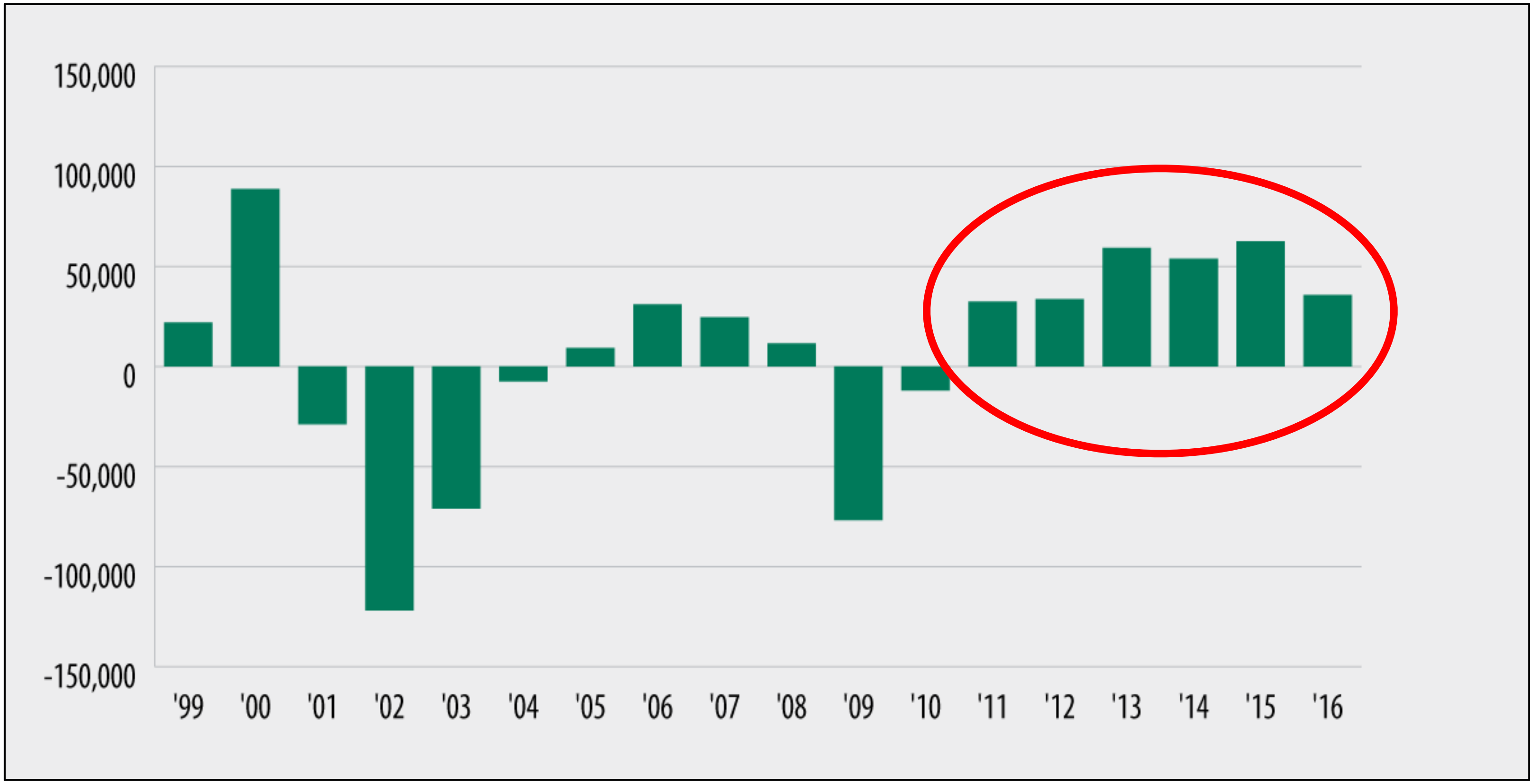
Annual change in Total Number of Jobs, 2007-2016



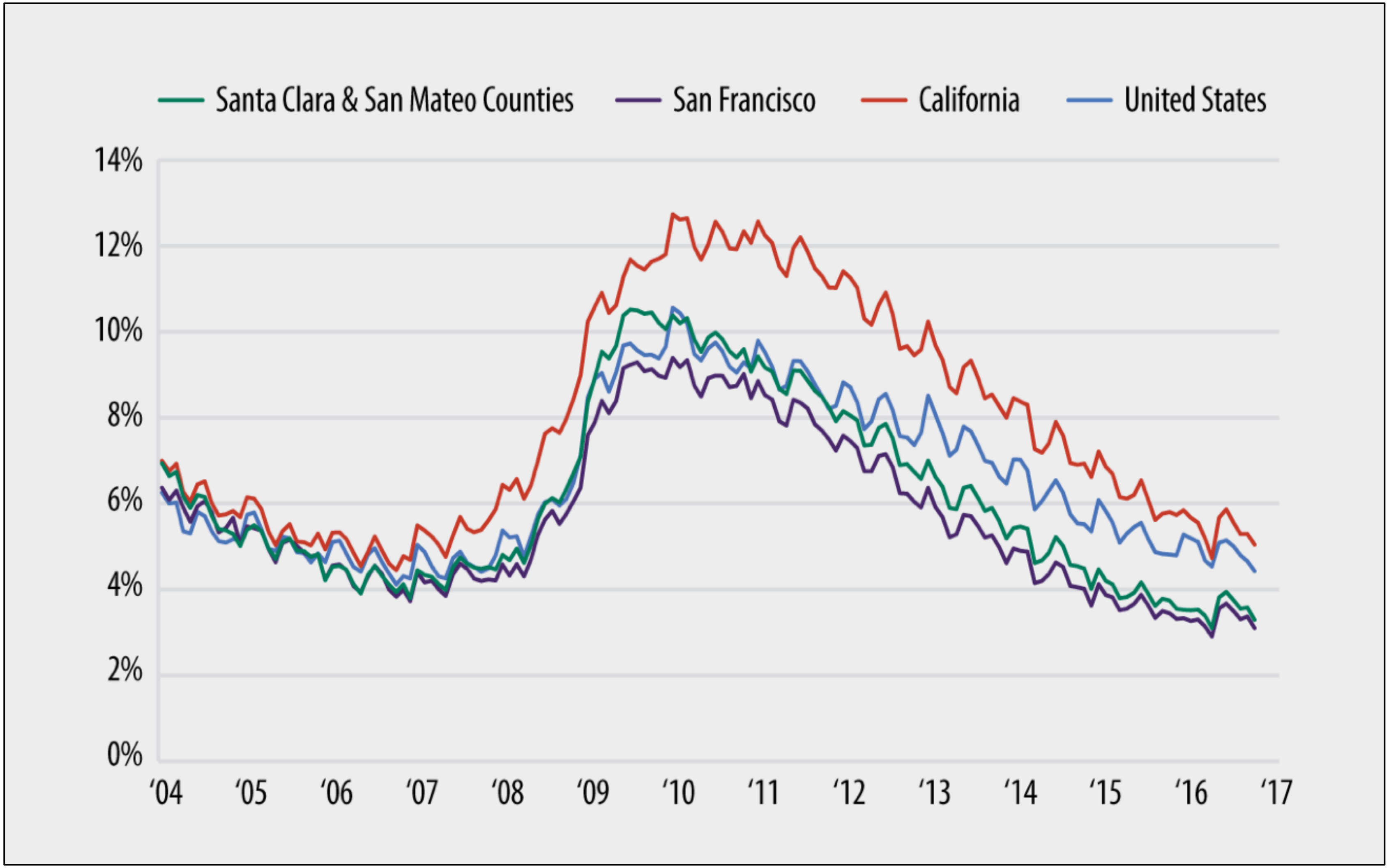
JOB GROWTH

Annual change in Total Number of Jobs

Santa Clara & San Mateo Counties



UNEMPLOYMENT RATE



GROWTH AREAS

2015-2016

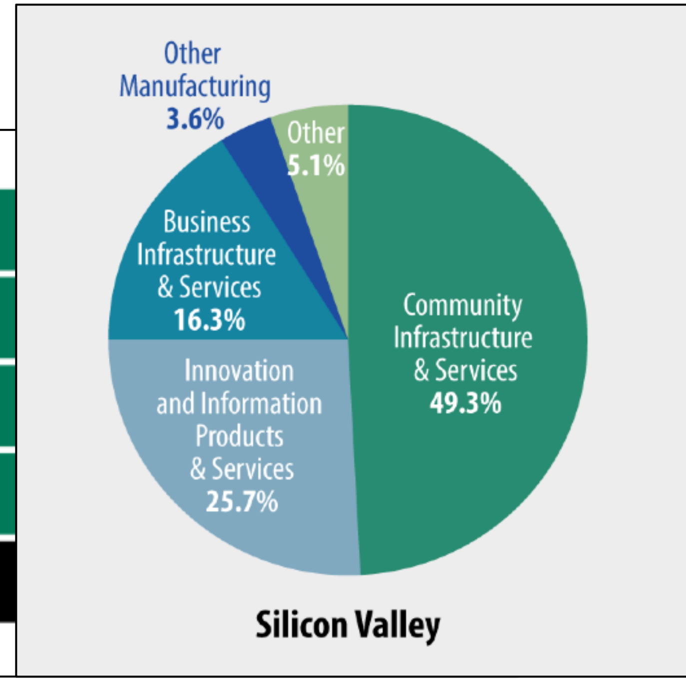
COMMUNITY INFRASTRUCTURE & SERVICES

INNOVATION AND INFORMATION PRODUCTS & SERVICES

BUSINESS INFRASTRUCTURE & SERVICES

OTHER MANUFACTURING

TOTAL EMPLOYMENT



Highest Growth Sectors by Total Jobs Added (2015-2016)

COMPUTER HARDWARE DESIGN & MANUFACTURING	+10,657	+7.0%
INTERNET & INFORMATION SERVICES	+7,904	+15.4%
CONSTRUCTION	+6,864	+10.1%
HEALTHCARE & SOCIAL SERVICES (INCLUDES GOVERNMENT JOBS)	+6,829	+4.7%
ACCOMMODATION & FOOD SERVICES	+3,772	+3.0%
TECHNICAL RESEARCH & DEVELOPMENT (INCLUDES LIFE SCIENCES)	+2,011	+5.9%
ADMINISTRATIVE SERVICES	+1,429	+4.9%
TRANSPORTATION	+1,376	+3.7%
MANAGEMENT OFFICES	+1,241	+5.0%
PERSONNEL & ACCOUNTING SERVICES	+1,192	+3.8%
BIOTECHNOLOGY (LIFE SCIENCES)	+1,006	+12.6%
LOCAL GOVT. ADMINISTRATION (EXCLUDES HEALTHCARE & SOCIAL SERVICES, EDUCATION, AND UTILITIES)	+884	+2.0%
INSTRUMENT MANUFACTURING (NAVIGATION, MEASURING & ELECTROMEDICAL)	+843	+4.9%
INVESTMENT & EMPLOYER INSURANCE SERVICES	+723	+6.0%
SOFTWARE	+722	+2.5%
FACILITIES	+595	+2.2%
MACHINERY & RELATED EQUIPMENT MANUFACTURING	+571	+4.5%
ARTS, ENTERTAINMENT & RECREATION	+493	+2.8%
EDUCATION (INCLUDES GOVERNMENT JOBS)	+486	+0.4%

Highest Growth Sectors by Percent Change (2015-2016)

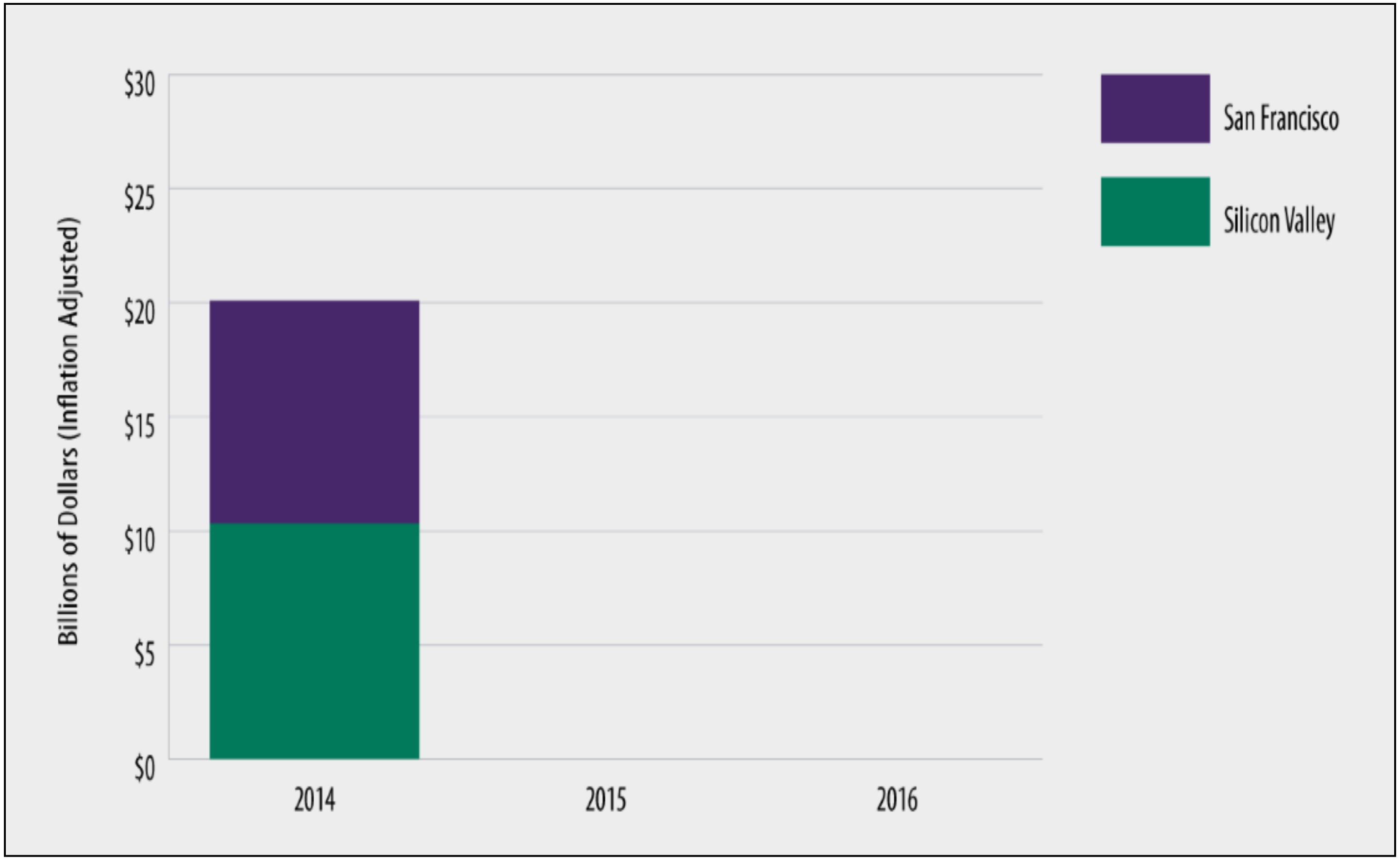
INTERNET & INFORMATION SERVICES	+15.4%	+7,904
BIOTECHNOLOGY (LIFE SCIENCES)	+12.6%	+1,006
CONSTRUCTION	+10.1%	+6,864
COMPUTER HARDWARE DESIGN & MANUFACTURING	+7.0%	+10,657
STATE GOVT. ADMINISTRATION	+6.7%	+166
INVESTMENT & EMPLOYER INSURANCE SERVICES	+6.0%	+723
TECHNICAL RESEARCH & DEVELOPMENT (INCLUDES LIFE SCIENCES)	+5.9%	+2,011
WAREHOUSING & STORAGE	+5.4%	+138
MANAGEMENT OFFICES	+5.0%	+1,241
ADMINISTRATIVE SERVICES	+4.9%	+1,429
INSTRUMENT MANUFACTURING (NAVIGATION, MEASURING & ELECTROMEDICAL)	+4.9%	+843
HEALTHCARE & SOCIAL SERVICES (INCLUDES GOVERNMENT JOBS)	+4.7%	+6,829
MACHINERY & RELATED EQUIPMENT MANUFACTURING	+4.5%	+571
PERSONNEL & ACCOUNTING SERVICES	+3.8%	+1,192
TRANSPORTATION	+3.7%	+1,376
OTHER MANUFACTURING	+3.2%	+321
LEGAL	+3.1%	+335
TEXTILES, APPAREL, WOOD & FURNITURE MANUFACTURING	+3.1%	+96
ACCOMMODATION & FOOD SERVICES	+3.0%	+3,772

Sectors with Job Losses (2015-2016)

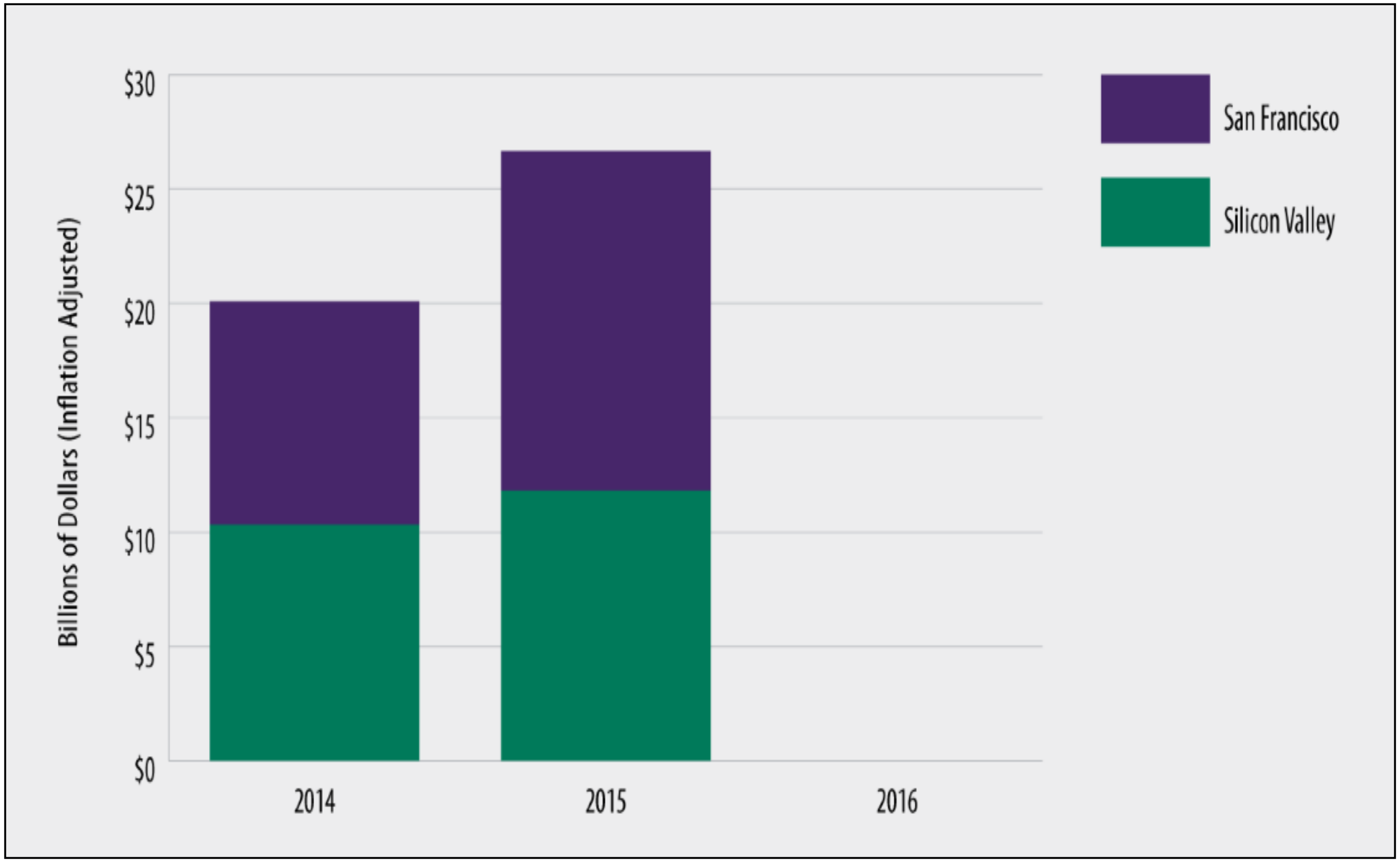
SEMICONDUCTORS & RELATED EQUIPMENT MANUFACTURING	-4.0%	-1,959
TELECOMMUNICATIONS MANUFACTURING & SERVICES	-6.8%	-1,195
RETAIL	-0.2%	-320
NONPROFITS	-1.7%	-172
I.T. REPAIR SERVICES	-7.7%	-123
MEDICAL DEVICES (LIFE SCIENCES)	-1.0%	-70
INSURANCE SERVICES	-0.8%	-68
TECHNICAL & MANAGEMENT CONSULTING SERVICES	-0.2%	-39
MARKETING, ADVERTISING & PUBLIC RELATIONS	-1.1%	-37
FEDERAL GOVT. ADMINISTRATION	-0.2%	-18
PRIMARY & FABRICATED METAL MANUFACTURING	-0.1%	-14
PETROLEUM AND CHEMICAL MANUFACTURING (NOT IN LIFE SCIENCES)	-0.2%	-1

How is the innovation engine doing

VENTURE CAPITAL



VENTURE CAPITAL



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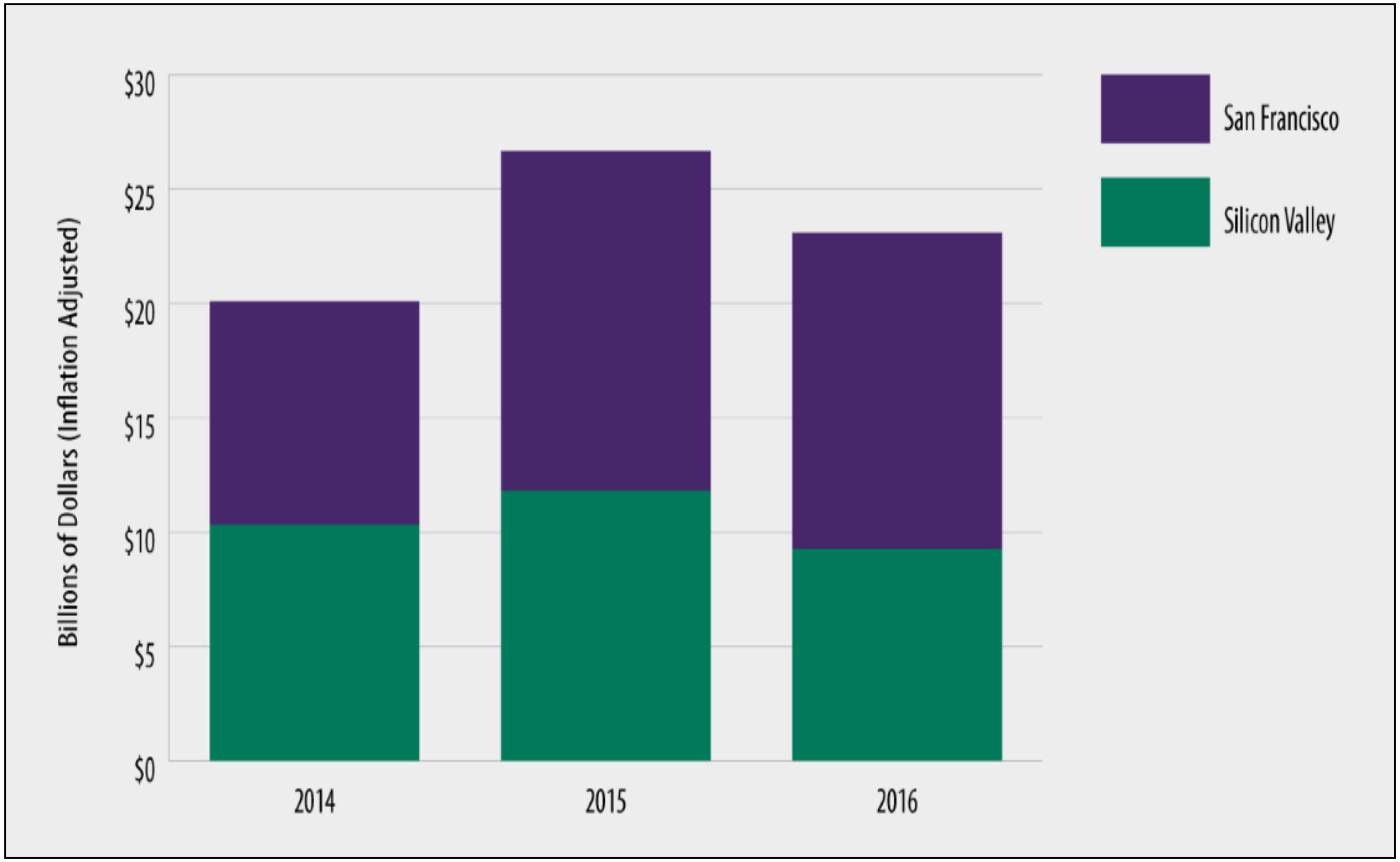

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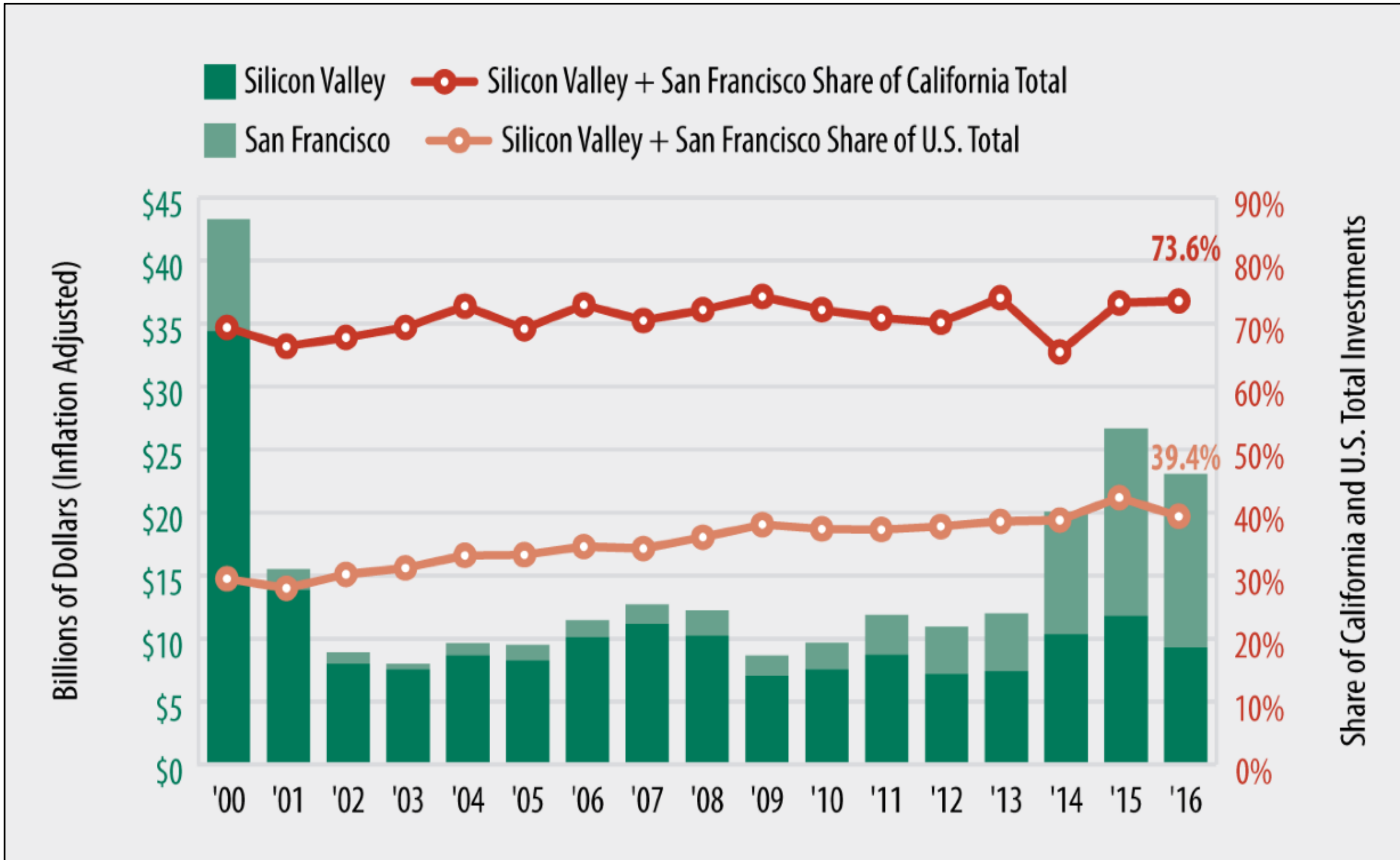
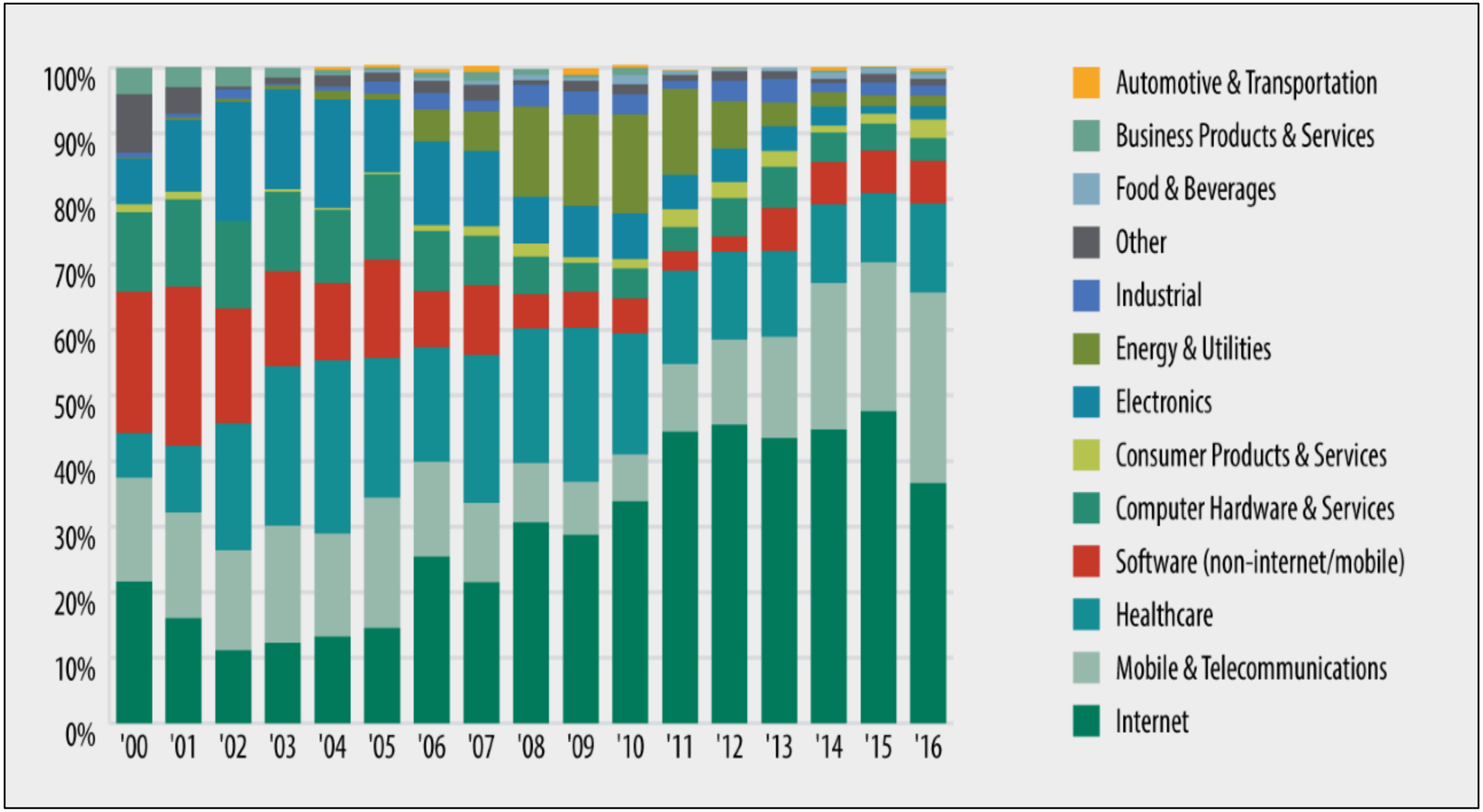
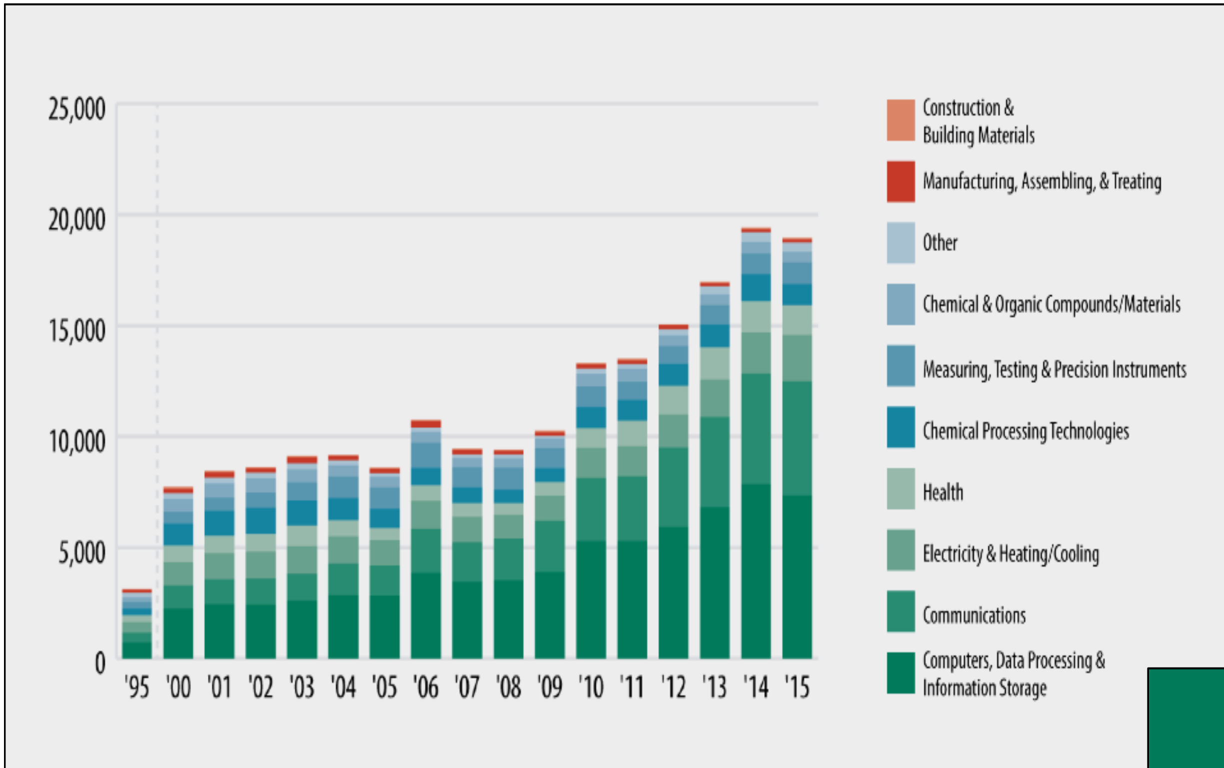


VENTURE CAPITAL BY INDUSTRY



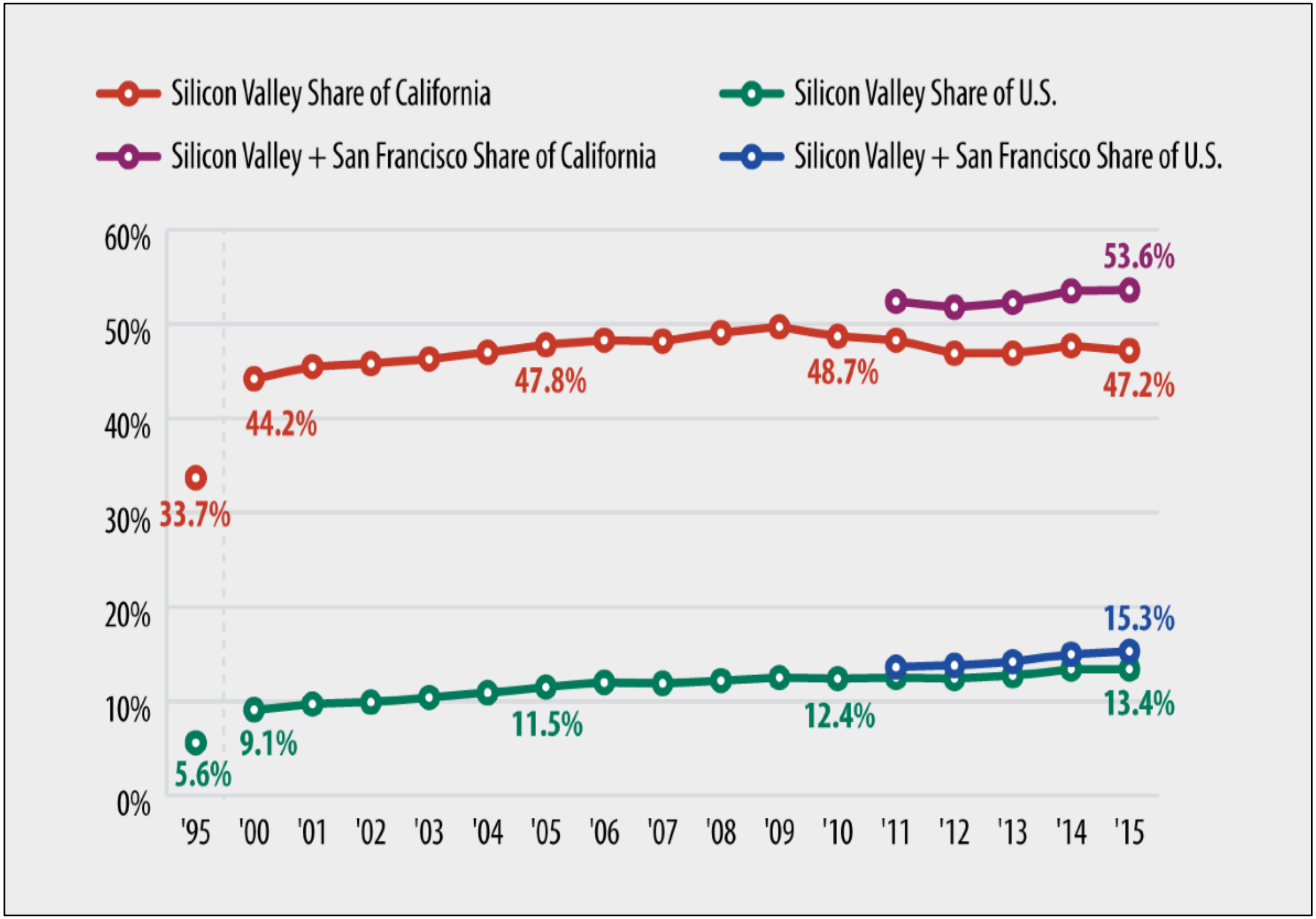
PATENT REGISTRATIONS



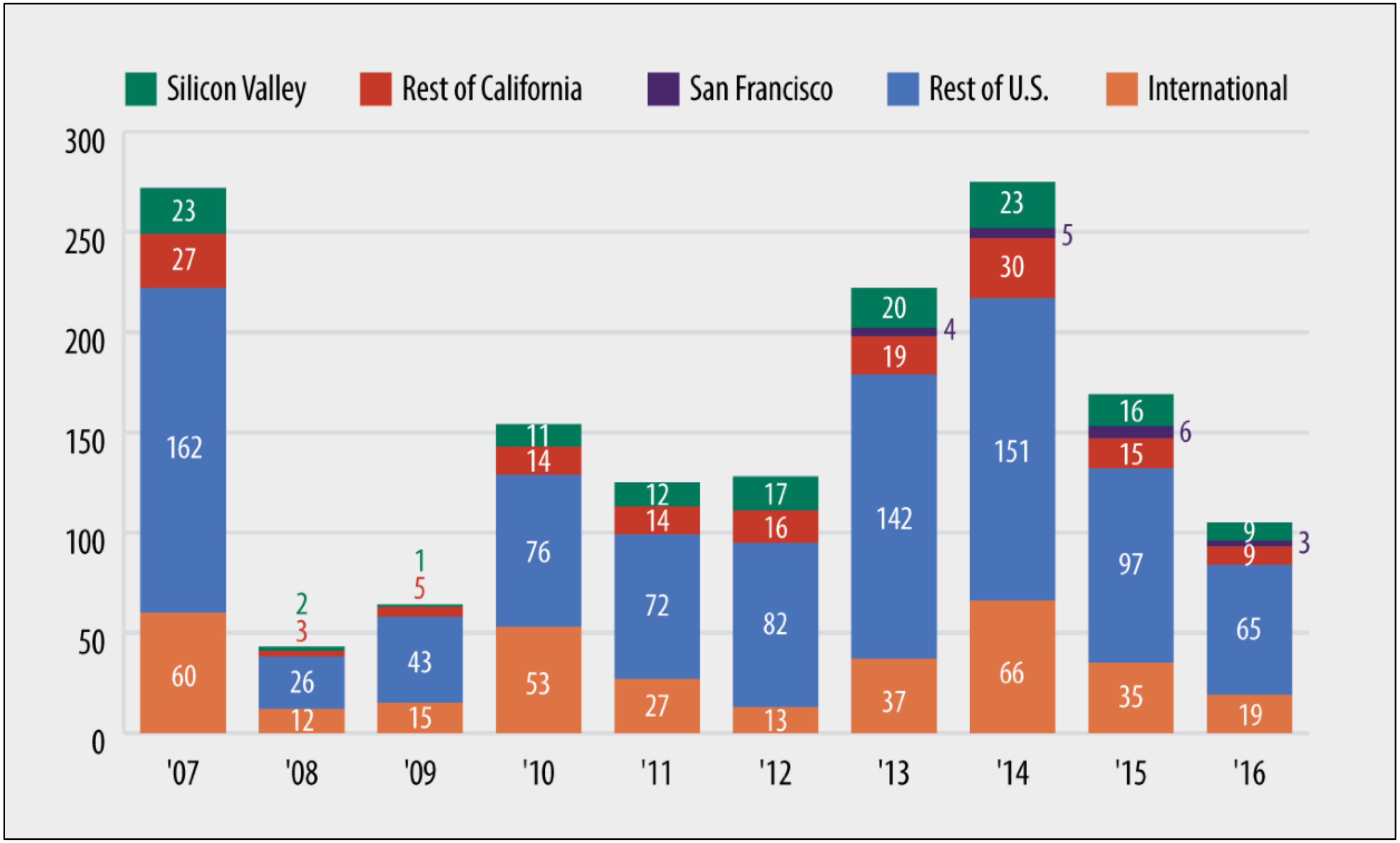
Patents Per Capita
Patents Granted per 100,000 People

	2011	2015	2011-2015 Percent Change
Silicon Valley	476	628	+32%
San Francisco	144	301	+110%
California	75	103	+37%

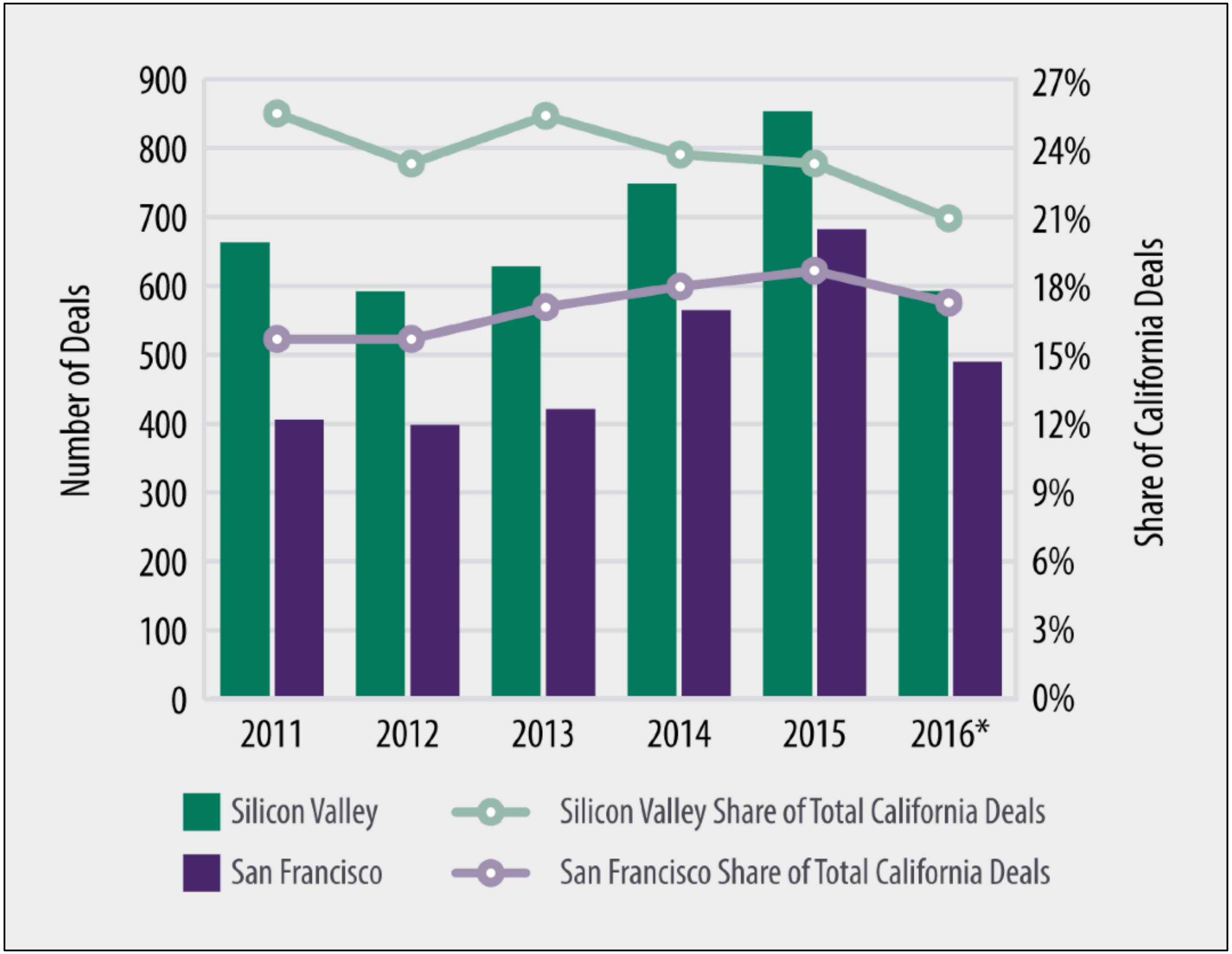
PATENT REGISTRATIONS



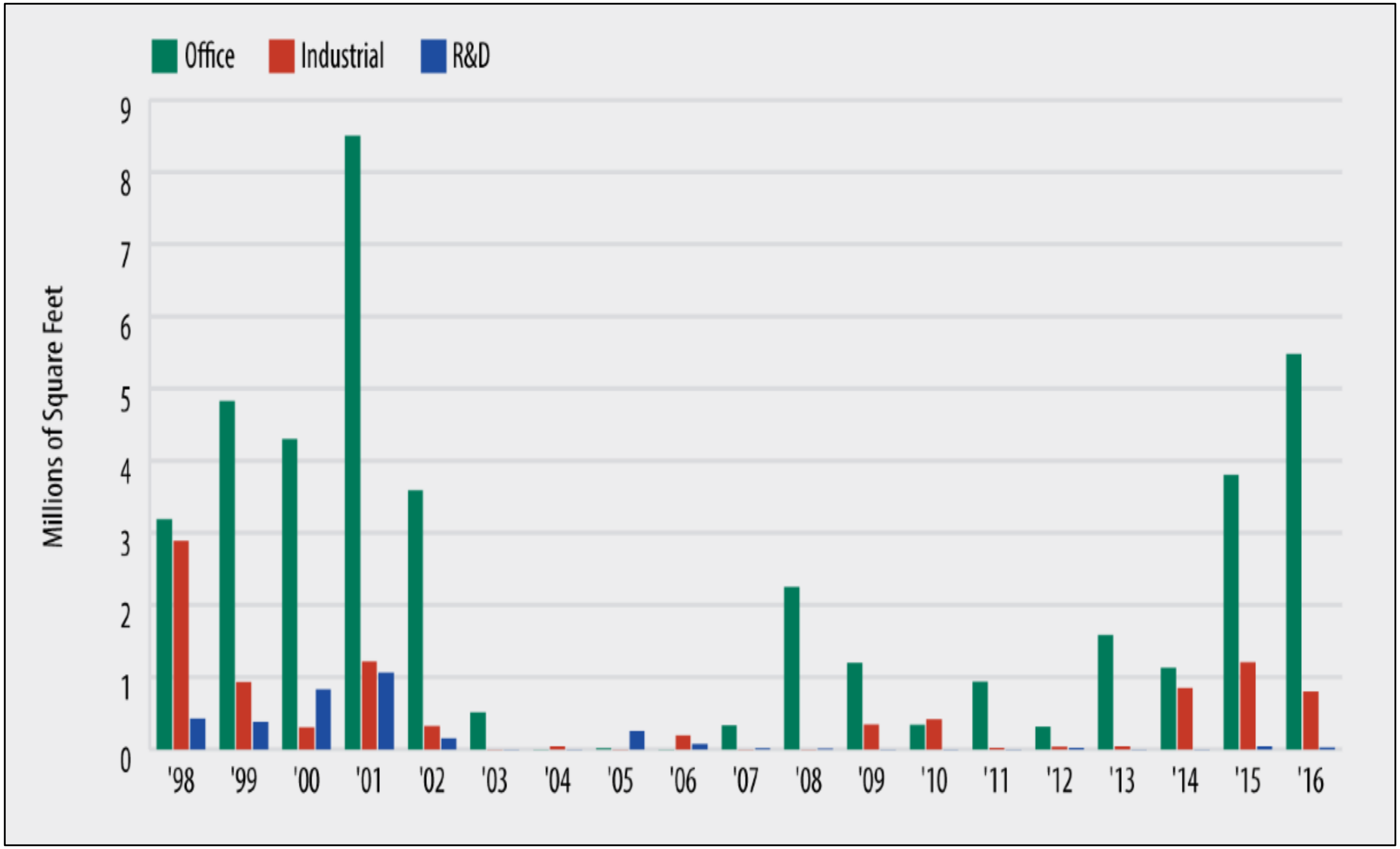
INITIAL PUBLIC OFFERINGS



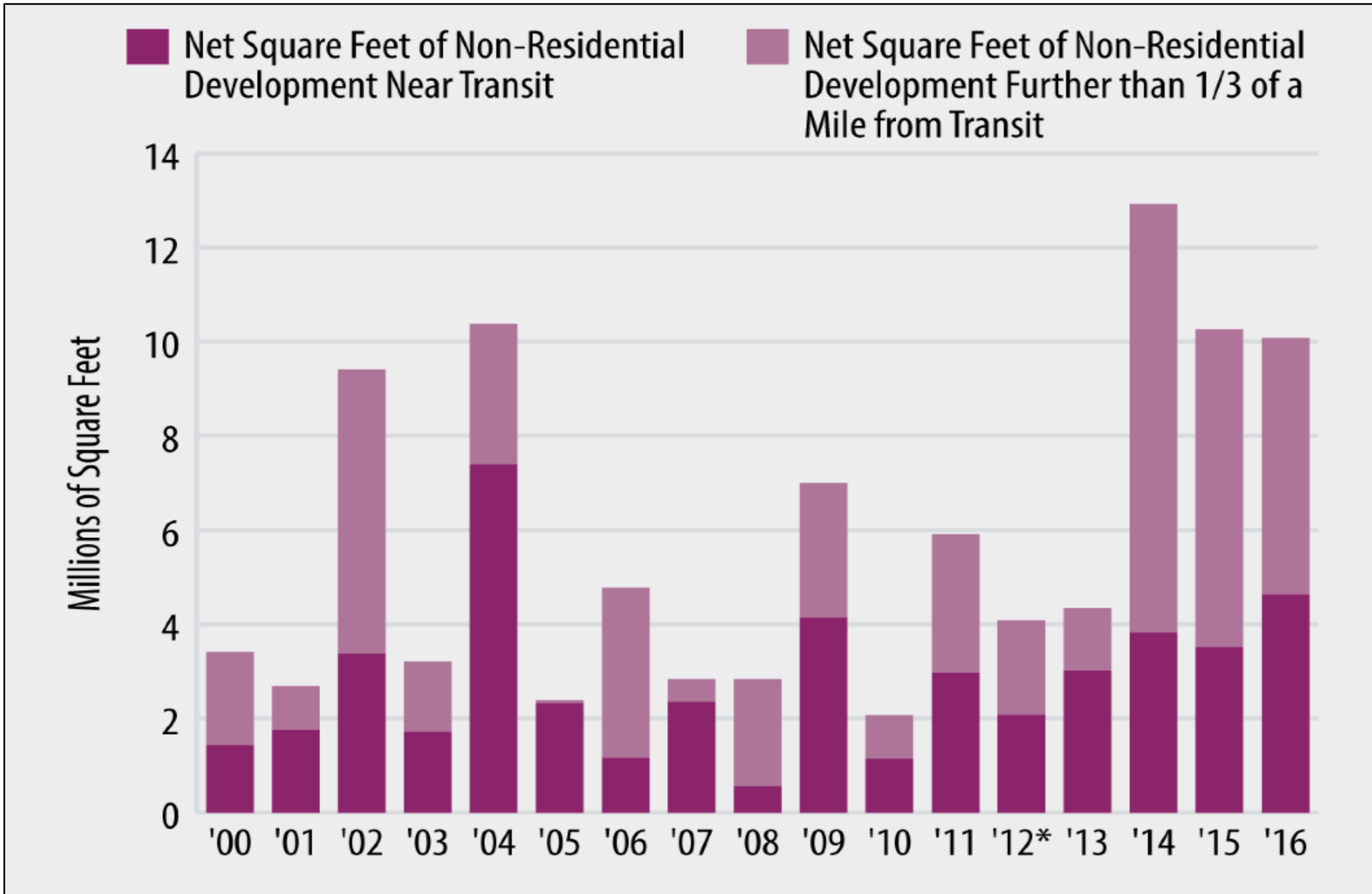
M&A ACTIVITY


900
800
700
600
500
400
300
200
100
0
Number of Deals
27%
24%
21%
18%
15%
12%
9%
6%
3%
0%
Share of California Deals
2011
2012
2013
2014
2015
2016*
Silicon Valley
San Francisco
Silicon Valley Share of Total California Deals
San Francisco Share of Total California Deals

NEW COMMERCIAL DEVELOPMENT



NON-RESIDENTIAL PLANNING APPROVALS



The innovation engine is still firing away.

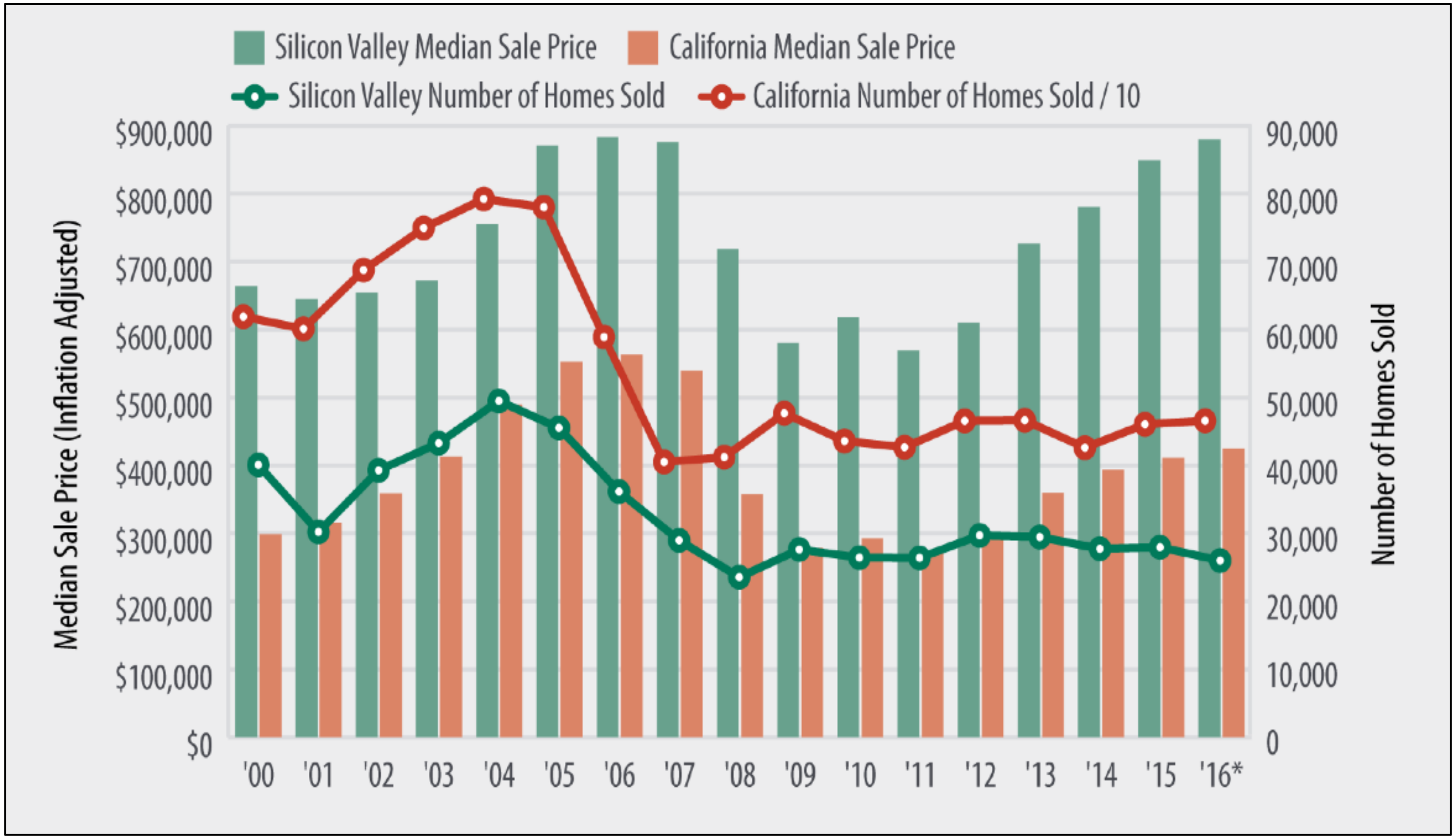
Our growth continues to outpace the state and nation.


Palo Alto
$1,750,000

MEDIAN HOME VALUE ESTIMATES

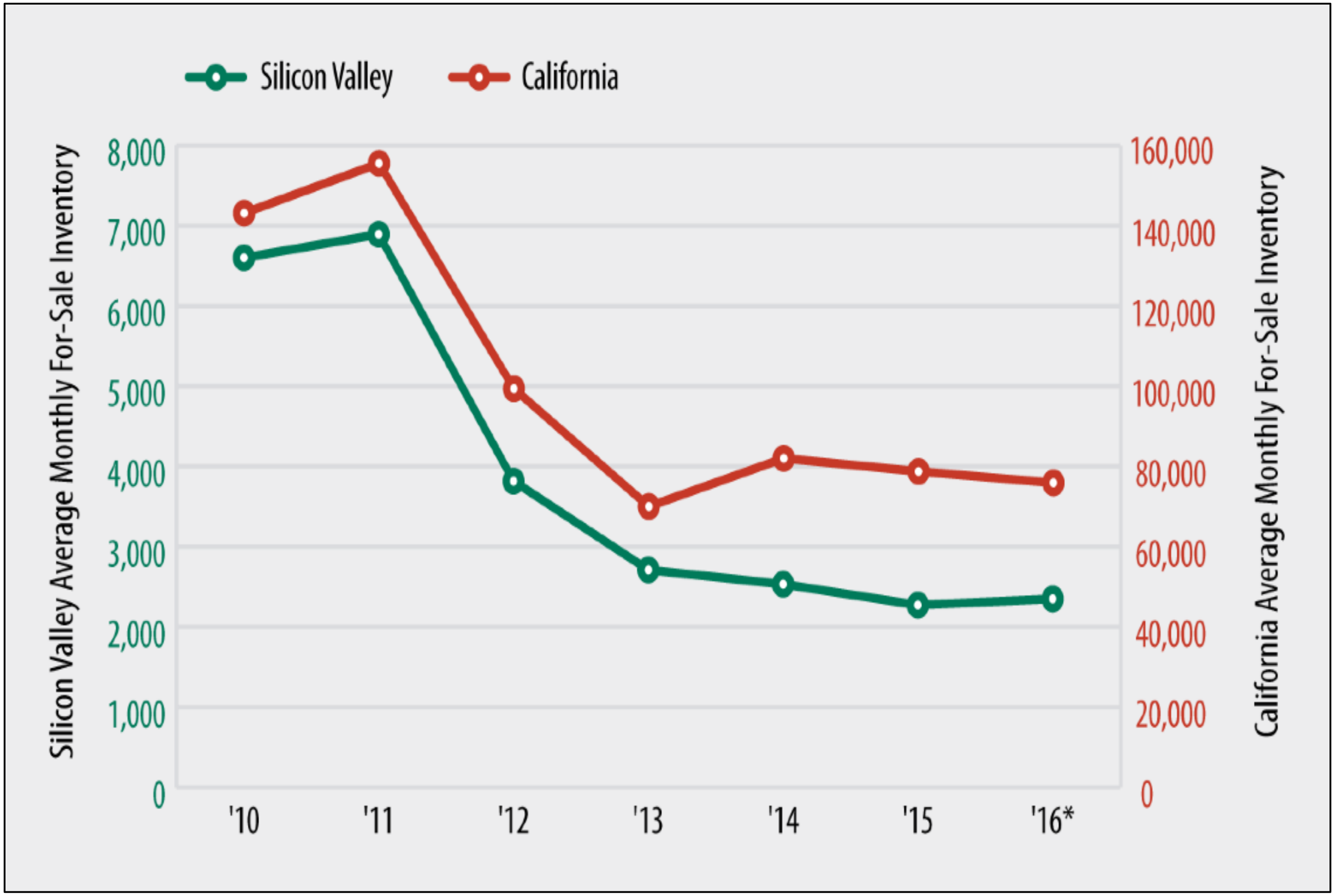
San Mateo County	$1,210,000
Santa Clara County	$ 1,080,000
California	$ 494,000
United States	$ 192,000

HOME SALES



Silicon Valley Median Sale Price
California Median Sale Price
Silicon Valley Number of Homes Sold
California Number of Homes Sold / 10
Median Sale Price (Inflation Adjusted)
$900,000
$800,000
$700,000
$600,000
$500,000
$400,000
$300,000
$200,000
$100,000
$0
Number of Homes Sold
90,000
80,000
70,000
60,000
50,000
40,000
30,000
20,000
10,000
0
'00 '01 '02 '03 '04 '05 '06 '07 '08 '09 '10 '11 '12 '13 '14 '15 '16*

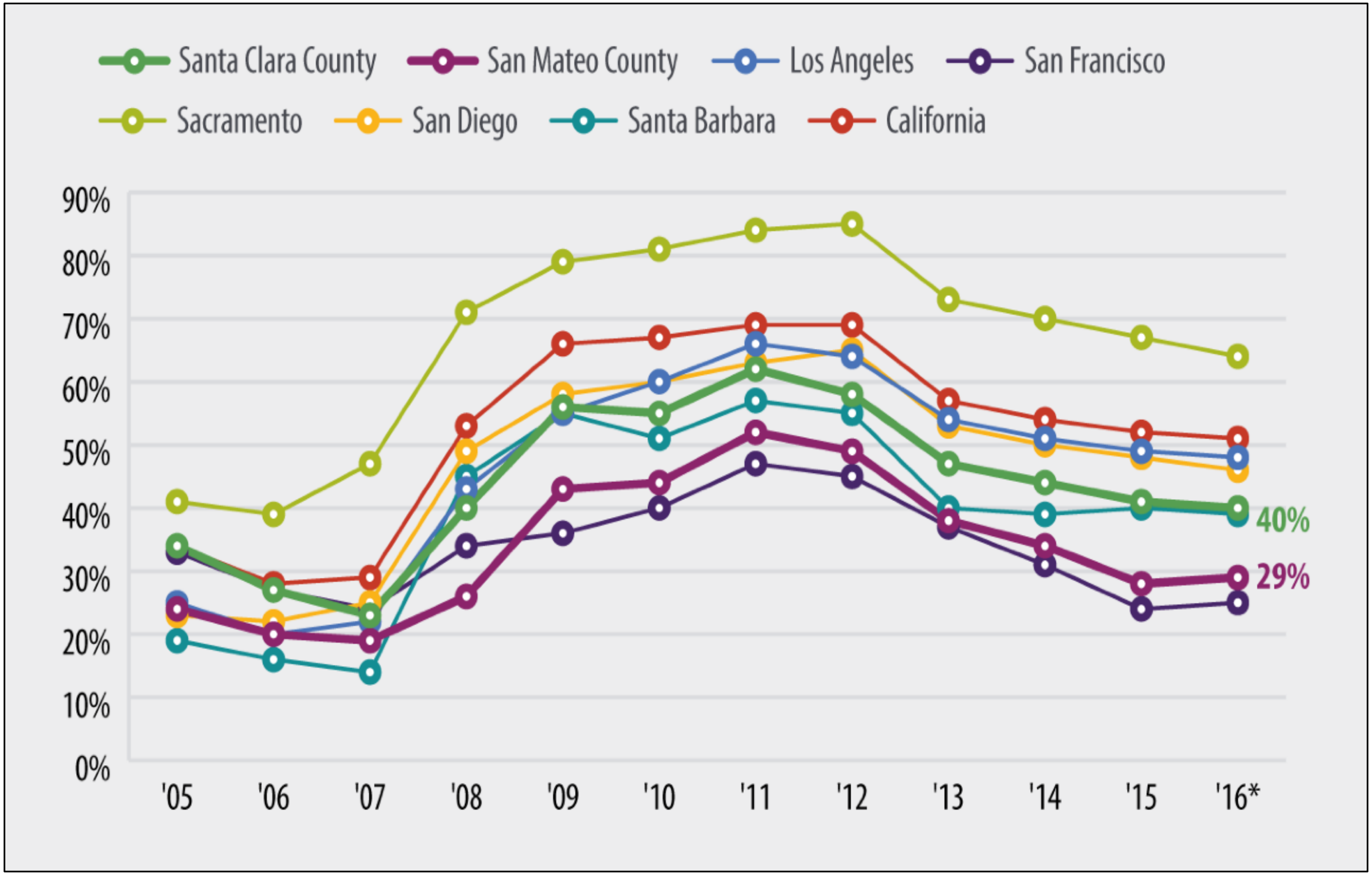
INVENTORY



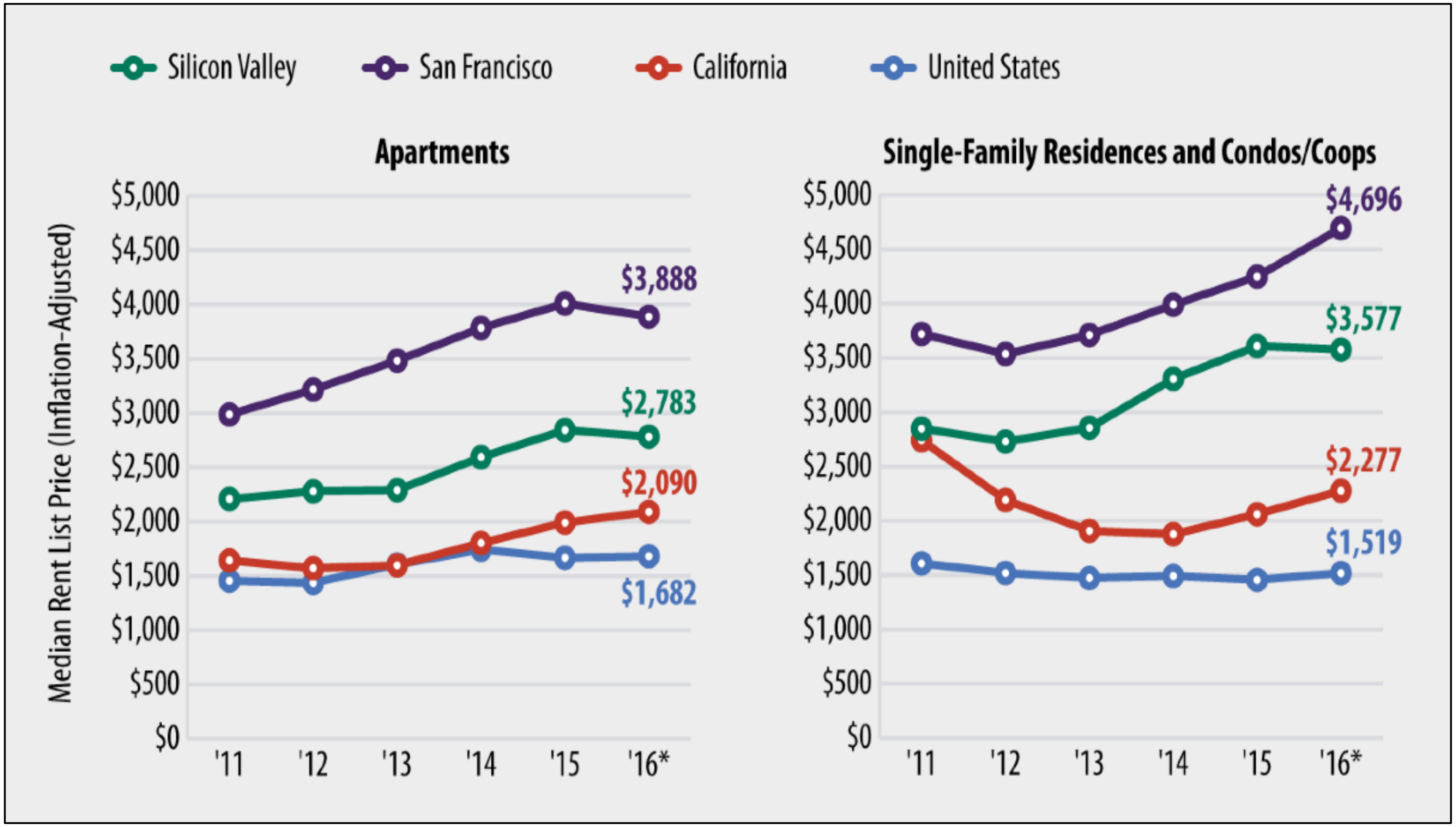
Silicon Valley
California
Silicon Valley Average Monthly For-Sale Inventory
California Average Monthly For-Sale Inventory
8,000
7,000
6,000
5,000
4,000
3,000
2,000
1,000
0
160,000
140,000
120,000
100,000
80,000
60,000
40,000
20,000
0
'10
'11
'12
'13
'14
'15
'16*

HOME AFFORDABILITY

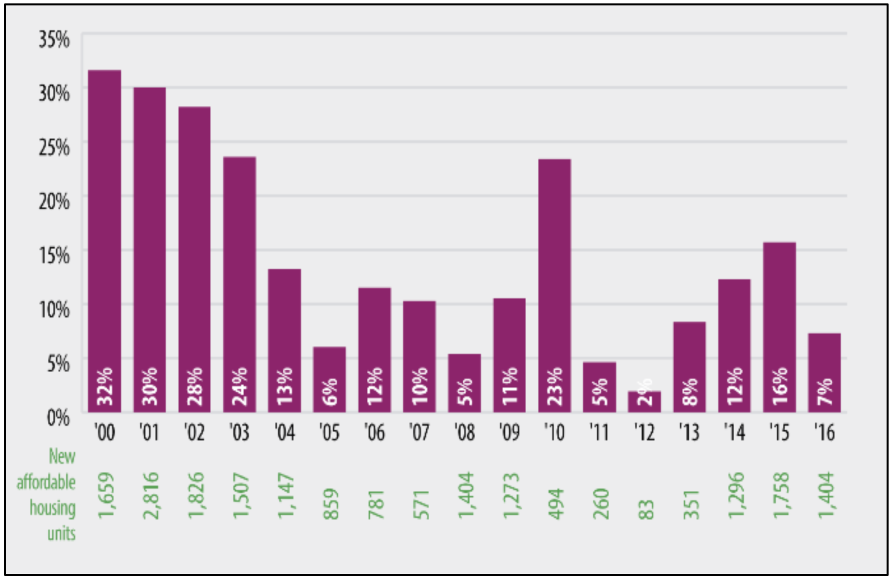
Share of Potential First Time Homebuyers That Can Afford a Median Priced Home

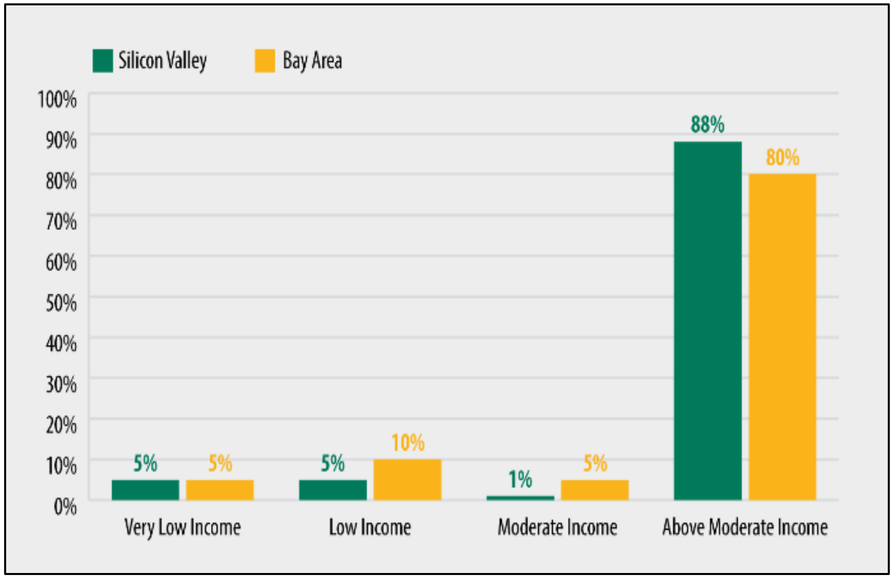


RENTAL RATES

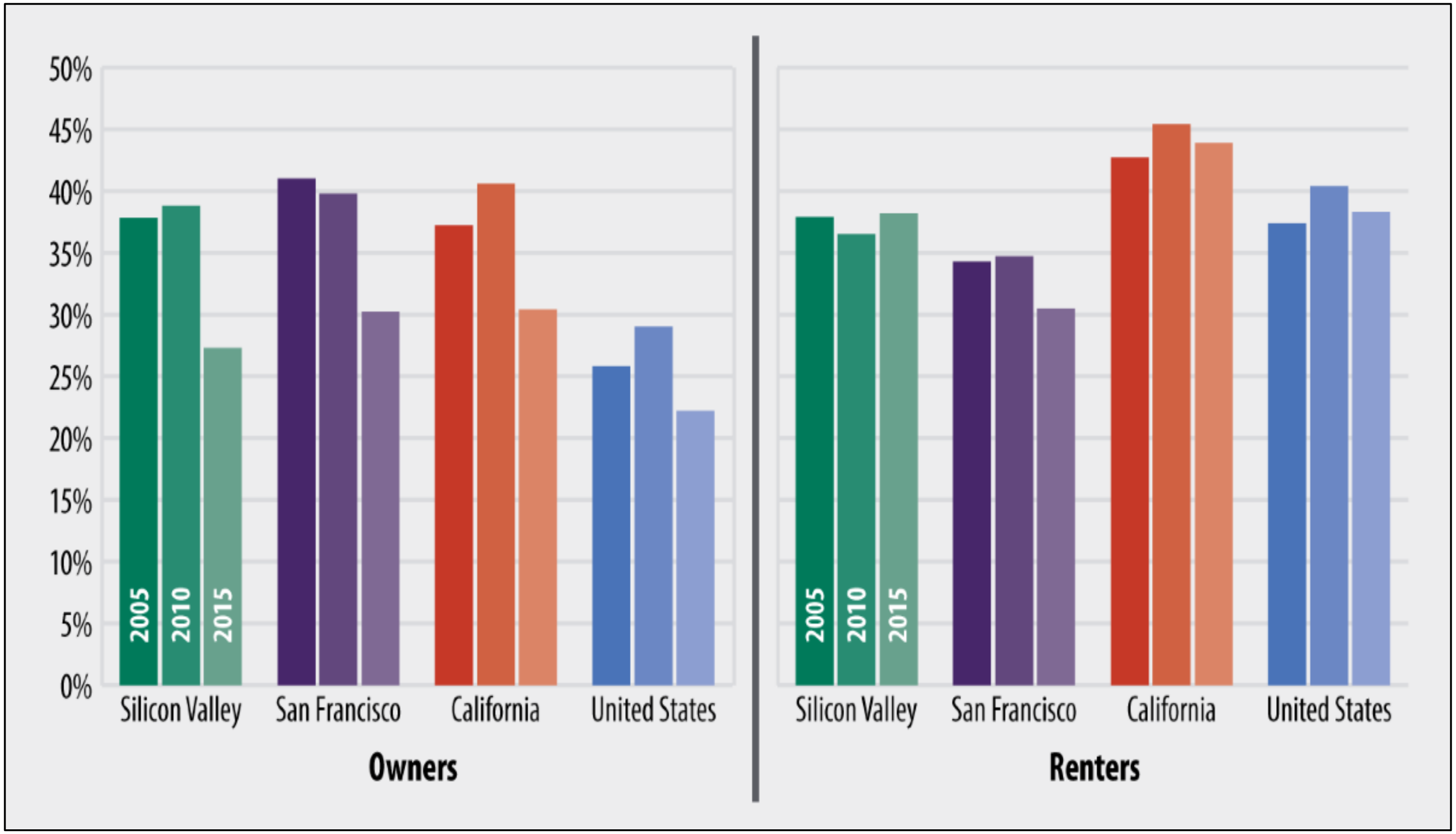


AFFORDABLE HOUSING

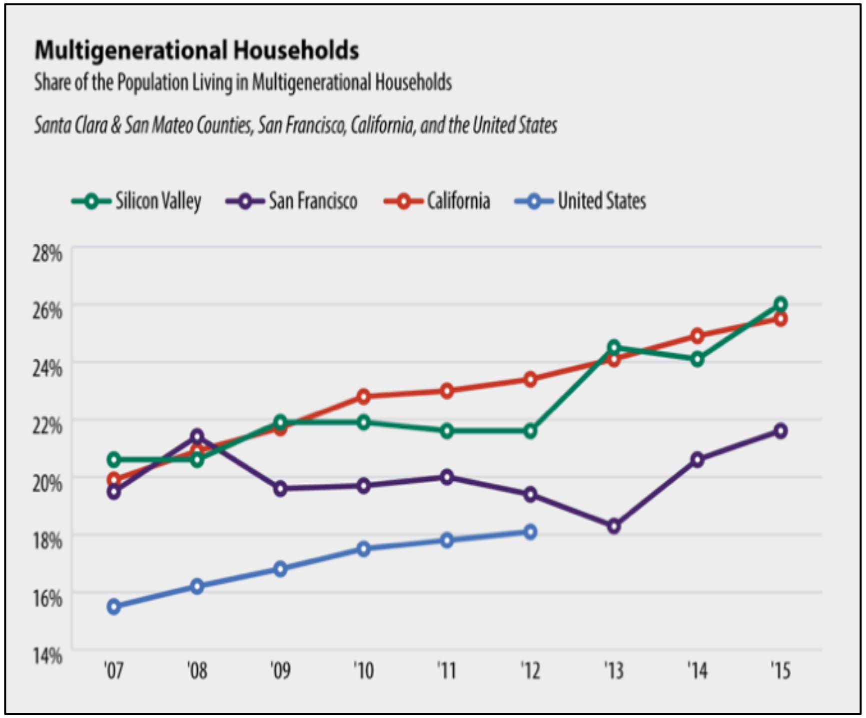


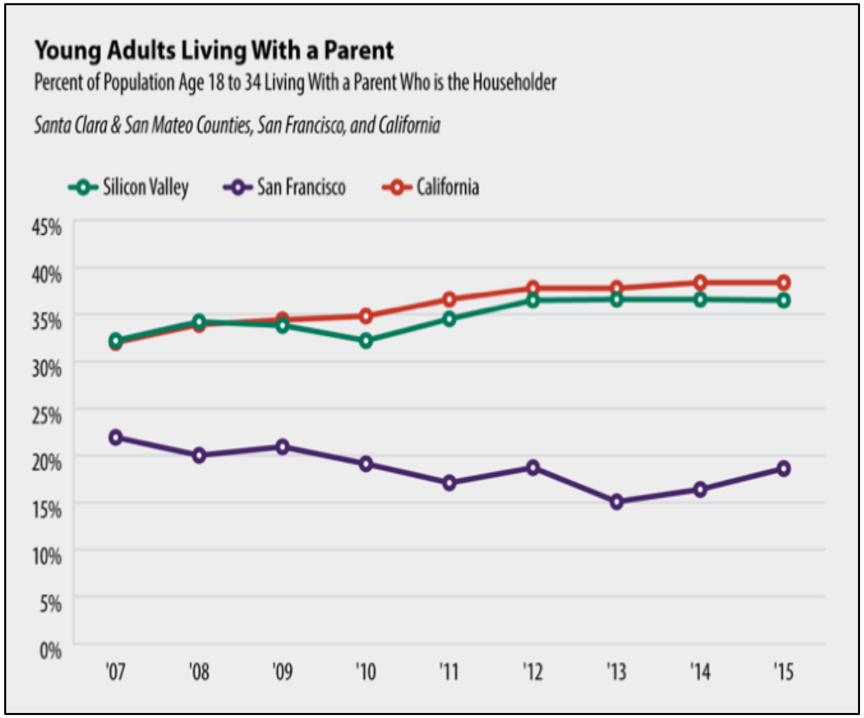


HOUSING BURDEN

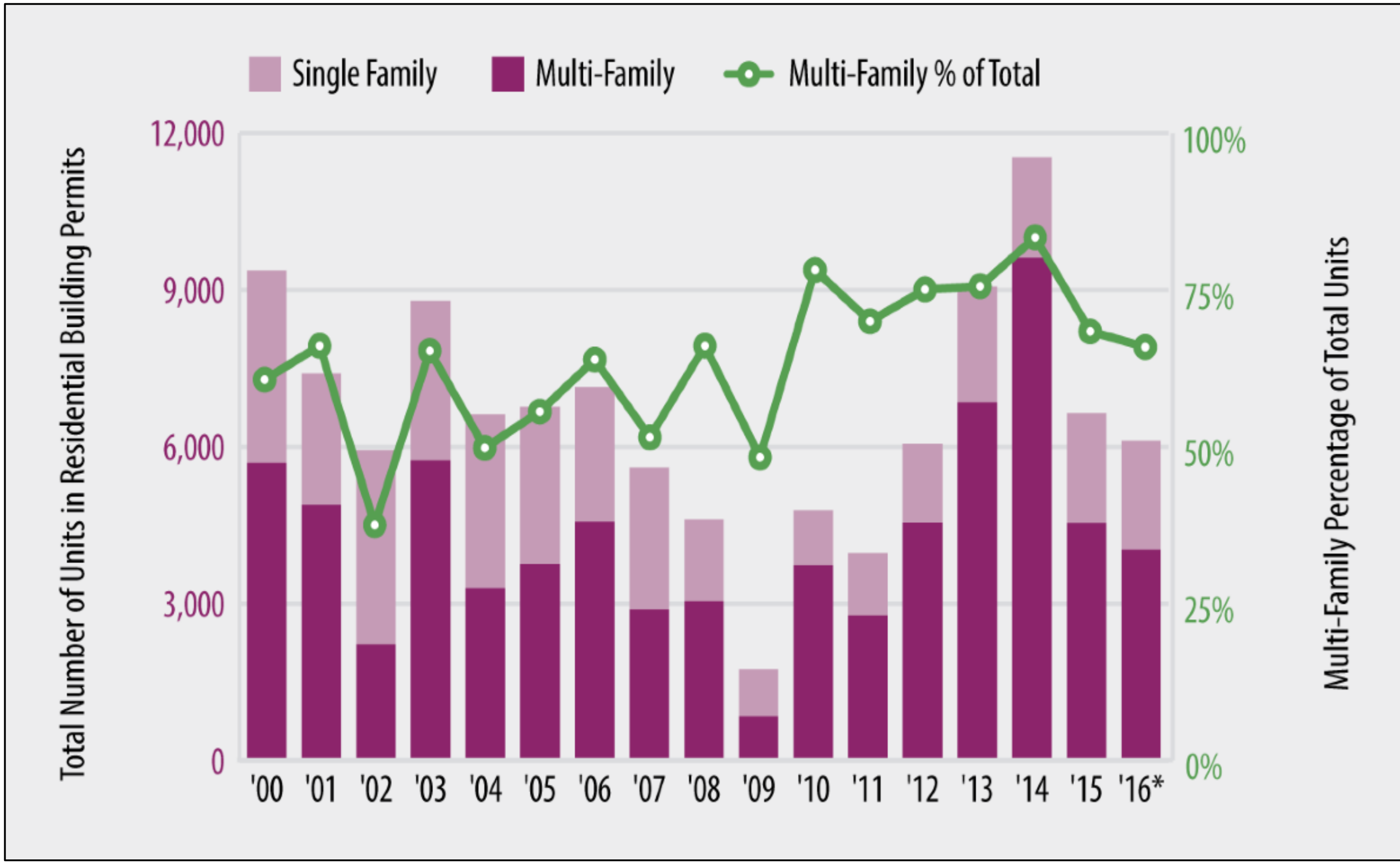


MULTIGENERATIONAL HOUSEHOLDS





RESIDENTIAL UNITS PERMITTED

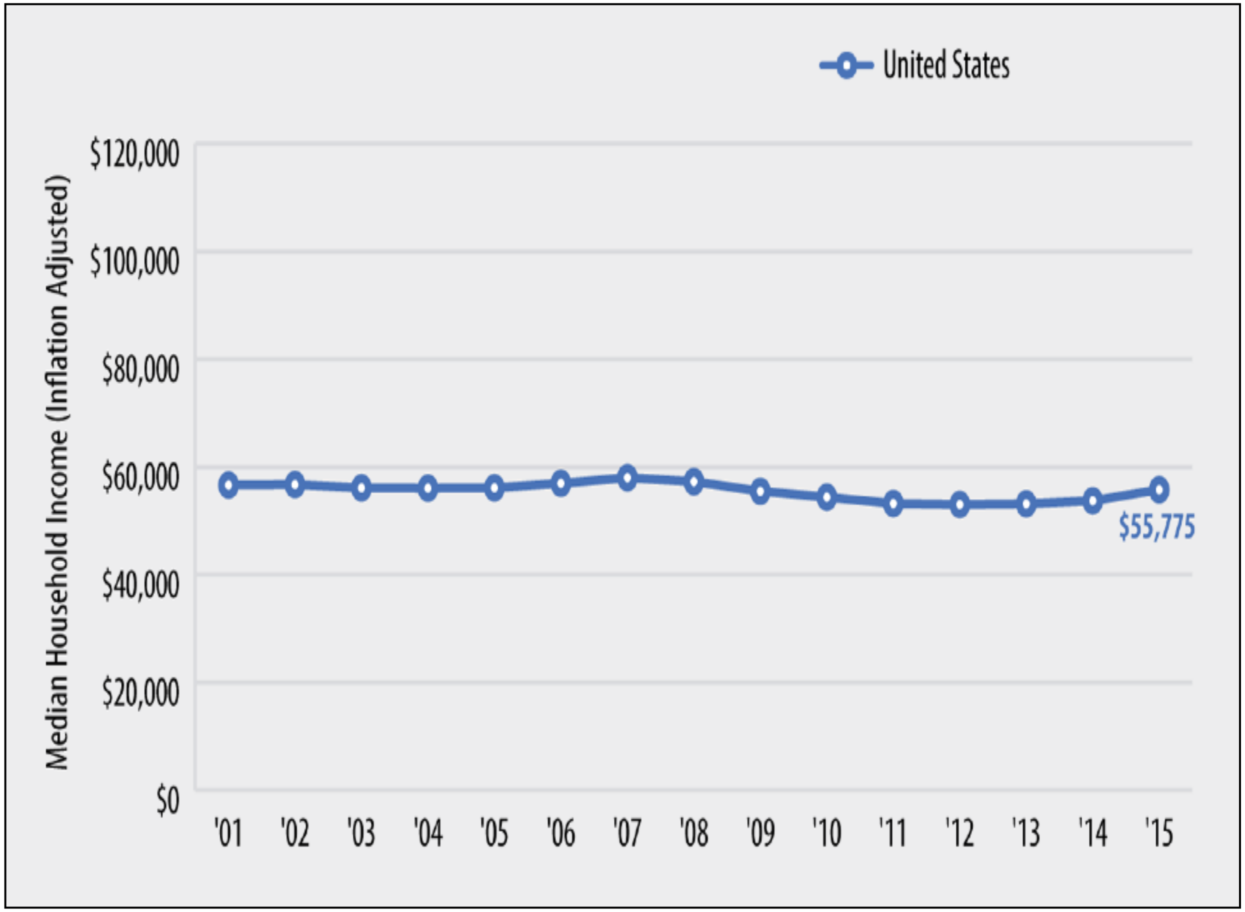


INCOME TRENDS

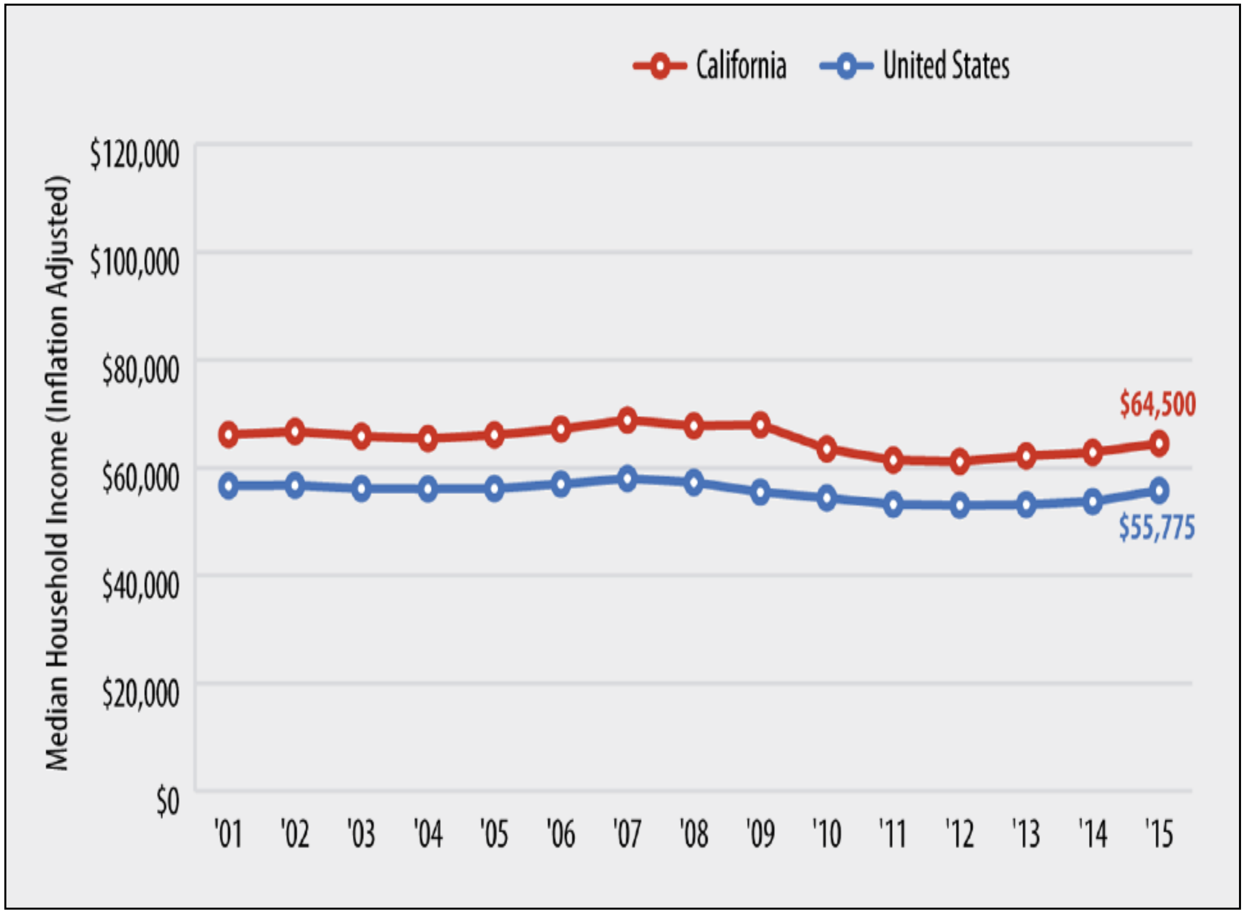
AVERAGE ANNUAL EARNINGS

Silicon Valley	$125,580
San Francisco	$114,400
Bay Area	$103,000
California	$74,200
United States	$63,200

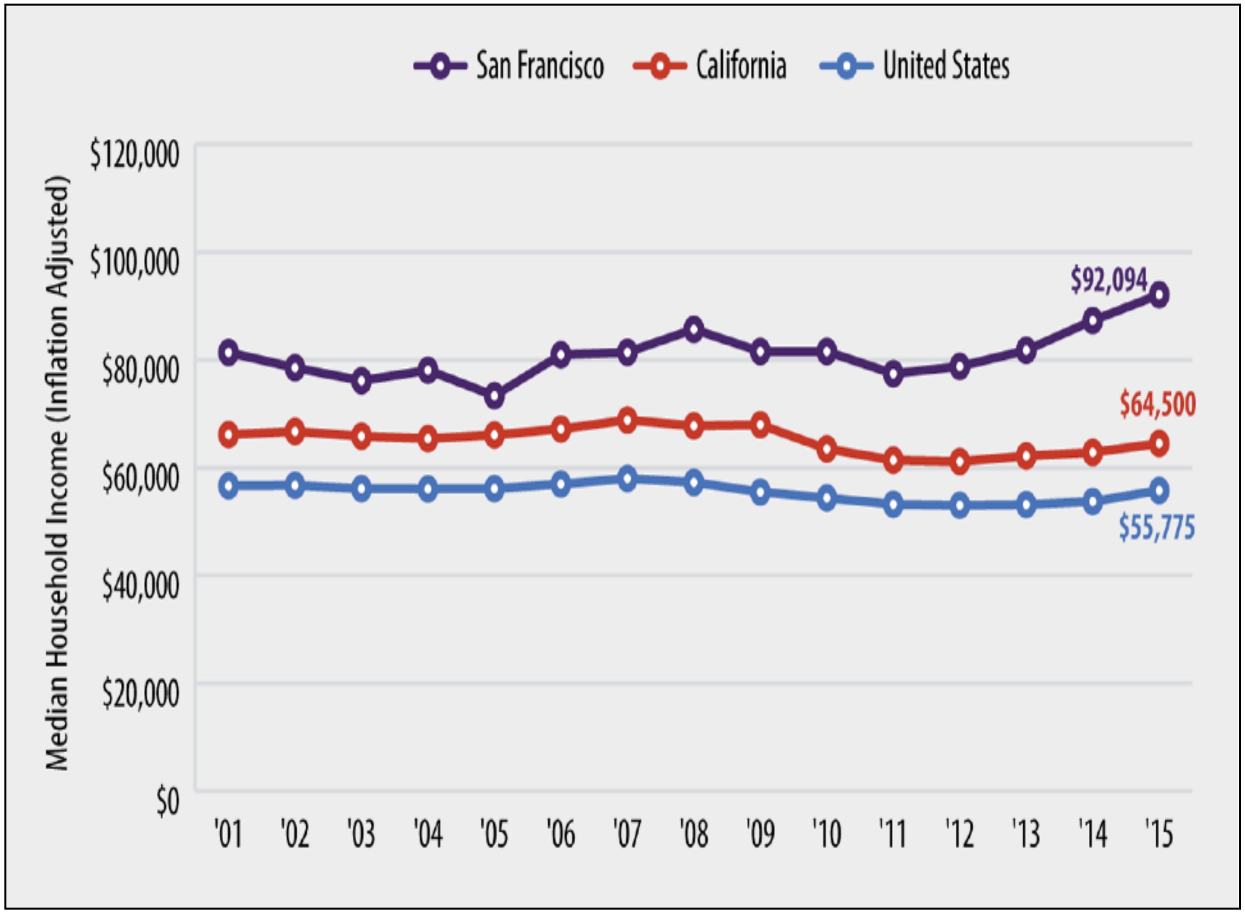
MEDIAN HOUSEHOLD INCOME



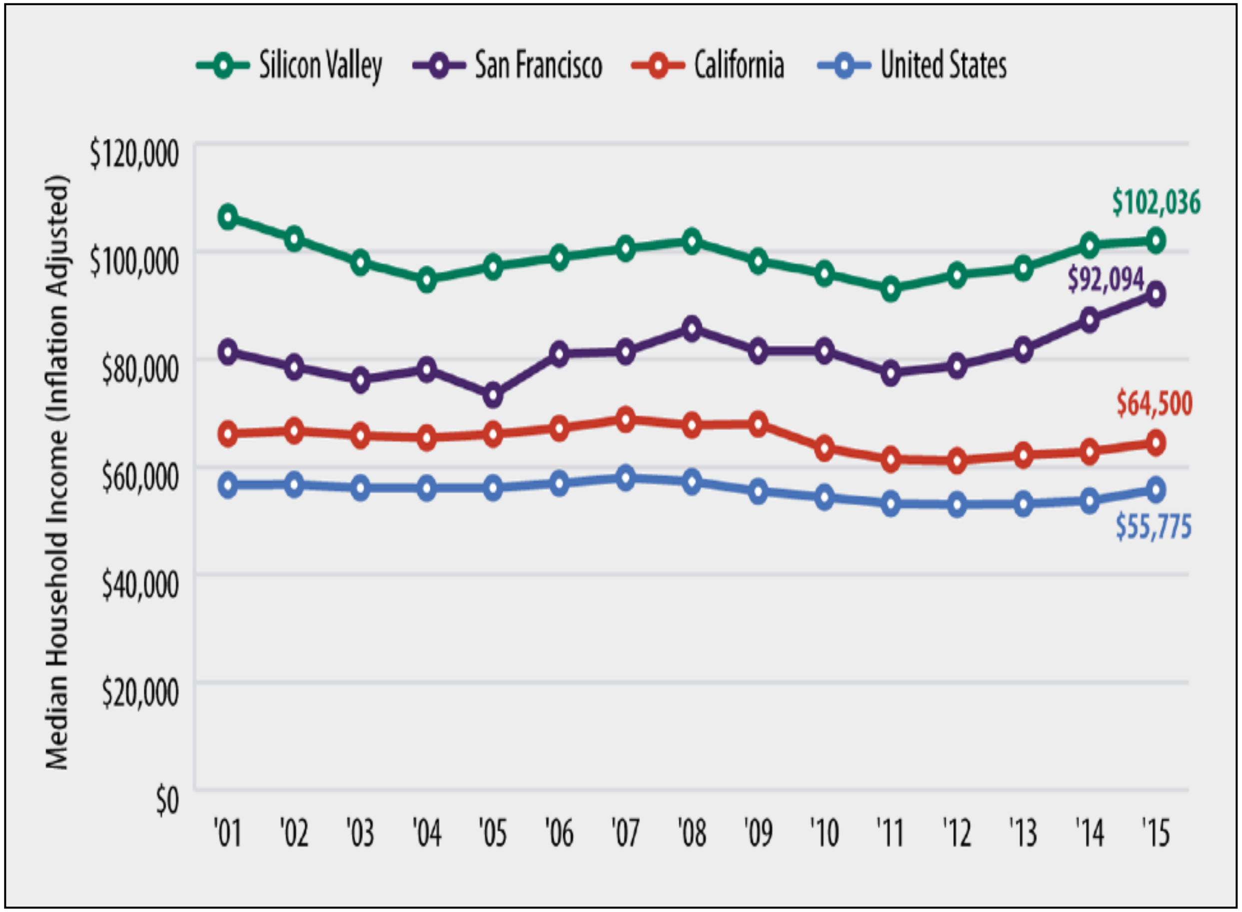
MEDIAN HOUSEHOLD INCOME



MEDIAN HOUSEHOLD INCOME

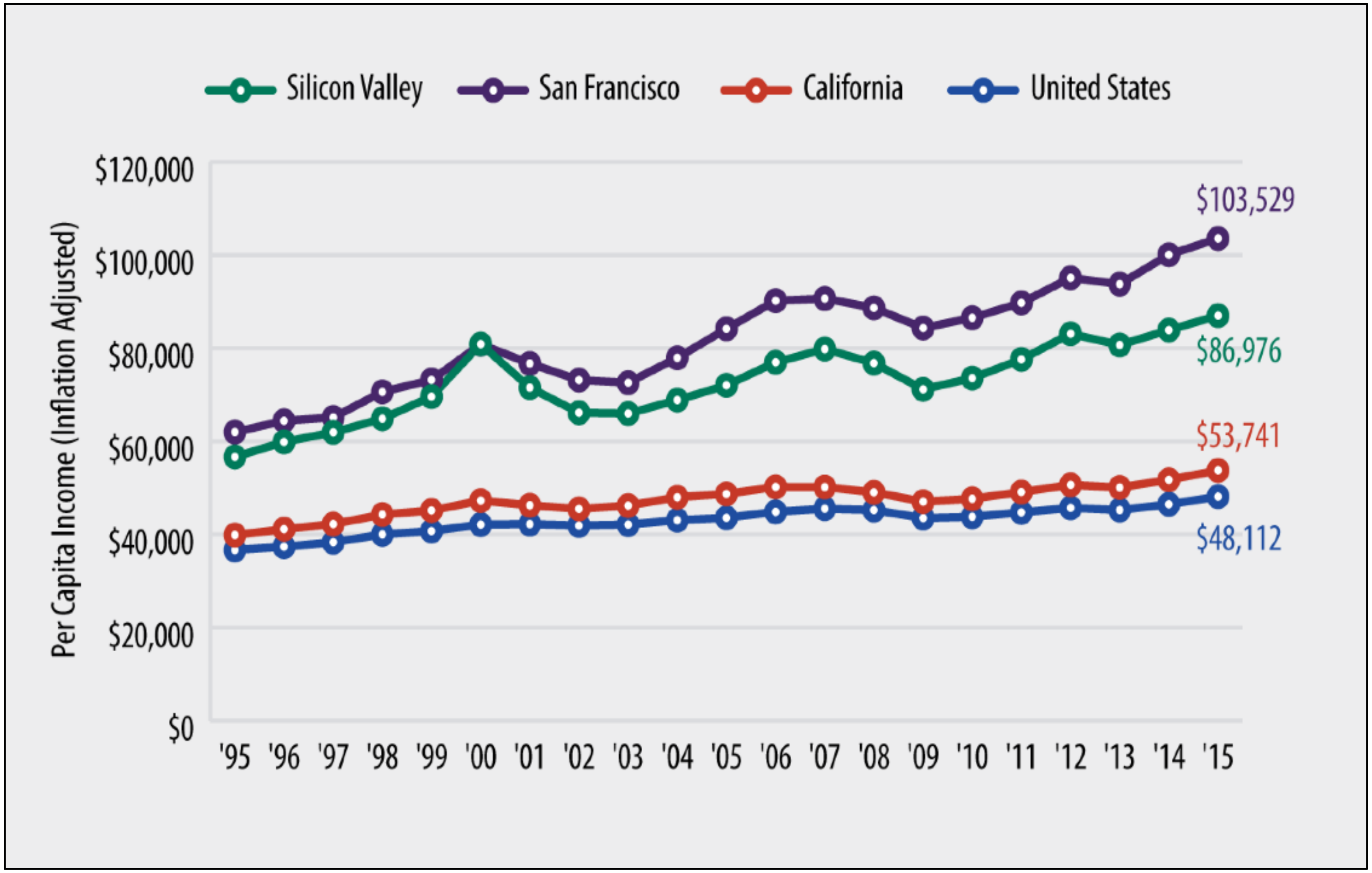


MEDIAN HOUSEHOLD INCOME



Percent Change in Inflation-Adjusted Median Household Income: 2014 - 2015	
Silicon Valley	+0.9%
San Francisco	+5.5%
California	+2.7%
United States	+3.8%

PER CAPITA INCOME



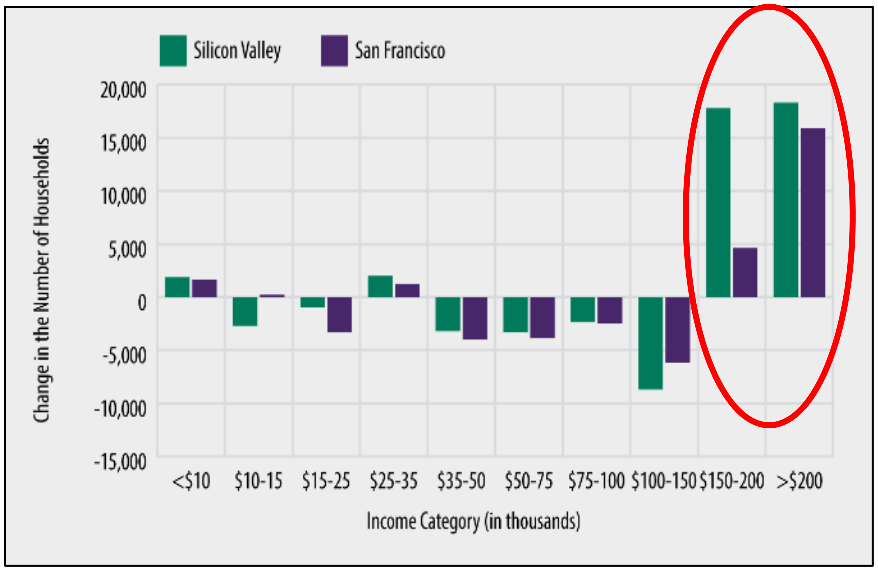
HOME PRICES OUTPACING INCOME GAINS

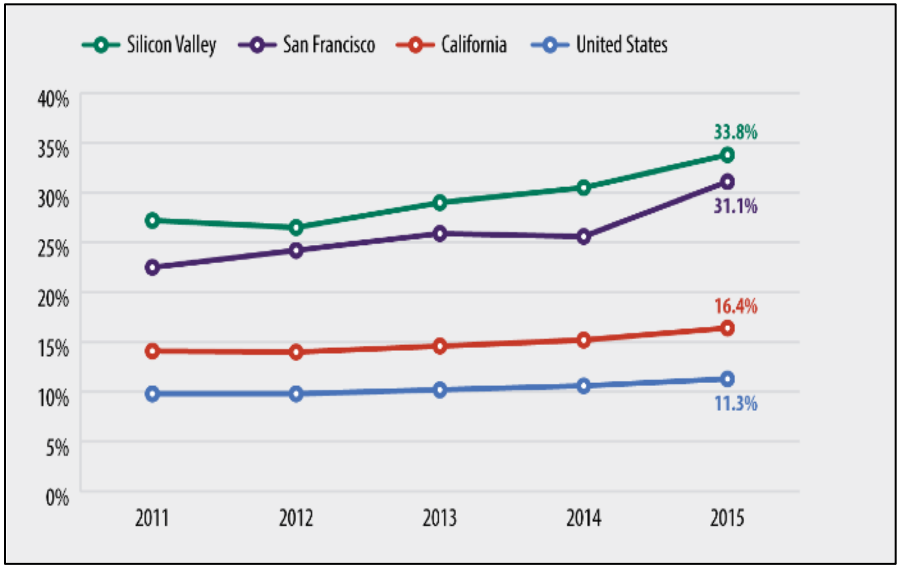
2014-2015	
Median Home Sale Price Increase	+$68,522
Corresponding Mortgage Payment Increase*	+428/month
Median Household Income Gain (pre-tax)	+$291/month

*Based on estimated mortgage payments at the average 30-Year Fixed Rates, including taxes and insurance, assuming first-time homeowners put 20% as a down payment, and not accounting for inflation between 2014 and 2015.

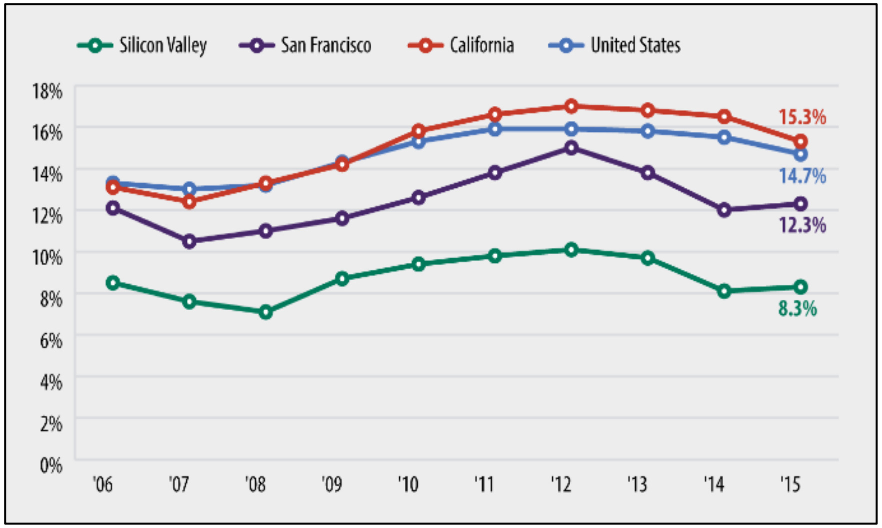
HIGH-INCOME HOUSEHOLDS

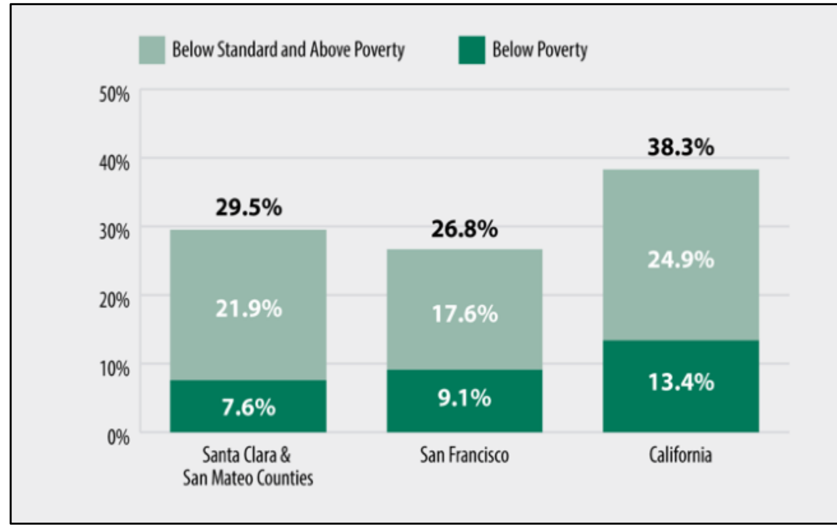
Share of Households with Income Greater than $150,000





POVERTY RATES





Share of Households Living Below the Self-Sufficiency Standard, by Race/Ethnicity of Householder
Santa Clara & San Mateo Counties | 2012

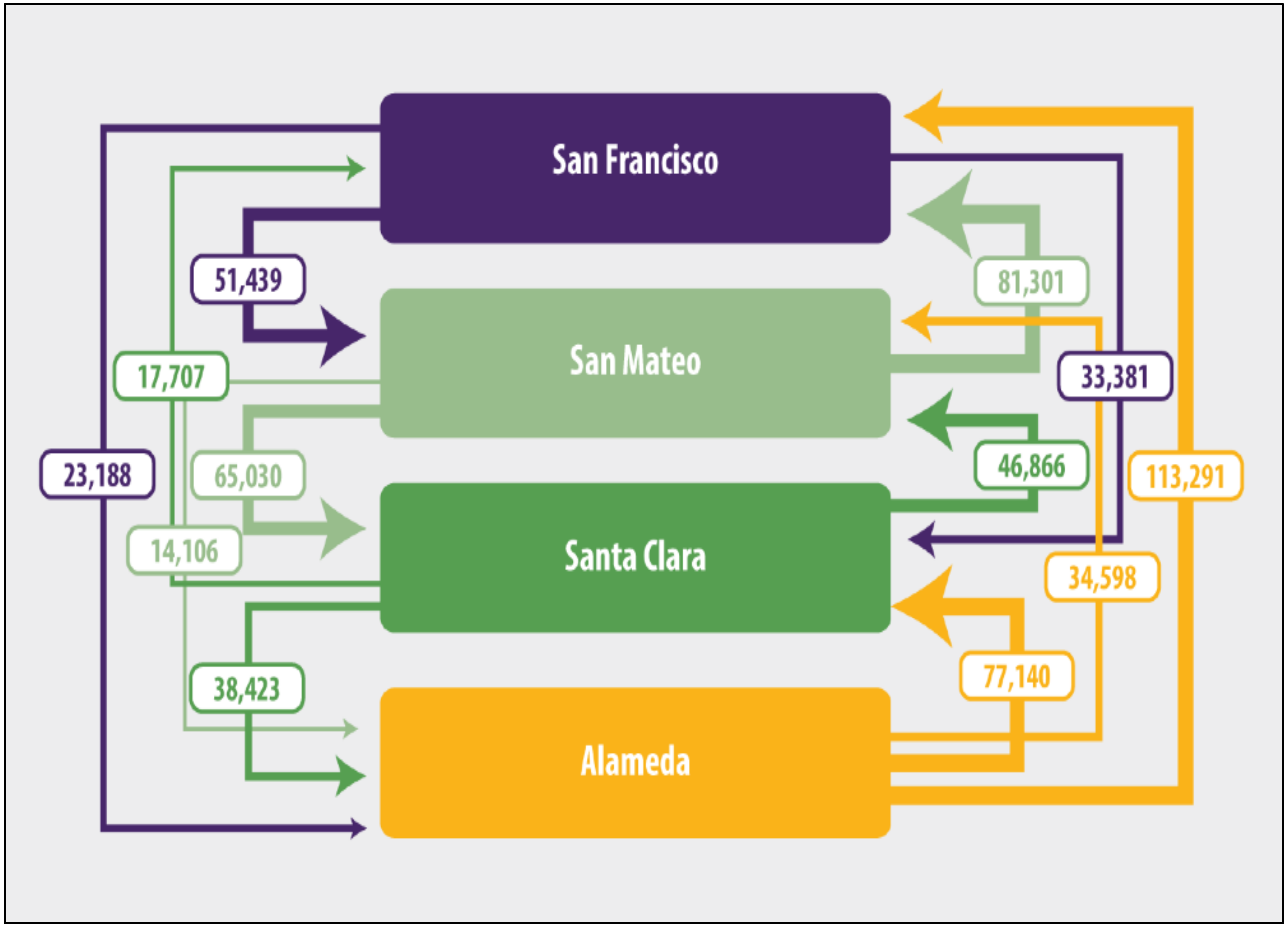
Asian/Pacific Islander	23.8%
Black	33.6%
Hispanic or Latino	58.8%
White	19.0%
Other	30.8%

Our growth continues to put a strain on the region’s infrastructure


ON 580
EAST OF GRAND AVE
OVER 4 1/2 TONS
Alameda
San Jose
San Francisco
BUSES AND
CARPOOLS ONLY
5AM-10AM MON-FRI
3PM-7PM
San Francisco
ONLY
END
CARPOOL
LANE
600 FEET
580
Oakland
880
San Jose
80
San Franci
3 RIGHT LAN
EXIT
9
ROADWAY

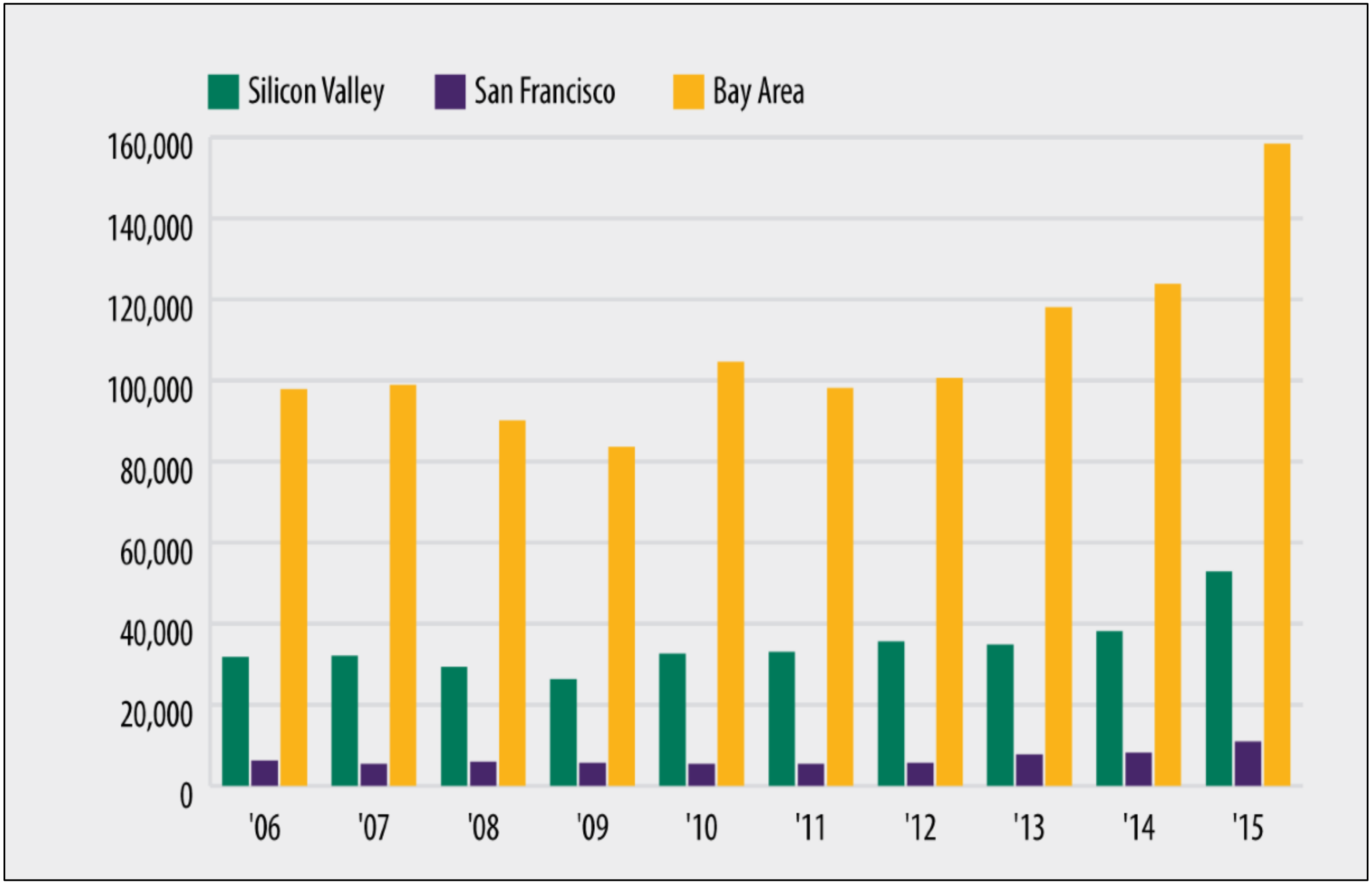
COMMUTE PATTERNS

2015



Share of Commuters Who Cross County Lines, by County of Residence 2015	
Santa Clara County	13.0%
San Mateo County	42.1%
San Francisco	24.8%
Alameda County	36.8%
Bay Area	29.5%

DAILY DELAY DUE TO CONGESTION



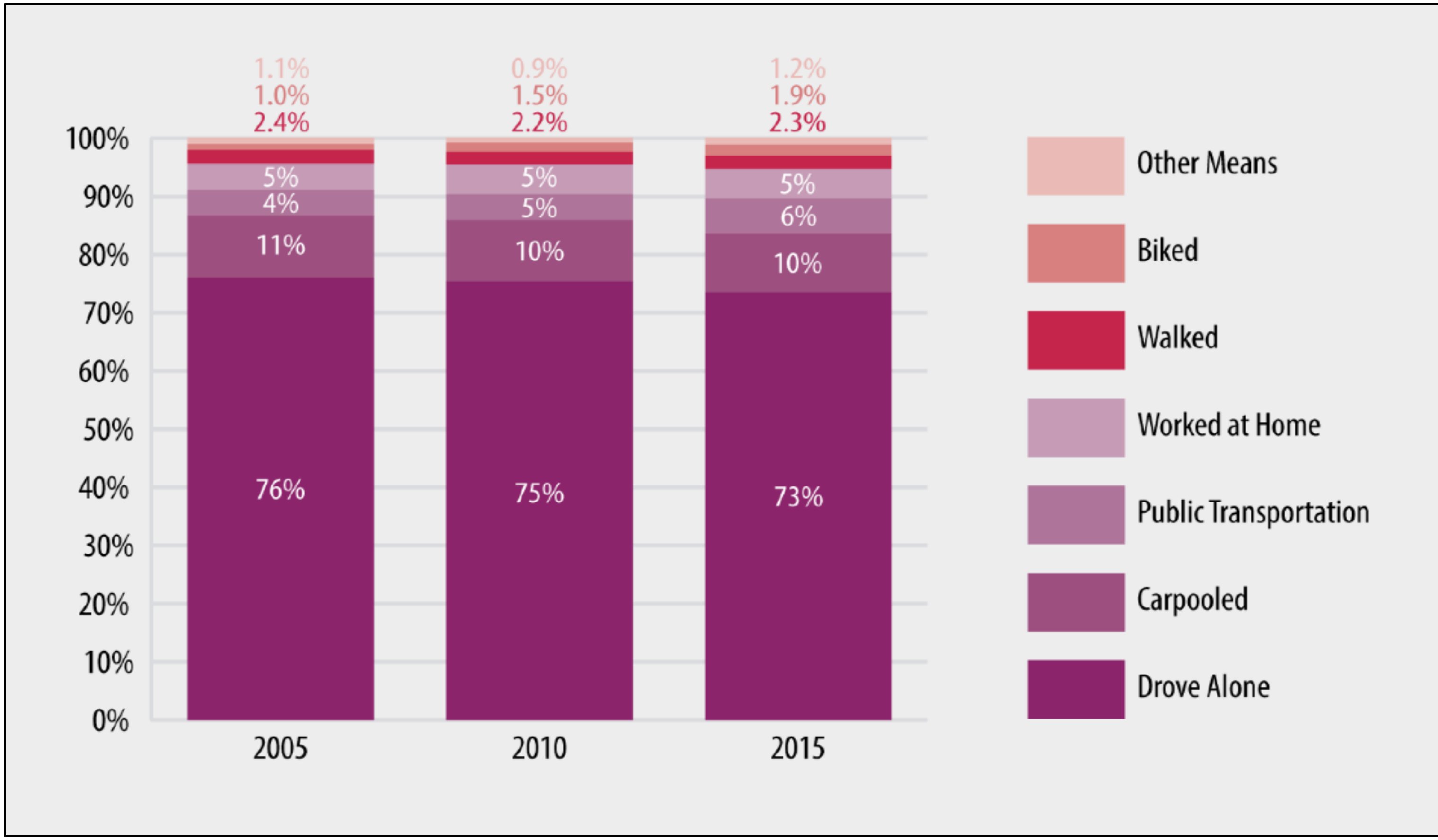
MEAN TRAVEL TIME TO WORK

2005-2015

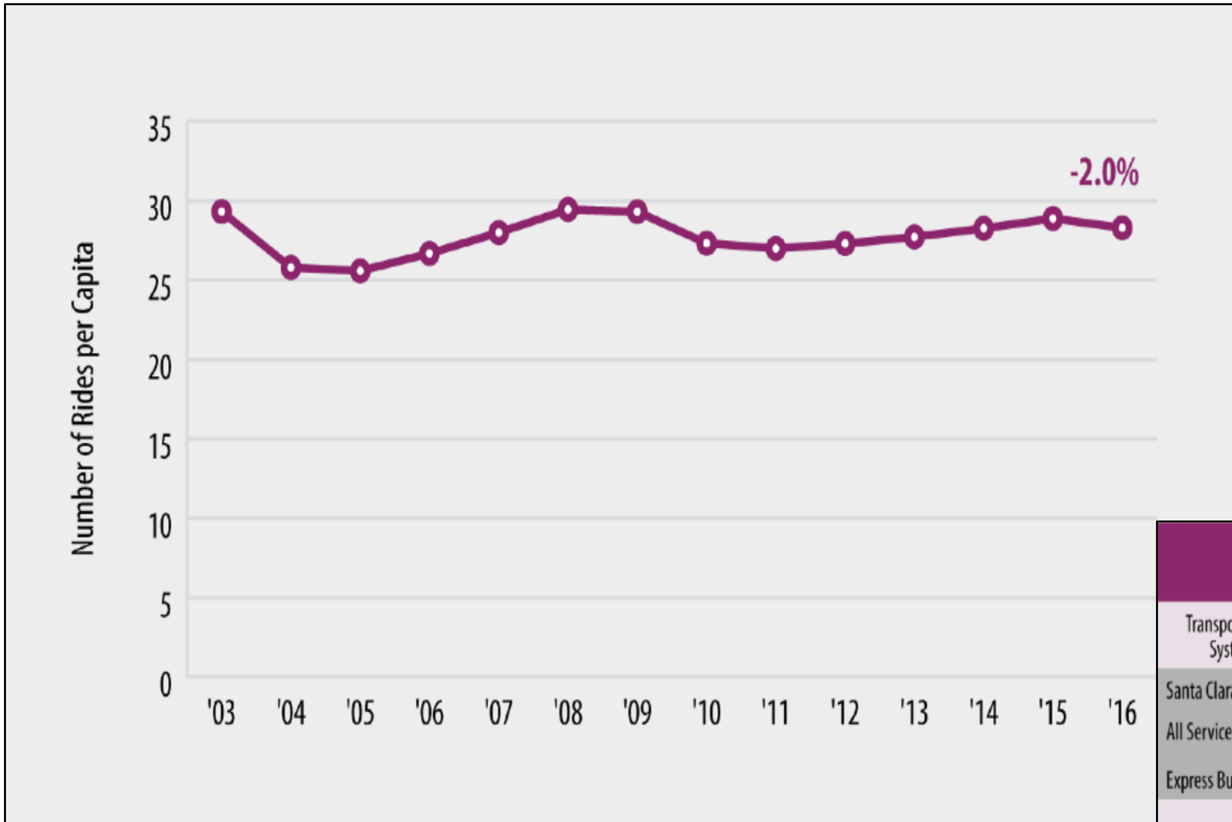
Mean Travel Time to Work Minutes				
	2005	2010	2015	2005-2015 % Change
Santa Clara & San Mateo Counties	23.9	24.4	27.9	16.9%
San Francisco	28.7	30.3	33.9	18.1%
California	27.0	26.9	28.9	7.0%

(40 minutes/week)
+35 hours per commuter annually

MEANS OF COMMUTE



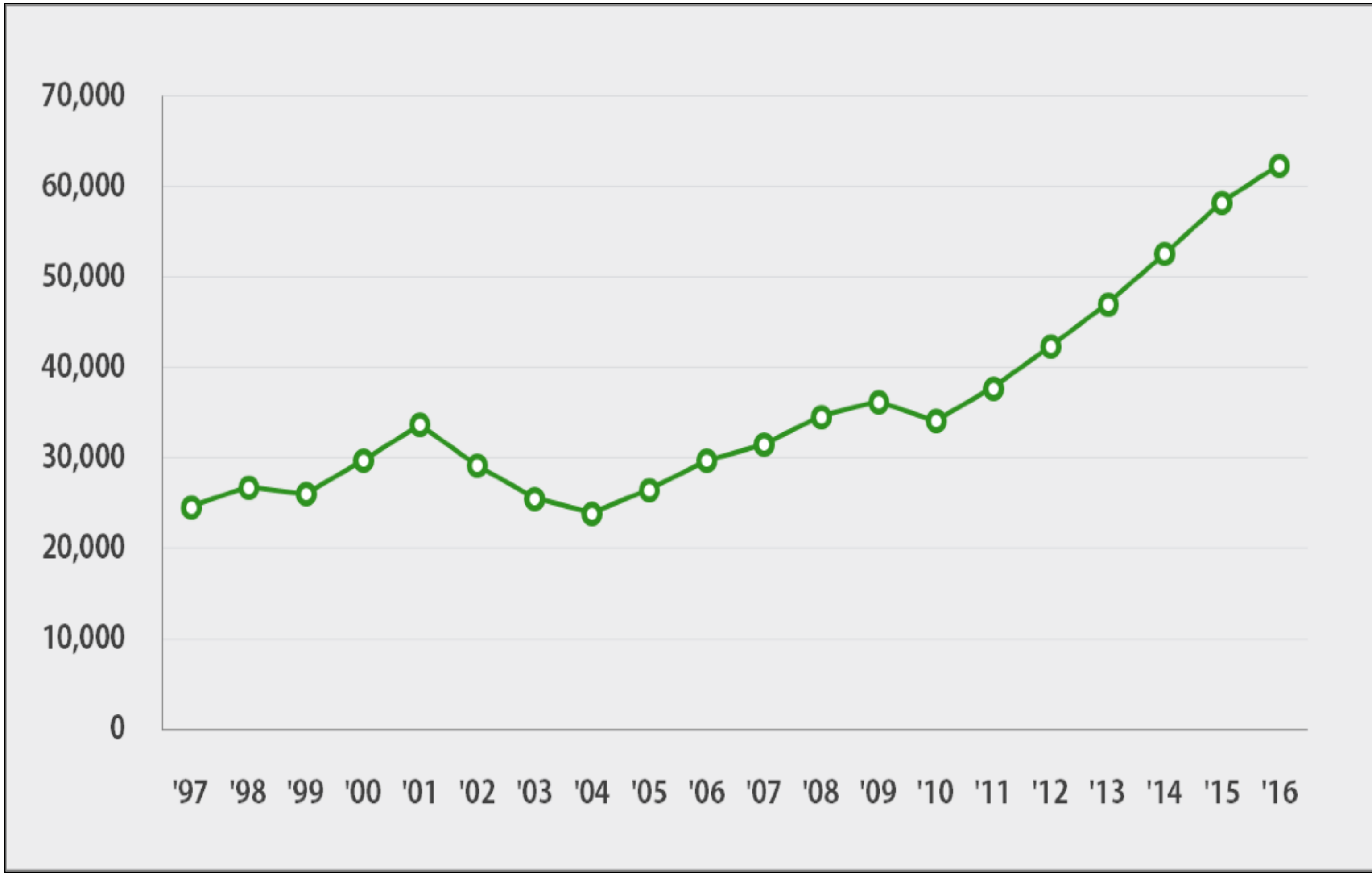
TRANSIT RIDERSHIP



Change in Per Capita Transit Use, 2010-2016
San Mateo & Santa Clara Counties

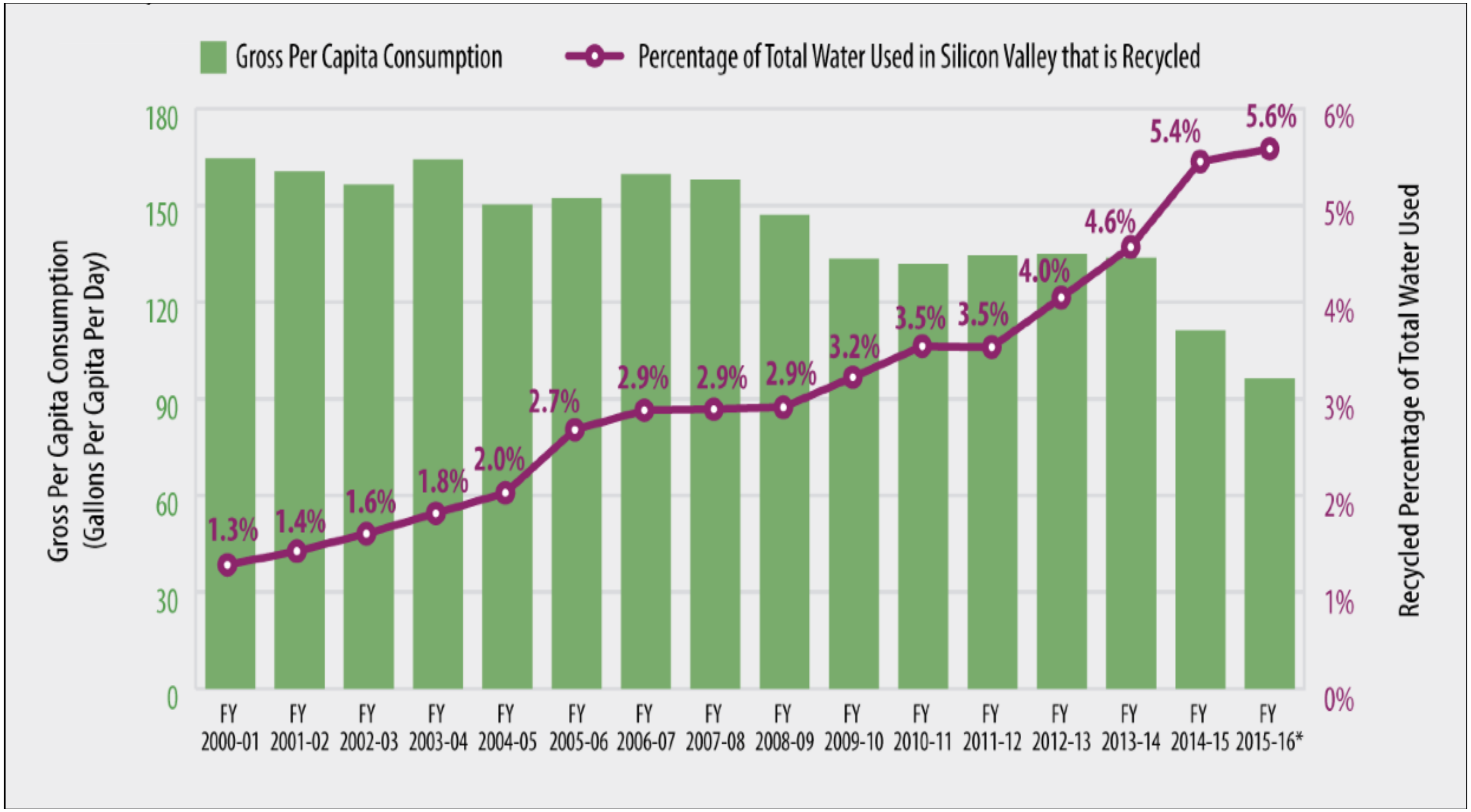
Transportation System	2010 per Capita Ridership	2016 per Capita Ridership	Percent Change
Santa Clara Valley Transportation Authority (VTA)			
All Service	16.69	15.93	-4.6%
Express Bus Service	0.38	0.53	**+39.9%**
SamTrans	5.57	4.75	-14.8%
Caltrain	4.79	7.14	**+49.1%**
Altamont Corridor Express (ACE)	0.27	0.47	**+76.5%**
Total	27.32	28.29	+3.5%

CALTRAIN DAILY RIDERSHIP

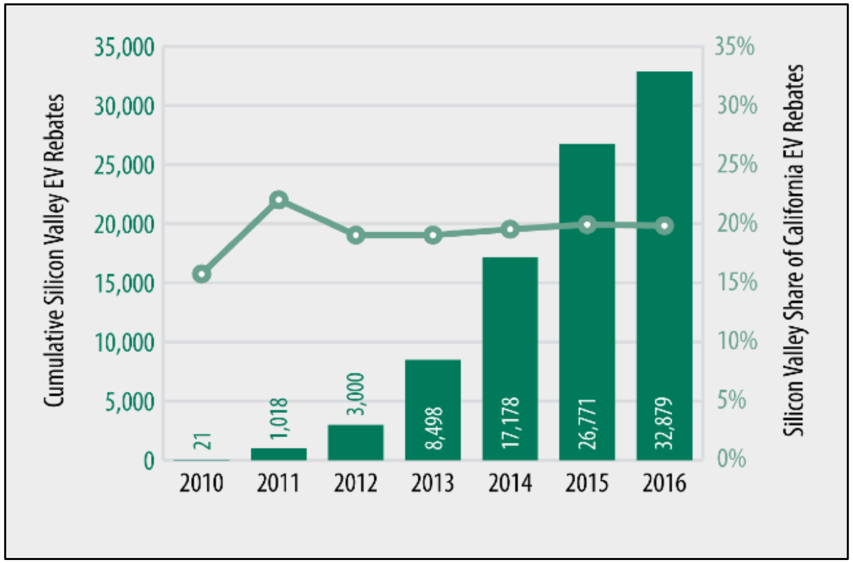


Other items of interest …

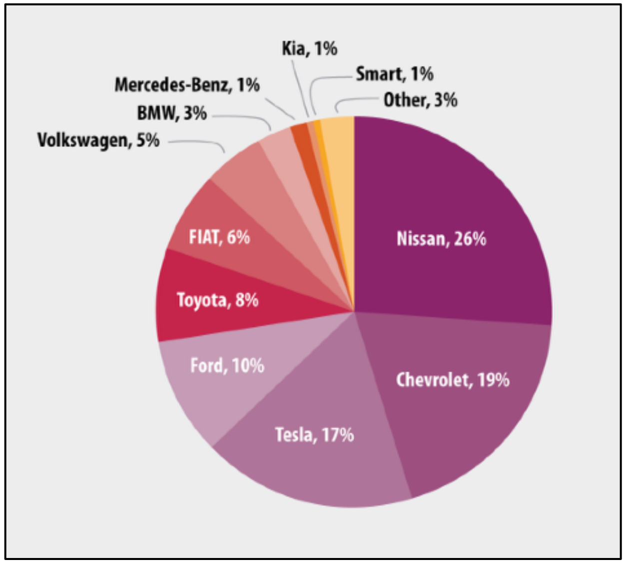
WATER CONSUMPTION



EV ADOPTION

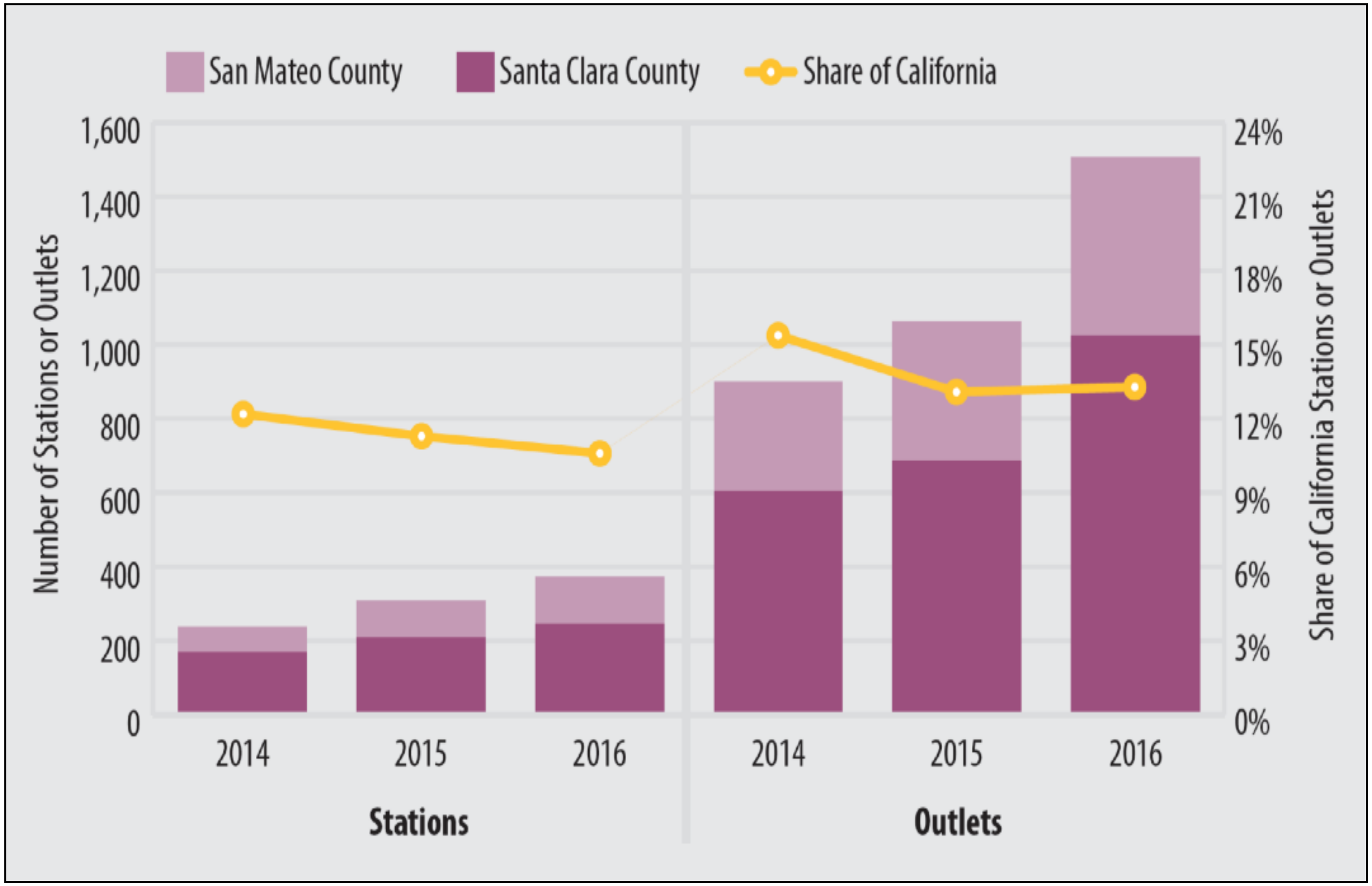


Cumulative Silicon Valley EV Rebates
Silicon Valley Share of California EV Rebates
35,000
30,000
25,000
20,000
15,000
10,000
5,000
0
35%
30%
25%
20%
15%
10%
5%
0%
21
1,018
3,000
8,498
17,178
26,771
32,879
2010
2011
2012
2013
2014
2015
2016

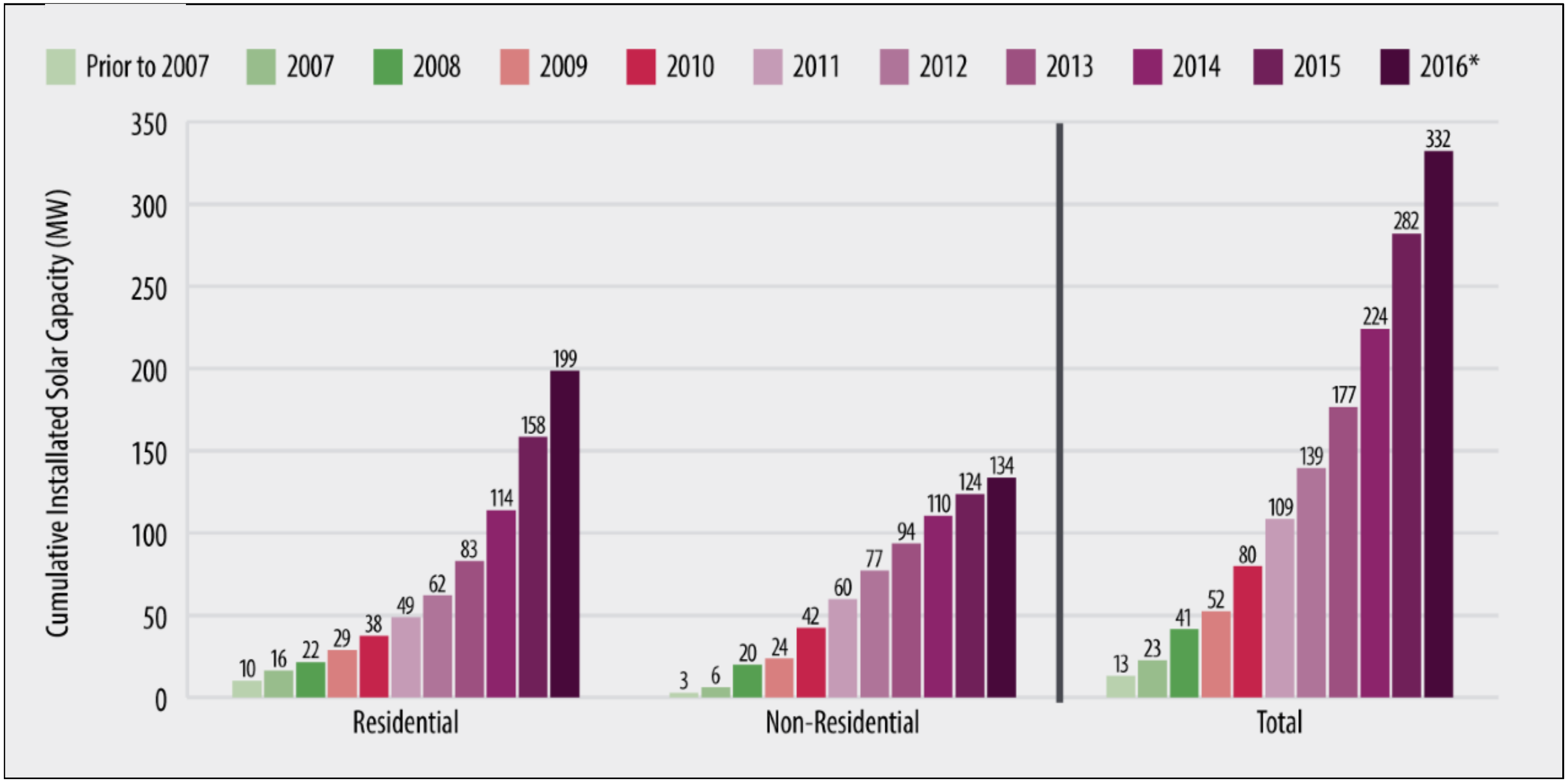


Kia, 1%
Smart, 1%
Mercedes-Benz, 1%
Other, 3%
BMW, 3%
Volkswagen, 5%
FIAT, 6%
Nissan, 26%
Toyota, 8%
Ford, 10%
Chevrolet, 19%
Tesla, 17%

PUBLIC EV CHARGING INFRASTRUCTURE

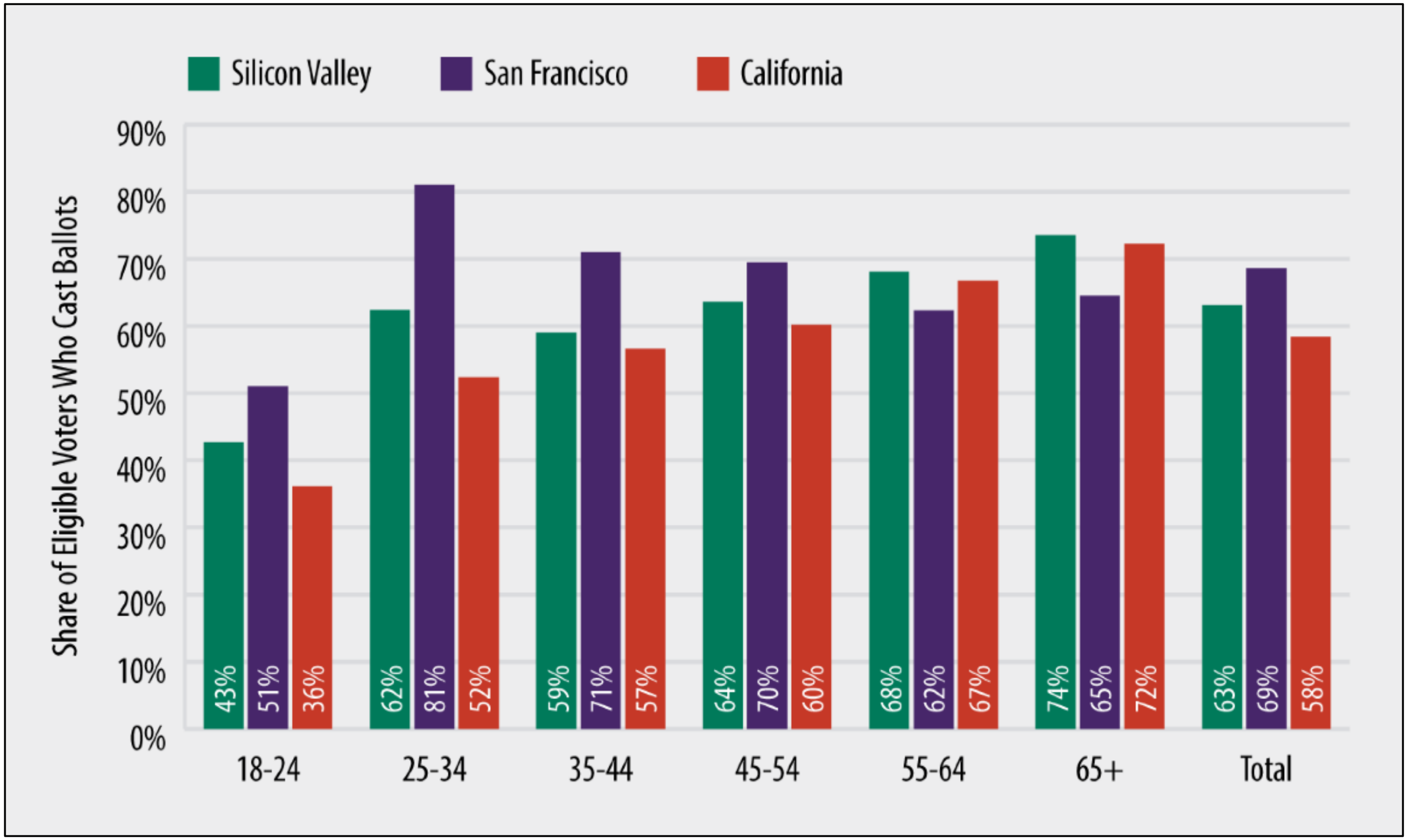


INSTALLED SOLAR CAPACITY

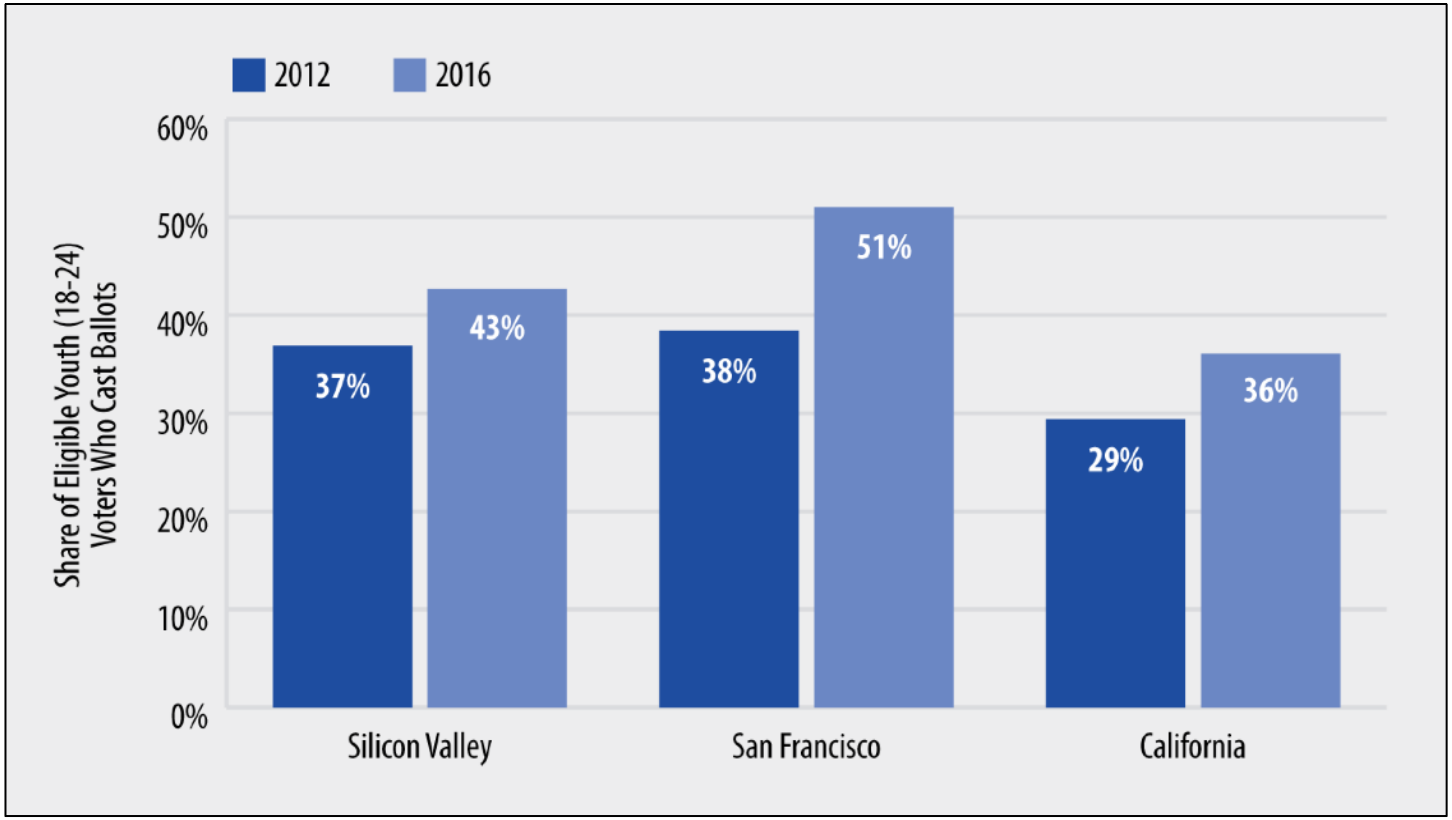


VOTER TURNOUT

2016 General Election

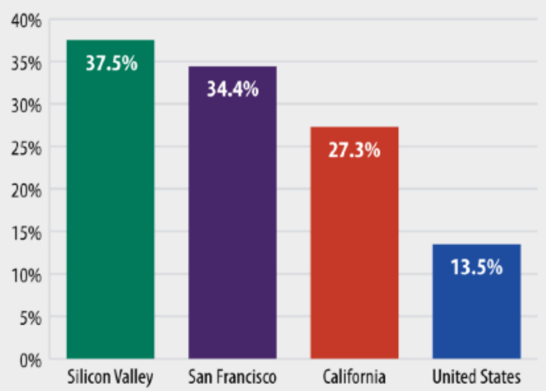


YOUNG ADULT VOTER TURNOUT
2012 & 2016



FOREIGN-BORN POPULATION

Foreign Born
Percentage of the Total Population Who Are Foreign Born
Santa Clara & San Mateo Counties, San Francisco, California, and the United States | 2015



Population Share That Speaks a Language at Home Other Than Exclusively English

	2005	2010	2015
Silicon Valley	48%	50%	51%
San Francisco	46%	45%	44%
California	42%	44%	45%
United States	19%	21%	21%

Foreign Born Share of Employed Residents Over Age 16, by Occupational Category
Santa Clara & San Mateo Counties, 2015

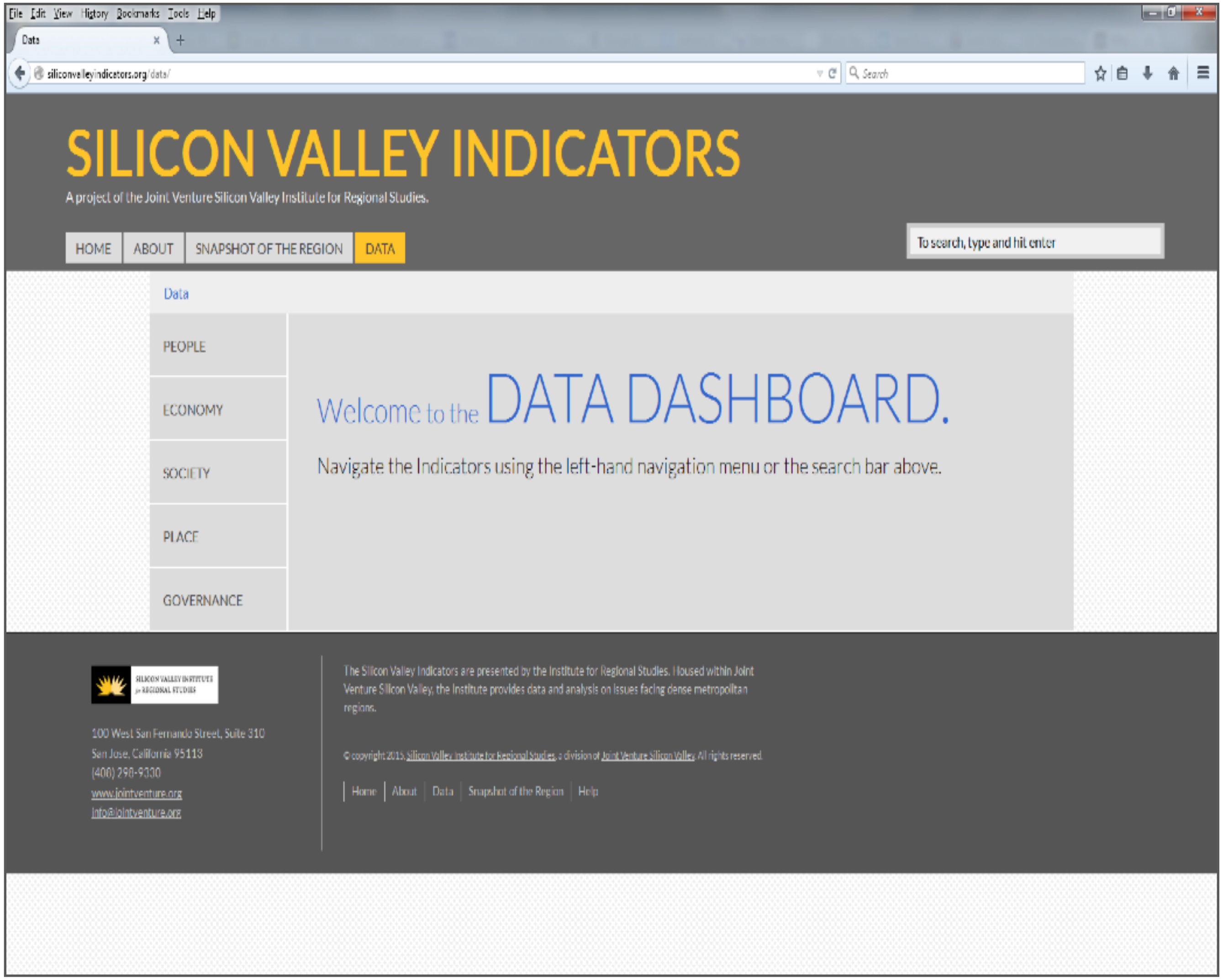
	All	Ages 25-44		
		Women	Men	Both
Computer & Mathematical	62.8%	75.9%	64.8%	67.2%
Architectural & Engineering	60.5%	77.4%	62.0%	65.5%
Natural Sciences	49.1%	38.1%	54.6%	46.9%
Medical & Health Services	46.7%	43.2%	45.2%	43.7%
Financial Services	46.9%	60.7%	29.8%	49.1%
Other Occupations	42.1%	41.6%	46.8%	44.5%
Total	45.6%	46.1%	50.9%	48.8%

Remember:

All of this information is available online!

www.siliconvalleyindicators.org

www.siliconvalleyindicators.org



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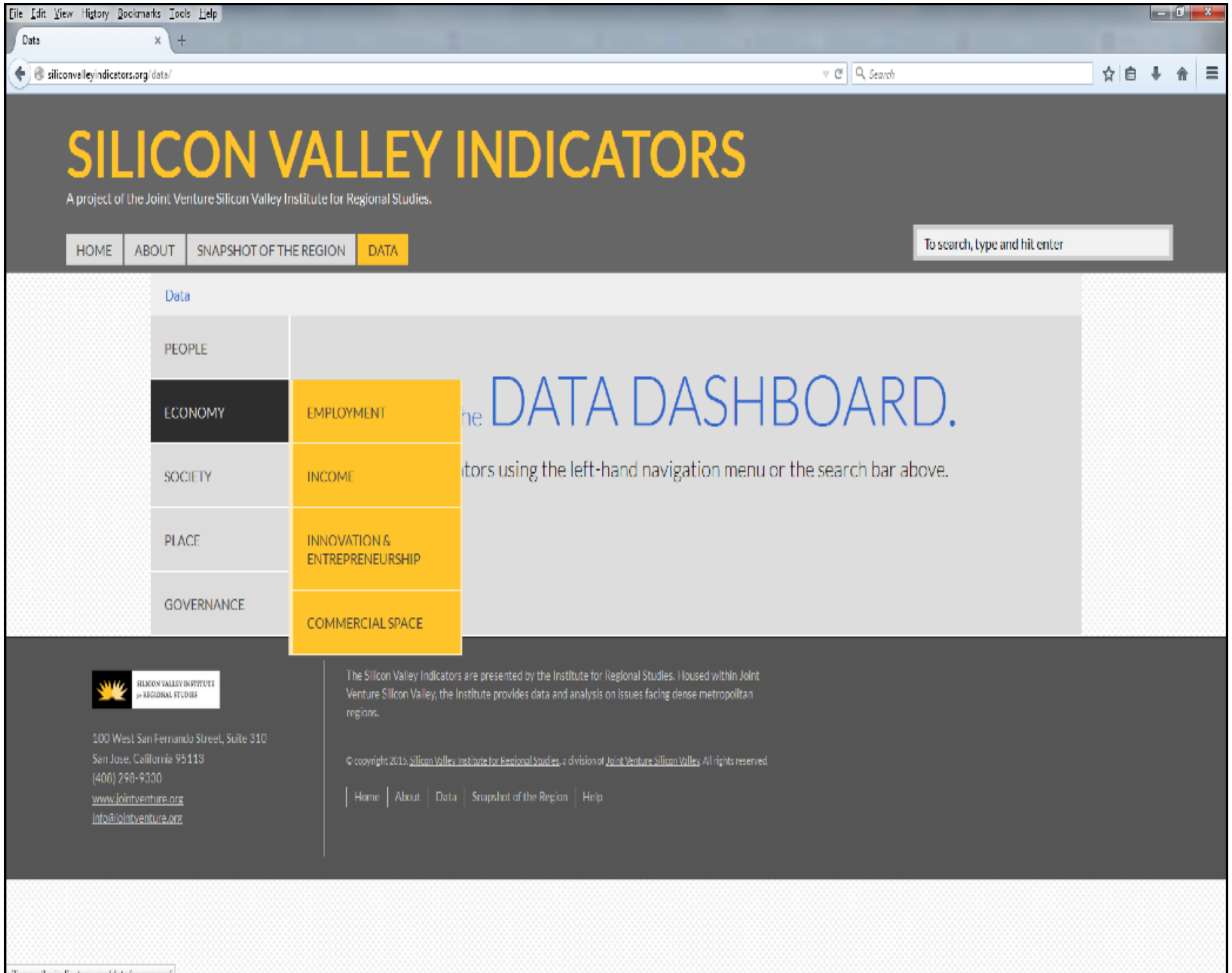

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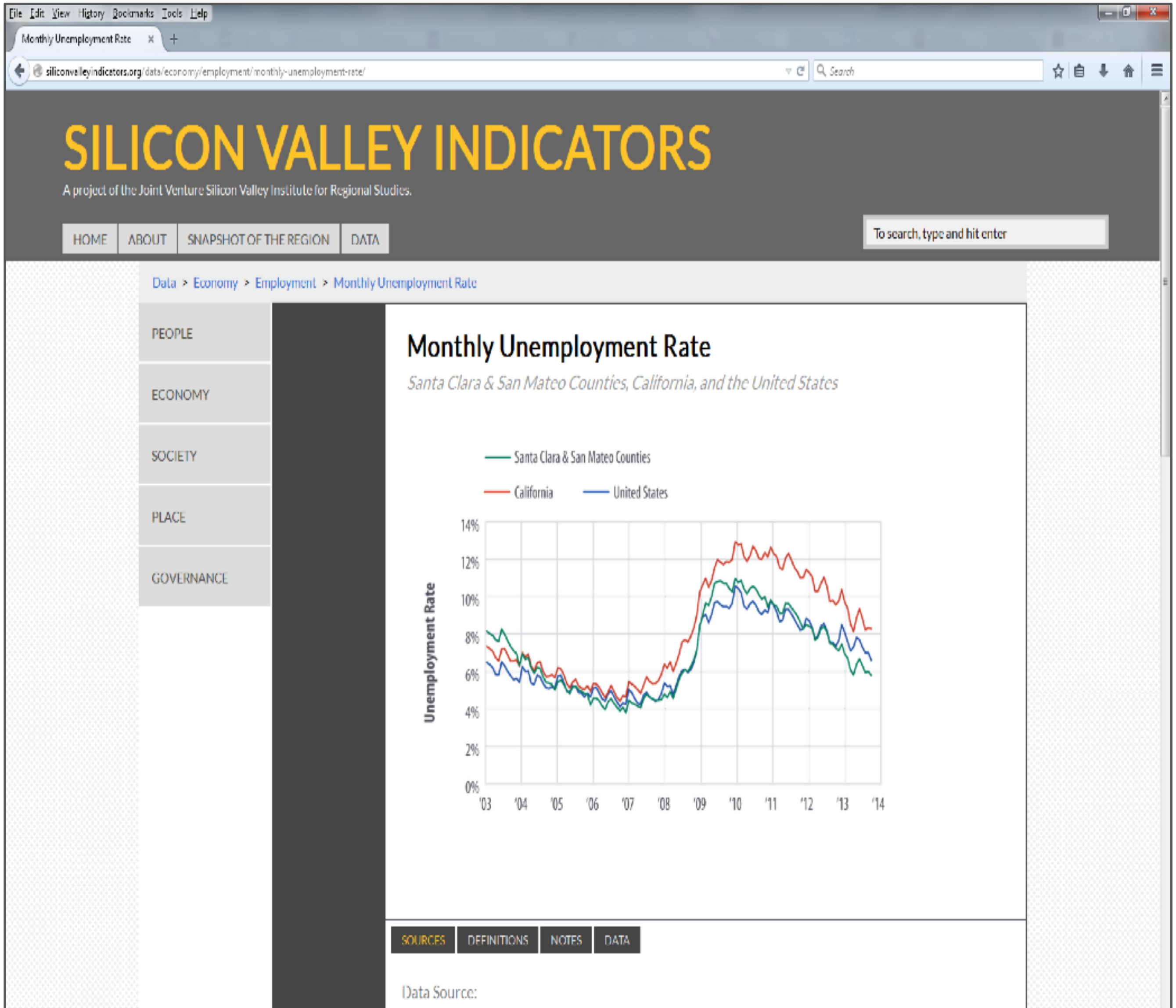


PEOPLE

ECONOMY

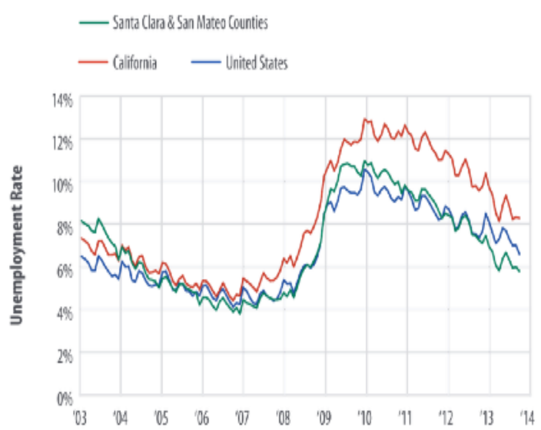
SOCIETY

PLACE

GOVERNANCE

Monthly Unemployment Rate

Santa Clara & San Mateo Counties, California, and the United States



SOURCES | DEFINITIONS | NOTES | DATA

Monthly unemployment rates are calculated using employment and labor force data from the Bureau of Labor Statistics, Current Population Statistics (CPS) and the Local Area Unemployment Statistics (LAUS). Data is not seasonally adjusted. Data is for San Mateo and Santa Clara Counties, California and the United States.

Resources for Relevant Data and Reports (show)

Related Indicators:

- Job Growth
- Relative Job Growth
- Silicon Valley Major Areas of Economic Activity
- Unemployed Residents' Share of the Working Age Population

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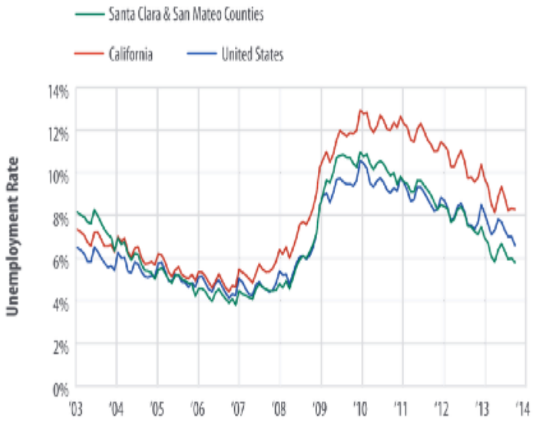

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Santa Clara County, San Mateo County, and California data for November 2013 are Preliminary.

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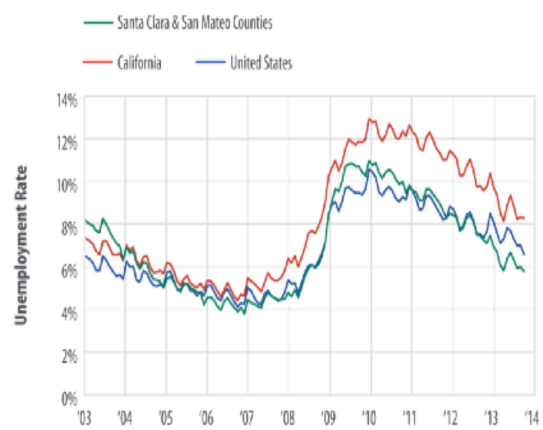

SOURCES | DEFINITIONS | NOTES | DATA

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You have chosen to open:

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Job Growth

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Unemployed Residents' Share of the Working Age Population

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Russell Hancock
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