

Hollywood vs. Silicon Valley: SPUR's Plan for funding high speed rail

July 24, 2012

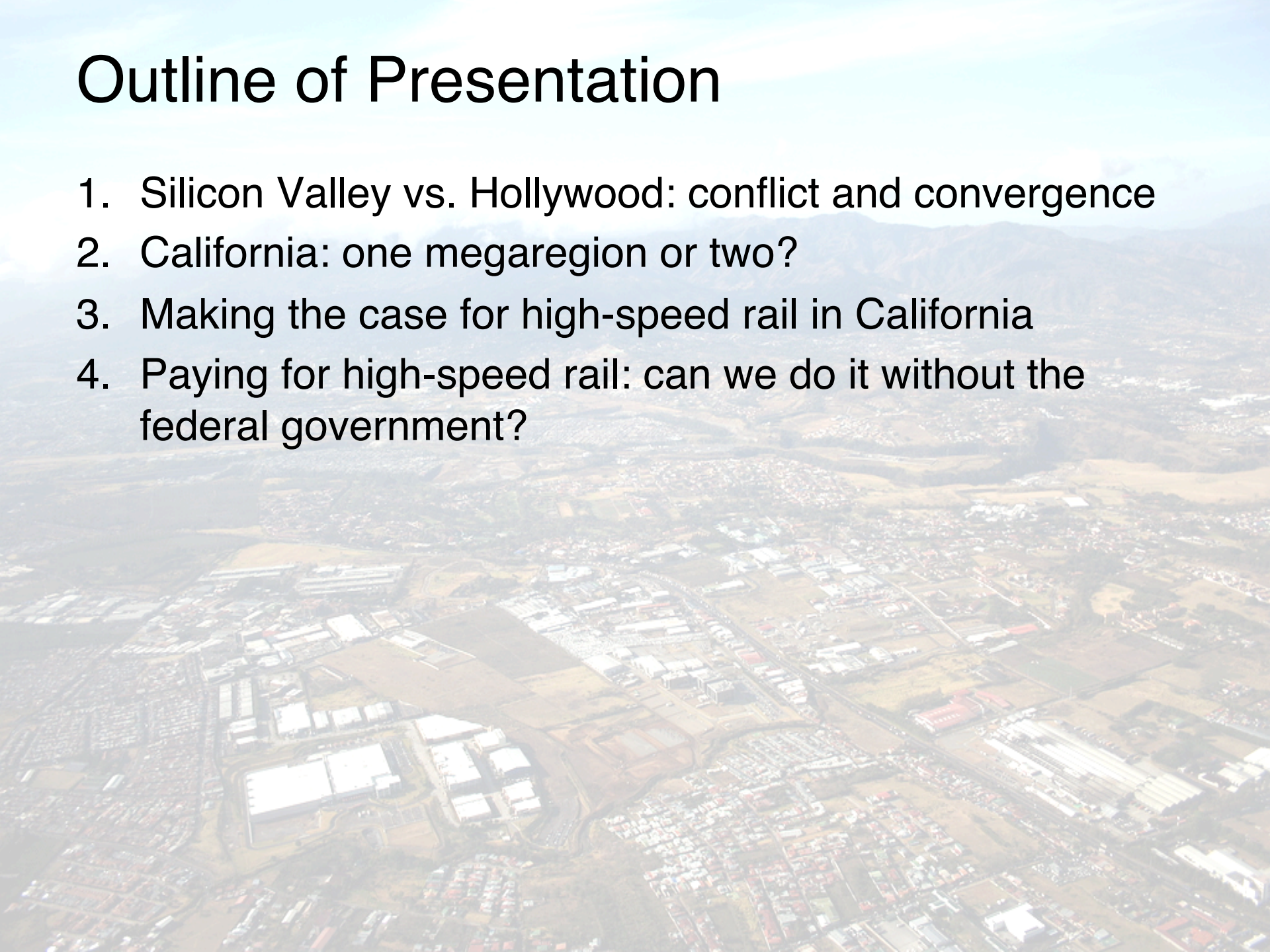
Egon Terplan



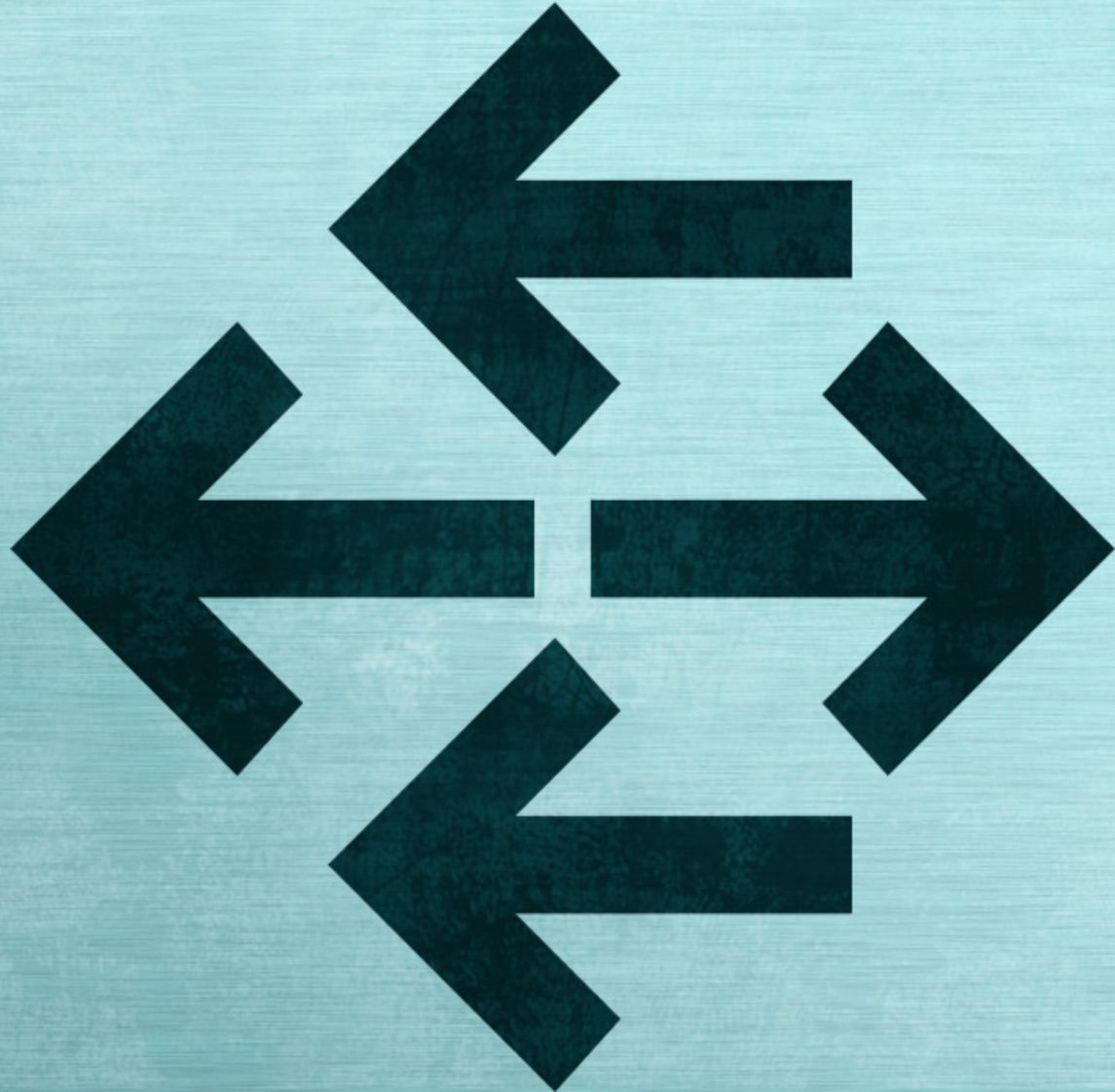
SAN FRANCISCO
PLANNING + URBAN RESEARCH
ASSOCIATION

Outline of Presentation

1. Silicon Valley vs. Hollywood: conflict and convergence
2. California: one megaregion or two?
3. Making the case for high-speed rail in California
4. Paying for high-speed rail: can we do it without the federal government?



Silicon Valley and Hollywood: Conflict and Convergence



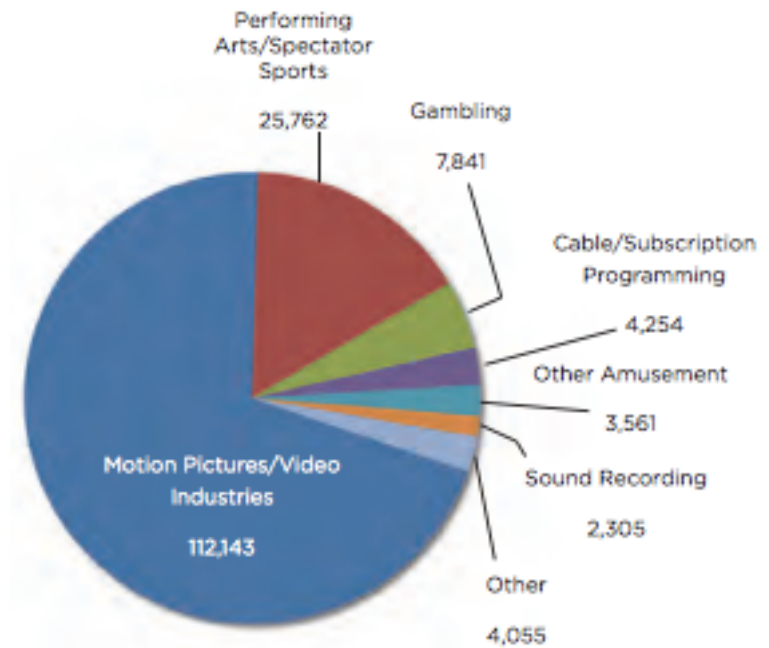






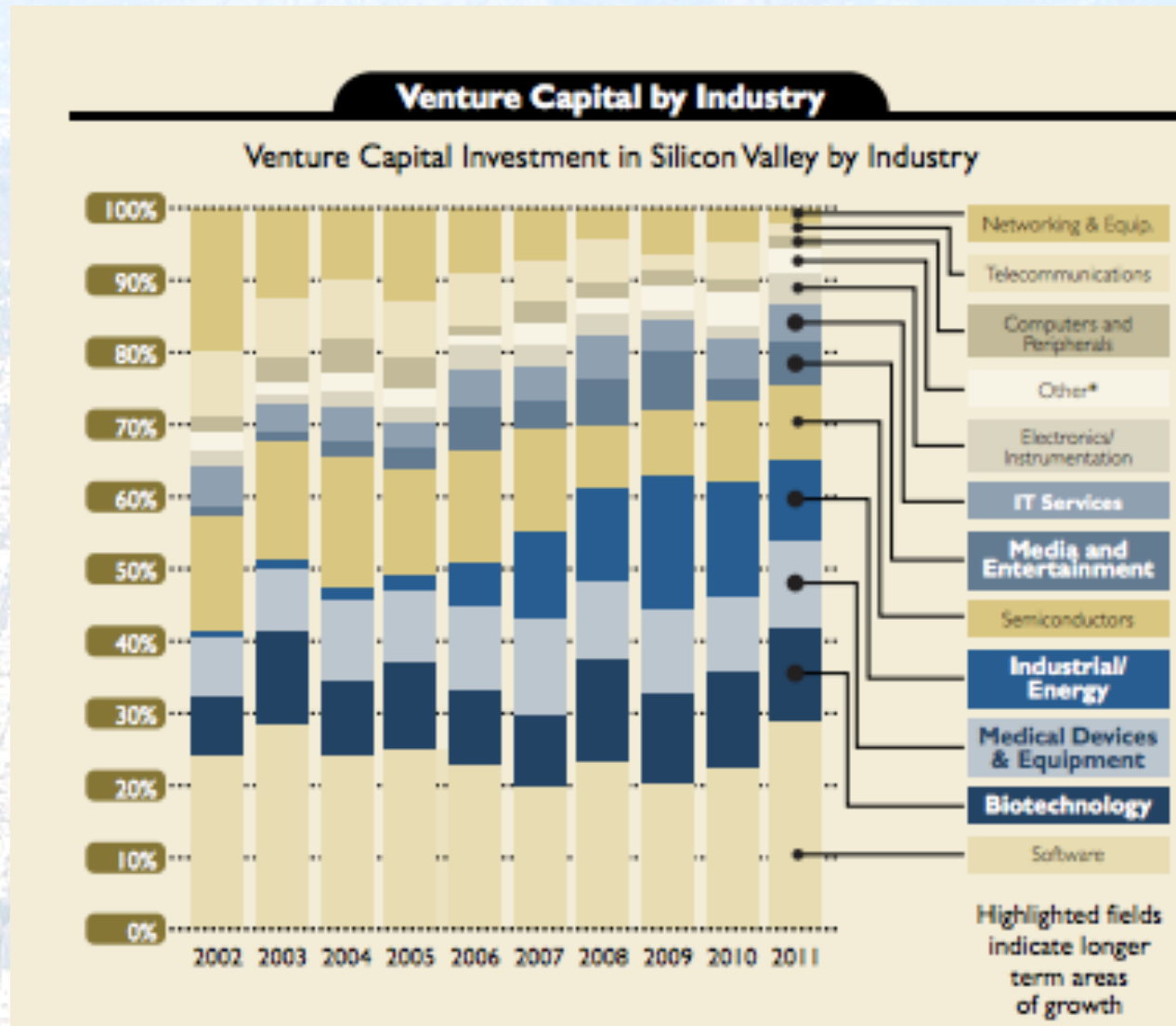
(Entertainment) is the largest “traded cluster” in LA

- 160,000 jobs; 4% of LA County jobs
- 63% of State’s entertainment jobs in LA County and 15% of nation’s entertainment jobs in LA County
- Average salary = \$110,000 (double the \$53k avg for all jobs in the County)



Traded clusters are 1 million of the County’s 3.85 million jobs.

Media and entertainment is growing as a share of VC in Silicon Valley





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Hard Rock\StainD with Fred Durst and DJ ...	3,665,975	128	44100	3:49	Emub7	DSL	N/A
Public enemy & Anthrax-Bring the noise.mp3	3,343,410	128	44100	3:30	Tish69	Unknown	N/A
Puff Daddy - Public Enemy Num one.mp3	3,925,055	128	44100	4:05	CSUF-A...	T1	N/A
Music\Public Enemy (He Got Game).mp3	3,787,920	128	44100	3:57	Joe-dog...	Cable	N/A
Music\Public Enemy - Don't Believe the Hy...	6,378,628	160	44100	5:17	gonztshi...	56K Modem	N/A
Music\Public Enemy - Do You Wanna Go ...	3,766,271	128	44100	3:55	matbar	Cable	N/A
Music\Public Enemy - Fight the power.mp3	3,826,536	128	44100	3:59	gonztshi...	56K Modem	N/A
Old School\Anthrax_n_Public_Enemy-Bring...	3,334,814	128	44100	3:29	Shock...	T1	N/A
another cd\StainD with Fred Durst and DJ ...	3,657,728	128	44100	3:49	Wingma...	Cable	N/A
Public Enemy - He Got Game.mp3	4,564,610	128	44100	4:44	bmathis27	T1	N/A

Returned 100 results.

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Erosion of power of gatekeeper



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Recommendations from friends replace tastemakers



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Diet Coke Like
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1,792,066 like this
11,057 talking about this

Ben Hammer 110 mutual friends
Isaac Wood 44 mutual friends
Greg Sanders
Renee Lynn
Priya Komma 20 mutual friends

Movies and TV: in transition

Daily Report: Netflix Transitions to TV Shows

By THE NEW YORK TIMES | February 28, 2012, 9:05 AM | 3

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Netflix has transformed itself into primarily an Internet streaming service for television shows, not feature films, with TV series now accounting for more than half of all Netflix viewing, [reports](#) Brian Stelter in The New York Times on Tuesday. The moment will unofficially come on Wednesday, when Netflix's three-and-a-half-year-old deal with Starz comes to classic and newer films disappears from the

While the end of the Starz deal is certainly not the disaster it was once predicted to be, but on television shows like "Mad Men" and "Los



Gaming as convergence

EA GAMES NEWS HELP Shop At Origin

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**TIGER WOODS
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TIGER WOODS PGA TOUR 13 COMING SOON FOR XBOX AND PS3
DOWNLOAD THE DEMO TODAY

LATEST FROM EA

THE WAR HAS BEGUN
**Take Earth Back
In The All-New
Mass Effect**

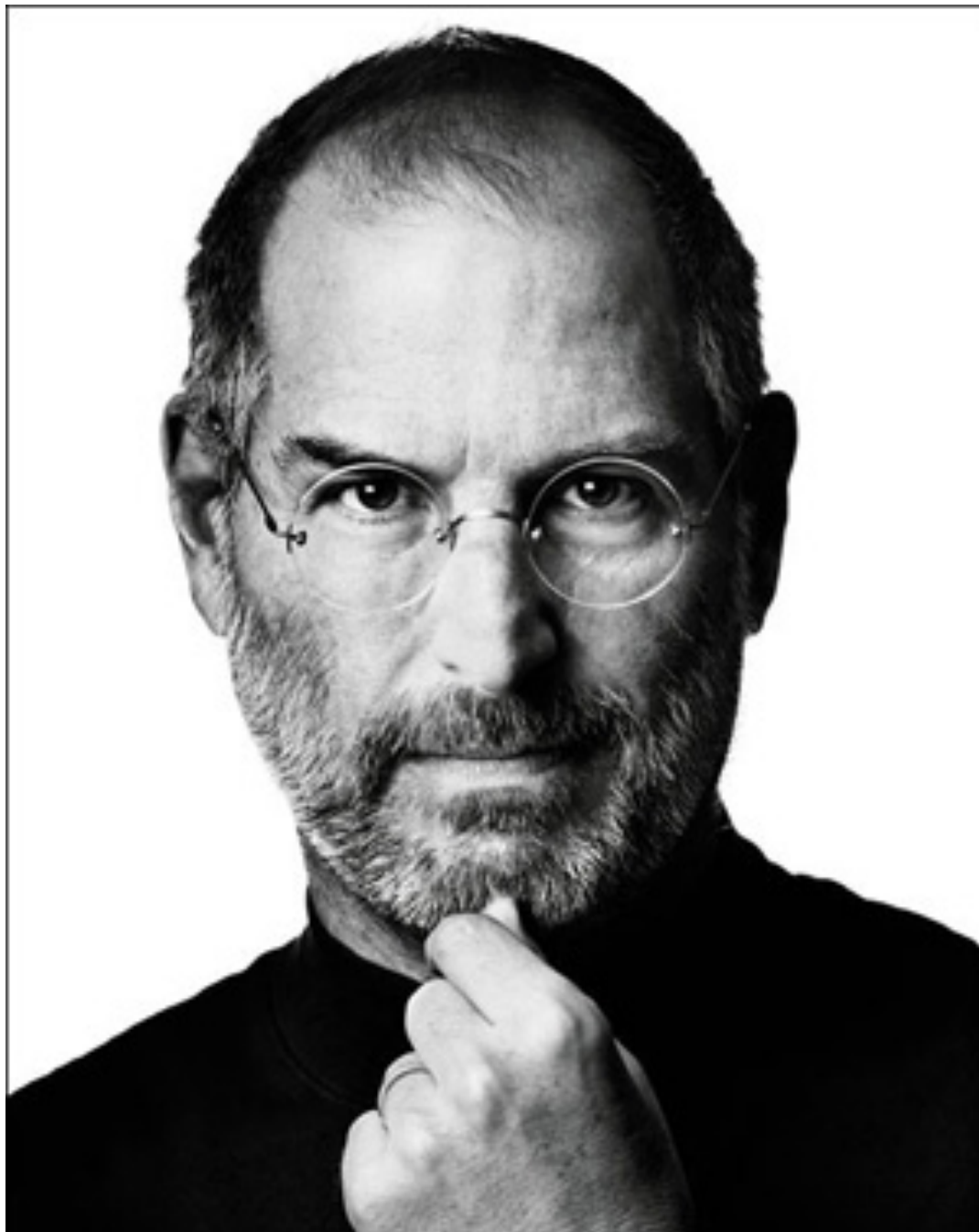
MASS EFFECT 3

JUST ANNOUNCED
**C&C Tiberium
Alliances Is Now
In Open Beta**

**COMMAND & CONQUER
TIBERIUM
ALLIANCES**

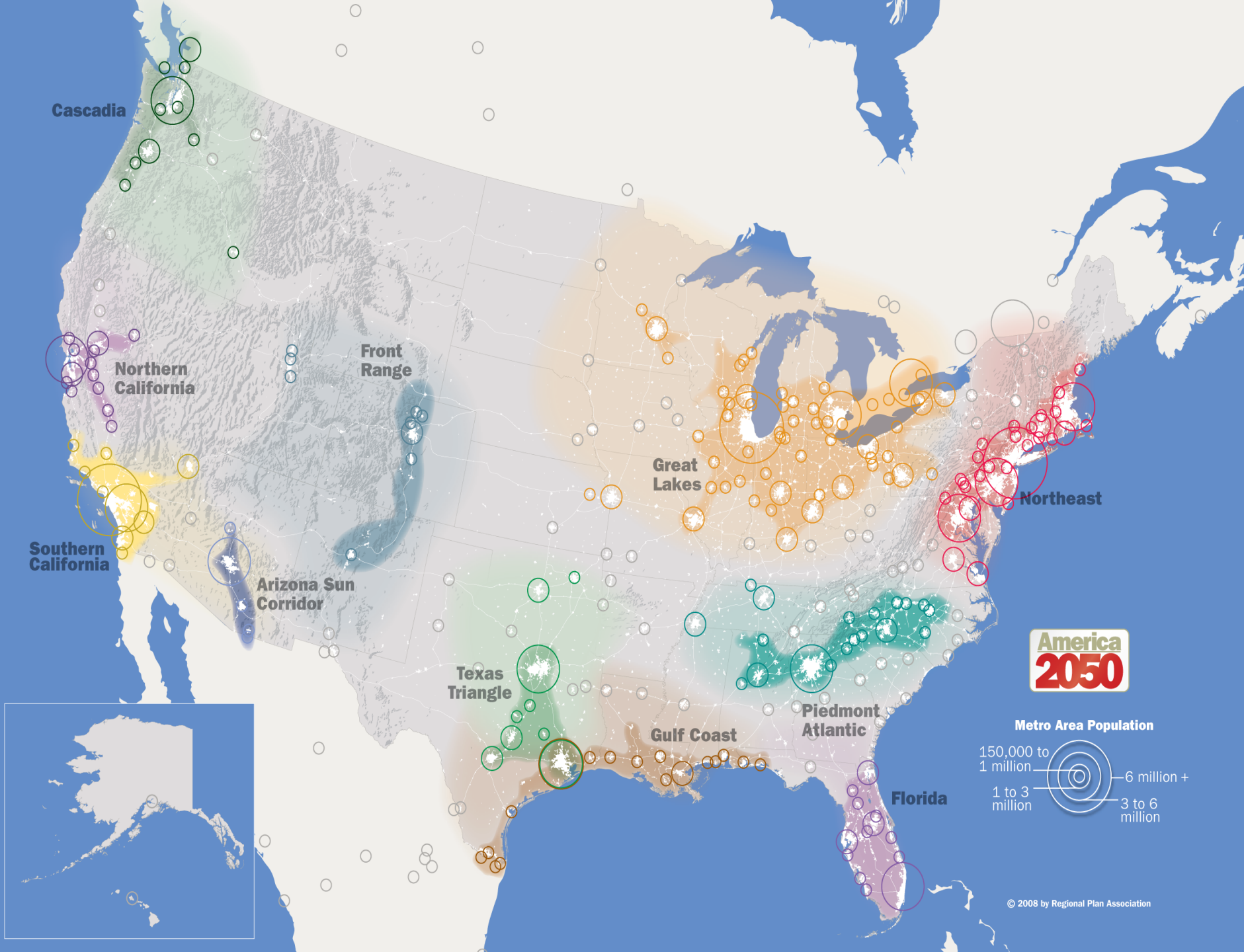
FEATURED GAMES

- ▶ [Mass Effect 3](#)
- ▶ [Star Wars: The Old Republic](#)
- ▶ [Battlefield 3](#)
- ▶ [Syndicate](#)



California one
megaregion”
two:
Norcal and
SoCal





Cascadia

Northern California

Southern California

Arizona Sun Corridor

Front Range

Texas Triangle

Great Lakes

Gulf Coast

Piedmont Atlantic

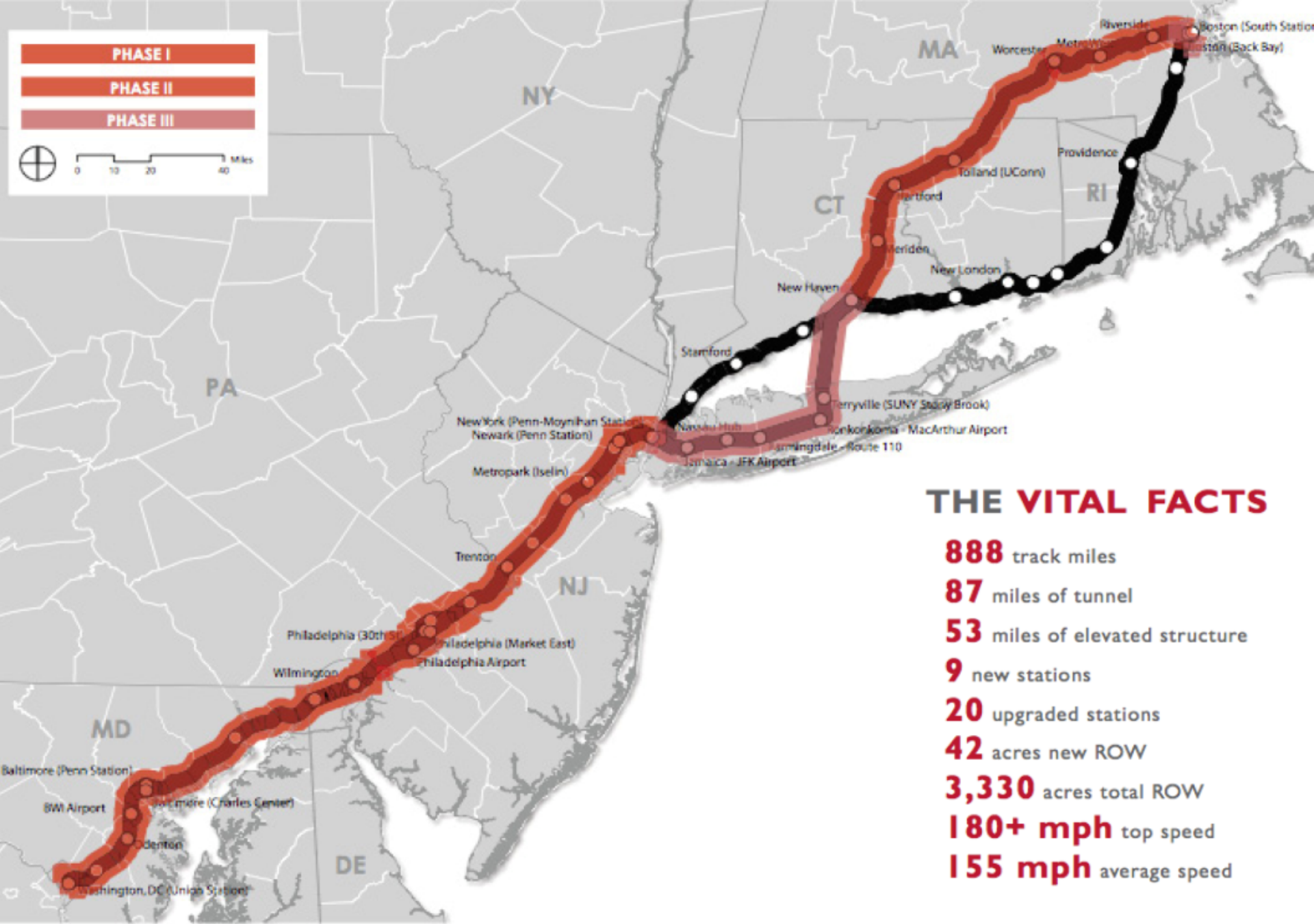
Florida

Northeast

**America
2050**

Metro Area Population





THE VITAL FACTS

888 track miles

87 miles of tunnel

53 miles of elevated structure

9 new stations

20 upgraded stations

42 acres new ROW

3,330 acres total ROW

180+ mph top speed

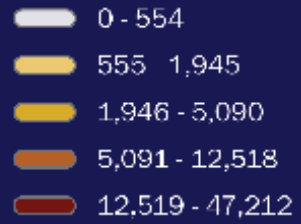
155 mph average speed

Travel Time Reduction

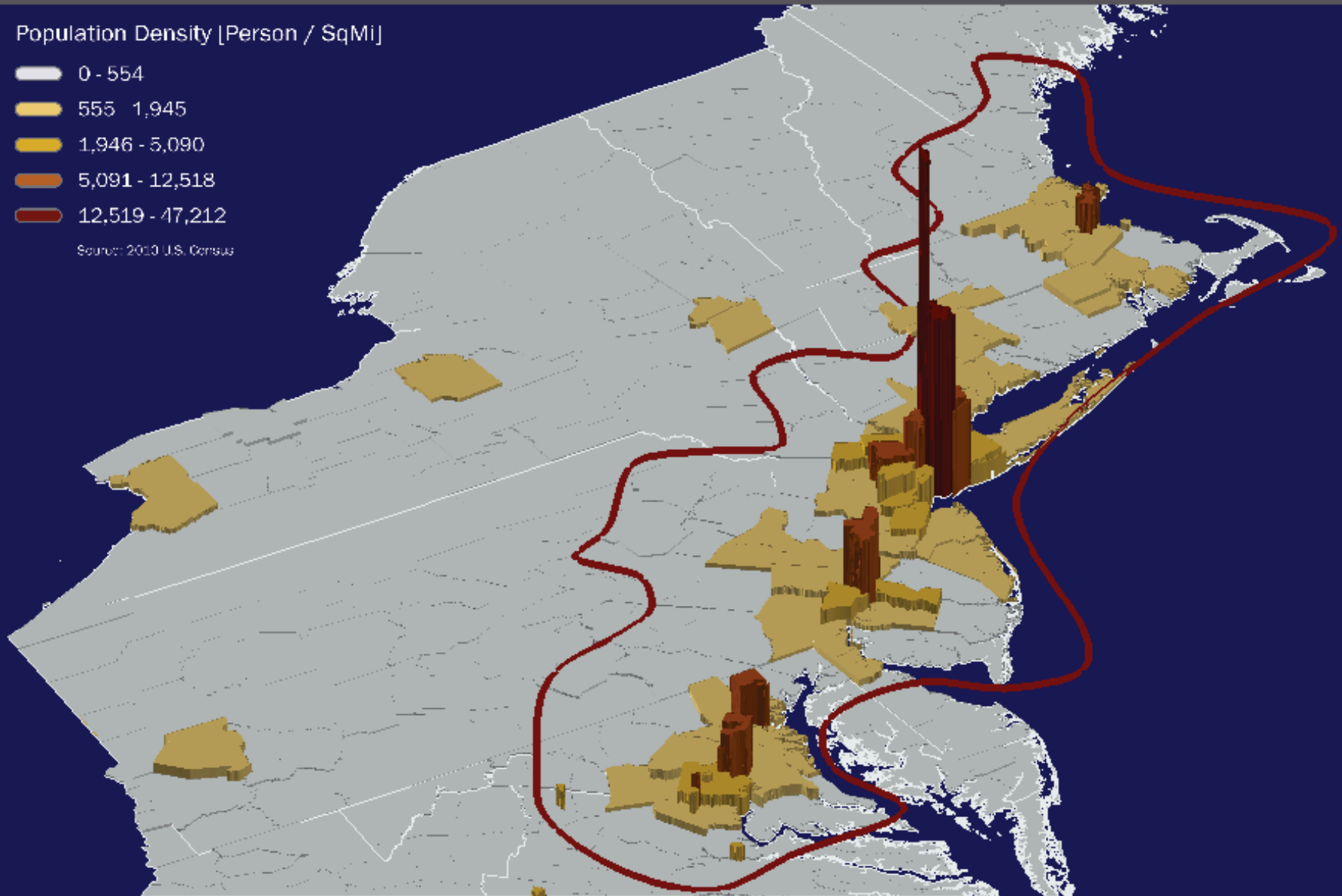


Population Density

Population Density [Person / SqMI]

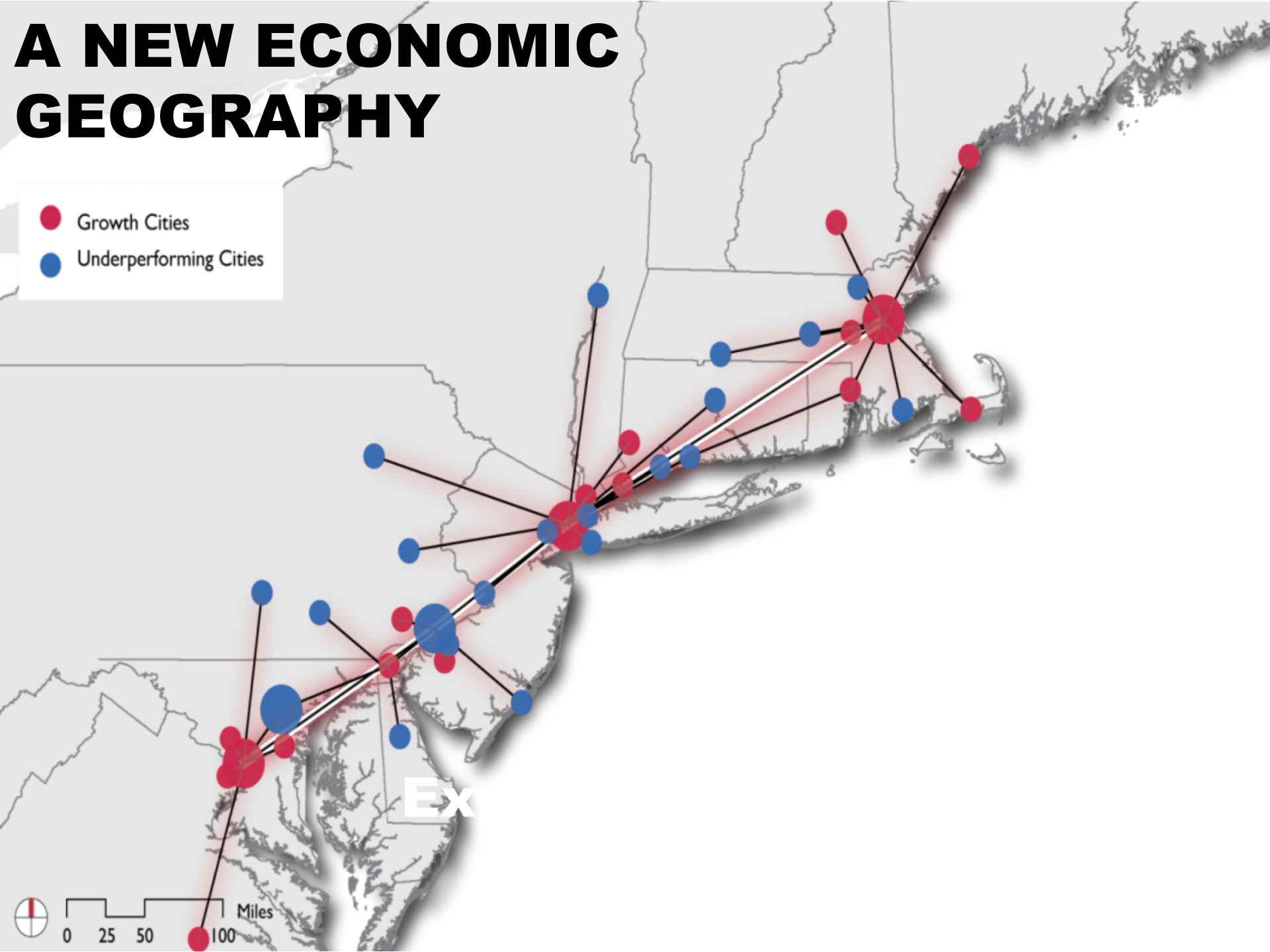


Source: 2010 U.S. Census

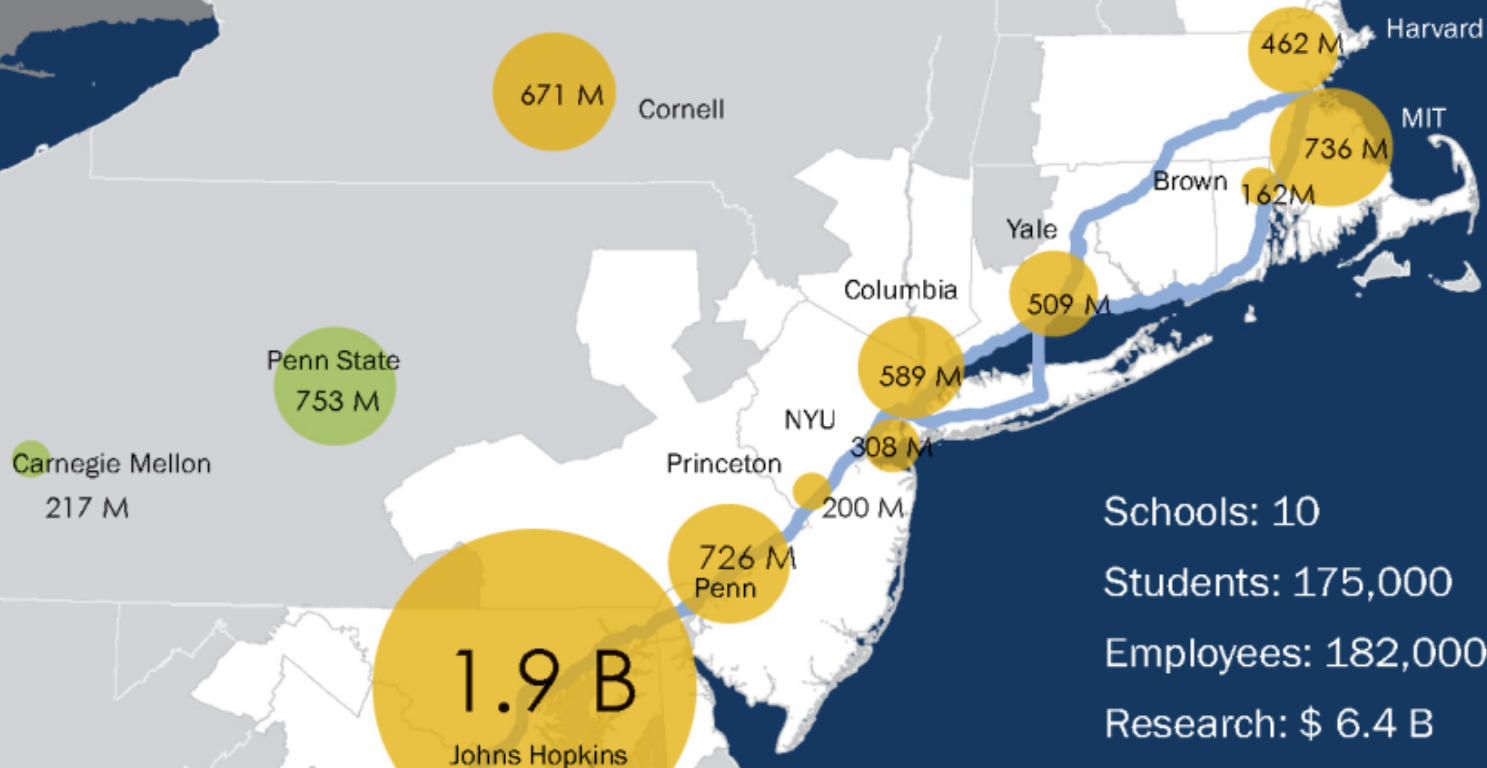


A NEW ECONOMIC GEOGRAPHY

- Growth Cities
- Underperforming Cities



Research Dollars Raised in the Northeast



Schools: 10
Students: 175,000
Employees: 182,000
Research: \$ 6.4 B

100

200



Research Dollars in the California

Schools: 7

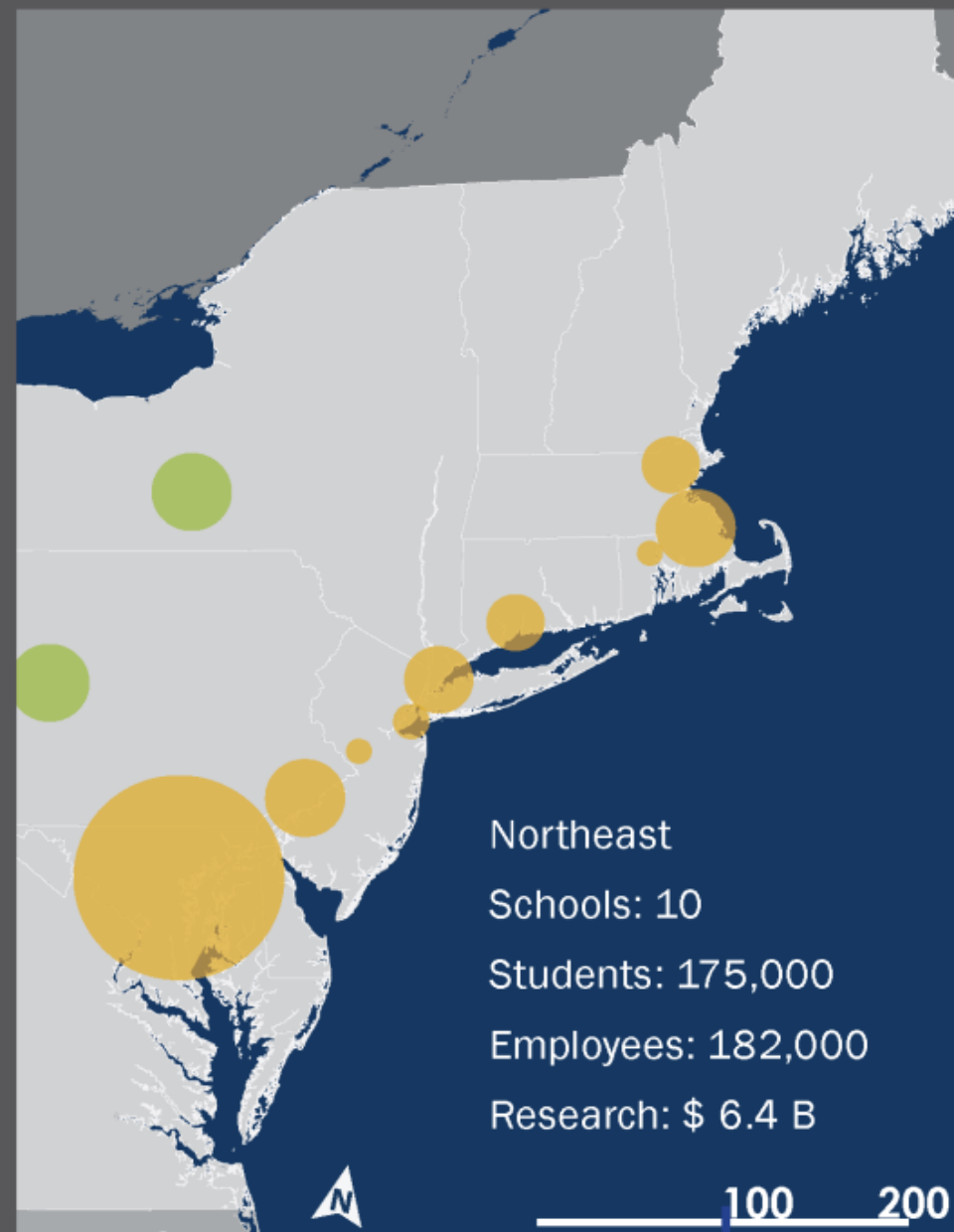
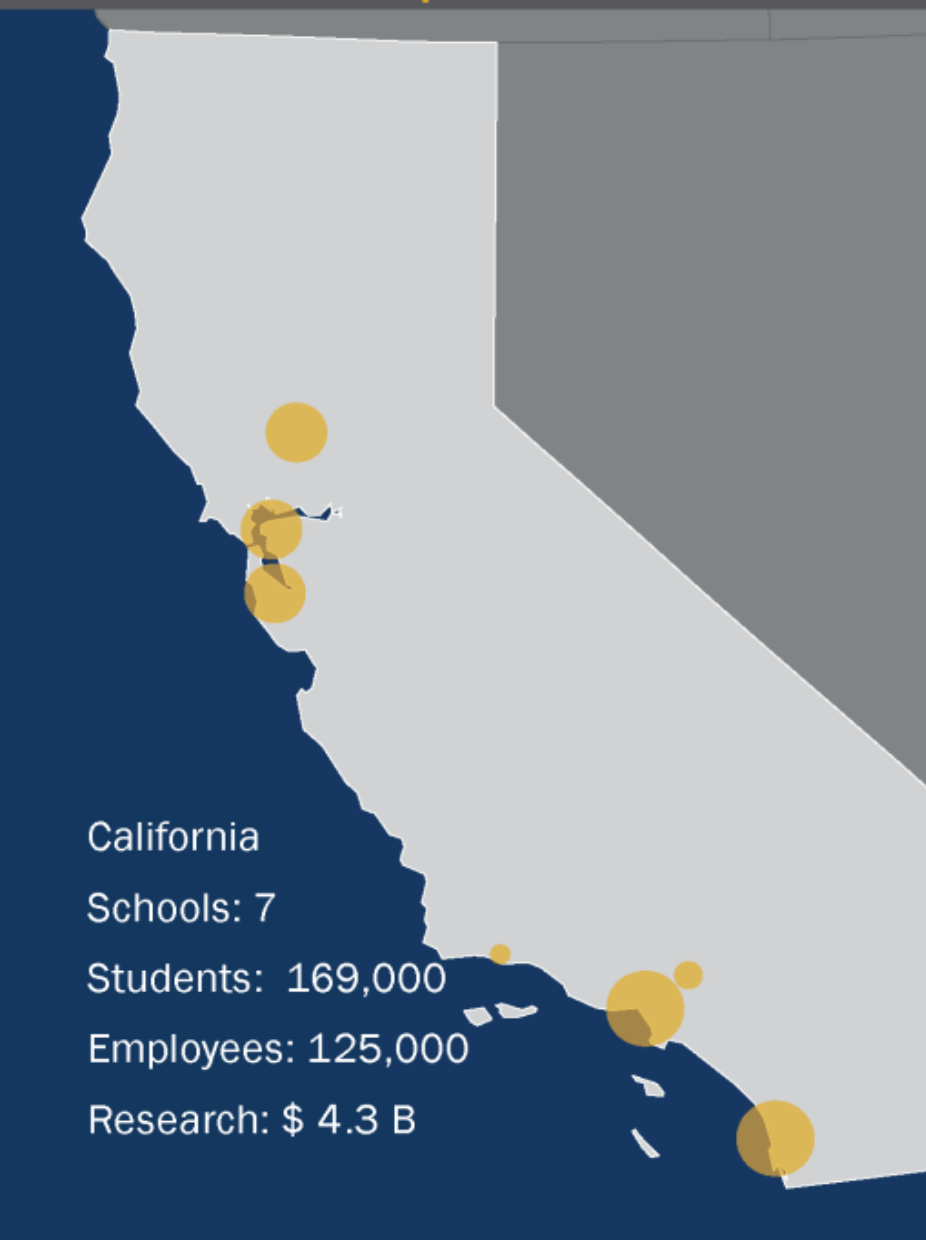
Students: 169,000

Employees: 125,000

Research: \$ 4.3B



Research Comparison



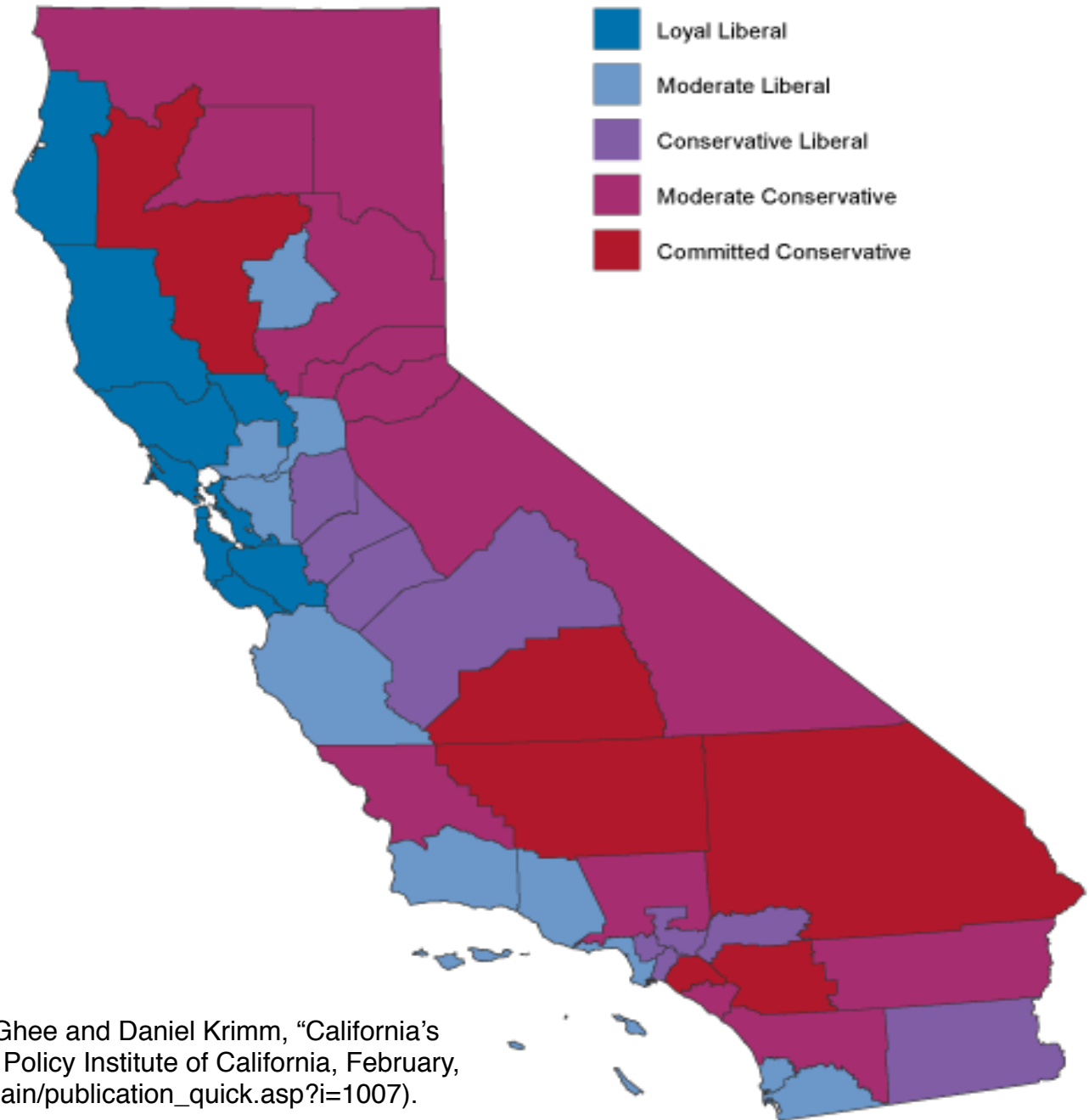
Defining U.S. megaregions

Table 2

Megaregion	Number of Counties	Area in sq miles	Population 2000	Estimated Percent Growth to 2025	Average Score
Southern California	10	61,986	21,858,662	31%	3.90
Southern Florida	42	38,356	14,686,285	45%	3.89
Northern California	31	47,928	12,724,861	36%	3.71
Northeast	142	61,942	49,563,296	17%	3.55
Piedmont	121	59,525	14,855,052	38%	2.96
Arizona Sun Corridor	8	48,803	4,535,049	62%	2.88
Cascadia	34	47,226	7,400,532	38%	2.79
Front Range	30	56,810	4,733,679	44%	2.79
Gulf Coast	75	59,519	11,747,587	35%	2.35
Texas Triangle	101	85,312	16,131,347	46%	2.27
Great Lakes	388	205,452	53,768,125	17%	2.22
Megaregions	962	772,860	206,780,494	28%	2.69
Rest of Country	2115	2,245,370	73,508,817	24%	1.00
Total	3077	3,018,230	280,289,311	27%	
Megaregion Percent	31%	26%	74%		

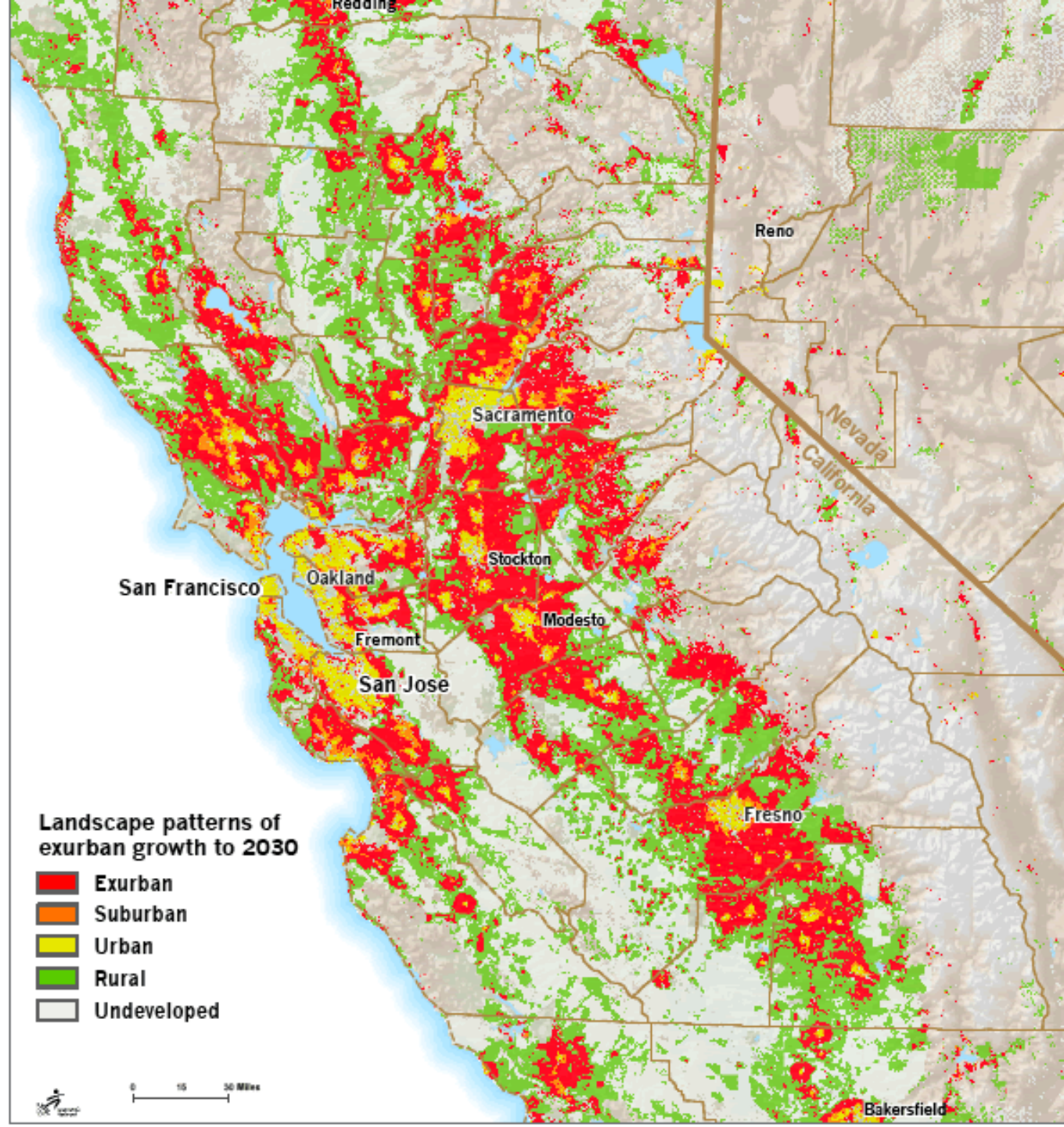
Source: RPA Analysis of Census and Woods & Poole Data

Red and Blue California

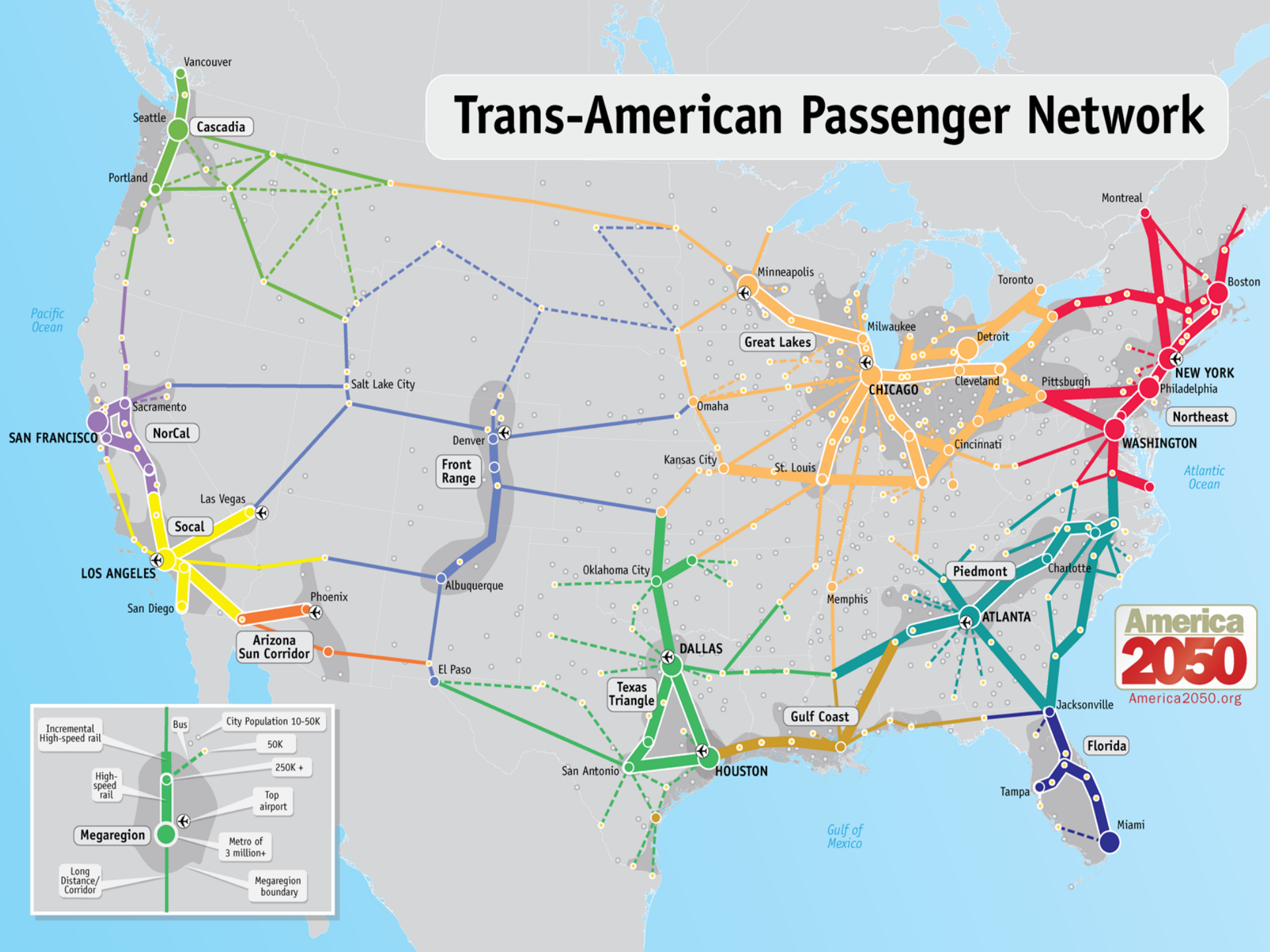


Source: Figure 2 in Eric McGhee and Daniel Krimm, "California's Political Geography," Public Policy Institute of California, February, 2012 (http://www.ppic.org/main/publication_quick.asp?i=1007).

The sprawling region



Trans-American Passenger Network



Megaregion

- Incremental High-speed rail
- High-speed rail
- Long Distance/Corridor
- City Population 10-50K
- 50K
- 250K+
- Top airport
- Metro of 3 million+
- Megaregion boundary

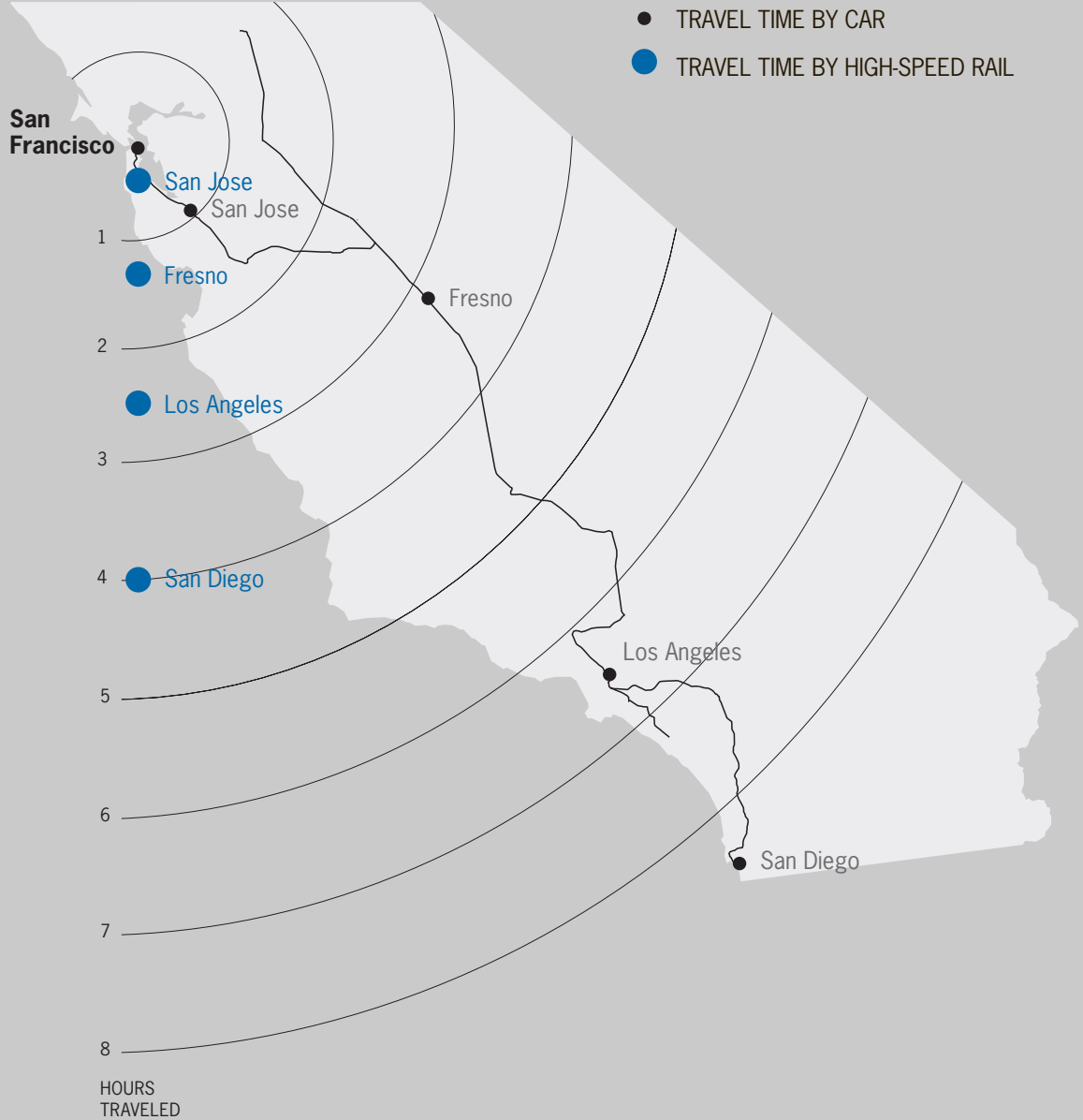


An aerial photograph showing a city with various industrial and residential areas, surrounded by a range of mountains under a clear sky. The text is overlaid on the left side of the image.

Making the case for High-Speed Rail

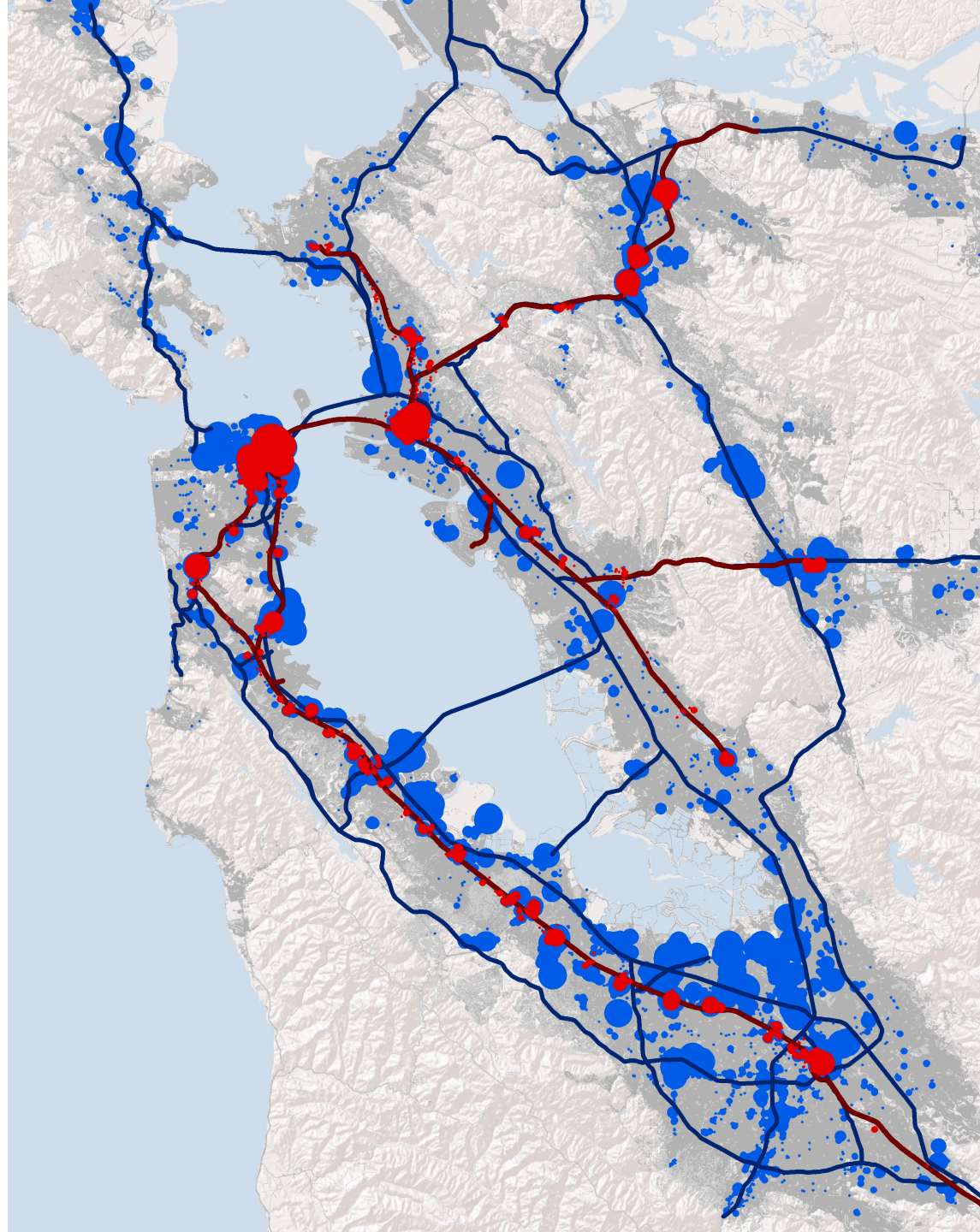
Time/Space map

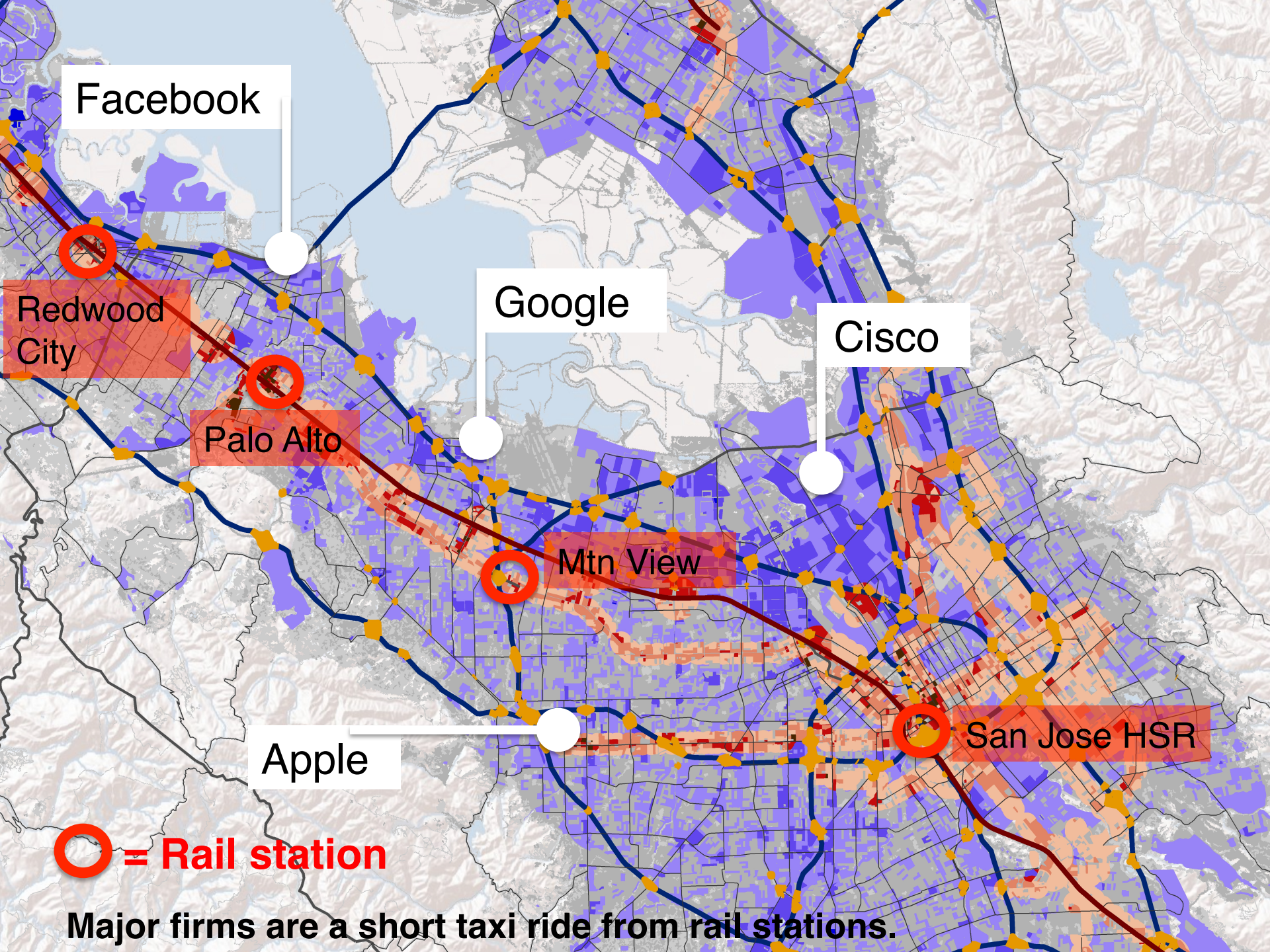
HSR makes communities closer by shortening travel time



HSR will connect
through the spine of
Silicon Valley.

Most of the region's
offices are within 3
miles of transit (but
regionwide, ~28
percent is walkable
from transit.)





Facebook

Redwood City

Google

Palo Alto

Cisco

Mtn View

Apple

San Jose HSR

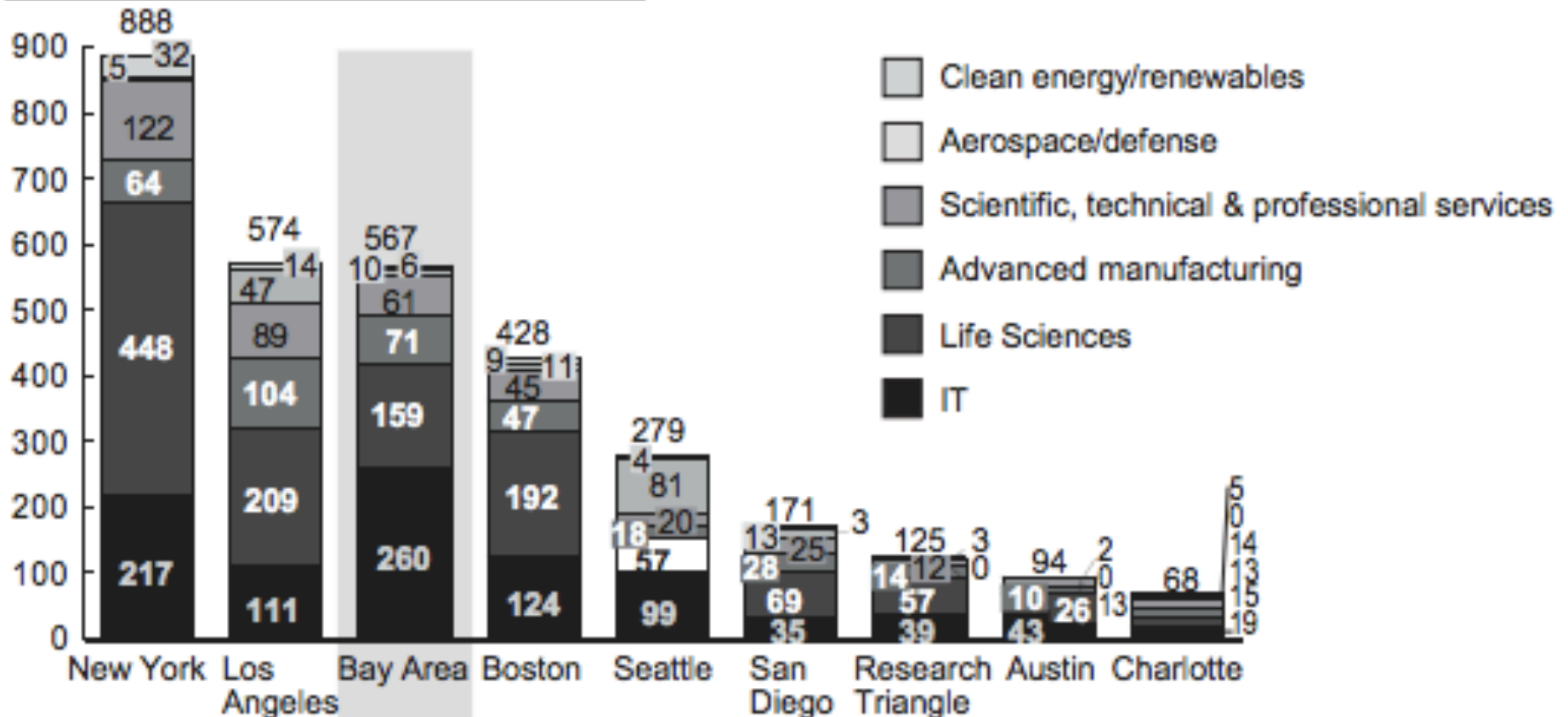
 = Rail station

Major firms are a short taxi ride from rail stations.

HSR connects two regions with a high percent of “innovation” sectors relying on face-to-face contact

Share of employment, innovation sectors¹

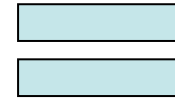
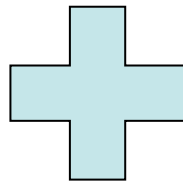
Total employment in thousands, 2010



10.7%	11.2%	18.4%	17.9%	17.1%	14.0%	16.1%	12.2%	8.4%	Innovation jobs' share of total employment
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HSR reduces congestion as travelers shift from air and auto to rail

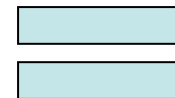
Download more graphics at www.psdgraphics.com



\$170 billion

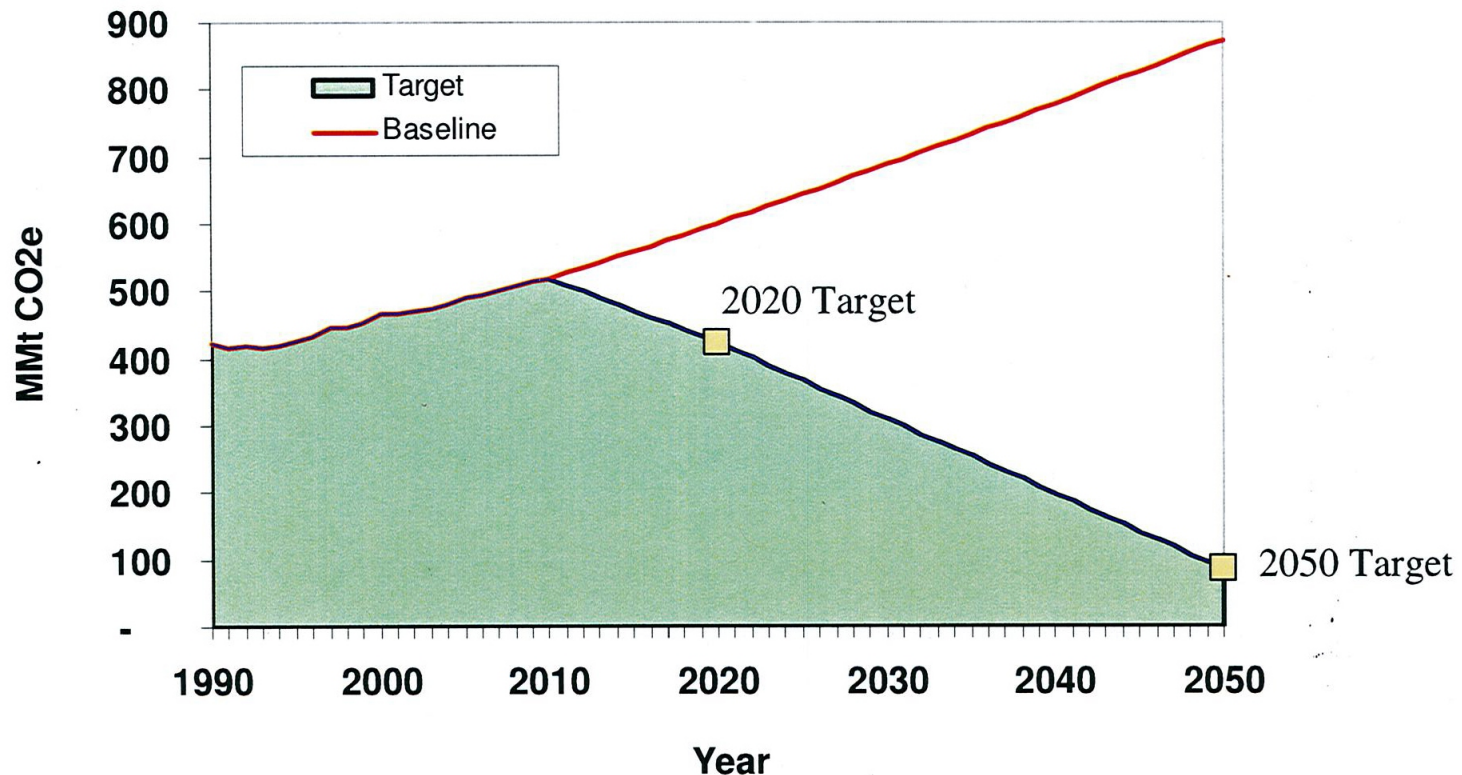
2,300 additional
highway lane miles

4 new airport
runways and
115 airport gates

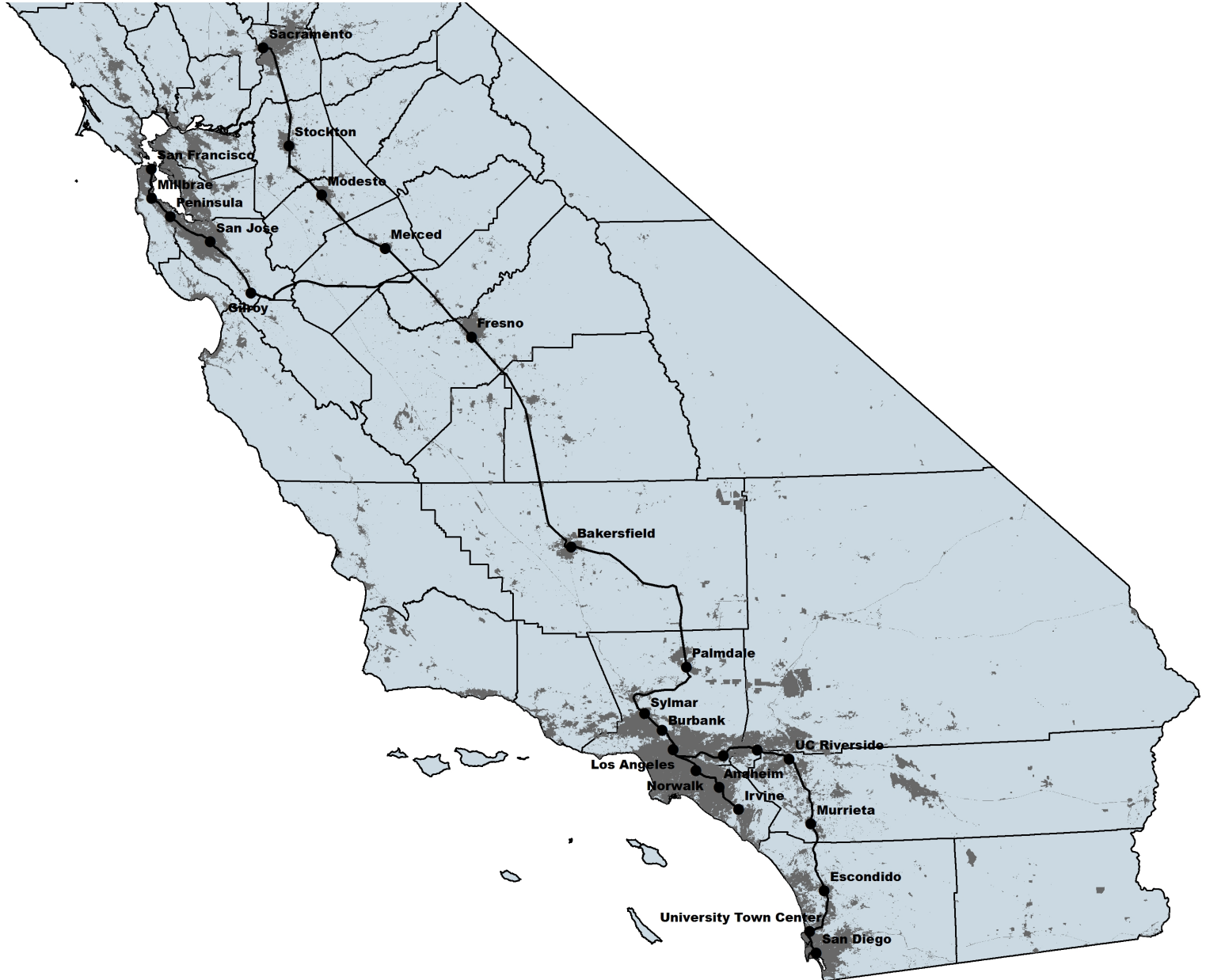


\$68 billion

HSR helps meet statewide AB 32 climate change goals by reducing (at least) 3 million tons of carbon dioxide emissions annually

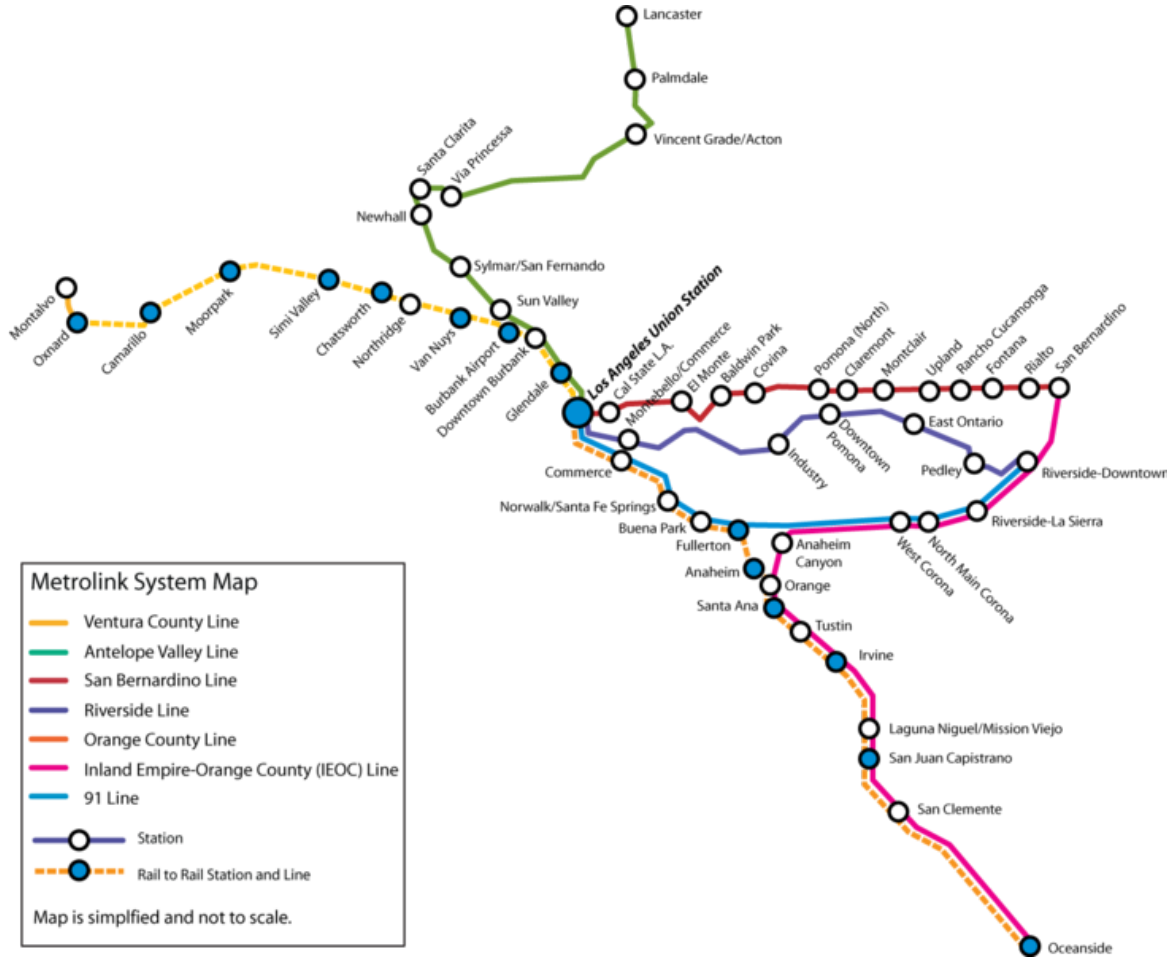


HSR provides armature for growth of the state

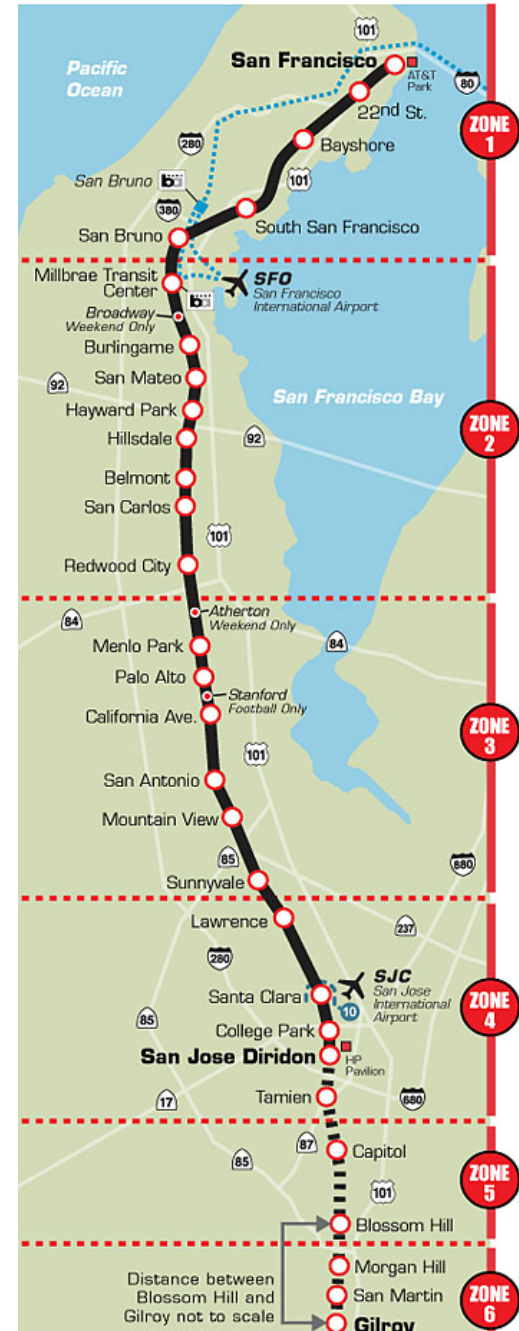


HSR helps strengthen commuter rail and regional intercity rail.

Metrolink Southern California's regional rail system



Caltrain SF to San Jose rail system



California is the largest global economy (other than Brazil) without high speed rail

National GDP and HSR (2011)

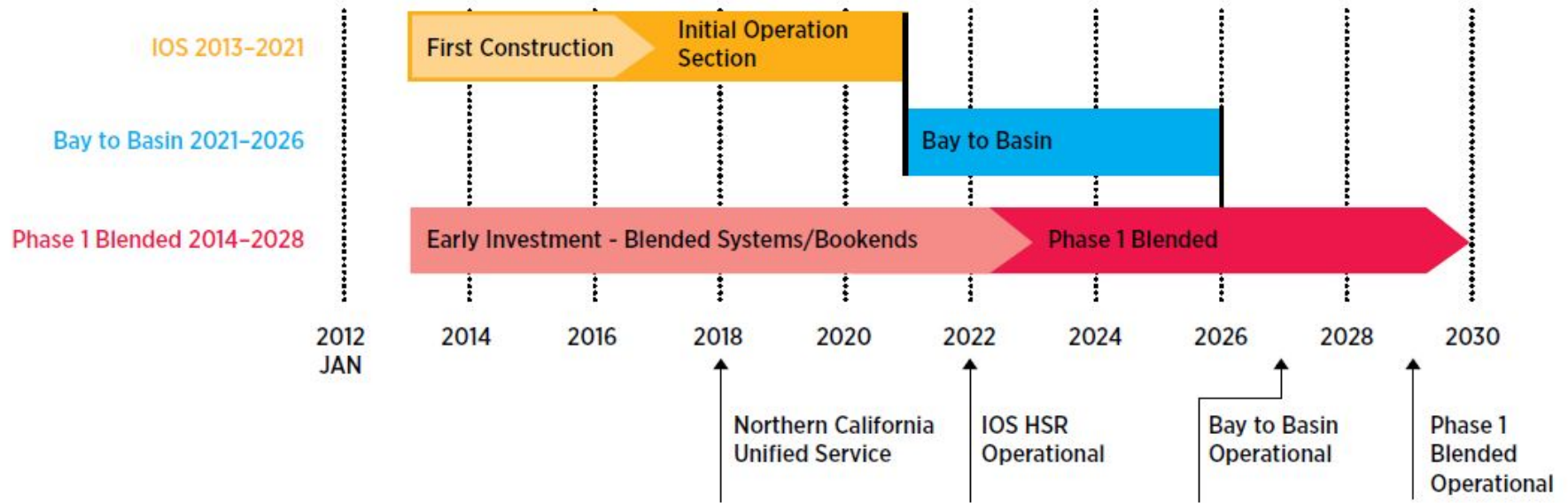
Rank	Country/State	GDP (billions of USD)	Population	HSR track (km)*
1	United States	15,094	313,847,465	362
2	China	7,298	1,343,239,923	10638
3	Japan	5,869	127,368,088	3042
4	Germany	3,577	81,305,856	1663
5	France	2,776	65,630,692	2100
6	Brazil	2,493	205,716,890	0
7	United Kingdom	2,418	63,047,162	113
8	Italy	2,199	61,261,254	923
9	California	1,959	37,691,912	0
10	Russia	1,850	138,082,178	0

*In operation or under construction

The CA High Speed Rail Alignment



How the high-speed rail will be built



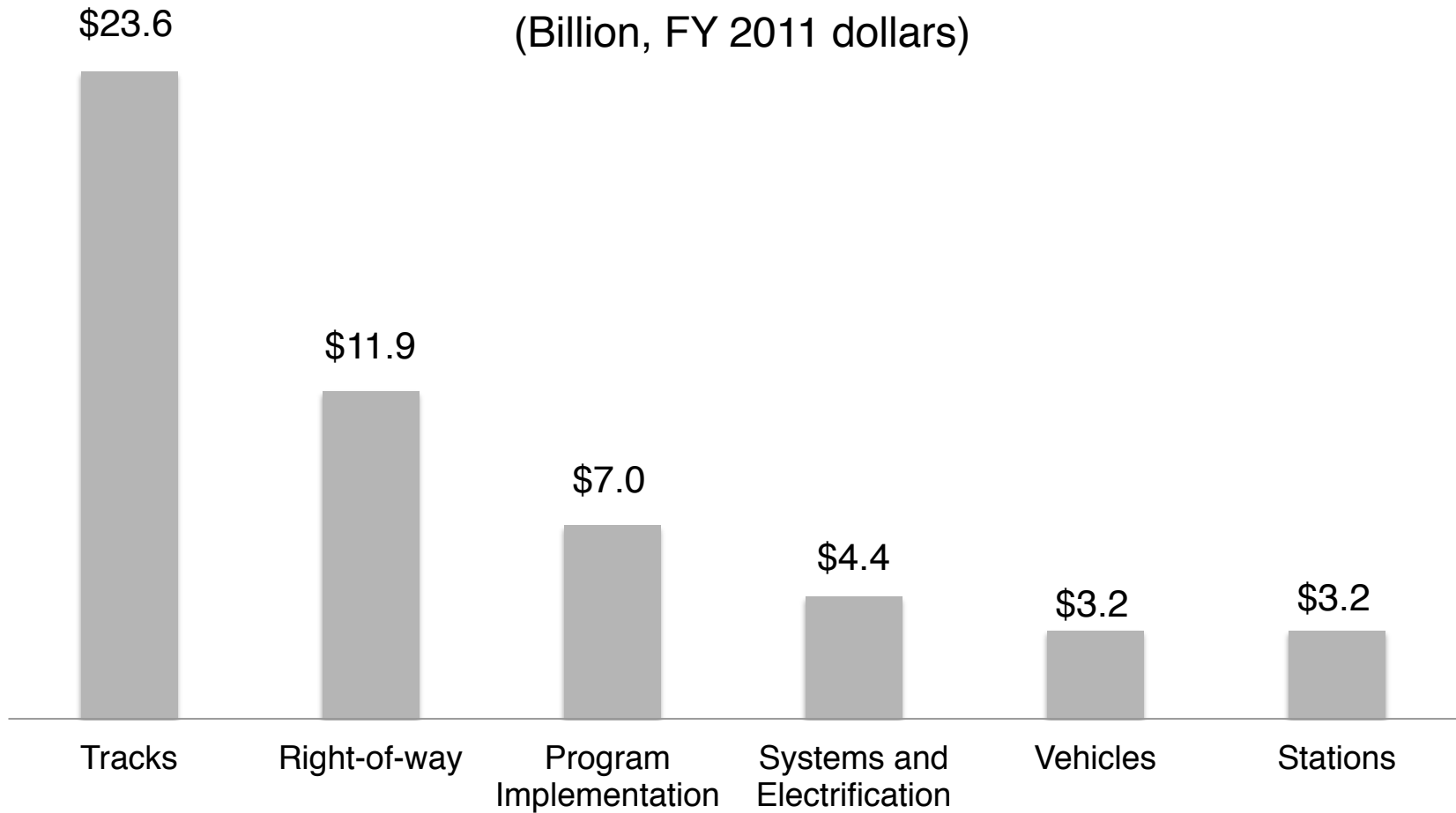
SPUR's Analysis of potential funding



Cost of high-speed rail

Cost to construct HSR

(Billion, FY 2011 dollars)



The 2012 business plan relies primarily on federal grants and loans...

...we think this is unrealistic

Funding Sources	2012 business plan (millions)
State Prop 1A Bond (already approved)	8,200
Federal grants (already allocated)	3,600
Net cash flow from operations	238
Other funds (state, local, private)	4,931
Private (equity partner)	13,118
Federal grants and federally backed bonds	38,290
Total	68,377

We've identified potential revenue for HSR from the following sources

- Tolling
- Gas tax
- Vehicle license fee
- Value capture
- General Obligation Bond
- Cap-and-trade revenue

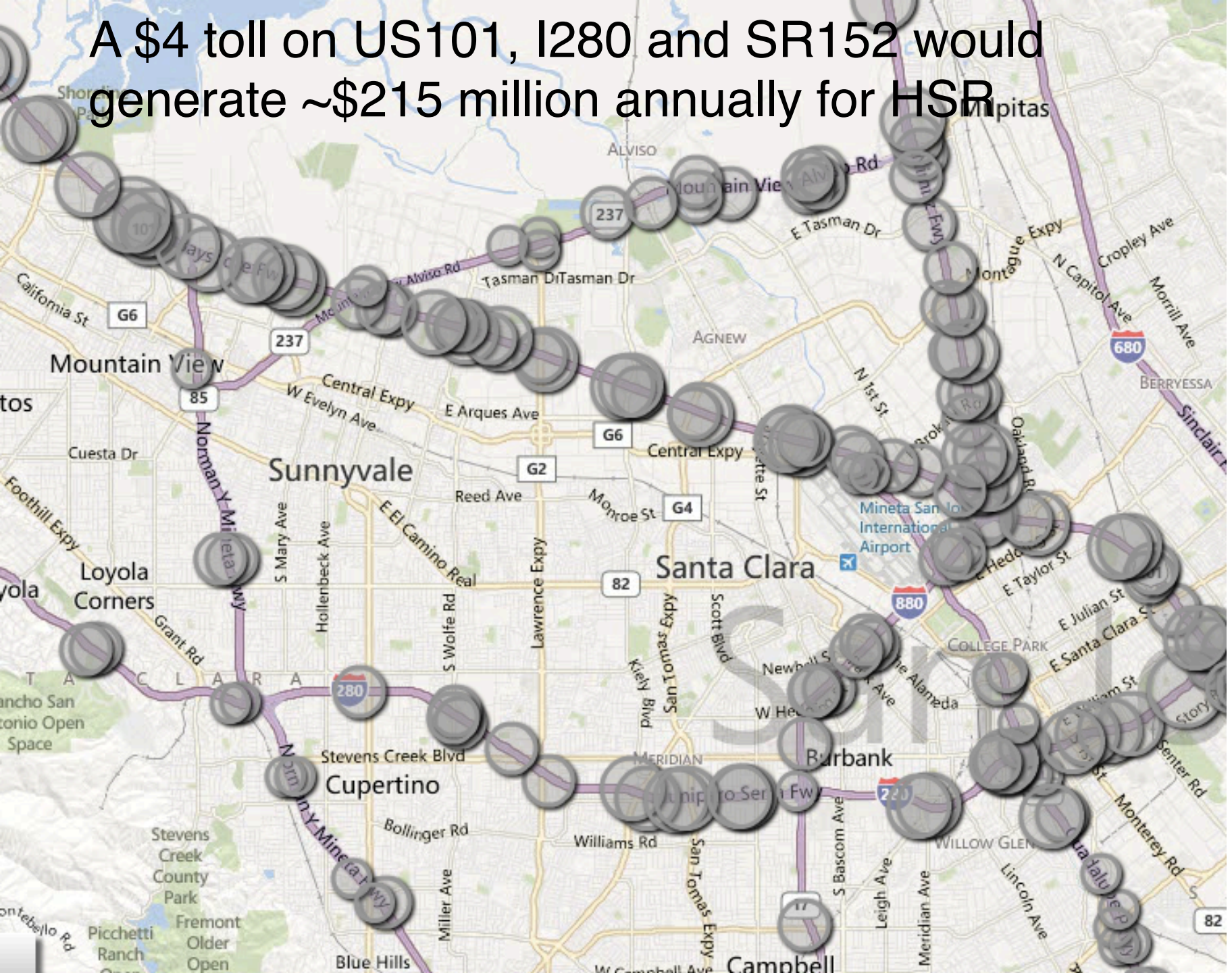
Proposal: Toll highways that are gateways to LA and Bay Area and parallel the HSR route.



\$4 tolls on SR14 and I5
near LA would generate
~\$240 million annually for
HSR



A \$4 toll on US101, I280 and SR152 would generate ~\$215 million annually for HSR



Tolls on highways along HSR corridors could yield \$9.2 billion towards the project

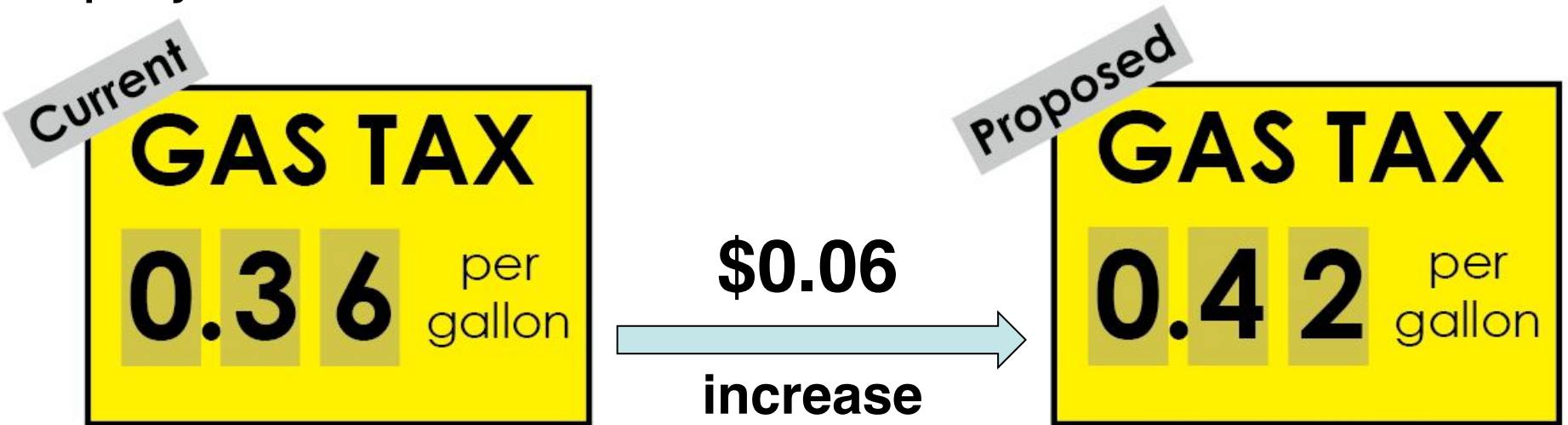
Average toll per car = \$4

Major Highways	Annual Average Daily Traffic	Annualized revenue	Dedicate 50% of proceeds to HSR uses
Bay Area			
101	160,000	\$233,600,000	\$105,120,000
280	150,000	\$219,000,000	\$98,550,000
152	20,000	\$29,200,000	\$13,140,000

Los Angeles			
14	150,000	\$219,000,000	\$98,550,000
5	150,000	\$219,000,000	\$98,550,000

Central Valley			
5	35,000	\$51,100,000	\$22,995,000
99	35,000	\$51,100,000	\$22,995,000
		Annual revenue	\$459,900,000
		Term (years)	20
		Total over 20 years	\$9,198,000,000

A 6 cent increase in the state's gas tax could yield over \$15 billion for the high-speed rail project



Additional revenue from tax per year	\$792,000,000
Term (years)	20
Value over 20 years	\$15,840,000,000

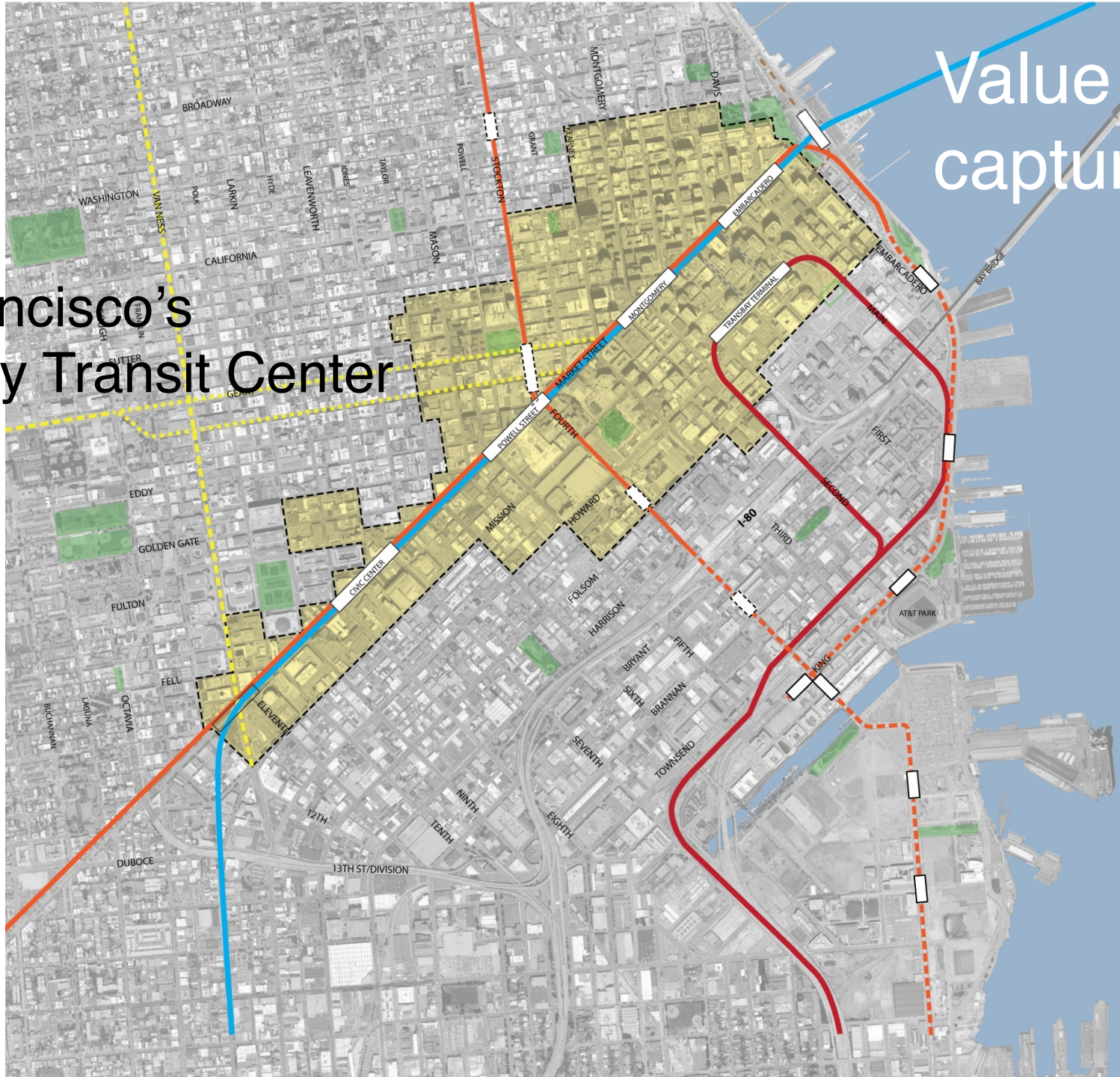
Projected new development at 5 station areas

Stations	Residential (units)	Commercial (million SF)
San Francisco	2600	3.10
Millbrae	640	1.10
San Jose	2590	5.42
LA	0	5.00
Anaheim	520	2.56
Total	6350	17.18



San Francisco's Transbay Transit Center

Value
capture





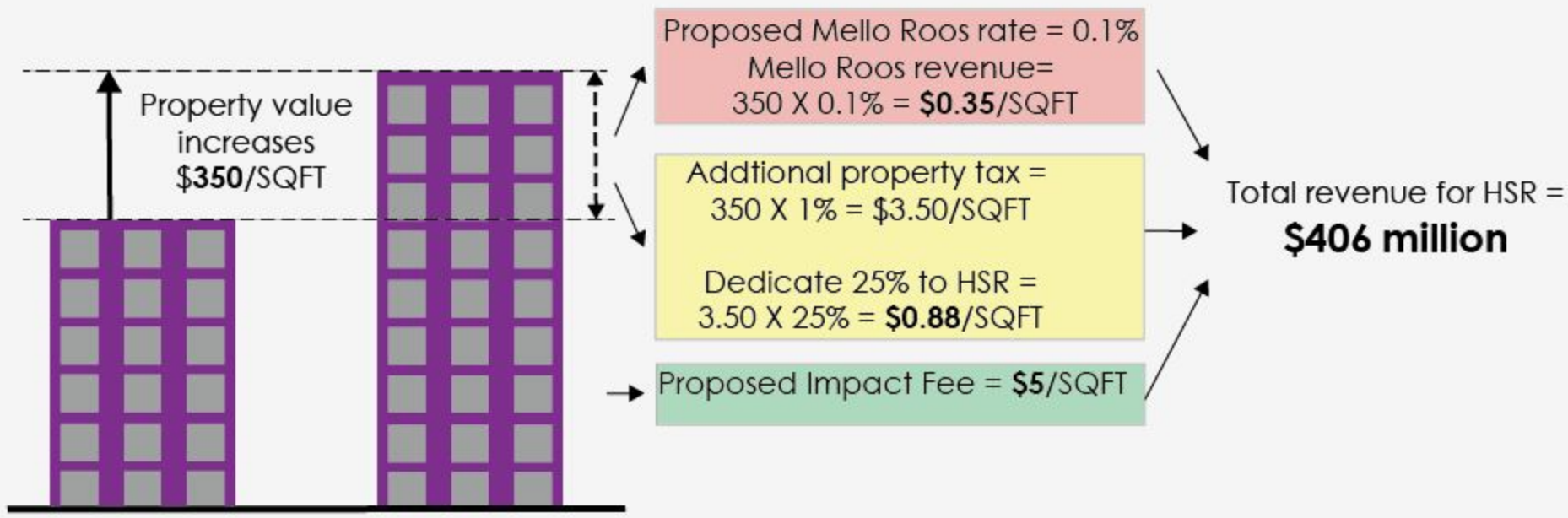




San Jose's
Diridon Station area

Proposed value capture plan on new development in station areas

-
- A. Impact Fee of \$5 per square foot (one time)
 - B. Tax Increment Financing based on capturing 25% of Tax Increment
 - C. Mello Roos based on additional .1% property tax
-



Note: Total revenue is based on bonding against an annual revenue stream.

VLF: Increasing vehicle license fees by \$8.50 per automobile per year for 20 years would yield \$3.7 billion



current
proposed

Current VLF rate= **0.65%**

Current VLF per private auto= **\$69**

Proposed VLF rate= **0.73%**

Proposed VLF per private auto= **\$77.5**

Increase **\$8.5** per auto

Average value = \$10,615

Total automobiles in California	22,083,049
Total anticipated new revenues per year	\$187,418,837
Term (years)	20
Total over 20 years	\$3,748,376,737

GO Bond: Greening and electrifying Caltrain and BART

- Sell \$2.5 billion in GO bonds in 5 counties with BART and Caltrain.
- Upgrades power systems on BART and Caltrain, electrifies Caltrain, and builds 100 MW of solar to produce the total amount of power needed by the two systems.



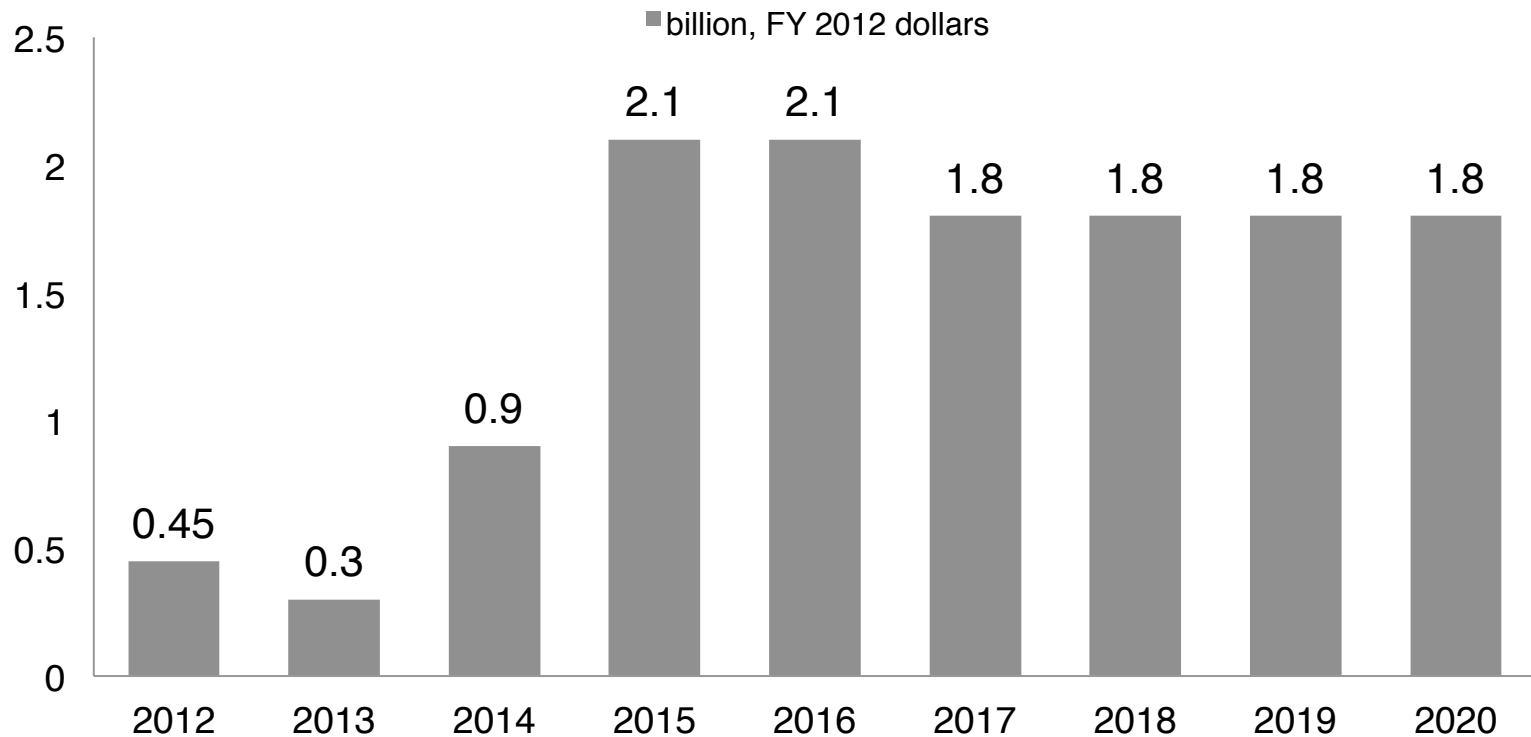
Greening BART/Caltrain GO Bond

BART Power System Rehab	\$500,000,000
Caltrain Electrification	\$1,000,000,000
SFMTA – TC/LRT Power System Rehab	\$300,000,000
Joint PV Power Supply	\$700,000,000
	\$2,500,000,000
HSR portion to apply to business plan	1,000,000,000

Cap-and-trade

Dedicating 15 percent of the proceeds of the cap-and-trade auction revenues, up to \$13 billion, to high-speed rail.

Dedicated Cap-and-trade Revenues to HSR



Funding Sources	2012 business plan (millions)	SPUR plan (millions)
State Prop 1A Bond (already approved)	8,200	8,200
Federal grants (already allocated)	3,600	3,600
Net cash flow from operations	238	238
Other funds (state, local, private)	4,931	0
Private (equity partner)	13,118	13,118
Federal grants and federally backed bonds	38,290	0
Value capture	N/A	406
Gas tax	N/A	15,840
Road tolls	N/A	9,198
Vehicle License Fee	N/A	3,748
Regional GO bond	N/A	1,000
Cap and Trade	N/A	13,050
Total	68,377	68,398

The source
in SPUR's
plan yield
\$43 billion
alone for
HSR

“Down with
Hollywood”?



From Sandow Birk's series
"The Great War of the Californias"



From Sandow Birk's series
"The Great War of the Californias"

The Great
Battle of San Francisco

