



NO ORDINARY DISRUPTION

THE FOUR GLOBAL FORCES BREAKING ALL THE TRENDS



**“I THINK THERE IS
A WORLD MARKET
FOR MAYBE FIVE
COMPUTERS.”**



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**THOMAS J.
WATSON**





**“THE CELL PHONE
PENETRATION IN
THE U.S. BY 2000
WILL BE 900,000
SUBSCRIBERS.”**



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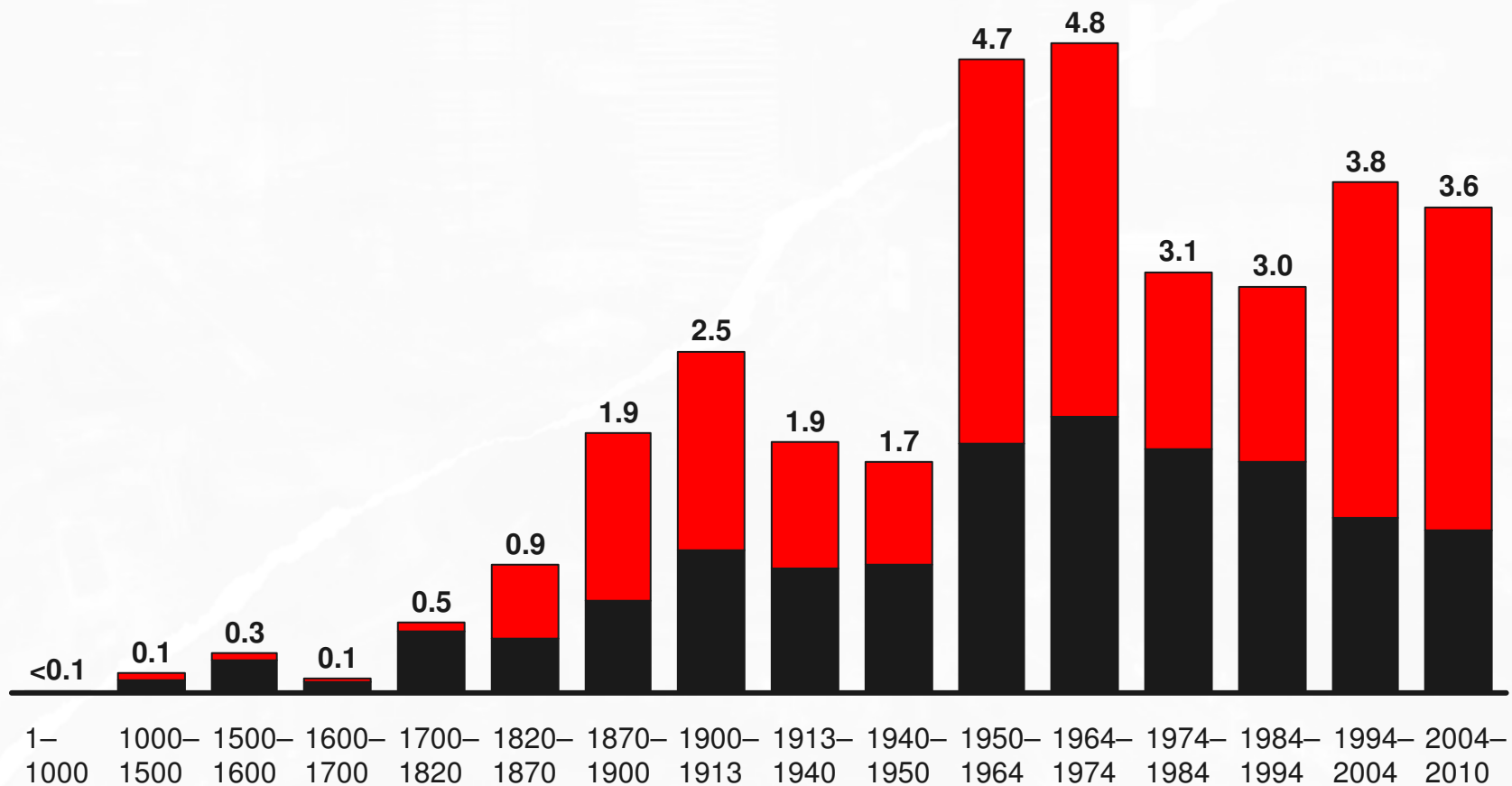
McKinsey & Company

Unprecedented levels of GDP growth since the 1950s

Contributions to global GDP growth

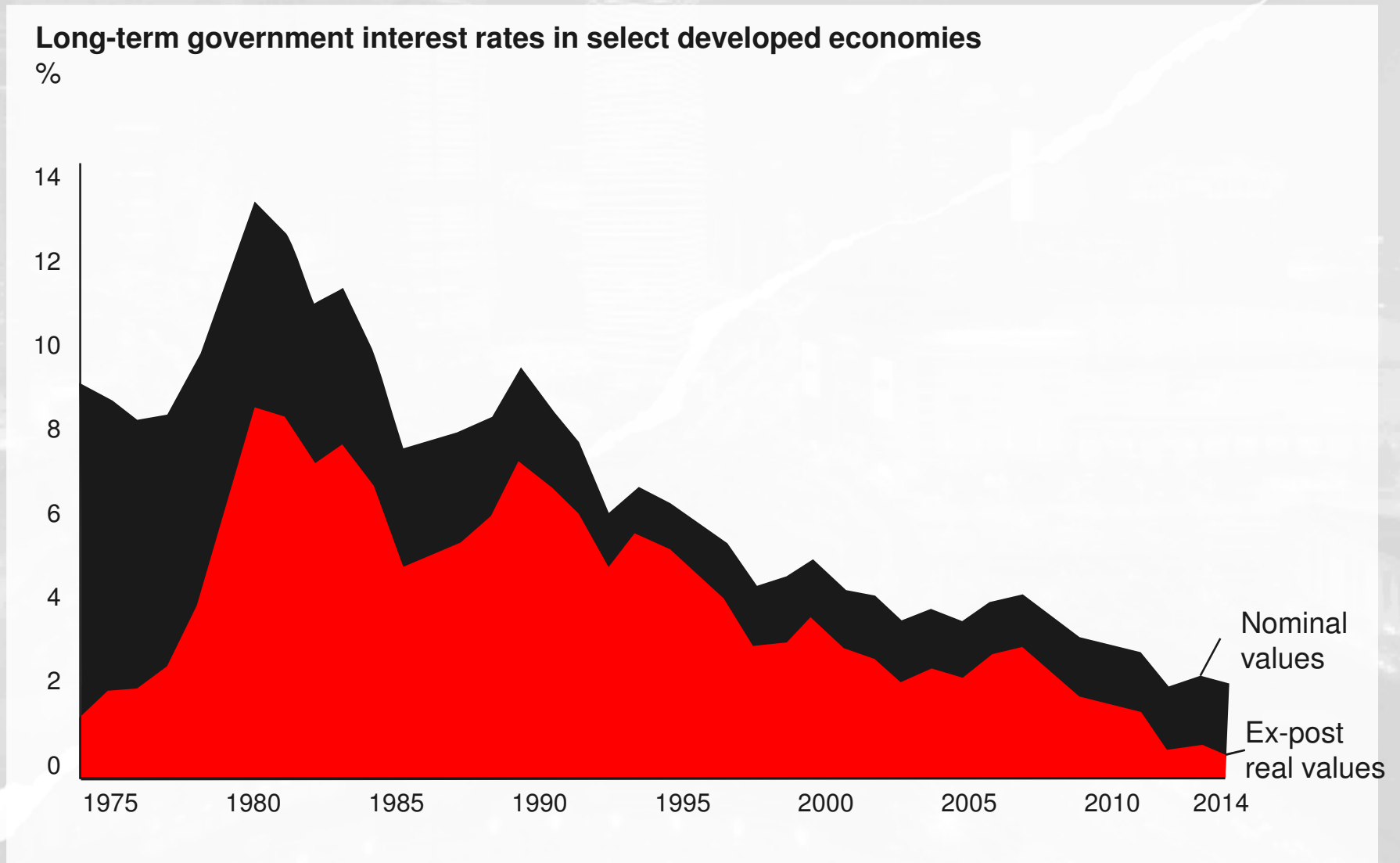
Compound annual growth rate, %

■ GDP per capita growth
■ Population growth



SOURCE: Jutta Bolt and Jan Luiten van Zanden, *The first update of the Maddison Project: Re-estimating growth before 1820*, Maddison Project working paper number 4, University of Groningen, January 2013; UN Population Division; McKinsey Global Institute analysis

Capital has become increasingly cheaper

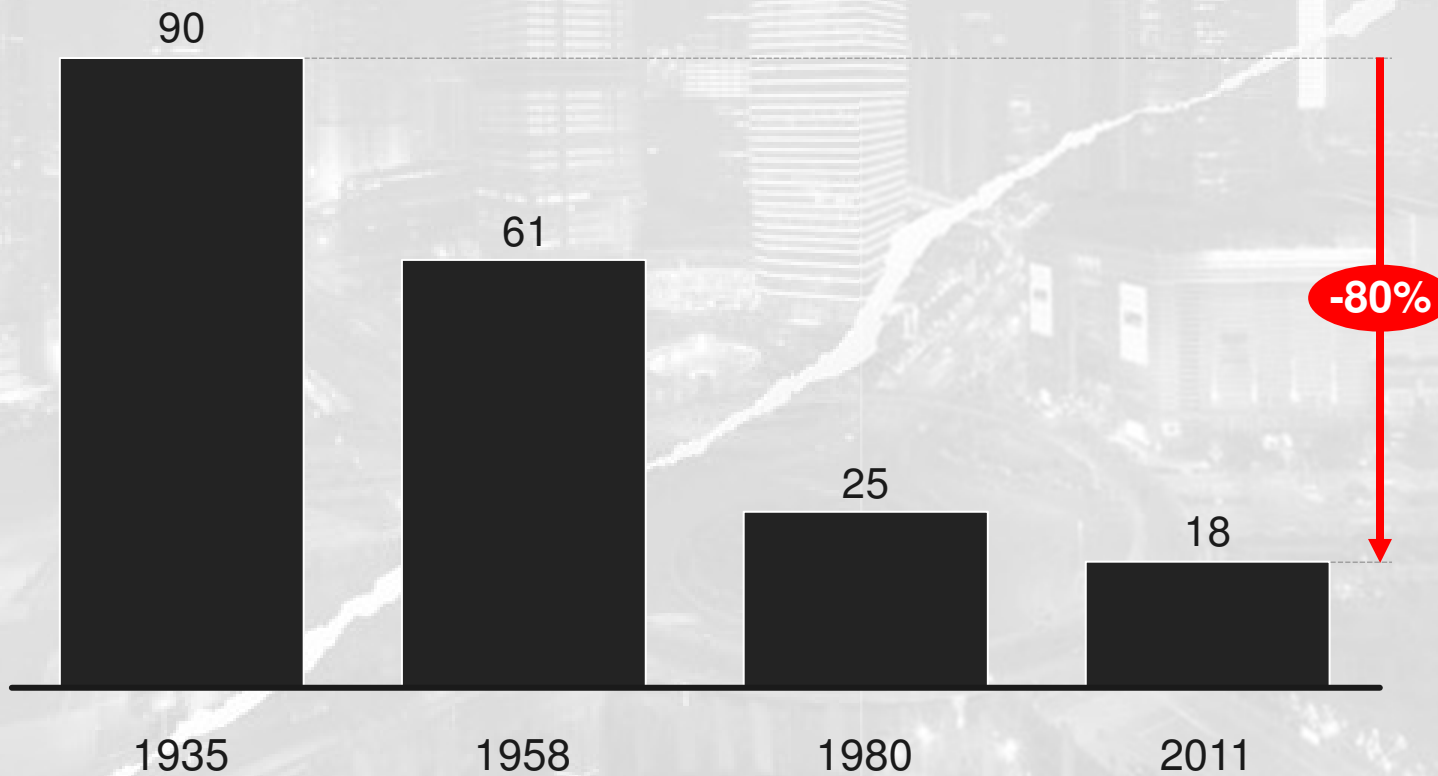


SOURCE: Oxford Economics; McKinsey Global Institute analysis

Average lifetime of companies is declining

Average tenure on the S&P 500

Years



Four disruptive forces

1

Industrialization
and urbanization

2

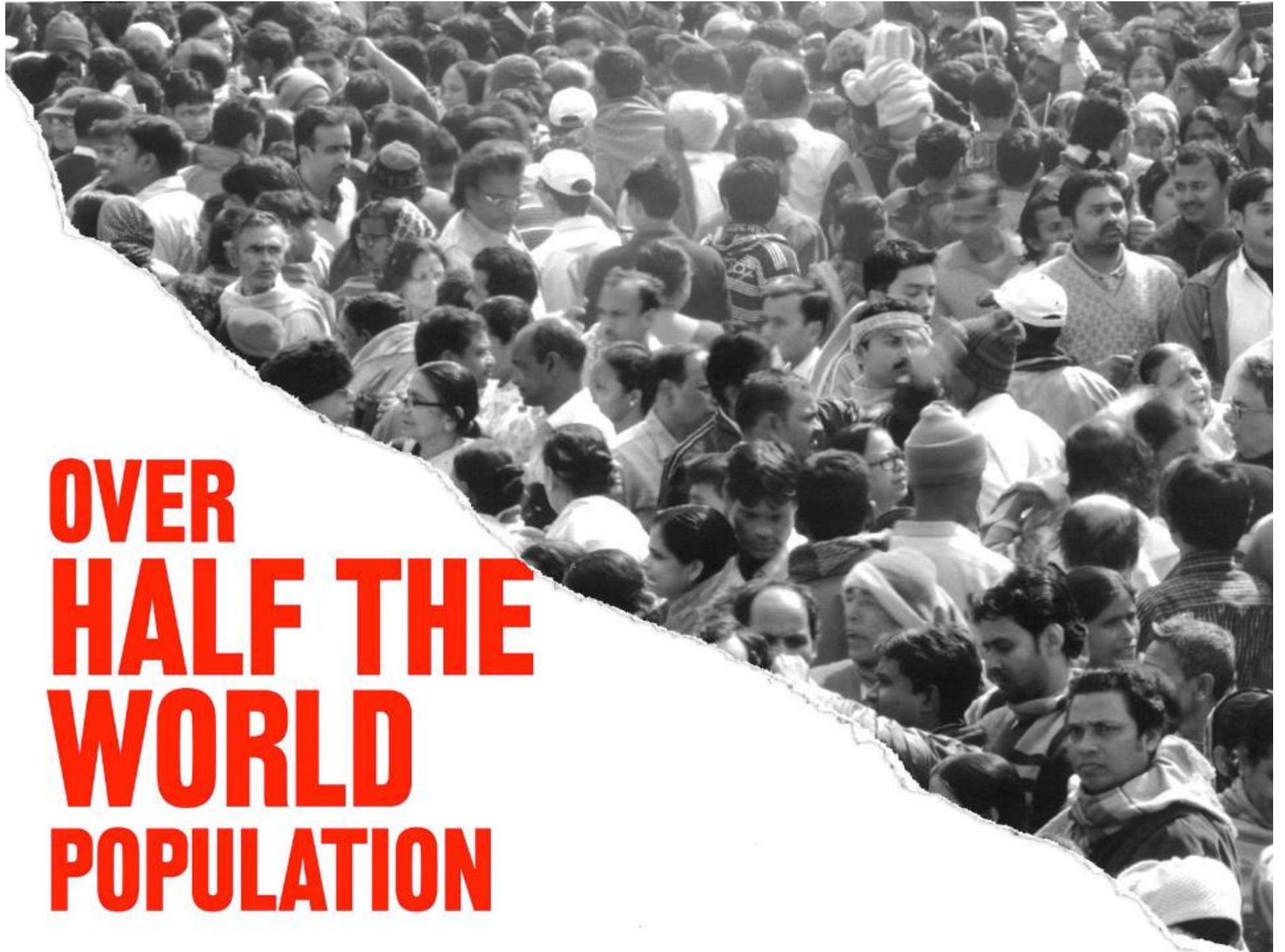
An aging
world

3

Disruptive
technologies

4

Greater global
interconnections



**OVER
HALF THE
WORLD
POPULATION**

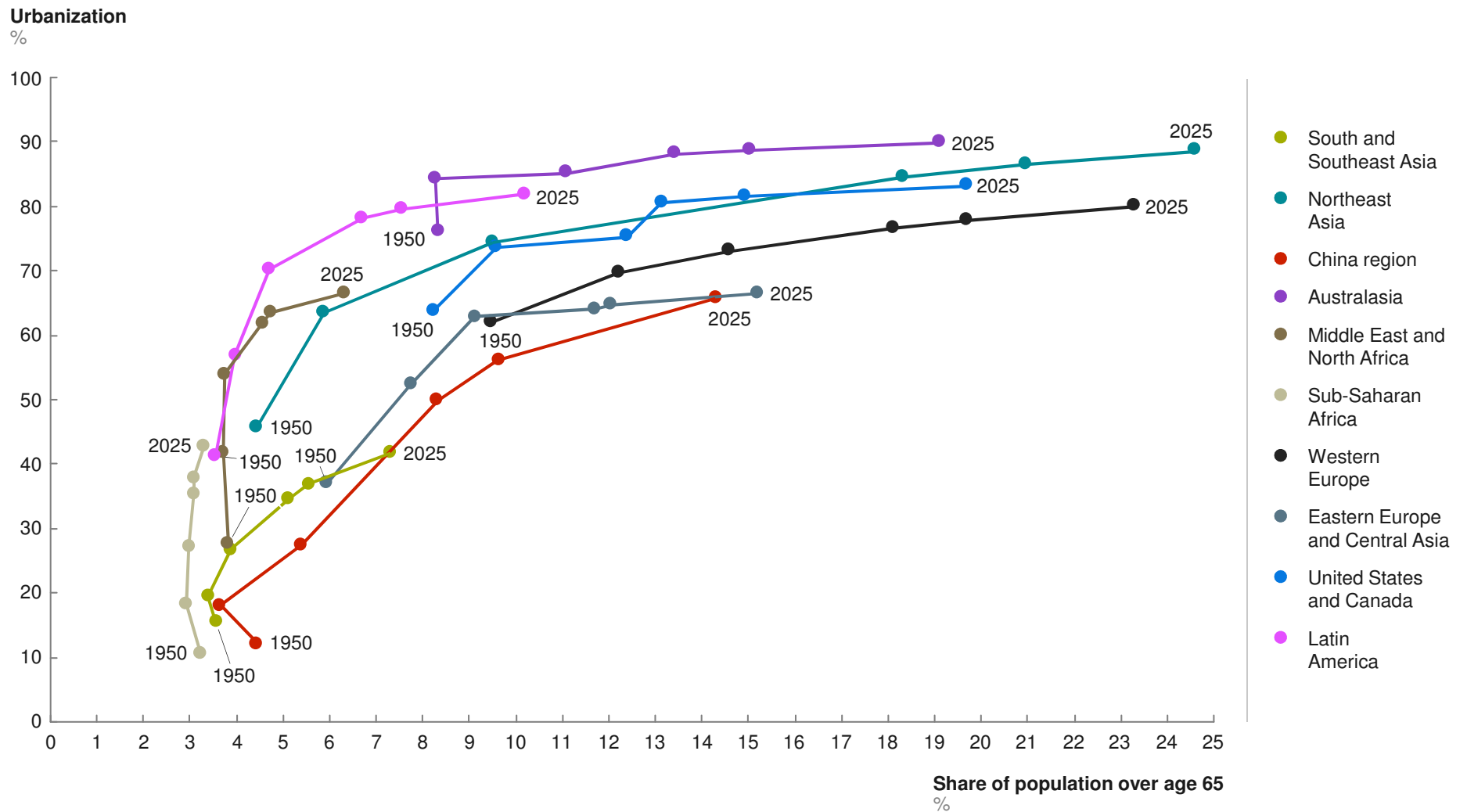


65M

**MORE PEOPLE
EVERY YEAR**

Globally the transition from rural to urban areas continues

Data points are 1950, 1970, 1990, 2010, 2015, and 2025¹

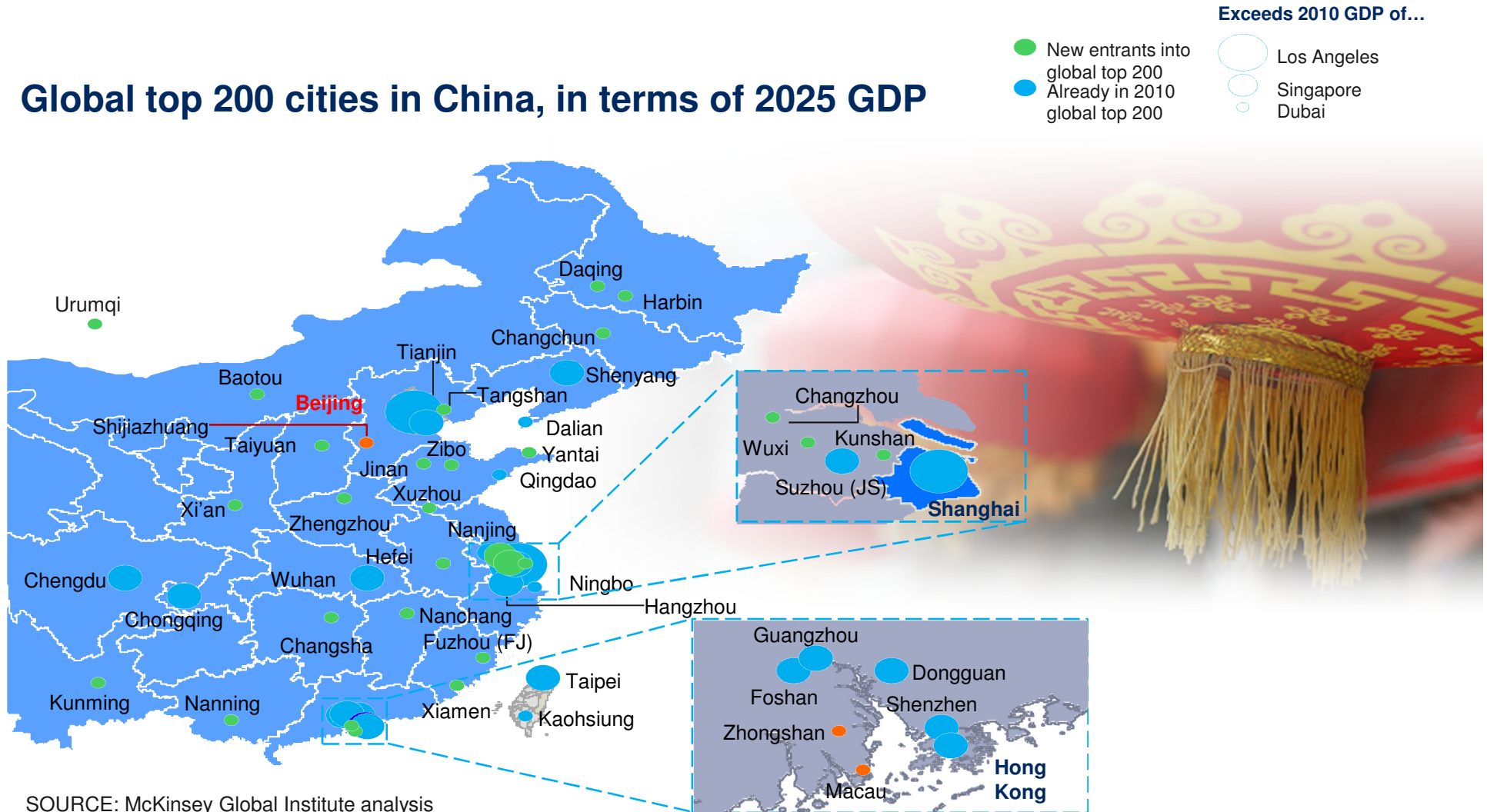


¹ Data include 180 countries.

SOURCE: *World urbanization prospects: The 2014 revision*, UN Population Division, Population series, Urban and total population data, July 2014; *World population prospects: The 2015 revision*, UN Population Division, Department of Economic and Social Affairs (zero migration scenario), July 2015; McKinsey Global Institute analysis

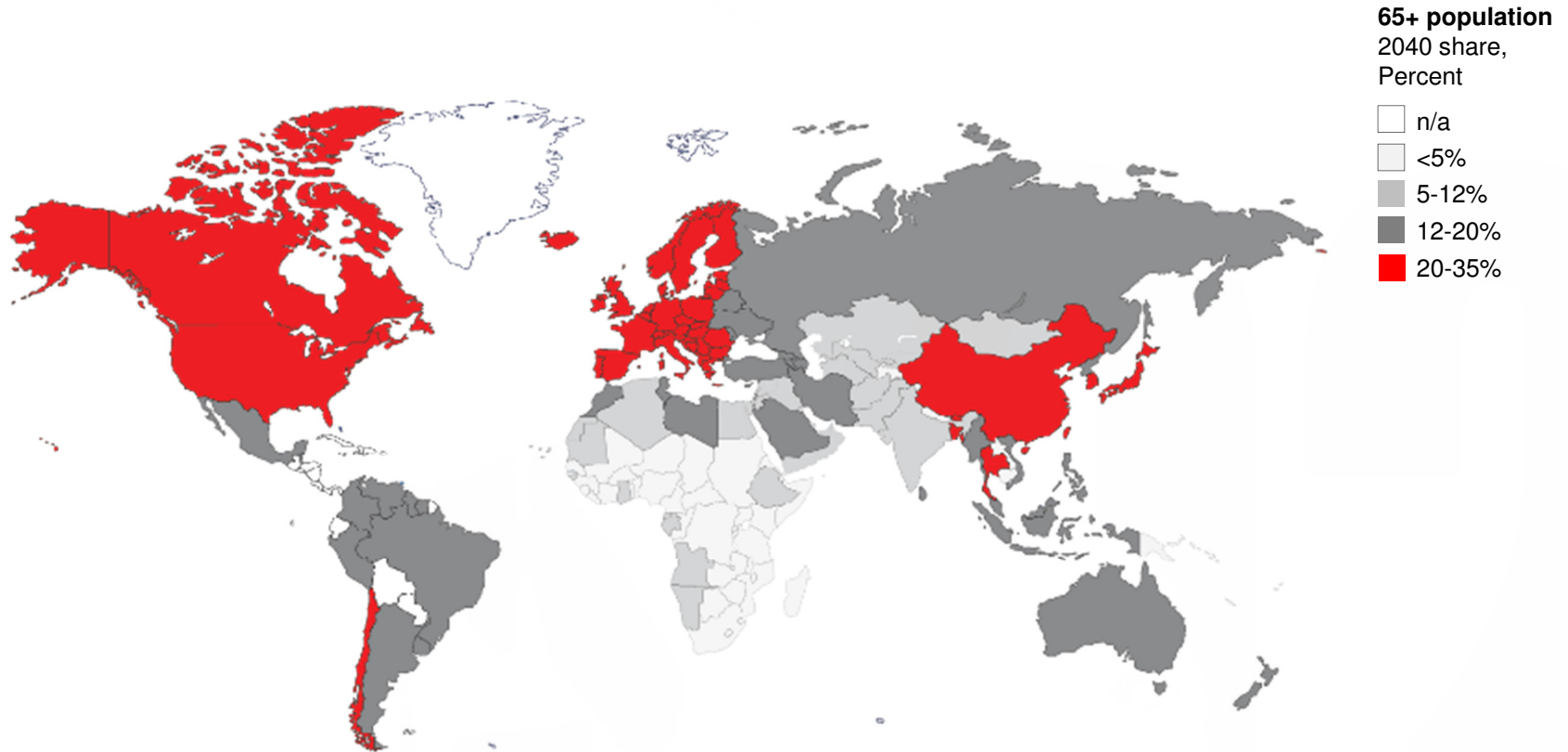
46 of the global top 200 cities to be Chinese by 2025

Global top 200 cities in China, in terms of 2025 GDP



By 2040, about 1 in 4 people in advanced economies and China will be 65 years old or older

Share of population 65+, 2040E



Elderly consumers in 2030 will differ significantly from their predecessors and therefore will consume differently

Increasing scale



More unequal



More ethnically diverse



More time for leisure or work



More likely to be single

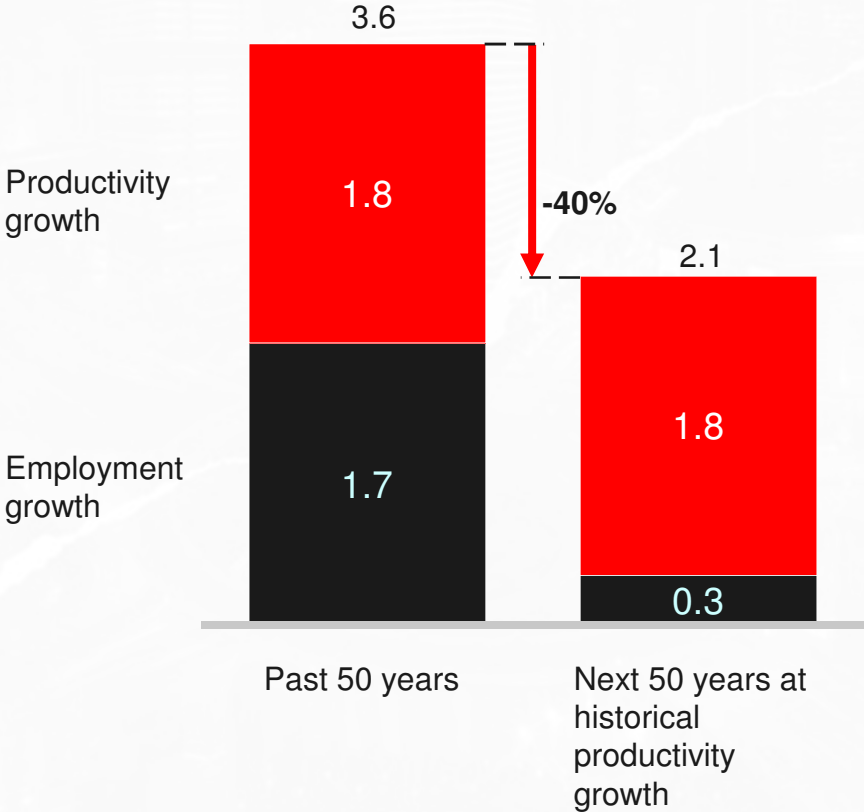


More technologically savvy



At past rates of productivity growth, global GDP growth would slow by about 40 percent

GDP of G19 and Nigeria
Compound annual growth rate, %



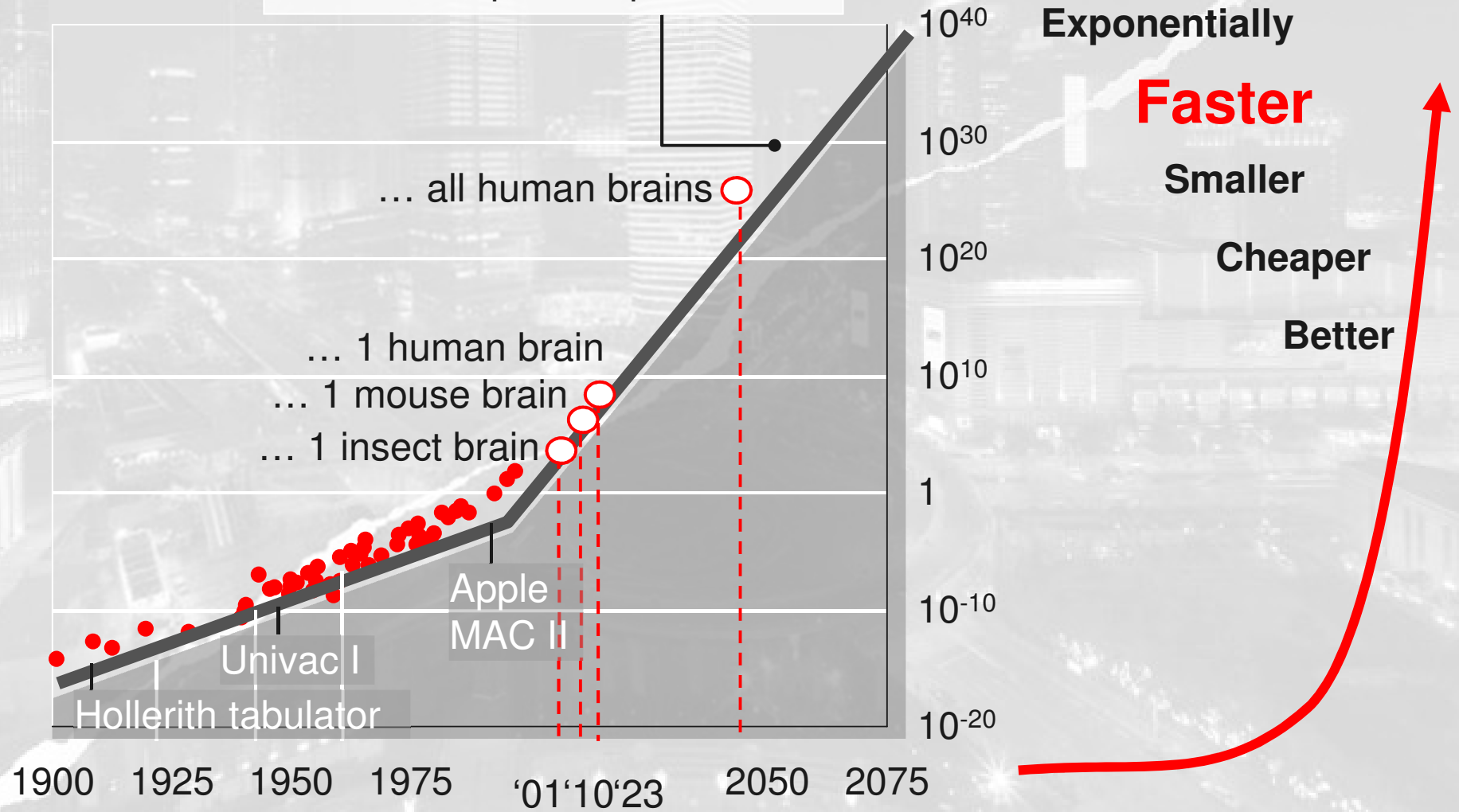
NOTE: Numbers may not sum due to rounding.

SOURCE: The Conference Board Total Economy Database; UN Population Division; McKinsey Global Institute analysis

The pace of digital disruption is accelerating

● Computer type

Plotted by number of calculations per sec per \$1,000



SOURCE: Singularity University

Adoption of new technologies is also accelerating

Time to reach 50 million users



SOURCE: Press reports; McKinsey Global Institute analysis

New construction technologies are maturing at a remarkable rate

Apr '14

10 full-sized houses in 24 hours



- **3D printers** are 10m wide and 6.6m high and use mixture of dry cement and **construction waste**



- Printed for **less than USD 5000/ per house** due to inexpensive material and limited manpower



- **10 houses of ~195 m²** printed and assembled in **24 hours**

Jan '15

6-story apartment and impressive villa



- **6-story** apartment building and large villa
- **30-60% material savings, 50-70% time saving and 80% labor savings** compared to traditional construction



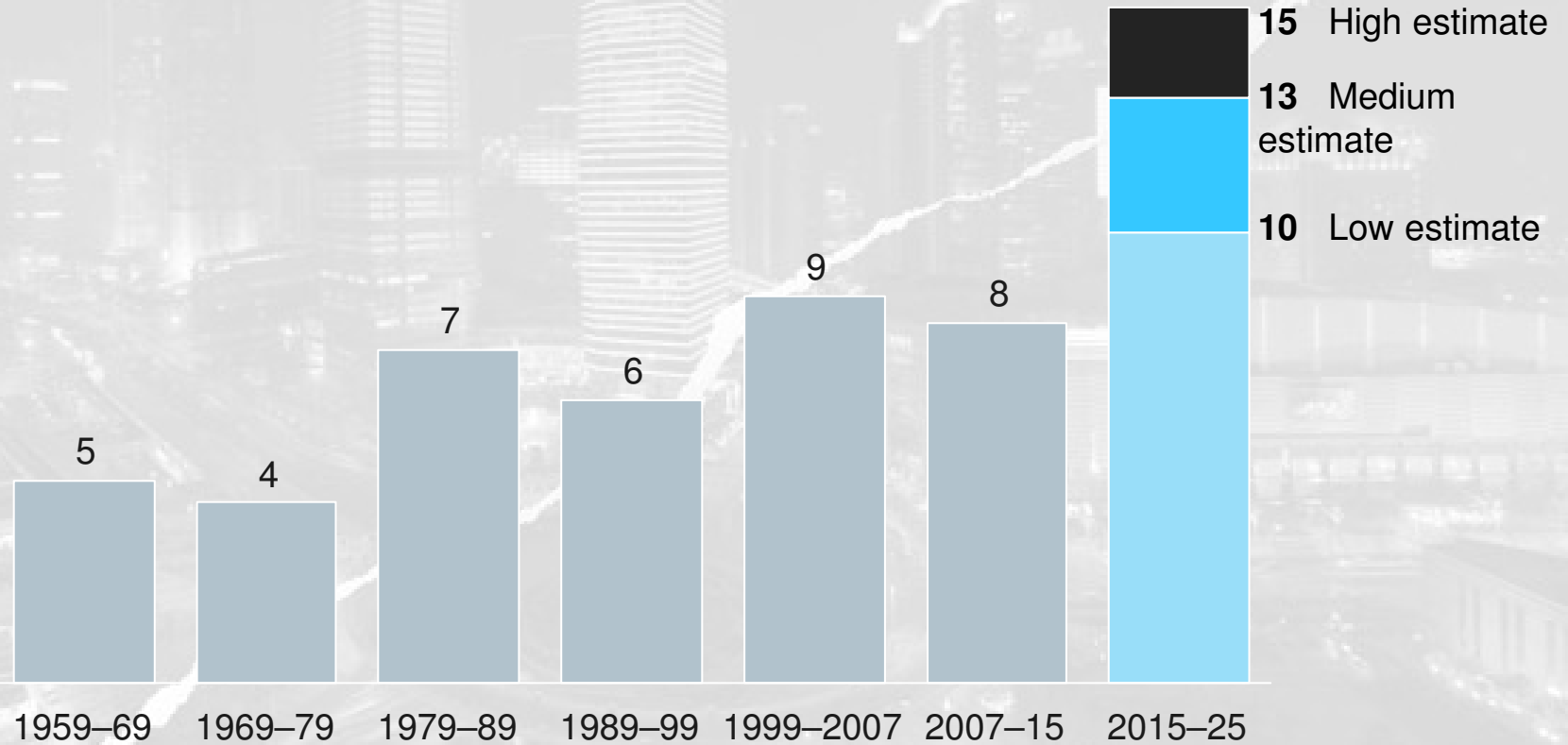
- Structural components **fabricated offsite, assembled** with beam columns, steel rebar and insulation **on site**



But technology-induced job displacement could accelerate over the next decade

Share of middle-skill jobs displaced in the US economy

%



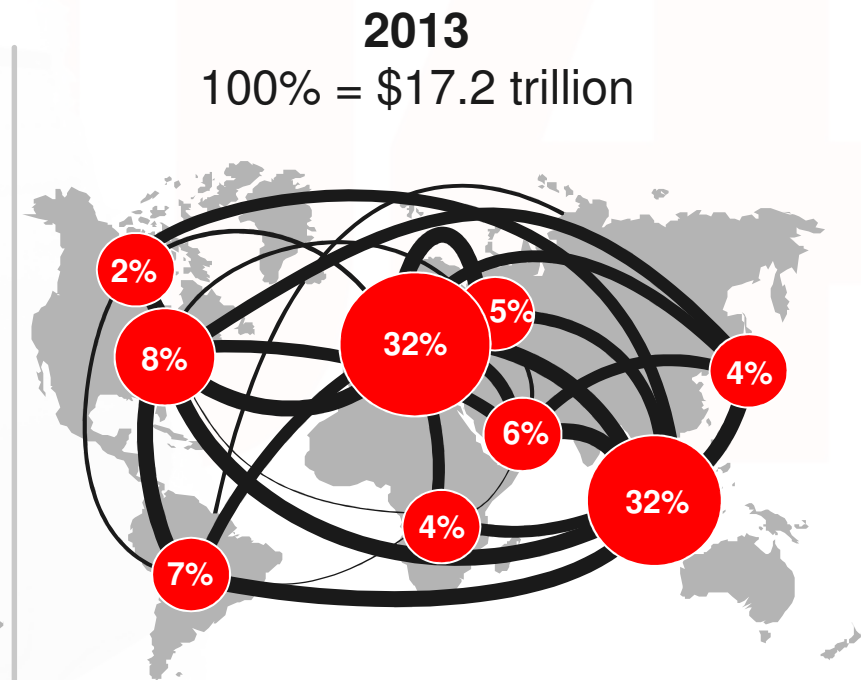
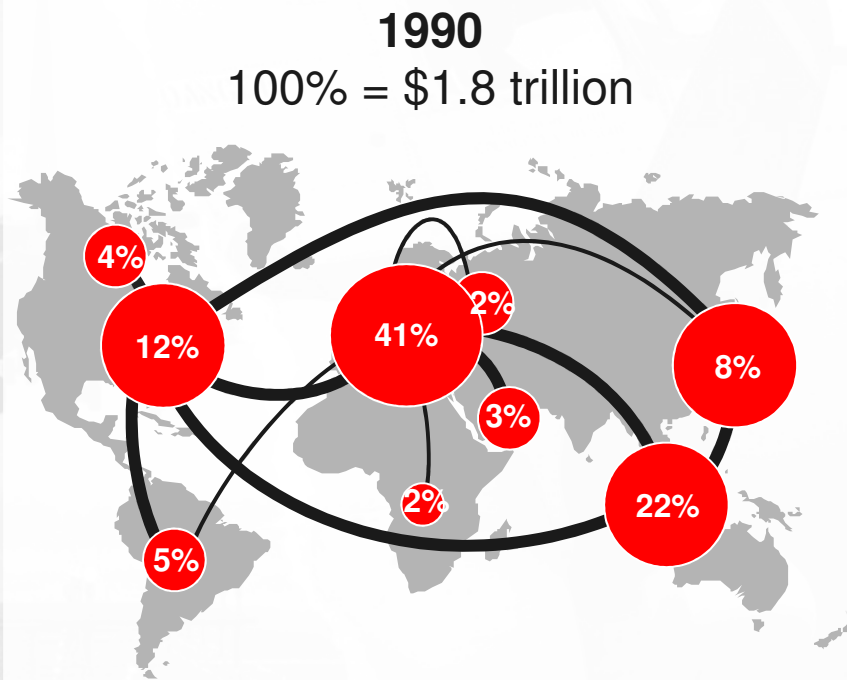
Jobs displaced
Million

2 3 5 5 6 6 8-12

Networks of global trade flows are expanding and becoming much more interconnected

- USD 50–100 billion
- USD 100–500 billion
- USD 500 billion or more

Lines show total trade flows between regions, figures in bubbles show participation in world trade



Data is the new major flow

Bandwidth

Gigabits per second (Gbps)

<50

50–100

100–500

500–1,000

1,000–5,000

5,000–20,000

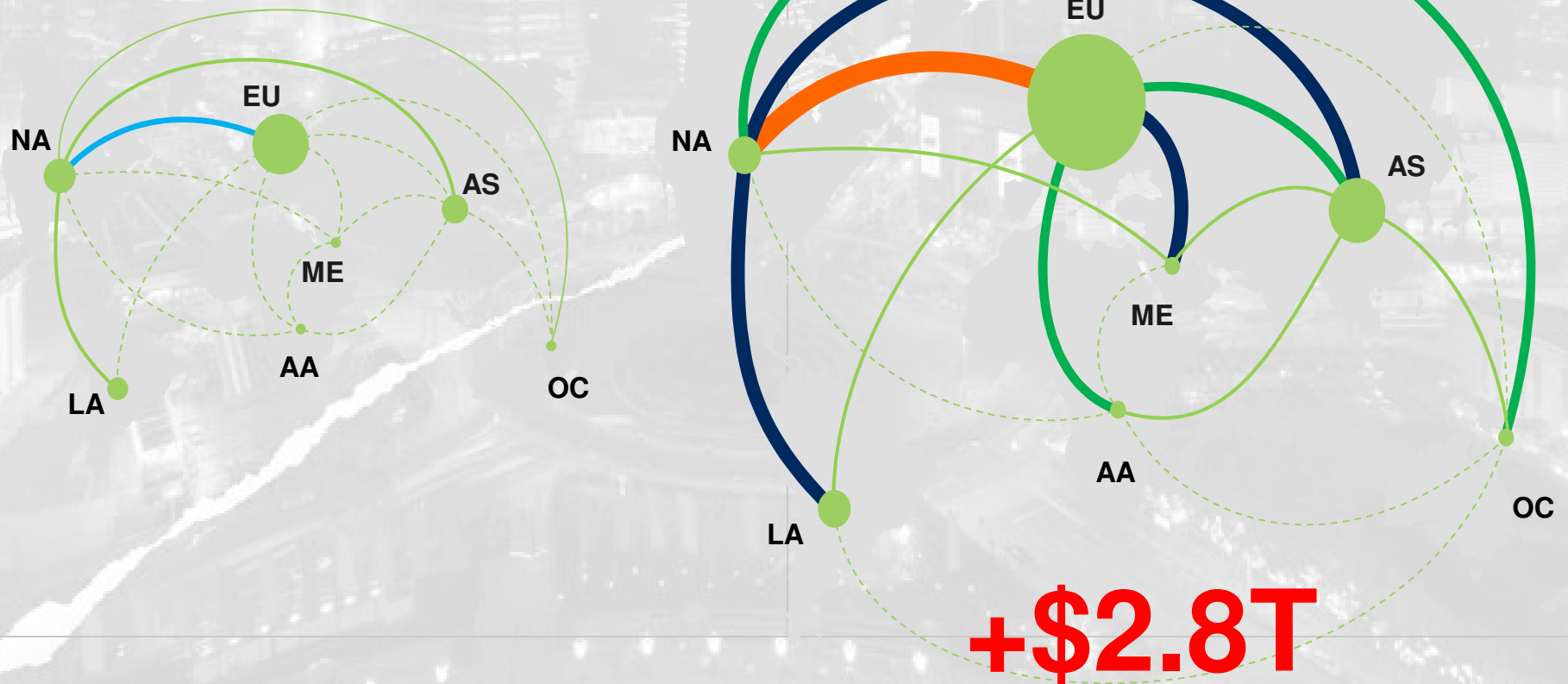
>20,000

2014 **45x larger**

100% = **211 Tbps**

2005¹

100% = 4.7 Terabits per second
(Tbps)



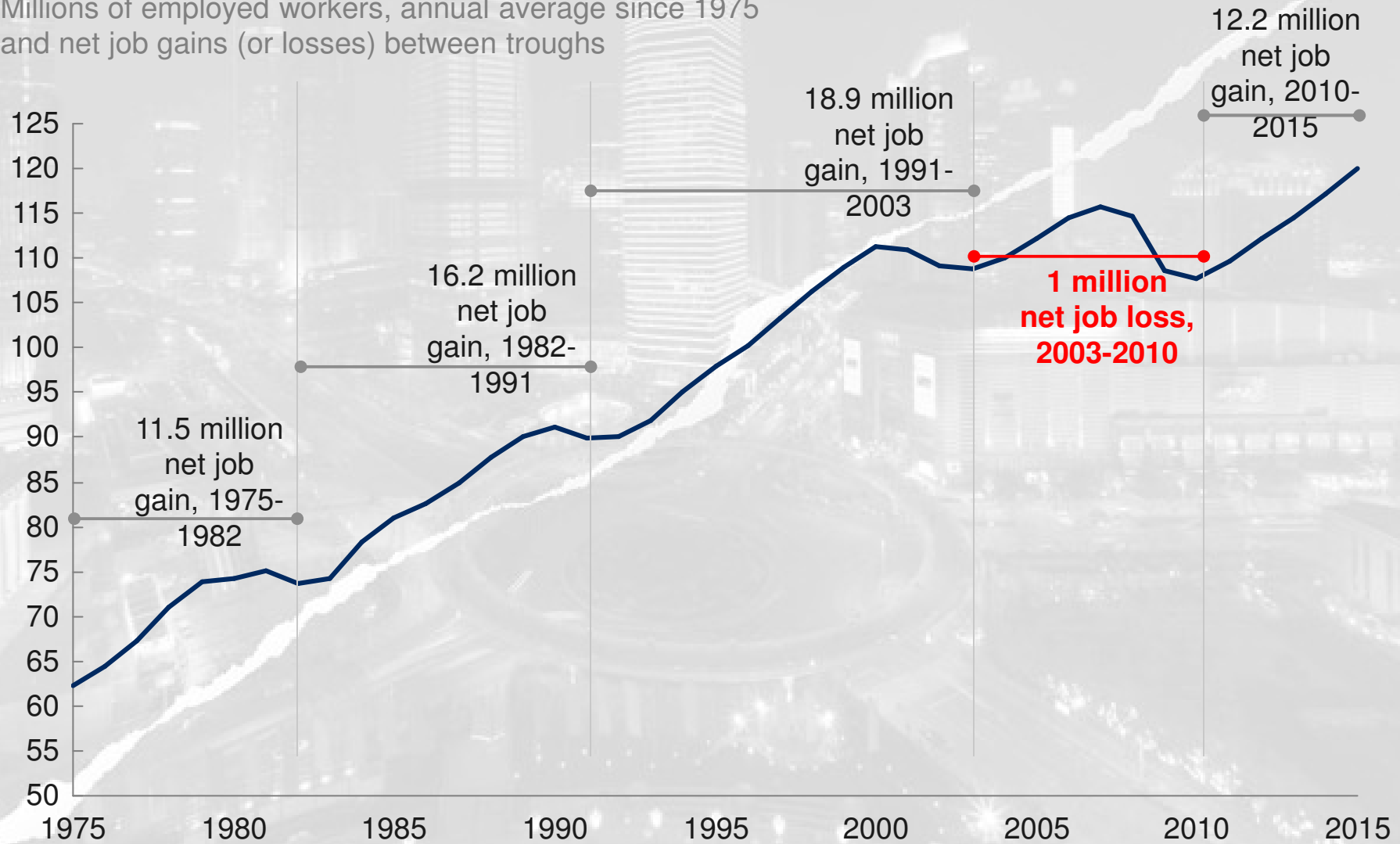
How these forces impact American counties



The current recovery follows a business cycle with no net job creation—unprecedented in postwar US history

Private non-farm employment in the United States

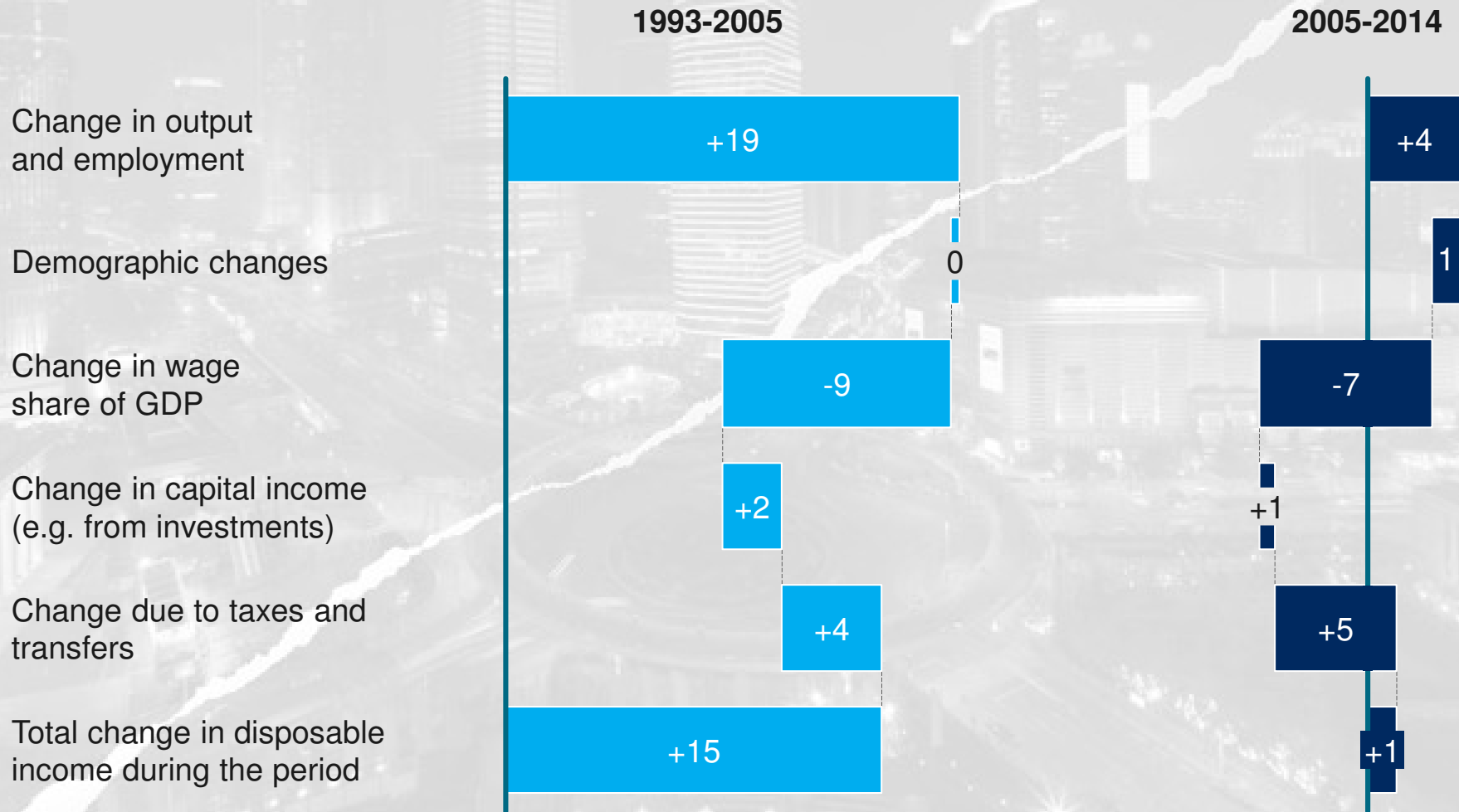
Millions of employed workers, annual average since 1975 and net job gains (or losses) between troughs



US households' income growth has slowed in the past decade compared to the previous decade

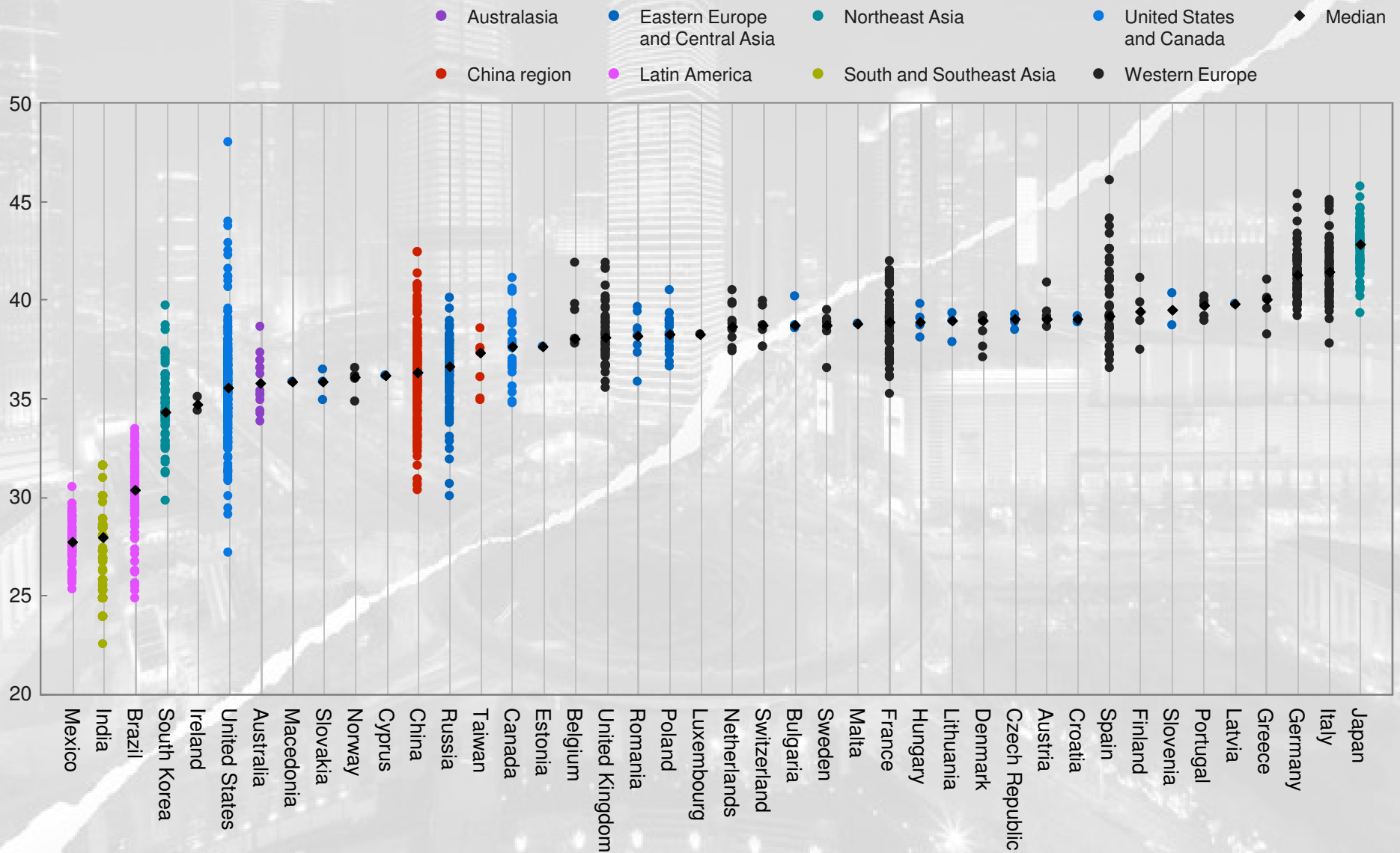
Change in disposable income for middle-income US households

% change over highlighted period

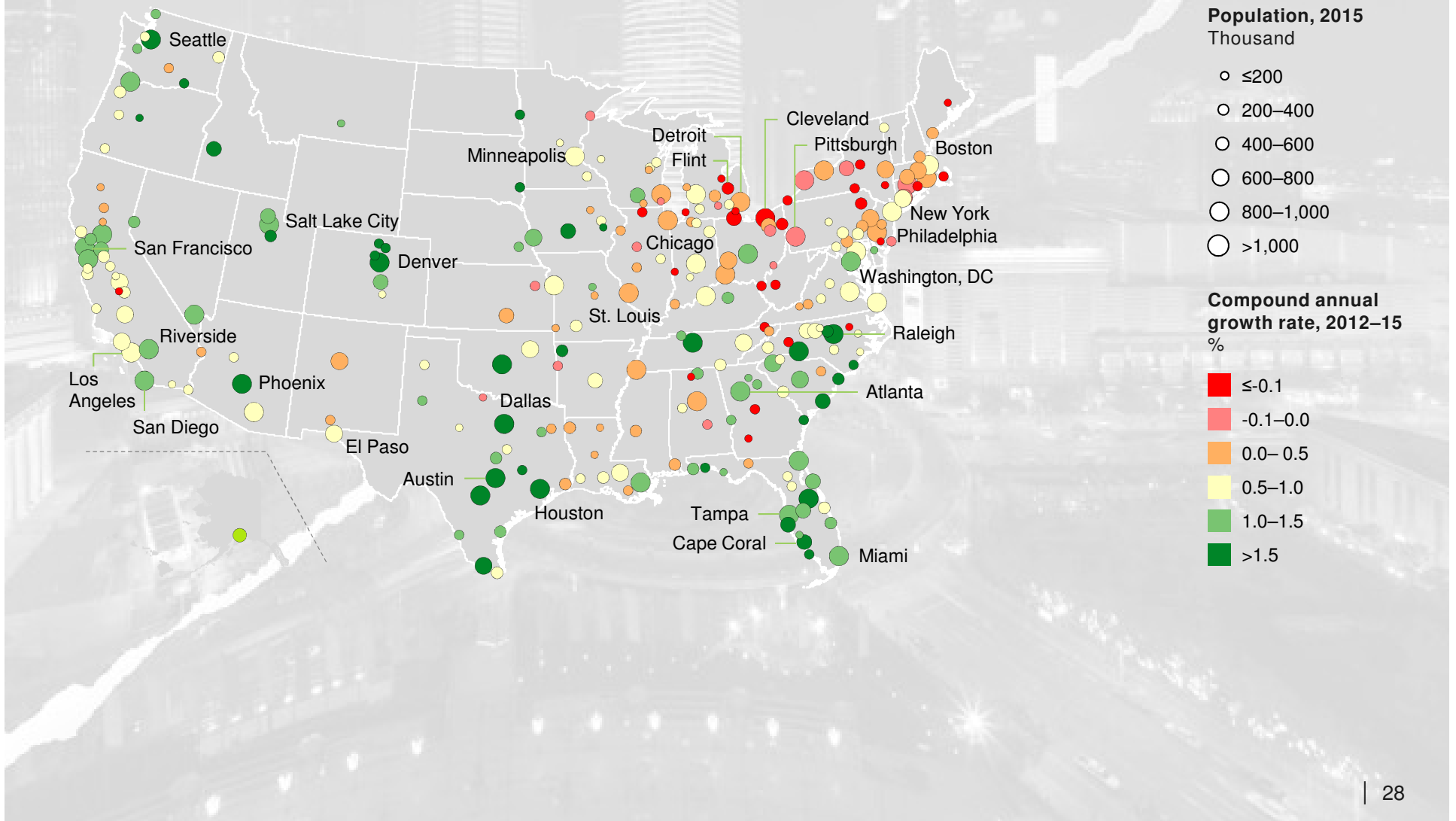


The US has a very broad range of age profiles across cities

City weighted-average age (sample of 1,503 cities)



17 percent of US cities have seen their populations decline

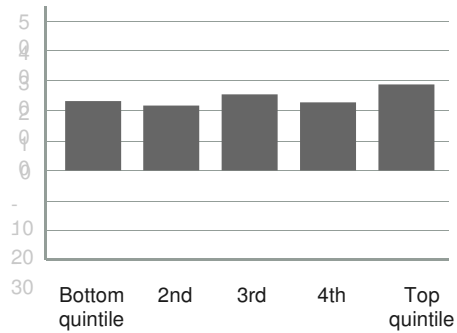


From 1993 to 2005 virtually all income segments advanced

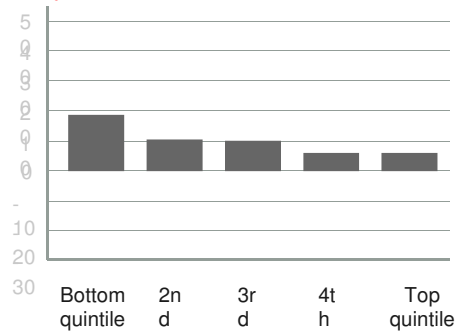
Change in real household income from wages and capital before taxes by quintile, 1993-2005
%

— Rising income

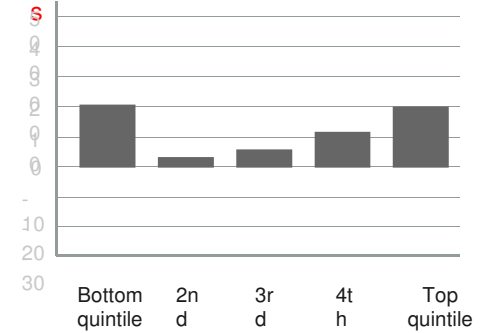
France



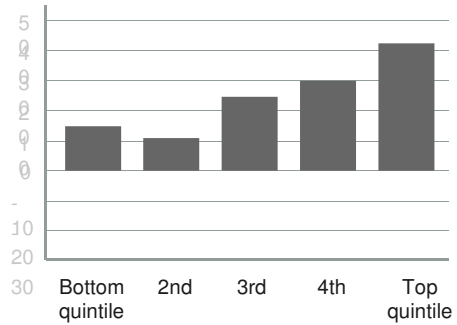
Italy



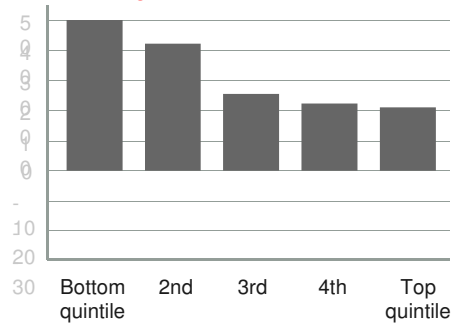
Netherlands



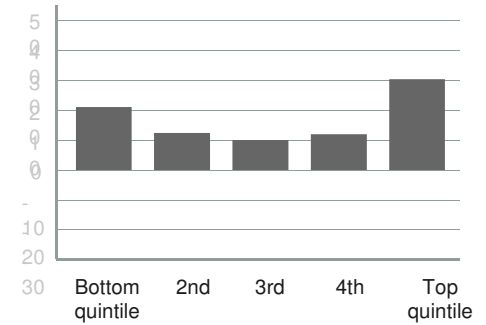
Sweden



United Kingdom



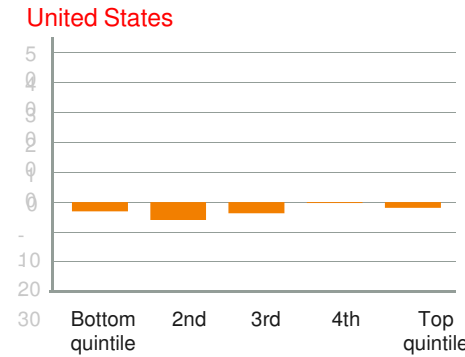
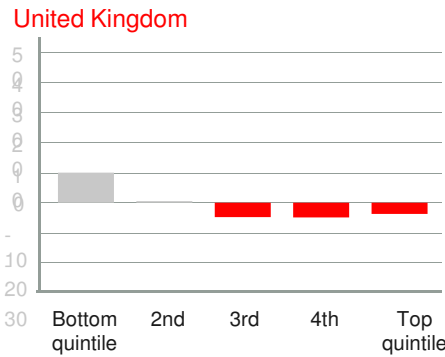
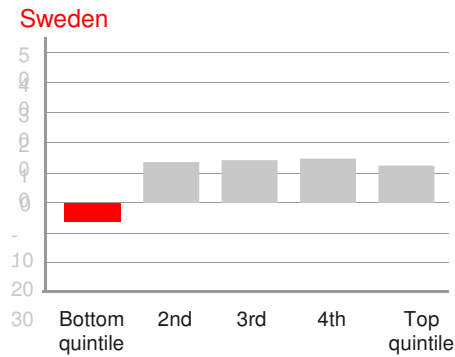
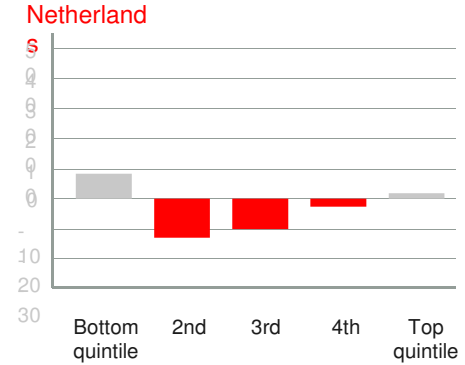
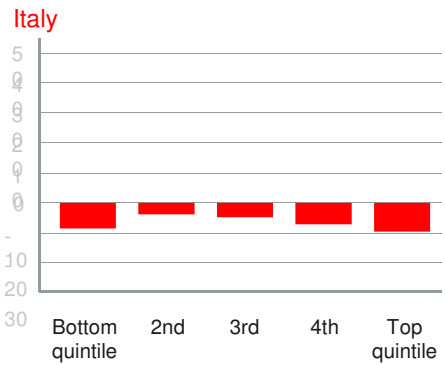
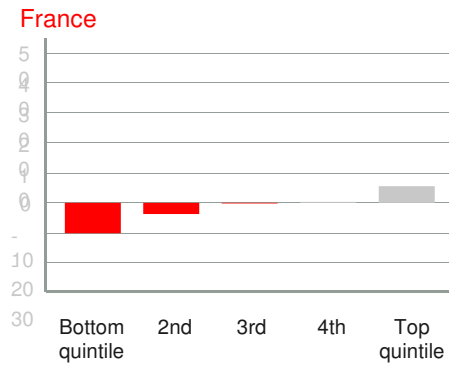
United States

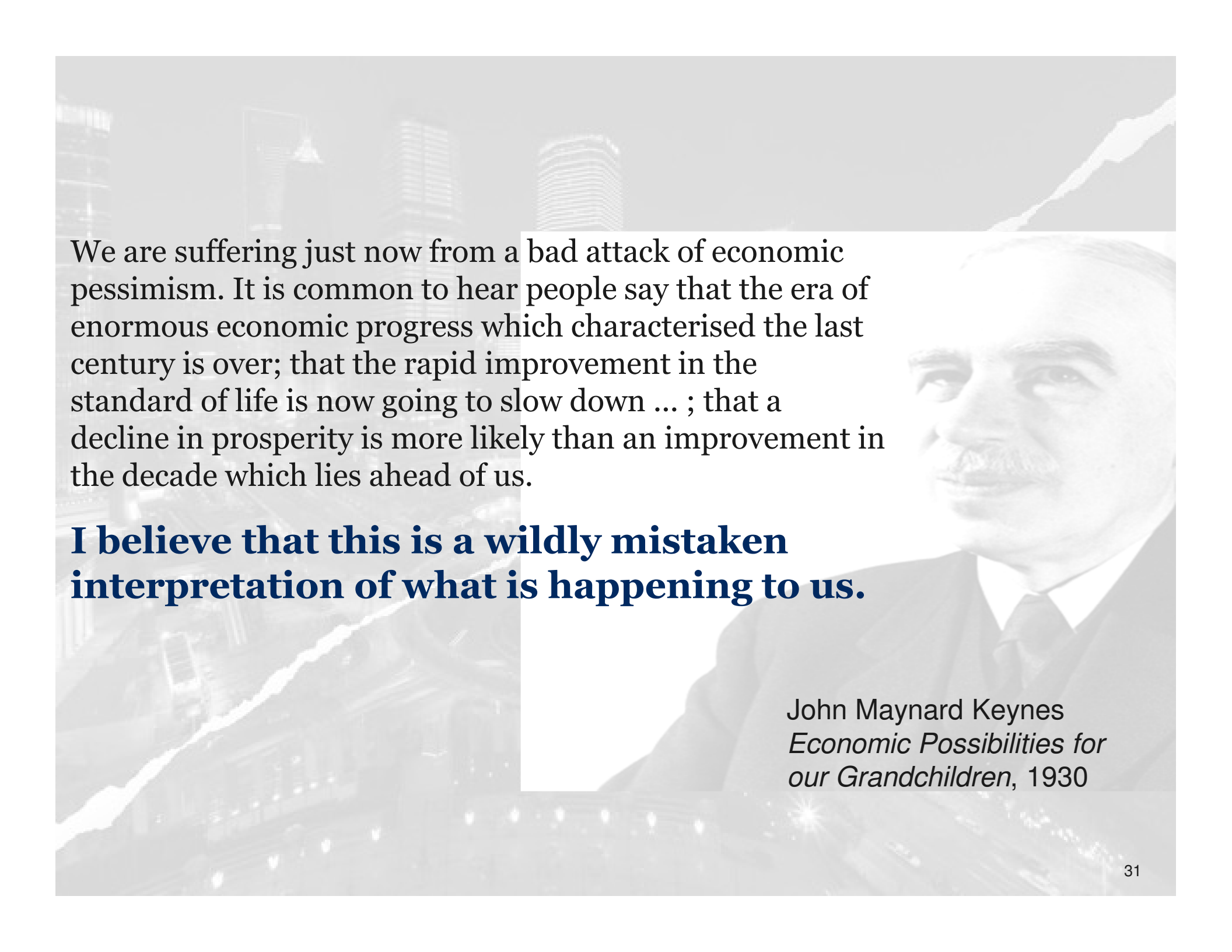


From 2005 to 2014, most households across the income distribution did not advance

Change in real household income from wages and capital before taxes by quintile, 2005-2014
%

— Rising income
— Falling income





We are suffering just now from a bad attack of economic pessimism. It is common to hear people say that the era of enormous economic progress which characterised the last century is over; that the rapid improvement in the standard of life is now going to slow down ... ; that a decline in prosperity is more likely than an improvement in the decade which lies ahead of us.

I believe that this is a wildly mistaken interpretation of what is happening to us.

John Maynard Keynes
*Economic Possibilities for
our Grandchildren, 1930*

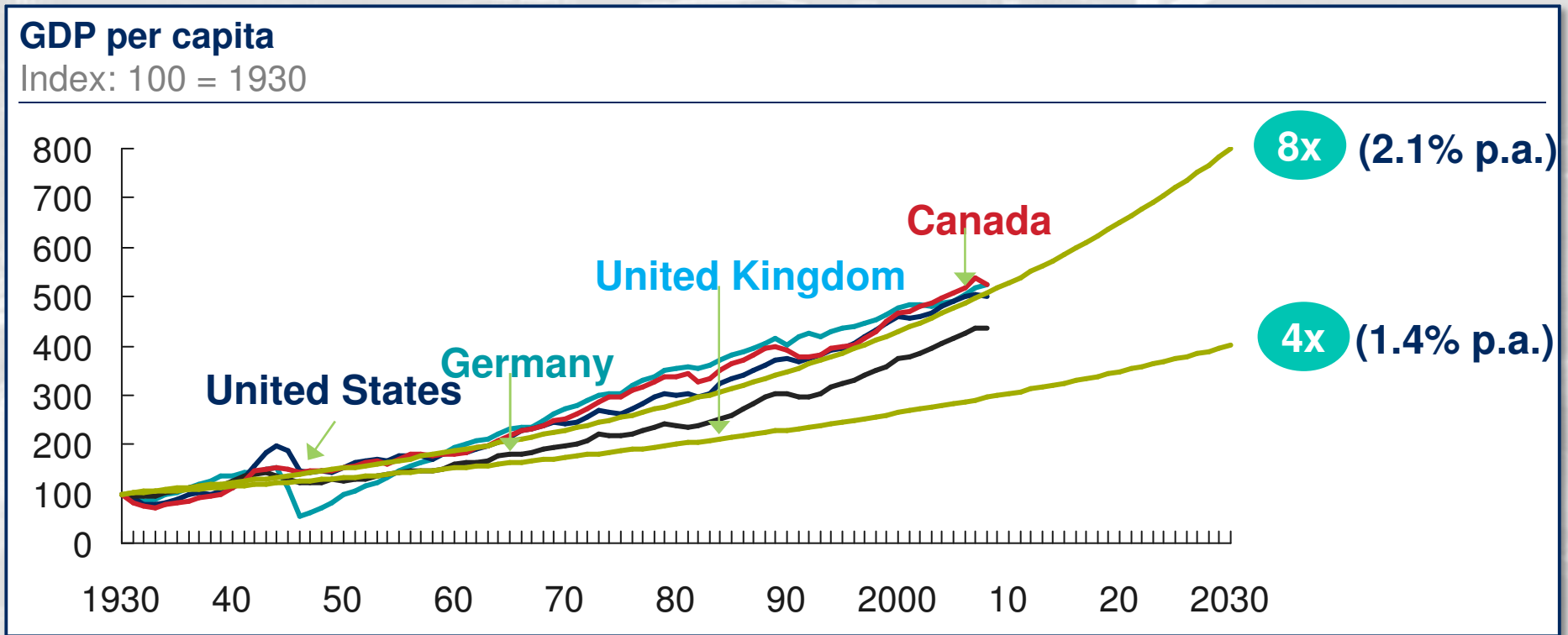


I would predict that the standard of life in progressive countries one hundred years hence will be between **four and eight times as high** as it is today.

John Maynard Keynes
*Economic Possibilities for
our Grandchildren*, 1930

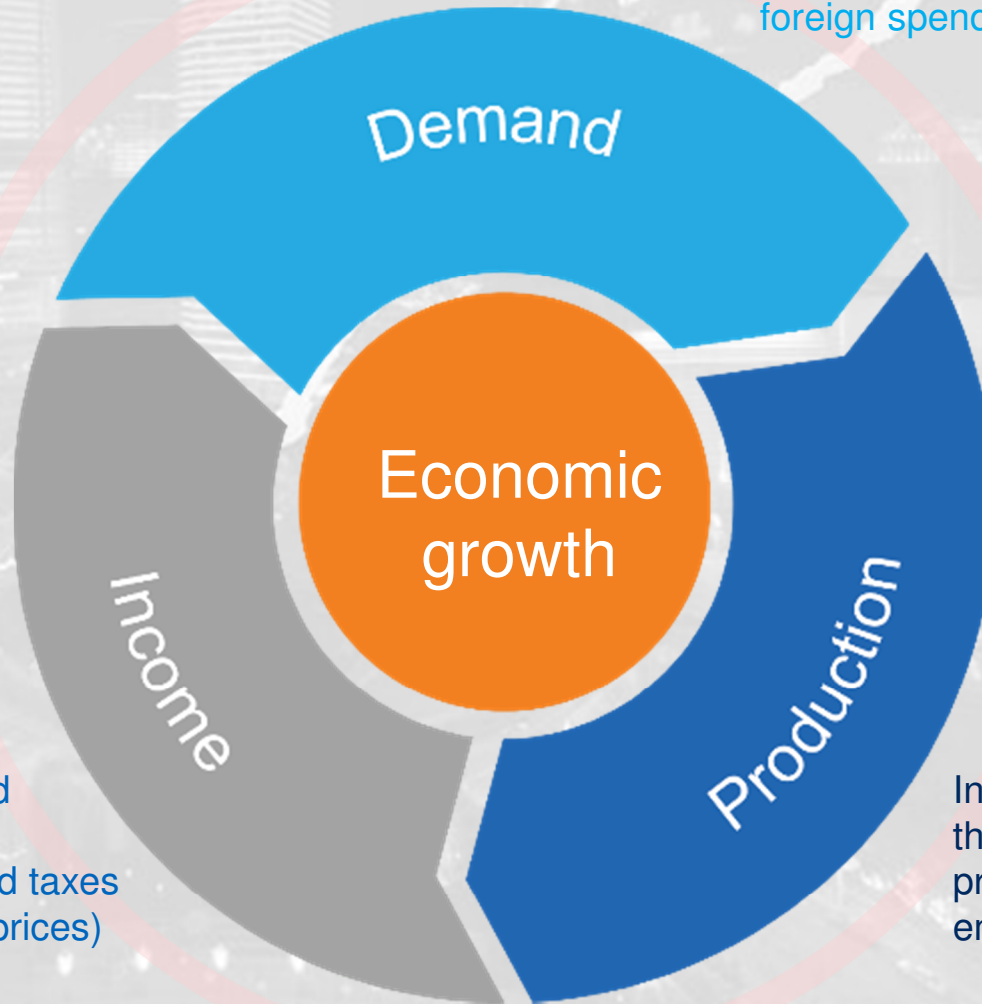
Keynes' bold prediction has proven to be correct

Germany United States United Kingdom Canada 8x 4x



Increases in demand, production, and income can drive a virtuous cycle of economic growth

Consumption and investment by private, public, and inbound foreign spenders



Distributed as wages, profits, and taxes (or lower prices)

Increases through productivity and employment

The United States can build a more dynamic, inclusive economy through action in five areas



Accelerating the digitization of laggard sectors and firms



Broadening participation in global trade and investment



Developing rapid training pathways for the workforce



Unlocking urban real estate for housing and transit

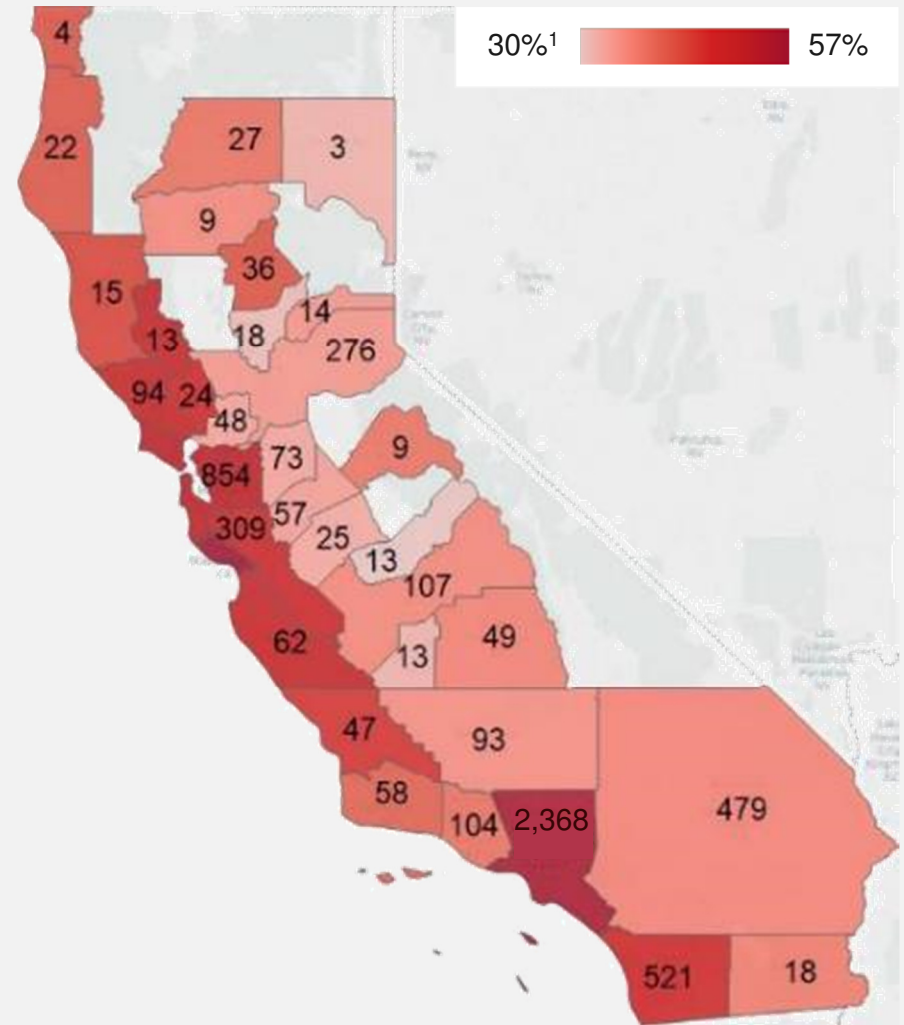


Facilitating productivity growth in the energy sector

Rising housing demand, chronic undersupply, and escalating prices have led to a housing affordability crisis

Households in MSA unable to afford rent Thousand

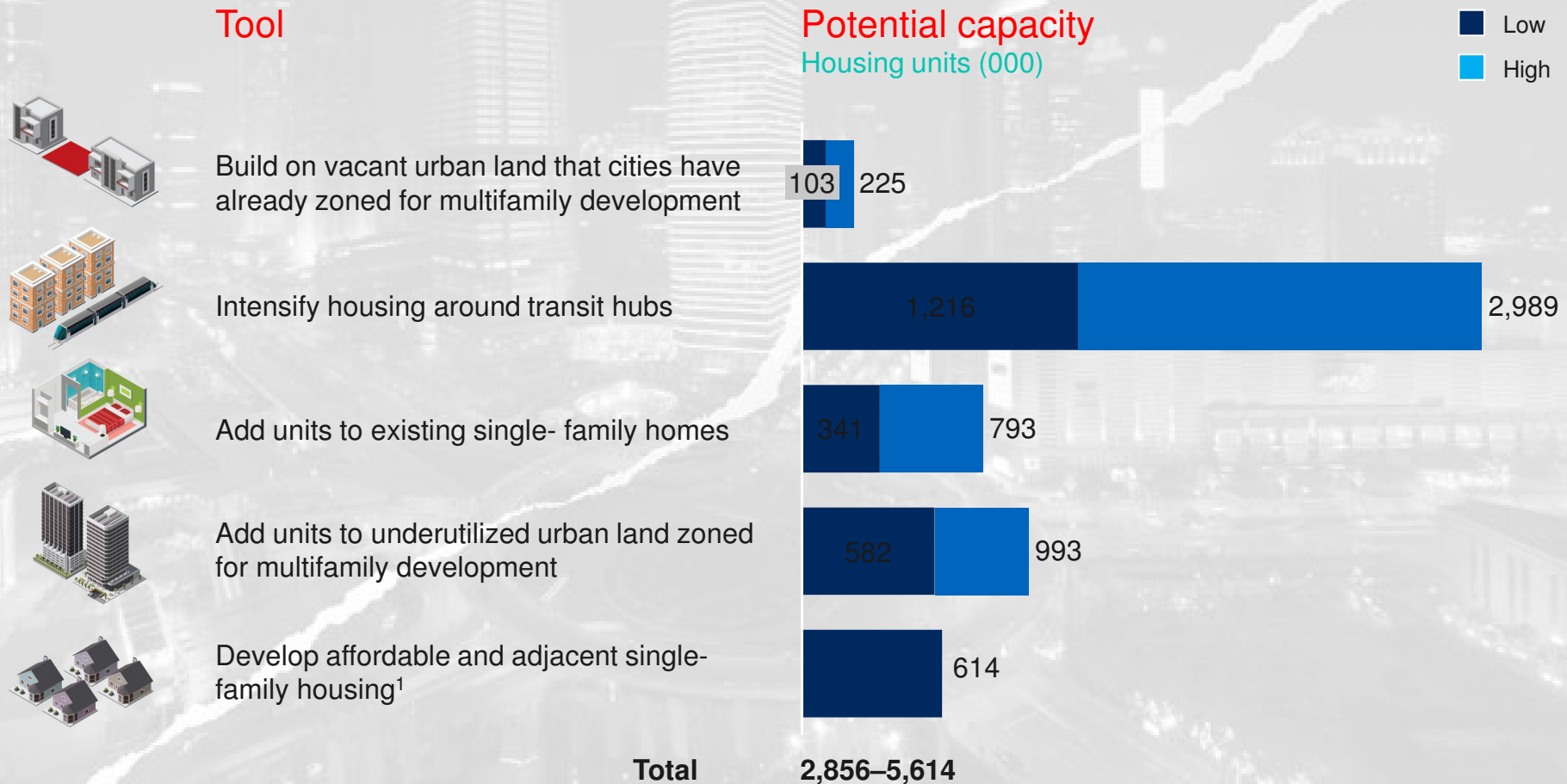
- Across the state, nearly 50% of California households are unable to afford the cost of housing in their local market
- The problem is pervasive: In every housing market in the state, at least 30% of households cannot afford the local cost of housing
- In cities such as LA and San Francisco where housing prices are most disconnected from average incomes, nearly 60% of households cannot afford the local cost of housing



¹ Number of households in MSA unable to afford the local cost of rent, as a share of the total number of households in MSA.

NOTE: Shaded regions represent 98% of state population; unshaded regions represent 2% of state population and lacked sufficient data for analysis

To fix this problem, California could build more than five million housing units in “housing hot spots”

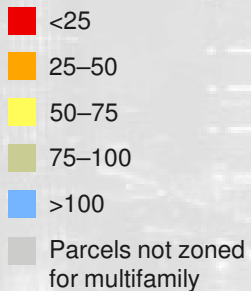


¹ Estimate for single-family potential capacity is highly conservative as it examines only three counties: Sacramento, San Bernardino, and Contra Costa.

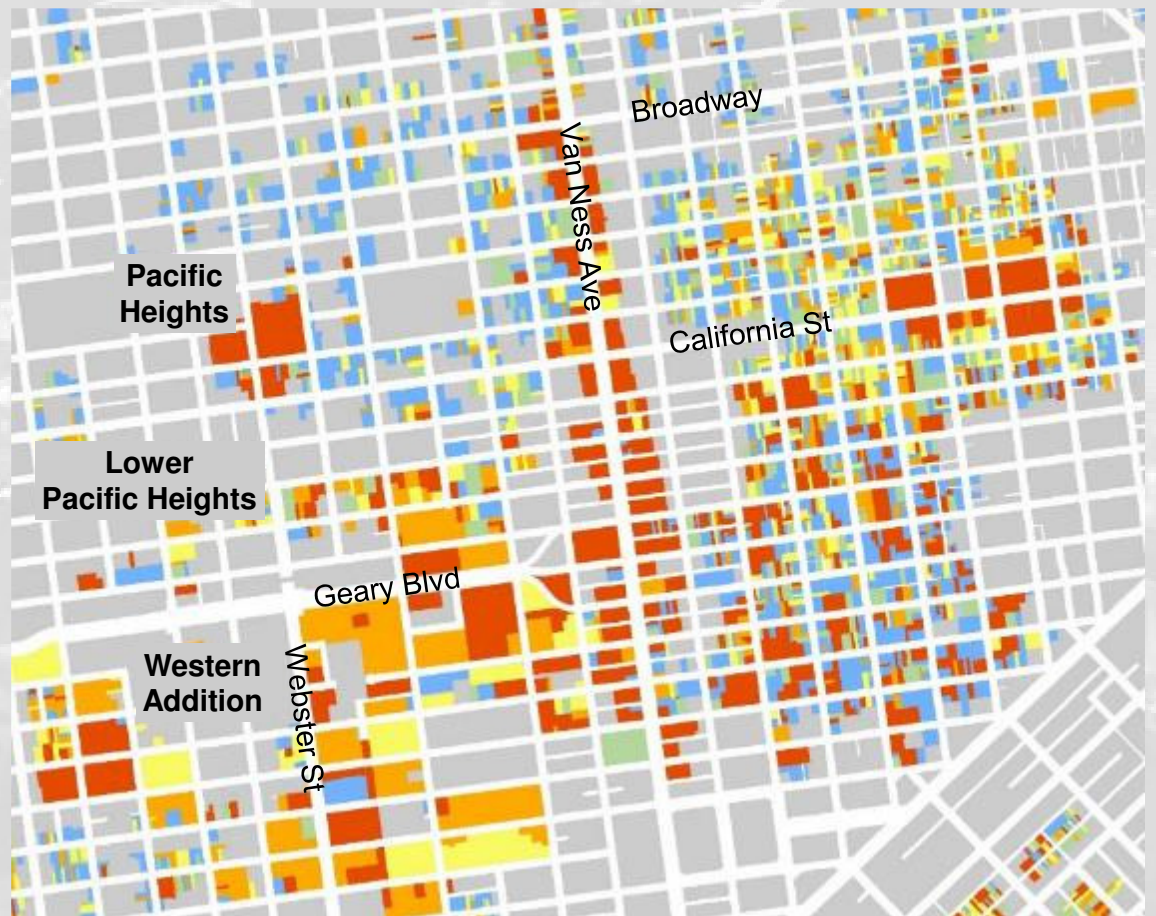
In San Francisco, 31 percent of multifamily parcels use less than 50 percent of zoned capacity, with potential to add 70,500 units under current zoning

Utilization rate

Percent



1 A closer look at San Francisco's multifamily utilization



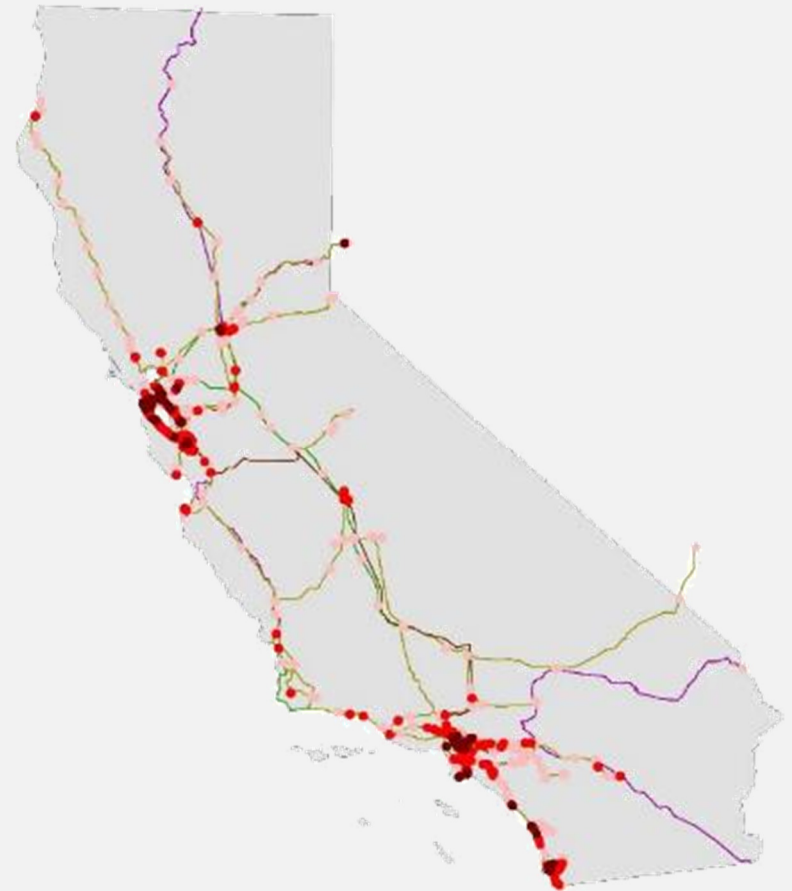
HOUSING HOT SPOTS--ILLUSTRATIVE

California has capacity to create between one million and three million housing units within half a mile of transit hubs

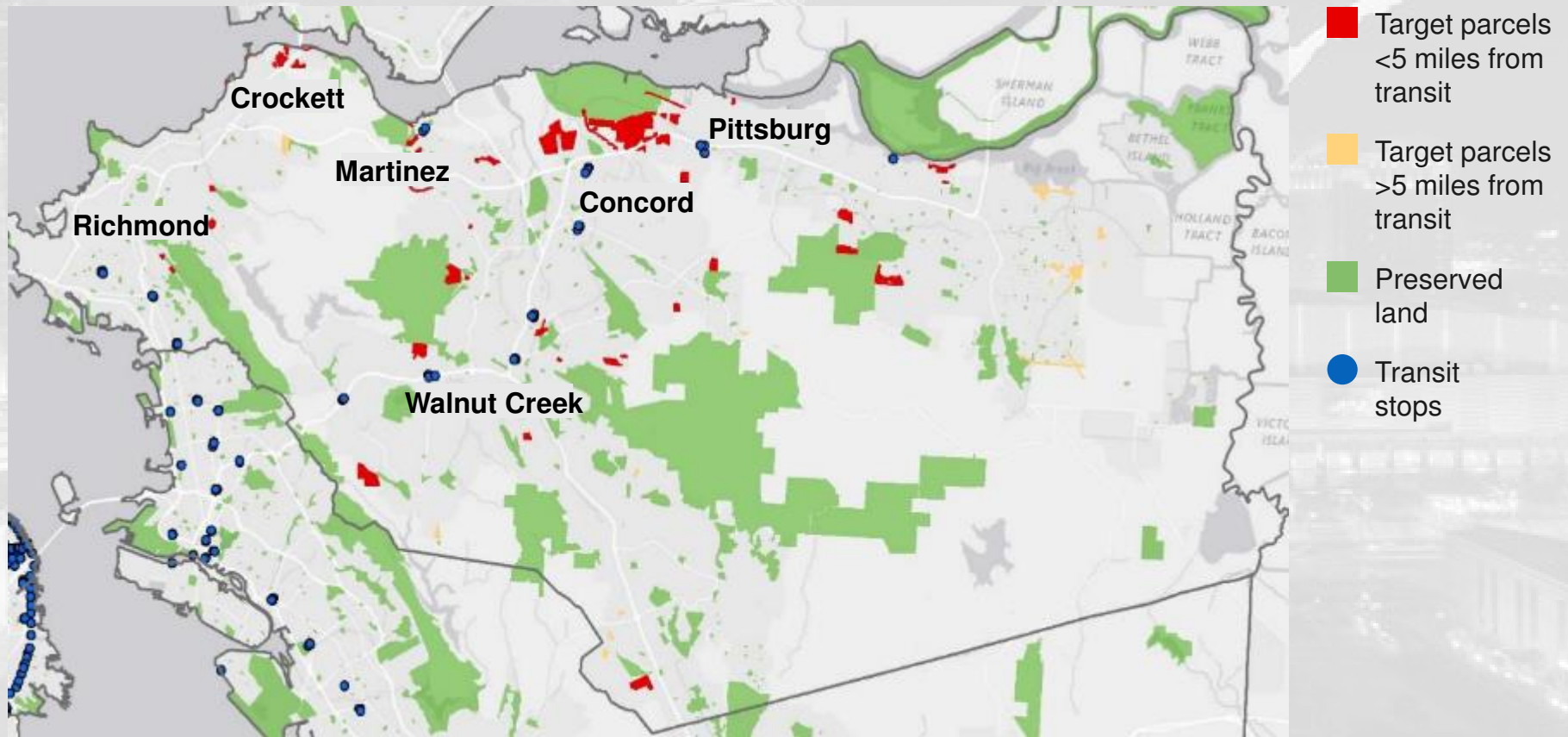
Urban type	Existing units Thousand	Additional units ¹ Thousand
● Regional hub >15 units per net acre	563	379
● Urban center 6.5–15 units per net acre	409	3,321 – 938
● Suburban node <6.5 units per net acre	192	516 – 1,672
Total	1,164	1,216–2,989

¹ Low end of range assumes one unit per net acre is added for every 100 existing units; high end assumes development to the next urban density level

Potential sites
for transit-oriented housing



Contra Costa County has 185,000 potential single-family units, with major opportunities in Crockett, Martinez, and Pittsburg



NOTE: Analysis includes parcels either zoned for general agriculture or deemed “unrestricted” under Contra Costa County zoning. Excludes parcels outside Contra Costa County urban growth boundary.

SOURCE:

To close the housing gap, California needs to change the rules of the game for housing approvals, cut the cost and risk of producing housing, and ensure housing access

Change the rules of the game for approving housing on high-potential land



Incentivize local governments to approve already planned for housing



Accelerate land-use approvals

Unlock supply by cutting the cost and risk of producing housing



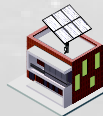
Accelerate construction permitting



Align development impact fees with housing objectives



Deploy modular construction



Reduce housing operating costs

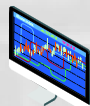


Raise construction productivity

Ensure housing access



Prioritize state and local funding for affordable housing



Attract new investors in affordable housing



Design regulations to boost affordable housing while maintaining investment attractiveness

WINNING IN DISRUPTION



1

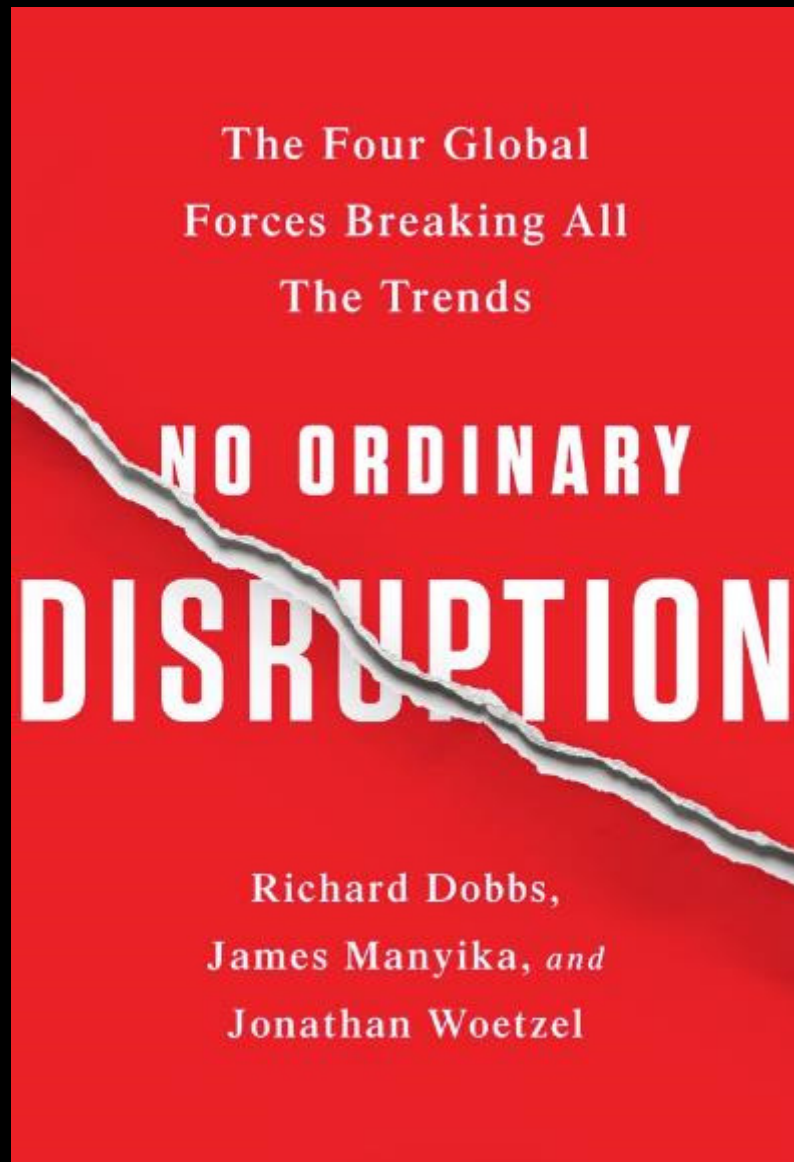
Externally
focused

2

Agile and
low cost

3

Optimist



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