## THE NEXT ECONOMY: Transforming Energy and Infrastructure Investment Lazard / Brookings Conference Palo Alto, CA / February 3, 2010



## The Great Recession Has Been A Wake Up Call





A vision for the next American economy



The next economy will be led by metropolitan areas



To build the next economy the U.S. must connect the macro to the metro



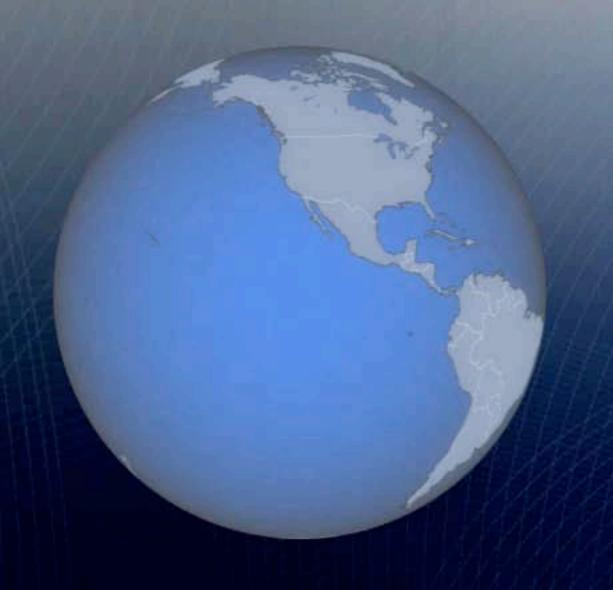
## The Next American Economy

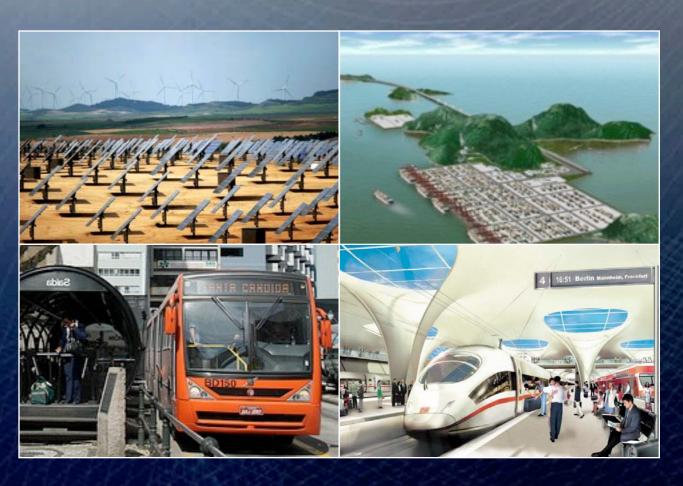




## The Next American Economy







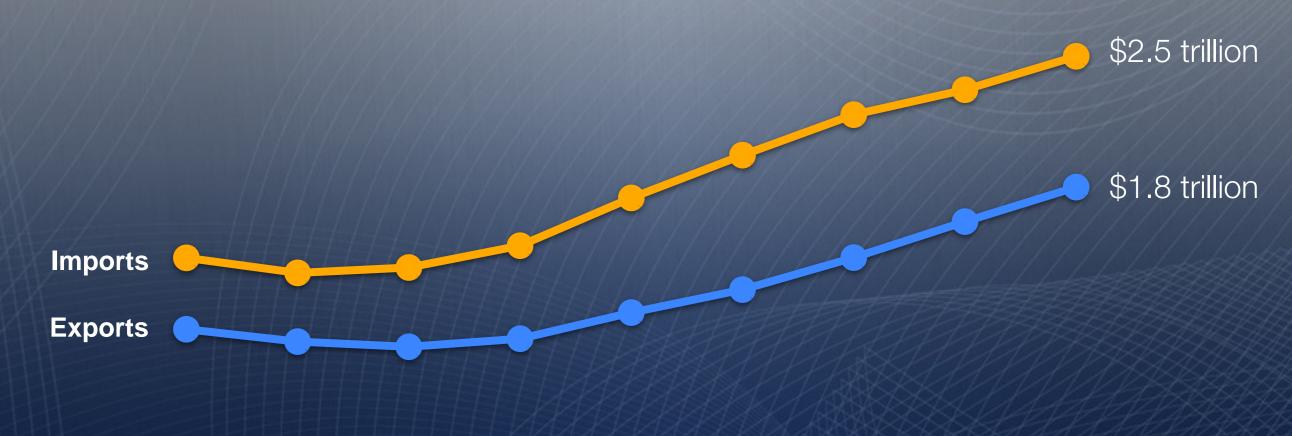
A vision for the next American economy



## U.S. Trade is Dominated by Imports



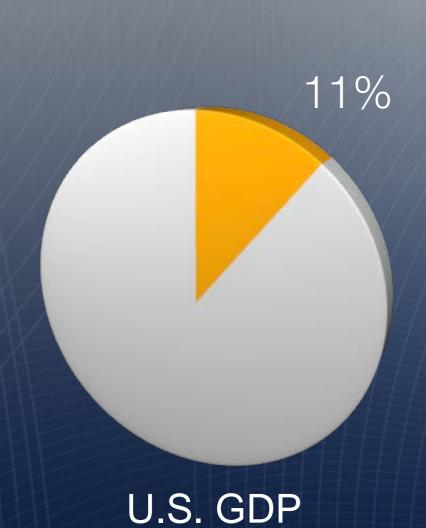




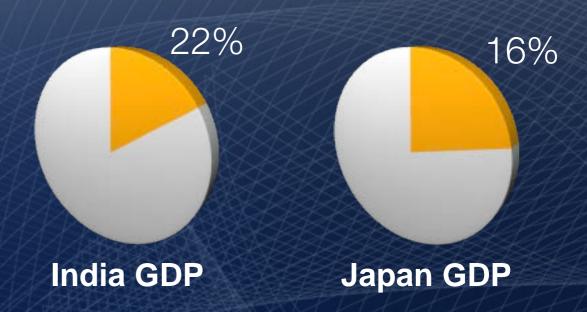
2000 2008

## U.S. Exports Lag Our Competition





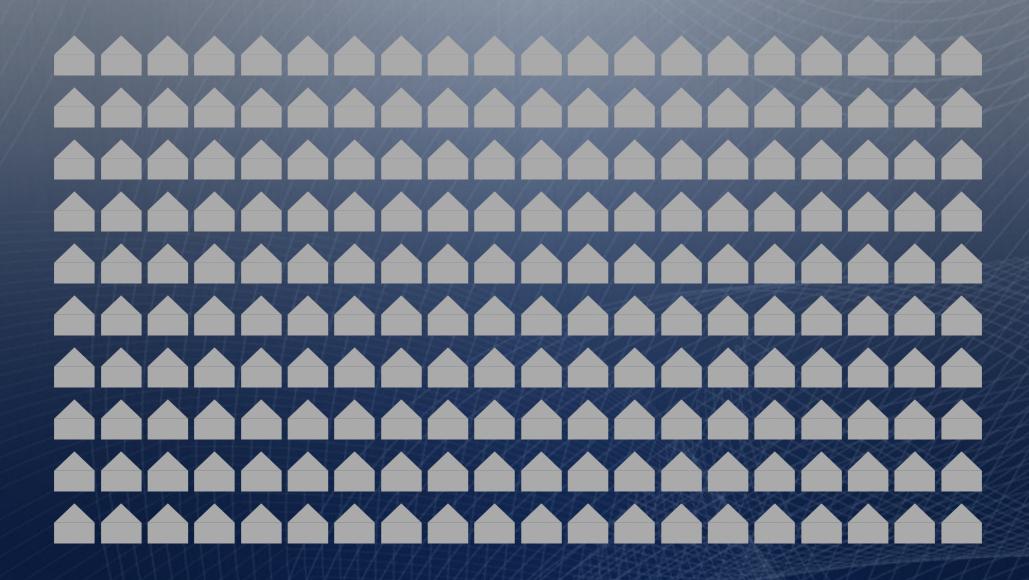




## Exporting Is an Unnatural Act



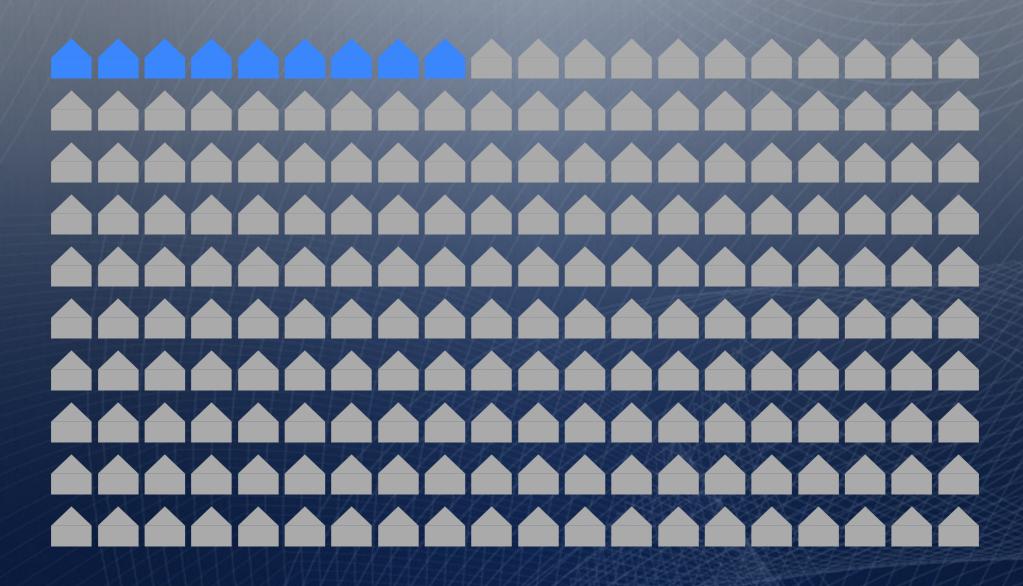
U.S. Companies



## Exporting Is an Unnatural Act



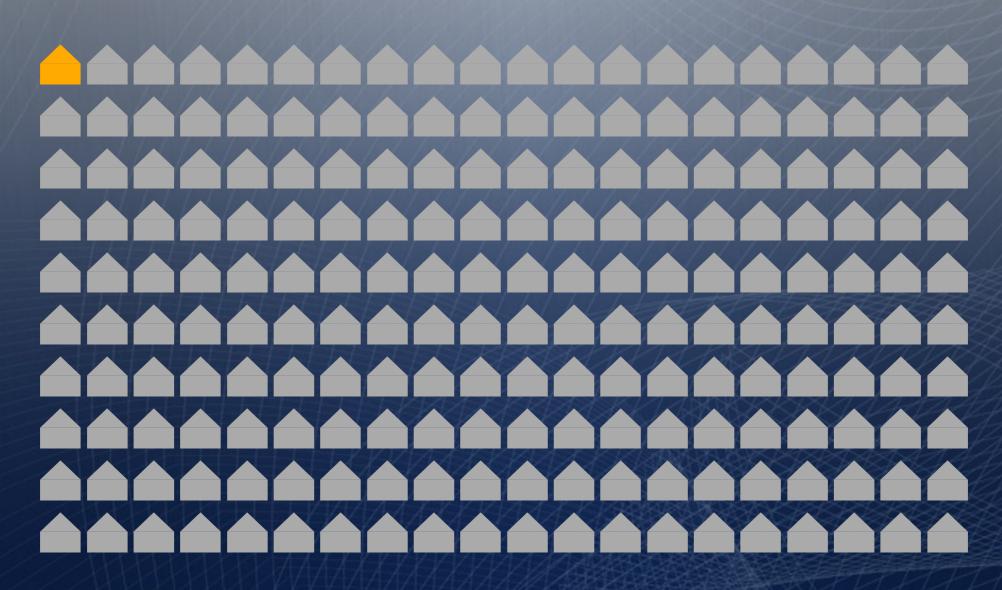
U.S. Companies that Export



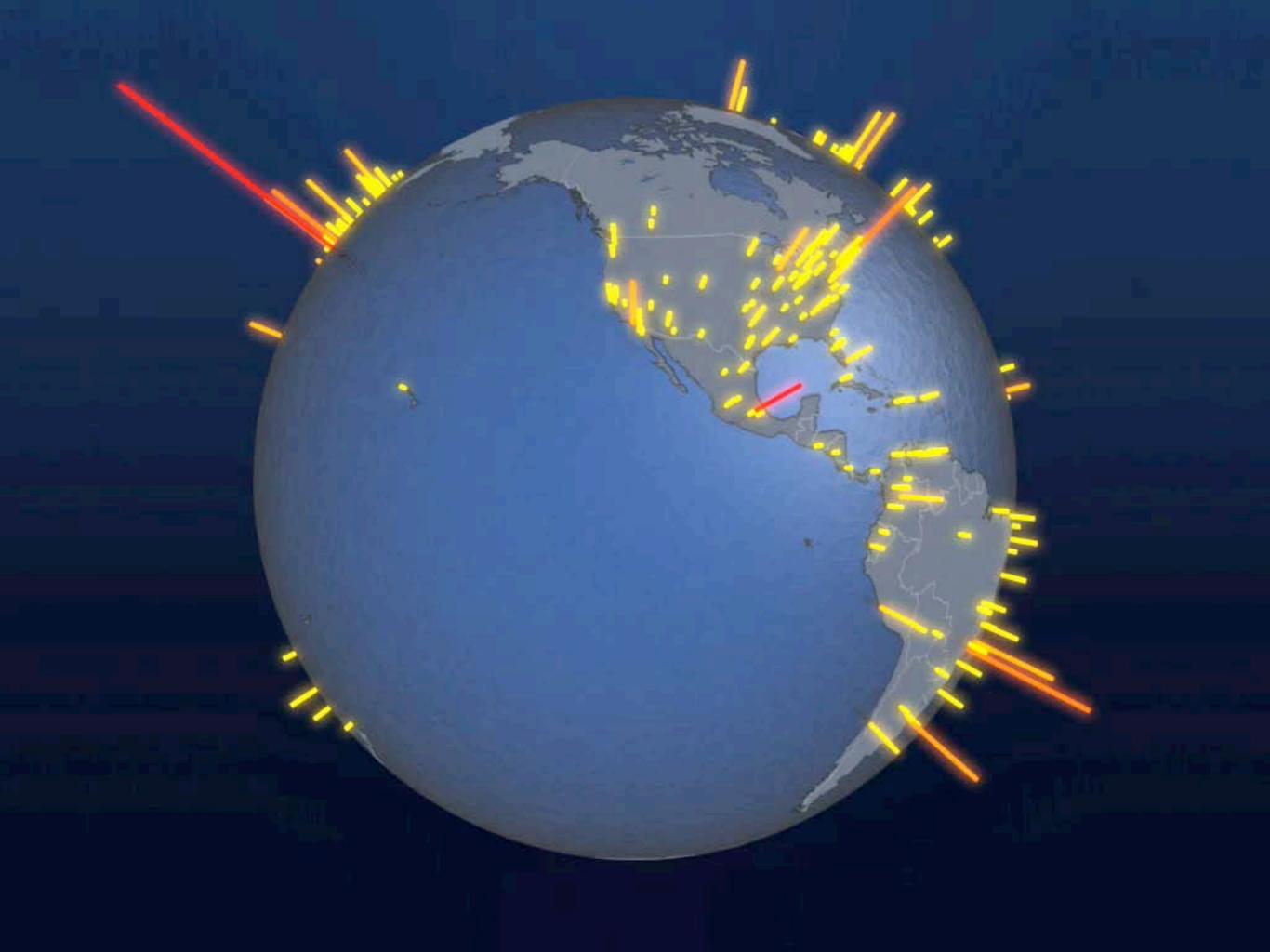
### Exporting Is an Unnatural Act



U.S. Companies that Export to More than One Country



## Can we get back into the export game?

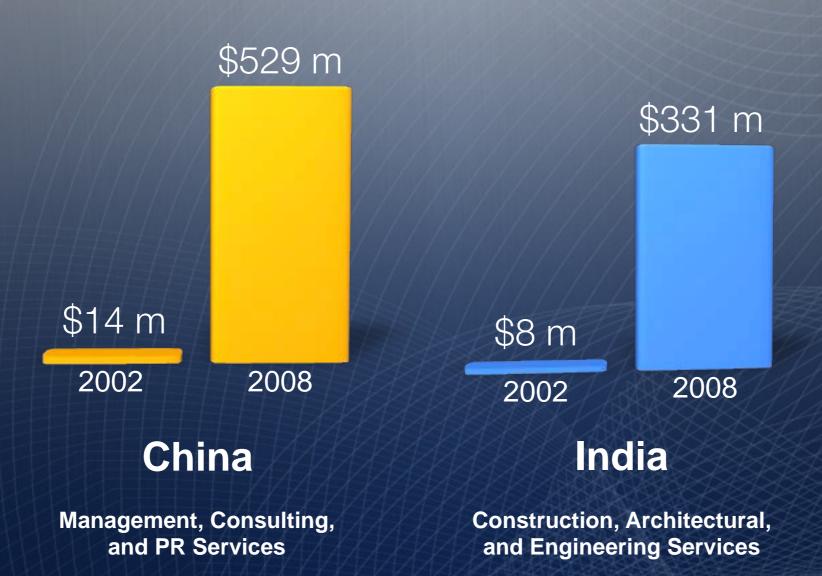






### U.S. Exports To Other Countries Are Rising





U.S. Goal for Exports

"We set a new goal: We will double our exports over the next five years, an increase that will support two million jobs in America."

President Obama January 27, 2010





## The U.S. Has Been Slow to Embrace the Green Economy









Source: International Energy Agency

## We have been slow to embrace the Green Economy



Top solar production firms in the world



American



## China is seeking to dominate the race to green

Stimulus packages on renewable energy

\$221 billion

\$94 billion

China

U.S.



ow carbo

Source: HSBC, "A Climate for Recovery" (2009)

Photo: Richard Fisher

## Low carbon economy

= Markets

## The Energy We Use















## The Products We Buy ION carbon PRIUS 06

# The Buildings We Live and Work In OM carbon

## The Buildings We Live and Work In







OM carbon







### Need Job Creation?



Financiers

Scientists / Engineers

Entrepreneurs

Laborers



## **Looking For A Smart Investment?**



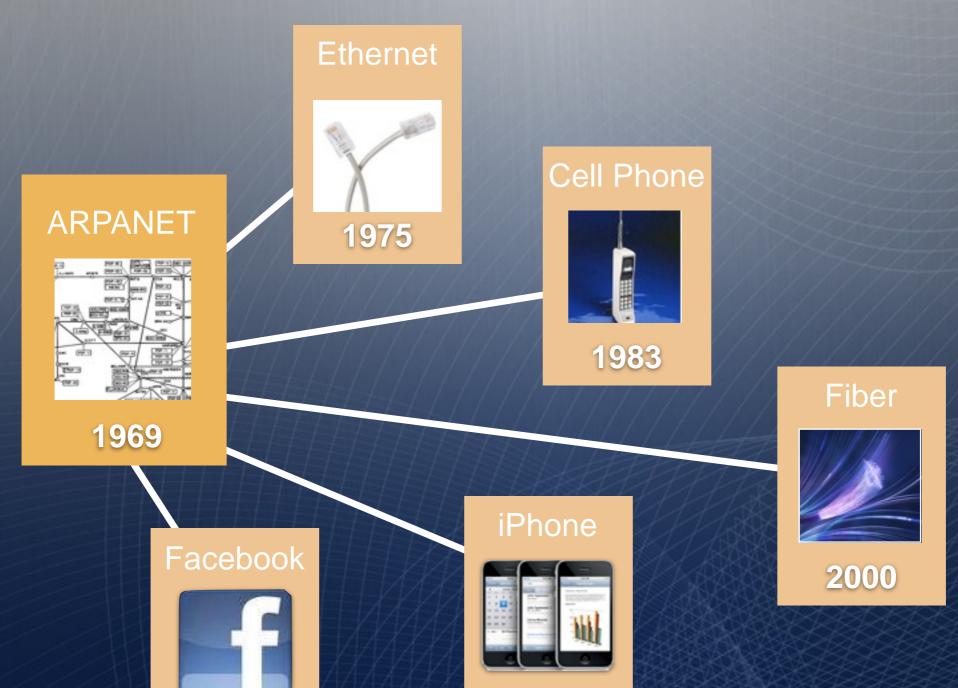
## \$13 trillon by 2050

to reduce greenhouse gas emissions



#### Internet and Telecom Innovation

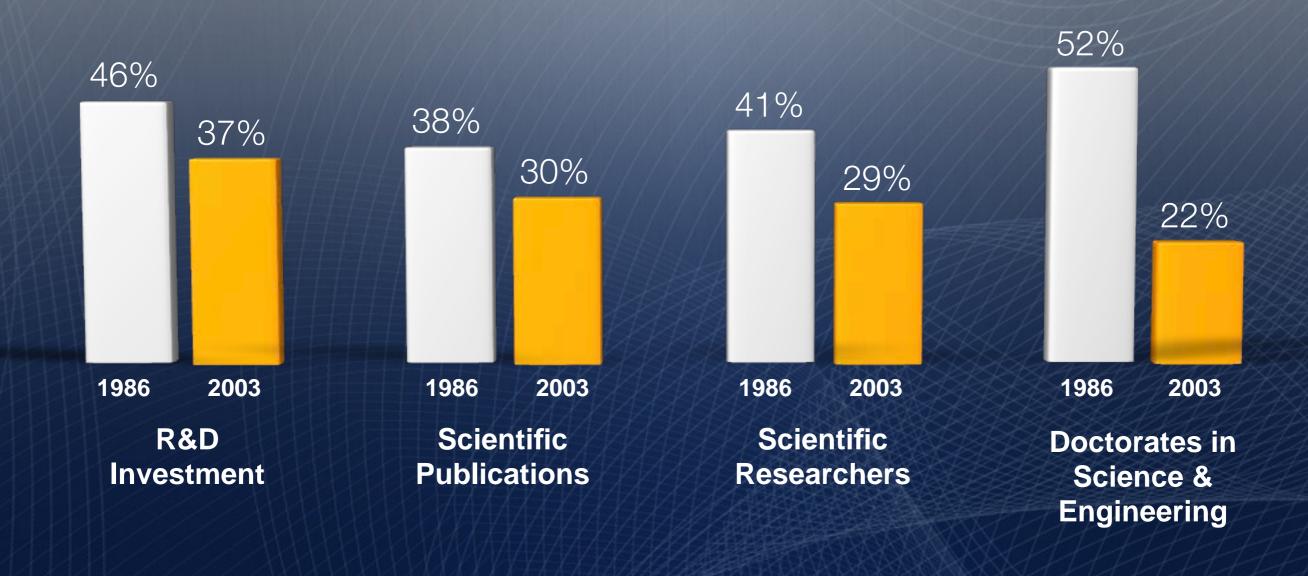




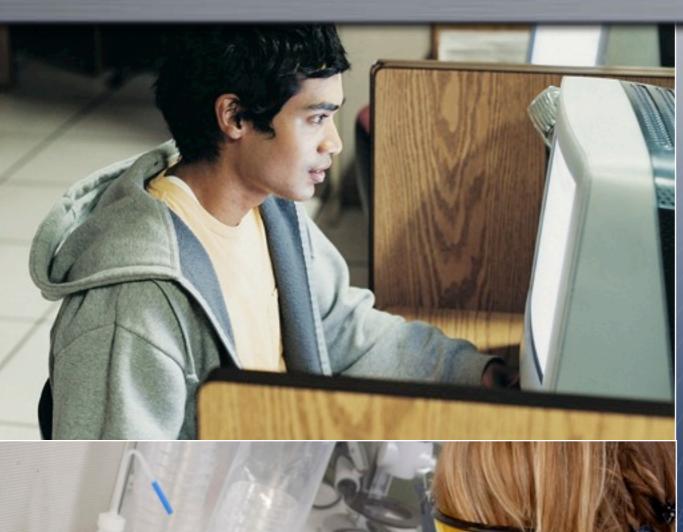
## U.S. Leadership On Key Innovation Indicators Is Slipping



#### U.S. Share of Global Totals



### The U.S. Ranks Low In Science and Engineering Degrees





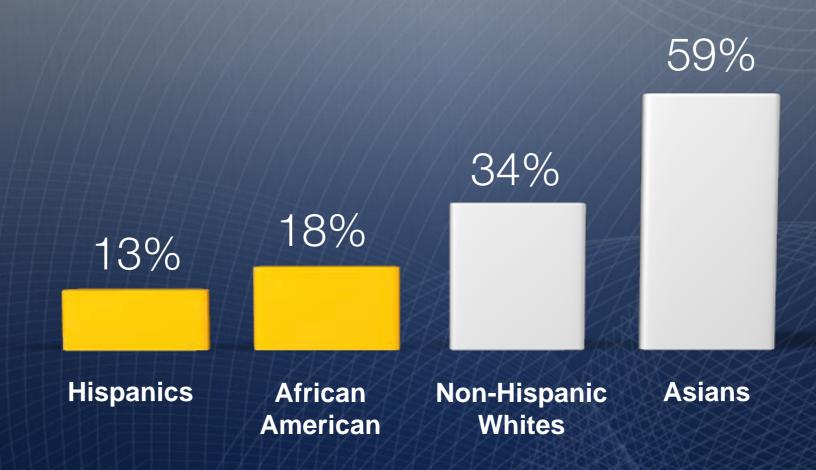
**United Kingdom** Lebanon Mexico Canada Bolivia Spain **Switzerland** Uganda Algeria **Estonia** Slovenia **South Africa** Mozambique Morocco **United States** Honduras Lithuania



#### The Next American Workforce Is III Equipped



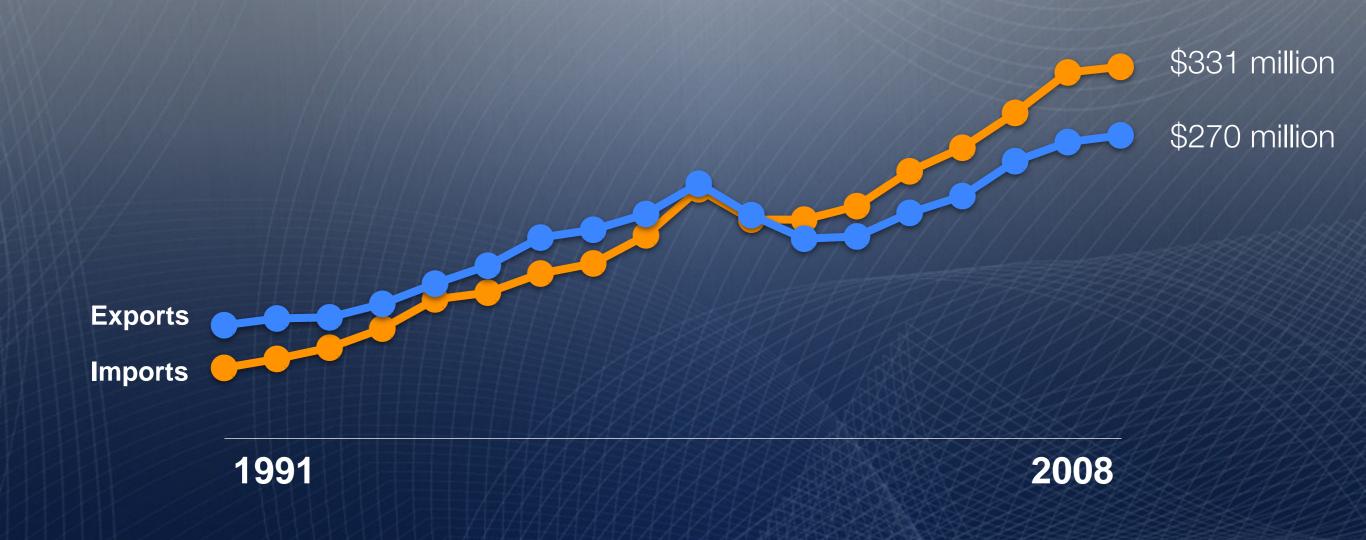
#### Bachelor's Degree Attainment



#### U.S. Lags On The Conversion Of Innovation Into Production



#### Advanced Technology Products



# It is time to rediscover our innovation...



1 2 3

The next economy will be led by metropolitan areas



U.S. Metros



### Seattle

51% 69%

Residents

**Economic Output** 

## Chicago

67% 78%

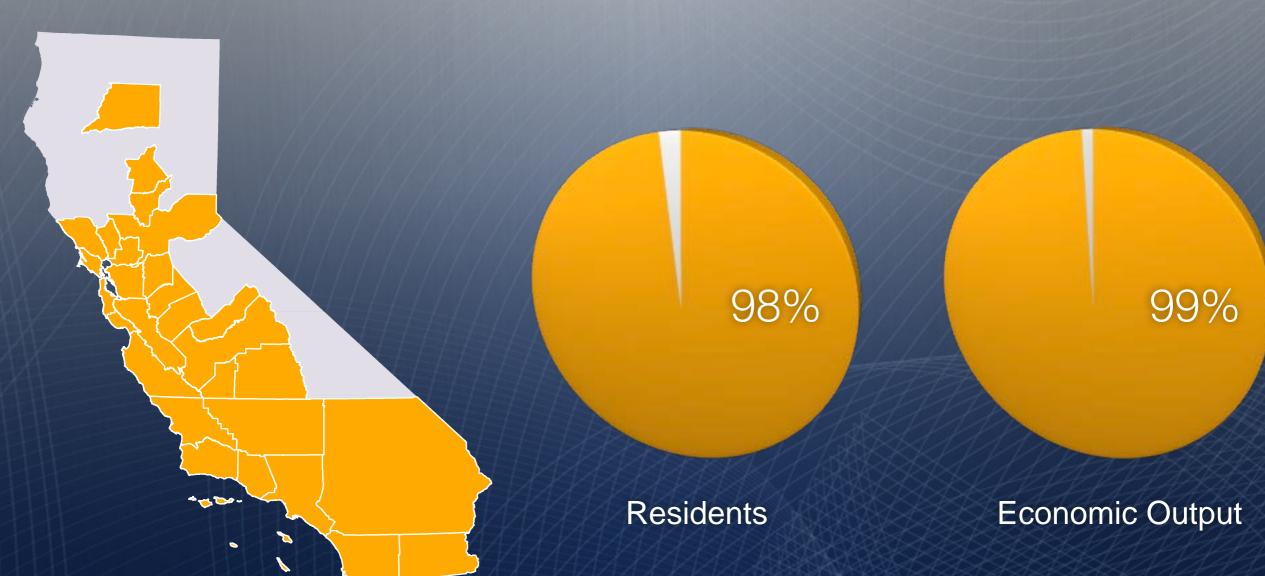
Residents

**Economic Output** 

Source: Brookings analysis of US Bureau of Economic Analysis data

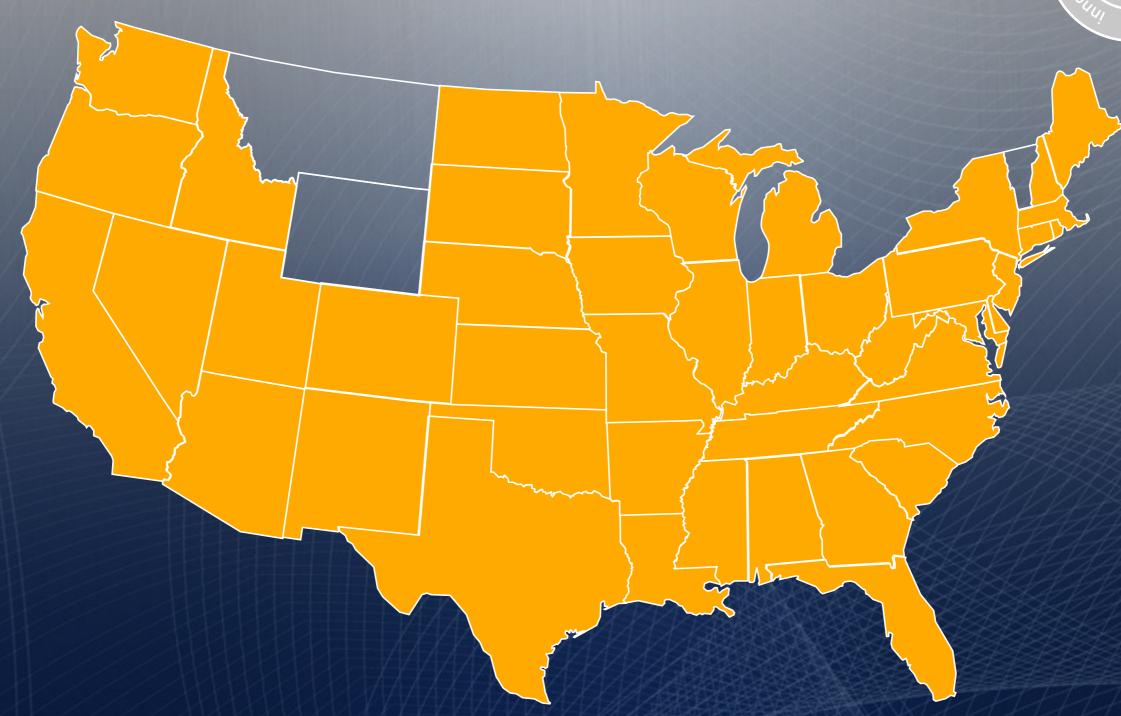
#### California Metros





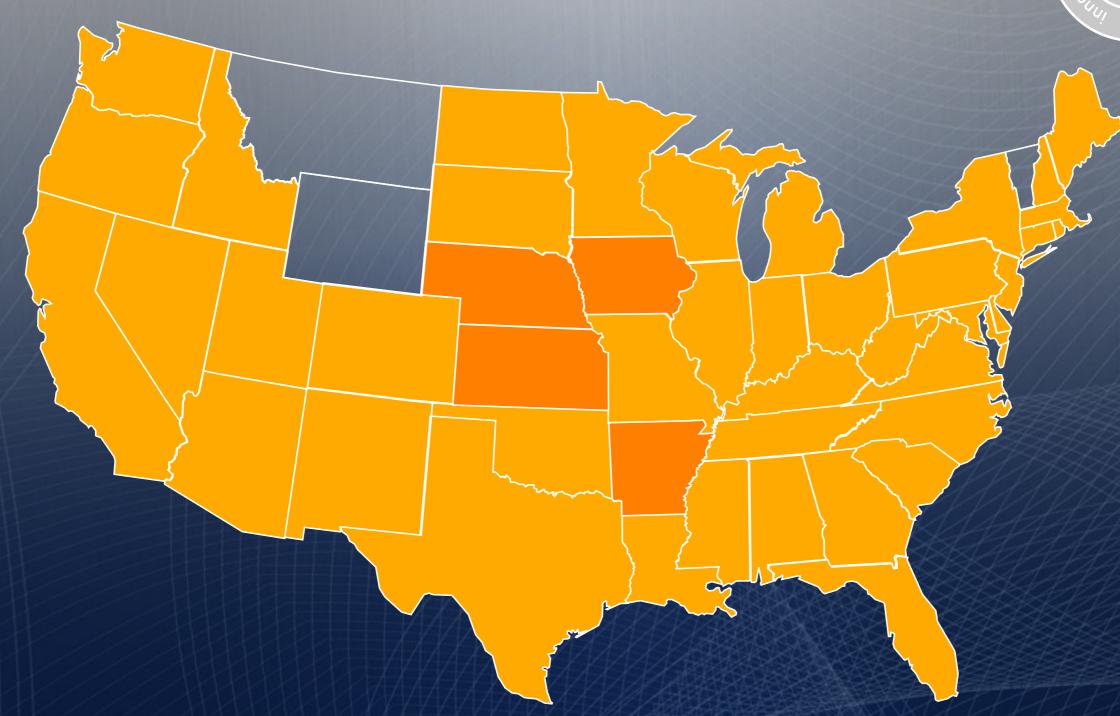
#### U.S. Metros



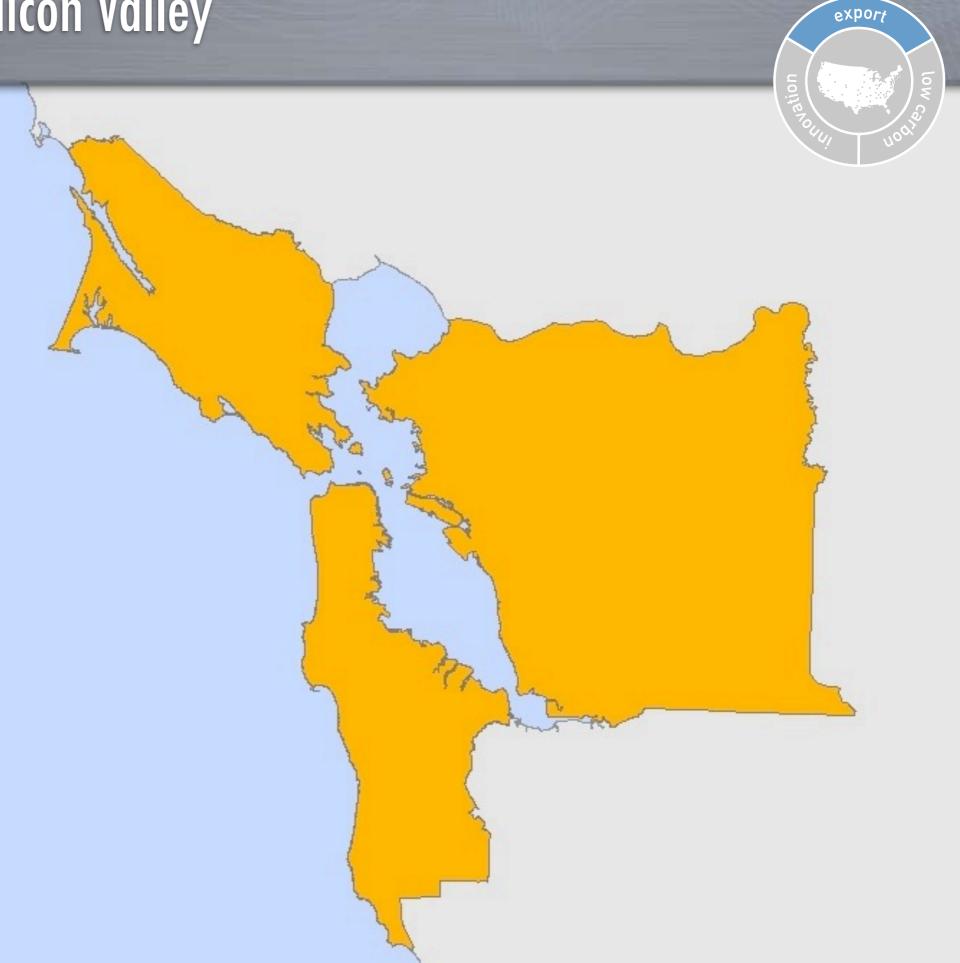


#### U.S. Metros





#### Bay Area and Silicon Valley



#### Bay Area and Silicon Valley





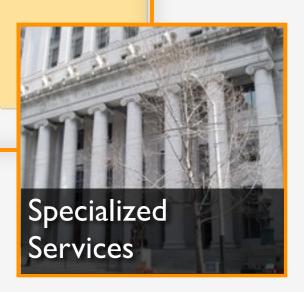






Business Associations

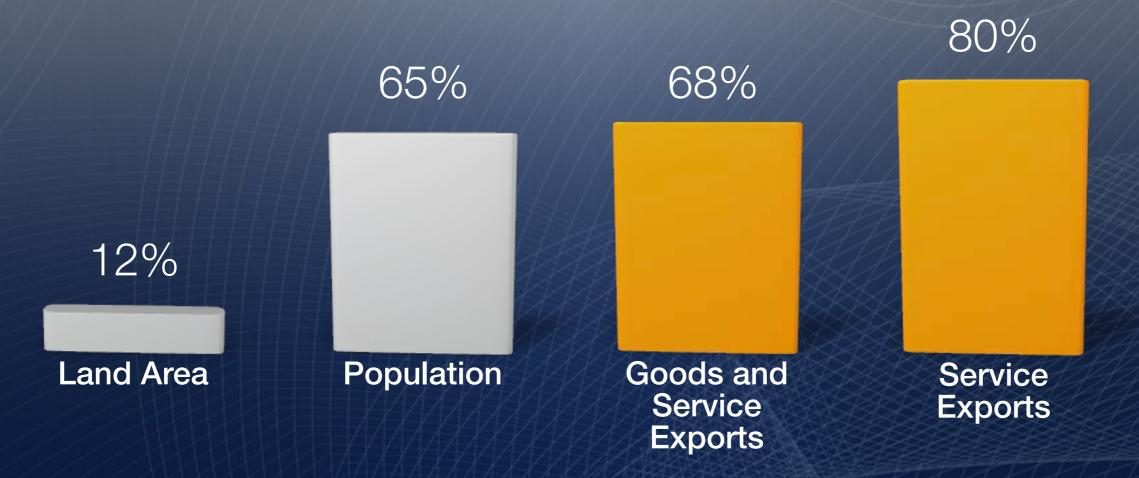




#### U.S. Metros Dominate Trade



#### Top 100 Metros



#### U.S. Metros Dominate Trade







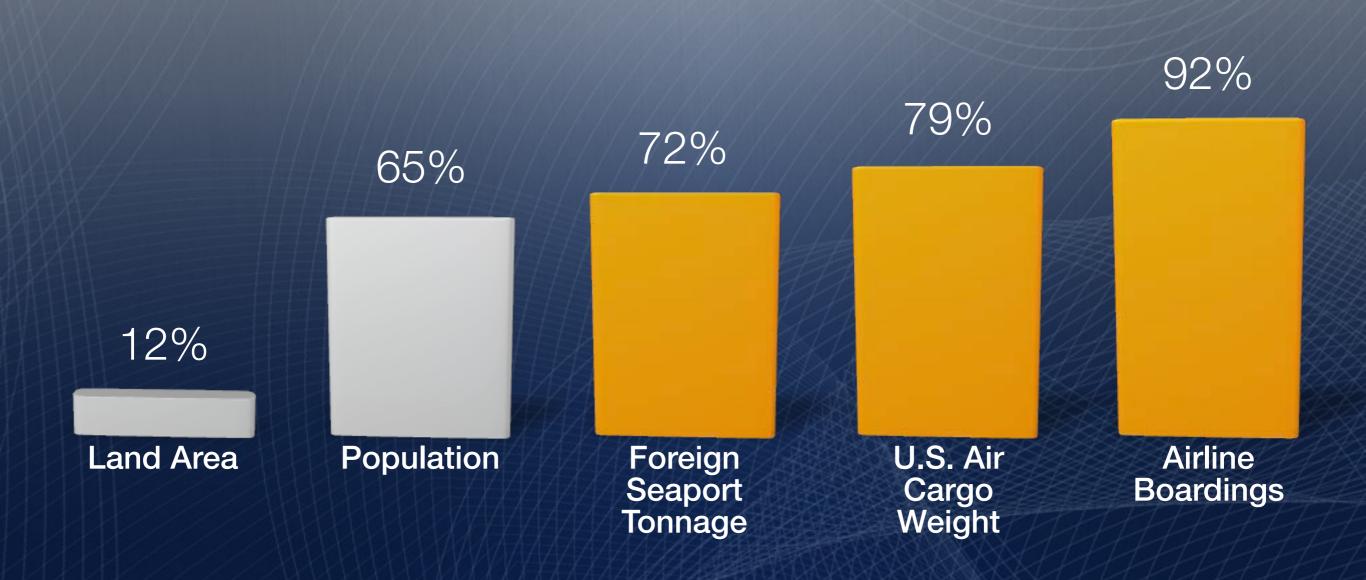




Wichita Portland San Jose Grand Rapids Youngstown Albuquerque Greensboro New York

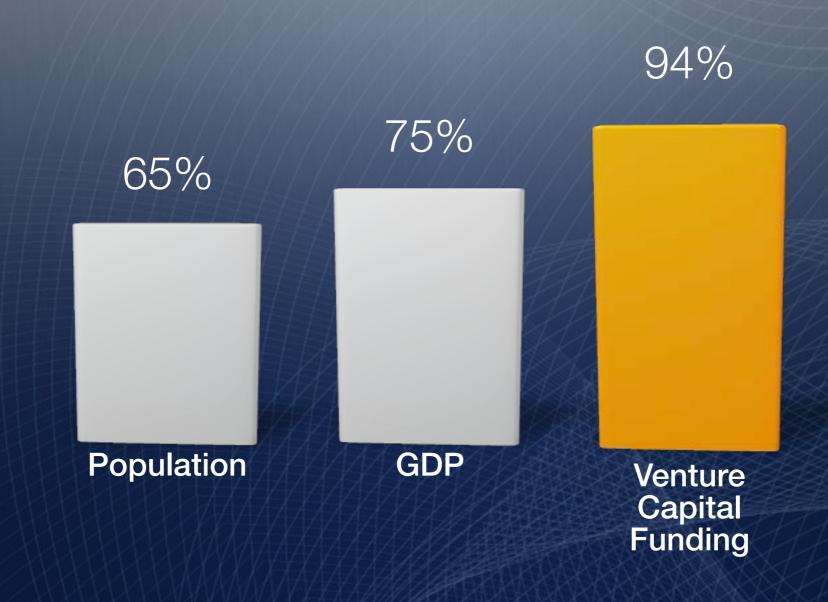
#### Top 100 U.S. Metros





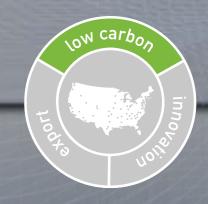
#### Top 100 U.S. Metros





Source: Brookings Institution, MetroNation

#### Innovations Cluster Around Research Institutions

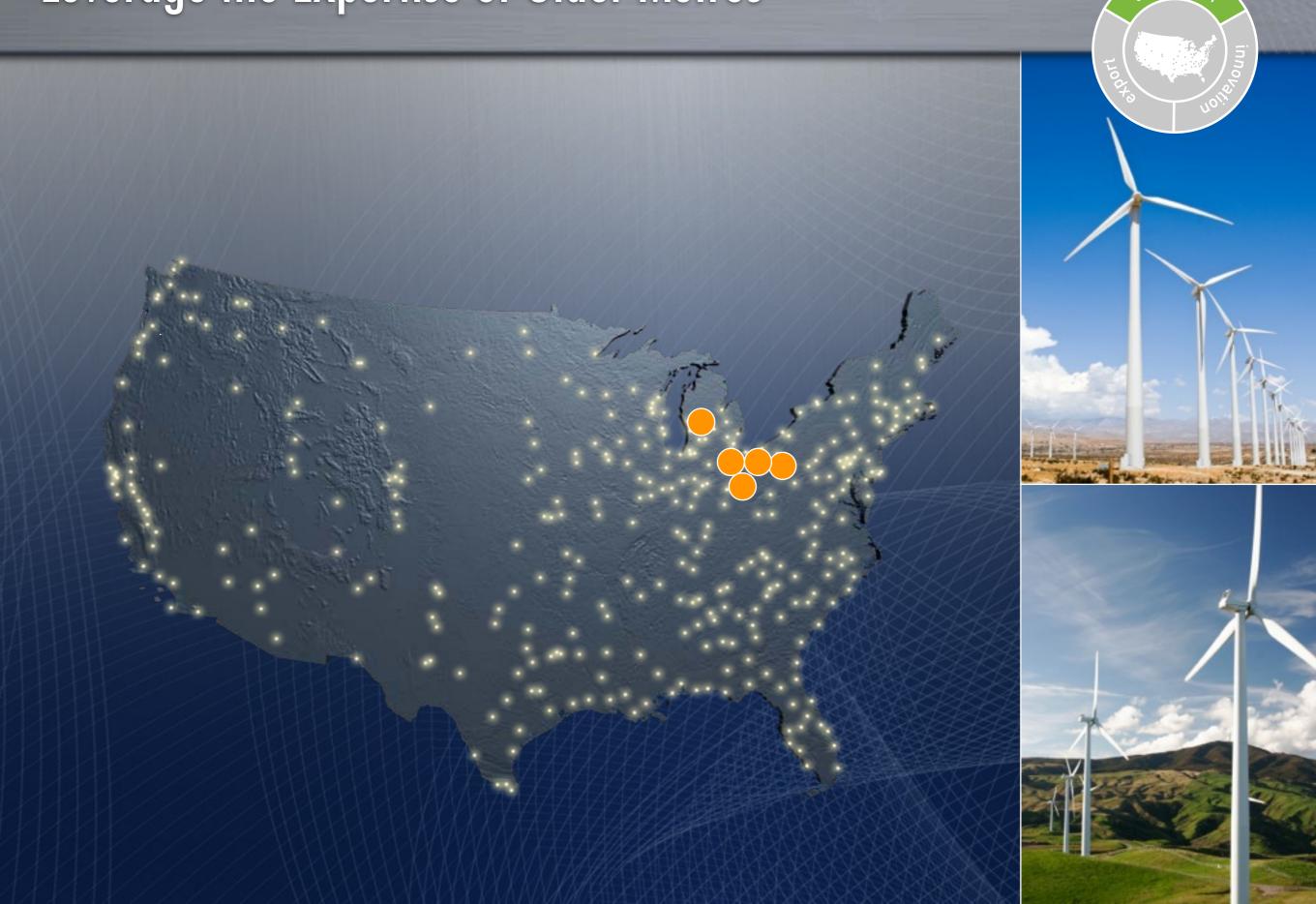




National Energy Laboratories Located in Metropolitan Areas



#### Leverage the Expertise of Older Metros





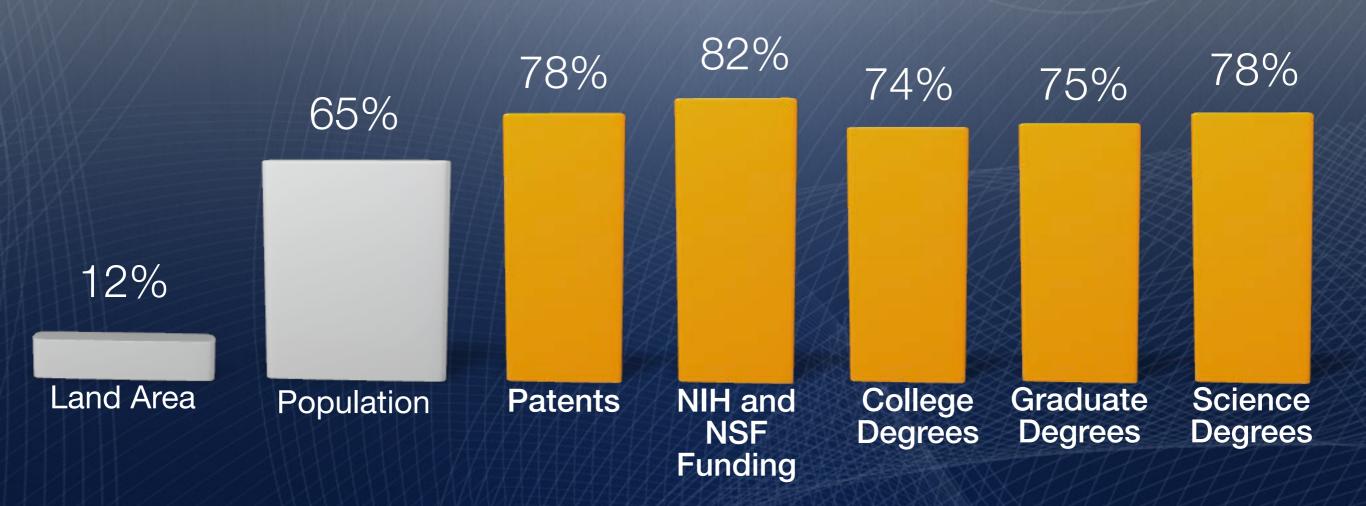
#### **Innovation Nation**





#### Top 100 U.S. Metros





1 2 3

To build the next economy the U.S. must connect the macro to the metro



#### The U.S. is Not China









Firms

Research

Government

Trade Assoc.

Labor

Philanthropy



Federal & State Governments

Lead where they must

Metropolitan Areas

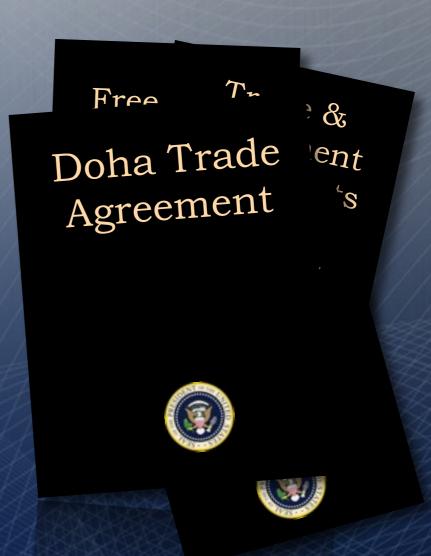
Innovate where they should

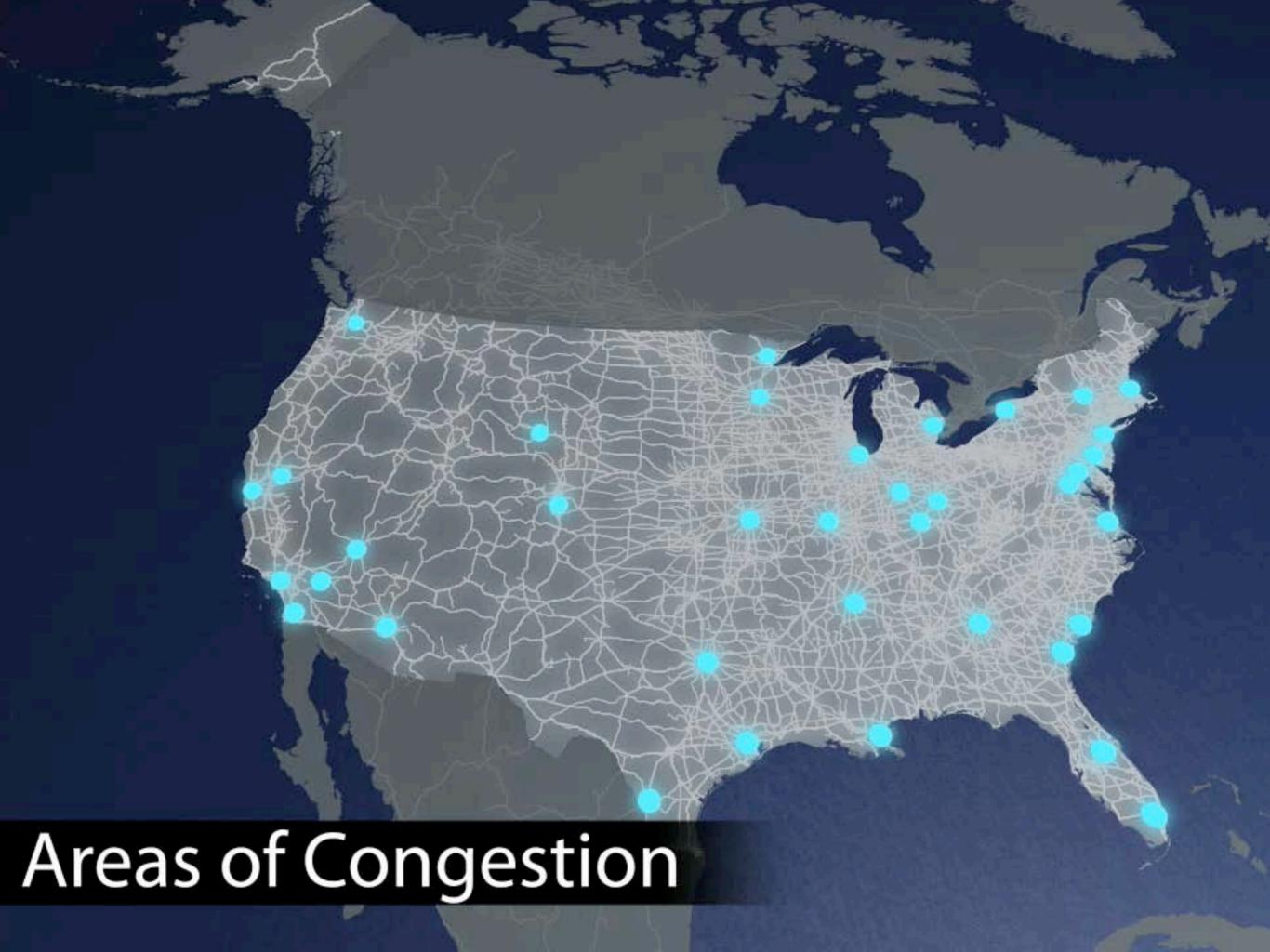


#### Macro Levers for Export Growth



Double Exports by 2015



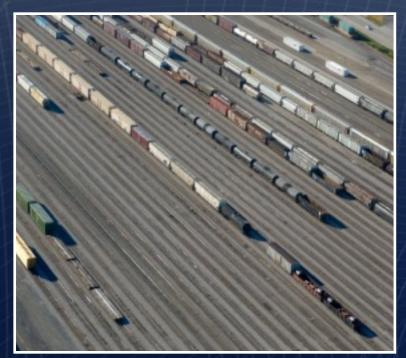


#### National Infrastructure Bank



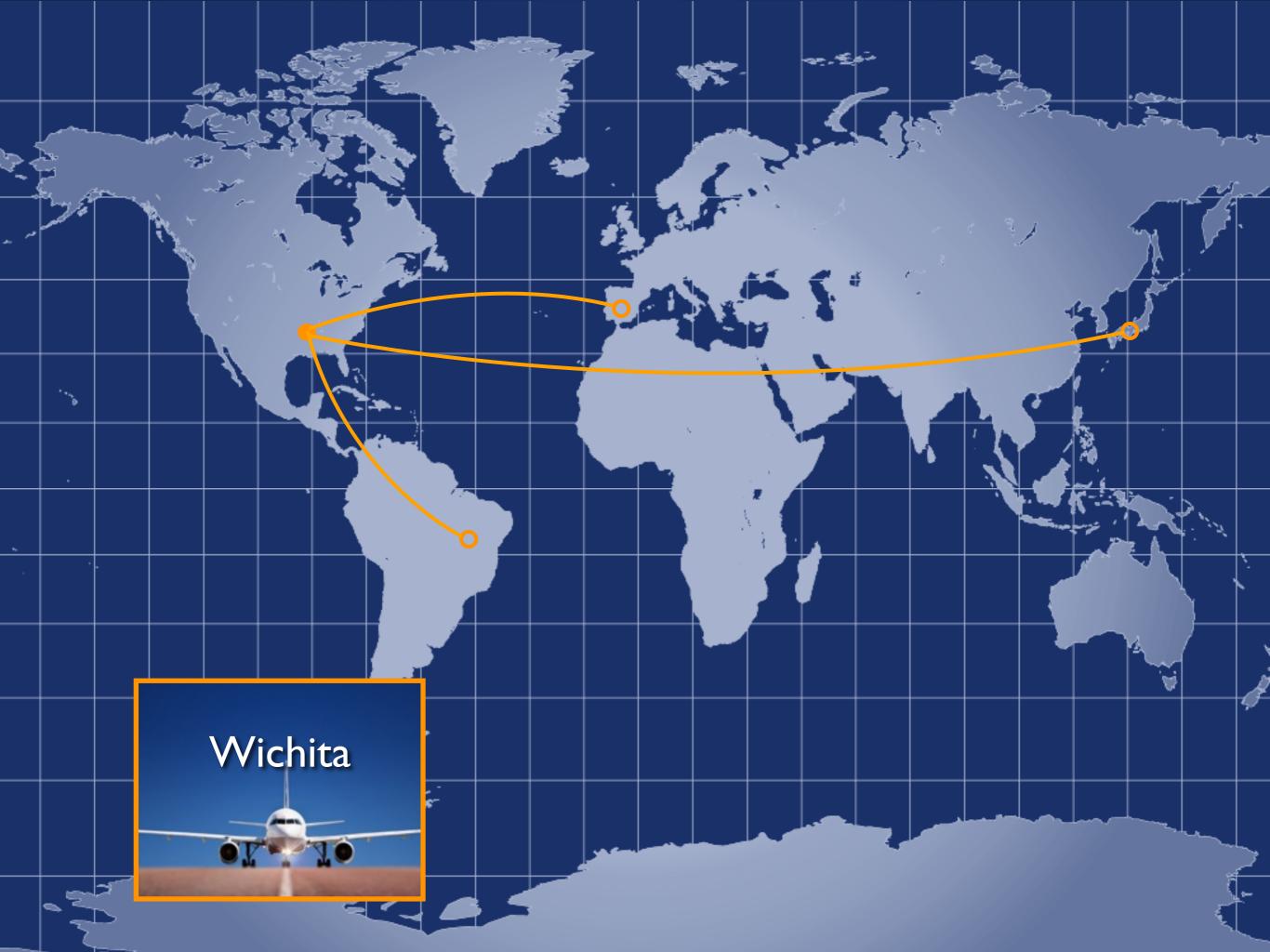


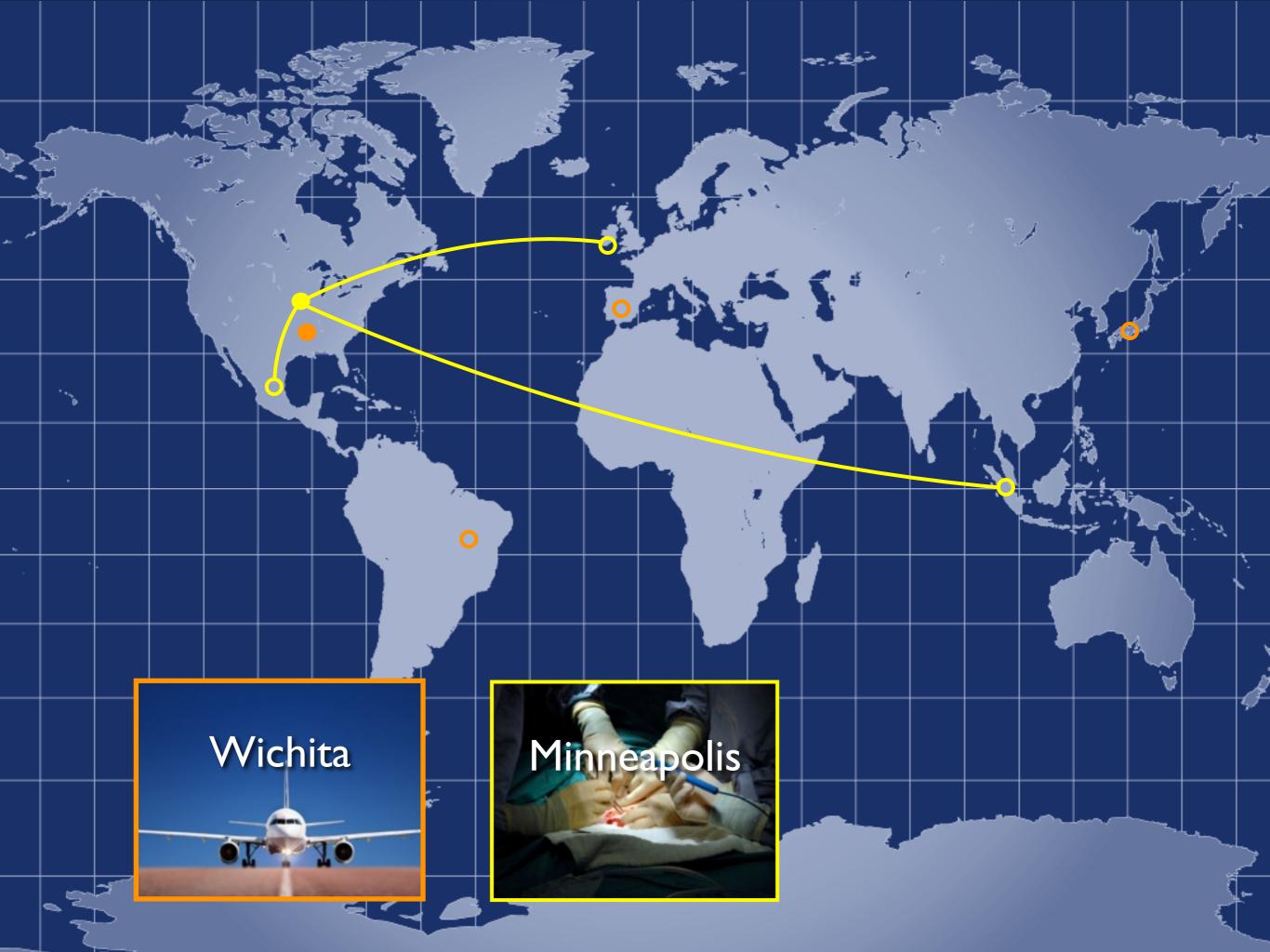








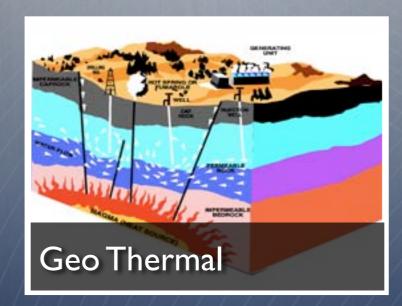


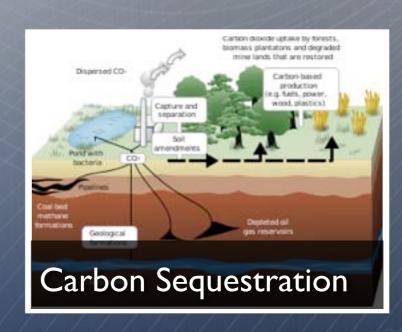




#### **Energy Discovery Innovation Institutes**

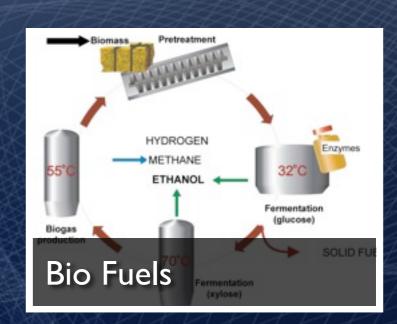












#### Energy Should be Prioritized in Federal R&D Funding



\$20 billion



\$8 billion

\$5.4 billion

1980 2008

**Proposed** 

#### Metros Can Develop Livable Places



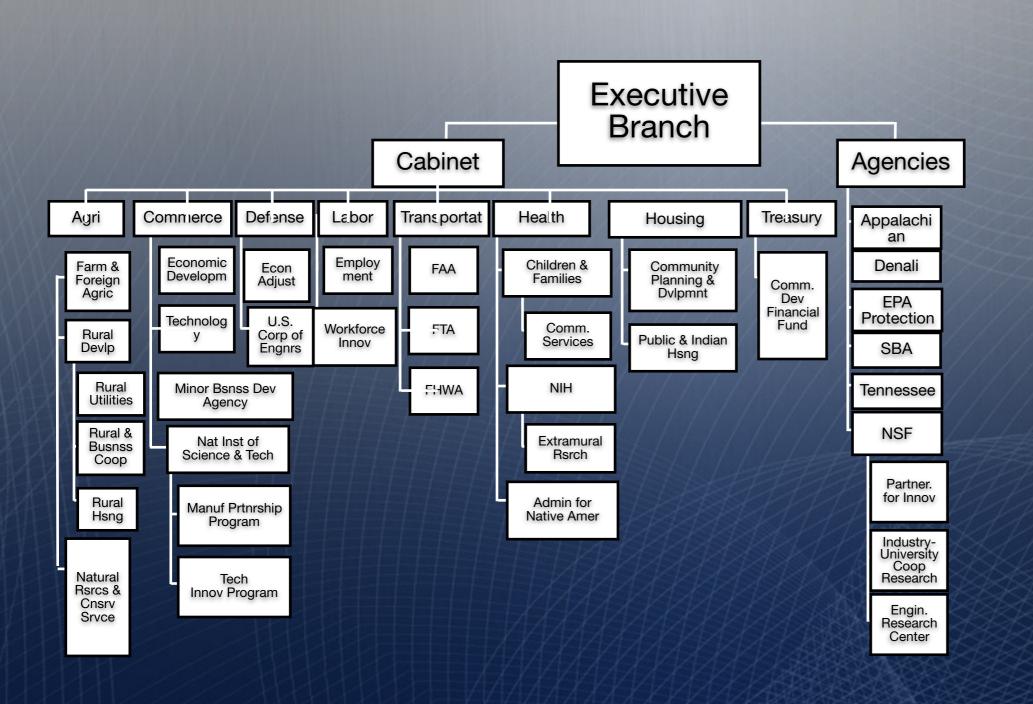


OM carbon



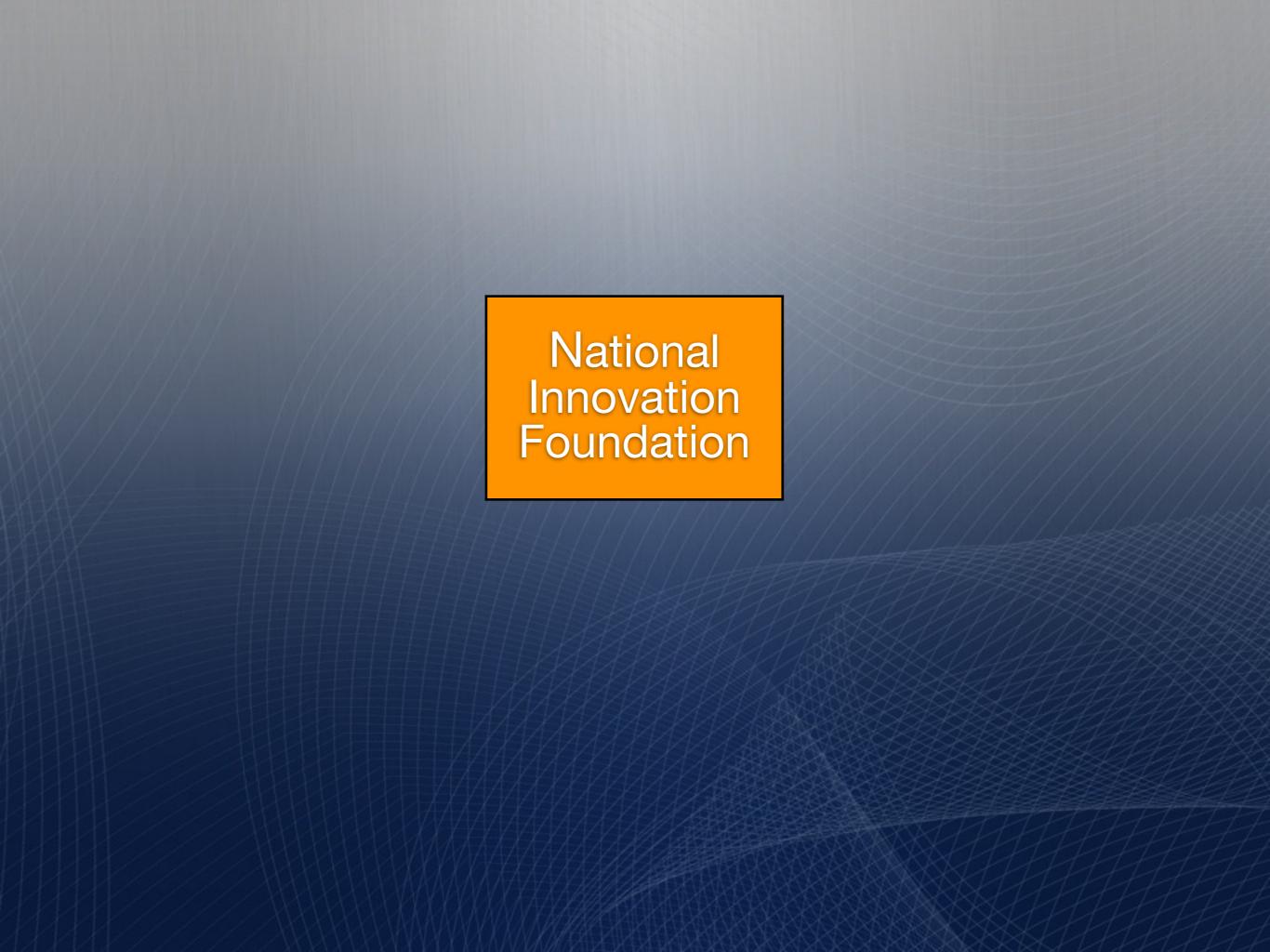






National Innovation Policy









#### Building the Workforce



Community Colleges

Post Secondary Schools

**Tech Schools** 





Federal & State Governments

Lead where they must

Metropolitan Areas

Innovate where they should





#### Federal & State Governments

Lead where they must



National Infrastructure Bank

National Innovation Foundation

Energy Discovery Innovation Institutes



Metropolitan Areas
Innovate where they should

Leverage economic clusters

Connect transportation and housing

Strengthen institutions for innovation and education





# THE NEXT ECONOMY: Transforming Energy and Infrastructure Investment

