



MAKING AN IMPACT ON U.S. MANUFACTURING

NIST
National Institute of
Standards and Technology
U.S. Department of Commerce

MEP Advisory Board Meeting

Wednesday, March 7, 2018

part 1 - morning

Welcome!

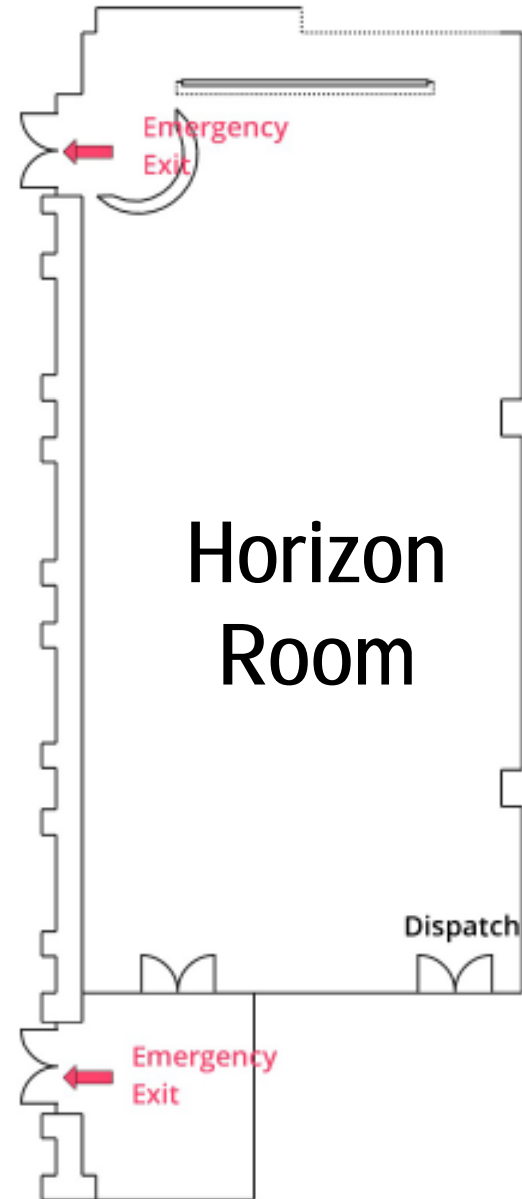


Emergency Exit:

- Make a **left** out of doors
- 1st Intersection Make a **right**
- Closest exit to the street **13 ½ Street Exit**

Restrooms

- Make a **left** out of doors
- At 1st Intersection restrooms **will be on right**



Wednesday, March 7, 2018: The Reagan Building

9:00 – 9:05 a.m.	Board Meeting Opening/Logistics
9:05 – 9:45 a.m.	Welcome and Introductions <ul style="list-style-type: none">• Opening Remarks• Welcome from NIST Leadership• Board and Audience Introductions• Director's Report
9:45 – 10:15 a.m.	Presentation <ul style="list-style-type: none">• National and State Economic Challenges and Opportunities, Data Trends, D. Berglund, SSTI
10:15 – 10:30 a.m.	Break
10:30 – 11:15 a.m.	MEP National Network Strategic Plan Update 2017-2022/Future is Now (FIN) <ul style="list-style-type: none">• Board Feedback & Discussion



Wednesday, March 7, 2018

Continued...

11:15 – 12:00 p.m.	Center Board & MEP Advisory Board– Roundtable Discussions <ul style="list-style-type: none"> Strategic Plan and the FIN Framework at the Center Level
12:00 – 1:30 p.m.	Lunch Break*
1:30 – 1:35 p.m.	Welcome Back/Afternoon Overview
1:35 – 1:55 p.m.	Working Group Update: <ul style="list-style-type: none"> Supply Chain Development Working Group <ul style="list-style-type: none"> <i>Board Feedback & Discussion</i>
1:55 – 2:45 p.m.	Presentation <ul style="list-style-type: none"> U.S. Defense Industrial Base, E. Chewning, DOD <ul style="list-style-type: none"> <i>Board Feedback & Discussion</i>

*Non-FACA programming



Wednesday, March 7, 2018

Continued...

2:45 – 3:00 p.m.	Break
3:00 – 3:20 p.m.	Working Group Update: <ul style="list-style-type: none"> • Performance/Research Development Working Group <ul style="list-style-type: none"> • <i>Board Feedback & Discussion</i>
3:20 – 4:00 p.m.	Board Governance & Board Assessment Discussion: <ul style="list-style-type: none"> • Executive Committee Working Group • Board Structures within the MEP Network • BoardSource Review – Assessment Process, L. Stewart, Galliard International
4:00 – 4:30 p.m.	Wrap-up/Public Comments



Welcome and Introductions

- **Jeffrey Wilcox**, MEP Advisory Board Chair
- **Phil Singerman**, NIST Associate Director for Innovation and Industry Services
- **Carroll Thomas**, NIST MEP Director
- **Guests**
 - Name
 - Name of Organization
 - How many years involved with MEP

Director's Report

Carroll Thomas, NIST MEP Director



MEP Advisory Board

2018 MEP Advisory Board

Mr. Jeff Wilcox, MD (Chair)

Ms. Bernadine Hawes, PA (Vice-Chair)

Members

Mr. Jose Anaya, CA

Mr. Matthew Newman, OK

Ms. LaDon Byars, TN

Ms. Kathay Rennels, CO

Dr. Carolyn Cason, PhD, TX

Mr. George Spottswood, AL

Mr. Joe Eddy, WV

Ms. Leslie Taito, RI

Ms. Mary Isbister, WI

Mr. Chris Weiser, AR

Mr. Mitch Magee, DE

Mr. Jim Wright, MT



Advisory Board and NIST Staffing Updates



Advisory Board

- Current Board count = 14; 2019 next membership expires
- Gary Groleau retired 12/31/2018
- Search started for Board member located in the New England region

NIST MEP Staff

- Jennifer Rosa, Marketing Communications Specialist
- Gina Simpson, Administrative Officer
- Several other positions in process

Center Directors

- TX – Mark Sessumes (interim)
- AL – Keith Phillips (permanent director status)
- WY – David Bell
- NV – Mark Anderson
- KS – Tiffany Stover (interim)



Legislative Outlook

(as of 3/6/18)

FY 2018 Appropriations Status

- FY 2018 President's Budget proposed program elimination with \$6 million for wind-down
- Continuing Resolution funding of \$60.6 million through 3/23/18
- Appropriation Committee Actions
 - House Omnibus at \$105 million
 - Senate Mark at \$130 million
- Final Appropriation TBD

President's FY 2019 Budget Request

- FY 2019: Program proposed for elimination with \$0 funds for wind-down



NIST Funding Overview FY 2017-FY 2019

(Appropriations in millions of dollars)

Budget Account	FY2017 Enacted	FY2018 Request	FY2018 H. Omb.	FY2018 S. Cmte.	FY2018 CR	FY2019 Request
Scientific and Technical Research and Services	\$690.0	\$600.0	\$660.0	\$695.0	\$310.8	\$573.4
Industrial Technology Services	153.0	21.0	110.0	145.0	72.4	15.1
<i>Manufacturing Extension Partnership</i>	<i>128.0</i>	<i>6.0</i>	<i>105.0</i>	<i>130.0</i>	<i>60.6</i>	<i>0</i>
<i>Network for Manufacturing Innovation</i>	<i>25.0</i>	<i>15.0</i>	<i>5.0</i>	<i>15.0</i>	<i>11.8</i>	<i>15.1</i>
Construction of Research Facilities	109.0	104.0	100.0	104.0	51.6	40.5
NIST, Total	\$952.0	\$725.0	\$870.0	\$944.0	\$434.8	\$629.1



NIST MEP FY 2018 Current Spend Plan

(In the Continuing Resolution through 3/23/18)

(\$ millions)

Available Funding:

Continuing Resolution Funding \$60.6

Carryover from FY 2017 \$ 5.9

Total Available Funding \$66.6

Planned Expenditures:

Center Renewals \$38.3

Strategic Competitions \$ 3.2

Contracts \$ 0.5

NIST MEP Labor \$ 4.0

NIST MEP Overhead \$ 2.4

Total Planned Expenditures \$48.4



NIST MEP FY 2018 Projected Spend Plan

(Full Year at Senate Mark)

(\$ millions)

Available Funding:

Full Year Appropriation	\$130.0
Carryover from FY 2017	<u>\$ 5.9</u>

Total Available Funding (with carryover from FY17) \$135.9

Planned Expenditures:

Center Renewals	\$110.0
Strategic Competitions	\$ 5.9
Contracts	\$ 5.3
NIST MEP Labor	\$ 9.3
NIST Overhead	<u>\$ 5.4</u>

Total Planned Expenditures \$135.9



FY 2017 MEP National Network Results for U.S. Manufacturers

The MEP National Network connected with 26,313 manufacturers, leading to \$12.6 billion in sales, \$1.7 billion in cost savings, \$3.5 billion in new client investments, and helping to create and retain more than 100,000 U.S. manufacturing jobs.

MEP NATIONAL NETWORK™ DELIVERS VALUE FOR MANUFACTURERS

More than **100,000 JOBS** Created or Retained

**\$12.6
BILLION**
in New and
Retained Sales



**\$3.5
BILLION**



in Total Investment in
U.S. Manufacturing

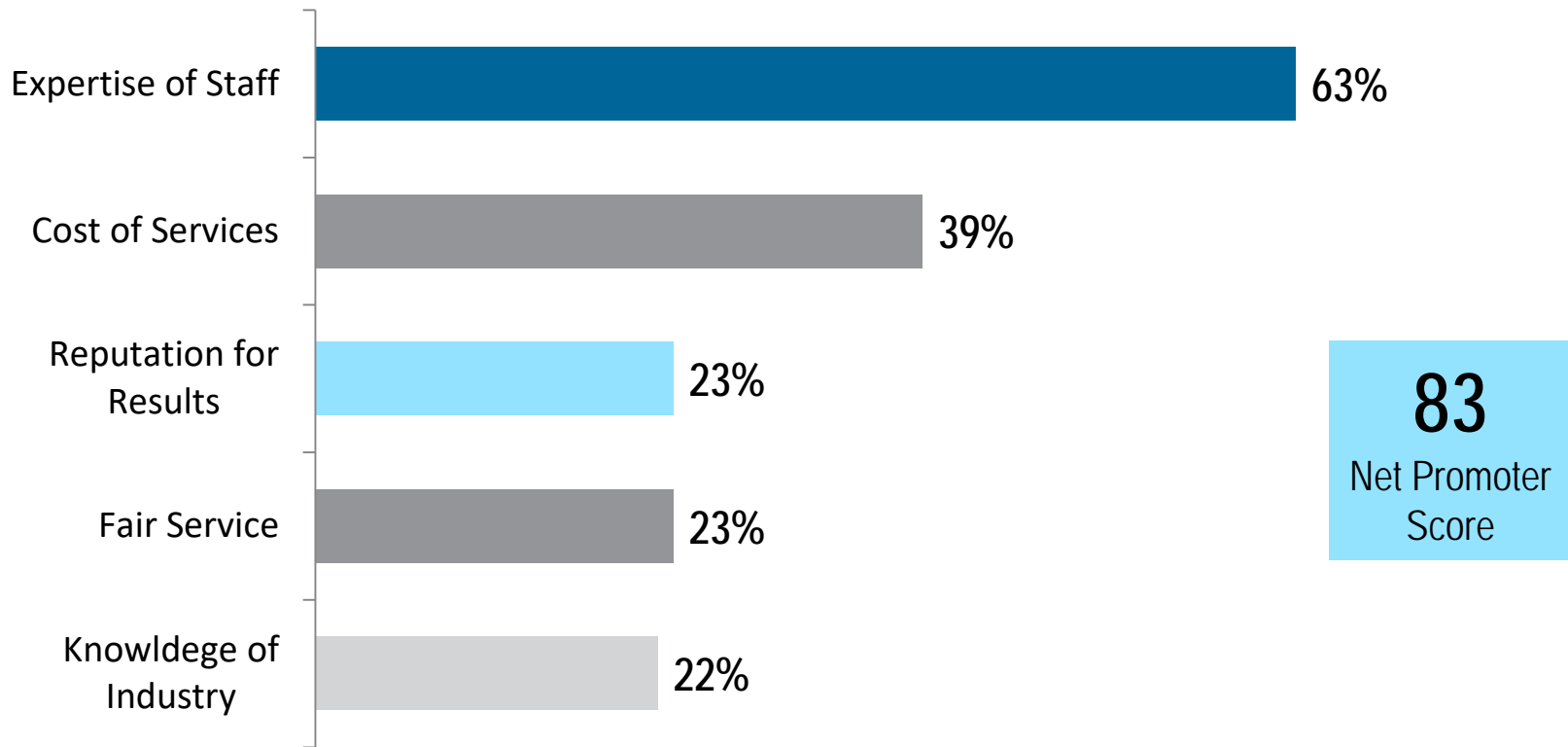
**\$1.7
BILLION**



in Savings



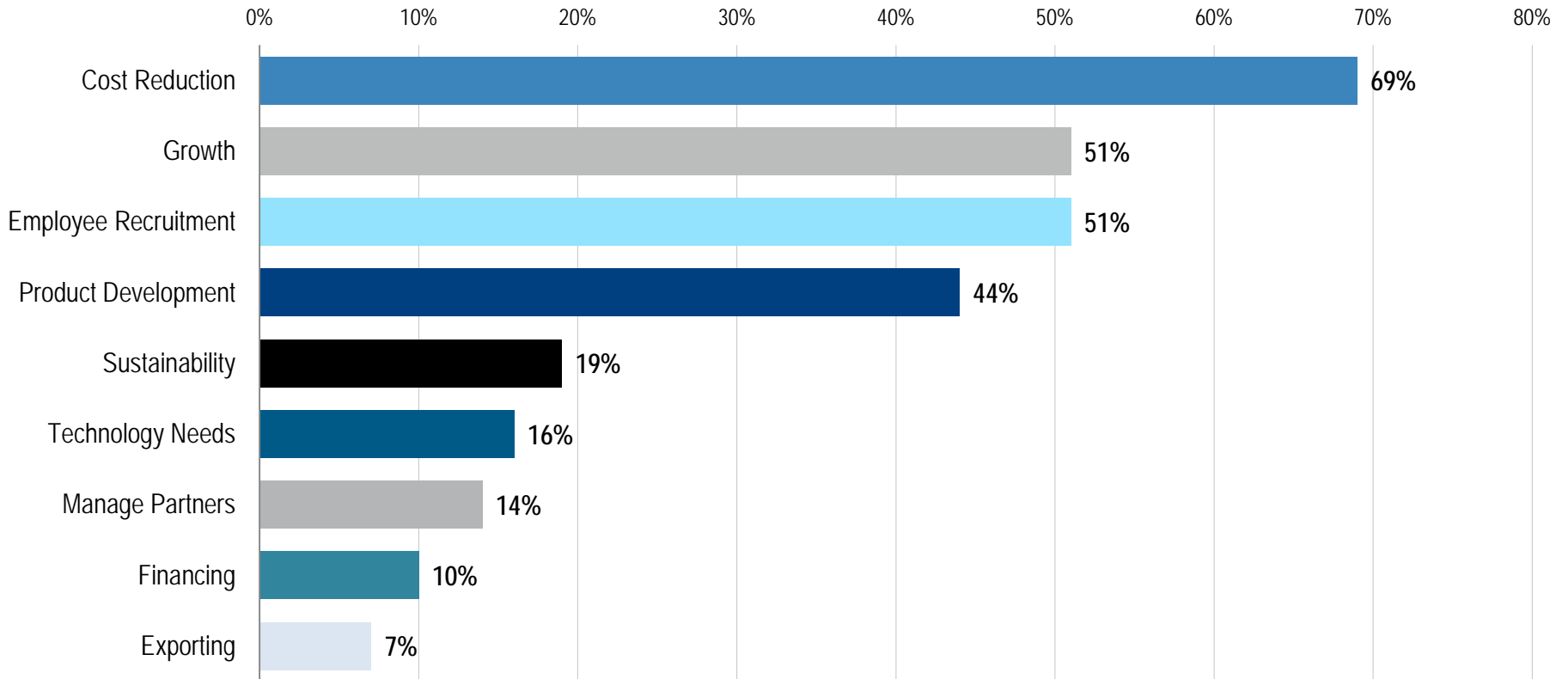
Top Reasons Manufacturers choose MEPNN



Numbers are based on FY 2017 MEP National Network Client Impact Survey



Client Challenges



Numbers are based on FY 2017 MEP National Network Client Impact Survey

Competitive Awards Program

Adding New Capabilities to the MEP National Network

- **Seven Awards (September 2017)**
 - MEP Centers – Georgia (2), Michigan, North Carolina, New Jersey, Nevada, and Virginia
 - ~20 Partnering MEP Centers
 - \$5.1 Million total funding
 - 2 Year Award duration
 - Competitive Award Process, No Cost Share
 - Topical Areas – Transportation, Growing Small Machine Shops, Cybersecurity, Digital Supply Chain, Food Safety, MEP Center Sales & Marketing, Medical Device Supply Chain
- **Objectives**
 - Increase capabilities of the MEP National Network
 - Develop projects to solve new and emerging manufacturing problems
- **Themes**
 - New manufacturing technologies of relevance to the SMMs (Industry 4.0)
 - Supply chain management technologies and practices
 - Workforce intermediary
 - Business services



Natural Disaster - Manufacturer Assessment Awards

(Manufacturers Impacted by 2017 Hurricanes Harvey, Irma, Maria)

- Five Awards (September 2017 – January 2018) to MEP Centers in:
 - Texas
 - Louisiana
 - Florida
 - Puerto Rico
 - Georgia
- \$6.2 Million total funding
- Over 800 planned assessments, close to 400 have been completed to date
- Non-Competitive Award process, no cost share
- Used NIST Authority, cannot duplicate MEP Center base award activities
- Objectives
 - Identify obstacles keeping affected manufacturers from returning to normal operations
 - Develop plans to support recovery
 - Connect the SMMs to local, state, and federal resources
 - Collect information, best practices, etc., and disseminate
 - Development of proactive strategies for risk avoidance by U.S. manufacturers
 - Recovery planning for manufacturers across the U.S.



Performance-based Panel Review

- Intent
 - AICA requires a PERFORMANCE-based Review to satisfy statutory requirement
 - Provide analysis, diagnosis and feedback to Centers regarding their strengths and opportunities for improvement identifying deficiency areas, if any; performance is defined as market penetration, economic impact
 - Includes an evaluation of a Center's own Performance Management System effectiveness, use and self-assessment
 - Promotes the sharing of information across the Network
 - Identifies common Center performance gaps so the Program can leverage internal and/or external resources to assist the Network in development of performance improvement practices
- Schedule
 - Round 1
 - CO, CT, FL, IN, MI, NH, NC, OK, OR, TN, TX and VA (All completed except IN – 3/1/18)
 - Round 2
 - AK, ID, IL, MN, NJ, NY, WA, WV and WI (Scheduled for June/July 2018)



Cybersecurity

2018 MEP National Network Focus – More to Come Later on Agenda

- Development of replicable Cybersecurity assistance practices that MEP Centers can deploy to small U.S. manufacturers nationwide
 - Led by and aligning efforts of MEP Centers' CAP Project, NIST MEP, and National Network Cybersecurity Working Group
 - Apply to any manufacturer, with emphasis on defense suppliers
- Continued close partnership with DoD as it conducts comprehensive assessment of Defense Industrial Base, including defense manufacturing supply chain resiliency, in response to July 2017 White House Executive Order (EO) 13806
 - NIST MEP is member of Interagency Task Force (ITF) responding to EO
 - NIST MEP Chairs ITF Cybersecurity for Manufacturing Working Group
- Working with NIST Labs to continue to develop resources for MEP Centers to deliver to manufacturing clients, ensuring alignment of MEP manufacturing-specific cybersecurity assistance with NIST guidance.



Knowledge & Learning Management

How do we get the right information, to the right people, in the right media, at the right time?

- Initial Goals/Objectives
 - Establish a structure of content collection for the learning management system
 - Create system of connecting those who know, with those that want to know (Ask the Expert System)
 - Develop a system of rating that builds our abilities to meet today's and tomorrow's National Network and client needs
- Planning and Development
 - Convene a meeting of principals and partners to determine sequence of development
 - Establish a Coordinating Committee (Steering Group)
 - Create a framework that defines actions, roles and responsibilities
 - Establish Small Teams to implement components of the plan
- Use Plan to Coordinate Activities Currently in Process
 - NIST MEP submitted a Request for Information (RFI) to learn how others approach this challenge
 - FIN published in Sept. 2017 a Knowledge Sharing Appendix to their Report
 - Foundation evaluating Learning Management Systems and collaborative development tools
 - NIST MEP continued the development and enhancement of MEP Connect & MEIS
 - NIST MEP has several Communities of Practice operational and supported by MEP Connect
 - Planning for the Best Practice Conference, MEP Summit, and Regional Training



MEP National Network Strategic Plan, Establishing the Integrated National Network



MEP National Network Strategic Goals

✓ EMPOWER MANUFACTURERS

Assist U.S. manufacturers in embracing productivity-enhancing innovative manufacturing technologies, navigate advanced technology solutions and recruit and retain a skilled and diverse workforce.

✓ CHAMPION MANUFACTURING

Actively promote the importance of a strong manufacturing base as key to a robust U.S. economy and protection of our national security interests; create awareness of innovations in manufacturing; create enabling workforce development partnerships to build a stronger and diverse workforce pipeline; and maximize market awareness of the MEP National Network

✓ LEVERAGE PARTNERSHIPS

Leverage national, regional, state and local partnerships to gain substantial increase in market penetration; identify mission-complementary advocates to help the MEP National Network become a recognized manufacturing resource brand; build an expanded service delivery model to support manufacturing technology advances.

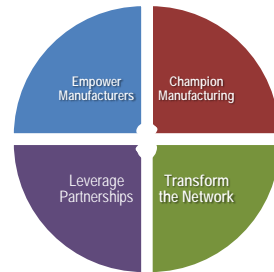
✓ TRANSFORM THE NETWORK

Maximize MEP National Network knowledge and experience by operating as an integrated National Network; increase efficiency and effectiveness by employing a Learning Organization platform; and create a resilient and adaptive MEP National Network to support a resilient and adaptive U.S. manufacturing base.



Network Priorities for the Next 18 Months:

- ▶ Create an integrated National Network Service Delivery System
- ▶ Update National-level Partnerships and Performance Support Services
- ▶ Define Areas of Focus for Manufacturing Technology Advances
- ▶ Build Infrastructure for National Network Learning Organization
- ▶ Develop Supply Chain National Services and Information and Technology Access



Eighteen-Month Measures of Success



March 2019

- Piloted integrated national networked approach to delivery system engaging half of the Centers in multi-center delivery projects.
- Increased small/rural engagements through 3rd party partnerships by 10% and increased longer-term impactful projects with these smaller firms by 5%.
- Attained Operational Excellence in 25% of Centers' operations and in 50% of NIST MEP administrative support.
- Increased awareness of the MEP National Network brand by 10% over base brand recognition measurement a year after the Network launches the brand.



National and State Economic Challenges and Opportunities, Data Trends

Dan Berglund, SSTI, President and CEO





Trends and New Developments

Presentation by:

Dan Berglund

March 7, 2018



Takeaways for today

- Economic challenges persist
- Manufacturing's standing
- Challenges for MEP centers
 - State and city fiscal stress
 - Higher education's standing
 - Gubernatorial transitions
- MEP's positioning to take advantage



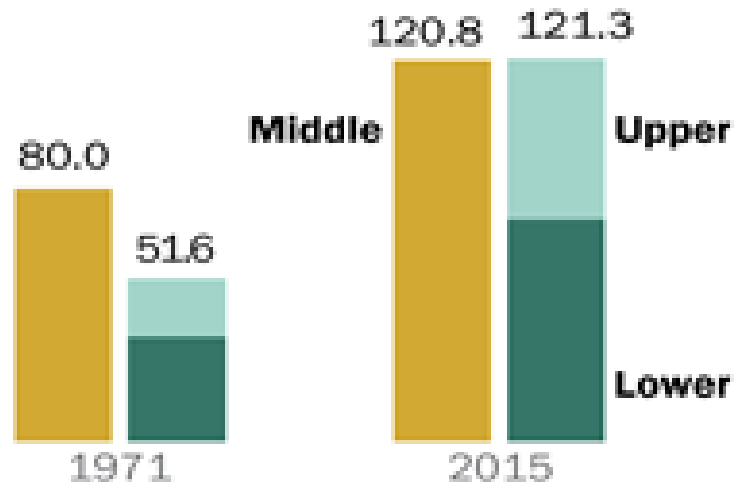
**ECONOMIC CHALLENGES
PERSIST**



Macro trends: Income inequality

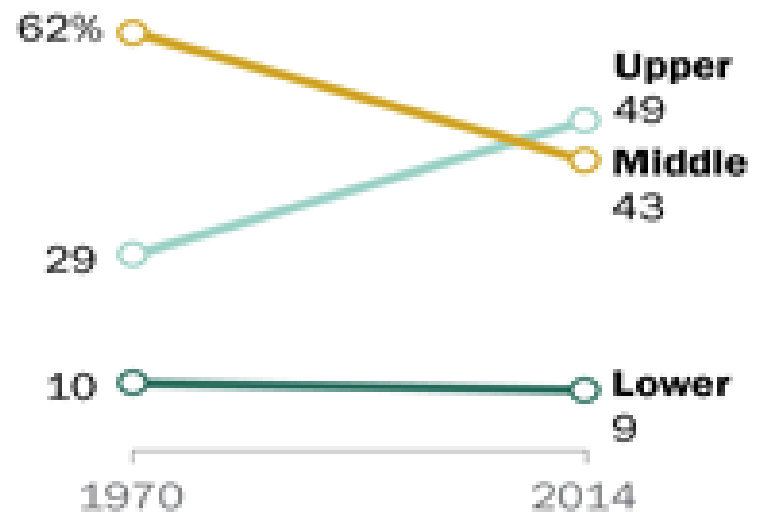
Middle-income Americans are no longer in the majority ...

Adult population by income tier (millions)



... and share of aggregate income held by middle-income households has plunged

% of U.S. aggregate household income





Disparity in increasing income

People earning in the	Saw an increase in their income from 1980 to 2014 (in constant dollars) of
Bottom 50%	None
50-90%	32%
90-100%	68%
Top 1%	36%



Income gap increased

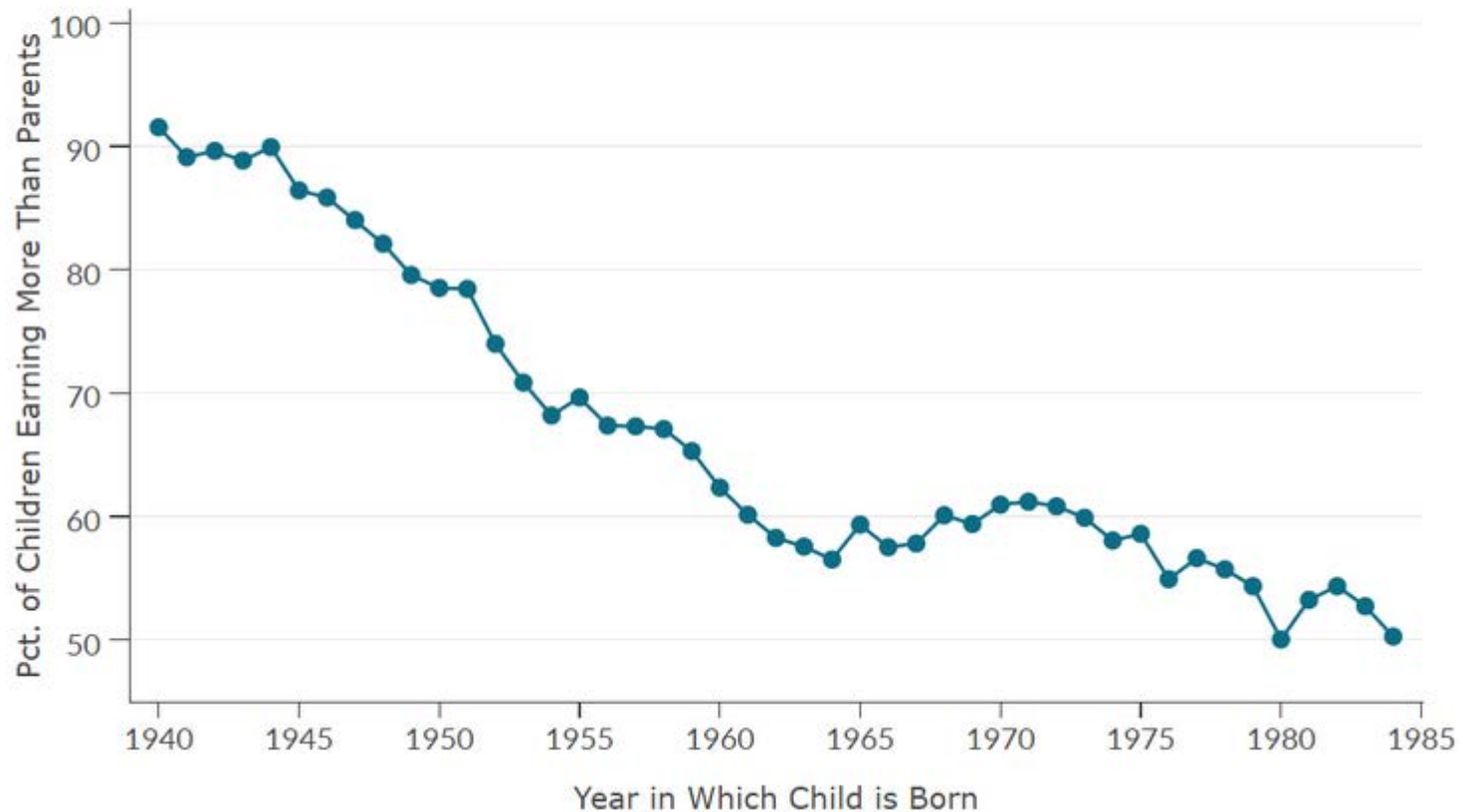
	In 1980 (in 2014 dollars)	In 2014
Income top 1%	\$428,000	\$1,300,000
Times the top 1% was greater than bottom 50%	27	81
Bottom 50%	\$16,000	\$16,000



Equality Opportunity Project

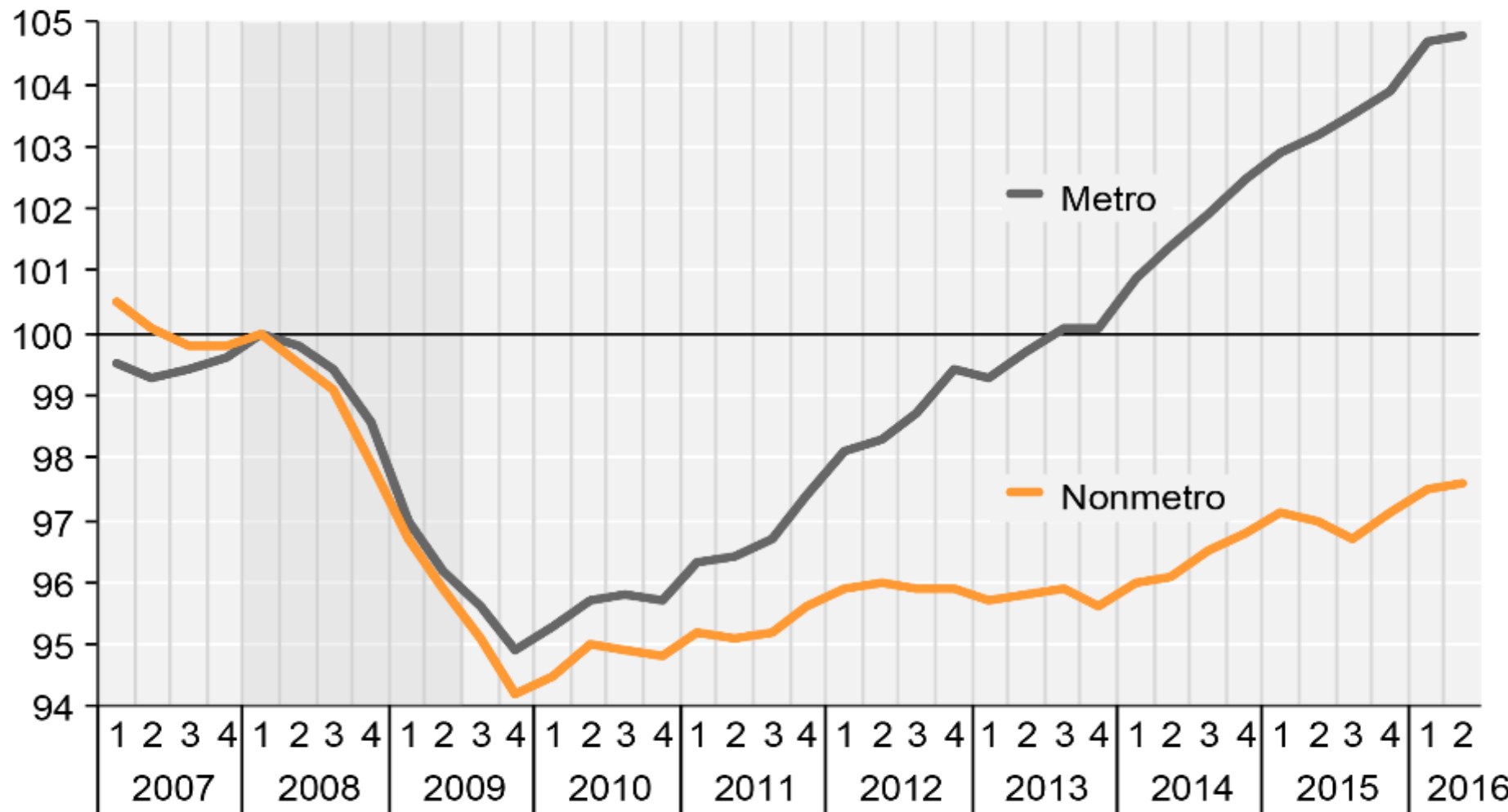
The Fading American Dream

Percent of Children Earning More than their Parents, by Year of Birth



U.S. employment, metro and nonmetro areas, 2007-2016 (quarterly)

Employment, index (2008 Q1=100)



Notes: Data are seasonally adjusted. Shaded area indicates recession period.
 Source: USDA, Economic Research Service using data from Bureau of Labor Statistics, Local Area Unemployment Statistics (LAUS).



Small population areas lag in recovery

Measuring economic recovery by four indicators shows:

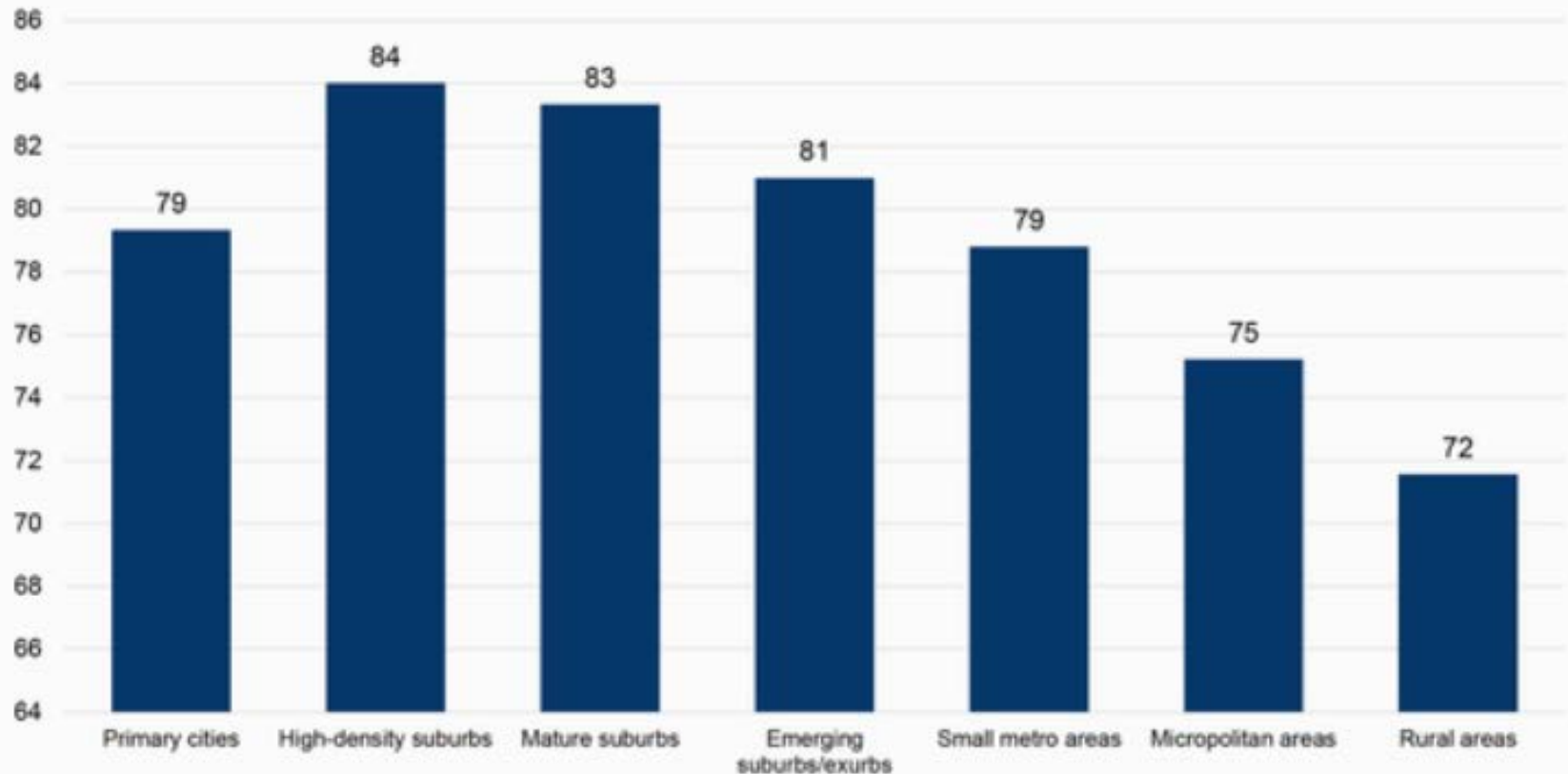
- One of four counties recovered on all indicators by 2016
- Counties with more than 500,000 residents have the highest rate of full recovery (41 percent).
- In counties with fewer than 50,000 residents, more than three quarters had not reached full recovery by 2016



Rural men lower employment rates

Prime-aged men in cities and smaller communities are less likely to be in work

Share of 25 to 54 year-old men employed by area type, 2010-14





Underemployed

- Young people, 16-24, jobless and not in school, on average, from 2010 to 2014
 - Counties in urban centers: 14 percent
 - Suburban counties: 12 percent
 - Completely rural areas: 20 percent
- Almost 4.9 million people in total

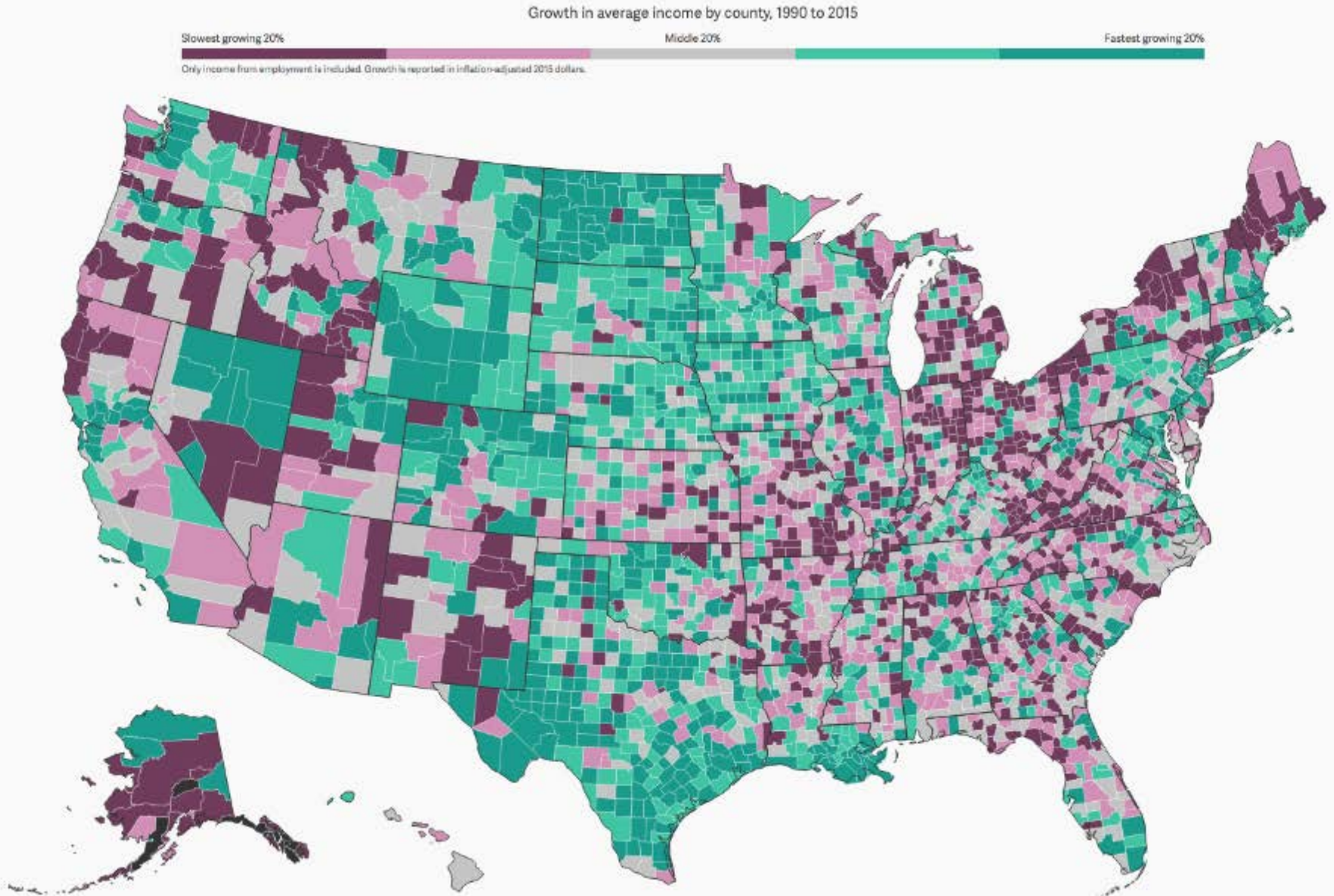
--Measure of America



The problem with men

- Labor participation rate among men 25-54
 - 1948: 96.7 percent
 - 2017: 88.5 percent
- Of the 11.5 percent not employed or looking
 - More than half blame illness or disability
 - “In other words, fully 6 percent of American men between the ages of 25-54 feel that their minds or their bodies are too broken for them to work.” [1.6 percent in 1968]
 - 44 percent took pain medication the day prior, two-thirds of which were taking prescription drugs

Growth in average income by county, 1990-2015





Millennials falling behind

- Median personal income in 2015 dollars for 25-34 year olds
 - 1975: \$36,858
 - 2016: \$34,837

- Educational attainment increased; percentage with bachelors degree
 - 1975: 23 percent
 - 2016: 37 percent



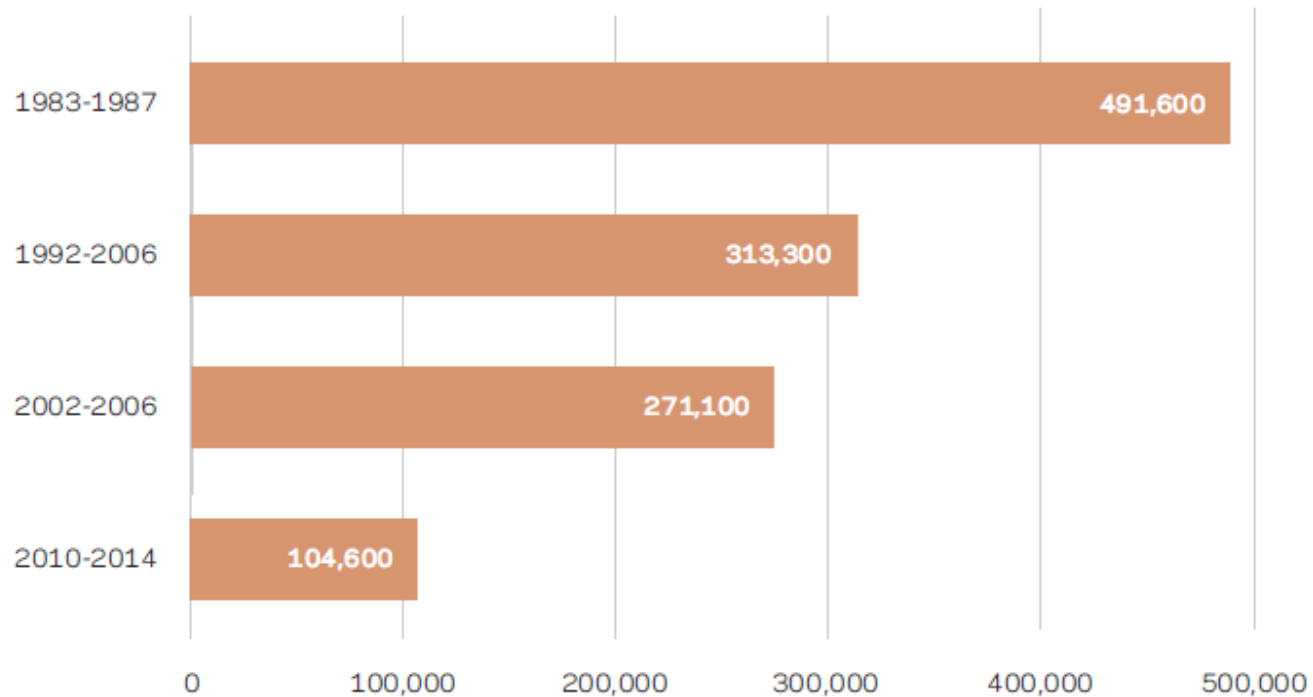
Student loan debt

- Student loan debt has grown 149% in the last decade
- Average student loan debt:
 - Increased 62 percent
 - Balance stands at \$34,144
- 13.4 percent of American hold student loan debt



Decrease in dynamism, EIG

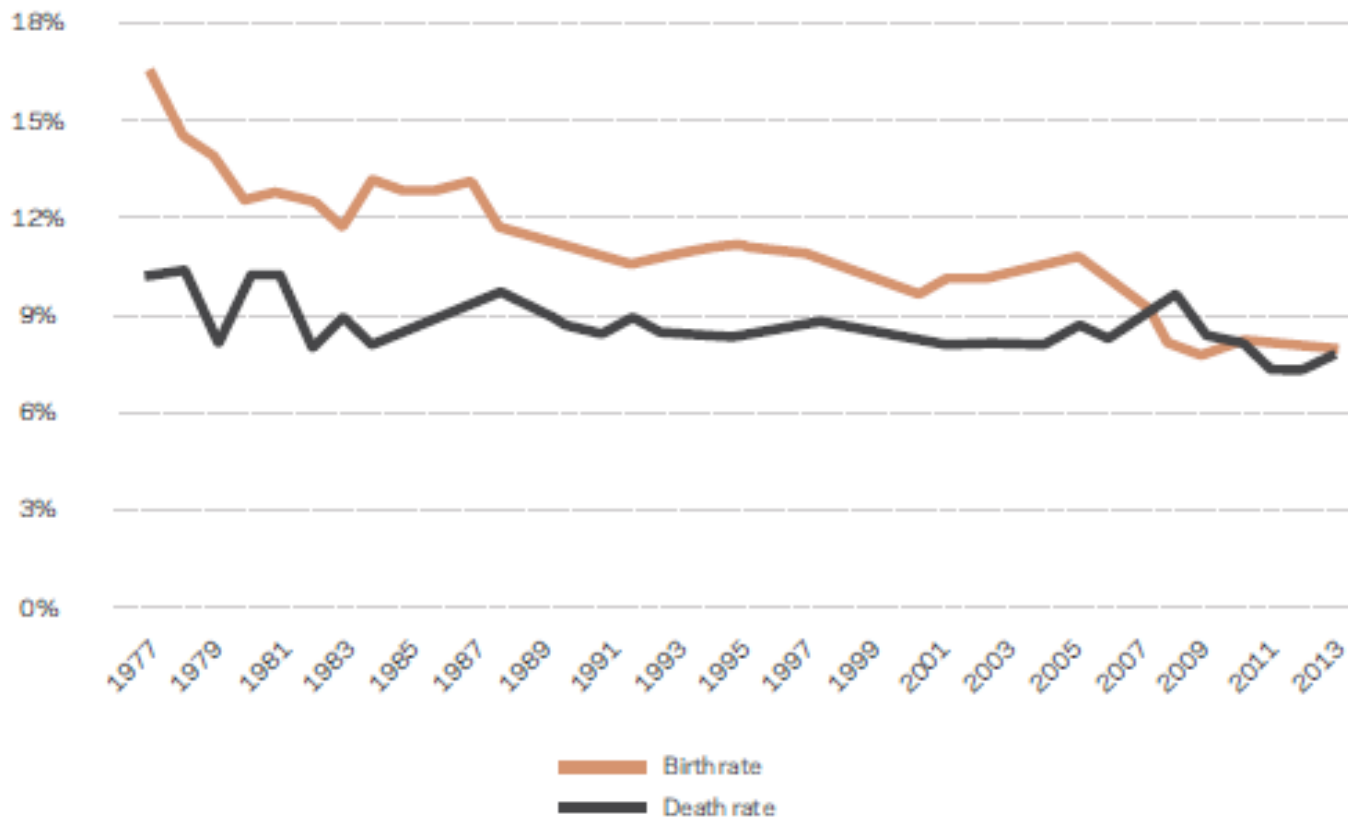
10. Total increase in the number of firms nationwide



Source: Census BDS

Great Recession accelerated trend

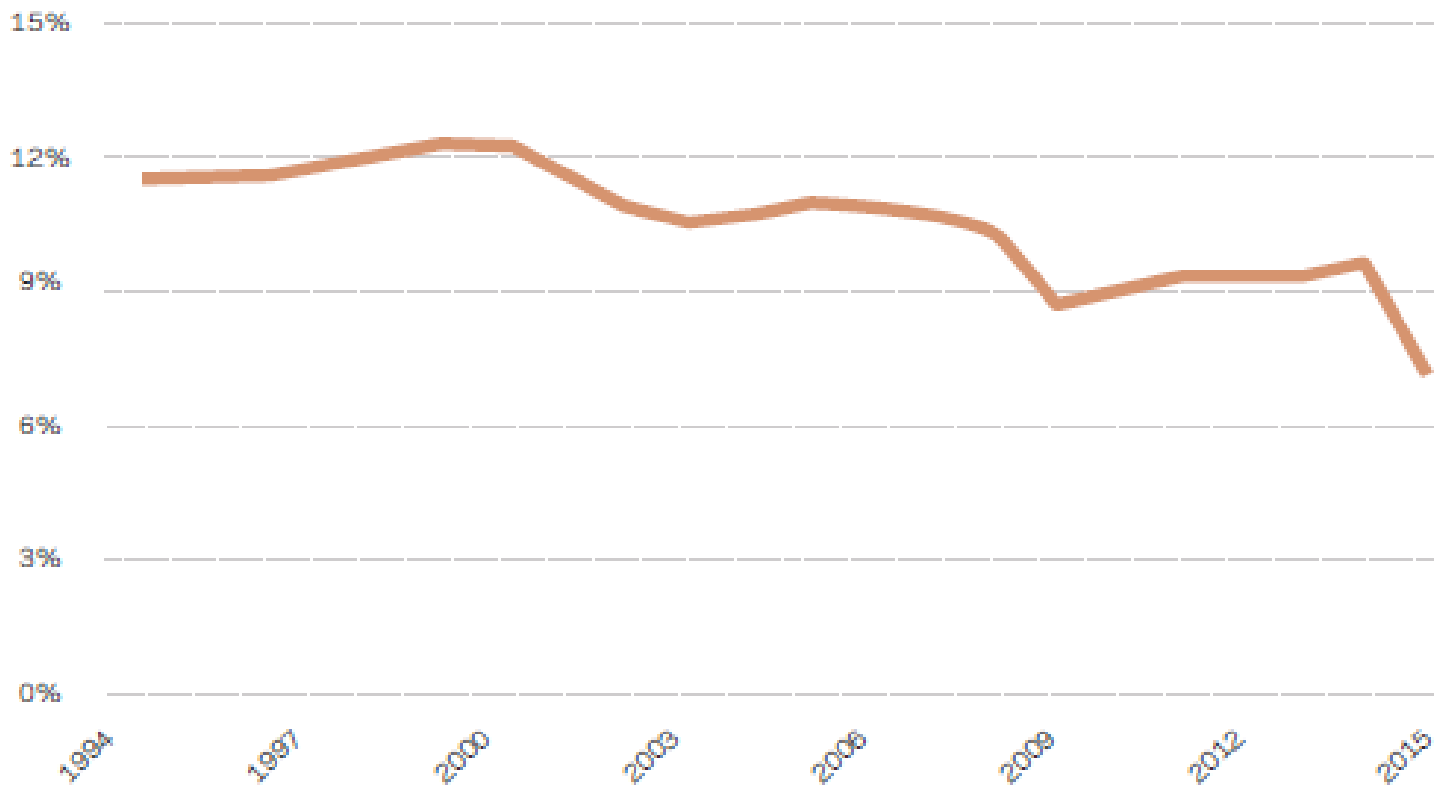
3. Firm birth (startup) and death rates





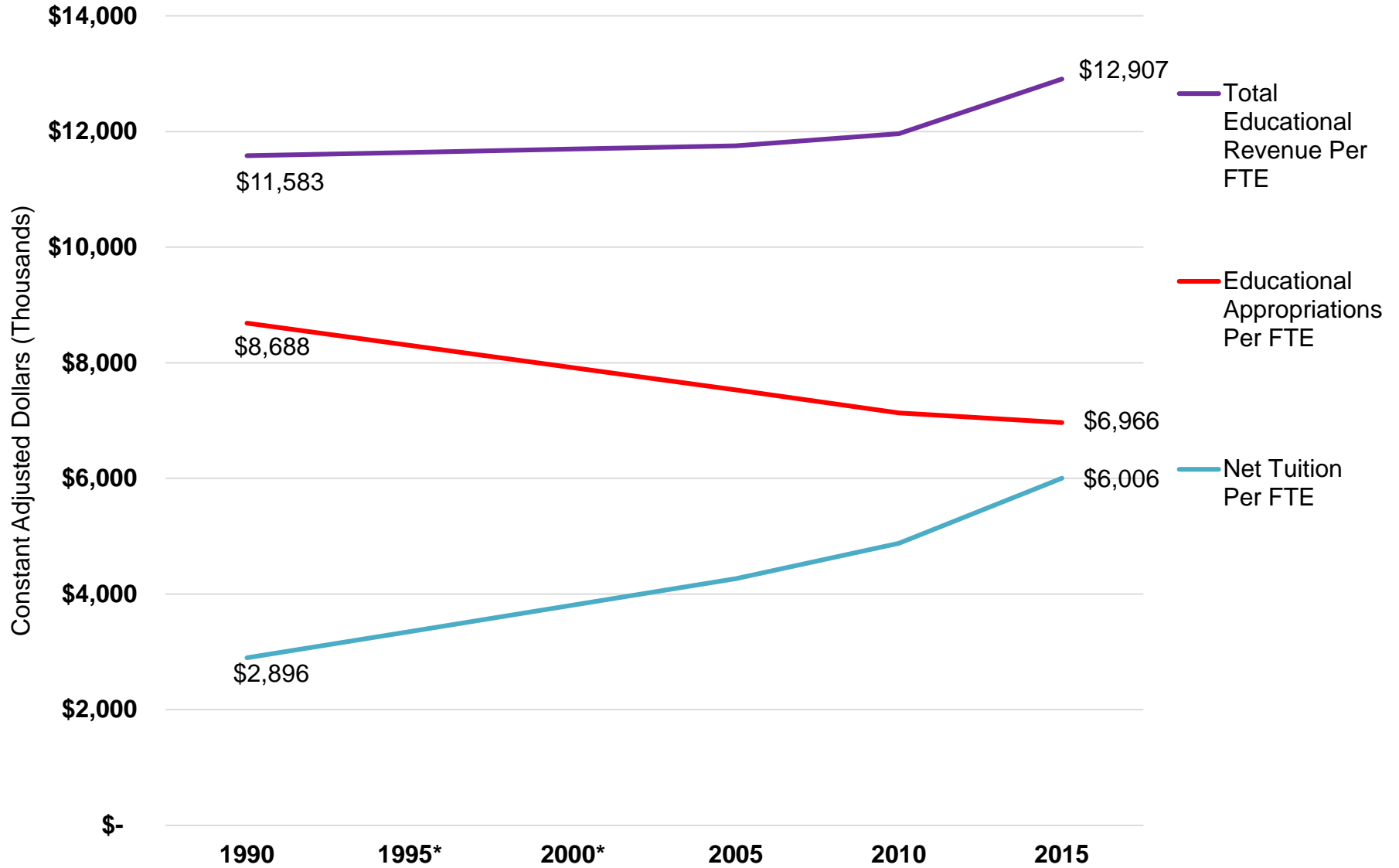
Job turnover rate drops

5. Job turnover rate



Source: Census LEHD

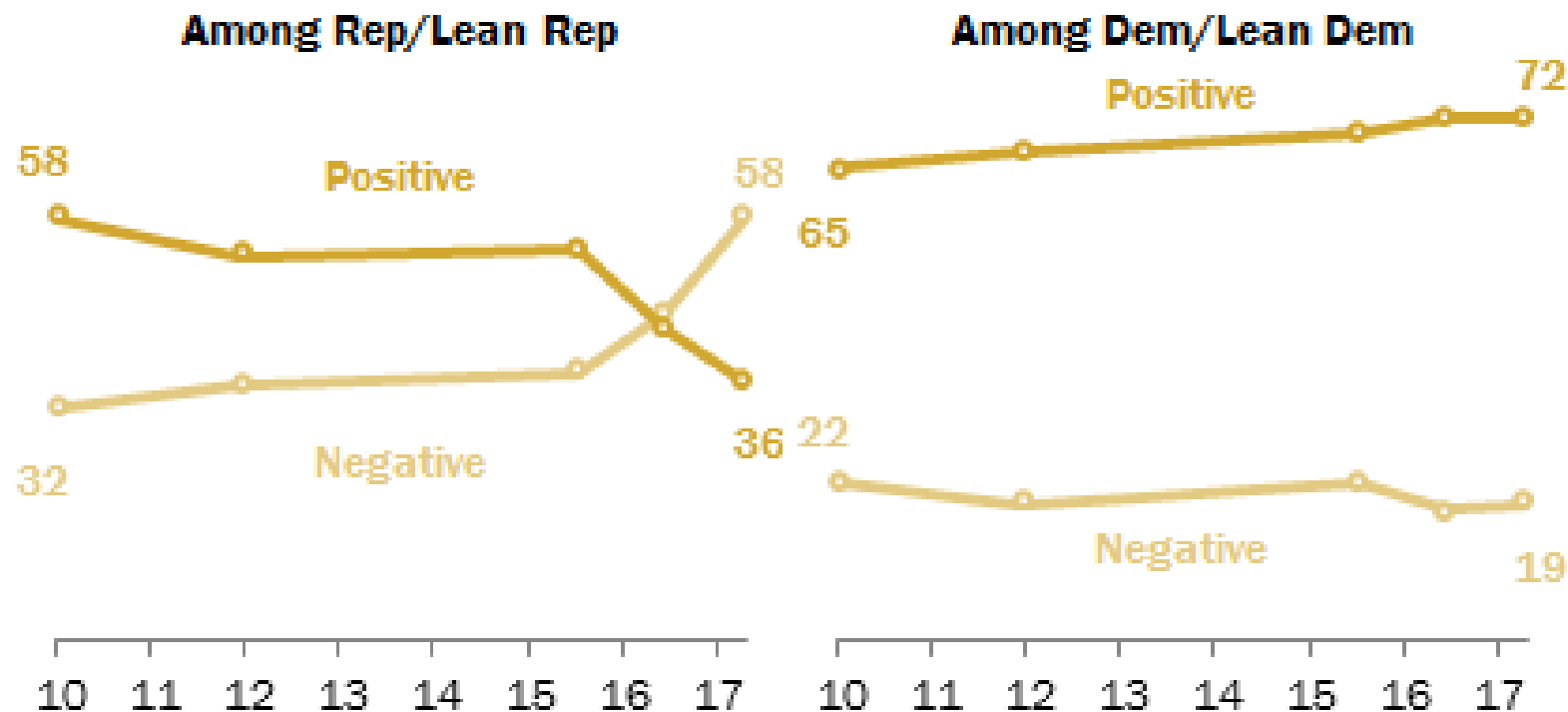
Higher Ed Revenue Total by Source (1990-2015)



Source: State Higher Education Executive Officers Association (2016)
2000 and 2005 data are estimates

Since 2015, sharp rise in share of Republicans saying colleges have a negative effect on the country

% who say colleges and universities have a ____ effect on the way things are going in the country



Note: Don't know/Other responses not shown.

Source: Survey conducted June 8-18, 2017.



MANUFACTURING'S STANDING

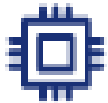


Mfg a popular policy prescription

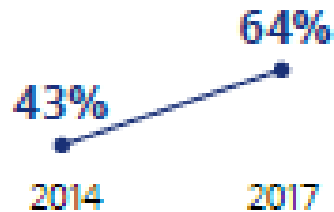
- Above average wages that help support middle class
- Can be an economic pathway for those not going to college
- It's creating jobs
- However...
 - State economic development policy goes in cycles
 - Down cycle for manufacturing likely to occur when/if:
 - Next big thing presents itself
 - Something else solves the first three bullet points
 - Major job losses occur in manufacturing



Positive public perception of mfg



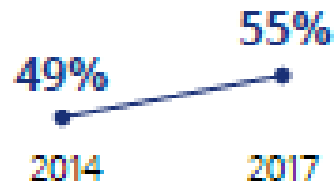
The US manufacturing industry is high-tech



More than **8 in 10 people (81%)** surveyed believe trade and export of American manufactured goods benefit the US economy



The US manufacturing industry can compete globally





Support job creation

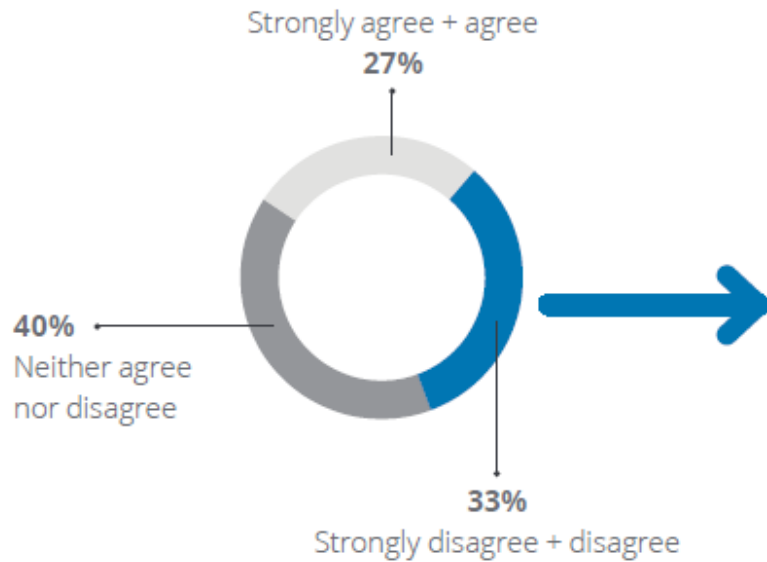
- Ranking by US public of type of new industry facility they would support to create 1,000 new jobs in their community

Overall respondents	
Industry	Rank
Technology	1
Health care	2
Manufacturing	3
Energy	4
Communications	5
Financial	6
Retail	7

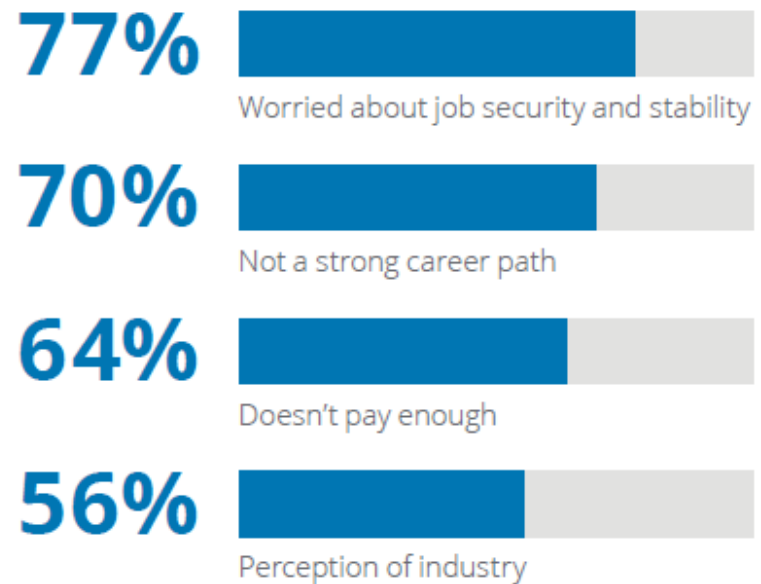


But not for their kids

I would encourage my children to pursue a manufacturing career



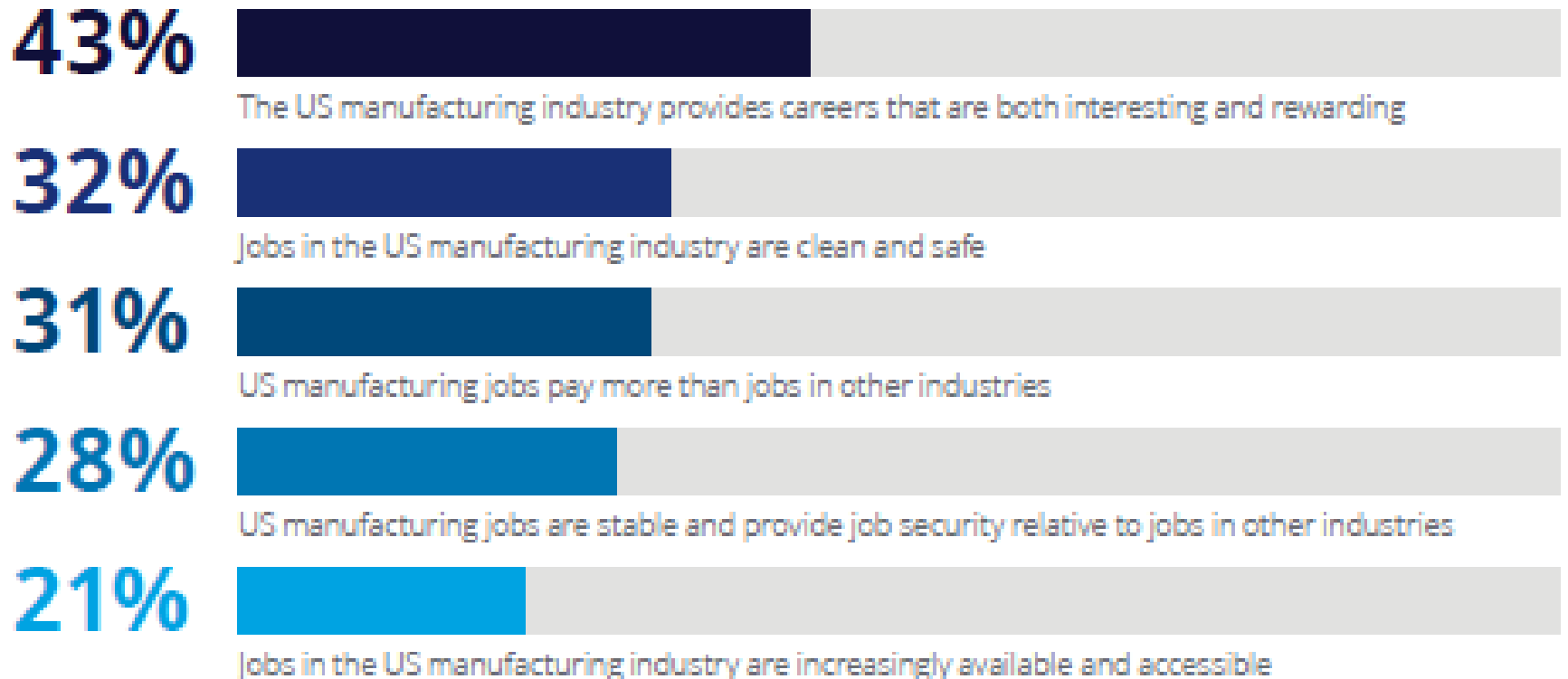
Reasons for not encouraging children to pursue a manufacturing career





Concerned about stability

Figure 6. Current views of US public regarding manufacturing careers
Percentage of respondents who strongly agree or agree with each statement





Focus group

- Innovation– 65% positive; 3% negative

Necessary

Creative

Technology

Research

Creativity

Progress

New

Advancement

Growth



Focus group

- Entrepreneurship– 49% positive; 20% negative

Money

Own boss

Risk takers

Brave

Owning own company

Freedom

Risky

New companies



Focus group

- Technology– 40% positive; 15% negative

Electronics

Internet

Computers

New ideas

Money

Software

Improving life

Progress



Focus group

- Manufacturing– 23% positive; 33% negative

China

Waning

Hard work

Lay-offs

Foreign

Overseas

Pollution

Blue collar



WORKFORCE



Wonkblog

Bosses believe your work skills will soon be useless

- *In the next 10 years, do you think we will see the emergence of new educational and training programs that can successfully train large numbers of workers in the skills they will need to perform the jobs of the future?*
 - 70 percent of technologists, scholars, practitioners, strategic thinkers and education leaders canvassed by the Pew Research Center and Elon's Imagining the Internet Center says no

No one “workforce” issue/solution

PROBLEMS

- Lack of skilled workers for long-term
- Lack of skilled workers for short-term
- The flow of people
- Unemployed
- Underemployed
- Underrepresented

APPROACHES

- Pay level
- Setting realistic expectations
- Increase STEM supply
- Increase # of mfg workers
- On the job or for the job training
- Apprenticeships/internships
- Retaining people in place and in company
- Attracting people to places
- Image campaigns
- Scholarships/tuition free



Workforce stats

- Middle skill jobs— require some post-secondary education, but not a four year degree

- Account for 54 percent of U.S. labor market
- But only 44 percent of workers are trained to fill them

---National Skills Coalition

- 30 million jobs in the U.S. pay well without a BA. These “good jobs” have median earnings of \$55,000 and are changing from traditional blue-collar industries to skilled-services industries

--Georgetown University Center on Education and the Workforce



Workforce

- Too few skilled workers is the problem
 - Wash Post: Zimmer Biomet, artificial bone company, has 40 open positions (“The problem isn’t China. It’s too many jobs”); possibility of company relocation
 - NY Times: “The main economic concern in Utah and a growing number of other states is no longer a lack of jobs, but a lack of workers.”
 - Nearly a third of the 388 metropolitan areas tracked by the Bureau of Labor Statistics have an unemployment rate below 4 percent



Problem bigger than skills mismatch

- Employers defining qualifications too narrowly
- Not recruiting widely enough
- Not recognizing they're not paying enough
 - 22 percent of employers surveyed by Utah's Dept of Workforce Services named low wages as a hiring problem
 - 68 percent were paying below average wages
- Employees may lack transportation or child care



FISCAL STRESS



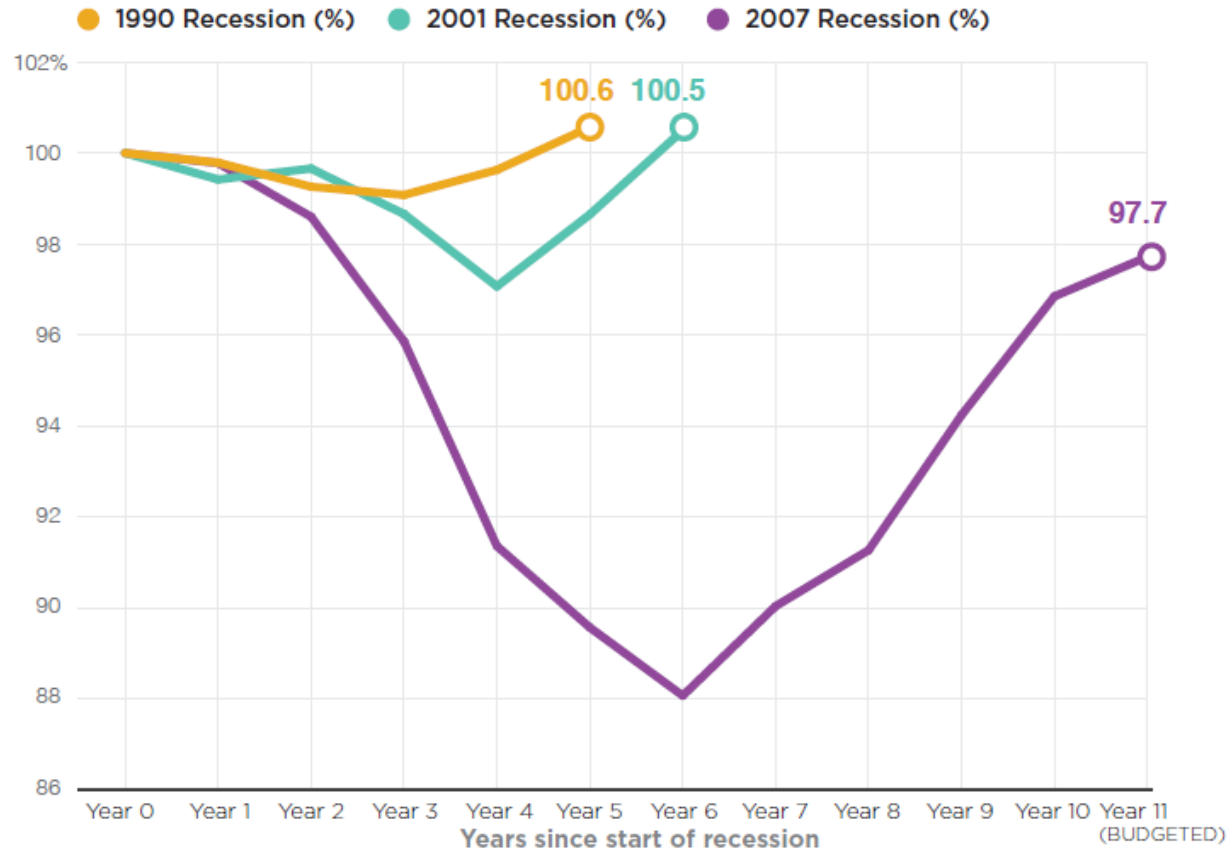
Fiscal stress at state level

- Since January 2016, S&P has issued credit rating downgrades in at least 10 states
- In April 2017, states had a median cushion of 4.9% in day-to-day operating revenue, enough to last 18 days, according to Pew Charitable Trusts
- Medicaid spending in states
 - FY2000: 12.2 percent of state revenue
 - FY2015: 16.7 percent of state revenue
- State pension funding gap reached \$1.1T in 2015



Fiscal stress at the city level

Figure 6 General Fund Revenue Recovery During Recent Recessions





A piece of advice

- In this political and fiscal environment [on the state level], if we want more money, then we have to bring something new to the table.
 - Stolen from a tech-based economic development leader



Thoughts on funding

- Defend what you have
- Bring something new to the table
 - Within your mission/capabilities/needs of the region
 - Relevant to today's problems
- Develop a longer-term strategy exploring new collaboration and funding partners



What are the issues of the day?

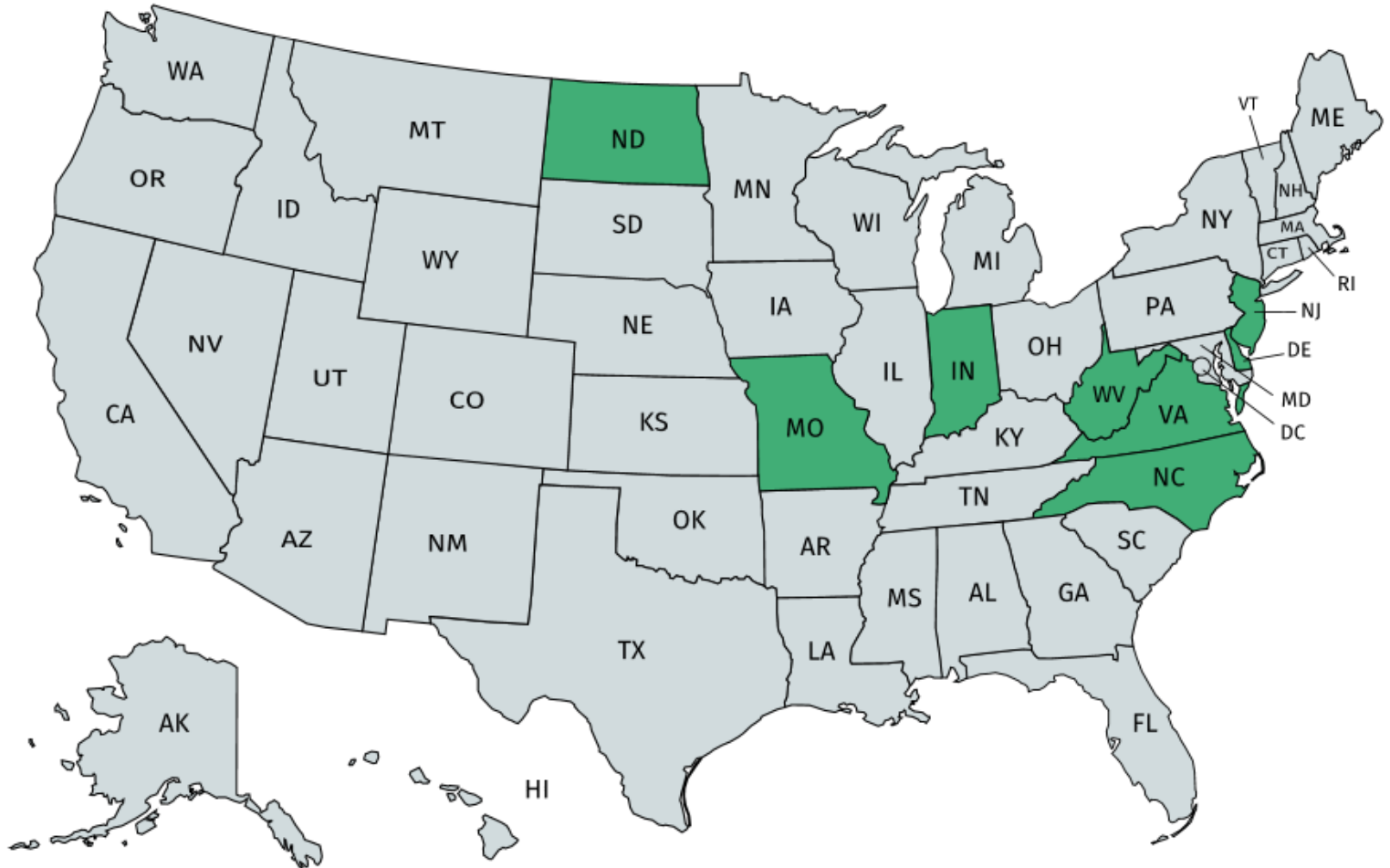
- Income inequality
- Workforce
- Rural
- Manufacturing
- Inclusion
- Climate change and clean energy
- Something that will create a better future



GUBERNATORIAL TRANSITIONS

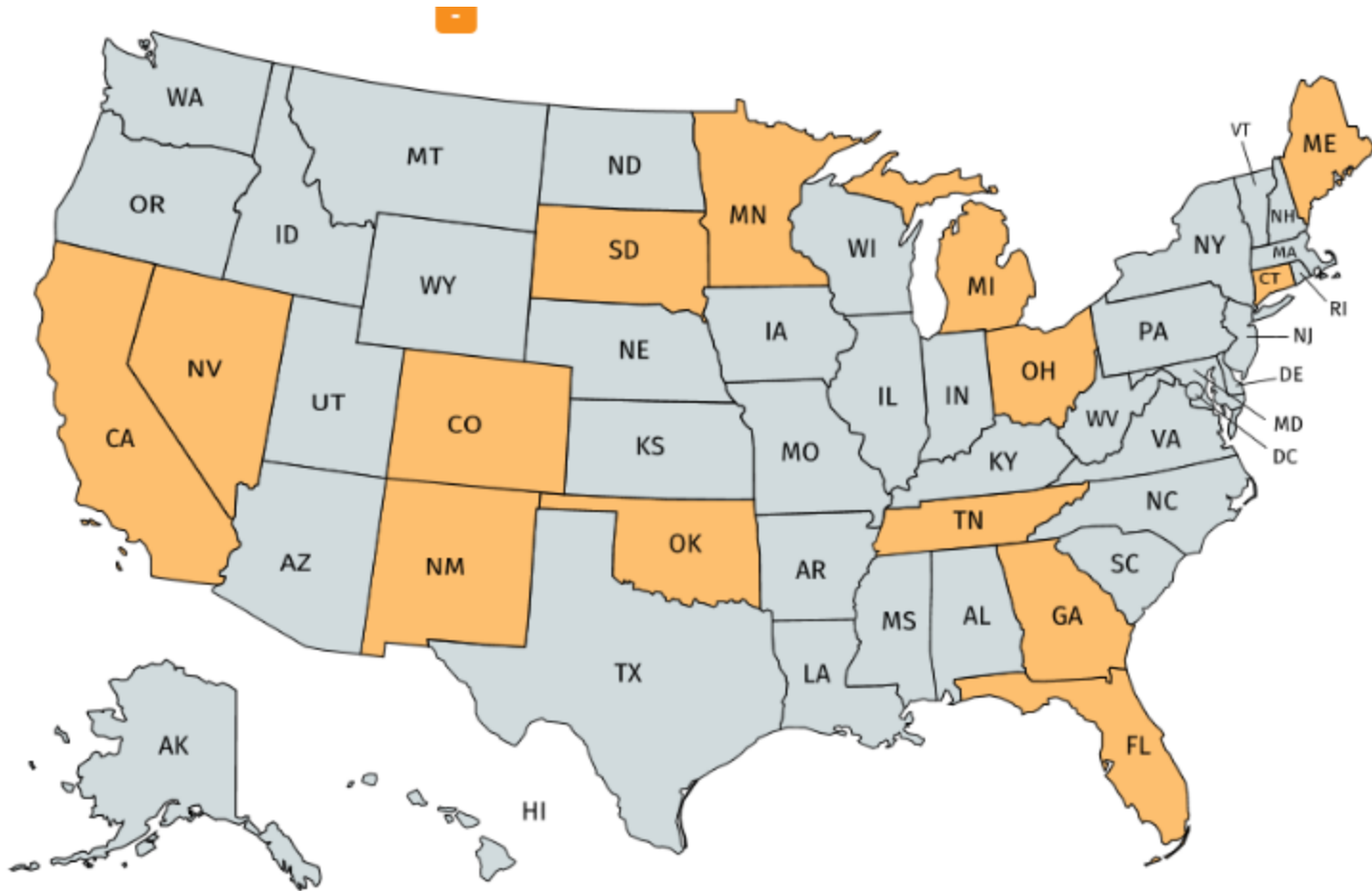


8 new govs elected in 16/17



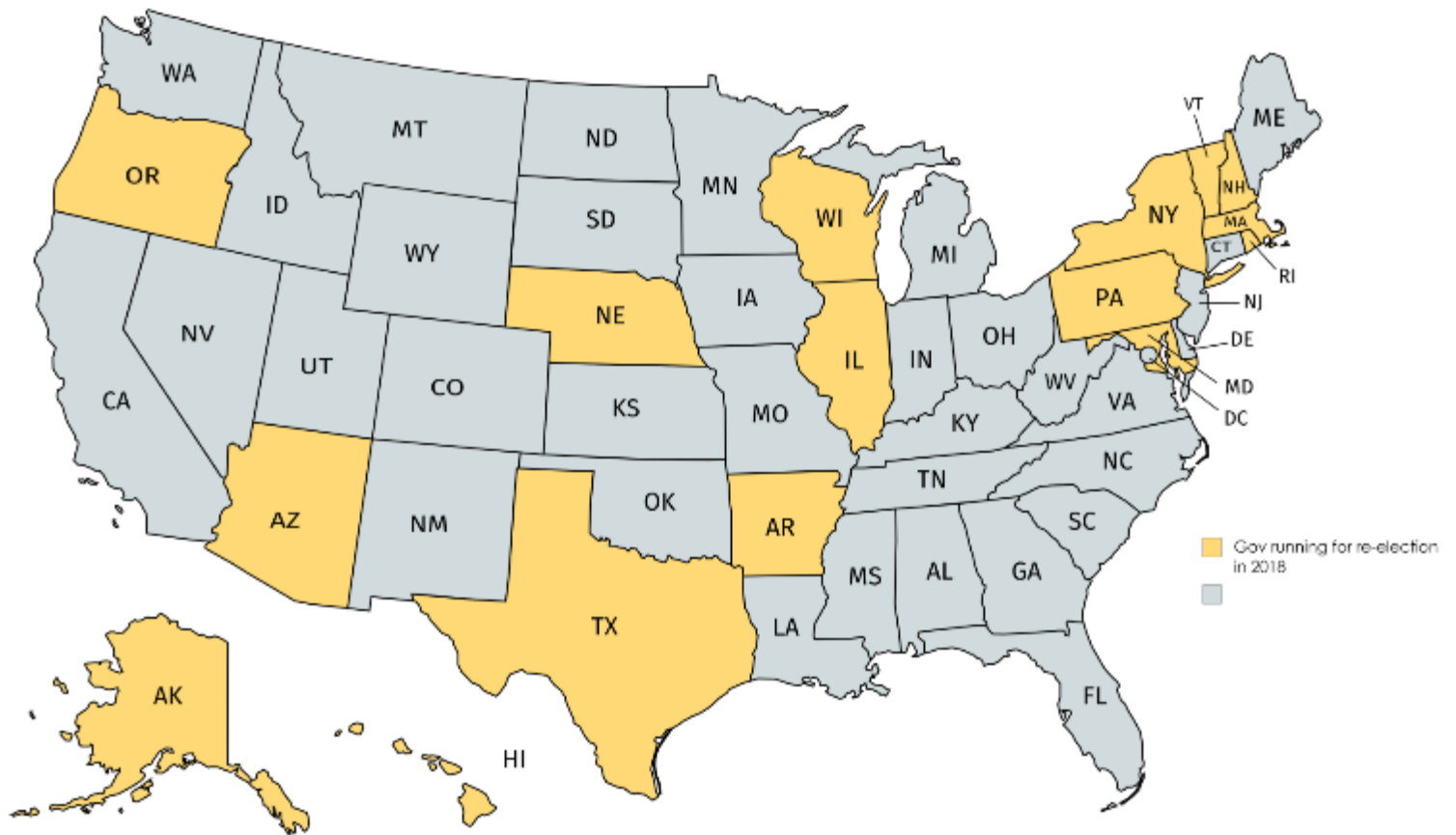


16 open seats in 2018



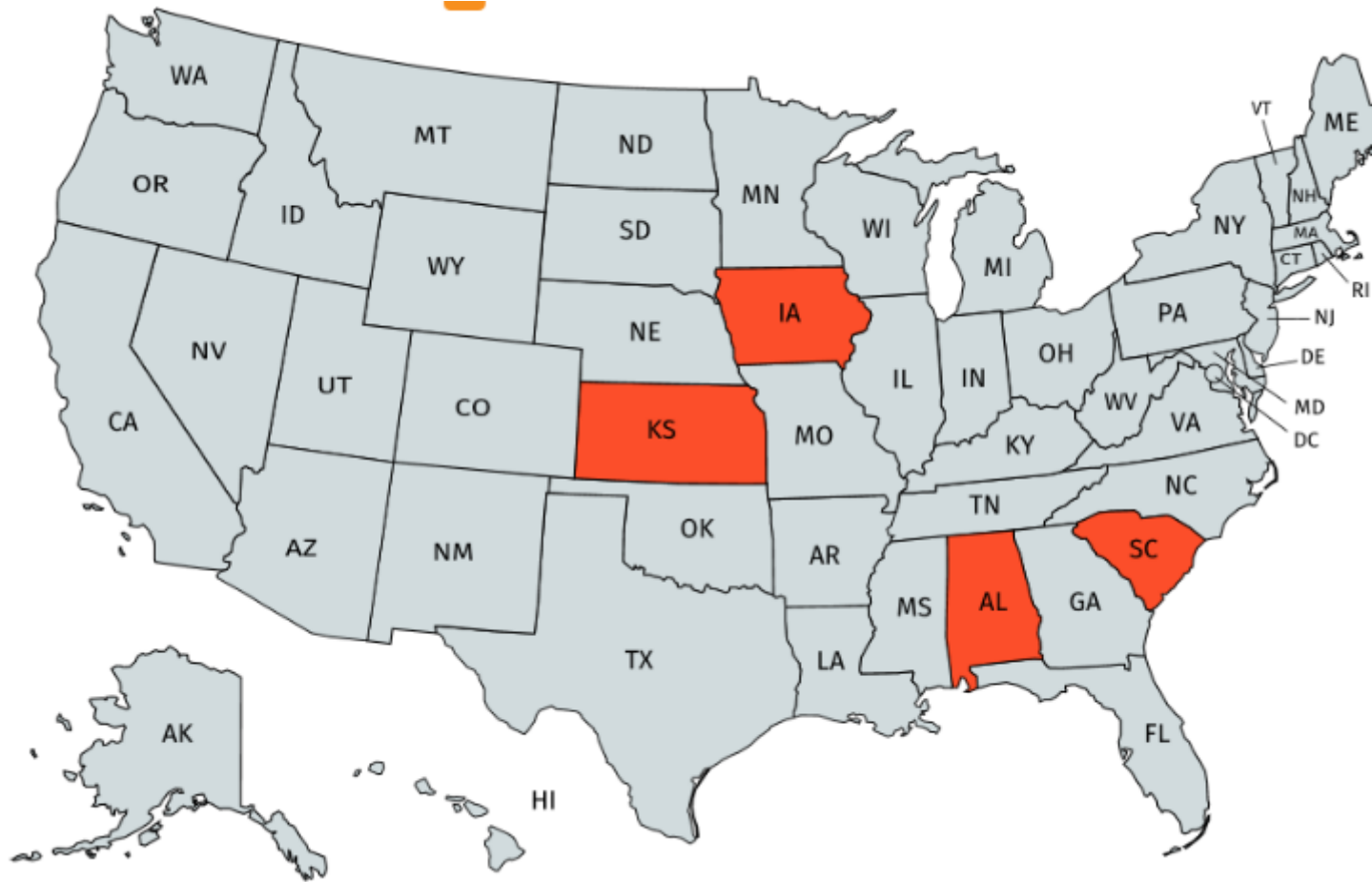


16 govs running for re-election





4 new govs running in 2018





CENTERS AND STATE RELATIONS



Centers and state: audiences

- Various audiences
 - Governor
 - State econ dev agency
 - Host organization
 - State legislators
 - Other orgs



Centers and states: actors

- Center actors
 - Center directors
 - Center staff
 - Outside support
 - Center boards



**DEMAND FOR
ACCOUNTABILITY AND
TRANSPARENCY**

State economist says 70 percent of Florida's incentive programs are losing money

Speaker Richard Corcoran demands data from 38 economic, tourist groups

Results of economic tax incentives debated

Georgia tax breaks: Costly giveaways or economic development?

Audit Shows Missouri Faces \$3B Tax Credit Revenue Loss

Missouri Democratic Auditor Nicole Galloway says the state could face a \$3 billion loss from tax credits over the next 15 years.

May 3, 2017 6:32 PM

Is \$433 million that S.C. pays to lure businesses well spent? State doesn't know, study says

Foxconn's \$3 Billion Tax-Break Deal Is A Loss For Smart Jobs Policies

The biggest jobs deal yet to be announced during the Trump administration exemplifies everything that's wrong with our nation's economic development system.



CONCLUSION



MEP is well positioned

- Addresses the issues of the day, particularly
 - Growing the middle class
 - Addressing needs of rural areas
 - Workforce issues
- Have the track record with the data and the stories to make the case
- Great opportunities with a new wave of governors coming in (and legislators)
- But approach has to be all elements of the National Network working together



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To sign up for *SSTI Weekly Digest* go to:

<http://www.ssti.org>

Morning Break



Establishing an Integrated National Network

Future Is Now

MEP National Network Framework



MEP
**National
Network™**

*The Go-To Experts for Advancing
U.S. Manufacturing*





MEP National Network

The Go-To Experts for Advancing U.S. Manufacturing

National Network Development Chronology

- **Fall 2016** MEP Update Meeting – NIST MEP Leadership announced the need for Centers to address the future technology needs of SMMs
- **January 2017** – Collection of Centers met and selected 6 Centers as a FIN Core Team for Network development
- **March 2017** – Draft of Network Framework Developed
- **June 2017** - FIN Core Team submits a proposal to demonstrate the power of the Network using cybersecurity
- **September 2017** – Expanded FIN Team meet to review Framework and begin work on a Framework Appendix to operationalize the Network
- **January 2018** – Framework and Appendix finalized
- **February 2018** – Center Leadership Team populated



Examples of Activities Supporting Network Behaviors

- **Cybersecurity Competitive Award Program (CAP)**
 - Six Centers were awarded a CAP to demonstrate the National Network through the development and adoption of cybersecurity services
 - Tasked with creating a framework for cybersecurity services, piloting the services and establishing regional “Go To” Centers for cybersecurity
- **Regional Meetings**
 - PacNW Regional Technology Transfer meeting, including Centers from Other Regions
 - Southwest Regional Meetings on Operational and Performance Improvement, Including Sessions with NIST-MEP staff
- **Cross Center Sharing**
 - Two Centers from Western and Southwest Regions collaborating on major Additive Manufacturing Workshop, being offered in both states
 - Southwest Center invited to Central Center’s internal Social Media Workshop
 - Manufacturing USA workshops being offered by embedded Centers at the request of other Centers...NextFlex and Robotics scheduled in the next few months
 - Arkansas MEP provided KATA training to 2 Southwest Centers
 - One FIN Core Center has shared best practices, service offering research, training efforts with 11 Centers in the last 12 months
 - Centers reaching out to adjoining Centers with invitations to staff and manufacturers to join workshops,

National Network Center Leadership Team

- **MEP Center Directors**

- ✓ Tom Bugnitz – Manufacturers Edge (Colorado)
- ✓ Buckley Brinkman – Wisconsin Center for Manufacturing and Productivity
- ✓ Mike Coast – Michigan Manufacturing Technology Center
- ✓ Bill Donohue - GENEDGE (Virginia)
- ✓ Jim Shillenn – Pennsylvania IRC Network Foundation, Inc.
- ✓ Jim Watson – California Manufacturing Technology Consulting

- ✓ Bonnie Del Conte – CONNSTEP (Connecticut)
- ✓ Jennifer Hagan-Dier- University of Tennessee Center for Industrial Services
- ✓ Ethan Karp – MAGNET (Northeast Ohio)
- ✓ Chuck Spangler – SCMEP (South Carolina)

- **MEP Staff**

- ✓ Dave Cranmer – Deputy Director

National Network Definition

An organization of MEP Centers, collaborating with the MEP Program and Partners, that collectively act on a national or regional basis to provide solutions to the current and future needs of small and medium-sized manufacturers

Vision – “Go -To MEP Network”



MEPNN Vision Statement – We are the go-to resource for America’s manufacturers ensuring U.S. manufacturing is resilient and leads the world in manufacturing innovation.

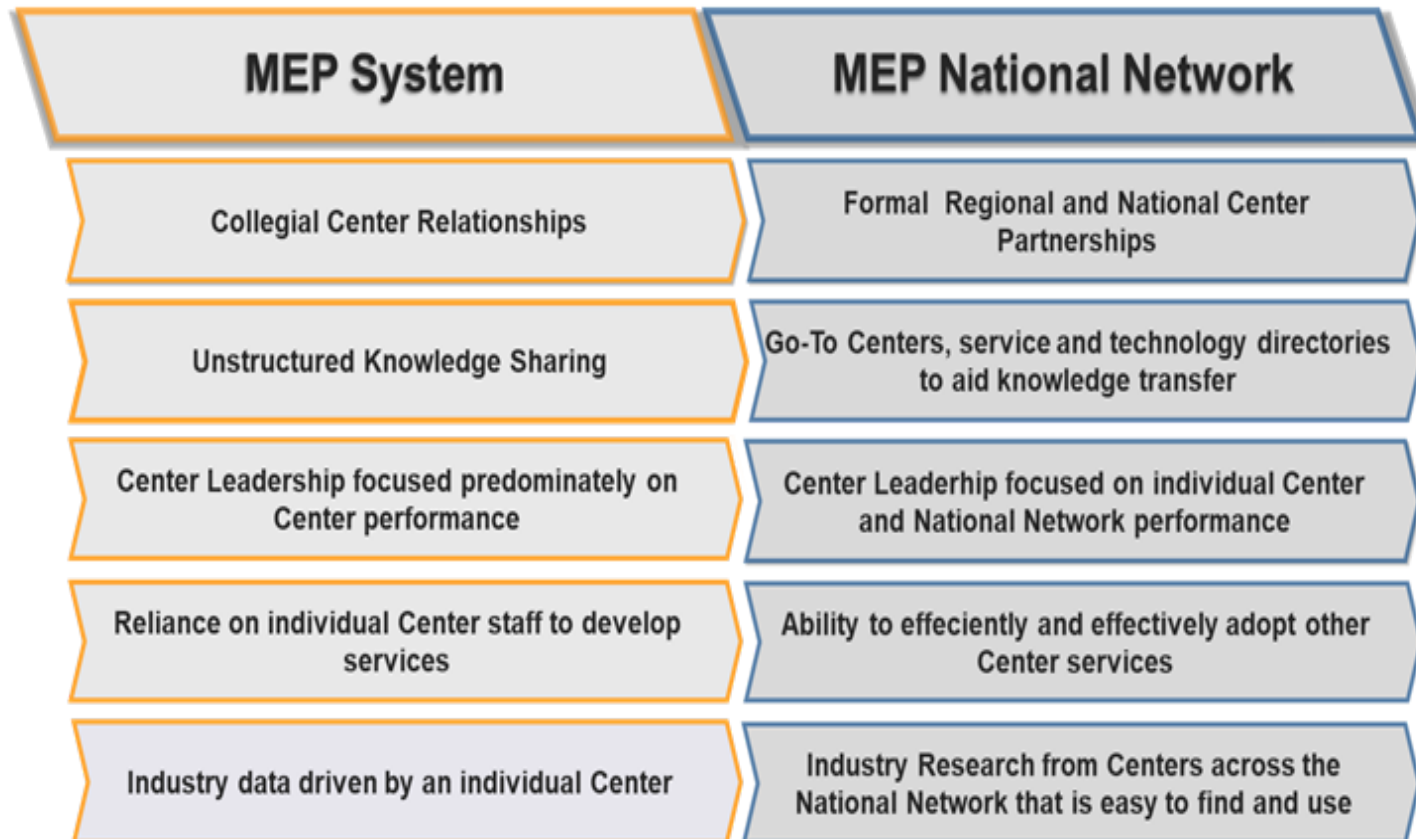
- Centers working together as a National Network
- Faster development & introduction of new capabilities, products, and services
- Access to capabilities/resources to provide solutions to complex challenges facing SMMs
- Provide seamless service offerings for supply chain

The National Network is Critical to the Future Success of the MEP Program

- Only a National Network will have the collective capabilities to solve the future technology needs of SMMs
- Only a National Network can leverage resources to serve more SMMs and increase impacts
- Only a National Network can provide seamless multi-state supply chain assistance
- Only a National Network can deliver on the Brand Promise to be the “Go-To Experts for Advancing U.S. Manufacturing”



Strategic Shift from an MEP System to a National Network



Network Participation Enhances a Center's Sustainability, Performance and Customer Value

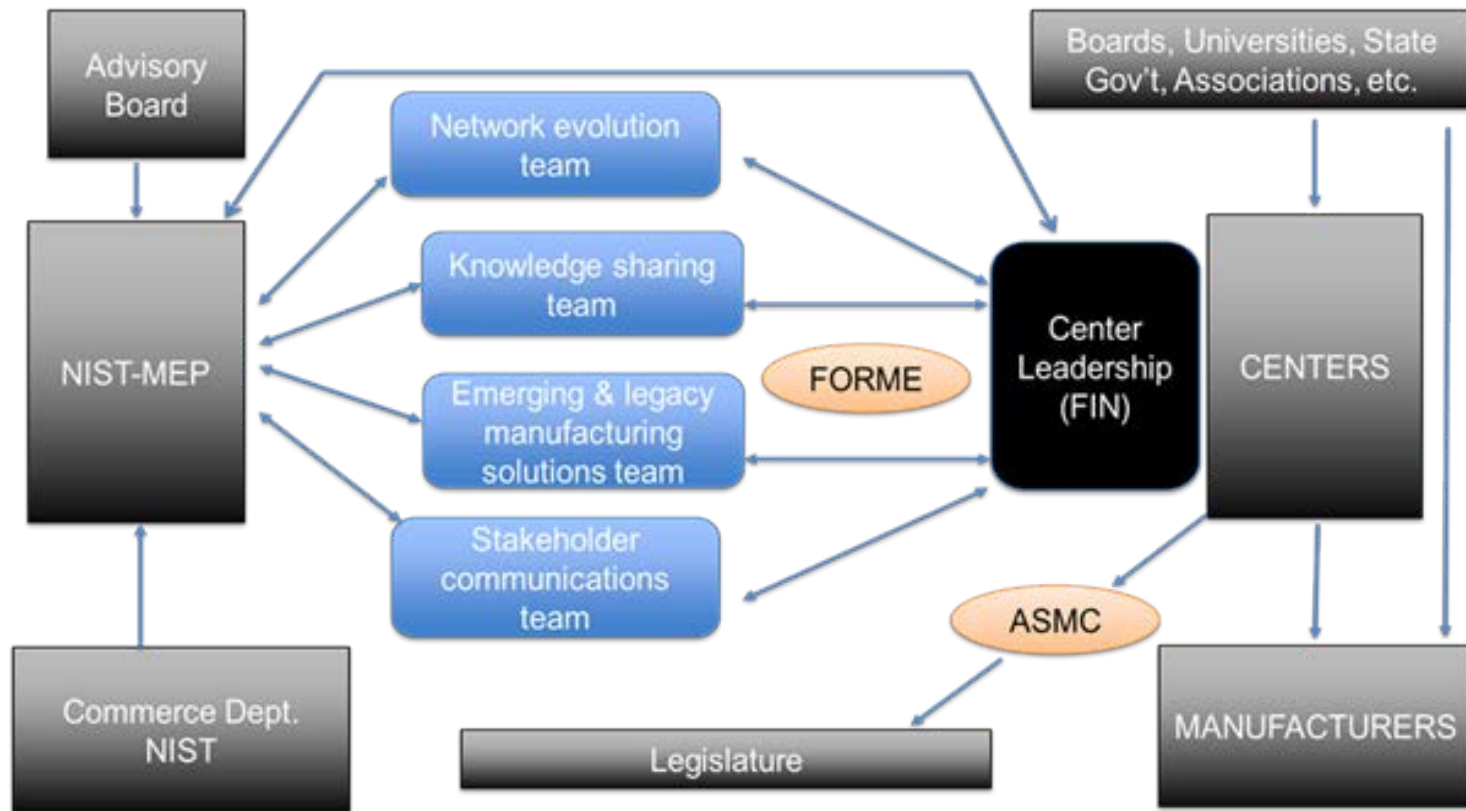
- Ability to think more broadly about serving manufacturers
- New capabilities to increase project activity, client fees and the number of manufacturers served
- More opportunities to participate in Multi-Center projects
- Access to capabilities to solve unique, complex business and technology challenges



National Network Principles and Behaviors sets the foundations for successful Center Interactions

Key Principles	Behaviors
Cooperation between Centers	Ready to assist with in-state and multi-state projects
Obligation to share resources and Best Practices	Actively providing assistance to solve another Center's business issues
Responsibility to adopt a common culture	Share values and approaches to support rapid network development
Support the use of "Go-To" Centers for expertise	Comfortable asking another Center for expertise to solve a client problem
Commitment of Centers with resources to help Centers in need	Leadership of Centers with resources are ready to provide assistance
Willingness to take risks to develop the National Network	Proactively engage in the Network knowing that it is new with open questions

National Network Operational Interrelationships



Next Steps to Operationalize the National Network

Short Term (6 months)

- Develop a Charter for the Center Leadership Team to effectively lead the National Network
- Finalize the Network Communications Plan and begin to secure Network participation
- Populate the Knowledge Sharing Team to collaborate with MEP Staff on Network strategies and objectives
- Formalize, encourage and document multi state engagements (e.g. cybersecurity)



Questions



MEP Advisory and Center Board Roundtables

Opportunity for Group Discussions

The Strategic Plan and the Future is Now (FIN) Framework
at the Center Level



Session Details

- Opening: Jeff Wilcox, MEP Board Chair & Dave Cranmer, MEP Deputy Director
- Assigned Tables: Advisory Board & Center Board by Region
- Two Questions
 - Integrated National Network Approach to Service and Delivery
 - ✓ Information and resources needed?
 - Network Citizenship as a Measure of Success
 - ✓ Behaviors of a “good” network citizen at the Center level?

