

# Executive Memorandum for Presidential Candidates

Innovation Advocacy Council  
October 2016

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# Introduction

## What Is Technology-Based Economic Development?

The American economy is increasingly driven by technology and innovation, through the creation of new industries and advancements in traditional industries. At the national, state, and regional levels, an economy composed of innovative firms requires five core elements.

- *Capacity for Scientific Research.* The capacity to conduct scientific research in universities, federal labs, or the private sector can be bolstered by centers of excellence, university-industry partnerships, and initiatives to expand research facilities, recruit eminent scholars, or increase research funding.
- *Transfer of Research to New Products and Businesses.* Research is an economic driver when it is converted into products or businesses with high commercial potential and can be promoted by proof-of-concept funds and centers and pilot-scale production and scalability testing.
- *Support for Entrepreneurs.* The creation and success of new businesses requires a structure that enriches the skills and abilities of entrepreneurs and can include venture development organizations, mentorship programs, and accelerators or incubators.
- *Access to Capital.* The availability of capital to support startup and emerging companies is critical and is often developed through angel investor tax credits, public capital that leverages private investment funds, and partnerships to expand awareness of opportunities.
- *Technically Skilled Workforce.* Industries want workers who can keep pace with advancement, and constituents want well-paying jobs. Common desire for a technically skilled workforce is facilitated by technical training and initiatives to encourage participation in STEM fields.

## The iSTEP Model

SSTI has developed a comprehensive platform of strategies to grow the nation's economy through innovation, technology, and entrepreneurship. These are encompassed in the Innovative Science & Technology for Economic Prosperity (iSTEP) model, which underwent extensive research to determine voters' opinions thereof.

In the fall of 2015, SSTI undertook a bipartisan national poll of 1,000 likely voters, including 588 in battleground states. It's clear that an overwhelming majority of voters support this platform. Significant findings include:

- 89 percent of voters nationally and 92 percent of voters in presidential battleground states support this initiative.
- 92 percent of presidential swing voters and 89 percent of independents support the iSTEP initiative.

- Each of iSTEP’s component parts find majority support, ranging from 95 percent to 74 percent nationally.
- 82 percent of economically disaffected voters support the initiative.
- **Nearly two in three voters (65 percent) describe themselves as more likely to support a candidate for president who supports the iSTEP proposal, including 66 percent in battleground states.**

The **Innovative Science & Technology for Economic Prosperity (iSTEP)** model calls for:

- Increased investment in scientific research;
- A dedicated effort to convert government-funded research into new companies and jobs;
- Streamlining government regulations so innovators can more easily, but still safely, bring new products, technologies, and cures to the American people;
- Increasing access to financing for innovative startups and existing companies that are creating new products and jobs; and,
- Making smarter investments in science, technology, engineering and math education in U.S. high schools and universities to ensure American talent continues to be the best in the world.

## Talking About Innovation

Our research also includes valuable lessons about successfully talking to voters about investing in innovation and technology for economic prosperity, including the following key messages.

- *It’s not only the economy.* While participants respond to the message of economic prosperity, they are also attracted to examples that demonstrate social benefits in terms of education and health care. The sweet spot is a case study that involves both jobs and social benefits.
- *Scale matters.* It is important to highlight the big-picture impacts of investment in innovation and technology. Examples that talk about thousands of jobs fared better with participants than examples that talk about fewer jobs.
- *Examples can help address resistance to any concerns about “government” involvement.* In a series of examples that were tested with voters, the strongest reaction came to one involving “Innovation Works” in Pennsylvania (see page 27). This case study not only involves an impressive scale (600 businesses and 3,000 jobs), but also provides reassurances that government involvement is not necessarily a bad thing. Taxpayers earned a strong return on investment. Seventy percent of businesses still have their doors open, suggesting that government did not screw this up. These assurances may be important, particularly in front of more conservative audiences.

## About the Innovation Advocacy Council and SSTI

The Innovation Advocacy Council (IAC) is SSTI's voice in Washington, D.C. on issues related to innovation, economic development, entrepreneurship, and technology. Active since 2012, the IAC has successfully grown Congressional support for its policy priorities, including the Regional Innovation (RI) Program at the Economic Development Administration.

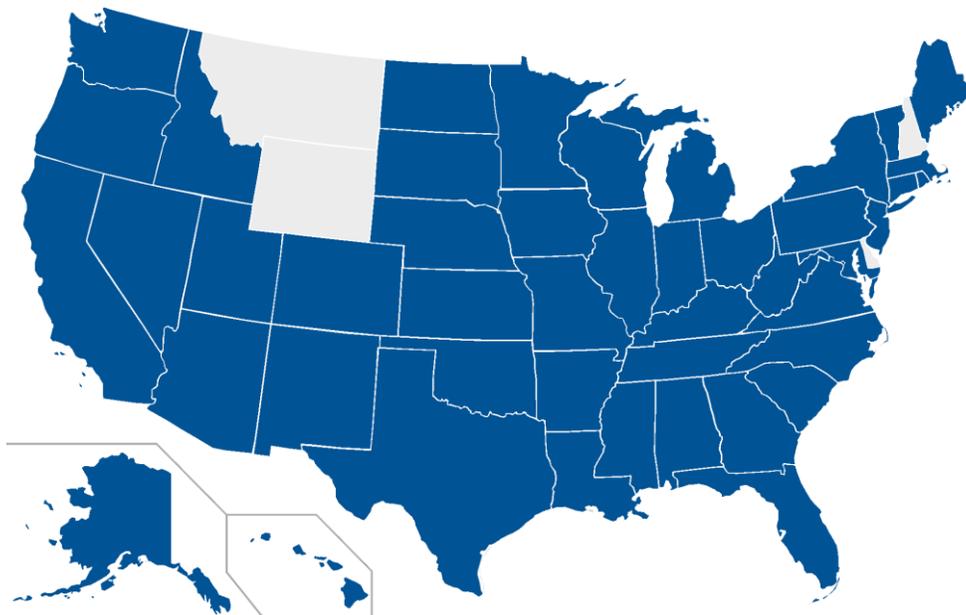
Originally created under the America COMPETES Act of 2010, the RI Program remained unfunded by Congress until the IAC began its advocacy work in Washington, D.C. In the program's first two years of Congressional funding, more than 400 applications were submitted from all 50 states, the District of Columbia, and Puerto Rico. In those two fiscal years, 51 funding awards were made, and Congressional funding continues to grow.

SSTI is a national nonprofit organization dedicated to improving initiatives that support prosperity through science, technology, innovation, and entrepreneurship. It is the community for state, university, local, regional, and federal innovation leaders—people who work to create a climate where prosperity occurs organically through science, technology, innovation and entrepreneurship.

Since its inception in 1996, SSTI has developed a nationwide network of practitioners and policymakers dedicated to improving the economy through science, technology, innovation and entrepreneurship. To best nurture more vibrant economies, SSTI conducts research on common performance standards, identifies best practices, analyzes trends in and policies affecting tech-based economic development, and fosters greater cooperation among and between all public, private, and nonprofit organizations encouraging prosperity.

SSTI has unparalleled access to the people that are most in demand for their experience. More than 150 of the country's strongest technology-based economic development organizations are active members of SSTI. Most vital to SSTI's success is the high degree of trust these practitioners and decision makers place in SSTI's work. That trust is based on SSTI consistently delivering products and services that are high quality, useful, fair and impartial.

*States with SSTI member organizations*



# Policy Solutions

## Principles

The *SSTI Policy Agenda* aims to support the individuals, institutions, and processes producing innovations that improve quality of life through technological advancement and economic prosperity.

To meet this mission, SSTI's policy framework is structured around six objectives:

- Grow federal government partnerships for locally-designed strategies.
- Facilitate the conversion of research into new jobs and businesses.
- Improve capital access for high-growth small businesses and startups.
- Ensure the workforce is trained for the jobs of the future.
- Empower national institutions to support the innovation economy.
- Increase scientific research and development.

## Policies

The below represents the tenets of the iSTEP initiative, as well as specific policy ideas presidential candidates should adopt in order to grow the nation's innovation economy.

### Grow federal government partnerships for locally-designed strategies

Across the country there are networks of activity, funded by states, universities, and local government, with proven track records in creating jobs, boosting economic growth, and forming new companies. These partnerships catalyze the development of strategies to encourage the creation and growth of innovation- and technology-focused companies. To continue growing these networks, and to establish them in all regions of the country, federal partnership is needed.

SSTI's highest policy priority is to support and grow opportunities for the federal government to partner with cities, states, regions, and nonprofit organizations. New federal support is needed to fill the gaps that currently exist within regional innovation networks, and current federal programs—including the Economic Development Administration's (EDA's) Regional Innovation (RI) Program, the Small Business Administration's (SBA's) Regional Innovation Clusters, and the Department of Energy's Small Business Voucher program—should be expanded.

Voter support is strong for federal government partnerships that strengthen local technology-based economic development strategies. We asked voters if they would support a policy change to “develop federal government partnerships with cities, states and regions and non-profit organizations to help fund locally-designed strategies that encourage the creation and growth of technology companies.” This proposal was met with overwhelming support from 78 percent of voters overall and 81 percent of voters in battleground states.

SSTI will continue its work to grow opportunities for the federal government to support regionally-based innovation work. We hope the next president will engage in this effort, in addition to supporting the policy ideas described below.

### Facilitate the conversion of research into new jobs and businesses

Converting research to economic outcomes begins when results reveal solutions to problems or lead to the creation of new small businesses. To improve the rate of this conversion, SSTI supports:

- Implementing a new commercialization capacity grant program that would bolster regional strategies to convert research into new products and services throughout the country.
- Modernizing the Small Business Innovation Research (SBIR) program to make permanent its authorization and by allowing for commercialization activities.
- Strengthening Manufacturing USA by funding new centers and providing a longer runway to sustainability for all centers and supporting greater involvement of small businesses in the institutes.
- Streamlining regulations and providing incentives to facilitate the conversion of research from federal laboratories into new jobs and businesses.

### Improve capital access for high-growth small businesses and startups

High-growth small businesses and startups create the majority of new jobs. To improve the ability of these businesses to access financing, SSTI supports:

- Modernizing the State Small Business Credit Initiative to emphasize proven, sustainable programs.
- Revising federal economic development financing programs to allow funds to be used for equity investments and other early-stage capital to better support small businesses and startups.
- Policies and guidance that encourage federal economic development programs to specifically target grant, loan and investment opportunities to veteran, minority and women entrepreneurs.

### Ensure the workforce is trained for the jobs of the future

An innovation-driven economy will create jobs for all skill sets, and individuals should be equipped for the job of their choice. To ensure the workforce is trained for the jobs of the future, SSTI supports:

- Facilitating the availability of Workforce Innovation & Opportunity Act funds to support programs specifically designed to improve entrepreneurial and high-technology skills.
- Allowing foreign graduate students in STEM fields to remain in the country after completing their degrees.
- Creation of a Startup Visa to enable immigrant entrepreneurs to create innovation- and technology-focused small businesses and startups.
- Improving the country's broadband and wireless internet infrastructure to provide greater access for all citizens to information and opportunities.

- Increasing funding for programs and teachers for primary and secondary STEM education.

### Empower national institutions to support the innovation economy

To unlock the economy's full potential, our national institutions must be able to offer greater support for the entire innovation ecosystem. To empower these institutions, SSTI supports:

- Increasing funding for the Manufacturing Extension Partnership to reach more small and medium-sized manufacturers and implementing recommendation for 1:1 matching.
- Establishing a National Innovation Foundation to define, measure and promote innovation.
- Reauthorizing the U.S. Economic Development Administration to continue its mission of promoting innovation and competitiveness in all regions of the country.

### Increase scientific research and development

Innovation and research not only create jobs and businesses, but also help address some of the most serious problems in our communities. To increase scientific research and development, SSTI supports:

- Greater funding for basic research, particularly to help provide cures for disease, a path to a lower-carbon future, and expanding the boundaries of knowledge.

## Polling Data

**An 89 percent majority of likely 2016 voters and a 92 percent majority of voters in the presidential battleground states support the iSTEP (Innovative Science & Technology for Economic Prosperity) proposal.**

There are precious few public policy questions that attract that kind of consensus. Voters not only embrace this proposal, but impressive majorities of national and battleground voters say they are more likely to support a candidate for president who embraces this proposal. Moreover, while it may be easy to sign off on a compelling idea in a survey, these voters are also willing to commit their own tax dollars to pay for the initiative.

This initiative finds support because it speaks to something voters recognize as a fundamental—and fixable—problem in the American economy: our struggle to convert cutting edge research into benefits for all Americans. Simply put, we still lead the world in scientific and medical research; in terms of patents, world-class universities, and Nobel prizes, no other country comes close. But too often the jobs and economic benefits that might emerge from this research are shipped overseas or gather dust at some university laboratory.

This proposal is about changing that reality.

The following data reflect an online survey of 1,000 likely voters in the 2016 election taken September 22-30, 2015 and conducted by the bipartisan team of Greenberg Quinlan Rosner Research and TargetPoint. This survey included an oversample of 500 voters in the presidential

battleground states, for a total of 588 battleground voters.<sup>1</sup> This survey was informed by an online focus group conducted August 27, 2015 among 31 swing voters in presidential battleground states.

## The iSTEP Initiative

### Description of iSTEP, as Presented to Survey Participants

“As a country, we lead the world in scientific and medical research and innovative ideas. America is home to 70 percent of the world's Nobel Prize winners and three-quarters of the world's top 40 universities. However, we often fail to convert that research into benefits for all Americans—economic benefits like new jobs and new companies and quality of life benefits like medical treatments and cures. We need a new approach that increases our economic prosperity and quality of life through science, technology, innovation and entrepreneurship. This is where the Innovative Science & Technology for Economic Prosperity (iSTEP) initiative comes in. This is a comprehensive initiative focused on converting our nation's strength in research into new businesses and jobs and to bring the benefits of American innovation to the American people.”

Among other things, iSTEP calls for:

- Increased investment in scientific research.
- A dedicated effort to convert government-funded research into new companies and jobs.
- Streamlining government regulations so innovators can more easily, but still safely, bring new products, technologies, and cures to the American people.
- Increasing access to financing for innovative start-ups and existing companies that are creating new products and jobs.
- Making smarter investments in science, technology, engineering and math education in U.S. high schools and universities to ensure American talent continues to be the best in the world.

Fully 89 percent of voters nationally and 92 percent of voters in the presidential battleground states support the iSTEP initiative. Not surprisingly at this level of support, iSTEP enjoys the backing of Democrats (91 percent support) and Republicans (86 percent support) alike. It also draws support from college (93 percent) and non-college educated (85 percent), white (89 percent) and communities of color (88 percent), and married (90 percent) and non-married respondents (88 percent).

iSTEP also finds huge support among the voters who will decide political outcomes in 2016, including independent voters (89 percent support), swing voters (86 percent) and presidential swing voters (92 percent support).<sup>2</sup>

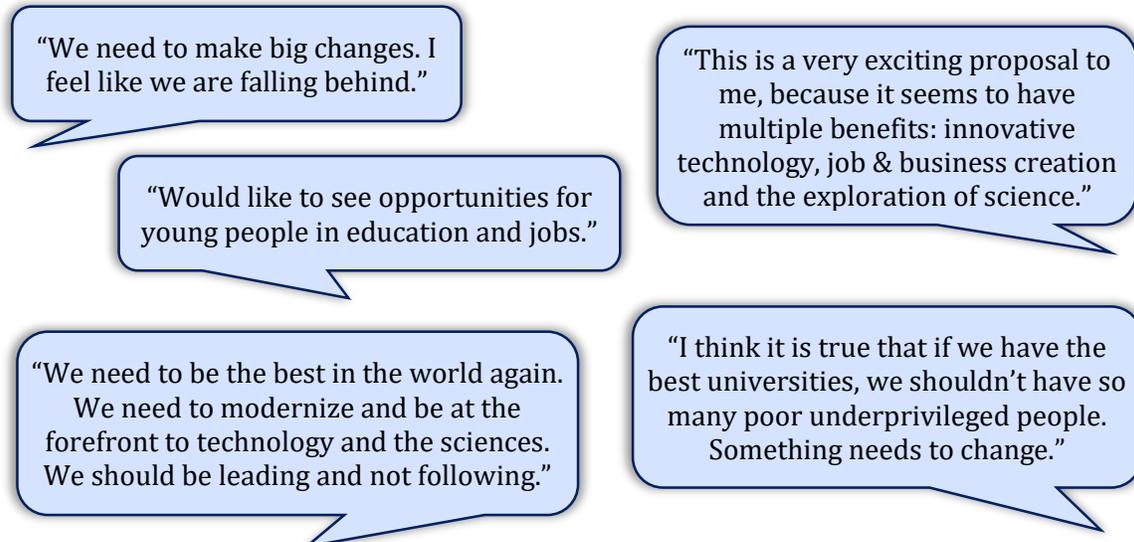
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<sup>1</sup> For the purpose of this survey, we define the battleground as the states of CO, FL, IA, NV, NH, NC, OH, VA and WI.

<sup>2</sup> Swing voters are voters who are completely independent, undecided in the presidential race, or who vote equally for Democrats and Republicans. Presidential swing voters are voters who are either undecided in the generic presidential race for president or who say there is a fair chance they would vote for the candidate for the other party of their first choice.

**During the focus group stage, the reasons participants initially supported the iSTEP proposal reflected the perceived economic benefit and the need for technology and innovation in the new economy.**

*Initial Reaction to iSTEP:*<sup>3</sup>



### Parts of iSTEP Find Majority Support

In addition to its broad objectives, the iSTEP initiative calls for specific policy changes:

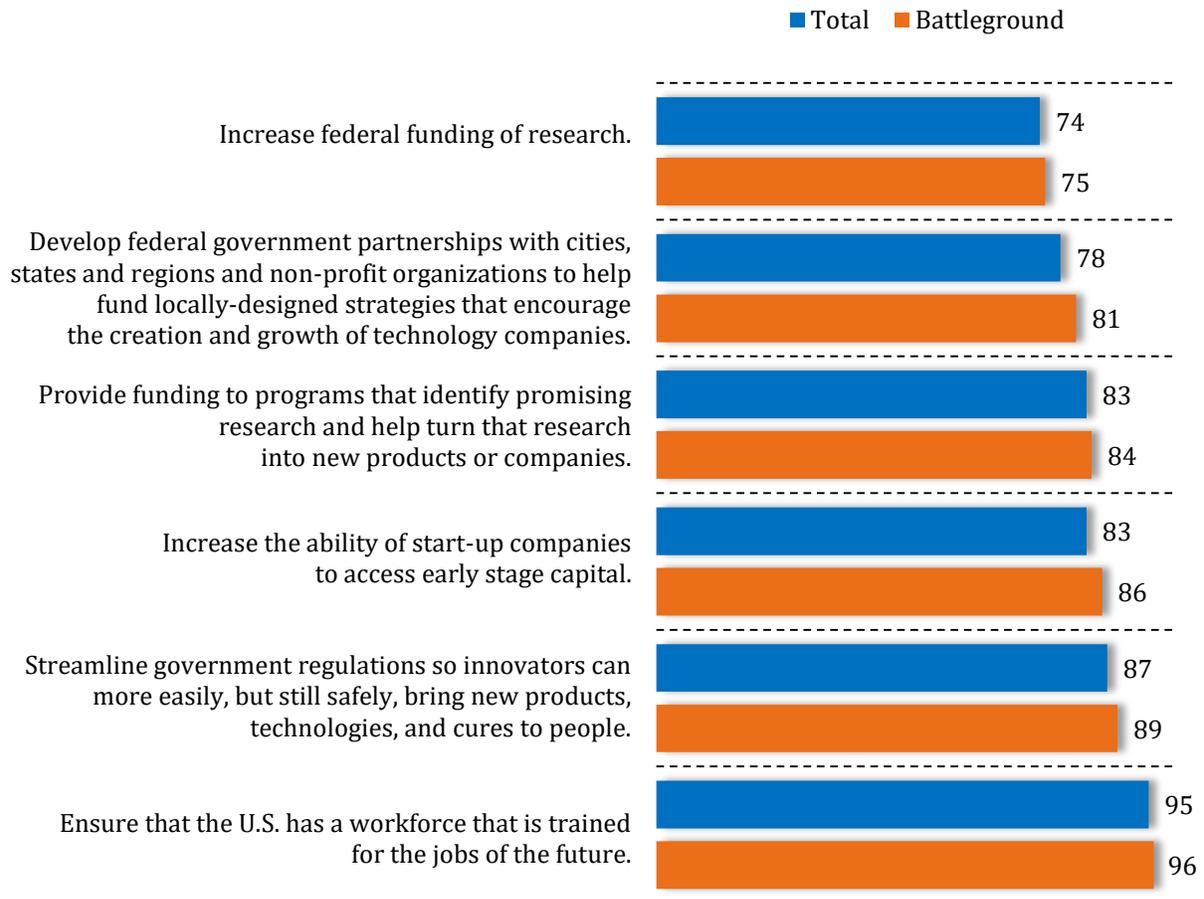
- Develop federal government partnerships with cities, states and regions and non-profit organizations to help fund locally-designed strategies that encourage the creation and growth of technology companies.
- Increase the ability of start-up companies to access early stage capital.
- Provide funding to programs that identify promising research and help turn that research into new products or companies.
- Increase federal funding of research.
- Ensure that the U.S. has a workforce that is trained for the jobs of the future.
- Provide a loan forgiveness program for college students majoring in science, technology, engineering or math.
- Streamline government regulations so innovators can more easily, but still safely, bring new products, technologies, and cures to people.

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<sup>3</sup> From: August 27<sup>th</sup> 2015 Focus Group

**Each of these finds majority support—ranging from 95 percent to 74 percent, nationally—when the iSTEP initiative is disaggregated.**

*Question: This initiative would involve a number of different policies. Here is a list of several specific policy changes some people have proposed to support this initiative. I want you to indicate your level of support for each.*

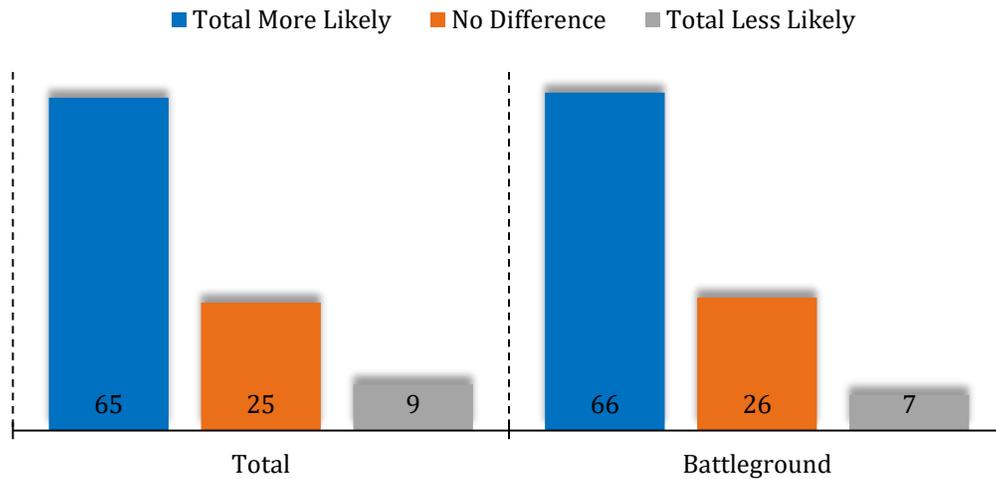


### Significant Potential Electoral Impact

A vast majority of voters, including a majority of voters in the presidential battleground, say they are more likely to support a candidate for President who supports the iSTEP initiative. This remains true among the independent and swing voters.

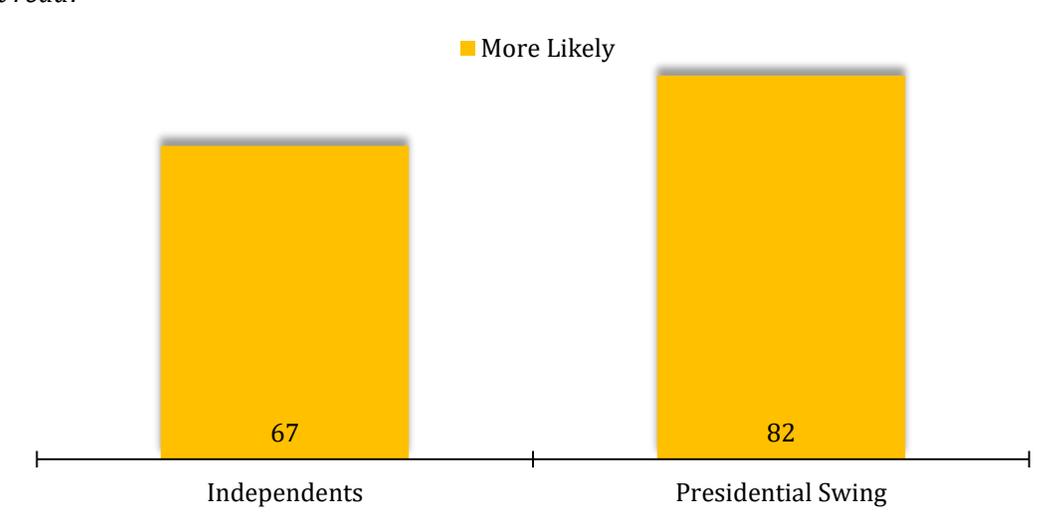
**All told, nearly two in three voters (65 percent) describe themselves as more likely to support a candidate for President who supports this iSTEP proposal, including 66 percent in the battleground.**

Question: Are you more or less likely to support a candidate for president who supports the proposal you just read?



**Among independent voters, 67 percent are more likely to support such a candidate. And among voters who are undecided or say there is a fair chance they would change their mind in the presidential election, a whopping 82 percent of voters are more likely to support a candidate who support iSTEP.**

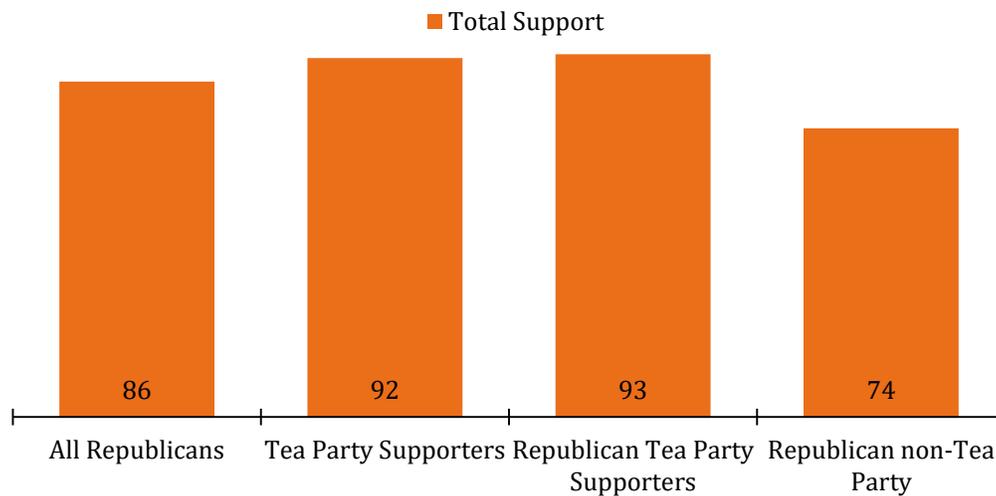
Question: Are you more or less likely to support a candidate for president who supports the proposal you just read?



**This initiative also addresses some of the key weaknesses each party faces going into the 2016 cycle.** For Democrats, this problem is one of intensity. Asked on a ten-point scale to rate their enthusiasm for voting in the 2016 elections, only 30 percent of Democrats describe their intensity level as a “10.” This compares to 46 percent among self-ascribed Republicans. However, among low-enthusiasm Democrats, 92 percent support the iSTEP proposal and 69 percent are more likely to support a candidate for President who supports this proposal.

The Republicans' issue is more about finding issues that unite more establishment-oriented Republicans and Tea Party supporters, while also attracting the support of swing and independent voters. And while the party is currently divided on candidate preferences in the Republican nomination for president, they unite in their support for iSTEP. Indeed, Tea Party Republicans are among the most supportive of any voters in the electorate (93 percent support; 74 percent support among non-Tea Party Republicans).

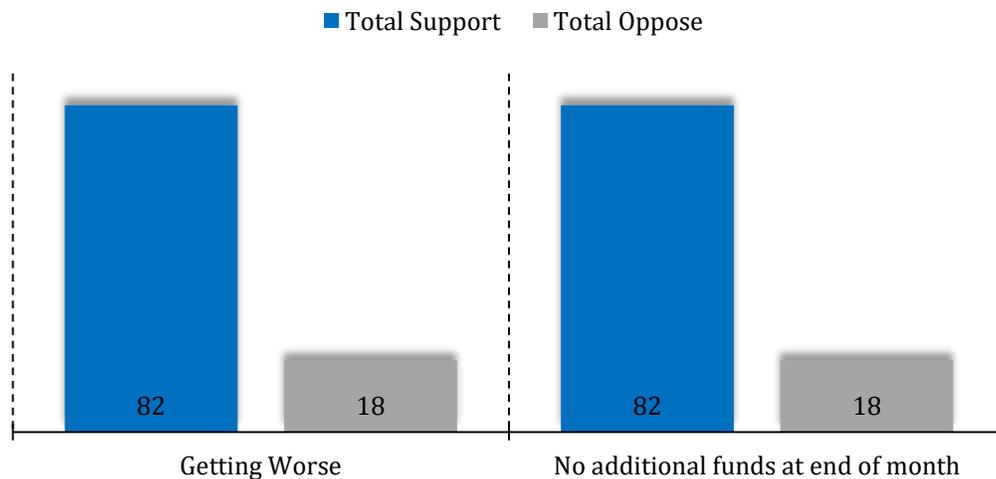
*Question: Overall, would you say you support or oppose this idea?*



**Importantly, the iSTEP initiative is very popular among economically disaffected voters.**

Many voters are still struggling with the current economy, and the economy remains the dominant issue of this election cycle. In this survey, only a third (32 percent) of voters describes the economy as “getting better.” Nearly one in three voters (28 percent) lives paycheck to paycheck or, worse, cannot make ends meet. An 82 percent majority of voters who believe the economy is getting worse supports iSTEP, as do 82 percent of voters who live paycheck to paycheck or who cannot make ends meet each month.

*Question: Overall, would you say you support or oppose this idea?*



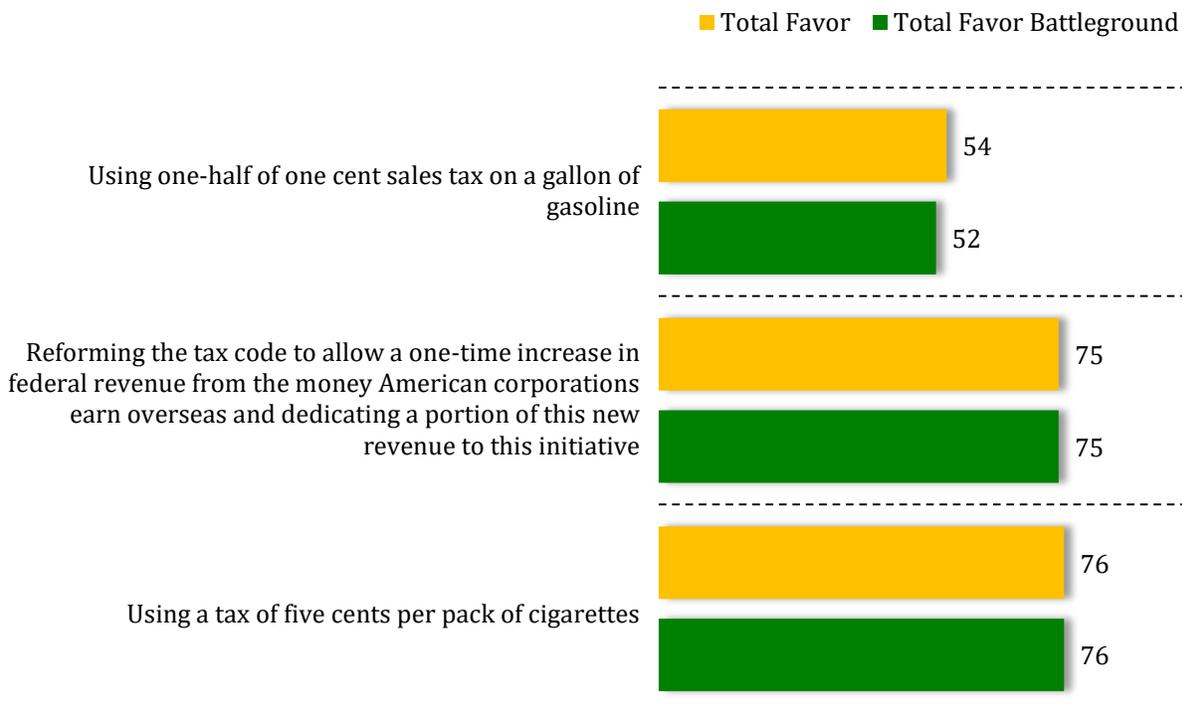
## Voters Commit to Paying for iSTEP

It is fairly easy for a voter to “support” a public policy proposal in a survey. It is quite another for a voter to commit their own tax dollars to a proposal. While there may be other potential financing systems, every idea tested in this survey finds majority support.

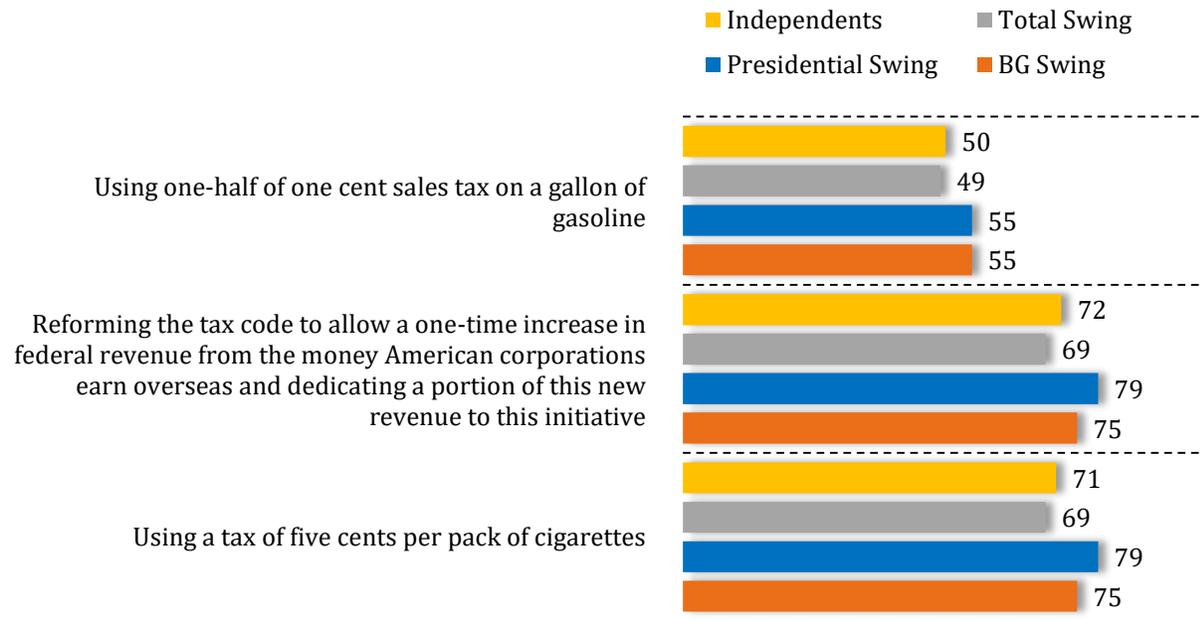
Even gas taxes, which politically are among the least popular sources of revenue, come in at 54 percent support. Among Republicans, nearly half (48 percent) support using a gas tax to pay for iSTEP. Among Tea Party Republicans, 49 percent support this.

**The results are clear: battleground voters, swing voters, and even Tea Party Republicans are willing to pay for iSTEP.**

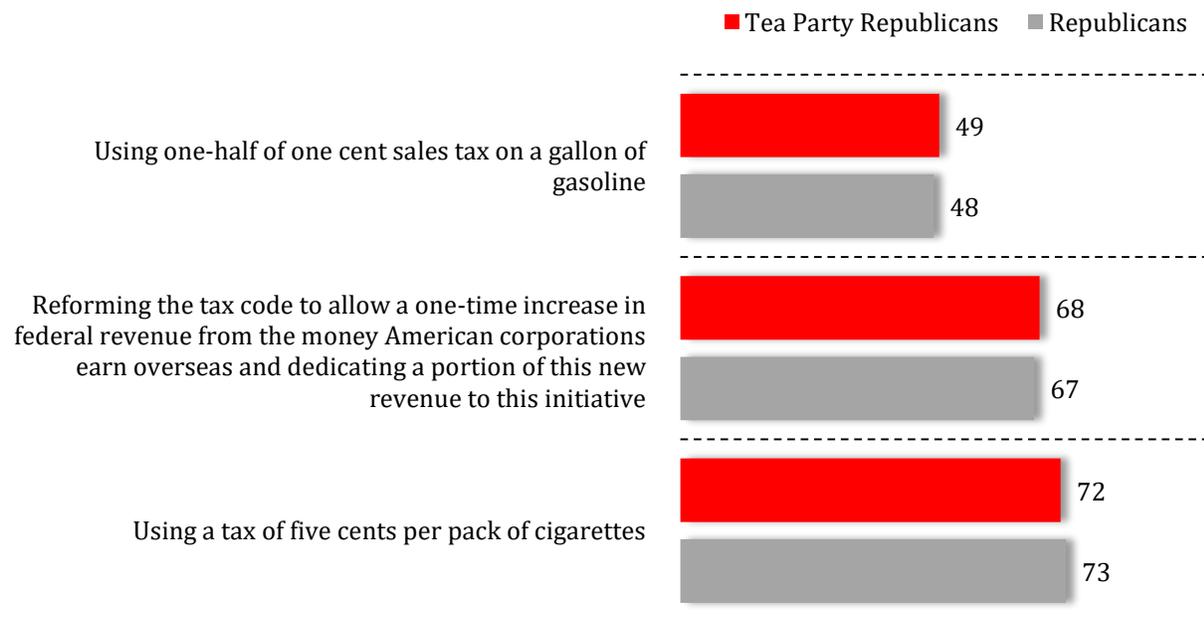
*Question: Here is a list of suggestions some people have made to pay for the iSTEP initiative. Please indicate if you support or oppose each suggestion.*



*Swing voters are willing to pay for iSTEP:*



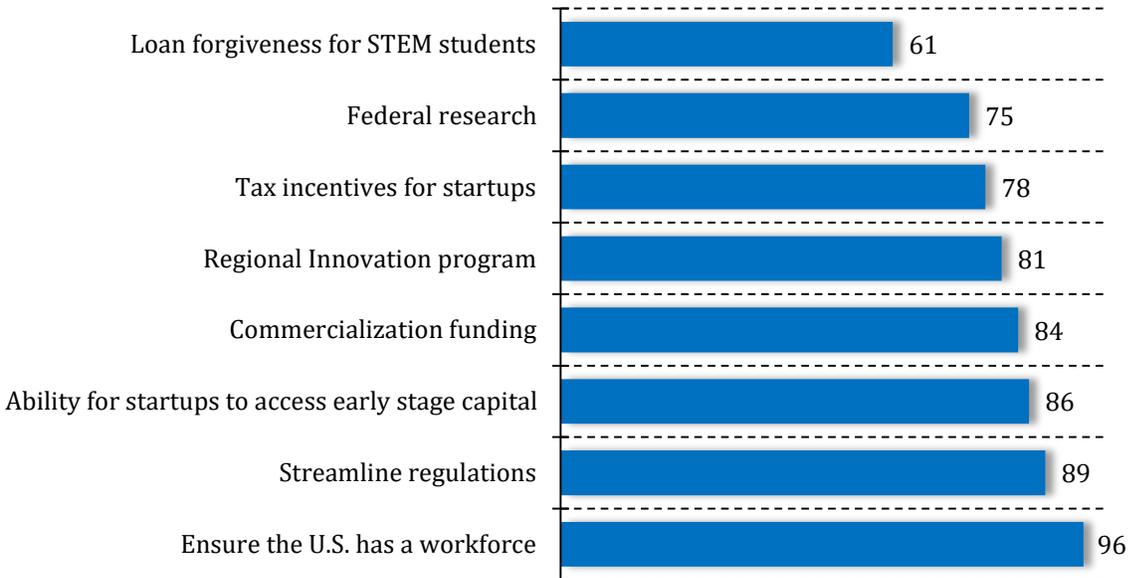
*Republicans, including Tea Party Republicans, also support most financing:*



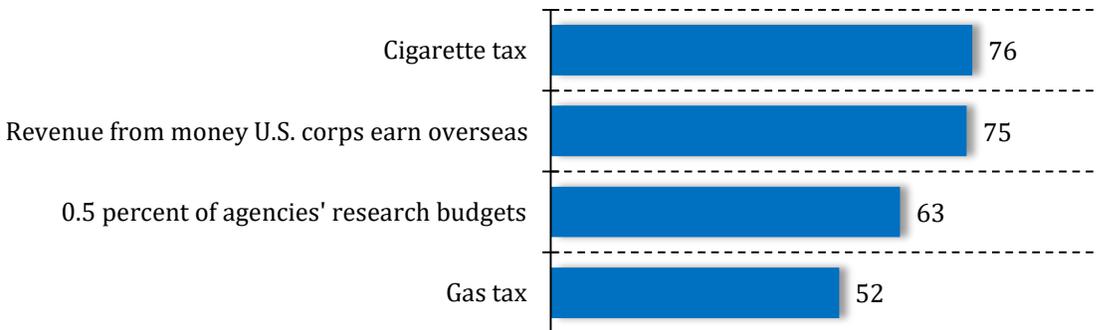
## iSTEP in the Battleground States

This project included an oversample of 588 likely voters in battleground states, defined as Colorado, Florida, Iowa, Nevada, New Hampshire, North Carolina, Ohio, Virginia, and Wisconsin. As mentioned previously, 92 percent of voters in battleground states support the iSTEP initiative. Additionally, **66 percent of battleground voters are more likely to support a candidate for president who supports the iSTEP proposal.** Among presidential swing voters, 82 percent are more likely to support a candidate for President who supports iSTEP.

*Battleground voters strongly support the individual planks of the iSTEP agenda:*



*And battleground voters are willing to pay for iSTEP:*



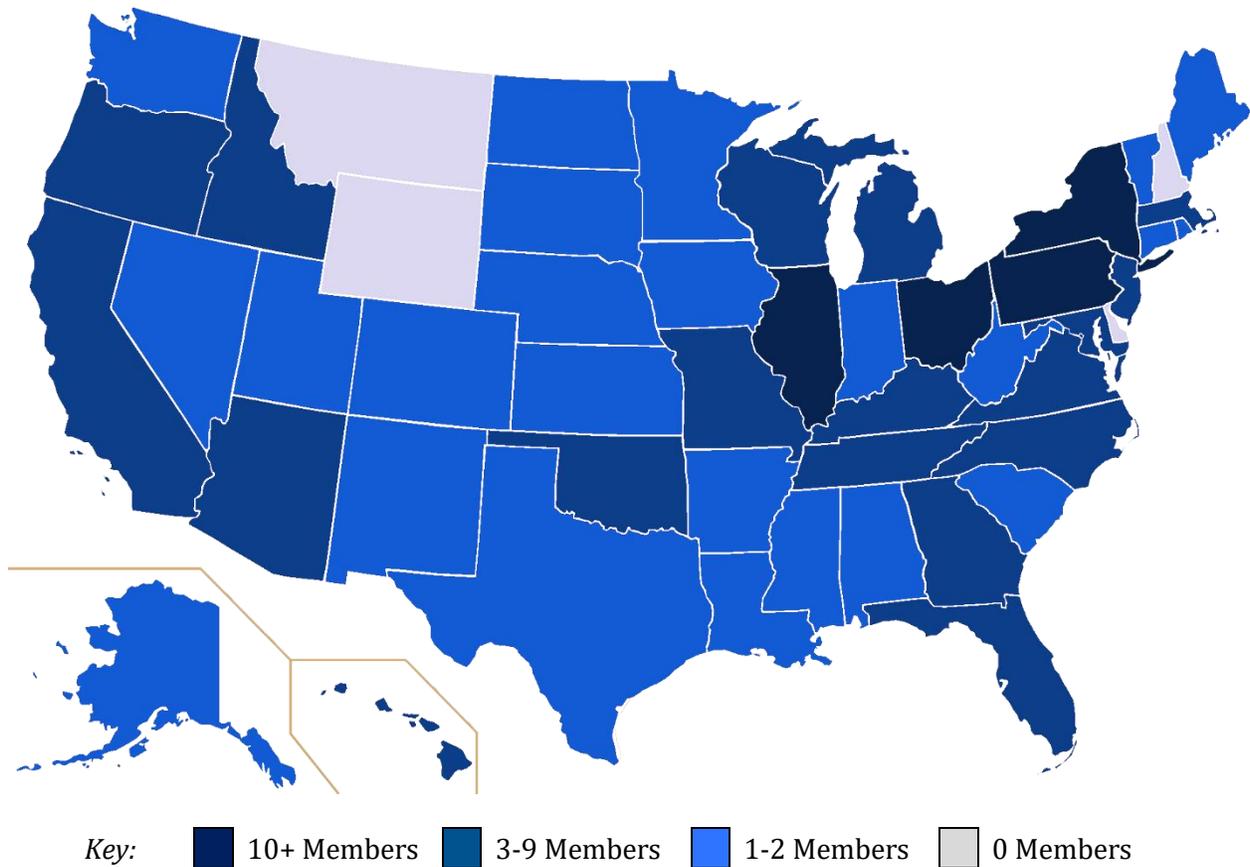
At a time when voters are fairly cynical about any policy initiative, the iSTEP proposal finds near-unanimous support. At a time when voters still struggle with the economy, this proposal speaks to economically disaffected voters. At a time when the country is divided evenly between the two parties, more than 65 percent say they are more likely to support a candidate for President who supports this proposal.

Officeholders and candidates would do well to research this idea further.

## SSTI in the Battleground States

SSTI's membership and the impacts of federal funding span the country, including the states that are proving to be most critical in the 2016 election (Florida, Georgia, Michigan, North Carolina, Ohio, Pennsylvania, and Wisconsin). In the following pages, we highlight these states with samples of the critical work being done there by SSTI member organizations. We also include examples of federal innovation dollars (Regional Innovation Program; SBA Cluster Program; and Manufacturing USA, formerly the National Network of Manufacturing Institutes) awarded to organizations in those states since 2010. Finally, we include for each state data on federal research and development investments, business research and development investments, and venture capital per capita.

*States by number of SSTI member organizations*



# Florida

## Select Federal Innovation Projects in Florida

CITY/REGION	PROGRAM: PROJECT
Rockledge	SBA Cluster: award for Space Coast cluster focused on aerospace sector
Tampa	Regional Innovation: grants to FirstWaVE Venture Center Program to provide support services to startups
Orlando	Regional Innovation: award to StarterCorps Seed Fund to establish a seed fund for Central Florida startups focused on innovative technology and advanced manufacturing
Fort Lauderdale	Regional Innovation: award to CareerSourceBroward for a proof-of-concept center to turn research and innovations into startups
East Central Florida	Regional Innovation: award to Space Coast Clean Energy Jobs Accelerator to grow this regional cluster by supporting startups, commercializing technology, and workforce education and training
Palm Beach County	Regional Innovation: award to examine the feasibility of establishing a science and research park for life sciences

## Spotlight on: The Florida High-Tech Corridor Council

The Corridor is a state legislature-created economic development initiative of the University of Central FL, University of South FL, and University of FL to attract, retain, and grow high-tech industry and workforce in the 23-county Corridor region, which is home to more than 60% of the state's high-tech activity.

Under its signature Matching Grants Research Program, The Corridor has partnered with 360+ companies on 1,400+ applied research projects involving nearly 400 faculty members and over 2,800 graduate students. Companies have complemented this investment of \$65.3 million with over \$180 million, together producing a downstream impact in excess of \$1 billion.

## The Sunshine State's Innovation Economy at a Glance

Metric	Amount	Rank
Federal Investment in R&D, FY2014	\$2.44B	14
Business Investment in R&D, 2013	\$5.79M	16
Venture Capital per capita, 2015	\$22.73	29

## SSTI in Florida

Energy Florida • Florida High Tech Corridor Council • Florida Institute of Technology • Hillsborough County Economic Development • University of Central Florida • University of Florida Research Foundation

# Georgia

## Select Federal Innovation Projects in Georgia

CITY/REGION	PROGRAM: PROJECT
Atlanta	Regional Innovation: Georgia Tech Research Corporation award to grow startup ecosystems in economically distressed areas and with Atlanta universities
Atlanta	Regional Innovation: award to the Georgia Institute of Technology to determine the feasibility of a research park focused on health and bioscience
Atlanta	Regional Innovation: Seed Fund Support award to the Global Center for Medical Innovation to accelerate health care startups focused on medical devices and medical technology
Atlanta	Regional Innovation: award to Georgia Tech and Gwinnett Tech to support commercialization and workforce training in Atlanta's Health Information Technology cluster

## Spotlight on: Georgia Research Alliance

The GRA grows Georgia's economy by expanding university research capacity and by seeding and shaping startup companies around inventions and discoveries. It is a nonprofit organization working in partnership with the University System of GA and the GA Department of Economic Development.

Since its formation in 1990, GRA has leveraged \$630 million of state funding into over \$4 billion of direct federal and private investment in Georgia. In addition, GRA has supported 150+ newly launched companies. The GRA Ventures portfolio has generated over \$660 in revenue, created 1,500 new jobs and received over \$1 billion in equity investment. Finally, the GRA Eminent Scholar Academy is a \$300 million research enterprise that supports 1,600 university jobs.

## The Peach State's Innovation Economy at a Glance

Metric	Amount	Rank
Federal Investment in R&D, FY2014	\$1.25B	22
Business Investment in R&D, 2013	\$4.02M	23
Venture Capital per capita, 2015	\$81.85	14

## SSTI in Georgia

Georgia Research Alliance • Georgia State University • University of Georgia

# Michigan

## Select Federal Innovation Projects in Michigan

CITY/REGION	PROGRAM: PROJECT
Detroit	Manufacturing USA: Lightweight Innovations for Tomorrow manufacturing institute focused on the manufacture of lightweight metal
Ann Arbor	Regional Innovation: planning award to Ann Arbor SPARK to create a Connected and Autonomous Vehicle Development Center
Southeast Michigan	Regional Innovation: funding for Advanced Contract Manufacturing of Southeast Michigan Cluster to put a new business model into place
Marquette	SBA Cluster: award to Upper Michigan Green Aviation Coalition to grow the green aviation sector
Detroit	Regional Innovation: award to Southeast Michigan Advanced Energy Storage Systems Initiative to train skilled workers and grow the advanced energy storage field

## Spotlight on: TechTown

TechTown is Detroit's most established business accelerator and incubator, offering a full suite of entrepreneurial services for both tech and neighborhood enterprises. TechTown helps startup and established businesses develop, launch and grow, while strengthening and diversifying the local economy.

TechTown's Labs programs include tech-centric business acceleration, as well as proof of concept, incubation, and commercialization services. Blocks programs offer small business support services that help launch and stabilize local businesses and catalyze neighborhood commercial districts.

In the last eight years, TechTown has served nearly 1,500 companies, which created more than 1,200 jobs and raised more than \$112 million in capital.

## The Great Lakes State's Innovation Economy at a Glance

Metric	Amount	Rank
Federal Investment in R&D, FY2014	\$1.85B	20
Business Investment in R&D, 2013	\$15.92M	3
Venture Capital per capita, 2015	\$33.10	27

## SSTI in Michigan

Business Leaders for Michigan • Michigan's University Research Corridor • TechTown

# North Carolina

## Select Federal Innovation Projects in North Carolina

CITY/REGION	PROGRAM: PROJECT
Raleigh	Manufacturing USA: Power America manufacturing institute focused on semiconductor technology
Chapel Hill	Regional Innovation: award to UNC Chapel Hill and other institutions for Technology Commercialization Carolina to grow innovation, startups, and job creation and educate entrepreneurs
Durham	Regional Innovation: award to the Triangle Venture Alliance to engage regional university alumni to grow seed capital
NC & SC	SBA Cluster: Carolinas' Nuclear Cluster to grow small businesses in the nuclear industry supply chain and commercialize nuclear energy research
Western NC	Regional Innovation: award to WNC AgriVentures to aid businesses in the sustainable agriculture and natural resources industries by helping them access the state's R&D outputs
Durham	Regional Innovation: Northern Carolina Eastern Region Aerospace and Automotive Cluster Project to improve automotive and aerospace supply chains

## Spotlight on: NC Biotech Center

NCBiotech's vision is to make North Carolina a global life science leader. The NC General Assembly created the non-profit organization in 1984 to accelerate life science technology-based economic development. NCBiotech nurtures the life science ecosystem that contributes \$73 billion, 237,000 jobs and \$1.7 billion in tax revenue to the state's economy.

NCBiotech programs invest dollars, expertise and time to support technology, company and sector development statewide. For each NCBiotech dollar, loan portfolio companies on average leverage \$109 in additional investment.

This one program generates \$70M in taxes annually, or 5.1 times NCBiotech's appropriation.

## The Tar Heel State's Innovation Economy at a Glance

Metric	Amount	Rank
Federal Investment in R&D, FY2014	\$1.88B	19
Business Investment in R&D, 2013	\$8.08M	11
Venture Capital per capita, 2015	\$67.26	16

## SSTI in North Carolina

North Carolina Biotechnology Center • RTI International

# Ohio

## Select Federal Innovation Projects in Ohio

CITY/REGION	PROGRAM: PROJECT
Youngstown	Manufacturing USA: America Makes designated as National Additive Manufacturing Innovation Institute
Rootstown	Regional Innovation: proof of concept center to accelerate development of new drugs by connecting researchers with companies
Youngstown	Regional Innovation: Valley Growth Ventures, LLC seed fund award to revitalize the local steel industry
Lima	Regional Innovation: High Strain Rate Metal Forming Commercialization Center brings together researchers, government, and businesses to increase commercialization
Cincinnati	SBA Cluster: Southwest Ohio Water cluster to commercialize water quality technology
Appalachian Ohio	SBA Cluster: Wood Products Cluster to grow and diversify the wood products industry
Cleveland	SBA Cluster: FlexMatters award to grow the flexible electronics industry in 21 counties
Cleveland	Regional Innovation: award for a Northeast Ohio Speed-to-Market Accelerator focused on the flexible electronics cluster

## Spotlight on: JumpStart

JumpStart is a Cleveland-based public, private, and philanthropic partnership which enables diverse entrepreneurs to transform communities. JumpStart manages three venture capital funds, provides technical assistance, and manages a collaboration of 13 entrepreneurial support organizations. Collectively, this group has helped more than 1,100 early-stage entrepreneurs raise over \$2 billion in additional risk capital, generate over \$1.7 billion in revenue, create more than 10,000 total jobs and generate more than \$3 billion in cumulative economic impact for the state of Ohio.

## The Buckeye State's Innovation Economy at a Glance

Metric	Amount	Rank
Federal Investment in R&D, FY2014	\$2.45B	13
Business Investment in R&D, 2013	\$8.11M	10
Venture Capital per capita, 2015	\$22.62	30

## SSTI in Ohio

BioHio Research Park • Bush Consulting • Case Western Reserve University • CincyTech • City of Dublin • Cleveland Water Alliance • JumpStart Inc. • Lorain County Community College Foundation • Development Services Agency • Ohio University • Rev1 Ventures • Science & Technology Campus Corp. • SSTI • TEconomy Partners, LLC • University of Cincinnati • University of Dayton Research Institute

# Pennsylvania

## Select Federal Innovation Projects in Pennsylvania

CITY/REGION	PROGRAM: PROJECT
Southwestern PA	Regional Innovation: award to support rural manufacturers and connect them with high-growth startups
Central PA	Regional Innovation: award to TechCelerator to support researchers in evaluating whether to pursue entrepreneurship and help them successfully create new companies
Philadelphia	Regional Innovation: Greater Philadelphia Advanced Manufacturing Innovation and Skills Accelerator to grow the region's manufacturing industry
Philadelphia	SBA Cluster: award to Greater Philadelphia Innovation Cluster to grow the regional economy of technology for energy efficient buildings
Philadelphia	Regional Innovation: Seed Fund Support Grant to grow capital for businesses in the regional impact economy
Blairsville	Regional Innovation: award for Agile Electro-Mechanical Product Accelerator to grow industry clusters

## Spotlight on: Ben Franklin Technology Partners

BFTP is a non-profit organization created by the state of Pennsylvania in 1982 to support regional innovation and entrepreneurship. BFTP, which is divided into four regional organizations, provides seed and risk capital to early-stage technology companies and established manufacturers.

Between 2007 and 2011, BFTP boosted the state's economy by \$6.6 billion, created 7,485 new jobs in client industries that pay 36% higher wages than average, and provided the state with a 3.6 to 1 return on investment. Cumulatively since 1989, BFTP helped the state's economy grow by more than \$23.5 billion and generated a total of 140,000 new jobs attributable to the organization's work.

## The Keystone State's Innovation Economy at a Glance

Metric	Amount	Rank
Federal Investment in R&D, FY2014	\$3.69B	10
Business Investment in R&D, 2013	\$10.76M	9
Venture Capital per capita, 2015	\$49.85	21

## SSTI in Pennsylvania

Ben Franklin Technology Partners • Carnegie Mellon University • Concurrent Technologies Corp. • Innovation Collaborative • Innovation Works • Lehigh University • Northwest Industrial Resource Center • Dept. of Community & Economic Development • University City Science Center • University of Pittsburgh • Urban Innovation21

# Wisconsin

## Select Federal Innovation Projects in Wisconsin

CITY/REGION	PROGRAM: PROJECT
Milwaukee	Regional Innovation: award for Milwaukee Regional Water Accelerator Project to grow the region's water cluster and ensure a skilled workforce in the water technology space
Milwaukee	SBA Cluster: award to create a Center of Excellence for Freshwater Innovation and Small Business Development to support small businesses in commercialization and growth
Central and South-Central WI	Regional Innovation: proof-of-concept commercialization center focused on the residual chemicals created by producing and processing vegetable crops
Milwaukee	Regional Innovation: Wisconsin Water Cluster Seed Capital Fund Grant to establish a seed fund to help companies bring water technology research to market

## Spotlight on: The Water Council

The Water Council was established in 2009 by Milwaukee-area businesses, education and government leaders. With 180+ members, it connects global water technology companies, innovative water entrepreneurs, academic research programs, and leading water professionals. The Water Council has transformed the Milwaukee region into a World Water Hub.

Since 2010, the Council has identified and tracked \$211.6 million in public/private investment in Milwaukee's Water Technology District. It has also debuted the first freshwater seed accelerator, opened a \$22 million Global Water Center, and introduced the ICE (Innovation. Commercialization. Exchange.) Institute to identify, catalog, and connect research at federal and university labs with industry to bring innovations to market.

## The Badger State's Innovation Economy at a Glance

Metric	Amount	Rank
Federal Investment in R&D, FY2014	\$701M	27
Business Investment in R&D, 2013	\$4.22M	22
Venture Capital per capita, 2015	\$15.22	34

## SSTI in Wisconsin

The Water Council • Wisconsin Economic Development Corporation • Wisconsin Technology Council

# Talking with Voters About Innovation and the Economy

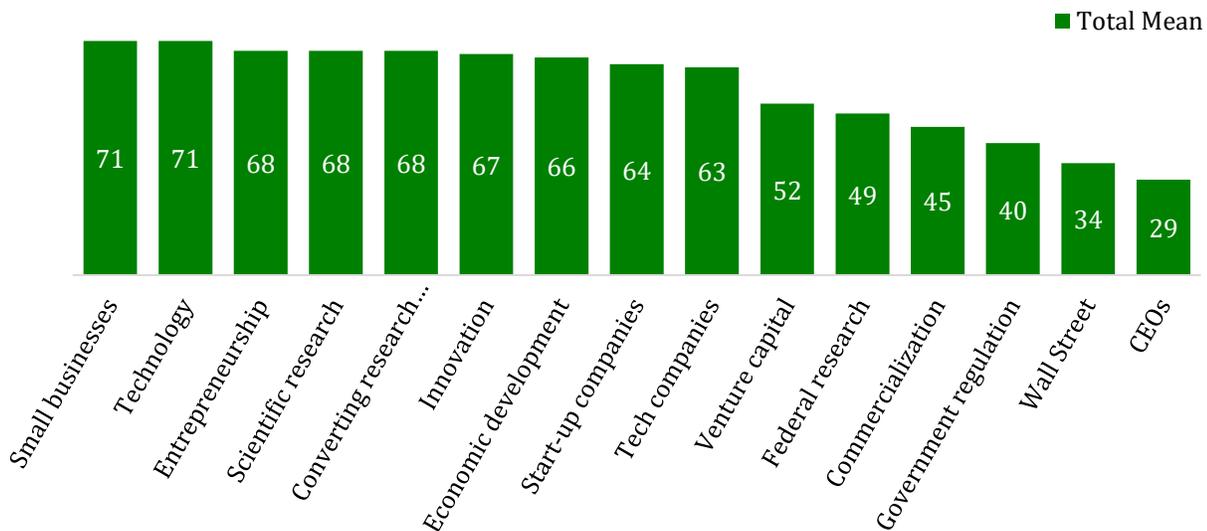
It's clear that voters respond to the iSTEP platform and that they understand its benefit for both them and the economy. But being able to communicate these ideas to voters is critical.

In the following pages, we provide insight into how to successfully talk to voters about the innovation economy.

## Key Words

Our research is clear: words matter. When talking to voters, avoid referencing federal research, venture capital, and especially commercialization. Words that voters respond well to include small business, technology, entrepreneurship, scientific research, and a reframing of commercialization: “converting research into jobs and businesses.”

*Please read through this list of words or phrases some people use to describe an economic plan or program. Please rate your reaction to each word or phrase, with 100 meaning a VERY WARM, FAVORABLE feeling; 0 meaning a VERY COLD, UNFAVORABLE feeling; and 50 meaning not particularly warm or cold. If you have no opinion, please check that box.*



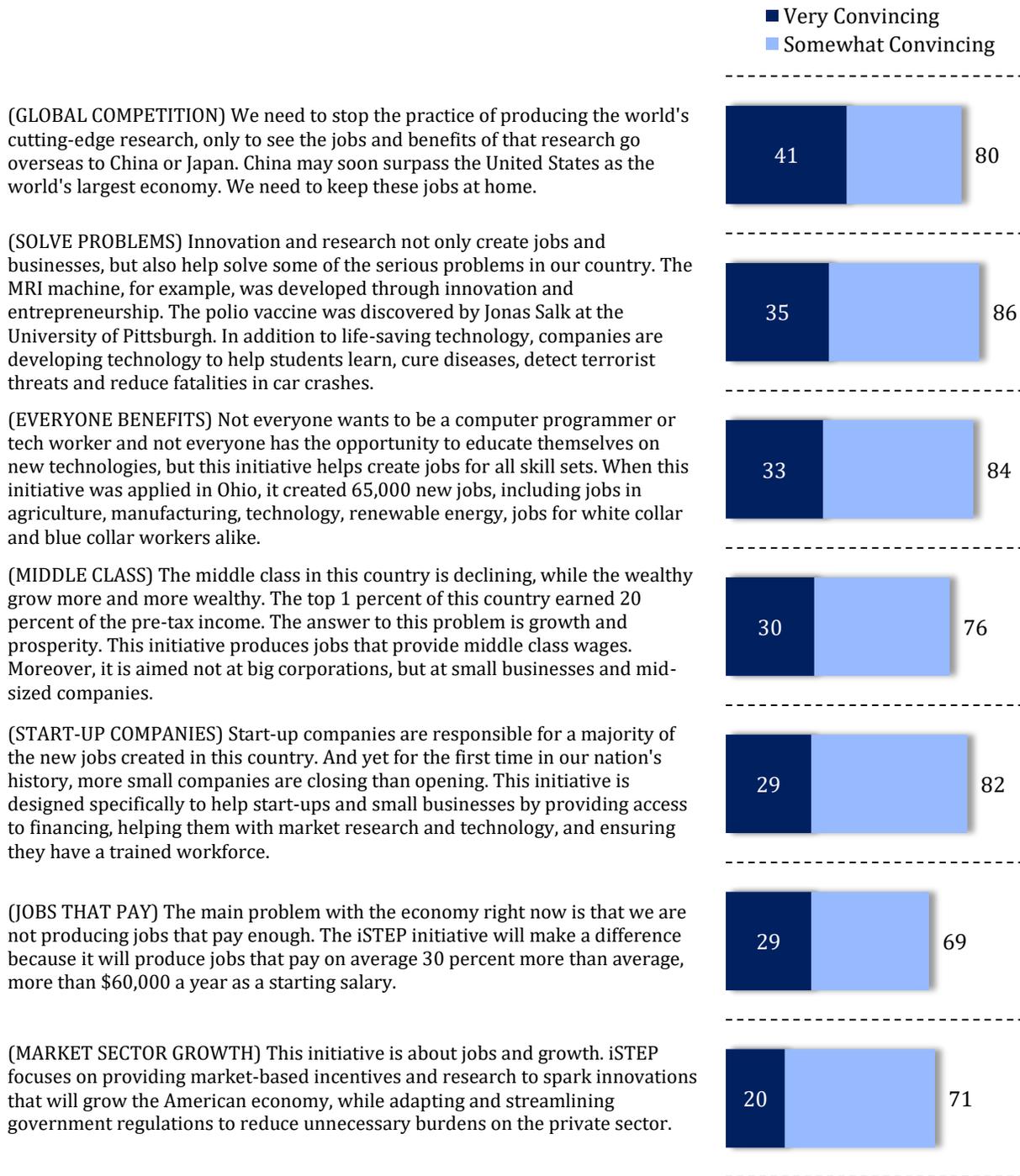
## Key Messages

When talking with voters, the below frameworks work well.

- We lead the world in research, but fail to convert that research into jobs and business. If we are going to compete in a world economy, we need to change that reality.
- Innovation and research not only create jobs and businesses, but help some of the most serious problems in our country.
- Not everyone can be or wants to be a computer programmer or tech worker; the iSTEP initiative helps create jobs for all skill sets.

## Communicating Ideas to Voters

Our research tested seven different messages, below, that could be used when talking about iSTEP and proposals like it. All messages scored highly, with “global competition,” “solve problems,” and “everyone benefits” as the most convincing. These results demonstrate the importance of framing the need for innovation, technology, and entrepreneurship.



Case studies and examples make these concepts more real and relatable to voters. The below examples demonstrate in real terms—using hard numbers for job and revenue growth—how iSTEP can make a difference.

**As important is what specifically these participants react to:**

- *Scale matters.* Given its prominence in our culture, it is not entirely surprising that Google is one of the prominent examples. Nonetheless, examples that talk about thousands of jobs fare better than examples that talk about fewer jobs.
- *It's only the economy.* We see this demonstrated more vividly in the message section, but participants are also attracted to examples that demonstrate social benefits in terms of education and health care. The sweet spot is a case study that involves both jobs and social benefits.
- *These examples can help us address resistance to "government."* The strongest example tested is the "Innovation Works" in Pennsylvania (see below). This case study not only involves an impressive scale (600 businesses, 3,000 jobs), but also provides reassurances that government involvement is not necessarily a bad thing. Taxpayers earned a strong return on investment. Seventy percent of businesses still have their doors open, suggesting that government did not screw this up. These assurances may be important, particularly in front of more conservative audiences.

Innovation Works is a non-profit organization in southwest Pennsylvania that receives funding from the state and federal government and partners with private investors to fund and support innovative, start-up companies. More than 75 percent of these companies are still in business, when, on average, two-thirds of all new start-ups close within a year. Innovation Works has helped start over 600 businesses, created 3,000 jobs with an average salary of over \$50,000 a year. According to state government sources, Pennsylvania taxpayers get back \$3.50 in revenue for every \$1 it invests in this partnership.

## Examples of successful case studies

I want you to read through these examples and then pick two that really stand out to you. Please select UP TO TWO from the list below.

Example	%
Everyone knows the company Google. What most people do not realize is that in 1996, two Ph. D students at Stanford named Larry Page and Sergey Brin were given a grant by the National Science Foundation to work on a search engine that was originally called "Backrub." This program evolved into the Google Search engine. Now, Google is one of the biggest companies in the world, worth 367.7 billion dollars and employs over 50,000 people. And it all started with a small government research grant.	38
In 2005, the state of Ohio passed several hundred million dollars in general obligation bonds for research and development in support of Ohio's industry, commerce and business with 54 percent of the vote share and then renewed this commitment in 2010 with 62 percent of the vote share. To date, this program has created or attracted 637 businesses to Ohio and created 55,000 direct or indirect jobs with an average annual salary of \$65,815.	34
The state of Maryland boasts two top-flight, national research universities, Johns Hopkins and the University of Maryland at College Park. These two universities alone produce 800 annual inventions or new technologies that could help start a new business, improve an existing business or create more jobs. And yet, only 20 to 30 companies are typically created out of this research.	24
Innovation Works is a non-profit organization in southwest Pennsylvania that receives funding from the state and federal government and partners with private investors to fund and support innovative, start-up companies. More than 75 percent of these companies are still in business, when, on average, two-thirds of all new start-ups close within a year. Innovation Works has helped start over 600 businesses, created 3,000 jobs with an average salary of over \$50,000 a year. According to state government sources, Pennsylvania taxpayers get back \$3.50 in revenue for every \$1 it invests in this partnership.	41
In 1984, North Carolina created the NC Biotechnology Center, the first such center in the United States, to recognize the transformative power of biotechnology for health, agriculture and industrial products and to advance the biotechnology sector statewide. The Center has funded research, supported start-up companies, and helped train workers. In the three decades since its creation, North Carolina has grown to have the nation's second-largest biotech sector in the nation.	31
Millions of Americans suffer from diseases of the eye and retina and treating these diseases can be extremely complicated. In 2006, Georgia Tech received part of a five-year, \$7 million grant from National Institutes of Health (NIH). Georgia Tech partnered with Emory and used that federal funding to develop a revolutionary microinjection treatment system. With help from the Georgia Research Alliance, the company Clearside Biomedical was launched around this new technology. Clearside now employees 24 people and is growing. Now doctors can safely treat these retinal diseases by injecting medication without affecting other parts of the eye and causing side effects.	28

It is clear that iSTEP and the policies it represents resonate with voters. But the way they are described is critical in winning support. When discussing issues related to the economy, innovation, technology, and entrepreneurship, candidates' messages should reflect the above findings.

# Appendix

## Methodology

This research was conducted by the bipartisan team of Greenberg Quinlan Rosner Research and TargetPoint. The survey consisted of 1000 likely 2016 voters nationwide with an oversample of battleground states which are defined as, Colorado, Florida, Iowa, Nevada, New Hampshire, Ohio, Virginia, North Carolina and Wisconsin. Counting the surveys from the base, a total of 588 interviews were conducted in these battleground states.

The survey fielded online from September 22nd to 30th, 2015. Respondents for this survey were selected from among those who have registered to participate in Research Now's online surveys and polls. The data has been weighted to reflect the demographic composition of likely 2016 voters nationwide. Because the sample is based on those who initially self-selected for participation in the panel rather than a probability sample, no estimates of sampling error can be calculated. All sample surveys and polls may be subject to multiple sources of error, including, but not limited to sampling error, coverage error, and measurement error.

This survey was informed by an online focus group that was conducted on August 27, 2015 among 31 swing voters in presidential battleground states.

## SSTI Members by State

Juneau Economic Development Council	AK
Economic Development Partnership of Alabama	AL
University of South Alabama, Office of the VP for Research	AL
Arkansas Economic Development Commission Science & Technology	AR
Arkansas Research Alliance	AR
Arizona Commerce Authority	AZ
Arizona State University	AZ
Arizona Technology Council	AZ
BioAccel	AZ
Tech Launch Arizona	AZ
Acellent Technologies, Inc.	CA
Larta Institute	CA
Los Angeles Cleantech Incubator	CA
Innovation Center of the Rockies	CO
University of Connecticut	CT
American Association of State Colleges & Universities	DC
ASME International	DC
U.S. IGNITE	DC
Energy Florida	FL
Florida High Tech Corridor Council	FL
Florida Institute of Technology	FL
Hillsborough County Economic Development	FL
University of Central Florida	FL

University of Florida Research Foundation	FL
Georgia Research Alliance	GA
Georgia State University	GA
University of Georgia	GA
Hawaii Strategic Development Corp.	HI
High Technology Development Corp.	HI
XLR8UH	HI
Iowa Innovation Corporation	IA
Idaho Department of Commerce	ID
Idaho National Laboratory	ID
University of Idaho	ID
Argonne National Laboratory	IL
Chicago Metro Metal Consortium	IL
Digital Manufacturing Design and Innovation Institute	IL
Fermilab	IL
Illinois Department of Commerce & Economic Opportunity	IL
Illinois Science and Technology Coalition and Institute	IL
Lakeview Consulting	IL
Northern Illinois University	IL
Southern Illinois University	IL
University of Illinois	IL
Central Indiana Corporate Partnership	IN
Indiana Office of Defense Development	IN
Kansas State University Institute for Commercialization	KS
Bowling Green Area Chamber of Commerce	KY
Murray State University	KY
Northern Kentucky Tri-ED	KY
Tri-County Economic Development Corporation	KY
NexusLA	LA
Massachusetts Technology Collaborative	MA
MassVentures	MA
University of Massachusetts, Office of the President	MA
BioHealth Innovation, Inc.	MD
Maryland Technology Development Corp	MD
Regionerate LLC	MD
University System of Maryland	MD
Innovation Policyworks, LLC	ME
Maine Technology Institute	ME
Business Leaders for Michigan	MI
Michigan's University Research Corridor	MI
TechTown	MI
Agricultural Utilization Research Institute	MN
Greater MSP	MN

BioSTL	MO
Missouri Technology Corporation	MO
U.S. Sourcelink	MO
University of Missouri	MO
Oxford-Lafayette County EDF	MS
Virginia Tech University	MS
North Carolina Biotechnology Center	NC
RTI International	NC
North Dakota Department of Commerce	ND
University of North Dakota	ND
Nebraska Business Development Center	NE
University of Nebraska	NE
Federal Laboratory Consortium for Technology Transfer	NJ
Festo Didactic, Inc.	NJ
Innovation New Jersey	NJ
New Jersey Institute of Technology	NJ
New Mexico Economic Development Department	NM
Sandia National Laboratories	NM
Nevada Governor's Office of Economic Development	NV
Accelerate Long Island	NY
Brookhaven National Laboratory	NY
Excell Partners, Inc.	NY
High Tech Rochester	NY
Launch NY	NY
New York Battery & Energy Storage Technology Consortium	NY
New York State Energy R&D Authority	NY
Research Foundation of SUNY	NY
Rochester Institute of Technology	NY
University at Buffalo	NY
BioHio Research Park	OH
Bush Consulting Group	OH
Case Western Reserve University	OH
CincyTech	OH
City of Dublin, Ohio	OH
Cleveland Water Alliance	OH
JumpStart Inc.	OH
Lorain County Community College Foundation	OH
Ohio Development Services Agency	OH
Ohio University	OH
Rev1 Ventures	OH
Science and Technology Campus Corporation	OH
TEconomy Partners, LLC	OH
University of Cincinnati	OH

University of Dayton Research Institute	OH
Greater Oklahoma City Chamber	OK
i2E	OK
Oklahoma Center for the Advancement of Science & Technology	OK
Oklahoma Manufacturing Alliance	OK
Oklahoma State University	OK
Sherilyn Stickley Associates	OK
Business Oregon	OR
Oregon BEST	OR
Oregon Nanoscience and Microtechnologies Institute (ONAMI)	OR
Ben Franklin Technology Partners	PA
Carnegie Mellon University	PA
Concurrent Technologies Corporation	PA
Innovation Collaborative	PA
Innovation Works	PA
Lehigh University	PA
Northwest Pennsylvania Industrial Resource Center	PA
Pennsylvania Department of Community & Economic Development	PA
University City Science Center	PA
University of Pittsburgh, School of Engineering	PA
Urban Innovation21	PA
Rhode Island Science & Technology Advisory Council	RI
South Carolina Department of Commerce	SC
South Dakota State University	SD
EPIcenter Memphis	TN
LaunchTN	TN
Oak Ridge National Laboratory	TN
Lamar University	TX
Texas Manufacturing Assistance Center	TX
National Centers of Excellence	UT
USTAR - Utah Science Technology and Research	UT
Axcel Innovation LLC	VA
The Launch Place	VA
Virginia's Region 2000 Partnership	VA
Vermont EPSCoR	VT
Pacific Northwest National Laboratory	WA
Washington State University	WA
The Water Council	WI
Wisconsin Economic Development Corporation	WI
Wisconsin Technology Council	WI
TechConnectWV	WV
West Virginia University	WV