




**National Academy of Sciences**  
Building the Ohio Innovation Economy

*Innovation Clusters and Economic Development*

April 25, 2011

INNOVATION. REGIONAL COLLABORATION. JOB CREATION. 



*"We know what it takes to compete for the jobs and industries of our time. We need to out-innovate, out-educate, and out-build the rest of the world ... The first step in winning the future is encouraging American innovation."*



- President Barack Obama  
2011 State of Union Address

- As outlined in the President's State of the Union Address, in order to remain globally competitive, we need to out-educate, out-innovate, and out-build the rest of the world.



**EDA's mission** *is to lead the federal government economic development agenda by promoting innovation and competitiveness, and building the regional innovation ecosystems critical to strengthening America's global competitiveness.*

- EDA's legislative authority empowers the agency to create an integrated platform to align federal investments with regions' competitiveness strategies.

Key Characteristics	20 <sup>th</sup> Century Economic Development	21 <sup>st</sup> Century Economic Development
Focus	Domestic competition; Zero sum game	Global competition & collaboration; Positive sum game
Goal	Growth of jobs	Increasing productivity & per capita income; Growth of jobs
Approach	Incentives to attract or retain cost-driven firms & industries	Investments in talent & infrastructure to support innovation-driven clusters
Role of Economic Development Practitioners	Lead industry attraction and marketing efforts to firms & industries	Broker innovation networks, connecting inventors, financiers, & transformers, to produce results
Performance Metrics	Quantity of jobs, number of firms attracted/retained	Quality of jobs, wage and income growth, innovation

•The old model of economic development was designed for a different time, a different outcome. But it is no longer sufficient. Today's new model of economic development is about leveraging the fullest extent of regional assets to minimize challenges and expand prosperity and opportunities.

•To capture and achieve the opportunities presented by this new economic development paradigm, we need a new model to harness regional assets to create jobs and businesses. We have lots of empirical evidence – both nationally and internationally – that clusters are an appropriate framework for a time such as this.

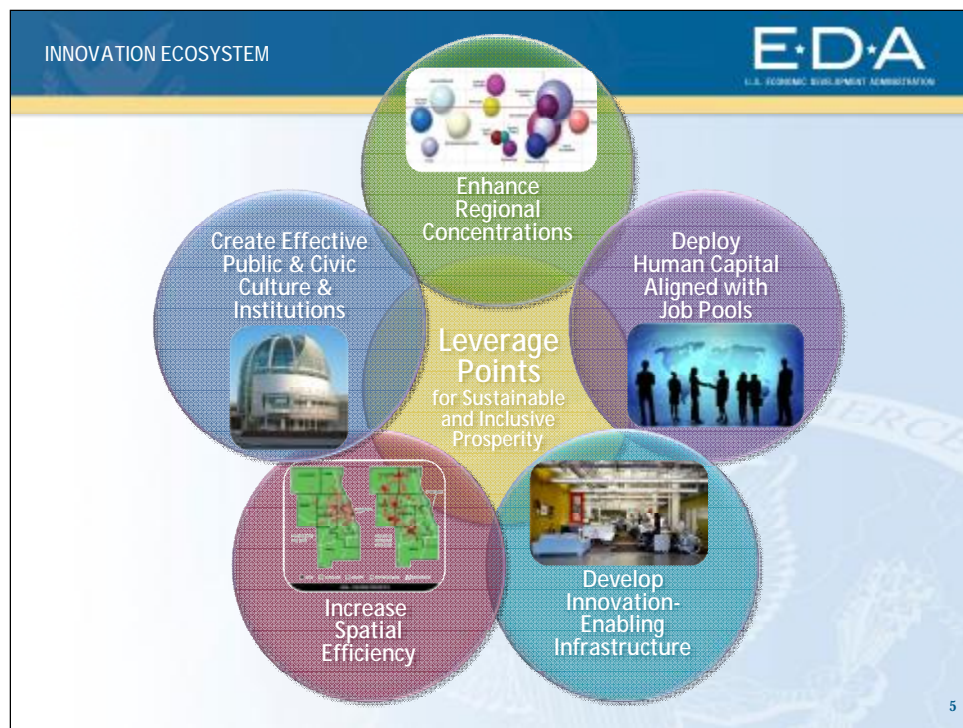
•Today it is not just Research Triangle Park, Silicon Valley and similar locations that are focused on clusters, it's industries and geographies across the United States, urban and rural, small and large. It's places that want to harness clusters to unleash the full economic potential of their communities.

•Clusters are based on a complex set of regional assets, including education, suppliers, customers, Federal Agencies, non-profit entities, foundations, venture capitalists, financial institutions, etc. These various entities all have a critical role in supporting the overall cluster.

•While complex, this diagram makes an important point – that clusters are fostered by a rich network of organizations focused on a common goal. In short, clusters thrive where regional entities come together to determine how to maximize regional assets to create and grow regional clusters.

•This is how economies work. They are built upon regional connections that have little to do with how we draw our political lines on our maps.

•Clusters work because they are driven by the private sector rather than by a "one size fits all" strategy dictated by the federal government. Robust regional innovation cluster strategies create a blueprint for accelerating the development of new businesses, products and services.



•In our understanding of economic development, the word – “ecosystem” – comes up a lot. Each economic ecosystem is unique, but to be successful, it must have three elements.

•The first is a talent pool.

•The second is “innovation infrastructure” – physical infrastructure, like wet labs, broadband, and research parks; education infrastructure, making sure the local workforce is prepared; and financial infrastructure, access to capital.

•Kansas State University’s Advanced Manufacturing Institute is a great example of innovation infrastructure that is making a real difference. The program provides expert advice in engineering, product design, manufacturing and business. They work side-by-side with entrepreneurs, including those in rural areas, and focus on product development, incubation, and commercialization, giving companies the boost they need to get established and become job creators.

•The third and final element is a support system – like Jumpstart here in Ohio, or Ann Arbor SPARK in Michigan – to accelerate high-growth entrepreneurs' success and attract private sector investment.

•A thriving economic ecosystem is the kind of place where entrepreneurs, scientists, product developers, and venture capitalists are clustered together and can work together. Where innovations can not only be developed, but brought to market. Where new businesses have a chance to grow. Where workers are confident that if one employer closes its doors, another will emerge to take its place. Where entrepreneurs—even the ones who at first don’t succeed—have a chance to try again.

•These are the places that generate high-wage, high-skill jobs. The jobs of tomorrow.

•This diagram created by the Brookings Institution, shows the five key leverage points for improving the performance of the complex interacting systems that constitute metropolitan economies:

•Enhance regional concentrations, human capital, innovation, spatial efficiency, and the institutional environment.



## Building America's Innovation Ecosystem to Win the Future

### *Jobs and Innovation Partnership*

- « Jobs and Innovation Accelerator Competition
- « i6 Green Challenge
- « Regional Innovation Acceleration Network
- « National Economic Cluster Map
- « 21st Century Innovation Infrastructure

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#### •Jobs and Innovation Accelerator Competition

EDA leads the Administration's Taskforce for the Advancement of Regional Innovation Clusters. The Taskforce's new competition will select 20 public/private pilot cluster initiatives with high growth potential. Winning partnerships will receive over \$1.5M in direct federal investment and technical assistance from a consortium of 14 federal agencies. This challenge will focus on bottom-up strategies that accelerate economic growth, job creation and global competitiveness.

•**i6 Green Challenge** – Building on the success of last year's inaugural i6 Challenge, EDA's i6 Green competition will reward communities that develop the best proof of concept centers to accelerate the commercialization of innovative clean technology. This year's \$12.3M i6 Green is led by EDA's Office of Innovation and Entrepreneurship in partnership with the U.S. Departments of Agriculture, Energy, and the U.S. Environmental Protection Agency.

•**Regional Innovation Acceleration Network** – EDA initiative to network America's most effective regional venture development and entrepreneurial support organizations. This network will advance best practices and replicable models for regional innovation ecosystems that lack these critical resources.

•**National Economic Cluster Map** – EDA joined with Harvard Business School to map economic geography and cluster strength consistently across the entire U.S., which will provide realistic and data-driven assessments of regional economic progress

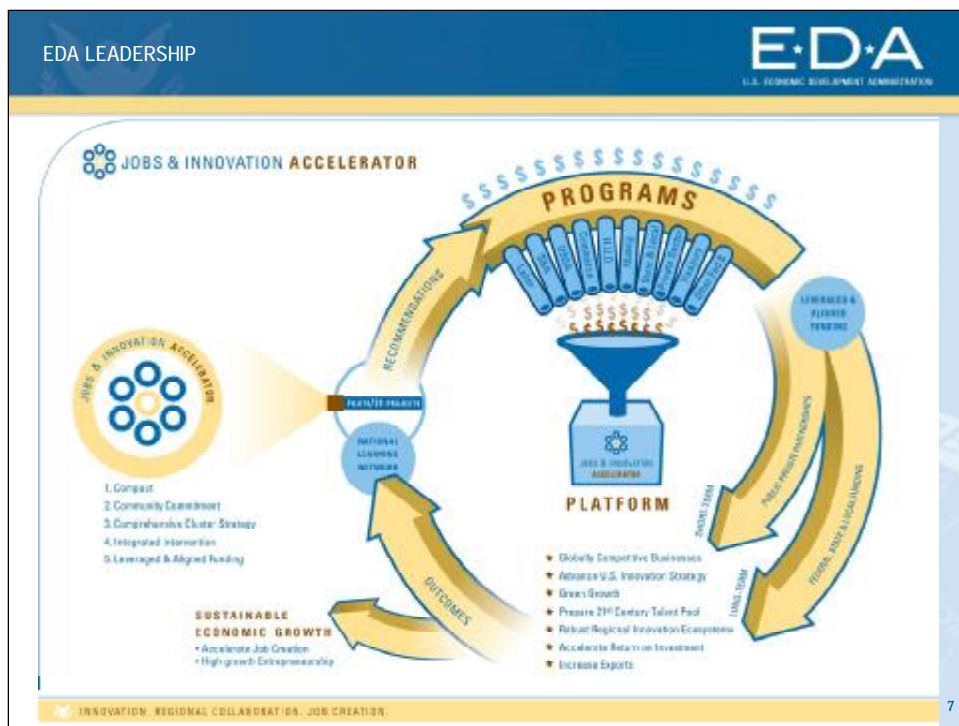
•**21st Century Innovation Infrastructure** – EDA provides targeted infrastructure investments to support regions' global competitiveness. Linked to established strategic economic development plans, competitively selected investments include technology accelerators, business incubators, science and research parks, and other public infrastructure required to create the competitive regions America's businesses need to succeed in the 21st Century global economy.

•EDA utilizes a highly competitive and transparent process for its investment decisions. EDA programs and investments are efficient and cost effective because they support locally developed strategic economic development plans and require a substantial financial match from local private and public partners.

•Moreover, EDA's programs are uniquely flexible and enable the agency to invest in customized initiatives designed by grantees to leverage their unique competitive assets.

•According to Rutgers University, the average EDA investment has been leveraged ten to one by the private sector. EDA projects help communities create long-term jobs at an average cost of \$3,058 per job, among the lowest rates in government.





•The business of economic development in the 21<sup>st</sup> Century global economy has changed dramatically since EDA was created over 45 years ago. In addition to sharpening EDA's investments strategies to strengthen regional innovation ecosystems, major reforms have been launched to build a 21<sup>st</sup> Century economic development agency. EDA's innovations include:

- Radically reforming our competitive grant process to enhance transparency and competitiveness, reducing the decision cycle from 128 business days to less than 20;
- Launching regulatory reforms to reduce barriers to effective private/public partnerships for high growth economic development initiatives; and
- Expanding regional field staff roles as network brokers to improve local partners' access to a broader portfolio of federal business and economic development assistance.

•The Office of Innovation and Entrepreneurship provides policy leadership on key elements of the US competitiveness agenda, including the commercialization of research and regional innovation strategies.

•In 2010, EDA launched the *Jobs and Innovation Partnership* initiative to align the agency's program investments for projects that strengthen regional competitiveness. EDA's investments catalyze and advance bottom-up, place-based innovation clusters that are critical building blocks for America's innovation agenda. Innovation cluster initiatives not only align public investments with market-based growth strategies, but importantly they create a smart platform to integrate investments from multiple federal agencies.

•In 2011, EDA will target \$90M to support over **75** regional innovation clusters that accelerate high growth entrepreneurship and job creation. EDA estimates that these investments will leverage an additional \$100M of local investments and support the creation of approximately 29,000 new jobs. EDA's Jobs and Innovation Partnerships investments include the following programs:



## EDA Contacts

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### Chicago Regional Office

**Robert Sawyer**  
**Chicago Regional Director**  
**(312) 353-7706**  
**[rsawyer@eda.doc.gov](mailto:rsawyer@eda.doc.gov)**

**Lee Shirey**  
**Ohio Economic Development Representative**  
**(312) 353-7148, ext 156**  
**[lshirey@eda.doc.gov](mailto:lshirey@eda.doc.gov)**