Regional Innovation Clusters

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The State of Upstate
The “new” cluster movement

- 20 years post Michael Porter, 10 years since wide adoption, we know that clusters work
- Cluster is a geographic concentration of interconnected firms and supporting stakeholders
- Stakeholders include academic institutions, large companies, small entrepreneurial companies, service providers, funders and investors, trade organizations ... and government in a supporting role
- Top down and bottom up approach to aligning regional assets and strategy
Clusters in New York State

- Cluster analysis tied to regional development goes back to the early to mid 1990s in New York State, led by NYS Department of Economic Development (now ESD) Division of Policy and Research.

- First region to organize around that concept was the Hudson Valley/Capital District, Long Island.

- Now cluster strategy embraced by all regions of the state, accelerated by the creation of Centers of Excellence, CAT’s and other public investments ... and moving to the next stage with soon to be announced Regional Councils.
New York is also looking vertically at clusters and recently completed a multi-agency update that benchmarked the following clusters of statewide significance:

- Cleantech Manufacturing
- Electronics, Imaging and Photonics
- Finance and Insurance
- Health Care
- Higher Education
- Information Technologies
- Life Sciences
- Research and Supporting Services
Clusters: Current snapshot

- Recent SUNY Strategic Plan tied to cluster framework
- Empire State Development moving toward a cluster strategy, tied to strategic regional investment deployment
- New York State moving toward a multi-agency approach to cluster development as a key tool, and rubric for producing and measuring outcomes, in terms of public policy
- Across the country, state initiatives are being supported by a federal framework supporting “Regional Innovation Clusters” (RICs), which have been the subject of many interagency funding solicitations
Why clusters?

- Reflects a need for a different kind of growth model (i.e., Startup America Partnership), and good work coming from groups such as Brookings, Kauffman and others around venture development and new innovation models.
- Recognition of a national imperative to “jumpstart” a national innovation agenda to maintain competitiveness.
- Insulates regions from sharp economic cycles and builds regional economies around lasting value and synergies.
- BECAUSE REGIONS ARE GLOBAL ECONOMIC UNITS OF POWER.
Why now?

- Few topics receive as much bi-partisan support as building strong regional economies, and the strategy works for both metropolitan and rural regions.
- Grounded in reality. The game of economic attraction has increasingly become a zero sum game. Talent and capital is mobile. Connections are global. Real gain comes from open innovation – a concept that goes back to “global localization” (developed more than 40 years ago by Akito Marito of Sony), based on “the economics of place.”
- “The art of progress is to preserve order amid change, and to preserve change amid order.”
What does that mean?

- We will create a strategy that relies on qualitative assets – our human, natural, physical, locational assets that make us unique
- We will work to preserve our authentic assets -- historic buildings, natural resources, viewsheds, and culture
- We will create new economic models based on entrepreneurship and innovation. Rather than becoming part of an ubiquitous global landscape, we will craft a strategy of local diversification and "quality of place." We will build a community with a strong sense of identity, fashioned around things we do well and innate strengths
- We will evolve a culture of risk taking and change, as well as civic engagement and stewardship
How to create a cluster

- Don’t try to create a cluster. Look for it. Then organize it.
- Start with research and data. Don’t assume it’s there.
- Don’t follow the herd. Not every region is the “next big thing” – whether it’s nano or green. Make an objective assessment about the sector, regional strengths and the nature of the industry.
- Focus initiatives on where there are strengths that are under-capacity, or not aligned. Focus on attacking specific issues: gaps or resource shortcomings.
- Focus existing programs around connecting resources.
Let the private sector lead

- The most effective clusters are industry led and fueled by academic-industry partnerships, *not* government led (Hudson Valley example). Focus on creating an effective framework to fill gaps, connect resources, share best practices, enhance capacity of service providers.

- Strategically engage business and community leaders, as well as regional intermediaries in the process. Bring in community foundations and funders.

- Think beyond borders. Tie an export and trade strategy to cluster development efforts. Clusters only work if they extend beyond regional trading areas.
What do we know about what works?

- Entrepreneurs as Leaders
  - Local successful, serial entrepreneurs who care deeply about the community’s startup culture and its success must take a leadership role in building these ecosystems. Ideally, these leadership groups are self-organized and fluid.

- Engagement
  - Regular activities/events that bring entrepreneurs together with other elements of the ecosystem, particularly customers and potential capital partners. These include pitch days, monthly meetups, forums, etc.

Source: Startup America Partnership
What do we know about what works?

- Network Density
  - Closely related to engagement, a successful ecosystem creates opportunities for more connections between entrepreneurs, advisors, mentors, angels, lawyers, accountants through a combination of formal directories and informal meetups. Inter and intra-sector, cross-cultural engagement will foster greater success.

- Talent
  - Successful ecosystems have deep pools of talent, with a high density of young, college-educated professionals particularly significant to success. One of the best ways to curate talent is through relationships with colleges and universities, an important asset.
What do we know about what works?

- **Big Companies**
  - Larger corporations that are in the region need to engage as customers to new companies. This can often require policy changes inside the company related to working with small businesses, and most importantly, a commitment to take a risk on a new company.

- **Support Services**
  - Bring in lawyers, accountants, bankers and others often as formal and informal advisors to entrepreneurs. In addition, providing physical space for new companies to work from is important as it fosters engagement between entrepreneurs and the rest of the ecosystem.
What do we know about what works?

- Government
  - Should serve as the convener, but not the leader. Government must make a deep, long-term commitment to focus on new, young companies. Key are policy changes that create a better, more hospitable environment for young companies to be successful.
  - Focus on multi-generational cluster and community development strategies that transfer knowledge (and capital) forward.
What’s the benefits?

- A regional innovation cluster is a compelling value proposition because:
  - It is based on a pro-market collaborative strategy that avoids “older industrialized” policies that are based on “protectionism” ... and a compelling strategy by which regions can grow based on diverse, locally embedded strengths, without “government picking winners”
  - Regional innovation clusters have a better chance of withstanding off-shoring
  - They are based on reality
What is that new reality?

- The world is flat, but the economy is “spikey” with naturally occurring concentrations of activity. The largest 100 metropolitan areas of the country had 12% of the country’s land mass, but generate 75% of the nation’s output, 85% of all new firms starts, 74% of the country’s college graduates, 82% of federal research funding and 96% of all venture capital funding. Regional economies are built around strong metro centers, but those regions of influence are getting larger and need to be more interconnected, to create exponential impact.

- Example: JumpStart New York example of an EDA effort to create super regional innovation cluster (RIC)
Upstate’s real opportunity: Downstate

- How do we connect innate upstate assets:
  - R&D, rapid prototyping, specialized contract manufacturing, regional supply chains, innovation, entrepreneurship and expertise, academic and industry expertise

- With downstate strengths:
  - Financial markets, funders, early adopters, market opportunity, media outlets, human capital (often looking to be redeployed), infrastructure and transportation networks to serve world markets

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What we need: A connector strategy

- Traditional economic development has relied on incentives and macroeconomic stabilization, tax policies, public investments ... *all important tools to benefit competitiveness of individual firms, but not regions*

- Next steps, at the policy level, how do we build the “meso” strategy to build regional innovation, entrepreneurship, regional competitiveness – strengthening the networks, filling the gaps, connecting the missing middle?

- What can we learn from places that have done this well?
Cluster success stories

- Don’t aspire to be the next Silicon Valley. The most successful clusters are dominated by networks of small firms, labs, some industry leaders, colleges and universities, small contract manufacturers and good logistics:
  - Indiana Life Sciences Cluster
  - Michigan Battery Cluster
  - Detroit Automation Alley Cluster
  - Northeast Ohio Polymers Cluster
  - Puget Sound Digital Media Cluster
  - Vermont Artisanal Cheese Cluster
Do we have what it takes Upstate?

- University
- Major Industry Asset
- State Funded University Tech Centers - Nano, Bio, Clean, Energy, Micro
- Syracuse Center of Excellence: Soil, IEQ, Building Design, Energy
- NYS Centers of Excellence: Bio, Nano, Technology, Micro, Life Sciences
- The Clean Tech Center
- Major Clean Tech Projects
Our regional example

- We began inventorying assets in 2005. We worked off regional strengths and good assumptions. We engaged Battelle for an independent analysis.
- We invited stakeholders.
- We laid out a strategy that included business development, R&D, policy, workforce development, community outreach, and spent the last six years aligning assets, filling gaps and connecting the dots.
- We are recognized as one of the top ten cleantech clusters in the world, with number that support it.
You can do it, too

- There will be increased federal support
- Up to $75 million EDA cluster initiative expected to continue to roll out, combined with other agency solicitations, including a proposed $11 million SBA effort to support the EDA program, and $12 million NSF fund
- Proposed $108 million DOL Workforce Innovation Fund
- $176 million proposed USDA Rural Innovation Fund to align resources more regionally
- $130 million Energy Regional Innovation Cluster grant was recently awarded to Philadelphia-based consortium
You can’t compete if you’re not ready

- Competitive regions will be connected regions .. Places where clusters and cluster strategies are real and working.
- Cluster strategy will increasingly become the yardstick by which federal and state public investments will be made.
- What happens regionally matters. The exciting thing about this notion, is that it places power in your hands. The scary thing about this notion is that it places power in your hands.
- The first thing you can do: Invite your best and brightest ... across generations, to self-organize and create a regional action plan.
The easy thing is to organize.

The hard thing is to sustain.

- It’s not about vision. It’s about constancy of purpose, and a constant re-infusion of ideas, energy and people. It requires change while you’re moving, and steering the course while regional leadership changes.
- Success is 20 years of hard work.
- I know this to be true because I’ve lived it ...
- I know it to be possible for upstate ...