



KENTUCKY
SCIENCE & TECHNOLOGY
CORPORATION

Kentucky: Encouraging New Entrepreneurs

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The National Academies:
SBIR/STTR & the Role of State Programs
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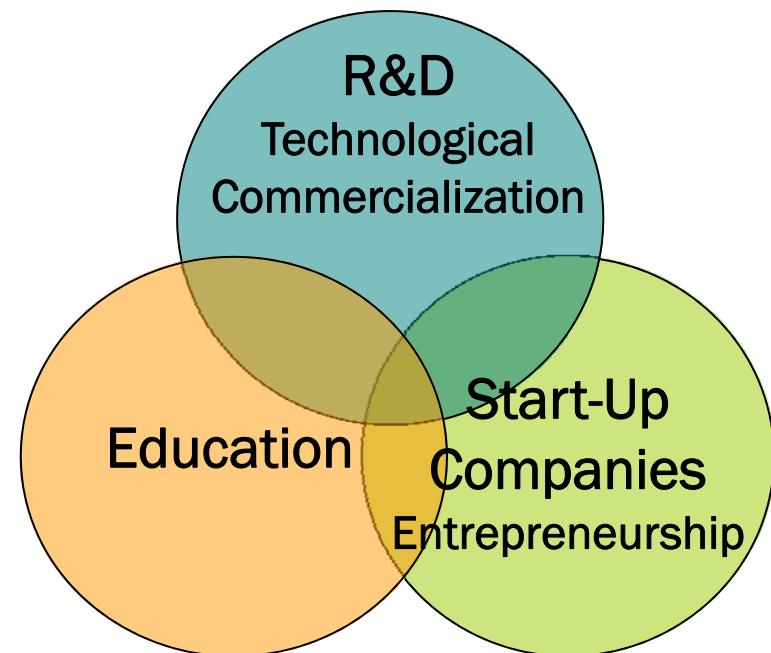


KSTC Mission and Functions

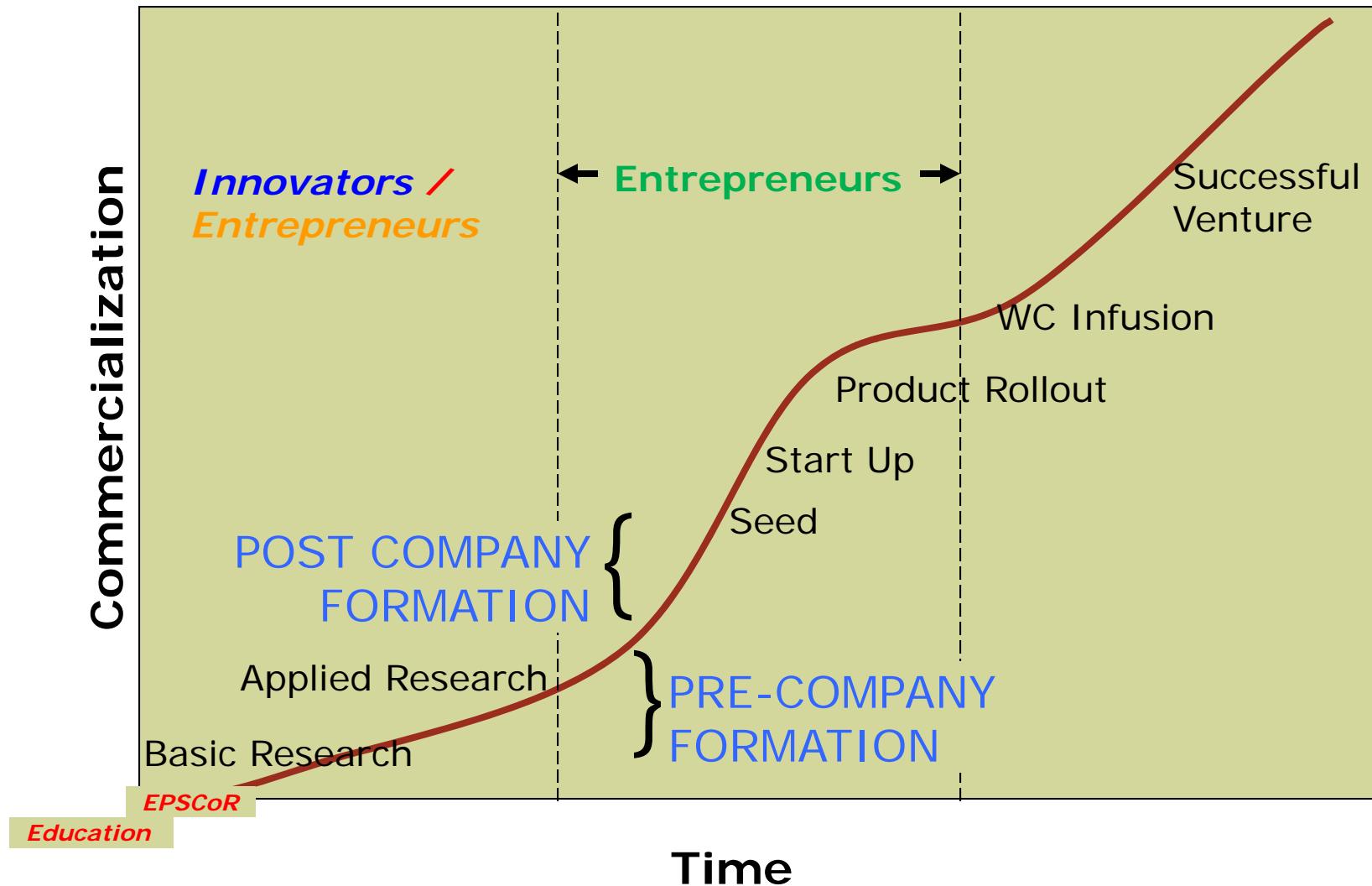
To strengthen the capacity of people, companies and organizations to develop and apply science and technology and compete responsibly in the global marketplace.

KSTC is an independent, non-profit company founded in 1987

www.kstc.com



Stages of Innovation and Investment



Kentucky Ranking 1999-2000*

Kentucky – EPSCoR and IDeA State

- 29th in Venture Capital Investments
- 42nd in Business Incubators
- 50th in Federal Research and Development
- 47th in Scientists and Engineers – Work Force
- 43rd in Patents Issued
- 42nd in the Creation of New Firms
- 44th in National SBIR Ranking (2004)

*Data from PricewaterhouseCoopers and National Business Incubation Association

Kentucky Innovation Act

2000 Kentucky Innovation Act (KIA)

- KIA Goal: Promote Innovation, Technology Development and Commercialization, Entrepreneurship, and Job Creation
- Several programs and initiatives were created and funded through the Kentucky Cabinet for Economic Development (CED) and the Kentucky Council on Postsecondary Education (CPE)
- Kentucky Science and Technology Corporation (KSTC), under a contract with the state, administers select KIA programs

Kentucky Programs for Entrepreneurs

To encourage entrepreneurs, Kentucky Offers a Variety of Programs:

- Talent Development
- New Venture Formation – Innovation Driven
- Business Assistance /Business Expansion
- Mentorship
- Research Funding / Business Capitalization
- Development of Entrepreneurial Climate

Programs Designed for ...

Student Entrepreneurs

- High school and College / University

Entrepreneurial Innovators

- Researchers and Faculty at an University

Entrepreneurs

- Business

Student Entrepreneurs



Governor's School for Entrepreneurs

- Where Creative, Free-thinking Teens are Empowered to Share and Develop Their Ideas for Innovative Products and Services
- Develops High School Students as Entrepreneurs through a Summer Learning Program
- Provides Dynamic Opportunities to Learn About Entrepreneurship and Put Their Ideas into Action
- 2013 and 2014 Summer
- www.kentuckygse.com

Idea State U

Created and funded by Kentucky Cabinet for Economic Development

- Kentucky's Statewide Business Plan Competition
- Designed to Encourage Innovation and Entrepreneurship by Rewarding Student-Teams from Colleges and Universities
- Open to Both Graduate and Undergraduate Students
- Competition Emphasis on Business Concepts
- Business Plans, Table Top Displays, and Pitches Scored by Independent Judges
- Total Prize: \$100K (Plans, Concepts and Special Pool)
- www.ideastateu.com (2014: 80 students, 26 teams)

Entrepreneurial Innovators



Kentucky Science and Engineering Foundation (KSEF) - Funded by CPE

KSEF Goals

- Proactively Fund Home-grown, Peer Reviewed Research Ideas that Lead to:
 - Capturing Innovations in Intellectual Property/Patents
 - Technologies with Commercial Potential
 - Training Students and Post-doctoral Fellows
 - Accelerating New R&D Collaborations
- Enhance Capacity of Organizations and People Successfully Compete at Federal Level
- R&D Excellence Award Size: Up to \$50K per year
 - FY 2002-2014 total \$18,473,333 in 342 awards

Kentucky Commercialization Fund

Funded by CPE

Program Goals:

- Help Universities in Commercializing Promising Technologies, from the Lab to the Marketplace, by Their Transfer to an Existing Business or the Creation of a New Start Up
 - Testing, Validation, and Scale-up of Technology
 - Market Opportunity Assessment
 - Technology Valuation
 - Commercialization Plan Development
- Award Size: Up to \$75K per year, for Up to Two Years
 - FY 2002-2014 total \$7,864,619 in 73 awards

Entrepreneurs

Kentucky SBIR/STTR Program

- Pre-application Assistance
 - One-on-one Consultation
 - Outreach SBIR/STTR Seminars
 - Workshops and Conferences: Regional / National
 - Phase Zero Grants (up to \$4,000)
 - Phase Double Zero Grants (up to \$4,000)
 - SBIR Connect Meetings: Louisville and Lexington
- Post-award Assistance
 - Kentucky SBIR/STTR Matching Grants
 - Review of Comments
- Entrepreneurial Leave Program: University of Louisville and University of Kentucky

SBIR/STTR Phase Zero and Phase Double Zero Grant Program

Program Goal

- Enable Small Businesses and Faculty Entrepreneurs to Prepare High-quality, Competitive SBIR/STTR Phase I and Phase II Proposals for Any of 11 Participating Agencies
- Award Size
 - SBIR/STTR Phase Zero Grant up to \$4,000
 - SBIR/STTR Phase Double Zero Grant up to \$4,000

Kentucky SBIR/STTR Matching Funds Program

Program Initiated and Funded by CED-OOE Since 2006

- Provides Matching Funds for Both SBIR and STTR Grant Awards
- Phase I
 - Matches Up to 100% but Not to Exceed \$150,000 for Exploration of Technical Merit or Feasibility of an Idea or Technology
- Phase II
 - Matches Up to 100% but Not to Exceed \$500,000 Per Year for Two Years to Support Full-scale R&D and Business-related Tasks

Kentucky SBIR/STTR Matching Funds

Program Goals

- Augmentation of the Federal Grant Work
- Facilitate a Competitive Phase II Application
- Increase Federal Funds to the State
- Enhance Tech Development for Commercialization
- Bridging the Gap between Phase I and Phase II
- Fill the Critical Funding Need to Retain Jobs and Continuity in Work and Business Development
- Enable Business to Protect Intellectual Property
- Facilitate Business Cluster Development

Kentucky SBIR/STTR Matching Funds

Uniqueness of the State Matching Program

- Competitive Program
- Matches Both Phase I and Phase II Grants
- Allows Additional Funding for Both Technical and Business Related Tasks – Complementing Federal Grant
- Allows Costs for Patents and Equipment Purchases
- Provides Funding for Business Development Expenses that may be Unallowable Under the Federal Grant
- Minimizes or Reduces the Technology Risk
- Prepares Businesses for Private Capital Investment
- Enables Businesses to Enter into the Market Early

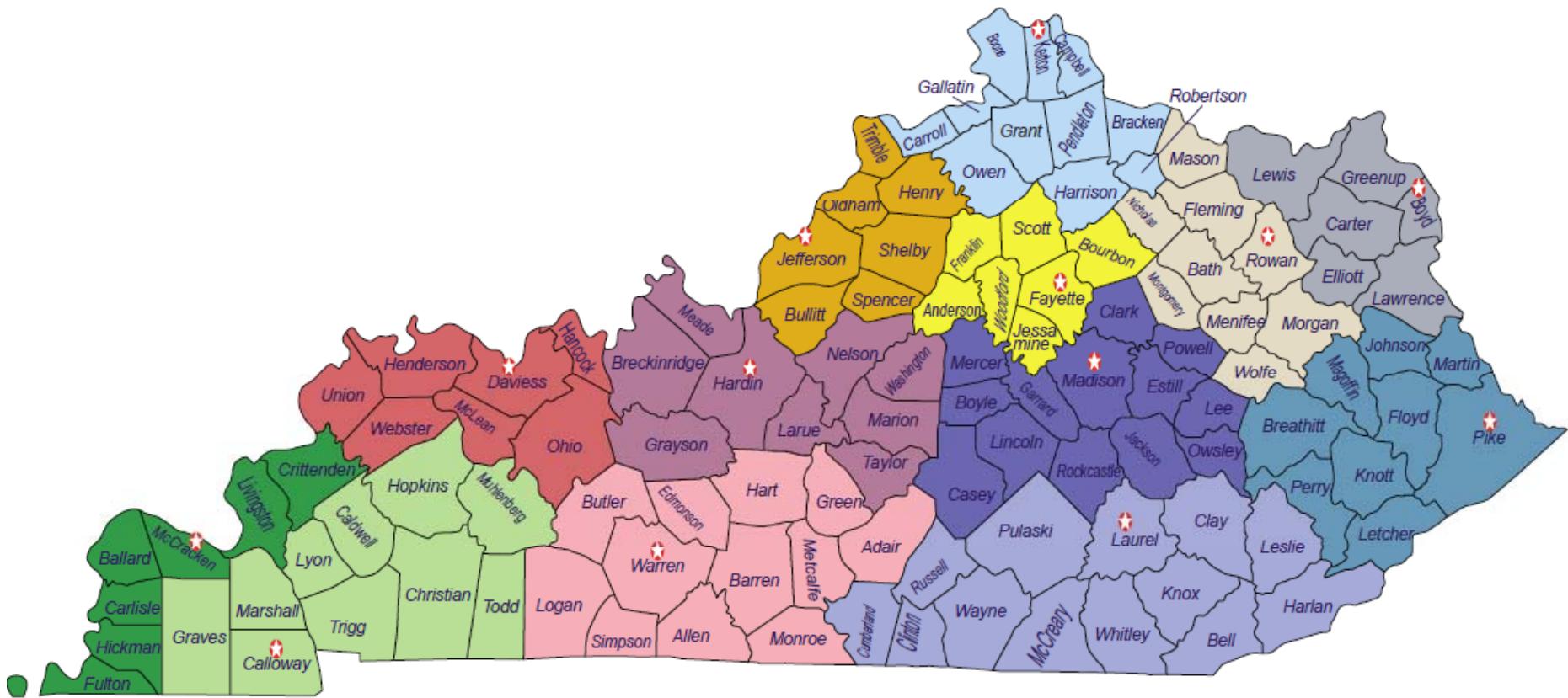
Kentucky Innovation Network (KIN)

Created and funded by KY Cabinet for Economic Development

Provides Business Assistance through 13 Locations:

- Business Development Consultation
- Business Model Consultation
- Validation and Market Assessment
- Assistance with Growth Strategy
- Access to Service Providers
- Access to Professional Networks
- Connections to Potential Suppliers / Business Partners
- Access to Funding Resources and Capital Networks
- Coaching throughout Fundraising Efforts

Kentucky Innovation Network



Sources of Seed Capital

Public and Private

- Kentucky Enterprise Fund (KEF), Kentucky New Energy Ventures Fund (KNEV), and Rural Innovation Fund (RIF)
 - Provides Seed-stage Capital to Kentucky-based Companies
 - Encourages Private Investments
- Commonwealth Seed Capital Fund (CSC)
 - Independent, Nonprofit Fund that Invests in Early-stage Businesses that have a Significant Kentucky Presence, the Prospect of Substantial Growth, and the Potential to Generate an Appropriate Rate of Return
- Enterprise Angels, Louisville, KY
- Bluegrass Angels, Lexington, KY
- Vogt Invention and Innovation Award (\$250K)

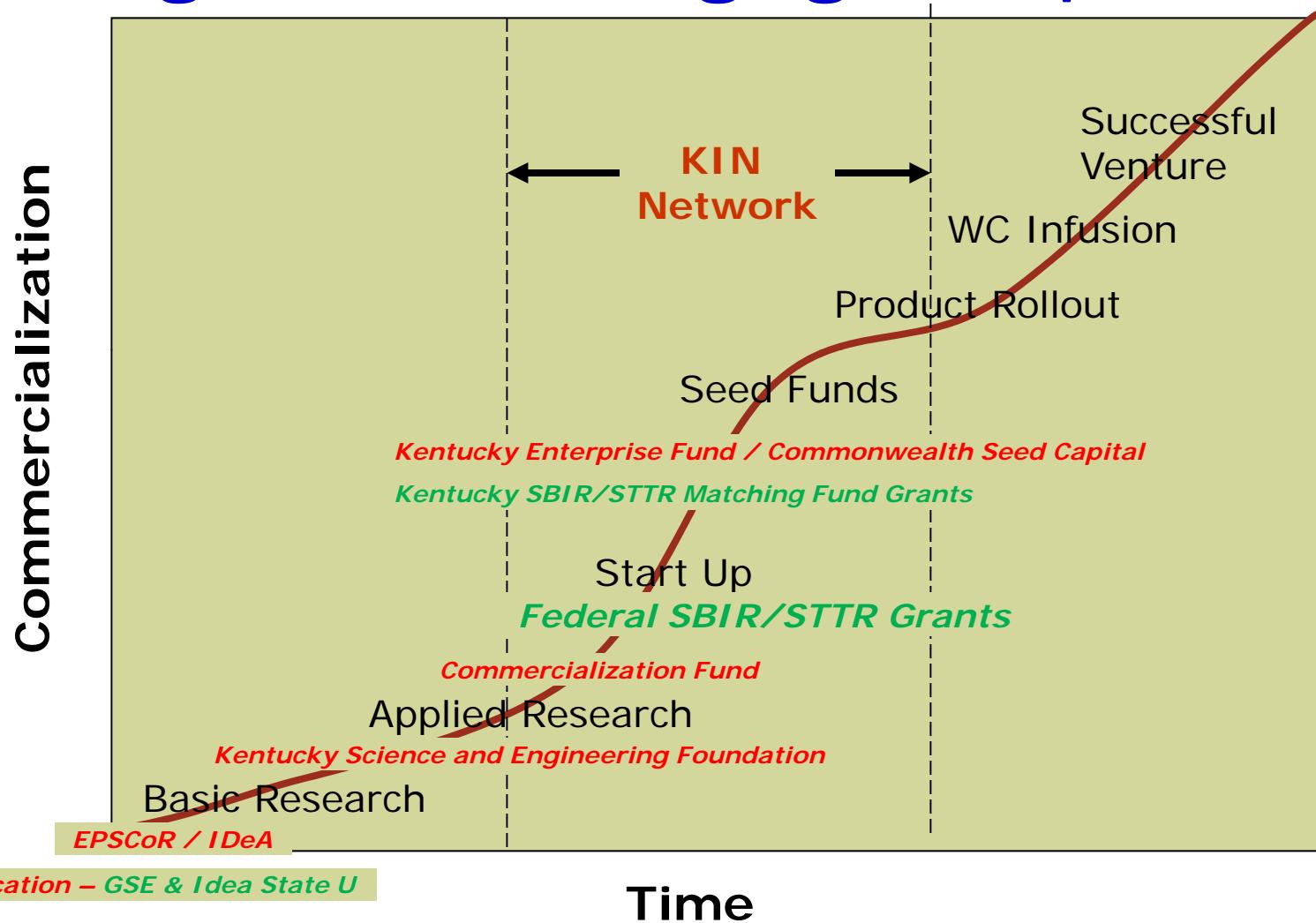
Incubators and Accelerators

- bioLOGIC Corporation, Covington, KY
- UpTech, Covington, KY
- Advanced Science and Technology Commercialization Center (ASTeCC), Lexington, KY
- Coldstream Research Campus, Lexington, KY
- MetaCyte Business Lab, Louisville, KY
- Nucleus, Louisville, KY
- i-Hub, Louisville, KY
- The Centre for Business and Research, Owensboro, KY
- WKU Small Business Accelerator, Bowling Green, KY

Supporting Mentoring Programs

- Lexington Venture Club
- Lexington-Startup-Advantage
- Geeks Night Out, KY
- 5Across, Lexington, KY
- Venture Connectors, Louisville
- SBIR Connect, Lexington / Louisville

KY Programs Encouraging Entrepreneurs



Kentucky SBIR/STTR Matching Funds

Program Impact

- Awarded \$48.6 M in 201 Matching Grants to 100 SBCs Leveraging \$85.2 M in Federal SBIR/STTR Grants
- Jump in Kentucky's National SBIR Ranking: from 44th in 2002 to 27th in 2012
- Created High Tech Jobs
- Led to Intellectual Property Development
- Several Companies Executed Licensing Arrangements
- Several Awardees Already Selling the Products
- Many Companies Secured Private Capital Investment; Two Companies Acquired

Kentucky's Entrepreneurial Activity Ranking

- Per 2011 Kauffman Entrepreneurial Index

Kentucky's Entrepreneurial Activity has Grown

- ✓ 5th Fastest Rate from 2001 to 2010
- ✓ 3rd Fastest Rate between 2008 – 2010
- ✓ 8th Highest Rate among All States in 2011

- Per The U.S. Bureau of Labor Statistics

Kentucky's Job Growth: 2.1% (Nov. 2011 to Nov. 2012)

- ✓ Among the Top Ten in the Country
- ✓ Highest in the Eastern United States

Kentucky's Entrepreneurial Activity Ranking

- Per 2013 FAST Magazine Kentucky Ranked
 - ✓ 2nd in Number of New Firms (per Million Residents) for 2011-2012
 - ✓ 5th in Percent Growth in Entrepreneurial Activity in 2010-2011
- Overall, Kentucky Ranked 20th for Innovation Among All States and the District of Columbia.
- Per University of Nebraska-Lincoln Report

Kentucky Ranked 4th in 2013 State Entrepreneurship Index

- ✓ Based on Data from the *Bureau of Labor Statistics, the IRS Statistics of Income Bulletin, the U.S. Census Bureau, and the U.S. Statistical Abstract*
- ✓ ND (2.72), CA (1.91), NY (1.79), KY (1.78), NH (1.71), CT...

Questions?