

### **UNIVERSITY CITY SCIENCE CENTER**

# 50 Years at the Intersection of Innovation & Economic Development



### **Celebrating 50 Years of Innovation in 2013**











### **Developing Communities & Making Connections**

- A private, non-profit, technologybased economic development organization
- Campus includes 15 buildings on 17 acres
- Innovative programs to support startups
- Develop communities and spark connections to increase innovation, company formation and job creation



The Science Center transcends government and geographic boundaries



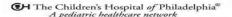
# An Independent Nonprofit Owned by 31 Shareholders



























The American College
Bryn Mawr College
Burlington County College
The Children's Hospital of Philadelphia
Delaware State University

Drexel University

**East Stroudsburg University** 

**Haverford College** 

Lafayette College

Lehigh University

**Lincoln University** 

Mercy Health System

NUS America (National University of Singapore)

The Penjerdel Council

Pennsylvania Hospital

Philadelphia College of Osteopathic Medicine

Philadelphia University

The Presbyterian Foundation for Philadelphia

**Rowan University** 

Rutgers, The State University of New Jersey

Salus University (former Pennsylvania College of Optometry)

**Swarthmore College** 

**Temple University** 

Temple University School of Podiatric Medicine

Thomas Jefferson University

University of the Arts

University of the Sciences in Philadelphia

University of Delaware

University of Pennsylvania

Villanova University

Widener University





























50 YEARS

31

**SHAREHOLDERS** 

8,000

PEOPLE WORK ON OUR CAMPUS

350

GRADUATE COMPANIES

15,000

**DIRECT JOBS** 

\$9B

ANNUAL ECONOMIC IMPACT



### **Avid – A Science Center Success Story**

- Moved into the Science Center's Port business incubator in 2005 with one employee
- By 2009, Avid had 37 employees and outgrew its space
- Moved into dedicated space in this building



Acquired by Eli Lilly in Fall 2010 for up to \$800 million



### Successful Alumni Deliver Economic Value

























#### **Port Incubator**

- 35,000 square feet of incubation space
- Flexible and affordable leasing space
- 30 startups
- Significant tax advantages
- Since 2006 Port residents have collectively raised \$80 million+ in private capital and \$12 million+ in government funding that directly supported product development.





### **Global Soft Landing**

- Introduced in 2006
- Helps international companies establish a foothold in local life sciences and IT markets
- Strategically located between NYC and Washington, DC
- Companies from Belgium,
   China, France, Japan,
   Singapore, Russia, Sweden, UK
- National Business Incubation Association (NBIA) Soft Landings International Incubator Designation







#### The Science Center:

- matches technology with suitable investment-worthy entrepreneurs
- lowers the barriers to their involvement and success
- maximizes the value of earlystage technology generated by research institutions



The Science Center transcends government and geographic boundaries



# Quorum: The Entrepreneurs' Clubhouse

Quorum is designed to strengthen the region's culture of technology commercialization by creating a magnet for entrepreneurs and innovators to convene, interact, network and exchange ideas.



This is Quorum: Innovation Has Its Place



## Quorum: By the Numbers

17
MONTHS

10,000 PEOPLE

225 EVENTS

31

STRATEGIC PARTNERS

31

**SPONSORS** 

3 NEW PROGRAMS

**COUNTLESS CONNECTIONS MADE** 



## **Key Elements of the QED Program**

- Funding for translational life science research
- Projects with commercially relevant milestones
- Market-driven project selection
- Business advice
- Guidance to exit

Initiated by \$1 million of Science Center funding



### **QED** BY THE NUMBERS

21
PARTICIPATING
RESEARCH
INSTITUTIONS

12 PROJECTS

SUPPORTED

**226**SCIENTISTS

90 BUSINESS ADVISORS

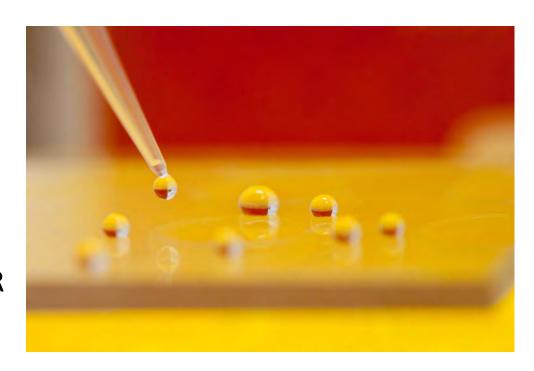
\$1.9 MILLION IN FUNDING RECEIVED 47
SELECTION
TEAM
MEMBERS

283
PROPOSALS

5 PROJECTS LICENSED MILLION IN FOLLOW-ON FUNDING

### **Phase 1 Ventures**

- A partnership approach to starting new companies
- Management expertise for inventors
- Leverages SBIR/STTR funding + seed investment
- Test feasibility of high-potential, early-stage technologies



## **Turning STEM Into STEAM: Breadboard**

- Science, Technology, Engineering, Art and Math
- Recipient of Business & Arts Partnership Award by the Arts & Business Council of Greater Philadelphia





# The Power of Regional Partnerships

















































Shared mission of tech-based economic development





### **Greater Philadelphia**

# Economic Development Framework

#### **2012 ANNUAL REVIEW AND UPDATE**

Presentation to the Regional Community and Economic Development Forum (RCEDF) October 23, 2012



# Greater Philadelphia Economic Development Framework

- Created to satisfy EDA requirements for a regional comprehensive economic development strategy (CEDS).
  - Approved by the EDA as the Greater
     Philadelphia region's CEDS on September 30,
     2009
- Co-authored by DVRPC, Select Greater Philadelphia, and Ben Franklin Technology Partners.
- Reviewed and updated annually.
- Major review required every five years.



# Purpose of a Regional CEDS

- Prerequisite for applying for funds under EDA public works, economic adjustment, and most planning programs.
- Identifies regional challenges and opportunities.
- Integrates economic development with land use and transportation planning.
- Integrates human and physical capital planning.
- Establishes regional goals and objectives.
- Leverages EDA funding to advance regional goals.

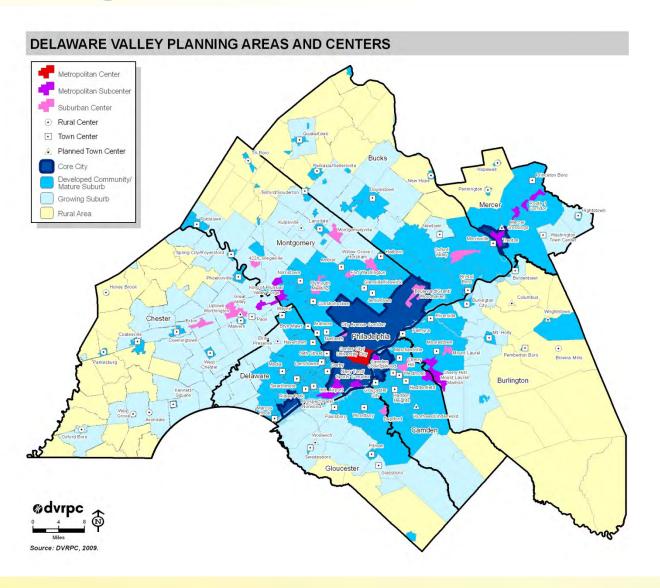


## **Annual CEDS Review**

- Review goals and objectives and revise as appropriate.
- Gauge progress by evaluating performance measures.
- Review and update the list of key regional economic development projects.

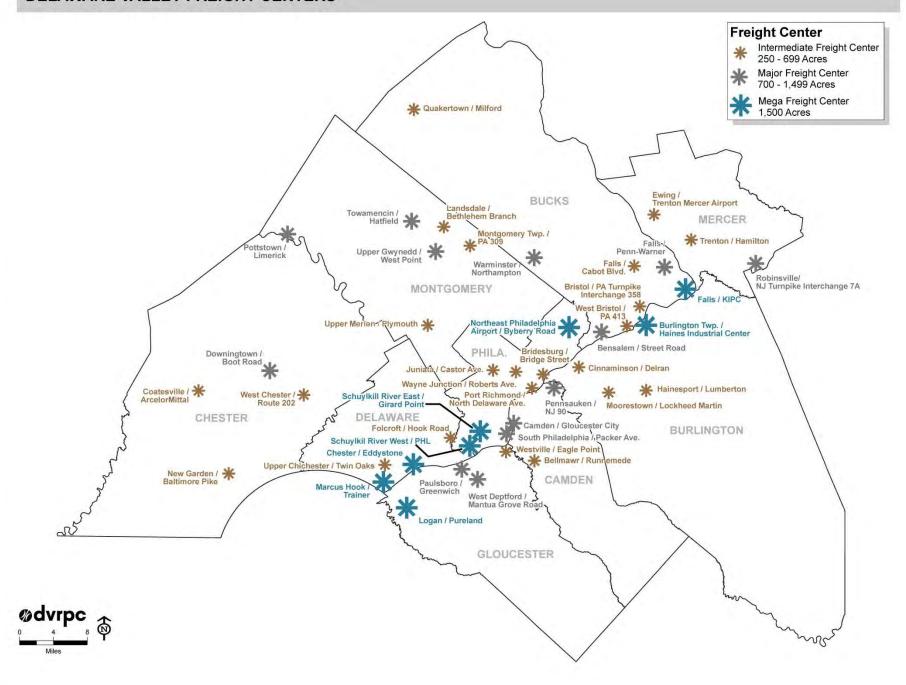


# Focus growth in centers.



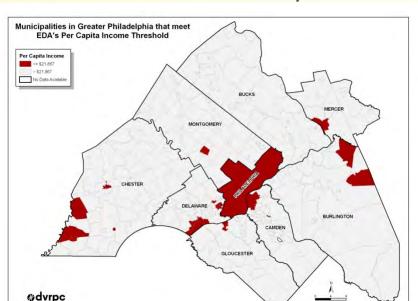


#### **DELAWARE VALLEY FREIGHT CENTERS**

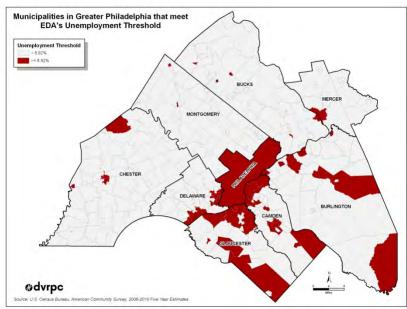


# Create jobs in distressed areas and for populations most in need.

Per Capita Income (80 percent or less than the national PCI)

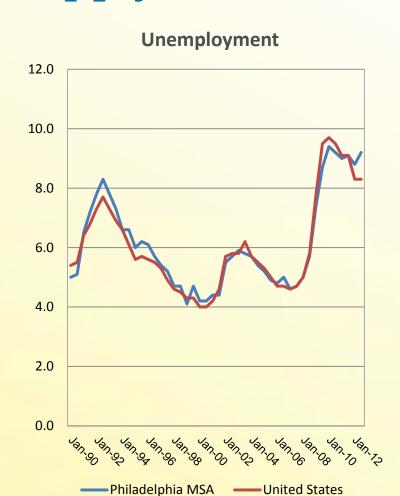


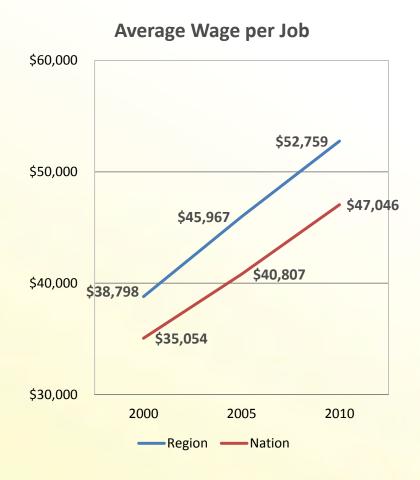
Unemployment (at least one percent greater than national rate)





# Create jobs that match workforce supply.







# Support and promote key economic sectors.

- Life sciences
- Tourism
- Health care
- Higher education
- Finance
- Creative industries
- Information technology
- Alternative energy
- Chemicals
- Specialty manufacturing



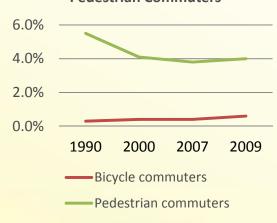
#### Percent Change by Sector, 2000-2010

Sector	Establishments	Employment	Gross Sales
Agriculture, forestry, fishing, and hunting	-21%	-18%	18%
Mining and utilities	-23%	-17%	21%
Construction and manufacturing	-26%	-32%	6%
Wholesale and retail trade	-12%	-8%	38%
Transportation and warehousing	-8%	-4%	26%
Information	5%	-26%	43%
Finance, insurance, and real estate	11%	-7%	44%
Professional, scientific, and technical services	10%	7%	61%
Management of companies and enterprises	-32%	52%	167%
Waste management and remediation services	-7%	-10%	49%
Educational services	30%	21%	74%
Health care and social assistance	19%	21%	85%
Arts, entertainment, and recreation	24%	25%	58%
Accommodation and food services	16%	10%	43%
Other services (except public administration)	-1%	9%	57%
Federal, state, and local government	-3%	5%	36%
Total	-2%	-2%	39%

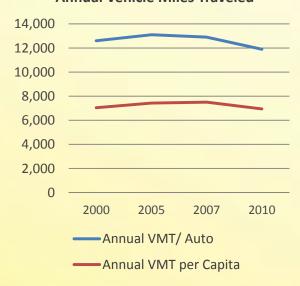


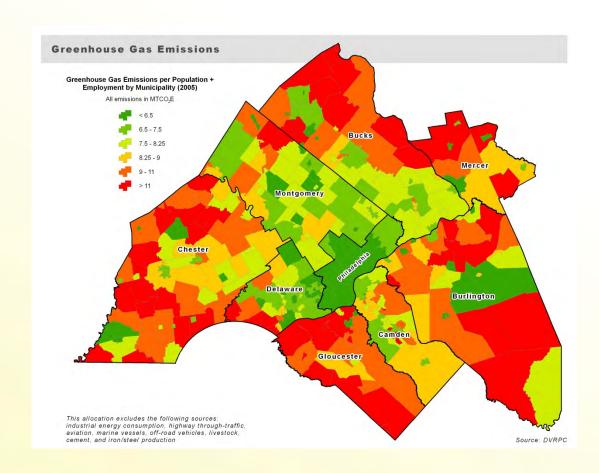
## Reduce greenhouse gas emissions.

#### Percent Share of Bicycle and Pedestrian Commuters



#### **Annual Vehicle Miles Traveled**







# Enhance the climate for business growth.

- Welcome new businesses and expansions.
- Promote an attractive tax environment.
- Increase efficiencies in government decision-making.
- Foster regional collaboration.
- Improve the region's image.
- Engage business leaders.
- Promote and support entrepreneurship.



## Invest in public infrastructure.

- Promote intraregional and interregional mobility.
- Support strategic investments in:
  - Transit
  - Rail
  - Ports
  - Airports
  - Utilities
  - Highways
  - Public streetscapes
- Support green technologies and sustainability.



## Invest in public infrastructure.

#### **Annual Unlinked Transit Passenger Trips (in millions)**

Year	SEPTA	NJ Transit	PATCO	Pottstown Area Rapid Transit	Regional Total
2000	317.3	22.8	10.6	0.3	351
2005	334.5	23.5	9.4	0.3	367.7
2010	346.9	26.8	10.1	0.2	384.1
Percent Change 2000- 2010	9%	18%	-5%	-9%	9%

#### **Cargo Entering Delaware River Ports**

Year	Metric Tonnage	Change from previous year	Twenty-foot Equivalent Units	Change from previous year
2005	69,518,905		491,940	
2006	66,583,918	-4%	508,691	3%
2007	74,178,495	11%	562,465	11%
2008	66,002,973	-11%	550,741	-2%
2009	62,241,146	-6%	434,435	-21%
2010	60,632,056	-3%	495,845	14%
2011	54,568,851	-10%	520,638	5%

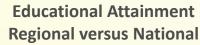
## Annual Tons of Air Cargo Passing through Philadelphia International Airport

Year	Tons of Air Cargo
2005	582,010
2006	566,761
2007	580,057
2008	531,251
2009	457,113
2010	440,975
2011	432,641



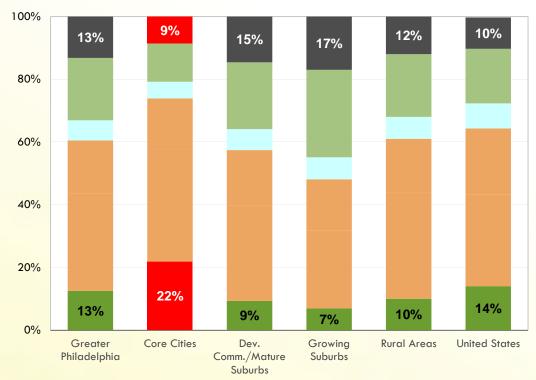
# Foster a high-quality, productive workforce.

## **Educational Attainment by Connections Planning Area**





- Graduate / Professional Degree
- Bachelors' Degree
- Associates' Degree
- High School Diploma or Equivalency
- Did not complete High School



- Did Not Complete High School
- Some College, No Degree
- Bachelors' Degree

- High School Diploma or Equivalency
- Associates' Degree
- Graduate or Professional Degree



# Expand our connections to the global economy.

- Promote international trade.
- Continue to attract foreign investment.
- Expand capacity and improve performance at Philadelphia International Airport.
- Enhance utilization of the ports and leverage the region's multimodal transportation infrastructure.



# **Key Projects List**

- Projects must be listed in the regional CEDS to be eligible for EDA funding.
- List is updated annually or through the CEDS amendment process.
- Not fiscally constrained: total estimated cost is over \$4.2 billion.
- Being on the list does not guarantee
   EDA funding!



# **Key Projects List**

- Project types include:
  - Planning
  - Research
  - Job training
  - Workforce development
  - Redevelopment
  - Adaptive Re-use
  - Site acquisition
  - Construction
  - Infrastructure investment
- Geographies range from region-wide activities to site-specific projects







# **Thank You**

For more information, please contact:

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Delaware Valley Regional Planning Commission

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www.dvrpc.org







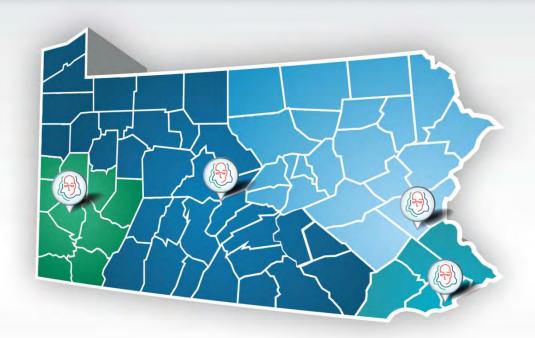
October 23, 2012

### Ben Franklin Technology Partners Statewide Network...Regional Focus



### **Since 1982**

Pennsylvania's
Partners to Drive
Technology
Based Growth



#### Mission

"...invest in the transformation of the Pennsylvania economy through technology, innovation, & strategic partnerships that foster a favorable business environment for high-growth companies."

### Recognized Leadership...for Pennsylvania



#### **BFTP**



Presidential Commendation



**Gubernatorial Commendation** 



PA Senate Resolution



**Technology-Led Economic Development Award** 



**Excellence In Economic Development Award** 

#### BFTP/SEP



The Nanotechnology Institute Honorable Mention for Excellence in Economic Development Award



**Technology Commercialization** Group finalist, Excellence in Economic Development Award



RoseAnn B. Rosenthal, Temple League of Entrepreneurial Women Hall of Fame



Award of Recognition & 20 years of Innovation Award



Local Venture Impact Award, Life Sciences Awards



RoseAnn B. Rosenthal, **Founders Award** 



**Enterpriser Award, Eastern Technology Council Enterprise Awards** 



RoseAnn B. Rosenthal, Champion of Small Business Award by the National Coalition for Capital, 2009



RoseAnn B. Rosenthal awarded an **Honorary PhD in Humane Letters** from Philadelphia University



RoseAnn B. Rosenthal appointed to National Advisory Council on **Innovation & Entrepreneurship** 



**Innovation Excellence Award** 



20 Years of Success Award

Microlending Minority Advocate of the Year



RoseAnn B. Rosenthal, Blair Thompson **Lifetime Venture Award** 

Website Awarded Silver at Addy Awards





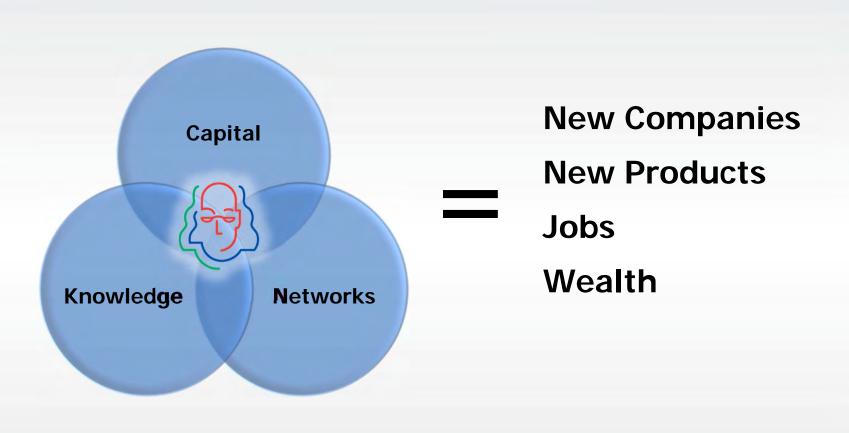


**Case Study for Regional Development** 

Terry Hicks, Minority Business Leader Award

# What We Do Seed, Link & Leverage Innovation Assets





Innovation Integrator

### **Impact**



### BFTP Statewide 2002-2006\*

- ✓ Bolstered the state economy by \$9.3B
- ✓ Returned \$3.50 for each \$1.00 invested by state
- ✓ Generated >\$517M in additional tax revenue for PA
- **√** \$54,509 weighted-average annual salary from BFTP clients:

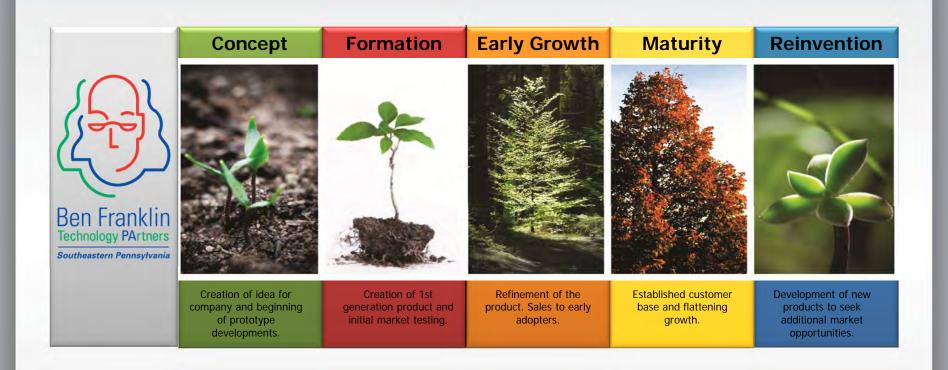
33% higher than average for all private nonfarm industries in PA

#### BFTP/SEP 2001-2012

- ✓ Committed > \$65M to > 475 early-stage companies
- ✓ Client companies raised more than \$1.2B in follow-on investment
- ✓ Client companies created or retained over 3500 high-tech jobs
- ✓ University partnerships leveraged \$700M into the region
- ✓ A lead partner in securing \$129M DOE Innovation Cluster

### Lifecycle Support





Capital, Knowledge & Networks

# Capital Money & Smarts at the Right Moment



- Seed investments & risk capital up to \$750K
  - \$50K Tech Commercialization Fund for proof-of-concept (50% cash match min)
  - \$100K \$750K Core Investments (1:1 cash match)
- Hands-on business development & management assistance
- GP/LP in regional seed funds



### 2001-2012

- Committed > \$65M toover 475 early stage companies
- Clients raised > \$1.2B in follow-on investment

### BFTP/SEP

### An active seed/early stage investor



Q4 2011: Greater Philadelphia

BFTP/SEP's investments represented 61% of all companies funded in the five county region

- PwC MoneyTree<sup>TM</sup>



Q4 2011: Nationally

### Ranked 10th by # of deals

Rank	Firm	City	Deal #
1	500 Startups	Mountain View, CA	37
2	New Enterprise Associates	Menlo Park, CA	27
3	First Round Capital	West Conshohocken, PA	20
	Google Ventures	Mountain View, CA	17
5	Kleiner Perkins Caufield & Byers	Menlo Park, CA	17
	Benchmark Capital	Menlo Park, CA	16
7	Bessemer Venture Partners	Larchmont, NY	16
8	True Ventures	Palo Alto, CA	16
9	Polaris Venture Partners	Waltham, MA	13
10	Ben Franklin Technology Partners Southeastern PA	Philadelphia, PA	12

### Capital

### Seeding the next crop of tech enterprises



1980's

1990's

2000's

Today



Acquired by **Teva Pharmaceuticals** 





Acquired by Cubist **Pharmaceuticals** 





















Acquired by Dell









HEALTH MARKET SCIENCE



■ REALWINWIN







**Private Bought out investors** 

#### MoreCom<sup>\*</sup>

Acquired by Liberate (NAS:LBRT); Acquired by COMCAST











Nasdaq: CDNW Acquired by **Bertelsmann** 



**Acquired by Multex** Nasdaq: MLTX











# Capital Client Profiles



## 1>>> TICKETLEAP

- Target customer: Event organizers
- Product:
   Online ticket
   sales & event
   management software



- \$525K from BFTP/SEP, 2008 -2011
  - Commercialization efforts, VP of Business
     Development & technology improvements
  - Advice on management, branding & website design
- \$6M raised, 2009-2012
- 10 fold revenue increase since 2008
- 2011 Top 10 Fastest-Growing Companies in the Delaware Valley by Philadelphia 100
- From 3 → 24 employees, 2012



- Target customer: *E-commerce website operators*
- Product: Software to develop & test target marketing campaigns for products & services
- \$250,000 from BFTP/SEP, 2008
  - Product improvements & commercialization
- \$5.1 million Series A round, 2010
  - FirstRound Capital
- \$15 million in VC Series B round, 2011
- Monetate CEO David Brussin, 2012 Ernst & Young Entrepreneur Of The Year® for Greater Philadelphia
- David Bookspan, Founder & Chairman, co-Founder of Dreamit Ventures
- From 3 → 100 employees, 2012...hiring

# Capital Client Profiles







- Target customer: Cancer patients
- Product: Antibodies for treatment of cancer, inflammatory & infectious diseases
- Founder & CEO: Nicholas Nicolaides, Ph.D.
- BFTP/SEP investment of \$200K in 2000
- Purchased by Eisai in 2007 for \$325M
- August 2012 Dedication Ceremony schedule for new \$80MM, 60,000 square foot pilot manufacturing plant to make drugs for clinical trials in Chester Co., Pa.
- From 4 → 150+ employees, 2012





- Target customer: *High energy usage enterprises i.e. universities & municipalities*
- Product: Software & services to manage energy consumption
- Founder, President & CEO: Audrey Zibelman; former EVP & COO PJM (Mid-Atlantic regional power transmission)
- \$400K from BFTP/SEP, 2010 (\$350K AEDP; \$50K US DOE)
  - Develop SEPTA Wayside Energy Project to capture
     & reuse energy from train braking system
- \$15M raised from Mitsui & Co. Ltd., 2012;
   \$15M raised from Braemar Energy Ventures, 2011
- Customers: Drexel University, American Electric Power, US Army (Ft Meade), Navy Yard, SEPTA
- From 10 → 30+ employees, 2012

## Capital Seeding the Capital Continuum & Supporting Entrepreneurship





- Boot-camp for IT entrepreneurs
- 65 companies, raised \$45M+, valuations > \$200M
- **Comcast Minority Entrepreneur Accelerator & Minority Angel Investor Network (2011)** 1st investment FY'12
- Dreamit Plus: BFTP/SEP & **Angels: 2 Investments**
- \$50M capital raise underway
- · Pilot replicated in NY, Israel



- First private investor group focused on high-growth, minority businesses
- Created by BFTP/SEP
- 10 company investments
- 2 in 2012; 1 w/ BFTP/SEP (Dreamit)

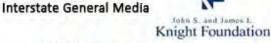


- MAG I & II: \$9.5M invested in 23 companies
- **Invested in 6 companies** in FY'12; 4 companies with BFTP/SEP



- \$13.5M early-stage IT fund
- **BFTP/SEP General Partner &** Lead Limited Partner @ \$5M
- Invested \$9.1M in 9 companies; 3 with BFTP/SEP











1st class of 3 companies...\$2M raised in 2012

**ALL Dreamit** 1 PMN partnership 1 Dreamit Plus ALL BFTP/SEP funded 1 Comcast MEAP/MAIN

#### Ben Franklin Talent Connect

Internship program connecting students to regional technology companies

### Knowledge Getting Ideas to Market...Faster



- Ben Franklin Technology Commercialization Network
  - 25+ University, government & private partners
- Structured industry/university partnerships
  - Leverage distinct capabilities of region's institutions & industry interests
- Ben Franklin Technology Commercialization Solutions
  - Customized approaches to advance Open Innovation Strategies

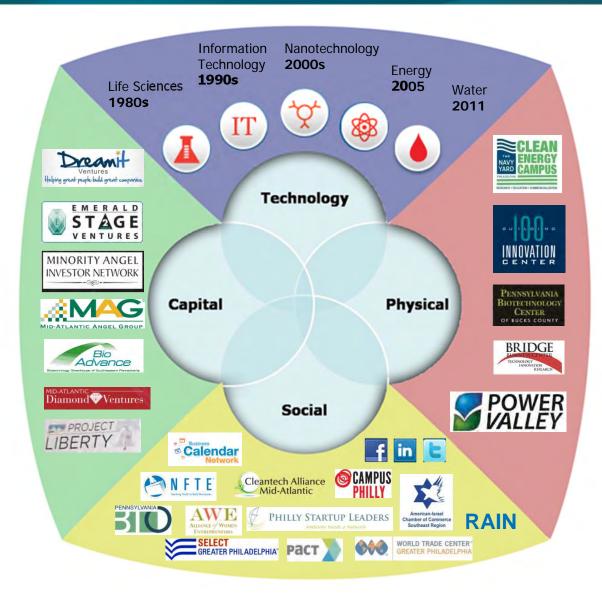


#### <u>2001-2012</u>

- Solved product development challenges for > 250 companies
- Clients commercialized > 1150 products & processes
- \$700M+ to region via univ/ind consortia

# Networks: Strengthening the Region's Innovation Infrastructure







# Networks Partnering for Growth







Advanced Manufacturing Accelerator





























































FOR GROWTH IN





WORLD TRADE CENTER®

American-Israel Chamber of Commerce

























CHINA PARTNERSHIP OF



























# Networks Advocacy & Policy













National Advisory Council for Innovation & Entrepreneurship (NACIE)

























- National: NACIE; SSTI; RIAN; IEDC; NASVF; AEE; Next Economy Partnership Project; NVCA
- Regional: DVRPC CEDs; RAIN; Life Science Leadership Advisory Council; Mayor's Sustainability
  Advisory Board; Solar Cities Partnership; EEB HUB Executive Board & Strategic Planning Steering
  Committee; Federal Reserve Economic Advisory Council; Select Greater Philadelphia CEO Council for
  Growth; Upper Perkiomen Advisory Committee & others

### Clients (a sampling)

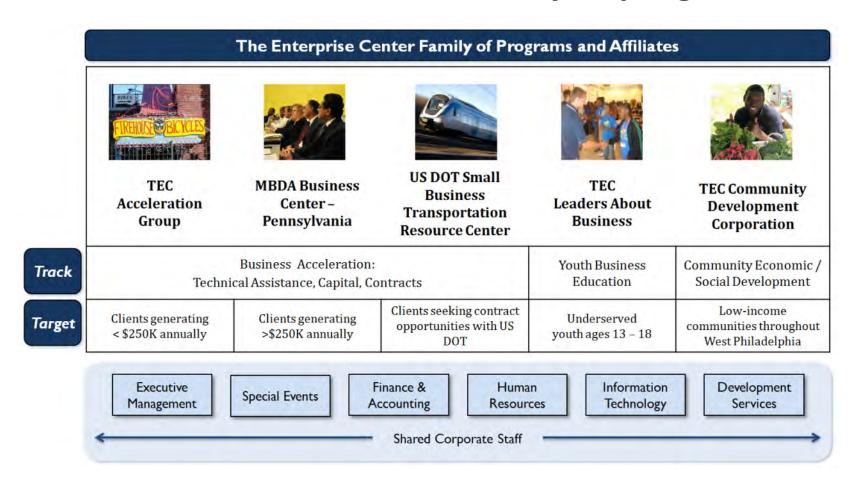




# A Holistic Approach to Community Economic Development

October 2012

# TEC Community Development Corporation is a member of the TEC family of programs



# TEC programs have a strong track record securing and leveraging public investments

### **Local / State**



\$750,000 toward CCE via NCAT/ NED Programs



\$500,000 toward CCE



\$546,722 toward CCE via Discovered and Developed in PA Program

#### **Federal**



\$784,595 toward CCE via CED Program



\$1,509,536 toward CCE via Special Grant



\$1,375,000 toward MBC of Pennsylvania Contract



\$183,000 toward MA-SBTRC Contract.

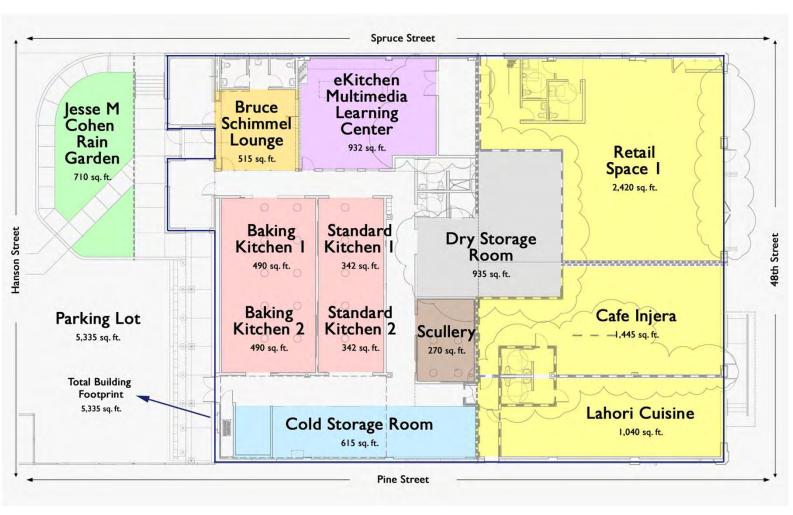
# TEC-CDC's community economic development strategy is informed by a comprehensive plan



# The Center for Culinary Enterprises is a central project achieving the Plan's goals



# The CCE features commercial kitchens for rent and the eKitchen Multimedia Learning Center



# Philly Food Innovation is the CCE's food business development program

## Financial Tech Assistance

- · Ensures financial literacy of clients
- Includes business planning, market analysis, credit counseling, etc.

### Access to Capital

- Administered through TEC Capital Corporation's Philly Food Ventures Loan Fund
- Loans ranging from \$10k to \$50k

#### Commercial Kitchens

- For hourly rent within the Center for Culinary Enterprises
- · 4 kitchens: 2 baking, 2 standard

Philly Food Innovation

#### Access to Contracts

- CCE partnerships with large institutional food purchasers
- Registration as MBDA Business Center – Pennsylvania clients

# Non-Financial Tech Assistance

- Individual TA, group workshops
- Wide variety of operational and strategic needs addressed

# The CCE will achieve the following projected outcomes annually

- 13 full-time jobs and 32 part-time jobs created through CCE staffing.
- 10 new food businesses launched or accelerated.
- Between 36 and 63 jobs created by clients using kitchens.
- Estimated full-time-equivalent (FTE) job creation

- 1-year: 54 to 81

3-year: 126 to 207

- 50 individuals placed in workforce positions in the culinary industry.
- 100 high school students trained in restaurant and hospitality mgmt.
- 400 community residents served with health & nutrition programs.

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# A diverse portfolio of public / private donors funded the CCE's \$5.5 million capital campaign

100%			
20%	Foundation	William Penn Foundation The Kresge Foundation Harry and Jeanette Weinberg Foundation Halloran Philanthropies	\$300,000 \$250,000
24%	Private	Dorrance H. Hamilton  Local Initiatives Support Corporation  Wells Fargo Program-Related Investment  Private Donations	\$350,000 \$250,000
56%	Public	US Economic Development Administration	\$500,000 \$500,000 \$298,000 \$250,000 \$54,356

# Major CCE Capital Funders Include the Following Organizations

### THE KRESGE FOUNDATION





















## View of Retail Storefronts from 48th St.

### **BEFORE**



## View of Retail Storefronts from 48th St.



## View of Storefronts from 48<sup>th</sup> St. sidewalk

### **BEFORE**



## View of Storefronts from 48<sup>th</sup> St. sidewalk



### View of Main Entrance from S. Hanson St.

### **BEFORE**



### **View of Main Entrance from S. Hanson St.**



## **View of Interior**

### **BEFORE**



# View of Interior – Bruce Schimmel Lounge AFTER



## **View of Interior – Traditional Kitchens**



# **View of Interior – Baking Kitchens**



# **View of Interior – eKitchen Learning Center**

