



Outline

- EPA's Role
- Technology Business Clusters
- Cluster Creation Process
- Formation of the WTIC
- EPA & SBA Announcement





EPA's Role





Environmental Protection Spurs Economic Development

- EPA Administrator Lisa Jackson made the following remarks at the National Press Club on 3/8/10:
 - “our environment is essential to our economy....the vital role environmentalism plays for a critical driver of our economic success: our capacity for innovation and invention.”
 - “smart environmental protection creates jobs”
- The National Risk Management Research Laboratory in Cincinnati, Ohio (NRMRL) was challenged to explore the possibility and potential of a water technology business cluster in its region.





What Can EPA Contribute?

- Provides funding for water research & technology development
- Conducts its water research at the EPA Cincinnati laboratory
- Coordinates the federal government role for water
- Creates water policy & regulates it





1913

Officers of the U.S. Public Health Service set up the Sanium Pollution Investigation Station in Cincinnati, operating under a Congressional Act of 1913.

1921

Development begins on the application of two fundamental measures of pollution in a stream: the coliform bacteria index and the biochemical oxygen demand test.

1948

The first Federal Water Pollution Control Act authorizes the Public Health Service to provide water quality for fish and aquatic life, and authorize facilities in Cincinnati to conduct research on water pollution and tests pertinent to pollution control.

1953

The Center moves to a new laboratory building on Columbia Parkway later to be dedicated as the Robert A. Taft Sanitary Engineering Center.

1966

The Robert A. Taft Sanitary Engineering Center on Columbia Parkway establishes a reputation for its work in wastewater treatment, water supply control, air pollution, radiation, and food preservation for the Public Health Service.

1969

Cincinnati donates 22 acres of land near the University of Cincinnati to the government, where the present facility is located.

1970

The Federal Water Quality Administration, National Air Pollution Control Administration and 17 other Federal units merge to create the U.S. Environmental Protection Agency.

1972

The legislation for the Federal Water Pollution Control Act of 1972 is enacted, later to be amended and renamed the Clean Water Act.

1975

On July 3, 1975, President Gerald R. Ford dedicates the National Environmental Research Center.

1980

The National Environmental Research Center is renamed the Andrew W. Bronkovich Environmental Research Center in memory of its first director (died 1975-1976).

1991

The Clean Water Act is reauthorized. Research at the Center expands to include assessment and management of risks from nonpoint-source as well as solid and hazardous wastes.

2001

Following the terrorist attacks on our country, EPA expands its research to help address the needs of homeland security.



Water Research

IN CINCINNATI

Water Research



**Urban Watershed
Research Facility**



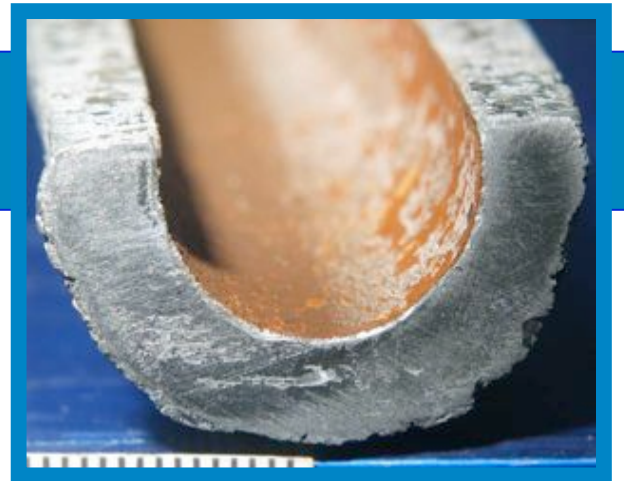
Stream Mesocosms



**Simulated drinking water
distribution system**



Microbial disinfection



Lead control research



Technology Business Clusters





What is a Business Cluster?

- **‘Critical mass’** of firms in one industry or closely related industries, located close to one another - including direct competitors.
- **Dense web** of designer/supplier/ manufacturer interrelationships.
- At least **one company** engaging in world class innovation and significant exports.
- May arise spontaneously or by design.

M. Porter (1998) “Clusters and the New Economics of Competition.” *Harvard Business Review* Nov–Dec, 77–90. Earlier work by Alfred Marshall



Why Create a Cluster?

- Green jobs
- Exports
- Growth in existing companies
- High-paying jobs
- "Innovator" image
- New companies -relocations
- New companies -start-ups
- Sustainable local economy
- Trained, flexible workforce
- Others...





Benefits of a Cluster

- Ample **knowledge workforce**
- Knowledge **spillovers**, leading to **still more start-ups**
- Region is attractive to still more **company relocations**
- **Companies “stick” to the locale**
 - Less economic development marketing expense
- Fewer claw back problems





Cluster Creation Process





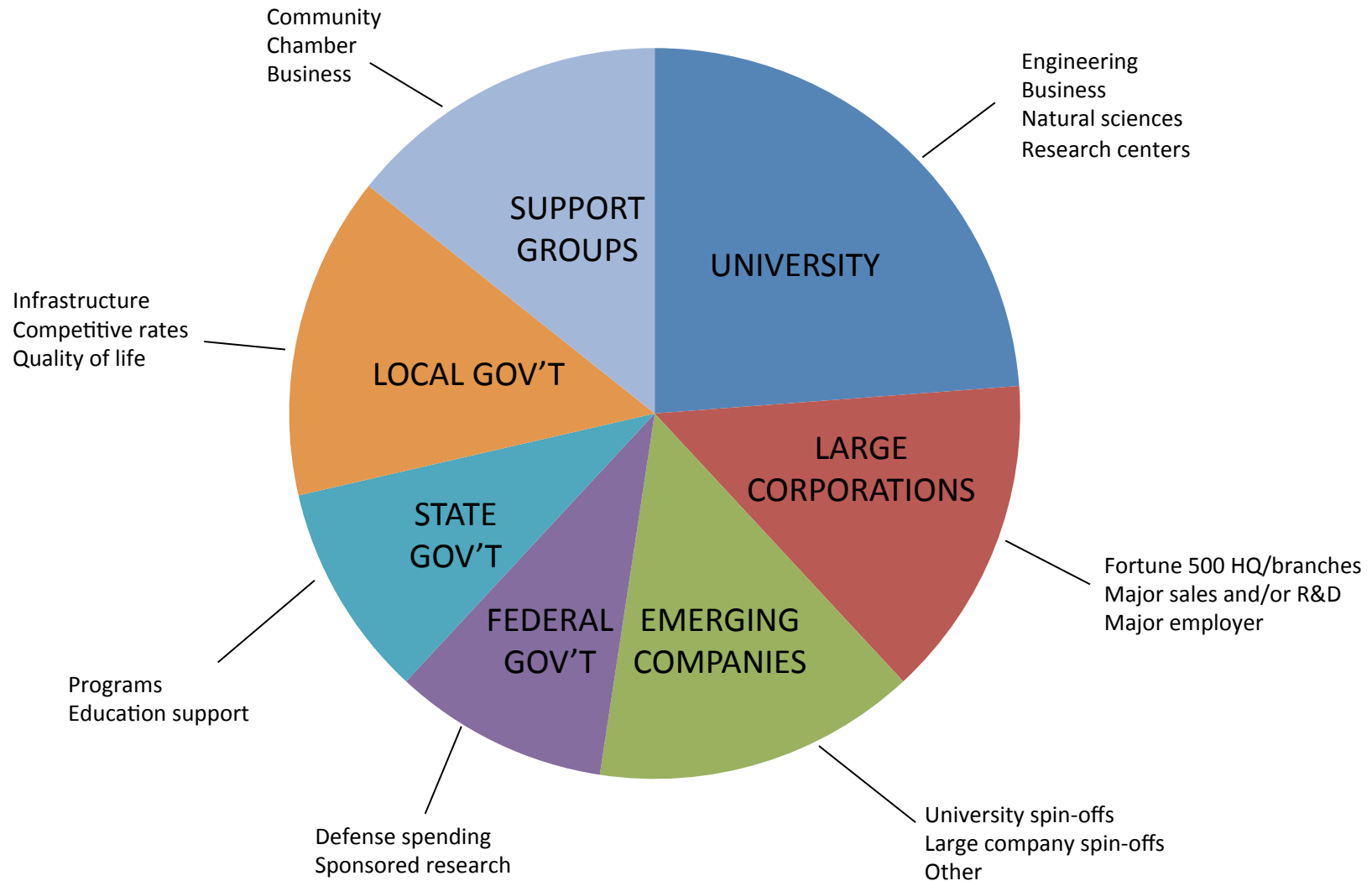
Cluster Creation Process Overview

Involves stakeholder engagement, social capital building and requires:

- Involvement of the leaders from the key cluster sectors
- Inventory of regional assets
- Agreement by leaders to form the cluster
- Grassroots formation of a steering committee
- Development of an operating structure & organization by the committee



Key Cluster Sectors



Adapted from "The Technopolis Wheel", Smilor, Raymond W., Gibson, David V., and Kozmetsky, George. "Creating The Technopolis: High-Technology Development In Austin, Texas." IC² Institute, The University of Texas at Austin (January, 1989). P.3.



Cluster Creation Process: The Details

- Stakeholder Engagement Involves:
 - Identification of regional strengths and key individuals and organizations
 - Facilitation of stakeholder meetings & discussions
- Asset Inventory Identifies:
 - Patents, innovative technology companies, laboratories, testing facilities, university assets, university researchers
- Operating Structure & Organization Involves:
 - Understanding cluster development stages and selecting the organization structure that meets the cluster's needs
 - Establishing goals and objectives
 - Making a commitment to proceed





Formation of the Water Technology Innovation Cluster (WTIC)





Formation of the WTIC

- EPA, SBA and champions from the key cluster sectors came together to form the WTIC
- EPA contributed the following:
 - Conducted studies of the market for drinking water technologies
 - Acquired the services of a cluster consultant
 - Conducted technology and knowledge mapping
- Champions formed a steering committee in 9/10
- WTIC Steering Committee:
 - Held two stakeholder meetings (10/20/10 & 1/12/11)
 - Developed the operating structure for the WTIC





WTIC

- **Vision Statement:**

- Collaborate to establish the region as a global leader in sustainable, environmental technology innovation, with an initial emphasis on water

- **Mission Statement:**

- Develop and commercialize innovative technologies to solve environmental challenges and spur sustainable economic development and job creation

- **Objectives:**

- Develop, test, and commercialize technologies
- Attract the best and brightest scientists and entrepreneurs
- Promote economic development through the creation and attraction of jobs and investment
- Become the world's source for practical and affordable solutions and sustainable practices

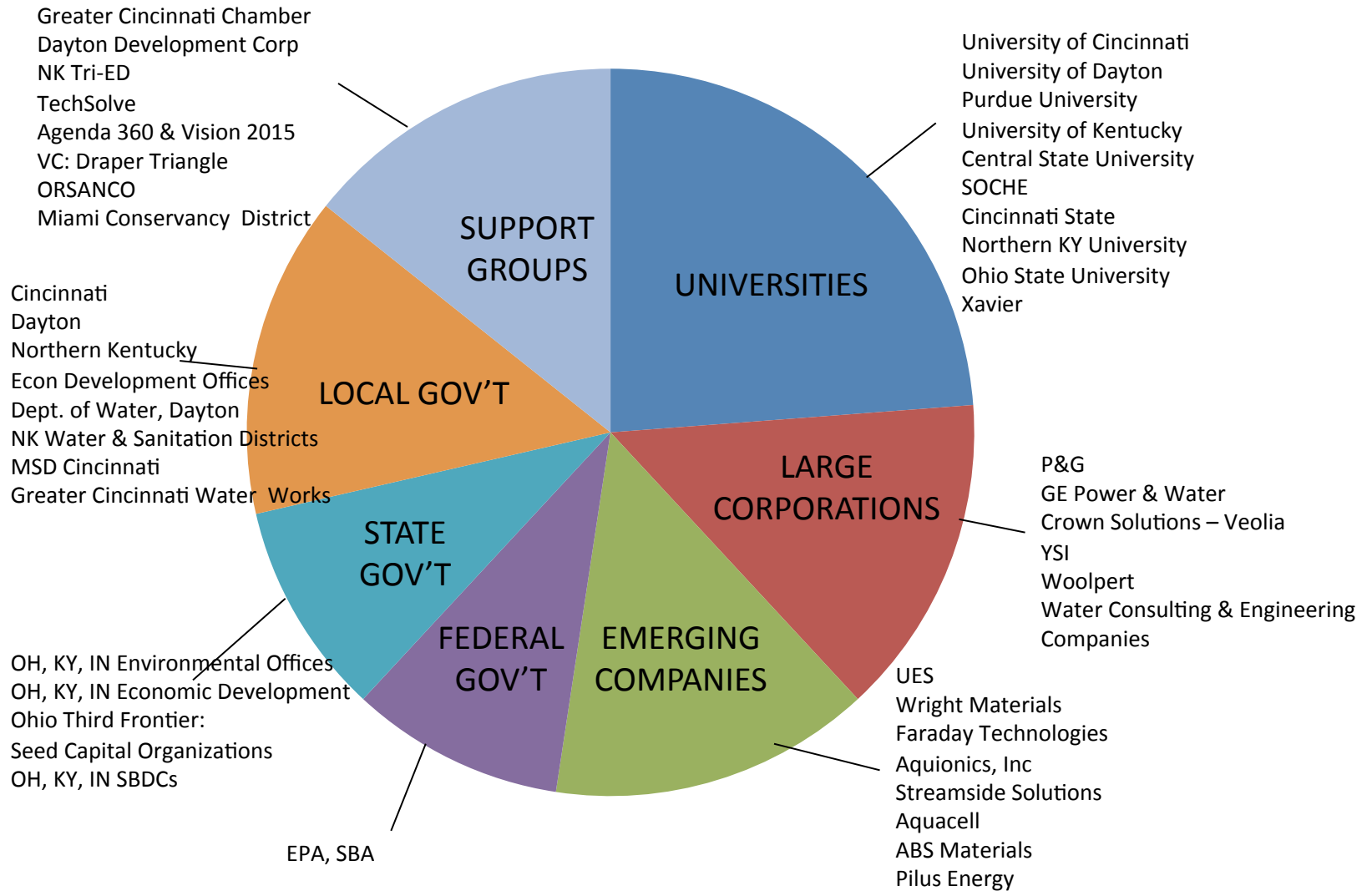


WTIC Structure

- WTIC Executive Committee of 3 members from: Dayton Development Coalition, Vision 2015, and Cincinnati USA Regional Chamber
- WTIC Board of Directors – 18 members
 - Chair: Alan Vicory, Exec. Director, Ohio River Valley Water Sanitation Commission (ORSANCO)
- WTIC Subcommittees
 - Commercialization
 - Research and Innovation
 - Economic Development



WTIC Partners and Stakeholders





EPA & SBA Announcement





A First - Joint Agency Announcement

- January 18, 2011 – EPA Administrator Jackson and SBA Administrator Karen Mills announced the formation of the WTIC in the Cincinnati/Dayton region, including Northern Kentucky and Indiana.
- WTIC directly supports EPA's new [Drinking Water Strategy](#)
- Resource commitments to seed the effort:
 - \$5M available for a National Center for Innovative Drinking Water Treatment Technology (STAR Grant)
 - \$1.5M available to fund innovative water treatment technologies being developed by the private sector (EPA-SBIR)





How can you learn more?





Acknowledgements

- Dr. Fred Phillips – General Informatics
- WTIC Steering Committee
- EPA Cluster Team
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- EPA-Office of Research and Development
- EPA-Office of the Administrator

