



111 South Calvert St. Ste.2700
Baltimore, MD 21202
410-385-5346
www.tiesteach.org

National Center for Technology Innovation: Technology Innovator's Conference
November 16, 2009
Washington, D.C.

THE NATIONAL STEM INNOVATION NETWORK: A Collaborative Effort

Jan Morrison
Executive Director, TIES



TIES

TEACHING INSTITUTE FOR EXCELLENCE IN STEM



WHAT IS STEM EDUCATION?

“STEM Education” refers to the teaching and learning of the STEM disciplines, usually in an trans-disciplinary, intensive and applied fashion, to a level of rigor at least sufficient for college-readiness without remediation.

TIES

TEACHING INSTITUTE FOR EXCELLENCE IN STEM



Intended Outcomes

- College-Ready
- Equity
- Economic Competitiveness
- Knowledge Capture & Transfer
- “Real Science and Technology” for Students

We want to leverage the current surge of national attention to STEM education to support the foundation’s goals, especially for low-income minority youth

TIES

TEACHING INSTITUTE FOR EXCELLENCE IN STEM



Strategic Relevance

STEM is a platform for:

- College-ready advocacy and equity focus
- Clearer, fewer, higher standards
- Developing new curriculum and instructional approaches
- New supports for students and teachers
- (Re)defining what a “teacher” is
- Source and a testing ground for innovation
- ***Developing robust intra- and interstate collaborative networks***

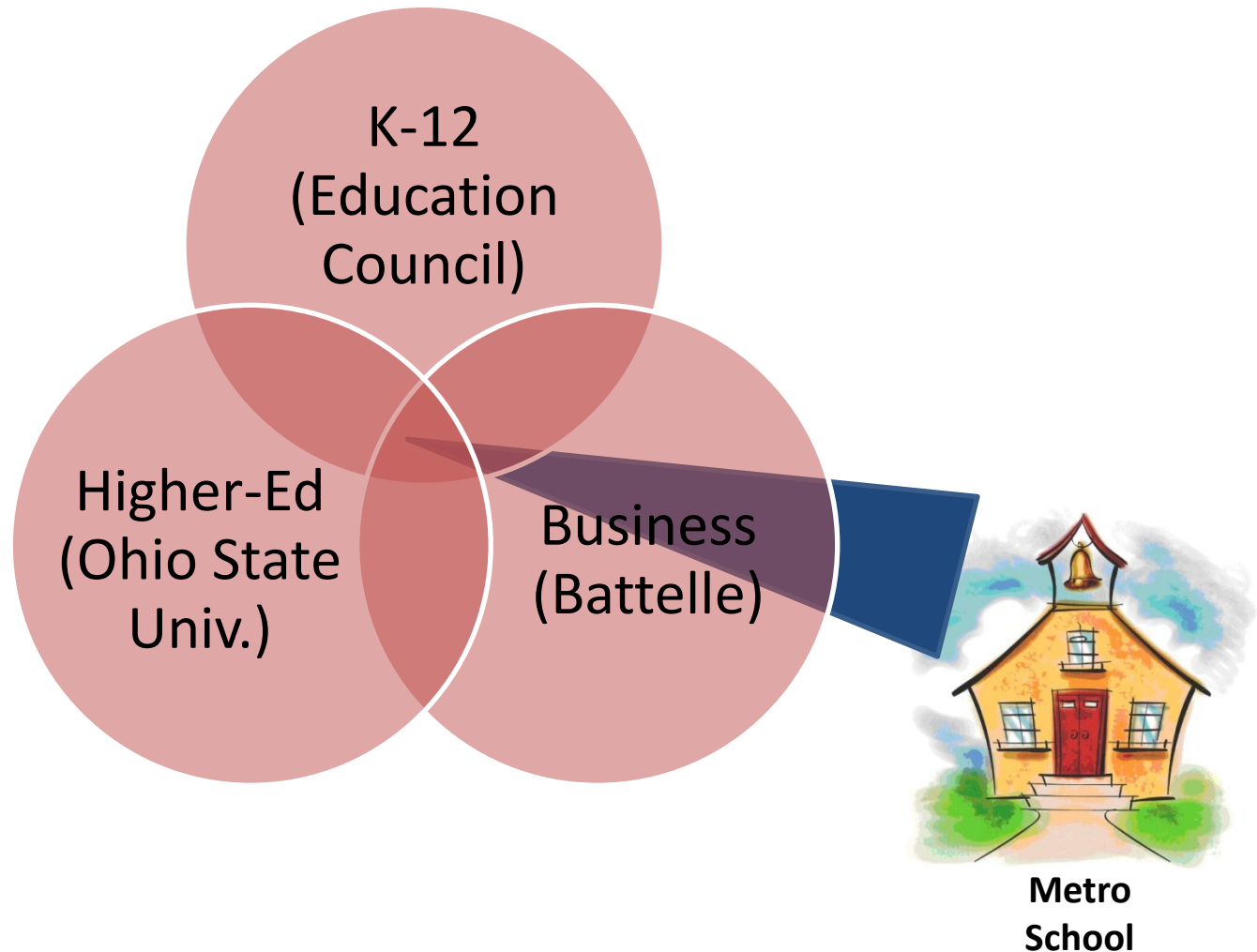
TIES

TEACHING INSTITUTE FOR EXCELLENCE IN STEM

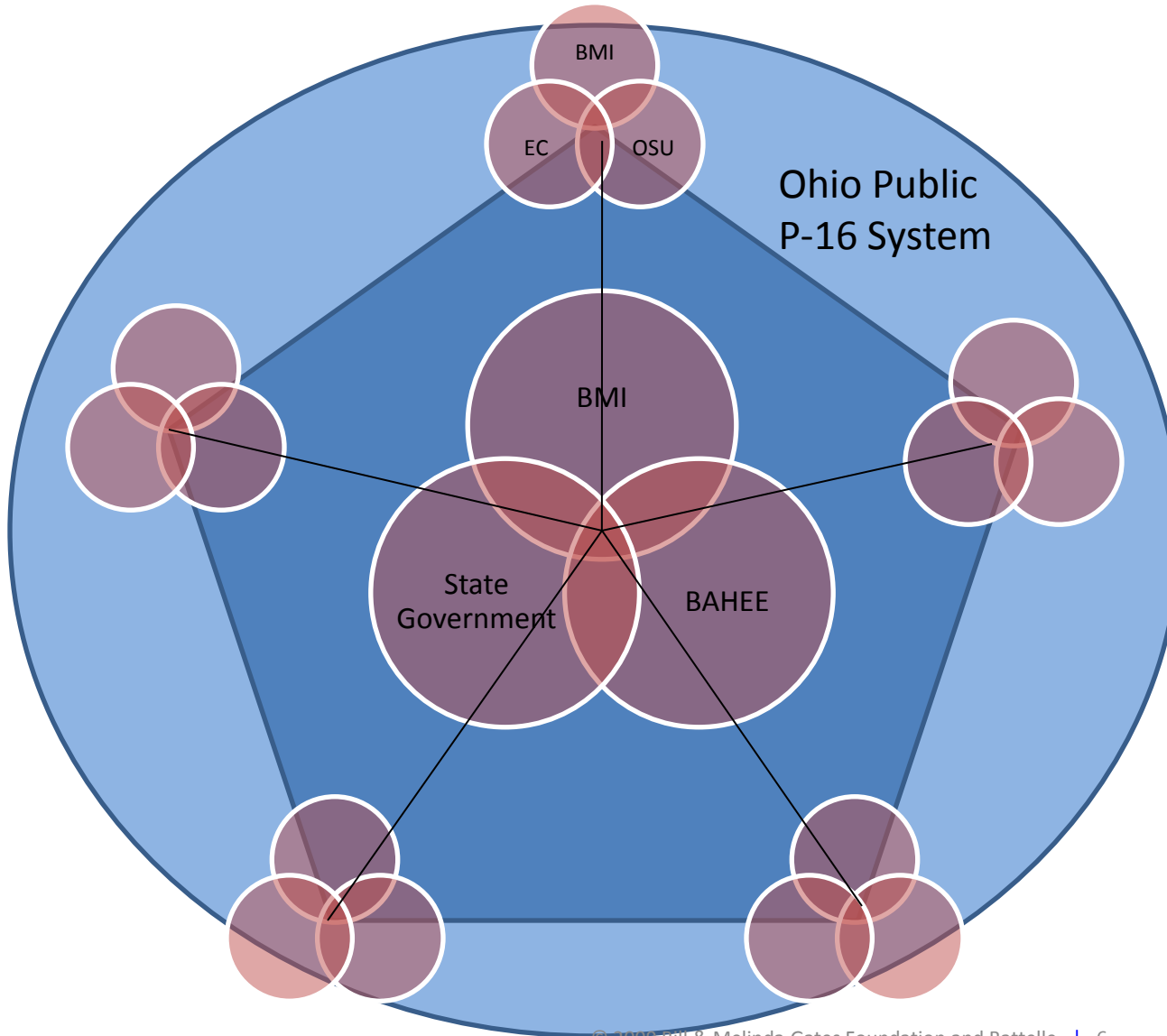
Ohio STEM Learning Network Prototype “HUB” Model

Partnership
responsible for:

- Design
- Governance
- Financial and In-Kind Resources



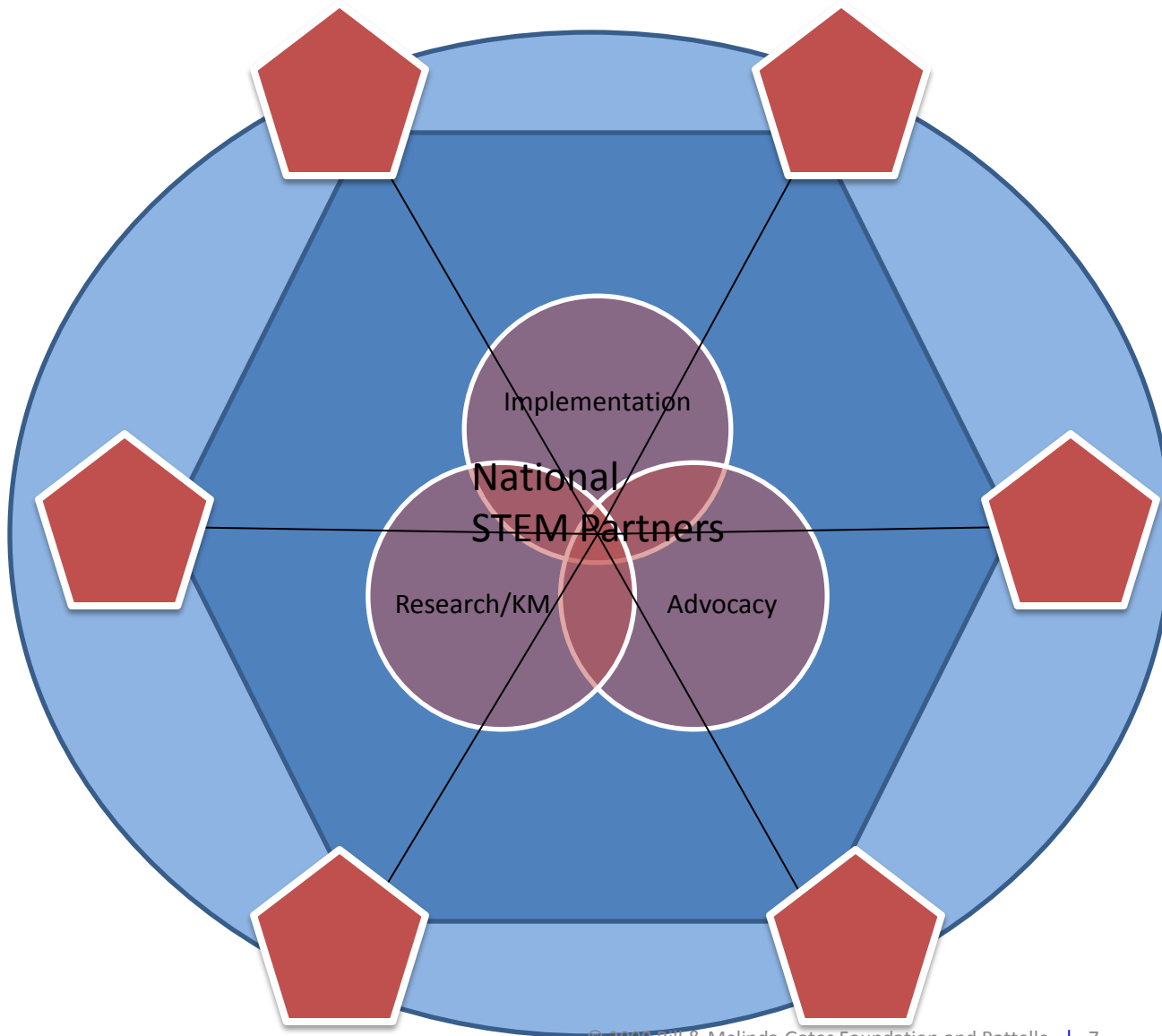
OLSN Collaborative Network Structure



“Thick” Network

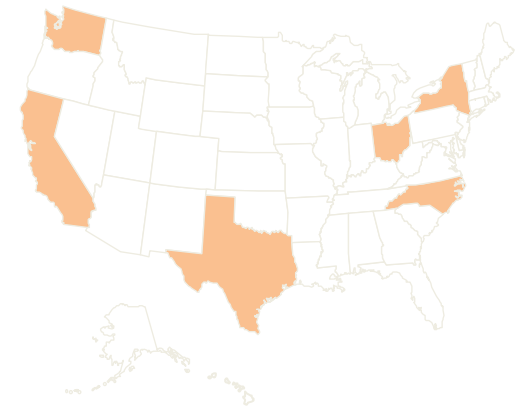
- Robust “HUB” Partnerships
- Robust Public-Private Partnerships
- Robust KM within network and between HUB and its region


Proposed National STEM Initiative



Current and Proposed States & Partners

- Texas
- Ohio
- North Carolina
- New York
- California
- Washington





Global Technology Networks and STEM for ALL Children...

MC2 STEM High School and The MIT FAB LAB

The FAB LAB is a global network of people who collaborate and share knowledge

Fab Labs have spread from inner-city Boston to rural India, from South Africa to the North of Norway.

Activities in Fab Labs range from technological empowerment to peer-to-peer project-based technical training to local problem-solving to small-scale high-tech business incubation to grass-roots research.

Projects being developed and produced in Fab Labs include solar and wind-powered turbines, thin-client computers and wireless data networks, analytical instrumentation for agriculture and healthcare, custom housing, and rapid-prototyping of rapid-prototyping machines.

Fab labs share core capabilities, so that people and projects can be shared across them



Global Technology Networks and STEM for ALL Children... MC2 STEM High School and The MIT FAB LAB

Cleveland to Kenya via Norway and GE

<http://mc2stemhs.wordpress.com/2009/06/24/about-the-fablab-concept/>

The Fab Lab in Cleveland will be working with their educational partner General Electric (GE) to develop an efficient solution to the lack of lighting and electricity available to the Fab Lab in Kenya

The plan is to develop the fixture with the informational resources and experiences from our team at GE Lighting and use only the tools and materials available to any Fab Lab around the world. **If it can be designed in Norway with support from Cleveland, it can be reproduced in Kenya by children!!**

TIES

TEACHING INSTITUTE FOR EXCELLENCE IN STEM



111 South Calvert St. Ste.2700
Baltimore, MD 21202
410-385-5346
www.tiesteach.org

National Center for Technology Innovation: Technology Innovator's Conference
November 16, 2009
Washington, D.C.

THE NATIONAL STEM INNOVATION NETWORK: A Collaborative Effort

Jan Morrison
Executive Director, TIES



TIES

TEACHING INSTITUTE FOR EXCELLENCE IN STEM