

North Carolina STEM Community Collaborative

A grassroots approach to building 21st
Century communities

North Carolina's STEM Landscape

Community Colleges

NC New Schools Project

Early College High Schools

Technology (e.g. - 1:1 Computing, Connectivity & eLearning Portal)

Futures 4 Kids

FIRST Robotics, Future City & Other Science Competitions

Strong Leaders

Hundreds of STEM Assets

NC Department of Public Instruction

National & International Programs

Corporate Programs

Economic Development Regions & Research Parks

Education Innovators

CTE

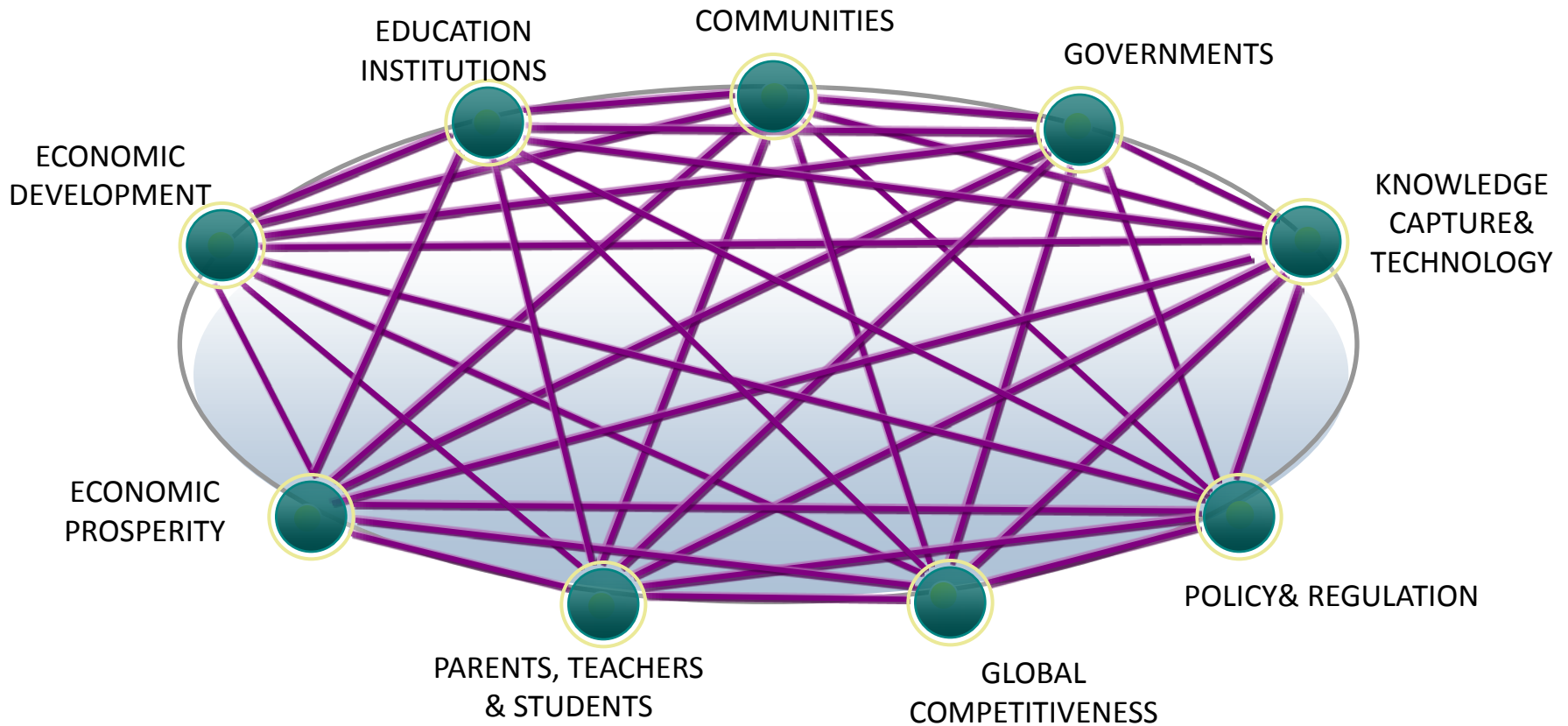
Entrepreneurs & Growing Technology Small Business

75+ University STEM Programs

Policy Leaders

Diverse population

Our Challenge is Ours, Collectively



By connecting communities to the state of the art programs, standards and assessments, curriculum/content, professional development, and expertise, the entire network benefits.

NC STEM Community Collaborative

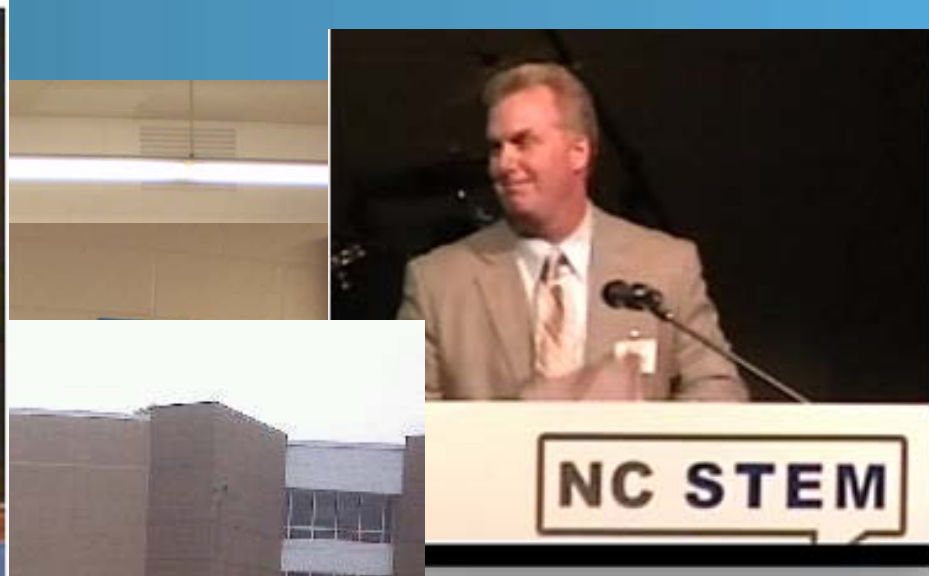
- Partnership with Bill & Melinda Gates Foundation, MCNC, Battelle Memorial Institute, STEM Communities, and Institutions
- Connects local community networks with STEM resources and other networks through systems-designed Community Collaborative Visioning Process (CVP)
- STEM Community Design Teams create a locally-sustainable Education Innovation Design Plan, focused on student-centered STEM education tied to economic needs of the region and state.
- 2009 STEM Communities: Davie County Region, Lenoir County Region, and BRAC Region (11 Counties)



2009 STEM Communities

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Media Coverage, Press Releases, Tweets across NC



Education Innovation Design Plans Created



STEM Communities

Community Visioning & Design Process:

Over a 6-9 month period, a STEM Community builds on its own assets by **engaging its community**, identifying **economic and education assets**, and using a **design process to create/support** education innovations. These Communities invest in sustainable, equitable, scalable, and collaborative approaches using:

- Communications & Networking Outreach
- Community-wide Meetings
- Procedural Design
- Facilitated Events & Meetings
- Digital Knowledge Capture
- Sharing knowledge across the network
- Networking with other states

Local STEM Design Teams include:

- Business Leaders
- Economic Development Partners
- 3+ Levels of Education
- Government Leadership
- Other Community Leaders
- Other Creative Partners:
 - NC DPI
 - Regional Partners
- NC STEM
 - Community Liaison
 - State/National Experts
 - Organized Resources



2009

- Began replicable, research-based **Collaborative Visioning Process (CVP)** with 3 Communities (Each Investing at least \$20,000 in this process)

Davie County

Lenoir County

Ft. Bragg Region

- **Kicked Off with Partners** from NC and Beyond – Over 2000 people engaged
- **JOBS Commission** –vehicle for legislative action and endorsement STEM Advisory Panel & Cross-Sector Advisers Engaged
- First 3 Communities creating **Education Innovation Design Plans**
- **Embedded staff** from NC Dept of Public Instruction, NC Community College System, Economic Dvpt with each design team
- **Aligned** with Race to the Top, JOBS, education establishment, Economic Development, Governor, Lt. Governor, Community Colleges and others
- **Connecting Community Demand with STEM Resources**

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2010

NC STEM Community Collaborative will:

- **Transition 3 STEM Communities** to implement their innovations
- **Partner in up to 4 new communities** to deliver Community Visioning & Design Process
- **Recruit private and public sector investments** to support changes that tie education to local economies
- **Grow and connect STEM network** of resources in NC & beyond



Building a Network of STEM Communities



Ready to Launch

3 STEM Communities engaged in 2009



Emerging/Incubating Communities

Future STEM Communities being identified

Davie County STEM Collaborative

Create a sustainable K-20 STEM culture by ***building innovative external and internal professional development models for teachers*** in collaboration with business, industry, government, higher education, school and private partners. These include:

- Teacher staffing/training models
- Teacher learning teams
- Residency programs
- The use of blended technology and alternative teacher evaluation systems.

2010 Steps:

- New Davie High School with teacher/STEM design with American Architecture Foundation
- Business & Implementation Planning (Q1-2)
- Sharing Mebane Masters model across network



Ft. Bragg STEM Collaborative

Through a *regional distributed learning network of enhanced technology classrooms*, promote and enable integrated learning, investigation, and questioning.

- Teachers connected with cutting edge researchers, subject matter experts and technologically assisted on-site professional development.
- STEM access/skills will become interdisciplinary, international, and virtually unlimited.
- Students will have access to support structures to become experienced problem-solvers, innovative thinkers, and intellectually curious.

2010 Steps:

- Aligning technology enhancements with content and teacher prep from around the state
- Connecting work to business & military assets
- Business & Implementation planning



Lenoir County STEM Collaborative

Education Innovation Plan:

Create a **STEM HUB** that:

- Networks internal and external STEM resources to promote experience-based learning opportunities for teachers and students.
- Will serve as an incubator of innovation in areas such as industry-based curricula, STEM research, blended education technology and professional development.
- Anticipated location: on the corporate campus of an aerospace industrial park

2010 Steps:

- Presentation to JOBS Commission 1/28
- Business & Implementation Plan in partnership with NC resources
- Connect with regional aerospace education resources and other clusters



2010 Focus Areas

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Increasing Network Capacity

3 STEM Communities to implement their innovations:

- STEM Communities investing in capacity building
- Design Plans transition to Business and Implementation Plans
- NC STEM and partners assist with talent, treasure and expertise for local capacity building

Grow and manage STEM network of resources in NC & beyond:

- 20+ Targeted Webinars for STEM Assets, Educators, Communities
- Connect NC partners with network of states and international resources
- Learning tours
- Demand Generation through media, social networking, and sponsorship
- Assist NC assets with resource acquisition
- Support prototyping of “next practices” and scaling of “best practices”



Growing the Network

Extend the network to each Economic Development region:

- **Partner in up to 4 new communities** to deliver Community Visioning & Design Process
 - Identify and recruit best communities for regional hubs
 - Identify and recruit lead agencies in each
 - Facilitate CVP during 2010
- Add more cross sector partnerships
- Connect current network with STEM networks in other states

Growing Team:

Director of Community Outreach

Team of Community Liaisons

Director of Communications/Policy

Program Manager

Embedded Staff from NC and Beyond

Contracted Partners and Resources



Questions & Discussion

NC STEM Community Collaborative

