## **Indiana STEM Ecosystem Initiative**

Indiana Afterschool Network I-STEM Resource Network June 2016





INDIANA Science • Technology • Engineering • Mathematics RESOURCE NETWORK

# Indiana Afterschool Network STEM Initiative

- General role of the IAN is to support the 1,000+ out-of-school programs throughout the state by providing professional development, connections, resources, and general support in all areas, including STEM
- IAN STEM initiative started in 2008 through the on-going support of the Noyce and Mott Foundations.
  Outcomes include:
  - Indiana OST STEM Standards used nation-wide
  - Indiana OST STEM Taskforce 230+ members
  - Focus on evaluation Dimensions of Success
  - Focus on professional development
- 9 regional OST Alliances, most with STEM education emphasis



## **I-STEM Resource Network**

- Mission is to enable Indiana students to succeed in formal STEM studies and to improve their college and career readiness in STEM disciplines through:
  - Support of STEM programming (K-8 focus) Indiana Science Initiative (ISI) 150 schools, 2,409 teachers, 52,168 students
  - Professional development of STEM educators
  - Advocacy of statewide STEM education opportunities and policies
  - Statewide I-STEM Advisory Council (100+ participants)



# IAN STEM/I-STEM Partnership Extending the STEM Learning Day

- Indiana partnership selected to join first cohort of the national STEM Learning Ecosystem
- 'Cardinal Rule' ALWAYS include out-of-school time in any STEM education discussion!
- Supported by the Indiana Department of Education STEM School Certification program – which requires a STEM school to partner with an OST STEM program





# Power of Linking STEM In-School & Out-of-School

- Multiplies available hours of STEM learning
- More STEM in afterschool and summers can add 1080 additional hours of learning to a child's year – equal to 144 school days
- Increases STEM skills, knowledge, excitement, hands-on learning, opportunities to learn with community experts
- Links the expert pedagogy of educators with the flexible hours and hands-on focus of informal learning environments
- Youth are in school 20% of their waking hours; how they invest the other 80% can be a life game-changer





#### Opportunity Areas for Alignment and Integration of In-School and Out-of-School STEM Learning

- Access to and prevalence of quality STEM learning
- High quality programs with competent staffs
- Advocacy for policy
- Funding and investment
- Partnerships
- Information sharing





# Local Indiana STEM Ecosystems



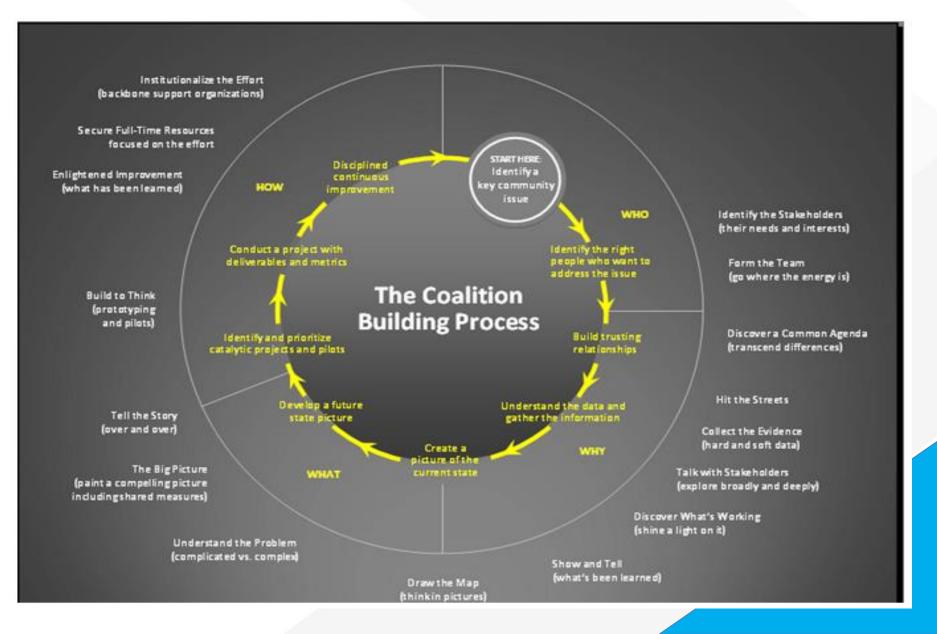


#### 'Rules of the Game'

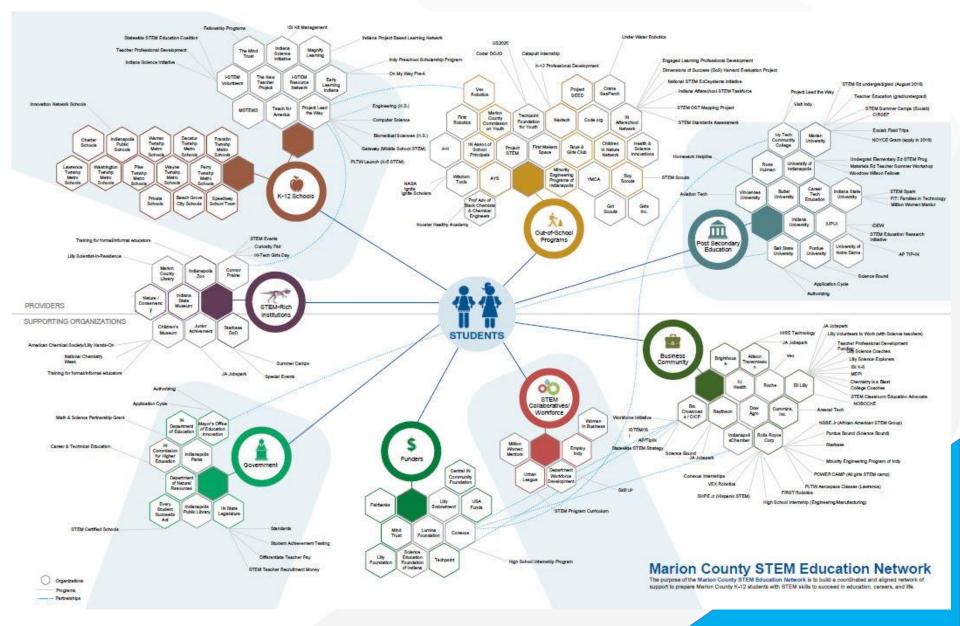
- Own it locally
- Designate a local champion
  - Indianapolis business
  - Columbus economic development
  - Bloomington community foundation
  - Fort Wayne higher education
- Use a collaboration building model
- Map assets
- ALIGN WITH OUT OF SCHOOL PROGRAMS!



## Institute for Coalition Building Model



## Marion County STEM Stakeholder Map



# Alignment of In-School & Out-of-School STEM Learning

- Set attainable goals
  - Effective communication between formal and informal STEM educators
  - Mutual identification of STEM learning opportunities
  - Shared professional and curriculum planning
- Recognize and work on the issues
  - Time constraints both in-school and OST
  - Barriers to OST participation
    - Cost
    - Transportation
    - Family awareness
  - Funding
  - Professional development, especially for OST
  - Space and equipment





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