

# STEM in MA

## The Governor's STEM Advisory Council



# Leaders 2014

- Co-chairs
  - Jeff Leiden, CEO, Vertex Pharmaceuticals
  - Representative Joseph Kennedy
    - ED
- Allison Scheff, Department of Higher Education, <http://www.mass.edu/stem/>

# A little pre-history...MA.1

Starting in the mid 1990's:

- STEM professionals/ STEM corporations/ workforce development professionals realized there is a real shortage of skills/ workforce
- STEM professional organizations expressed concerns re: a shortage of STEM-ready-workforce & diversity in STEM workforce

# A little pre-history...MA.2

- Strong reflections in Massachusetts (engineering and science professional Societies; workforce development professionals; training and education professionals in STEM corporations)
- Beginning of STEM Pipeline movement in Massachusetts in late 1990-early 2000 - STEM professionals and K-20 education - together ( a lot of work from 1999-2003)
- NSF responded by SMET funding (late 1990 - early 2000) (there was no STEM back then, it was SMET)

# A little pre-history...MA.3

- Beginning of a plan under aegis of UMass Pres Office
  - First MA STEM Summit in 2003
- MA STEM Caucus in the Legislature
- MA STEM Pipeline Fund
- MA Council created by executive order, end of 2009

# The Council works through:

- Executive Committee
- Operations Board
- Named SubCommittees
  - This year the Global STEM Education Committee was created

# Named Subcommittees

- Media & Communications
- Defining STEM
- Global STEM Education
- STEM Awareness
- STEM Summit Proposal Review Panel
- Diversity
- STEM Networks
- Data & Measurement
- Teacher Training and Development
- Workforce Training

# Council accomplishments

- Establishment of regional networks (9)
- @Scale projects (3rd phase to start )
  - e.g. Digits (phase 1)
  - Bioteach (phase 1)
  - BATEC (Big Data) (phase 2)
  - Science from Scientists (phase 3)
- To view details: <http://www.mass.edu>



# Since Council creation in Oct. of 2009

- The STEM Pipeline fund has received a total state allocation of \$5.5M broken down as follows:
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- FY2010 – No allocation
- FY2011 - \$500K
- FY2012 - \$500K
- FY2013 - \$1.5M
- FY2014 - \$1.5M
- FY2015 - \$1.5M
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# Members

- ***Gary J. Beach***, Author, Guest Columnist, The Wall St Journal
- ***Fran McDonald***, VP, Operations, MA Maritime
- ***Antonio Pagan***, Integrity by CELT
- ***Alex Sanchez***, Senior Manager, Strategic Global Sourcing, Raytheon, Raytheon Integrated Defense Systems
- ***Larisa Schelkin***, Founder & ED, The Global Education Center
- ***Richard Tharin***, CEO, Eureka International Regulatory Services, LLC

I chair the Committee

# Focus/Definition of Global STEM Subcommittee.1

- STEM work now and in the future will be characterized by teamwork/collaboration across geographies and cultures and with the use of cutting edge communication and other technologies to solve critical challenges and problems faced by the world. All students need to acquire the necessary knowledge base and skills and practice them so they become proficient in all these dimensions.

# Focus/Definition of Global STEM Subcommittee.2

- For students to be able to achieve this proficiency, their teachers must be equally educated and supported: understanding and working with diversity of all kinds, with technology and science, technology, engineering and mathematics.

# Mission of the Subcommittee.1

- To bring attention to the importance of Global STEM education for the future success of students and the workforce of MA and the US
- To educate the community(ies) about the importance of Global STEM education for the future success of students and the workforce of MA and the US

# Mission of the Subcommittee.2

- To make Global STEM a goal in the MA STEM plan
- To develop tactical and strategic actions to ensure the integration of Global STEM in education K-16 and support the three objectives above

# Immediate Desired Actions

- Quickly move MA to invest in global STEM education (huge ROI)
- NY, CA, NC, WI already have
- IA is contemplating a similar committee
- Check out:

<http://mappingthenation.net/state-massachusetts.html>

# Contact info:

**The Council can be located at  
<http://www.mass.edu/stem/>**

**I can be reached at  
[ikz1@verizon.net](mailto:ikz1@verizon.net)**