

# Can Smart Cities *Contribute to STEM Learning and Workforce Development?*



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# SMART City R&D

Community



Industry



University



Smart City Challenges



Cyber-Physical  
Systems



Real World Problems

High School  
Students



Instructors/  
Researchers



Professionals



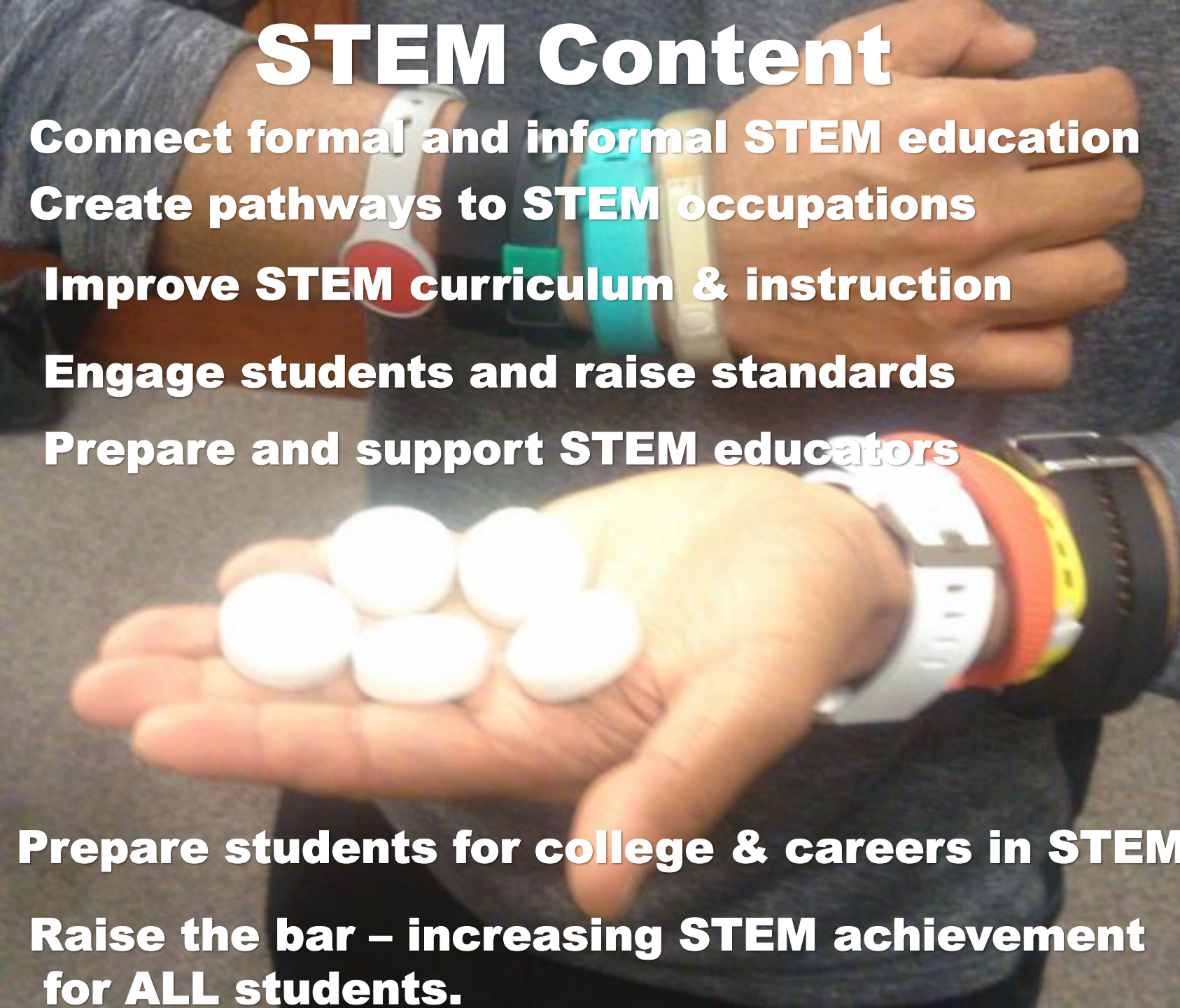
Partners

Stakeholders

CO-  
DESIGN

Systems



A close-up photograph of a person's hands. The left hand is open, palm up, holding five small, round, white pills. The right hand is partially visible, also holding pills. Both wrists are adorned with multiple colorful wristbands in shades of red, yellow, green, and blue. The background is a dark, textured surface.

# **STEM Content**

- Connect formal and informal STEM education**
- Create pathways to STEM occupations**
- Improve STEM curriculum & instruction**
- Engage students and raise standards**
- Prepare and support STEM educators**

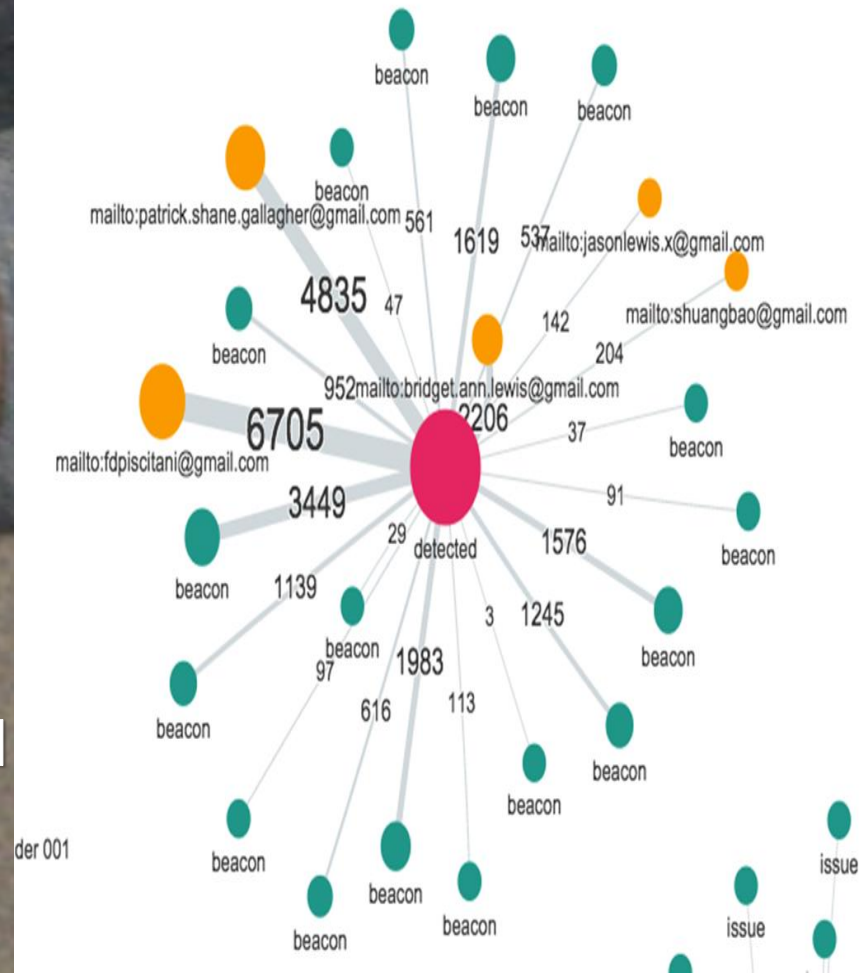
## **Prepare students for college & careers in STEM**

### **Raise the bar – increasing STEM achievement for ALL students.**

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# Sensor-based Measurement & Visualization

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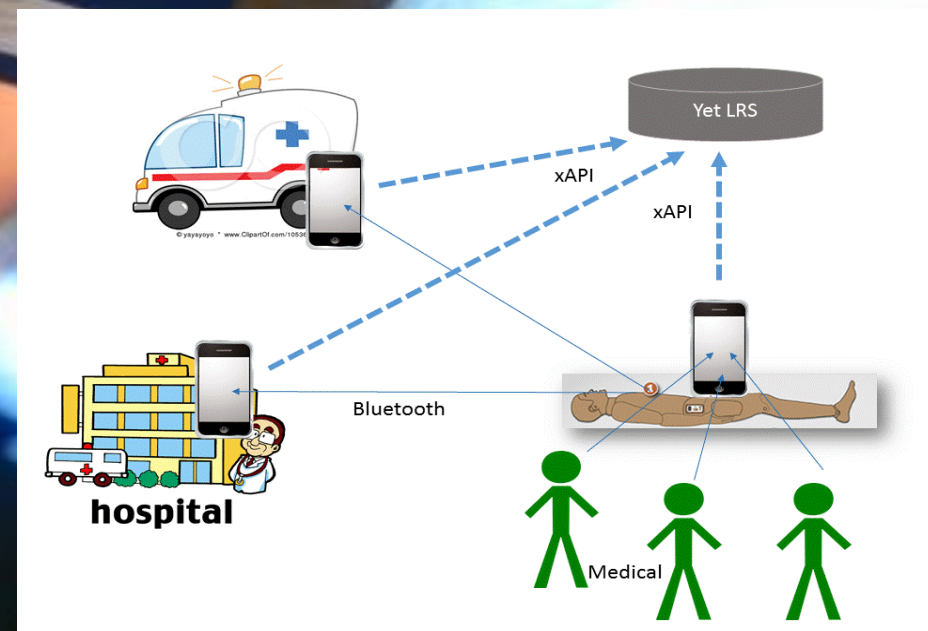


# Collaborative Design/ Partnerships



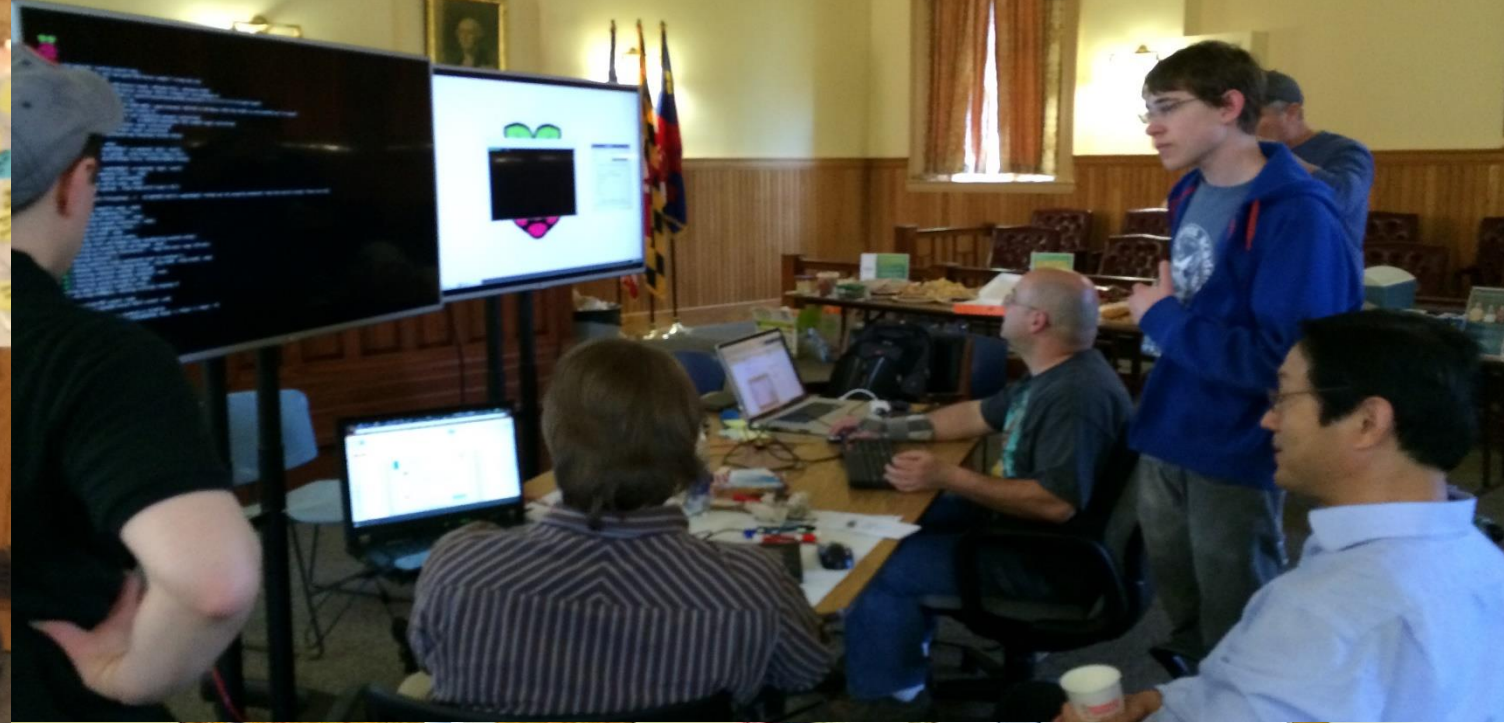


# Engineering/Systems





# Computer Science/Informal learning



# Problem Solving/Critical Thinking



**High School**



**Stakeholders**

**Undergraduate**



**Professionals**



**Graduate**



**Scientific Teams**



**Community**





# Impacting Real World Challenges

**Opportunities for students and teachers to participate in co-design and research in SMART cities challenges.**

**Please join me and my colleagues in exploring how smart and connected communities can inspire next generation high schools.**

