



# WPI

## CENTER FOR GLOBAL PUBLIC SAFETY

Industry Stakeholders' Forum  
April 30, 2018

# CENTER FOR GLOBAL PUBLIC SAFETY







**THEORY**

**PRACTICE**

**IMPACT**

**Center for Global Public Safety**

April 30, 2018

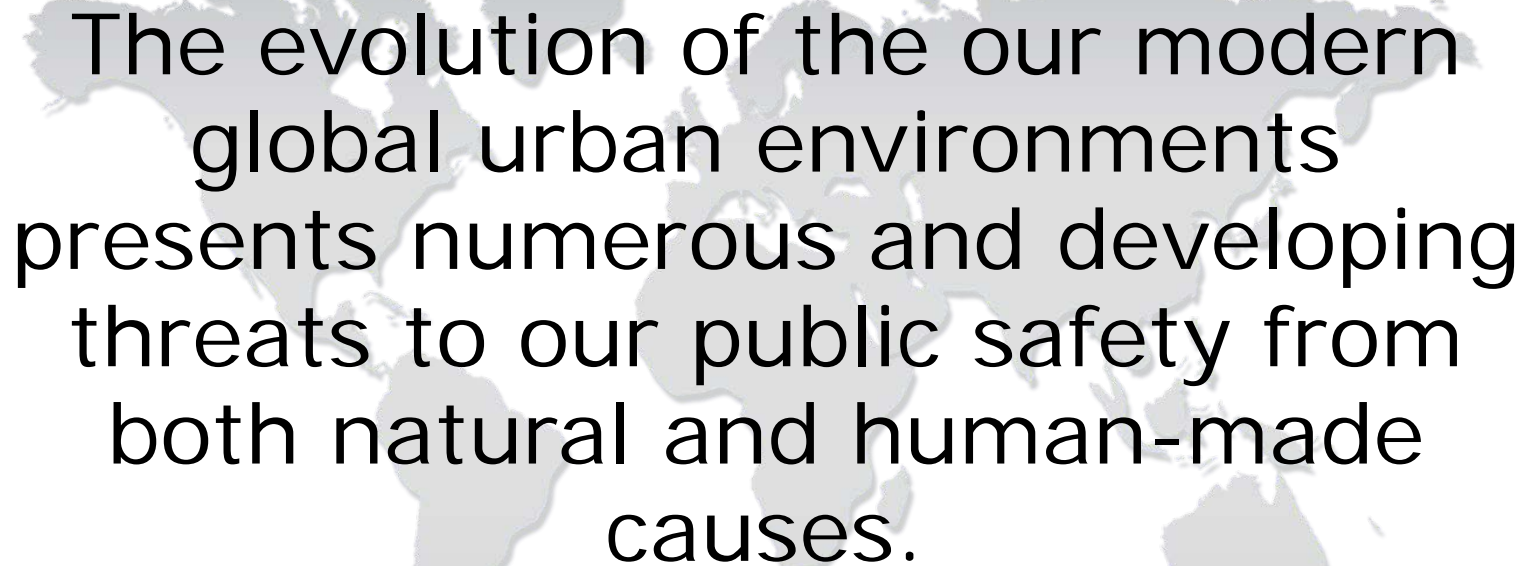
# Agenda

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- Reasons
- Mission & Vision
- Five Year Strategy

# Observations

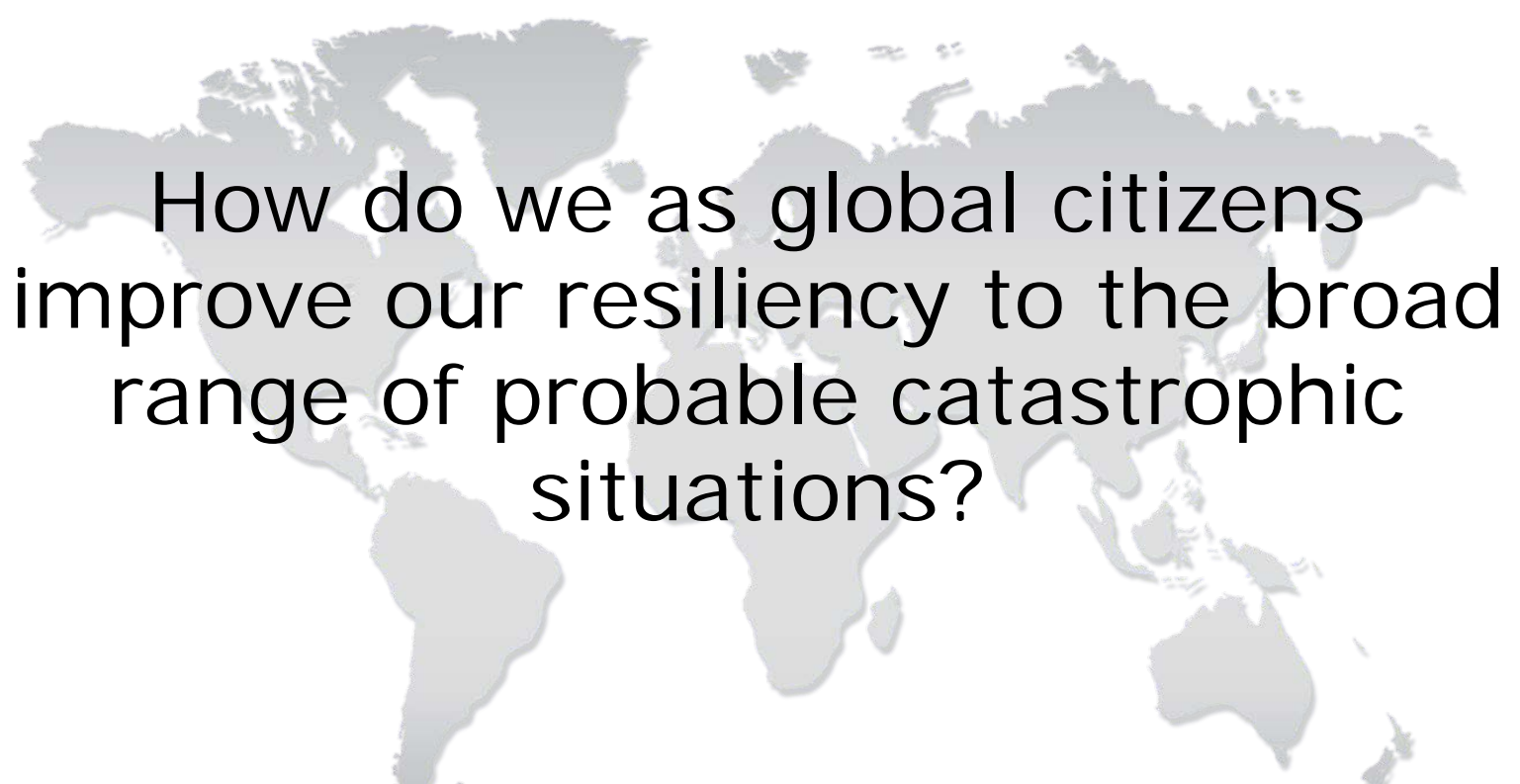
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The evolution of the our modern  
global urban environments  
presents numerous and developing  
threats to our public safety from  
both natural and human-made  
causes.

# Observations

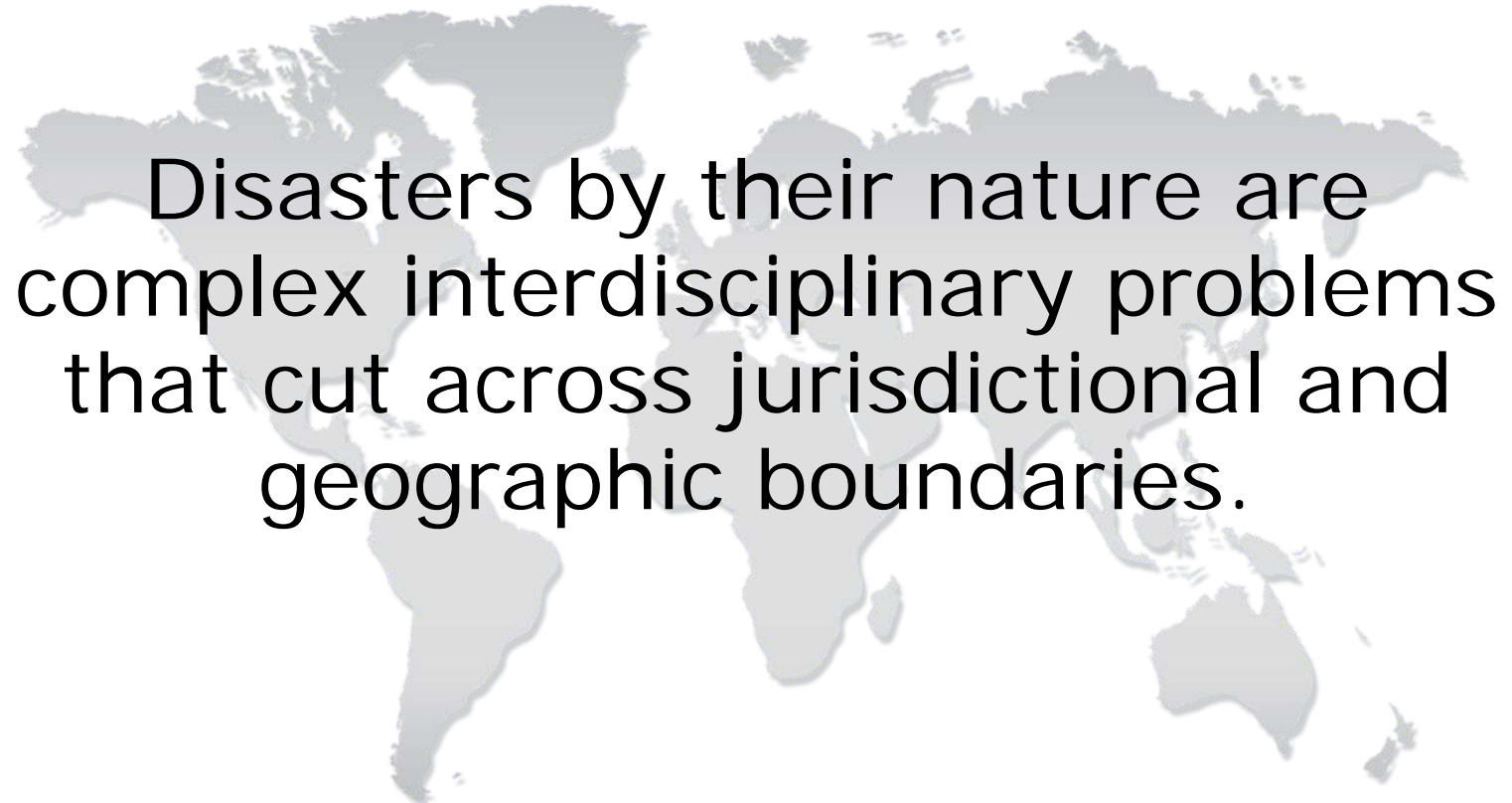
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How do we as global citizens  
improve our resiliency to the broad  
range of probable catastrophic  
situations?

# Observations

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Disasters by their nature are complex interdisciplinary problems that cut across jurisdictional and geographic boundaries.

# Vision: A Global Leader in Creating a More Resilient World

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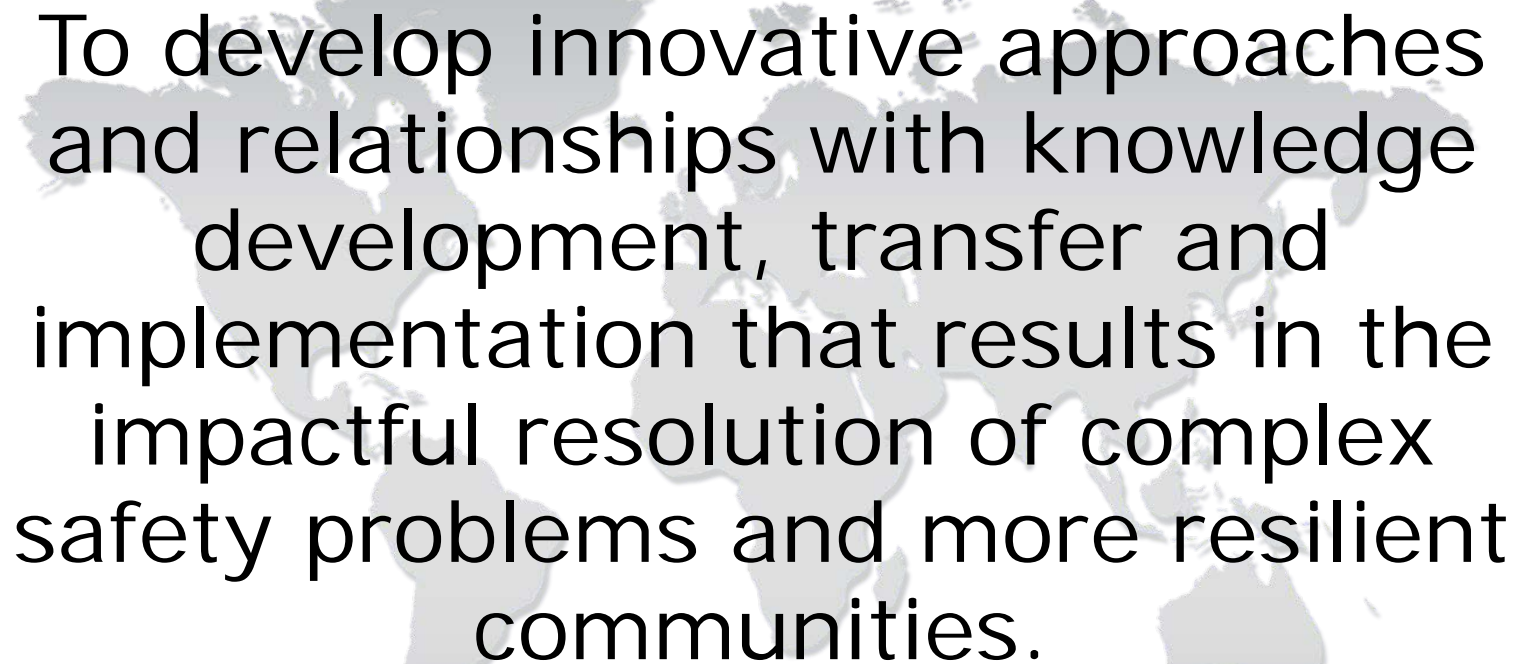
With an initial focus in the key areas such as:





# Mission

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A faint, light gray world map is visible in the background of the text, centered behind the mission statement.

To develop innovative approaches and relationships with knowledge development, transfer and implementation that results in the impactful resolution of complex safety problems and more resilient communities.

# Mission

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World-wide safety is our focus



- Research and innovation
- Training and education
- Partnering with industry, government, academia and NGO's



# The Distinction of **WPI**

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- Approaches problem solving by blending theory and practice
- Project-based education model for over 40 years
- Existing global footprint – 46 project centers provides global context
- Unique expertise in academic areas
- Produces engineers best prepared to solve real world problems
- Purpose-driven education and research for local/global impact

# Tsinghua University – Beijing, R.O.C.

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- #1 Global University for Engineering – US News and World Report (2016)
- Internationally influential Institute of Public Safety Research
- Support of the Chinese National Center for Disaster Management
- Expertise in resilient systems for infrastructure, early warning systems, and other aspects of Smart Safe Cities



# Five Year Center Growth Strategy

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# Phase I: Initiate *(Until Sep. 2017)*

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- Presidents Leshin and Qiu envision and launch the Center in 2016
- MQP project with Siemens China on Smart Field Devices for Flow of HVAC Units in Buildings
- 1st Symposium on ***Resilient and Smart Cities*** in Beijing at Tsinghua University in 2017
- Graduate student exchange with Tsinghua University in FPE – Prof. Ali Rangwala
- Supporting WPI PhD ME Fire Resistance of Geo-polymers – Prof. Jianyu Liang
- Initial Center funding secured from JENSEN HUGHES, Lion Inc., Mickey Reiss and anonymous donor



# Phase II: Growth *(Oct 2017 – Sep 2018)*

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- Hiring of Administrator and securing space
- Tsinghua PhD student working w/WPI Prof. Rangwala will present at upcoming US Combustion Conference
- Awarding of CGPS Seed Grants
- UAE initiatives
  - Retained local consultant
  - Khalifa University
  - UAE Civil Defense
  - American University of Sharjah (AUS)
- CGPS Reception on March 8 on WPI campus
- Industry Stakeholders Forum at WPI (April 2018)



# Phase II: Growth *(Continued)*

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- Populate CGPS Advisory Board
- ECE TA w/Prof Huang to work on 3D model area for Smart Fire Truck Project
- 2 WPI IQP teams at Tsinghua (Summer 2018) Smart Fire Truck Project Liang/Huang
- 2nd CGPS Symposium (at WPI, Sept 17, 2018)
- WPI ME PhD Student will conduct research at Tsinghua summer (2018)
- Establish relationships with Government Agencies in the Public Safety Space
- Continue to fundraise

# Phase III: Scale & Sustain (Sep 2018 – 2020)

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- Expand opportunities with industry engagement
- Build on Seed Grant research
- Establish expertise in key areas of global safety
- Deliver *Global Safety Index* (risk indices by country)
- Formalize joint WPI/Tsinghua MS/PhD and research programs
- Functioning BS/MS and certificate program in FPE with Khalifa University
- On-site implementation of project-based learning at AUS
- Continue to fundraise and recruit members for CGPS



# Phase III: Scale & Sustain *(Continued)*

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- Scaling of **research** and **innovation** opportunities at Tsinghua, Khalifa, UAE Civil Defense and AUS
- Annual CGPS Symposiums with academic and industry partners
- Target other strategic universities (Latin America, Africa) for expanding the BS/MS and certificate program model
- Establish sustainable funding model (blend of membership, philanthropy, and group funded programs)



# Summary and Conclusion

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Our goal:

Within 5 years, to have established a global network that is delivering impactful results in public safety for communities across the world in demand-driven areas such as fire, water, food, emergency response and transportation.



# Questions

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