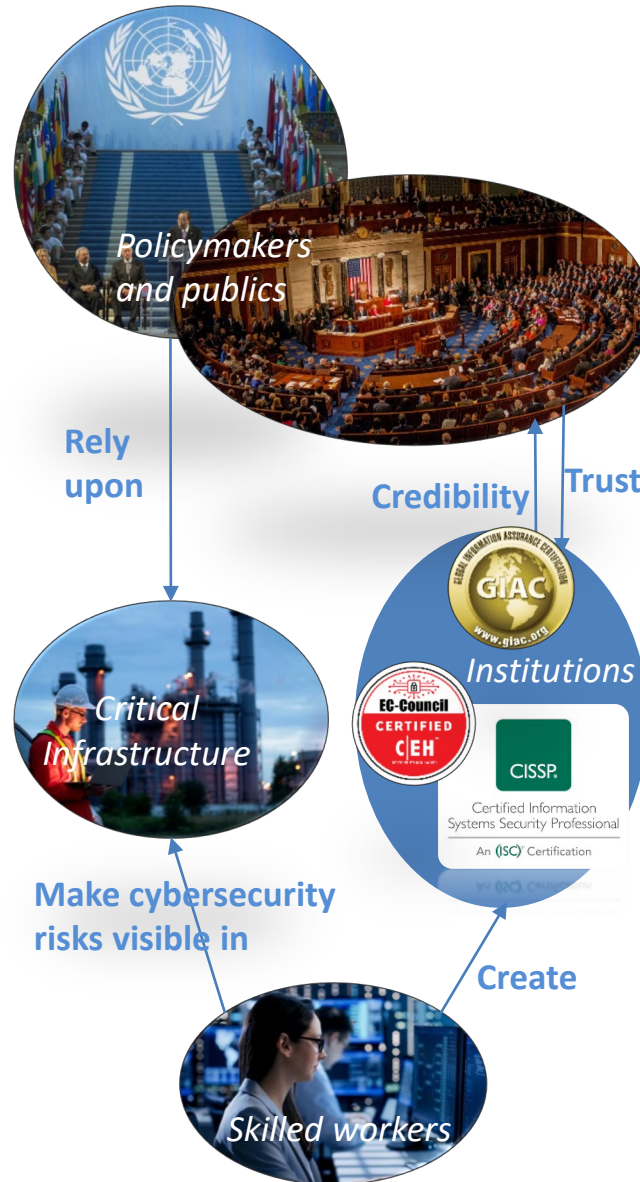# Enacting Cybersecurity Expertise

Challenge:

We have a shortage of expertise in critical infrastructure cybersecurity. Establishing expertise requires not only skills and knowledge, but also building networks of trust between experts and those who rely upon them. But it is impossible to prove that a system has not been breached, and no system is perfectly secure. So how is credible expertise created?

Solution:

Using ethnographic and document-based research, at multiple scales (organizational, national, global), examine how skilled workers:

- Define and make risks visible.
- Demonstrate technological capabilities.
- Create credible institutions that enable expertise to travel.

Project 1553069, Cornell University
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Policymakers and publics

Rely upon

Credibility **Trust**

Institutions

Critical Infrastructure

Make cybersecurity risks visible in

Create

Skilled workers

Scientific Impact:

- Understand how knowledge and skills in critical infrastructure cybersecurity have been institutionalized.
- Theorize relation between expert practices and international cybersecurity.
- Integrate undergraduate and graduate research and teaching on social dimensions of cybersecurity.

Broader Impact and Participation:

- Undergraduate and graduate research training, including hands-on training for graduate research assistants (3), postdoctoral researcher (1), and undergraduates (12).
- New policy proposals for civilian and military cybersecurity emphasize the centrality of skilled work and the value of defense.