

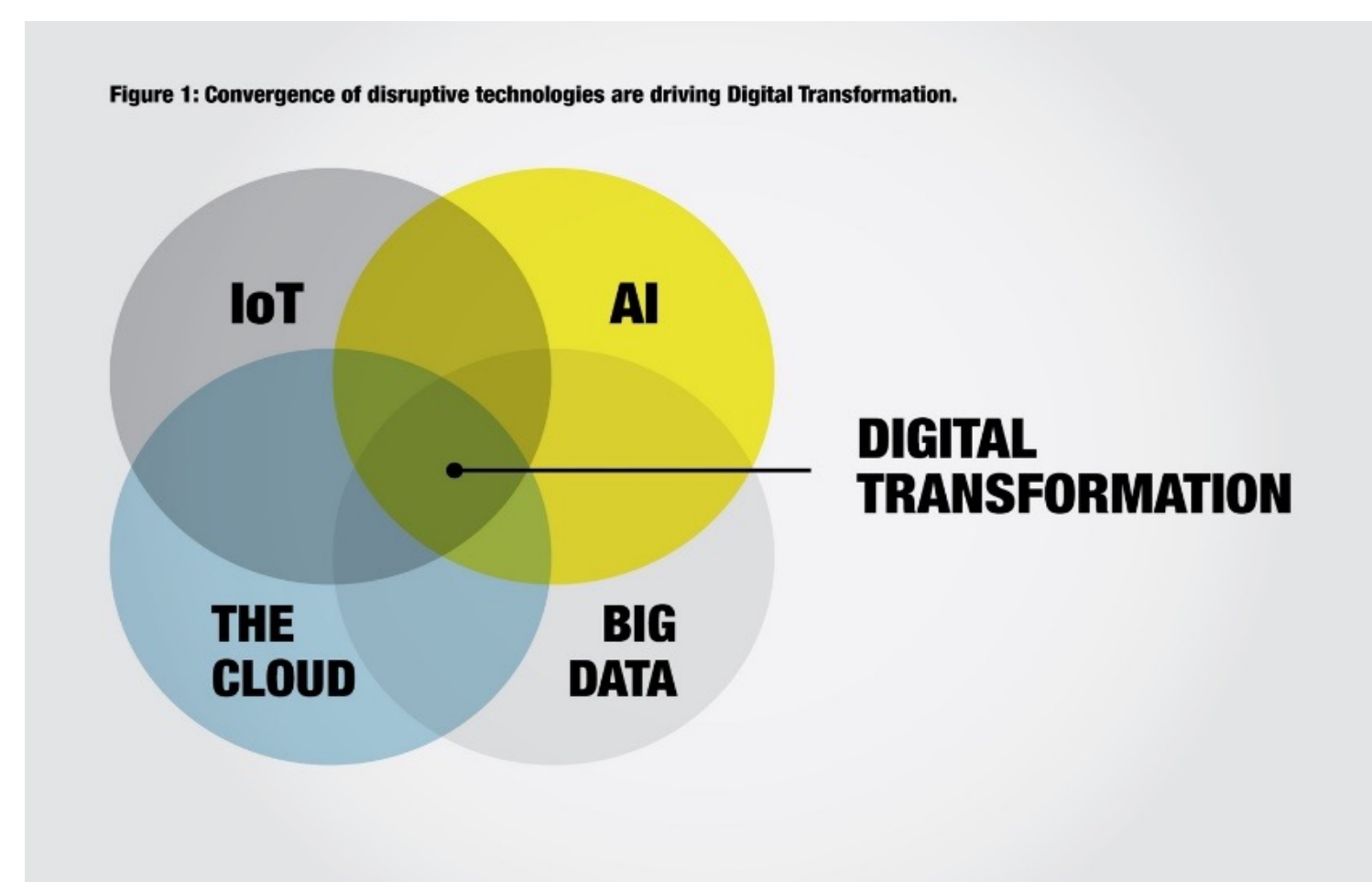
# Foundations of Resilient CybEr-physical Systems (FORCES)

NSF grant CNS-1545126

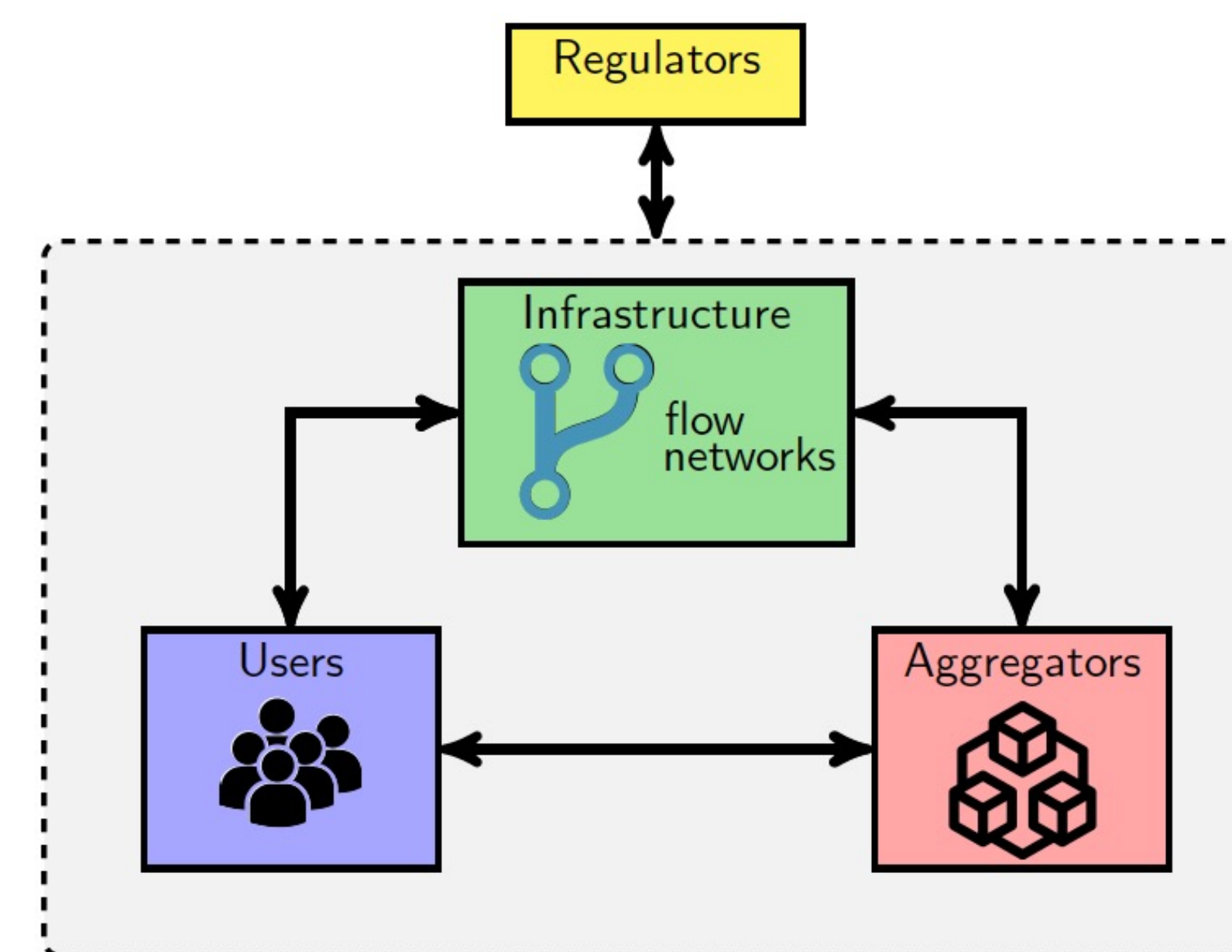
## Update and New Directions

Shankar Sastry (UC Berkeley)

Motivation: This Frontiers CPS was among the most productive grants that I had the good fortune to be associated with. In partnership with MIT, Vanderbilt and Michigan we look at the evolution of societal scale CPS systems combining IoT, AI/ML and resilience to attack. We used transportation networks, water networks and power networks as motivating examples



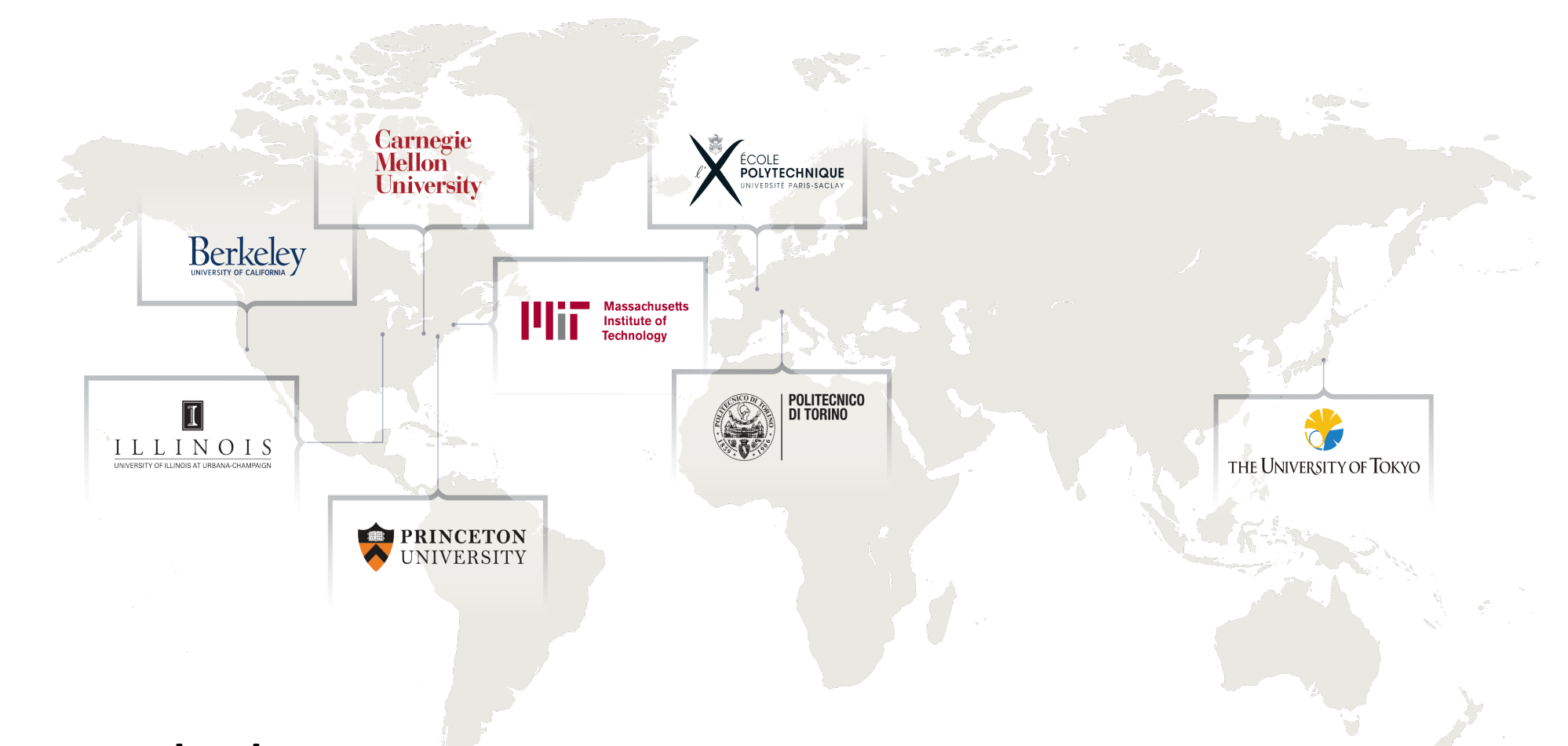
C3.ai + Microsoft funded Digital Transformation Institute: Berkeley, UIUC, Chicago, CMU, LBNL, MIT, Princeton, Royal Inst. of Tech, Stockholm, Stanford direct outgrowth of FORCES: 2020-30.



Data Markets: Mechanism Design, Privacy, Cybersecurity



Human Centric CPS: How does one incentivize good behavior from local protocol design? How do you design interaction schemes which enable the lowest "price of anarchy", difference between societal good and Nash equilibria



Siebel Energy Institute 2014-2019

- ❖ Major international partnership between Philippine Universities and Berkeley
- ❖ Major partnership with Singapore (MIT)
- ❖ NSF Science of Security Label led by Vanderbilt

Girls in Engineering: Major Program for Interesting Middle School Girls in STEM/CPS: Prof. Claire Tomlin, now a major CoE program at Berkeley



### MIT CPS Track for Undergrads/masters

