

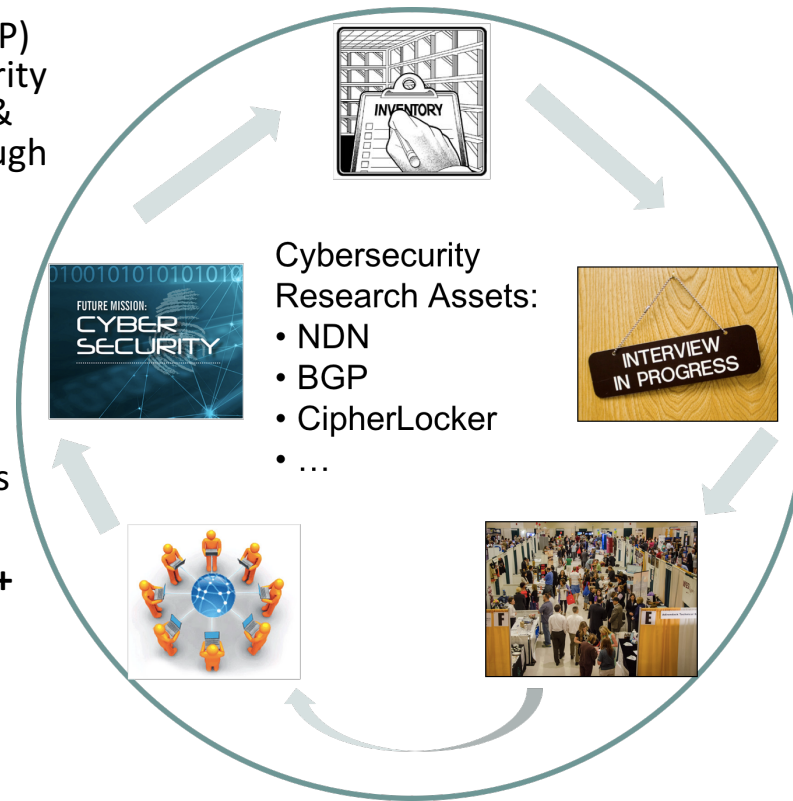
EAGER: Cybersecurity Transition To Practice (TTP) Acceleration

Challenge:

- Accelerate Transition To Practice (TTP) of NSF funded later stage cybersecurity research into operational Research & Education (R&E) environments through applied research pilot deployments

Solution:

- Identify & assess **inventory** of NSF cybersecurity research assets ready for applied research pilot phase
- **Interview** researchers & practitioners for needs/learnings/best practices
- **Leverage Internet2 community (315+ universities, 40+ regional networks) to enable “matchmaking”** between researchers and academia IT/NW operations for pilots/testing
- Deploy webinars, portal, in person **events for researcher/IT matchmaking**
- Identify cybersecurity **needs/gaps**



Award Number: 1650445
Internet2
PI: Florence Hudson, SVP/Chief Innovation Officer

Scientific Impact:

- Increase awareness of cybersecurity research & capabilities
- Accelerate cybersecurity transition to practice in the near to mid term to make cyberspace safer
- Identify cybersecurity needs to inform future NSF solicitations

Broader Impact:

- Enable partnership for NSF TTP with other Federal agency programs, including DHS, SBIR, etc. to accelerate and streamline the TTP pipeline
- Enable a more diverse research and education pipeline partnering with Society of Women Engineers and others

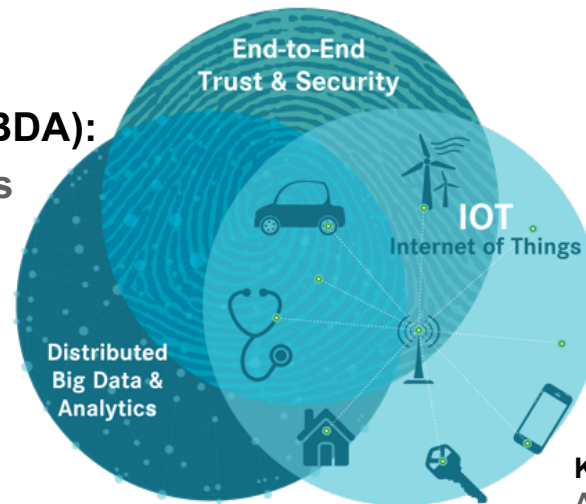
Collaborative Innovation Community is the combination of three member-led innovation working groups, focused on areas related to our top two priorities of advanced networking plus trust & identity.

E2E Trust & Security (E2ET&S):

- TIPSS for IoT – Trust, Identity, Privacy, Protection, Safety, Security
- NSF EAGER Cybersecurity Transition to Practice Acceleration
- *SDP (Software Defined Perimeter), Network Segmentation for IoT*

Distributed Big Data & Analytics (DBDA):

- Health & Life Sciences / Genomics
- Smart Campuses and Cities
- NSF Big Data Hub Collaboration



Internet of Things (IoT):

- IoT Sandbox
- Smart Campuses and Cities
- Smart Grid Testbed

Key:

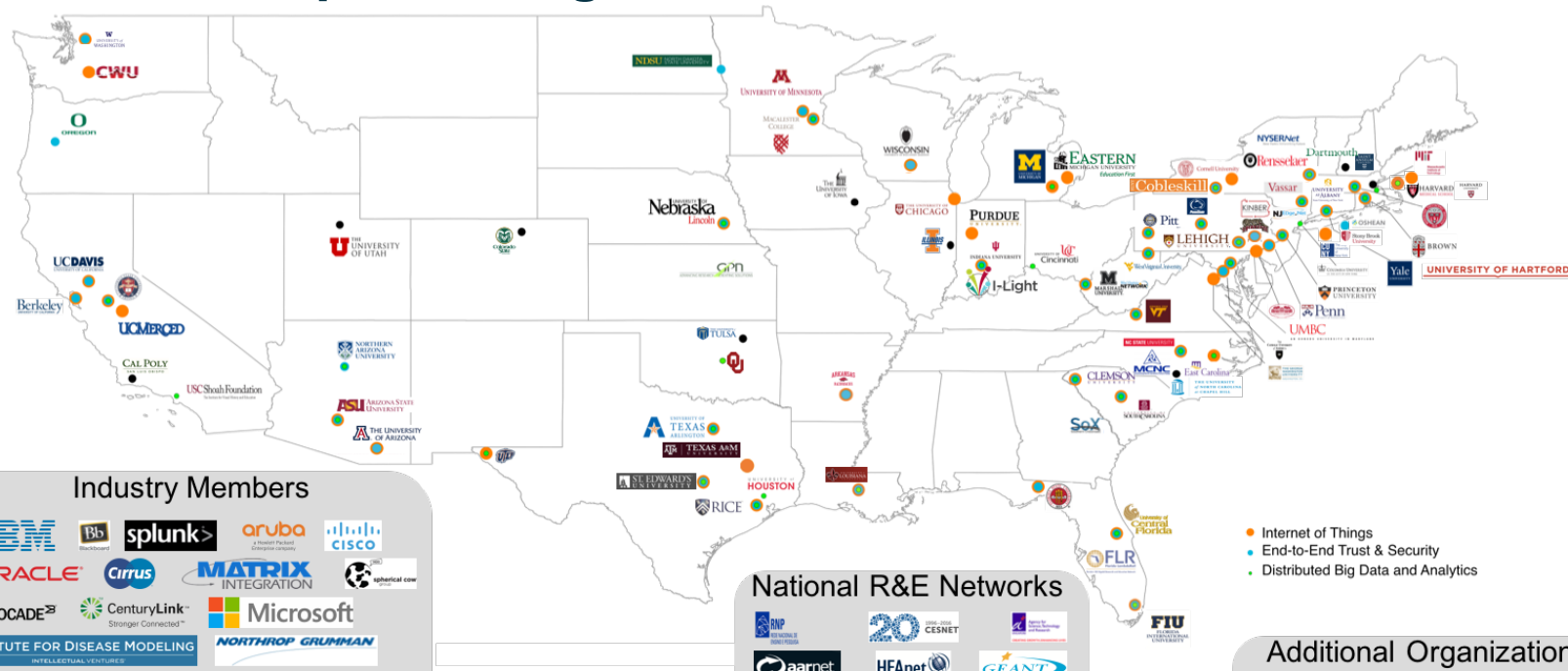
Advanced Networking plus Trust & Identity
Advanced Networking focus only

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Internet2 Collaborative Innovation Community Working Group includes 320+ individuals representing 130 member institutions.



Industry Members

Logos of industry members include IBM, Oracle, Microsoft, Splunk, Aruba, Cisco, Cirrus, Matrix Integration, Brocade, CenturyLink, Northrop Grumman, Phybridge, Ciena, and Rackspace.

National R&E Networks

Logos of national R&E networks include UNINETT, SWITCH, ASREN, aarnet, HEAnet, GEANT, and NORDUnet.

Additional Organizations

Logos of additional organizations include HIMSS, NIST, EDUCAUSE, Argonne, Trinity College, and others.

- Internet of Things
- End-to-End Trust & Security
- Distributed Big Data and Analytics

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As of February 19, 2017



Cybersecurity TTP Acceleration Project Plan

Start Date August 2016



Step	Project Activities	1Q	2Q	3Q	4Q	5Q	6Q	7Q	8Q
1	Project team in place	█							
2	Develop NSF Research Asset Inventory	█							
3	Interview NSF, researchers, practitioners, universities, industry, labs, DHS, other agencies	█							
4	Develop researcher/practitioner match-making showcase -online, events		█						
5	Develop TTP R&D showcase and technical workshops			█					
6	Deploy workshops				#1	#2	#3	#4	
7	Design, develop NSF TTP Portal		█	█					
8	Develop materials for NSF TTP Portal		█	█	█				
9	Deploy NSF TTP Portal					█	█	█	
10	Assess TTP program and develop recommendations								█



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SME Interview insights regarding TTP acceleration

Cybersecurity Researchers

- Key needs for TTP identified: Funding from NSF and others, early user feedback
- User feedback from pilot deployments critical to accelerate TTP
- Opportunity for acceleration of the TTP process at multiple steps
- Researchers like opportunity to leverage NSF TTP, DHS TTP, I-CORPS multiple agency support
- NSF TTP dollars sometimes perceived as small & cumbersome to capture, prefer working with venture firms
- TTP not necessarily a priority for some researchers – looking to solve complex problems, not start a business

Practitioners for Pilot Deployments

- Practitioners need to know operational requirements for pilot use of TTP assets
- All size universities and regional networks interested in potential to test out / pilot cyber research early
- Smaller universities requested to participate in TTP as they have simpler approval processes
- Some universities unwilling to deploy unproven, non-production tested cybersecurity code

Agencies

- Interested in cross-agency collaboration opportunities for NSF and DHS to accelerate cyber TTP

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TTP matchmaking webinars, workshops, showcases

1. On-going recruitment of cybersecurity TTP researchers and R&E practitioners for matchmaking
2. Ongoing TTP matchmaking webinars/workshops/showcases for researchers and R&E practitioners
 - Kickoff with 5 research assets highlighted for R&E community: Sept. 27, 2016, Internet2 TechEx, Miami
 - 2 cyber researchers presented to 8 universities, 5 regional NWs on Internet2 webinar – Nov. 18, 2016
 - Recruiting researchers for TTP workshop/showcase at Internet2 Global Summit April 23-26, 2017 in DC
 - Considering regional, Internet2 TechEx, other pertinent events (e.g., ITANA (IT Architects in Academia))
3. Potential TTP coaching webinars and workshops for researcher matchmaking success
 - Knowing when you are ready to transition to an applied research environment for user input
 - Other potential topics: clarify value proposition, user handbook, operational requirements, user support
 - Identify coaching mentors and how best to provide it

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Contact us: cino@Internet2.edu

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