Convergence Accelerators: A New Model for Research to Innovation
What is a Convergence Accelerator?

- A new organizational structure intended to leverage external partnerships to accelerate convergent and translational activities in an area of national importance
- A home for application-driven basic research
- Advances ideas from concept to deliverables

Key Characteristics

- Fed by basic research & discovery
- Adopts convergent approach
- Cohorts, integrated teams
- Proactively and intentionally managed
- Seed investment, competition
- Intensive education and mentorship
- Attracts partnerships
- Fixed term
How do CAs differ from Foundational Research?

• CAs are intentional in outcomes, more goal-oriented

• CAs foster a range of approaches, solutions

• CAs feed on the tension between top-down direction setting and bottom-up creative approaches
How will the research in a CA be defined?

• NSF will start with a few “Tracks” that define focus areas within the accelerator
• Each track will have specific goals (outcomes, deliverables)
• NSF will host workshops both to form teams and to solicit additional tracks recommended by the community
Convergence Accelerator Phases

0: Team Seeding
- Organic or through structured workshops
- Multi-disciplinary
- Diverse membership

1: Team Formation
- Cohorts of ~20 teams in 3-5 tracks
- ~6 months
  - Ideation
  - Convergence
  - Team dynamics

2: Accelerated Research
- Large grants to selected teams
- Semi-annual or annual reviews
- Maintain cohort structure

NSF PIs, partners, basic research results,
Unique NSF Expertise, combined in new ways, designed to decrease time to discovery

- Convergence Accelerators build on NSF innovations and best practices
  - Network model: I-Corps (Teams and Cohorts)
  - Collective Impact: NSF INCLUDES
  - Team Development: Ideas Labs
  - Industry-inspired Workshop on Quantum (Mar. 2018): Industry wants more similar workshops on HDR and FW-HTF topics (and URoL)

- Convergence Accelerators add new dimensions
  - Selection by pitch, instead of 15-page research proposal
  - Competition for monetary prizes
EHR participation in CA

- Team formation stage involves intensive education/training of teams
  - Training on team dynamics, ideation, communication, convergence
  - Faculty from teams give lectures on their areas of expertise; other team members listen & learn
  - Industry partners discuss needs and directions
  - Integrated “work” sessions by teams
    - Needs: Innovative curriculum, world-class instructors

- One track in the FW-HTF CA may focus on “future classroom” as a workplace with integrated technology and cognitive assistants helping the teacher and students improve overall learning outcomes