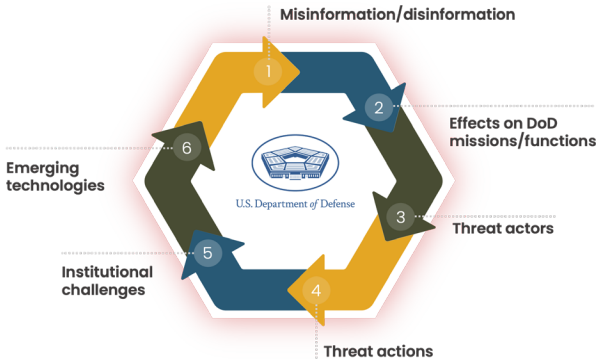
Pathfinder

Growing the next generation of federal government cyber professionals

As cyber threats against government systems grow exponentially, the Department of Defense, intelligence community and civilian agencies all face escalating challenges that put missions at risk.

The President's Cyber Executive Order of 2021 makes clear that the government needs to increase both vigilance and capability. The expanding threat environment, technology limitations, and lack of cyber talent puts missions—and people—at risk.

Expanding threat environment **impacting DoD**



Talent Shortage: Pipeline Slows to a Trickle

Nationwide demand for cyber personnel outstrips the talent pool. An aging government workforce threatens stability while the commercial sector may appeal more to younger workers.

Over 650K

PRIVATE SECTOR
cyber jobs nationally

Over 40K

PUBLIC SECTOR
cyber job openings

PUBLIC SECTOR CYBER WORKFORCE:

- **<6%** under age 30
- **>30%** over age 55
- **26%** women

Sources: CISA State of the Federal Cyber Workforce — Sept 2023; Cyberseek.org

Solution: A Fresh Approach to Engaging Cyber Talent

Uncover Gaps, Identify Opportunities in OT&E

Future conflicts will require systems that are survivable and interoperable. That's why operational test and evaluation (OT&E) is critical. But limited resources greatly impact the tools and time available to conduct effective testing. Meanwhile, recruiting and retaining cyber talent affects long-range planning and day-to-day continuity.

Leverage a Nationwide Talent Resource

The key to mitigating the resource issue is to generate a steady flow of experienced talent, who can be found in academia. Agencies can benefit by identifying, training, and rewarding promising students in universities across the country. Pathfinder makes this idea real.

Pathfinder: Building the Future Cyber Workforce

In response to a Congressional mandate and funding in the 2020 NDAA, the Test and Evaluation Cyber Center of Excellence (TECCE) was created as a collaborative effort between DOT&E and PEO STRI to support Red Teams, fund novel research, and integrate industry tools.

The program has three, interactive elements to engage universities and students in relevant career opportunities and problem solving:

INTERNSHIPS

Provides field-specific industry professional certification; sponsors interns for security clearances. Exposure to OT&E field methodologies through:

- Structured, field-specific apprenticeships
- On-the-job training at a DoD worksite or lab
- Mentoring and skills development

SCHOLARSHIPS

Provides funding through Cyber Scholarship Program (CySP), mentoring, and career paths, including:

- CySP students commit to government service after graduation
- Top Secret clearance and Certified Ethical Hacker support
- Full scholarships + 2 paid summer internships

R&D PROJECTS

Professor-led teams of students who address current, critical cyber issues. The program:

- Engages universities in the Federal contracting process
- Delivers usable tools and innovative courses of actions
- Assigns novel DoD projects to universities

Nationwide Participation, Expanding Opportunities

Pathfinder is a fast-growing program that has already delivered on its mandate. A key to Pathfinder's success is engaging a diverse set of universities and students to bring fresh energy and ideas to solving agencies' "wicked problems."

86
interns, including 3 Skillbridge

25
participating universities

21
R&D projects

60 students,
24 faculty,
$70K average cost

9
minority serving schools

5 HBCUs,
4 Hispanic Service Institutes

5
CySP to government new hires

Pathfinder is expanding to more agencies across government, incorporating Blue Teams, computer and software testing, and cyber policy development. As more universities and STEM programs participate, Pathfinder will increase the diversity of thought, ability, and experience needed to support in-demand, hard-to-fill positions—while expanding opportunities for promising students and transitioning military to support national security priorities, now and for years to come.