3-Part Webinar Series

1

DARPA 101

August 14, 2024

During this training, you will learn more about DARPA, its organizational structure, and its role in advancing national security.

2

DARPA SBPO

August 21, 2024

DARPA will explore how its small business programs provide funding opportunities to develop innovative technologies while promoting economic growth and scientific advancement.

3

DARPAConnect

August 28, 2024

During this session, DARPA will explain how businesses can stay engaged through DARPAConnect and the resources that DARPA provides.

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DARPA 101

Introduction to DARPA

Ms. Jennifer Thabet
Program Director
DARPA Small Business
Programs Office

Dr. Jess Resig
Director of Solutions Innovation
Applied Research Institute (ARI)

August 14, 2024

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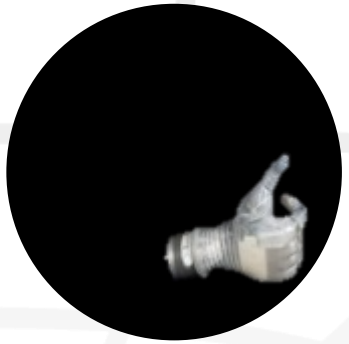
Breakthrough Technologies and Capabilities for National Security

Create breakthrough, paradigm-shifting solutions.

Accept and manage significant technology risk.

Disrupt or massively accelerate technology roadmaps.



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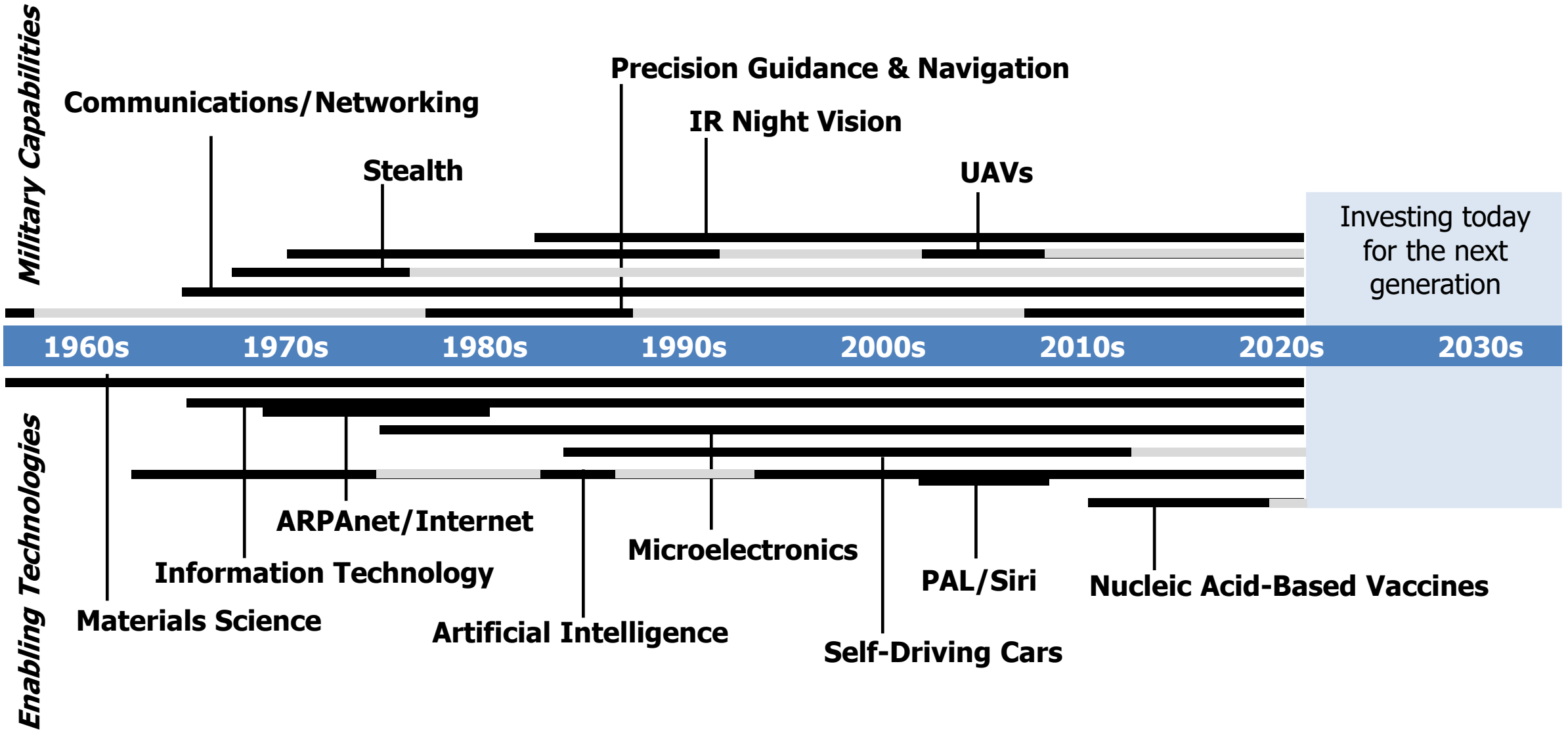
Pivotal early investments that change what's possible



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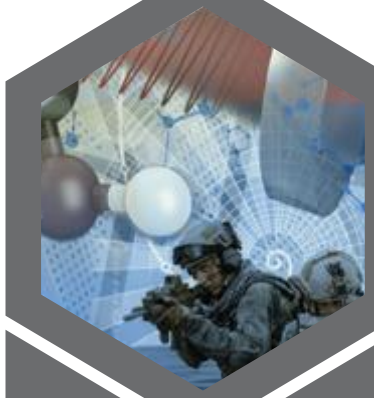
DARPA Technical Offices

Biological Technologies Office

- Maintain force readiness
- Tactical warfighter care and functional restoration
- Operational resilience and logistical security
- Biosensors and novel methods and materials



Defense Sciences Office

- Novel materials and structures
- Sensing and measurement
- Computation and processing
- Enabling operations
- Collective intelligence
- Emerging threats

Information Innovation Office

- Proficient AI
- Advantage in cyber operations
- Confidence in the information domain
- Resilient, adaptable, and secure systems

Microsystems Technology Office

- Disruptive microsystems
- Edge processing
- Microsystems manufacture

Strategic Technology Office

- Advanced sensors and processing
- Battlefield effects
- Command, control, and communications
- System of autonomous systems
- Empowered human decision making

Tactical Technology Office

- Tactical systems
- Platforms, systems, and technologies that enable new warfighting constructs
- Reimagination of missions across maritime, ground, air, and space domains

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Characteristics of DARPA

SBIR·STTR
POWERED BY INNOVATORS
MOVING TECHNOLOGY FORWARD

- $4.1B Funding Agency
- Revolutionary Change
- High Risk Tolerance
- Program Manager-Centric
- Just-In-Time Topic Development

SBIR Program

3.2% of all extramural RDT&E

FY24 – $113.4M

STTR Program

.45% of all extramural RDT&E

FY24 – $15.9M

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Doing Business with DARPA

Programs

- Represent most of DARPA's funding opportunities
- Open to all capable sources
- Proposals solicited through specific program BAAs
- Often multi-year, multi-disciplinary efforts
- Technology development to move from "possibility" to "capability"

Challenges

- Compete on unique DARPA R&D problems
- Tend to include phases with culminating events where winners win monetary or other prizes
- May result in a prize with up to a $10M fair market value

Seedlings, SBIR/STTR, Explorations

- Open to all capable sources
- Smaller, shorter projects
- From "disbelief" to "doubt"
- Inspire new program ideas

Ways to Work with DARPA

There are a **variety of paths** that individuals can take to join DARPA. Interested in learning more? Visit the **"Opportunities to Work with DARPA"** lesson on DARPAConnect.us.

WAYS TO WORK WITH DARPA

- Program Manager
- Innovation Fellow
- Support Contractor
- Performer
- Young Faculty Award
- Teaming Partner

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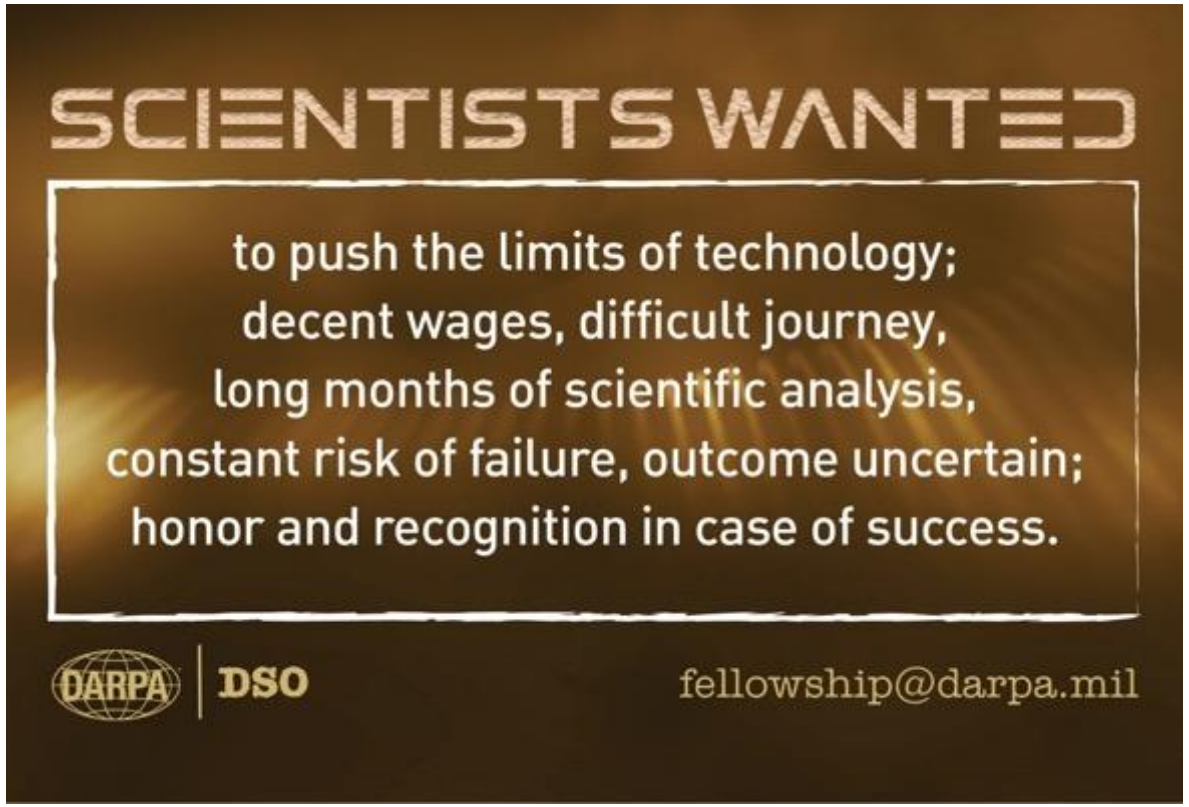
DARPA Innovation Fellowship



- Spend 2 years at DARPA in a Fellowship for early career scientists
- Develop and manage a portfolio of high-impact exploratory efforts
- Work with a pool of diverse, multidisciplinary talent to focus emerging research on national security needs

Paradigm shifts in technology often come from those not deeply indoctrinated in established theories

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Advanced Research Concepts (ARC)

- A new process to quickly capture and rigorously evaluate many ideas
- 8 topics targeted annually
- 30-60 ideas per topic
- One person funded per year per contract
- Streamlined proposal and contracting process

YFA Program Overview

The objective of the DARPA Young Faculty Award (YFA) program is to identify and engage rising stars in junior research positions, emphasizing those without prior DARPA funding, and expose them to DoD needs and DARPA's program development process.

The YFA program provides funding, mentoring and industry and DoD contacts to awardees early in their careers so they may develop their research ideas in the context of national security needs. The long-term goal of the YFA program is to develop the next generation of academic scientists, engineers, and mathematicians who will focus a significant portion of their career on DoD and National Security issues.

The annual research announcement seeking YFA applications is typically posted to the Grants.gov, and beta.sam.gov websites between July and August.

For more information about the YFA program and other opportunities for universities, please visit https://www.darpa.mil/work-with-us/for-universities.

LEARN MORE ABOUT THE **DARPA 101** AT

WWW.DARPACONNECT.US

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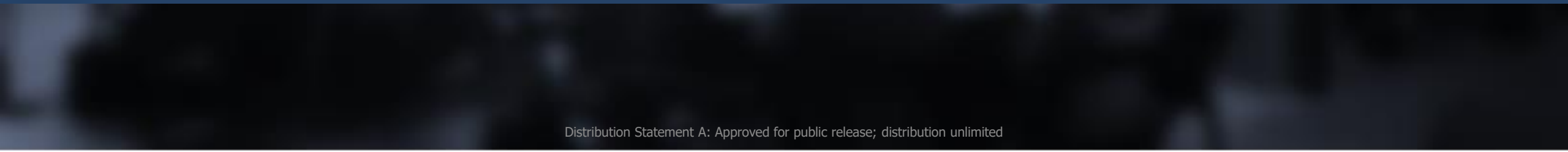
ENGAGING WITH DARPA PROGRAM MANAGERS



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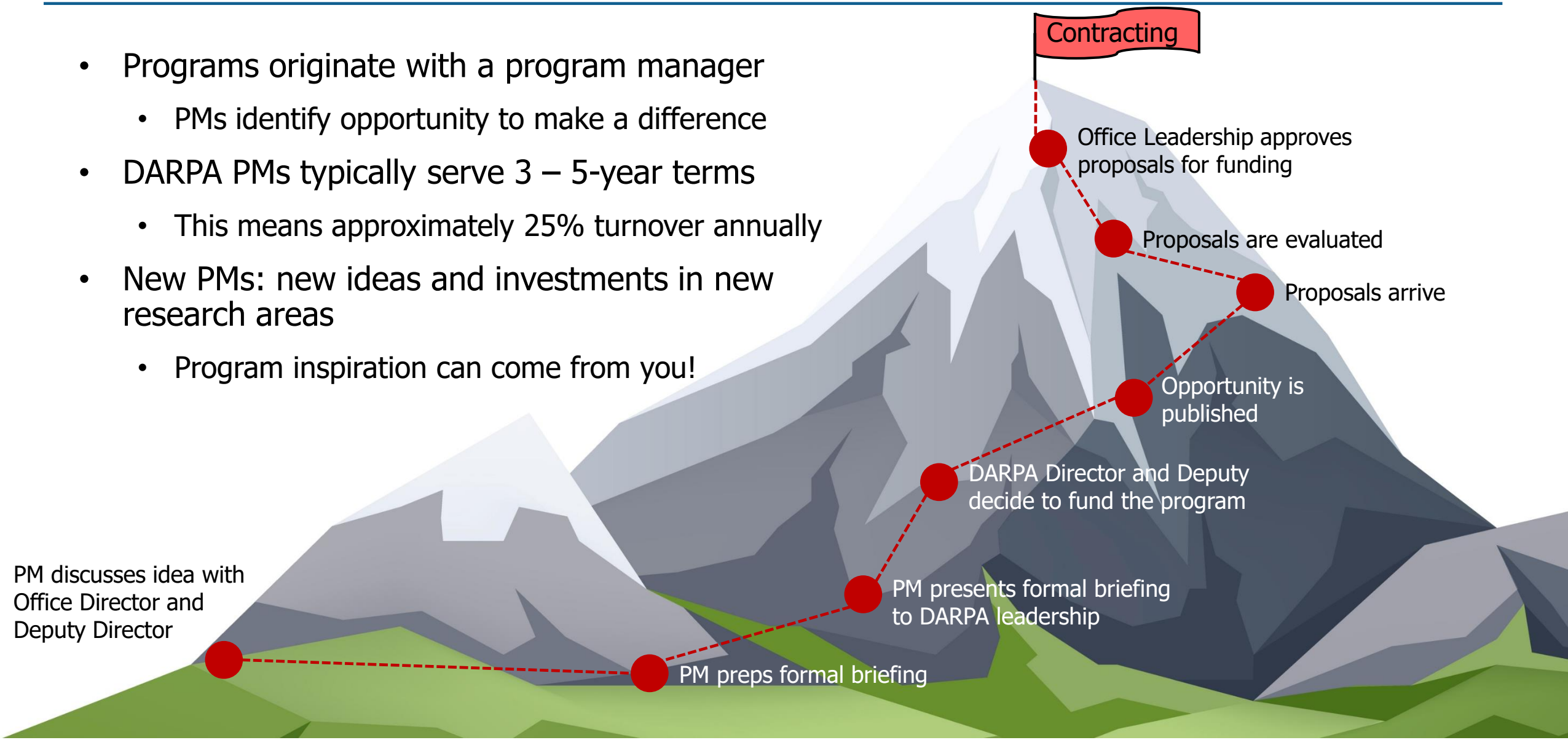
The Path from Idea to Program

- Programs originate with a program manager
  - PMs identify opportunity to make a difference
- DARPA PMs typically serve 3 – 5-year terms
  - This means approximately 25% turnover annually
- New PMs: new ideas and investments in new research areas
  - Program inspiration can come from you!



The Heilmeier Catechism

George H. Heilmeier, Director of ARPA (1975-1977)
IEEE Spectrum, June 1997

I: What are you trying to **do**? Articulate your objectives using absolutely no jargon.

II: How is it done today, and what are the **limits** of current practice?

III: What is **new** in your approach and why do you think it will be successful?

IV: Who cares? If you are successful, what **difference** will it make?

V: What are the **risks**? How much will it **cost**? How **long** will it take? What are the mid-term and final "**exams**" to check for success?

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Talk to a Program Manager

- Start with **www.darpa.mil**
- Identify (if you can) the right PM
- Then, contact them (web page, email, visit)

Some Advice

- PMs are motivated by finding new and highly disruptive problems that will be the basis of new programs
- Generally, you should discuss ideas that might lead to new programs, not present your approaches for ongoing programs

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- PMs will be thinking about the Heilmeier catechism…so you should, too
- PMs are most receptive when you do their homework for them
- Listen to them!

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DARPA CONNECT

DISCOVER · COLLABORATE · CONTRIBUTE

www.DARPAConnect.us

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