ARPA-H: The Mission

The Advanced Research Projects Agency for Health

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Director, ARPA-H

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Winter Council on Governmental Relations 2023 Virtual Meeting

Our Mission

Accelerate better health outcomes for everyone.
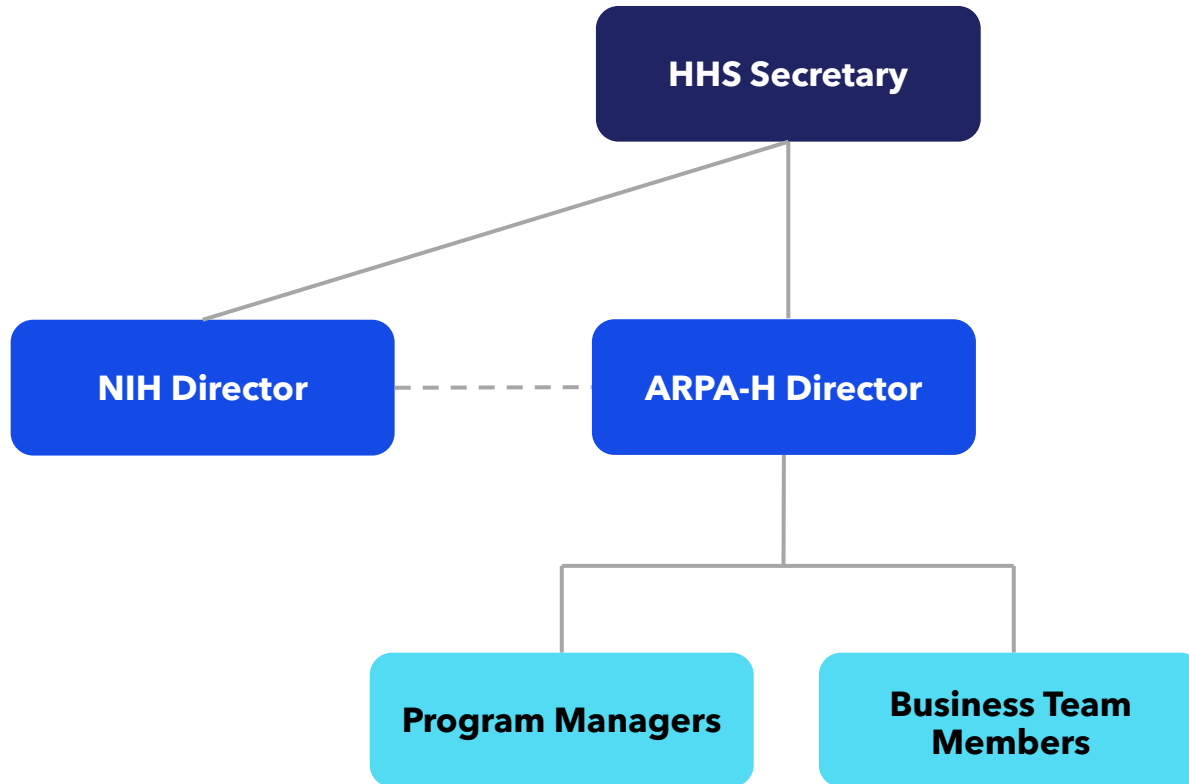
President Biden's Vision

"ARPA-H will pursue ideas that break the mold on how we normally support fundamental research and commercial products in this country."

"Ideas so audacious that people say they just might work only if, only if, we could try. Well, we're about to try in a big way."
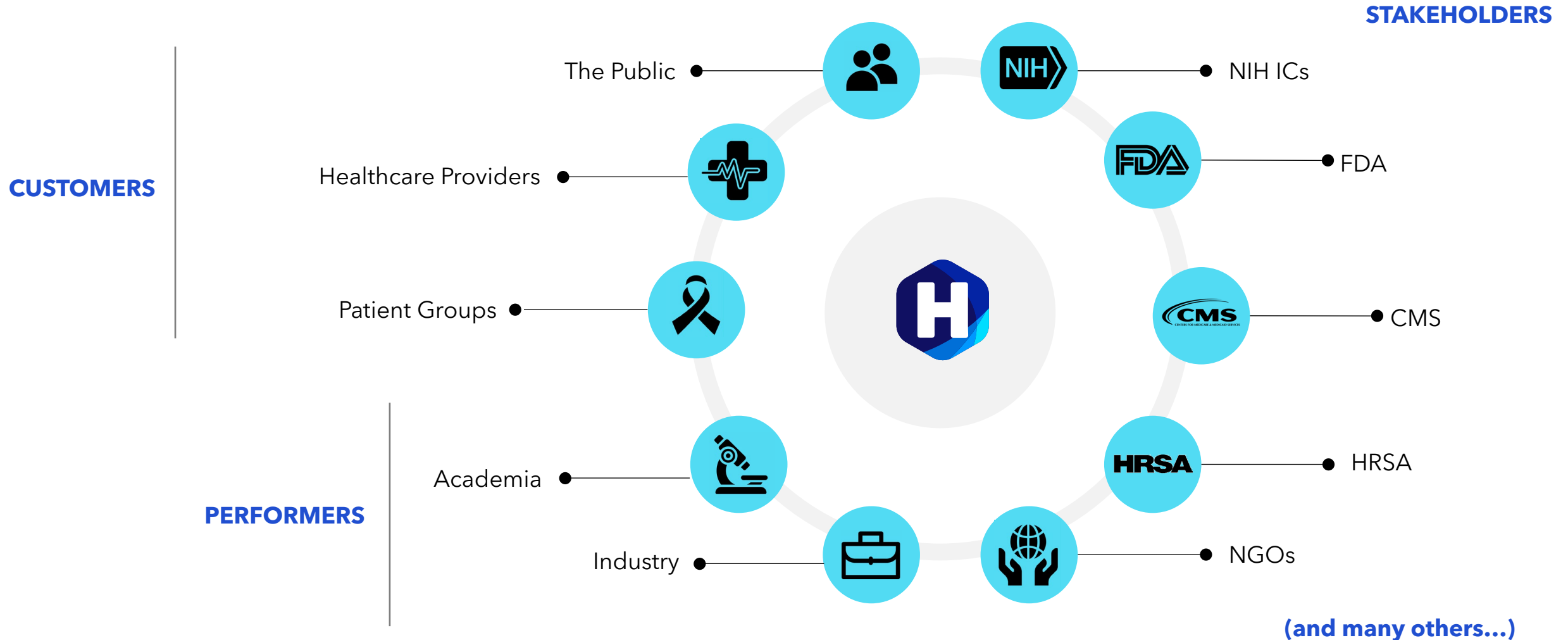
- President Biden Remarks, March 18, 2022

ARPA**H**

ARPA-H Organization within HHS

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                    │  HHS Secretary  │
                    └─────────────────┘
                   /          │
   ┌──────────────┐     ┌──────────────────┐
   │ NIH Director │─ ─ ─│  ARPA-H Director │
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              ┌─────────────┴──────────────┐
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   │ Program Managers   │     │  Business Team   │
   │                    │     │     Members      │
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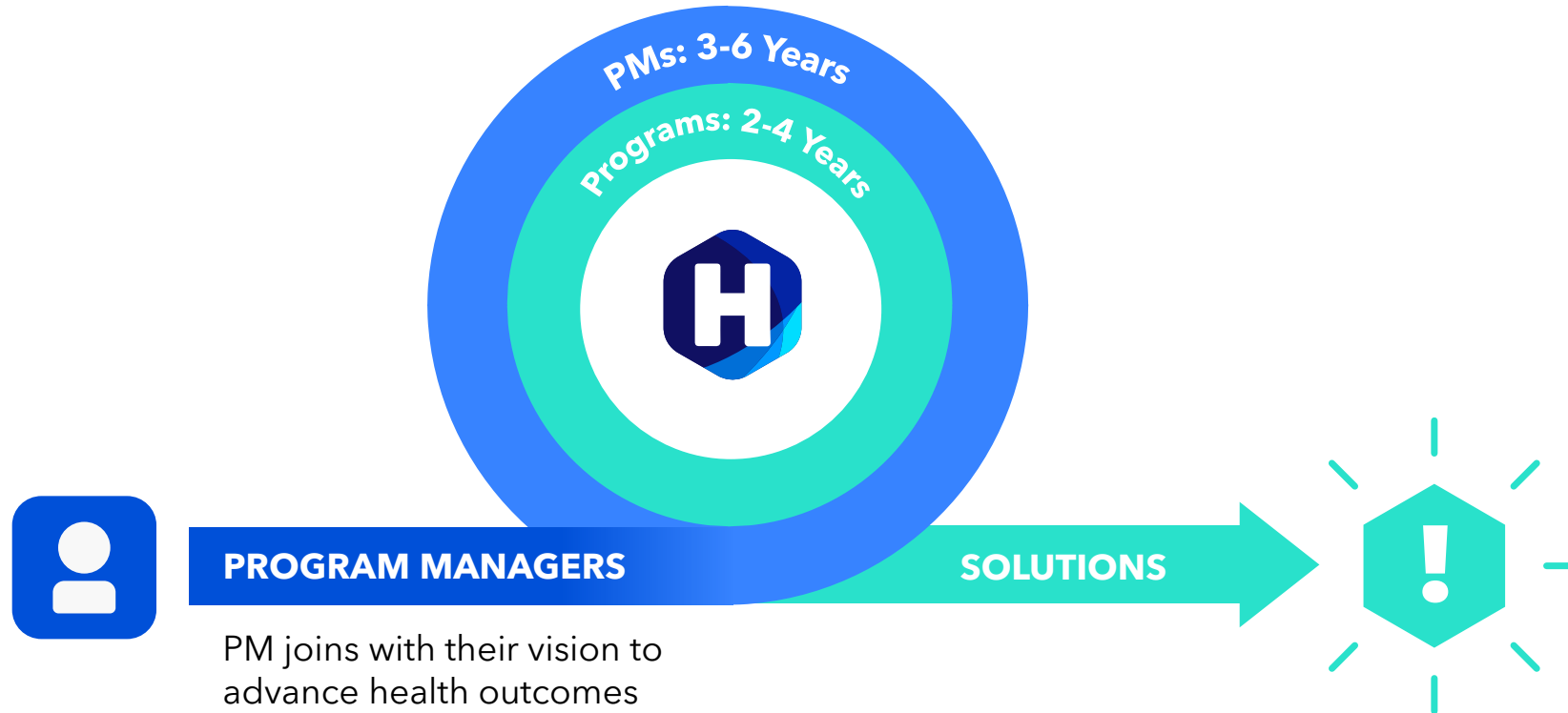
ARPA-H Key Features & Authorities

- ARPA-H is a Federal R&D Funding Agency

- Congress has provided $2.5B to start; funding independent of NIH

- Independent component of HHS within NIH, but not an Institute

- ARPA-H Director reports directly to HHS Secretary

- No internal research labs; disease agnostic

- Lean and nimble management structure

- Bottom-up Program Manager driven ideas and decision-making

- ~30/70 Fed/contractor workforce

- Not grant-based; focus on Cooperative agreements, OTAs, contracts

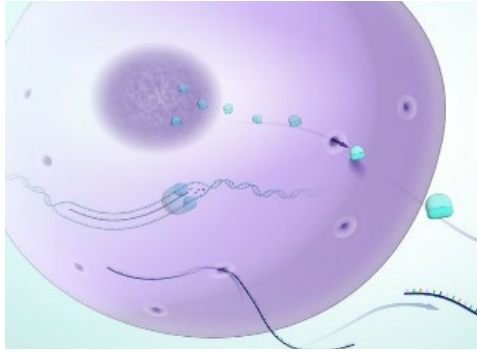- High Risk/High Impact Research

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ARPA-H Health Ecosystem

STAKEHOLDERS

CUSTOMERS

PERFORMERS

The Public

Healthcare Providers

Patient Groups

Academia

Industry

NIH ICs

FDA

CMS

HRSA

NGOs

(and many others…)

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The Program and Program Manager Flywheel

PMs: 3-6 Years

Programs: 2-4 Years

PROGRAM MANAGERS

PM joins with their vision to advance health outcomes

SOLUTIONS

The ARPA-H portfolio is (1) a reflection of the program managers, (2) dynamic, and (3) will – and should! – change frequently
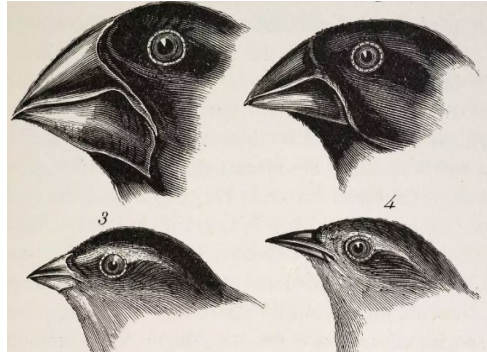
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Organizational Attributes

Nucleus of Org.
Facilitating the Future

PMs are the nucleus of the organization, and their energy and passion drive the mission.

ODs and DIRO "work for" the PMs to facilitate success.

PMs are responsible for the full program lifecycle, from new start proposal to transition.

Radical change
Evolutionary proposers need not apply

ARPA-H investments should seek to address seemingly impossible barriers in demonstrating "proof of concept" for solutions to major challenges – not incremental advances.

Projects should be high-payoff, high-risk, with the most forward-looking science and technology.

Autonomy
Programs are PM directed

Workshops, consultations, seedlings are encouraged, but no advisory/guidance committees

PMs should practice "full contact" management, with metrics/milestones for program, empowered to stop underperforming projects

PMs manage multiple programs, including programs they inherit from departing PMs
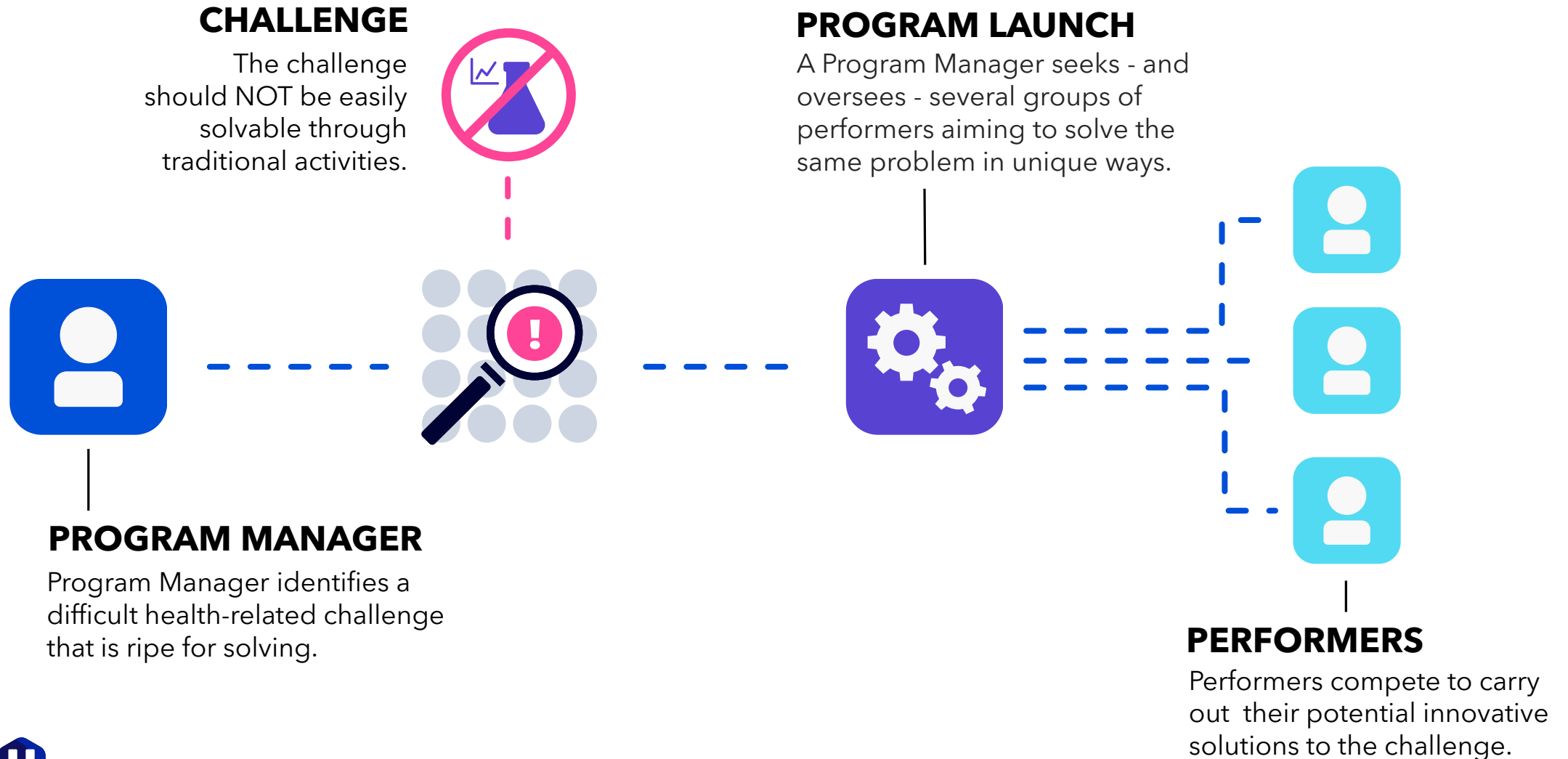

Term limits
A "projects" agency, not a career

Terms limited to 3 years (renewable once for 6 total years) for PMs, ODs, and DDs, allowing inflow of new ideas

Limits create urgency and focus on successful NSPs – aligned with office/agency

Limits remove incentives for empires, organization-building, span of control, bureaucracy, etc.

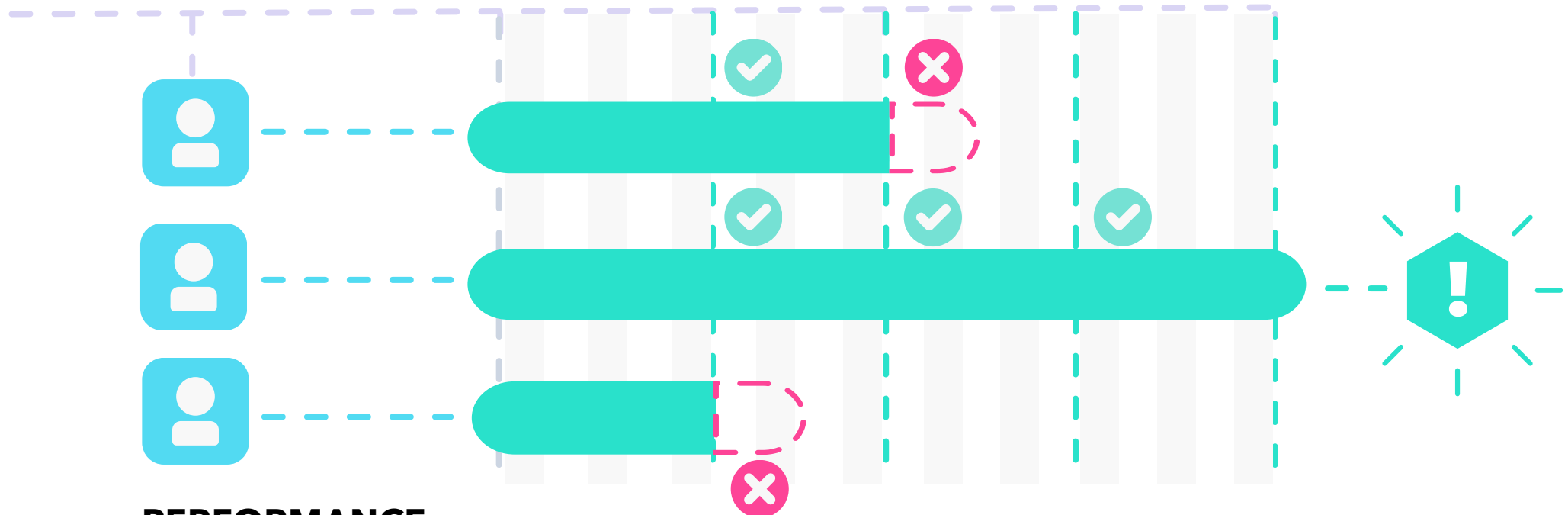ARPA H

ARPA Model: Program Formation

CHALLENGE

The challenge should NOT be easily solvable through traditional activities.

PROGRAM LAUNCH

A Program Manager seeks - and oversees - several groups of performers aiming to solve the same problem in unique ways.

PROGRAM MANAGER

Program Manager identifies a difficult health-related challenge that is ripe for solving.

PERFORMERS

Performers compete to carry out their potential innovative solutions to the challenge.

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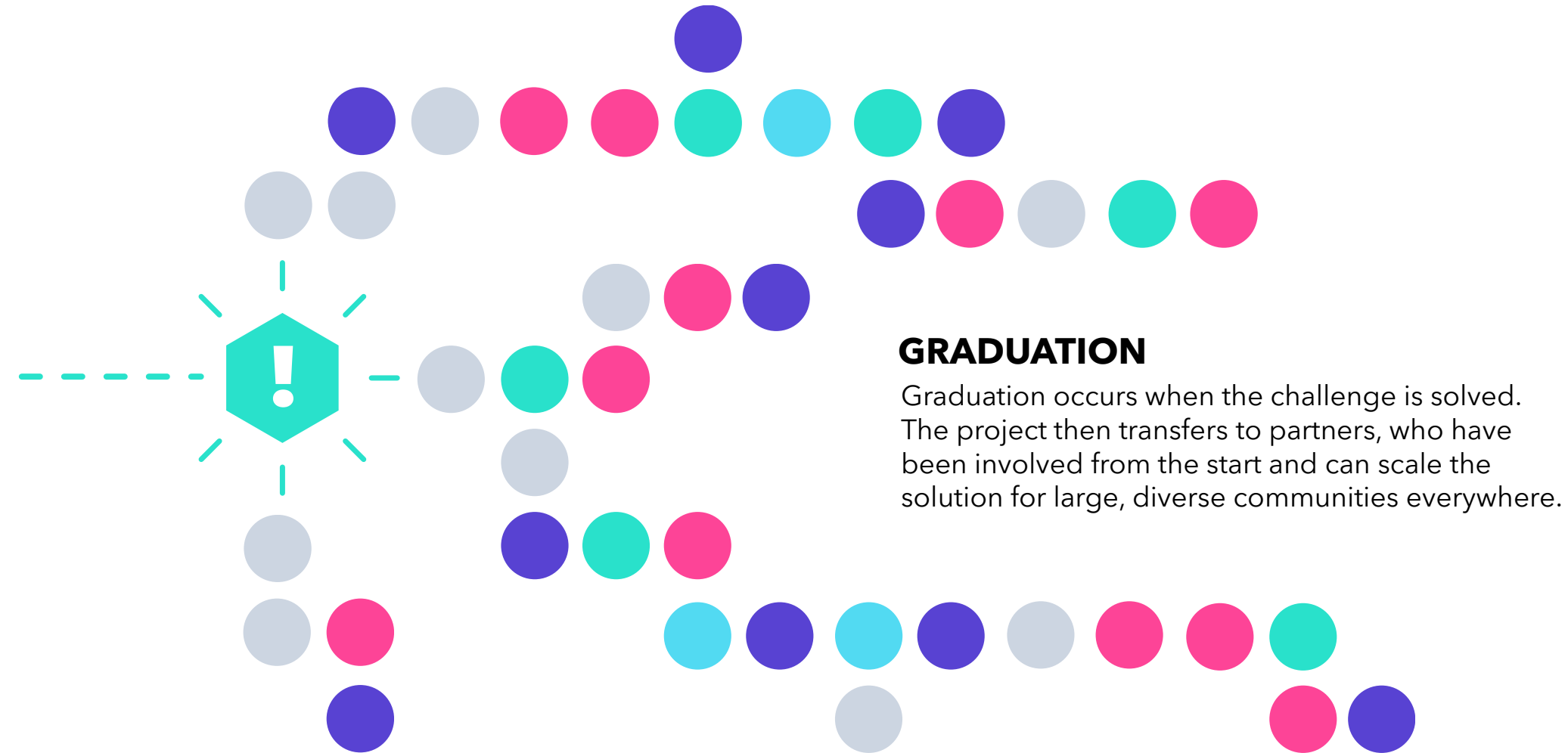# ARPA Model: Support and Evaluation

SUPPORT

Support for ARPA-H programs comes from funding, Program Managers, partners, and ARPA-H offices to ensure the best chance of success throughout the process.

PERFORMANCE

Performance is assessed regularly. If results fail to measure up, a performer's work may be stopped, while more successful performers continue. Valuable lessons are learned and shared from each project.

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ARPA Model: Transition

GRADUATION

Graduation occurs when the challenge is solved. The project then transfers to partners, who have been involved from the start and can scale the solution for large, diverse communities everywhere.

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ARPA-(H)eilmeier Questions

Towards a Well-Defined Problem

1 What are you trying to do? What health problem are you trying to solve?

2 How does this get done at present? Who does it? What are the limitations of present approaches?

3 What is new about our approach? Why do we think we can be successful at this time?

4 Who cares? If we succeed, what difference will it make?

5 What are the risks? That may prevent you from reaching your objectives? Any risks the program itself may present?

6 How long will it take?

7 How much will it cost?

8 What are our mid-term and final exams to check for success?

9 To ensure equitable access for all people, how will cost, accessibility, and user experience be addressed?

10 How might this program be misperceived or misused (and how can we prevent that from happening)?

A R P A H

Program Lifecycle
From ideas to solutions in the real world

DESIGN PROGRAMS

- ARPA-Hard and well-defined problems in health
- Heilmeier Framework
- High risk/High consequence
- Stakeholder Insights

BUILD A PERFORMER TEAM

- Solicit Solutions from the community
- Find the best non-traditionals, industry, and academics to solve
- Build new coalitions

EXECUTE & MEASURE

- Active program management against metrics; PM = CEO
- Stakeholder engagement throughout to ensure transition
- Pivot resources when needed

LEARN & GROW

- Capture and share insights
- Technical honesty
- Advance the state of the art; 10x+ improvement, no incremental change

COMMERCIALIZE & TRANSITION

- Assist company formation or licencing
- Provide mentorship, connections to customers, investors
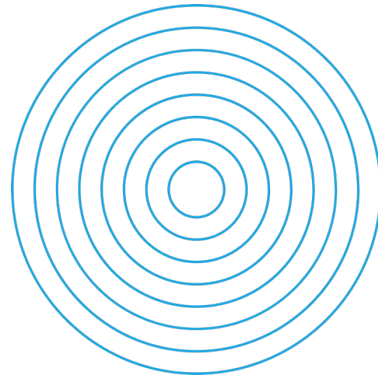- De-risk investments

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Initial Mission Focus Areas

Health Science Futures
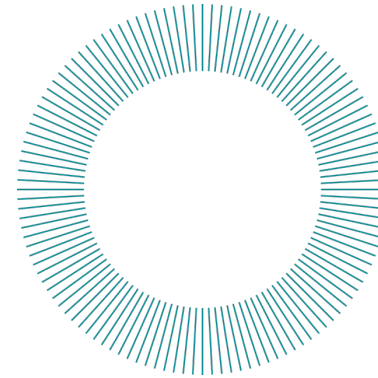
Expanding what's technically possible

Accelerate advances across research areas and remove limitations that stymie progress towards solutions. These tools and platforms apply to a broad range of diseases.

Scalable Solutions
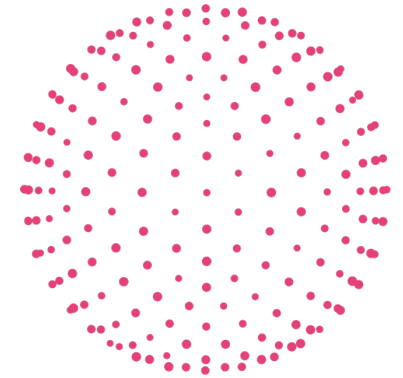
Reaching everyone quickly

Address health challenges that include geography, distribution, manufacturing, data and information, and economies of scale to create programs that result in impactful, timely, and equitable solutions.

Proactive Health

Keeping people from being patients

Preventative programs will create new capabilities to detect and characterize disease risk and promote treatments and behaviors to anticipate threats to Americans' health, whether those are viral, bacterial, chemical, physical, or psychological.

Resilient Systems

Building integrated healthcare systems

Create capabilities, business models, and integrations to weather crises such as pandemics, social disruption, climate change, and economic instability. Systems are sustained between crises—from the molecular to the societal—to achieve better health outcomes.

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Project Accelerator Transition Innovation Office (PATIO)

Increasing the odds - at each step - that solutions can "survive in the wild"

PROGRAM LIFECYCLE

PROGRAM DESIGN
- Support PM to find opportunities and gaps
- Market assessment
- Human-centric design

BAA DEVELOPMENT
- Who are possible performers? Innovation Hubs?
- VC style due-diligence
- Validate transition potential

EARLY PROGRAM PERFORMANCE
- De-risk for investors
- Design MVPs to drive adoption
- Demystify regulatory process

MATURE PROJECTS
- How to protect IP?
- Help company formation
- Business strategy, legal and marketing services

TRANSITION/OUTPUTS SURVIVE IN THE WILD
- SBIR/STTR
- Transition partner/Third-party investment
- Ongoing mentorship
- Access to key customers and investors

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Program Managers
What are the Phenotypes?

Uncommon people with common traits

"THINK LIKE A CEO"

RECOGNIZED EXPERTISE

SERIOUS DRIVE

INSATIABLE CURIOSITY

NO FEAR OF FAILURE

INTERDISCIPLINARY TRACK RECORD

TECHNICAL HONESTY

DECISIVE

CUSTOMER-CENTRIC

Different Approaches and Career Stage

THE PROBLEM SOLVER
Motivated by personal experience; can't let it go.

THE ROOKIE
Early career. Unbiased, looks at the world with fresh eyes.

THE DREAMER
Intensely curious about how the world works, motivated by search for objective facts/truth.

THE STATUS QUO CHALLENGER
Mid-career. Frustrated by the limits of the existing system.

THE SPRINTER-TINKERER
Intrinsic desire to build and experiment and quickly iterate to achieve path to market. Cares about application, not theory.

THE SAGE
Late career. Experience yields deep understanding.

Becoming a Program Manager

- Responsibility and opportunity to set and maintain a program vision that has the potential to solve a big challenge in health

- Simple – but intense – application process https://arpa-h.gov/careers/program-managers/

- Timebound (3 yr base contract + up to add'l 3 yrs)

- Competitive salary

- Direct hire, can be "on loan" IPA

- Seeking PMs diverse in geography, demographics, experience, and topic

- Act as "CEO" of their programs and portfolio

- PMs can expect full business and technical team support for day-to-day program management, market assessments, transition, budget, human-centered design, etc.

Application Process

Make contact
Submit a cover letter, CV, and a program concept framed in the ARPA-(H)eilmeier Questions via our website

Talk with us
If the [candidate] + [concept] have ARPA potential, we will reach out to provide feedback the concept, share more about ARPA-H, assess cultural fit, and answer any questions

Prepare to pitch
ARPA-(H)umans will work with the candidate to build an introductory program "pitch" deck that will be the foundation of your ARPA-H interview.

The pitch!
The candidate presents and defends program concept(s) to the ARPA-H team. If selected, the candidate spends 3-4 months once on board to refine the concept, engage key stakeholders, and launch a solicitation to build teams of solvers to address a big problem in health.

https://arpa-h.gov | careers@arpa-h.gov

PMs Define Success for Future Real-World Impact

At ARPA-H, our Program Managers identify a well-defined problem to pursue through the program life cycle to bring solutions forward that:

"Survive in the wild"

Real people **want** them and enthusiastically **adopt** them.

Separate the improbable from the impossible

Remove the barriers of today's technologies and systems.
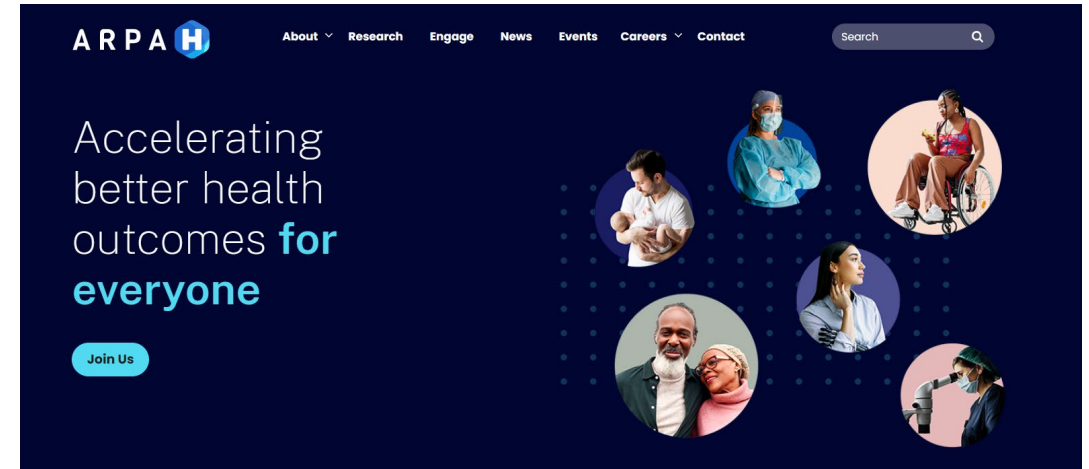
Deliver better health to everyone

The healthy, the sick, providers, hospitals, all 50 states, the world…

Program Managers will use flexible contracting vehicles, including Cooperative Agreements, Contracts, and Other Transactional Authorities to create these solutions.

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Recent ARPA-H Milestones

✓ **First PMs onboarding in Q1, first programs in Q2/Q3 2023**

✓ **Released Partnership Intermediary Agreements (PIA) Solicitation**

✓ **Coast to Coast engagements with:**

- **More than 30** members of Congress, staff, and intragovernmental partners

- **More than 20 universities'** administrators, vice chancellor/vice presidents of research and associated faculty

- **More than 10** patient advocacy organizations and professional associations

But we're just getting started!

arpa-h.gov landing page

J.P. Morgan Event, Jan. 10

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ARPA-H Call to Action

Apply - Our top priority is to **hire the Program Managers** that will bring well-defined problems to ARPA-H and build the teams to solve them

https://arpa-h.gov | careers@arpa-h.gov

Engage - We are actively engaging research, patient, and stakeholder, communities; we want to hear from you!

inquiries@arpa-h.gov

@ARPA_H   ARPA-H   @ARPA-H
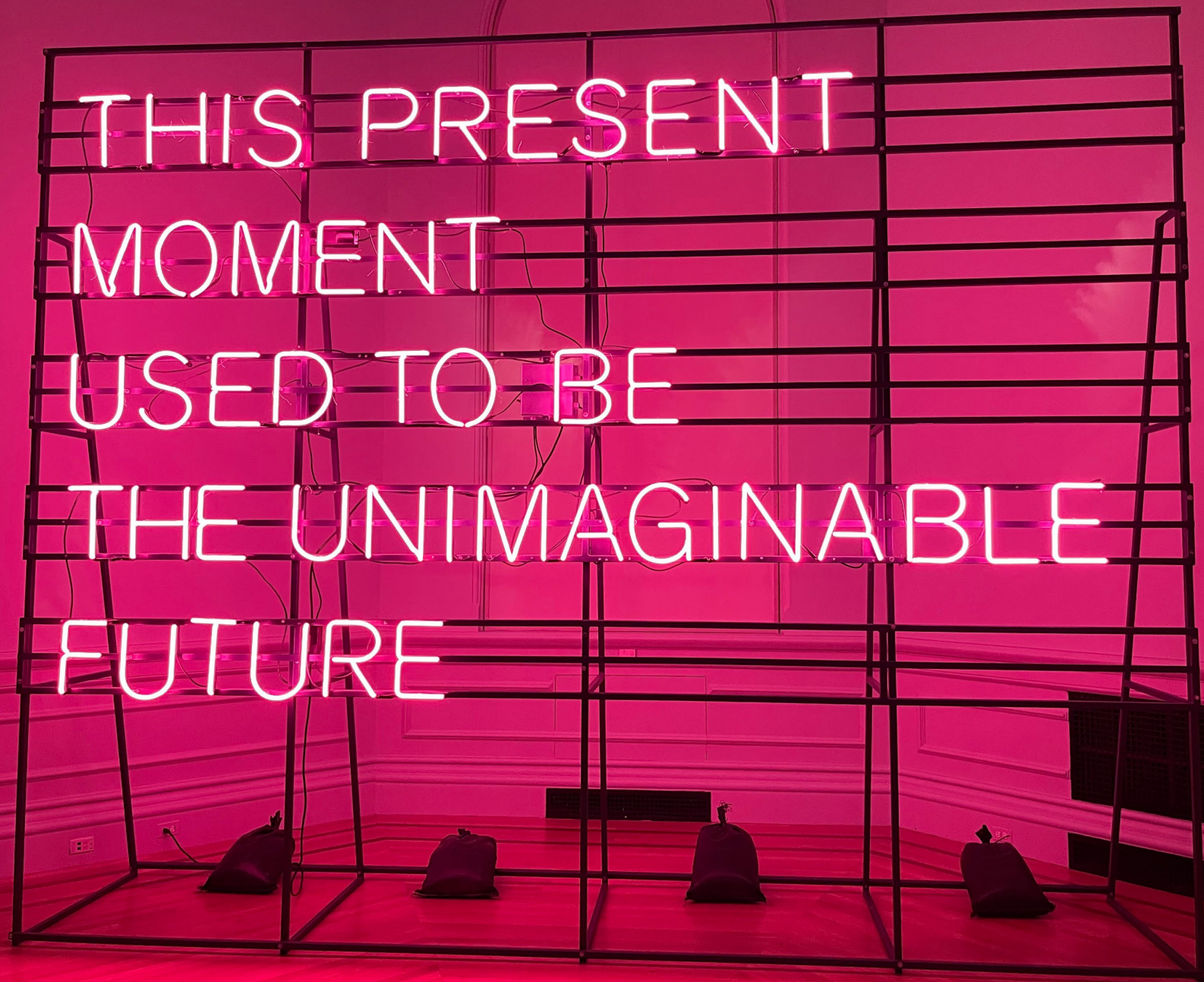
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APPLY NOW

- Director Acquisitions and Contracting Office

- Supervisory Congressional Affairs Specialist

- Congressional Affairs Specialist

- Deputy Comptroller

- Assistant Program Management

- Program Analyst

THIS PRESENT MOMENT USED TO BE THE UNIMAGINABLE FUTURE

Alicia Eggert
This Present Moment
2019 – 2020
Currently @ The Renwick Gallery
Washington, DC

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"Full Contact" Program Management

- Responsibility to identify well-defined problems in health and assemble teams from industry, academics, and government to solve

- Acts as the CEO of Programs – has autonomy as a decision-maker; protects risk-taking by ensuring all decisions are made on technical merit, mission benefit

- Develops well-structured programs that decouple concept risk (high) with execution risk (moderate)

- Provides active and cooperative oversight and direction of all programs and performers

  - Define technical milestones/deliverables
  - Monitor technical milestones/deliverables
  - Pivot resources as needed

  - Stakeholder Engagement
  - Budget management
  - Drive towards transition

- Expected to launch ~1 program/year

- Lead a contractor SETA team to execute day-to-day activities

First acting deputy director, Dr Adam Russell

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Our Vision

Solutions to preserve and expand health

Our Moment

We live in an era of complex technologies with massive economic and social disruptions. Powerful biological factors include pandemics that make us sick and emerging biotechnologies to make us well.

Our Promise

ARPA-H Program Managers (PMs) design, build, and launch *solutions* to create the best version of our health future.

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