



**NASEM PRECISION MEDICINE
IN NEUROSCIENCE WORKSHOP**

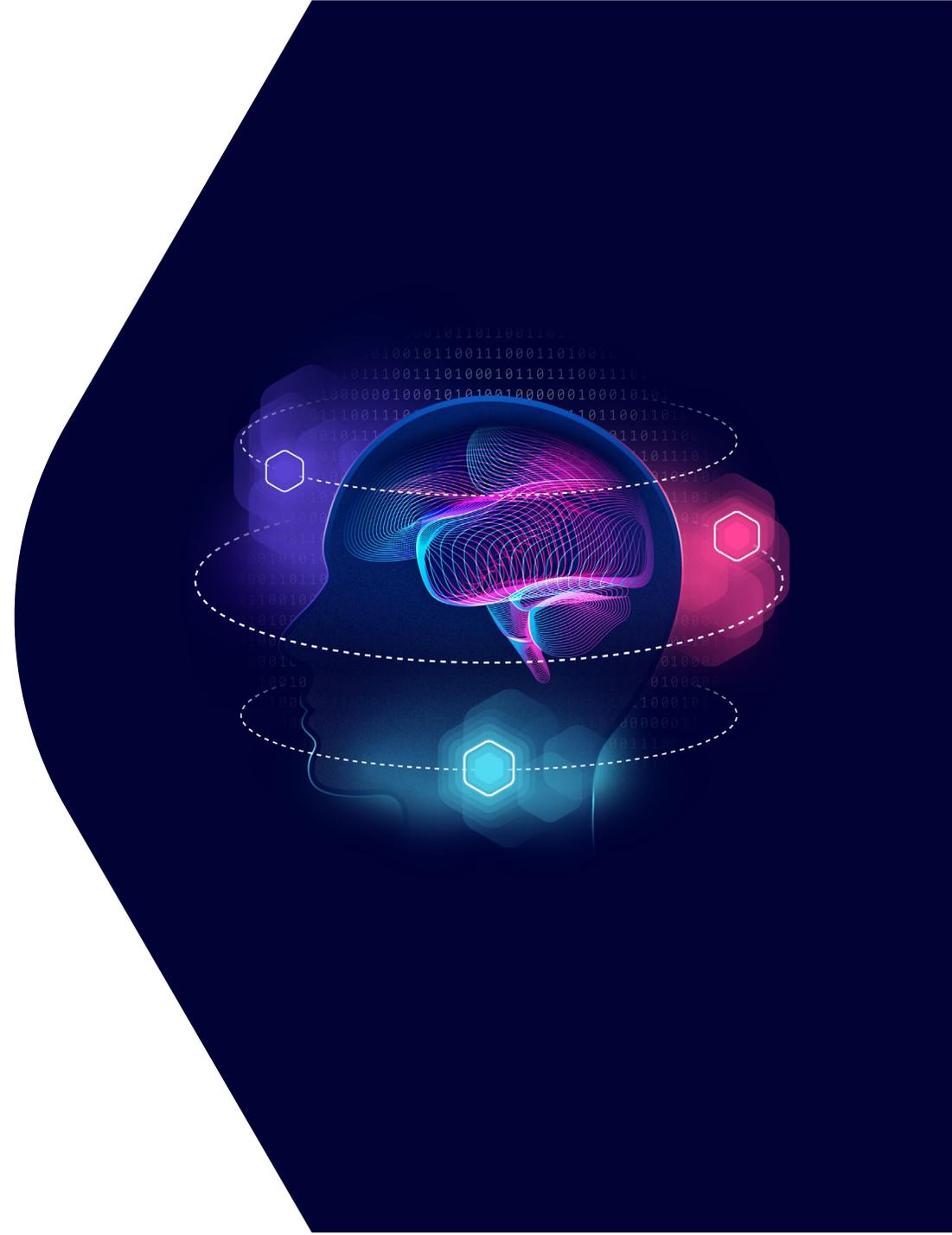
4-5 MARCH 2026

Transforming Mental & Behavioral Health at Scale

Nate Mohatt, Ph.D.

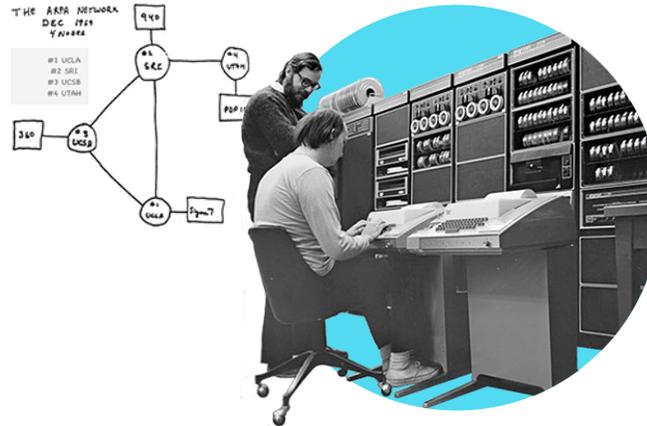
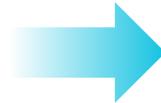
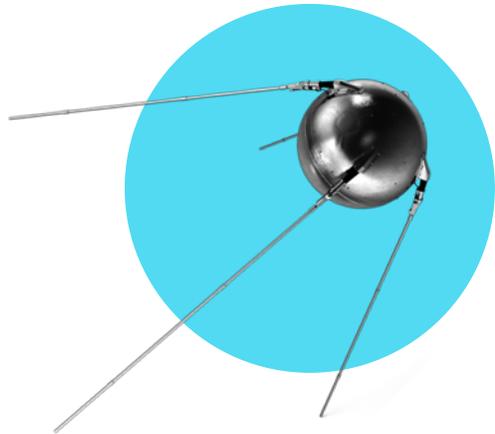
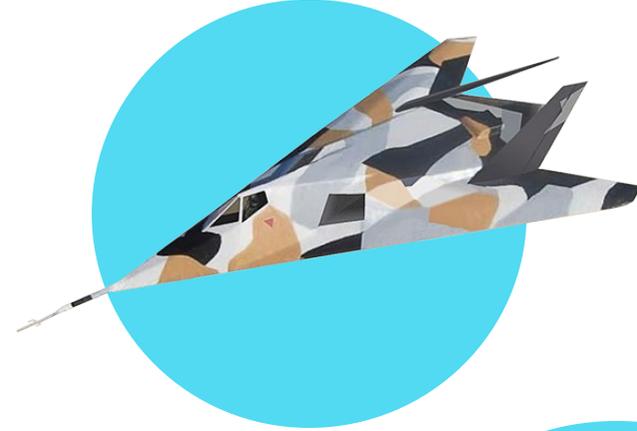
Program Manager, Proactive Health Office (PHO)

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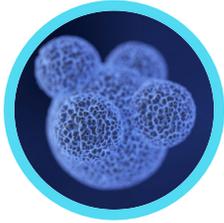


The Promise of the ARPA-H Model

Catalyze biomedical and health breakthroughs—
from molecular to societal scales—through pivotal
investments in high risk, high-impact health solutions
for all.



ARPA-H: The ARPA Model at Work for Health



HOW?

We are a unique funding agency *by design*



WHO?

Problem-focused Program Managers drive innovation



WHAT?

We are seeking radical change

Attributes that Support the Mission

Radical Change

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

Autonomy

PMs practice “full contact” management to maintain vision and deliver results, with metrics/ milestones for program, empowered to stop underperforming projects.

Term Limits

Terms limited to 3 years (renewable once for 6 total years) for PMs, Office Directors, and Deputy Directors, allowing inflow of new ideas.

Success for ARPA-H is defined by real-world impact.

ARPA-H Model: Program Lifecycle

LAUNCH

Program Manager

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



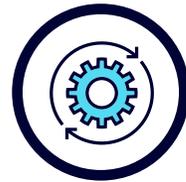
Challenge

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.



Performers

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

Support

ARPA-H will provide contracts – not grants – for projects with well-defined endpoints. Additional support will be provided by Program Managers, partners, and ARPA-H offices to ensure the best chance of success throughout the process.

✓	✓	✓	✗
✓	✓	✓	✓
✓	✗		

PERFORM

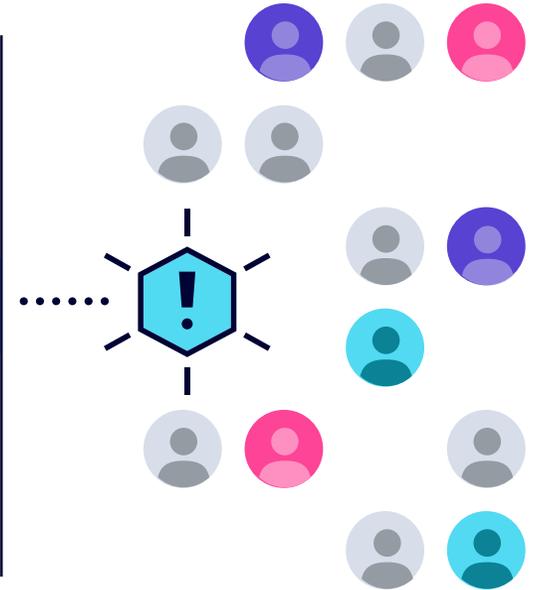
Performance

Contract performance will be regularly evaluated to allow ARPA-H to concentrate resources on the most effective approaches to reaching the desired goals.

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.



ARPA-H Mental and Behavioral Health Topics

Objective: Addressing America’s growing mental and behavioral health epidemic will require multiple radical changes. We must reimagine the system around answering the question what works for this specific person, right now?



1 in 2

Americans will have a behavioral health disorder during their lifetime¹

There are **no predictive, scalable, objective, standardized measures** of behavioral health.



We don’t know what is working, when, or for whom



Left unaddressed, these form a vicious cycle and **exacerbate other chronic diseases.**²⁻⁵

Topic Focus Areas

1: Widely adopted objective measurement.

Measurements that capture what matters, are less time consuming and are incentivized.



2: Effective prevention and treatment for everyone. More durable evidence-based interventions, personalized to what each patient needs, and adjusted if they are not working.



3: Reimagined system of care, with expanded capacity and improved training. Renewed focus on familial & community interventions, not just 1:1 treatments.





EVIDENT

Evidence-Based Validation & Innovation for Rapid Therapeutics in Behavioral Health

Launched November 21, 2025



What if we had widely adopted objective measures of mental health and wellbeing?

VISION

EVIDENT will develop more quantitative measures of mental and behavioral health to help usher in a new era of safe, tailored, cutting-edge diagnostics and treatments.

TECHNOLOGY FOCUS AREAS

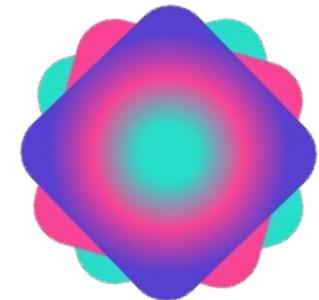
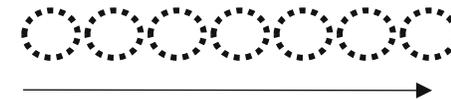
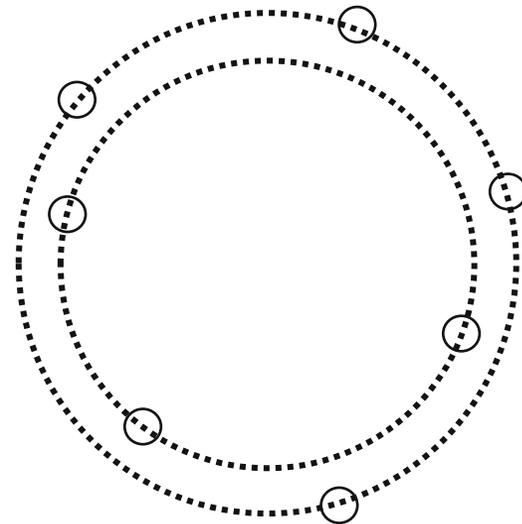
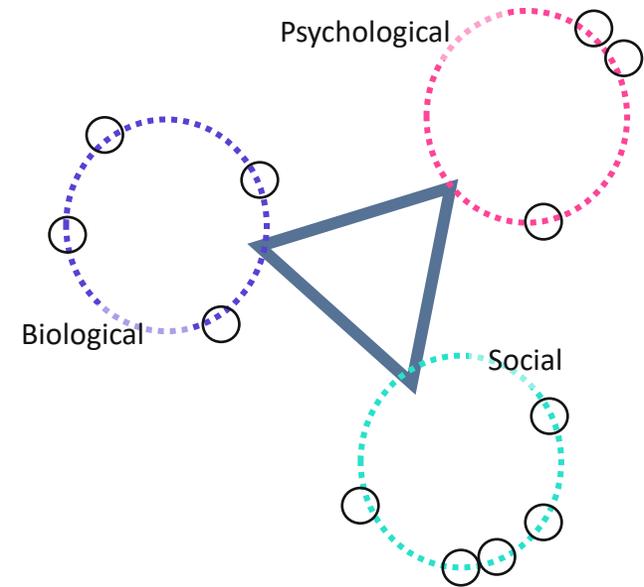
- Objective Measurement of Clinical Change
- Mechanisms of Rapid, In-Session Change
- Personal Risk & Durability Profiles
- Clinical Trial Data & Biosamples

EVIDENT: First step towards widely adopted objective measurement of mental health



EVIDENT

Future



Taken together, the data from EVIDENT will:

- **Establish which biomarker(s) might best predict** subjective & objective aspects of behavioral health, at minimum replacing unreliable and impractical self-report elements.
- **Provide a quantitative approach** to select biomarker(s) for future causative studies.
- **Act as a Rosetta Stone** for comparing wide variety of datasets & findings within behavioral health.

If EVIDENT is successful, data will be available to enable future efforts. For example:

- **Establish causal biomarkers.**
- Optimize **predictive capability** (in accuracy and time).
- **Improve integration** into user life, clinician practice, and/or automated systems (e.g., machine learning or AI).
- Impact to **downstream physical health.**

EVIDENT Expansive Data Landscape



Psychological

- Patient Health Questionnaire (PHQ-9)¹
- General Anxiety Disorder-7 (GAD-7)²
- Depression Anxiety Stress Scale-8 stress items (DASS-8)³
- Brief Resilience Scale (BRS)⁴
- Flourishing Scale⁵
- FDA Clinical Endpoints

- *Digital health*
- *Brain Imaging*
- *Neurotropic Factors*
- *Oxidative/Cellular Stress*
- *Metabolics Markers*
- *Inflammation*
- *Hormones*
- *Positive/Negative Affect*
- *Travel and Weather*

Biological

- Heart rate variability
- Sleep onset latency
- Other digital health data from consumer wearables

Social + Environmental

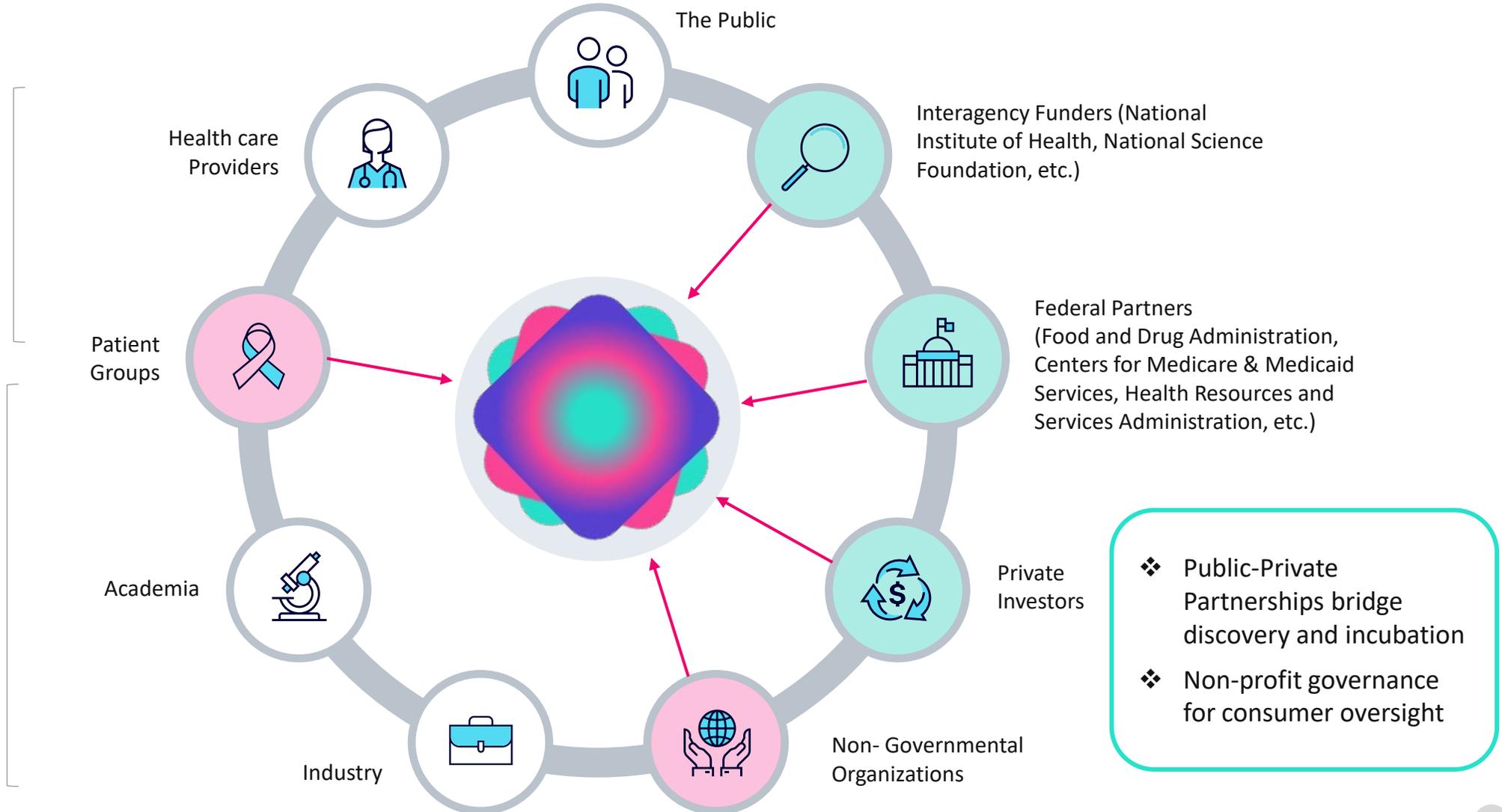
- Homestay
- Other GPS data from consumer wearables

[1] Kroenke et al., [2001](#); [2] Spitzer et al., [2006](#); [3] Ali et al., [2021](#); [4] Smith et al., [2008](#); [5] Diener et al., [2010](#)

What Data Resources Does it Take to Enable Sustainable Discovery?



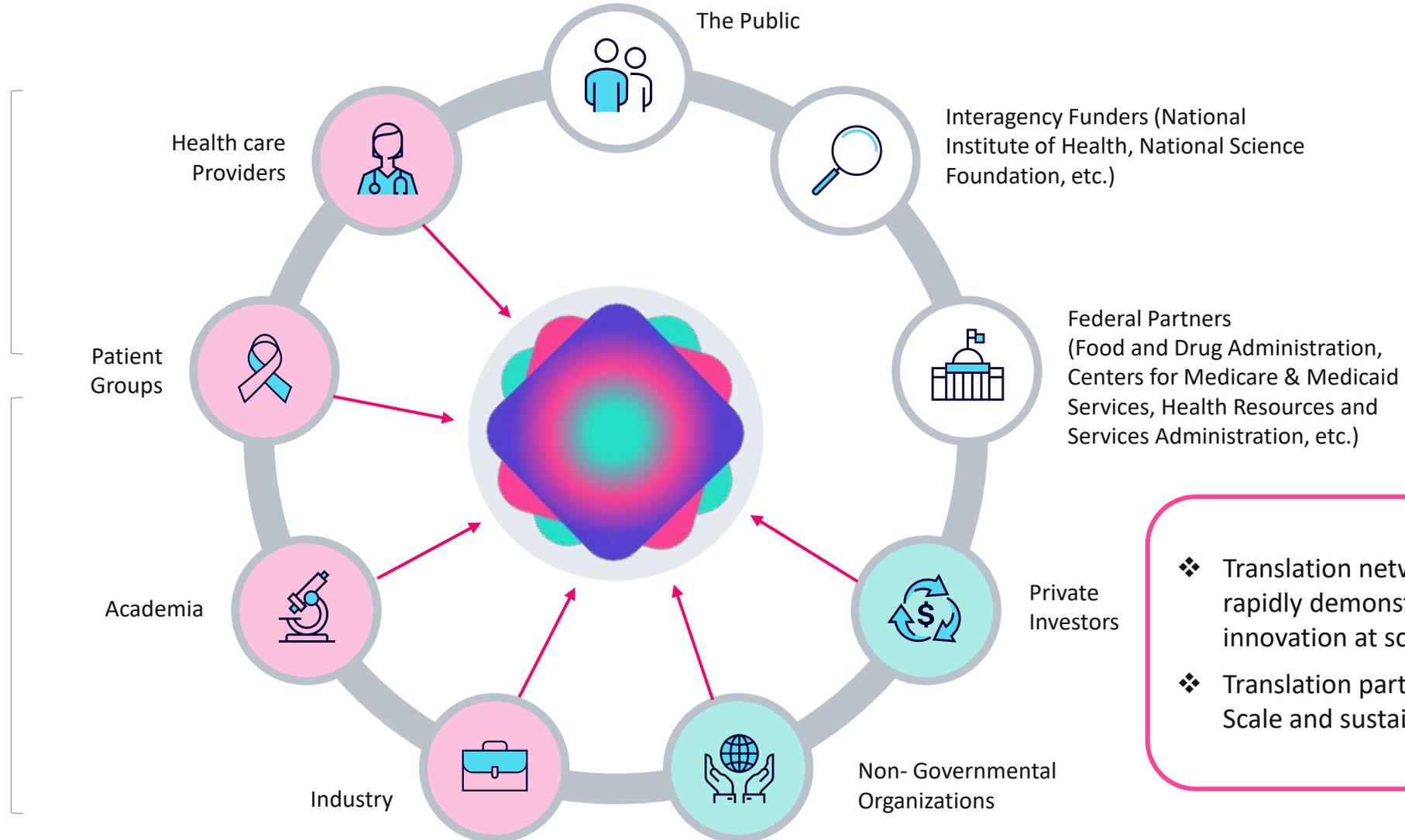
Ecosystem Catalysts



How can translation partners scale innovation and accelerate ecosystem-wide testing and deployment?



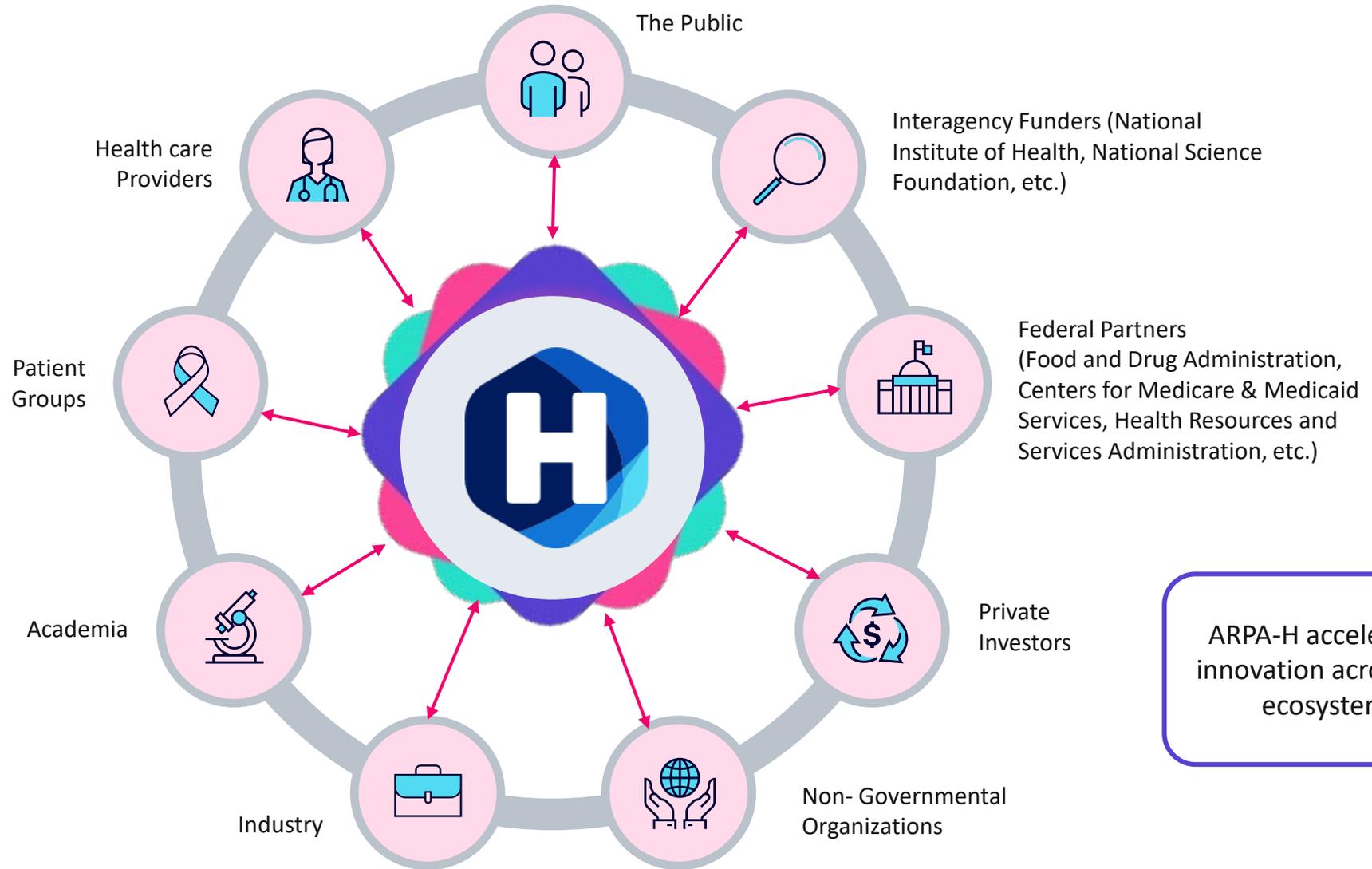
Ecosystem Translators



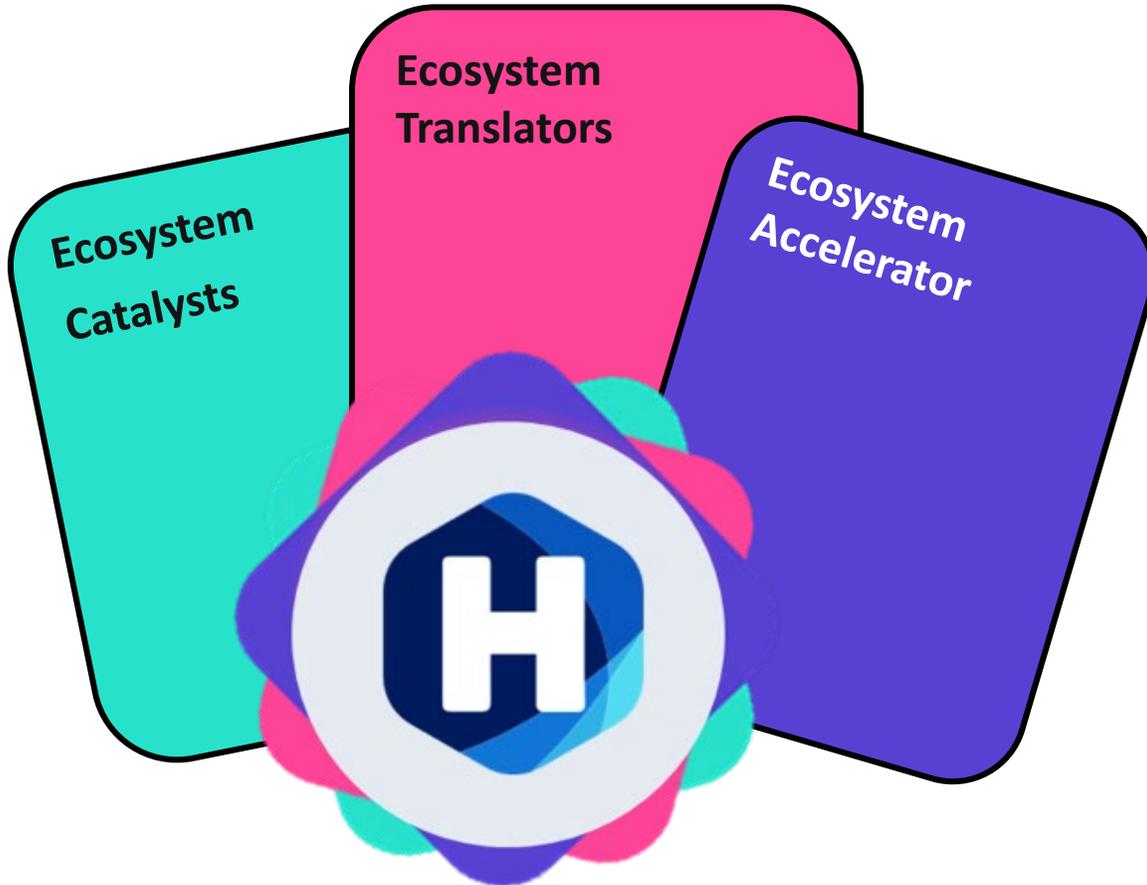
ARPA-H Accelerates the Entire Health Ecosystem



Ecosystem Accelerator



Three Key Takeaways



- We need to **build collaborative structures**, such as for data stewardship, to sustain public health and commercial impact.
- **Translation networks** are necessary to drive precision neuroscience innovation rapidly towards consumer benefit.
- **Bring funder and customer closer together**: strategies must enable catalysts and translators to foster ongoing innovation and improvement.



For more information on

EVIDENT

Please visit <https://arpa-h.gov>

Engage with ARPA-H

Scan the QR Codes with your phone's camera to visit our ARPA-H webpages.



BECOME A PROGRAM MANAGER



ARPA-H is seeking to hire Program Managers that will bring well-defined problems to ARPA-H and build the teams to solve them.

arpa-h.gov/careers/program-managers



CHECK OUR OPEN SOLICITATIONS



ARPA-H is currently soliciting research applications. Solicitations are time-limited and regularly added to our website.

arpa-h.gov/explore-funding/open-funding-opportunities



KEEP UP TO DATE WITH ARPA-H



Keep Up to date with the **ARPA-H Vitals Biweekly Newsletter**

engage.arpa-h.gov/arpa-h-vitals-newsletter-sign-up

Financial toll of behavioral illness is larger than heart disease or cancer



Costly: US spends nearly **\$200 billion** on behavioral health treatments annually

Compounding: Behavioral illness exacerbates other chronic conditions, multiplying costs by **3-6x**

Total cost of behavioral health disorders	1 billion People are living with behavioral health condition, globally ¹	\$5 trillion Global cost of mental health each year ²	3-6x Greater healthcare cost vs. those without a behavioral health condition ^{3,4}	\$282 billion Economic cost per year (2024 USD) ⁵
Estimated annual US healthcare spending (2019)⁶	\$166 billion Mental disorders	\$30 billion Substance use	Chronic pain⁷ 80% Of chronic pain population cannot work	\$700 billion In lost wages and healthcare utilization
Estimated annual US spend, specific conditions (2019)	\$41 billion Depressive disorders	\$38 billion Anxiety disorders	Major depressive disorder⁸ 38% Increase in cost since 2010	\$326 billion Cost per year
	\$49 billion Dementias	\$52 billion Low back pain		35% Direct costs of care 61% Workplace costs 4% Suicide-related costs

[1] World Health Organization, [nd.](#); [2] Arias et al., [2022](#); [3] Davenport et al., [2020](#); [4] Sporinova et al., [2019](#); [5] Abramson et al., [2024](#); [6] Dieleman et al., [2025](#); [7] Young et al., [2022](#); [8] Fournier et al., [2021](#)