

IARPA Overview

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Office of the Director of National Intelligence

I A R P A
BE THE FUTURE



The United States Intelligence Community





IARPA Mission

IARPA envisions and leads *high-risk, high-payoff research* that delivers innovative technology for future *overwhelming intelligence advantage*

- Our problems are **complex** and **multidisciplinary**
- We emphasize **technical excellence** & **technical truth**



IARPA Method

Bring the best minds to bear on our problems

- Full and open competition to the greatest possible extent
- World-class, rotational Program Managers

Define and execute research programs that:

- Have goals that are clear, measureable, ambitious and credible
- Employ independent and rigorous Test & Evaluation
- Involve IC partners from start to finish
- Run from three to five years
- Publish peer-reviewed results and data, to the greatest possible extent
- Transition new capabilities to intelligence community partners



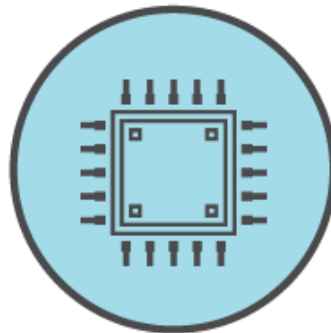
4 Core Research Thrusts



Collection



Analysis



Computing



Anticipatory
Intelligence



Collection R&D



“Dramatically improve the value of collected data”



NOVEL ACCESS

Reach hard targets in denied areas



ASSET VALIDATION AND IDENTITY INTELLIGENCE

Assess trustworthiness and advance biometrics in real-world conditions



LOCATING, TRACKING AND DETECTING

Accurately locate and track intelligence interests and detect CBRNE agents



Analysis R&D



“Maximize insight from the information we collect, in a timely fashion”



LARGE DATA VOLUMES AND VARIETIES

Provide powerful new sources of information from massive, noisy data



SOCIAL, CULTURAL, AND LINGUISTIC FACTORS

Analyze language and speech to produce insights into groups and organizations

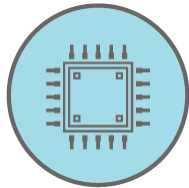


IMPROVING ANALYTIC PROCESSES

Enhance analytic process at the individual and group level



Computing R&D



“Operate effectively in a globally interdependent and networked environment”



COMPUTATIONAL POWER

Revolutionary advances to solve problems intractable with today's computers



TRUSTWORTHY COMPONENTS

Gain the benefits of leading-edge hardware and software without compromising security



SAFE AND SECURE SYSTEMS

Protecting systems against cyber threats



Anticipatory Intelligence R&D



“Detect and forecast significant events”



S & T INTELLIGENCE

Detect and forecast the emergence of new technical capabilities



INDICATIONS & WARNINGS



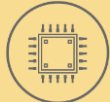



Provide early warning of societal crises, disease outbreaks, insider threats, and cyber attacks



STRATEGIC FORECASTING

Forecast major geopolitical trends and rare events



	 Collections	 Analysis	 Computing	 Anticipatory Analysis
Completed	BIC (biosecurity) GHO (quiet UAV) TRUST (polygraphy)	BEST (facial recog) ICArUS (neuroscience) KDD (information discovery) METAPHOR (linguistics) Reynard (virtual worlds) SCIL (socio-linguistics) SHO (holography) Sirius (training)	ATHENA (cybersecurity) CAT (circuit analysis) CSQ (quantum) MQCO (quantum) QCS (quantum) SPAR (privacy) STONESOUP (security)	ACE (collective forecasts) ForeST (S&T intel) OSI (OSINT forecasting)
Ongoing	HFGeo (HF geolocation) MAEGLIN (CBRN) Odin (biometrics) SILMARILS (chem detection) SLiCE (RF tracking)	Aladdin (video search) Babel (speech recognition) Finder (geolocate imagery) Janus (facial recog) KRNS (neuroimaging) SHARP (training)	C3 (cryogenic computing) LogiQ (quantum) MICrONS (neuromorphic) RAVEN (chip analysis) TIC (chip security)	CAUSE (cyber forecasting) CREATE (crowdsourcing) FUSE (S&T intel) Mercury (SIGINT forecasting) SCITE (insider threats)
In Development	Amon-Hen (space awareness) Ithildin (chem detection) MOSAIC (pattern of life) UnderWatch (undersea)	CORE3D (3D modeling) DIVA (surveillance video) MATERIAL (translation)	QEO (quantum) SuperTools (cryogenic computing) VirtUE (cloud security)	FunGCAT (synthetic bio) HFC (hybrid forecasting)
<div>  Seedlings and Studies  </div>				

Last updated
11 May 2017



Current IARPA Opportunities

- Nail to Nail (N2N) prize challenge
- Face Recognition prize challenges
- MORGOTH'S CROWN prize challenge

OPEN OPPORTUNITIES

PRESENT

FUTURE

UPCOMING OPPORTUNITIES

- Amon-Hen (space awareness)
- Ithildin (chem detection)
- Functional Map of the World prize challenge
- {stay tuned for more over the summer/fall}

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IARPA does everything “from AI to Zika” and is a world scientific leader

Although best known for quantum computing, superconducting computing and forecasting tournaments – IARPA’s research portfolio is diverse, including math, physics, chemistry, biology, neuroscience, linguistics, political science, cognitive psychology and more.

- 70% of completed research transitions to U.S. Government partners
- 2,000+ journal articles published through FY2016
- Physicist David Wineland won the Nobel Prize in Physics for quantum computing research funded by IARPA
- World’s leading funder of quantum computing academic research, and quantum research cited as Science Magazine’s “Breakthrough of the Year”
- White House BRAIN Initiative, National Strategic Computing Initiative
- Dr. Craig Gentry named a MacArthur Fellow



IARPA in the News

“One of the government’s most creative agencies, the Intelligence Advanced Research Projects Agency...”

David Brooks, NYT, “Forecasting Fox”
21 March 2013

“All the News
That’s Fit to Print”

The New York Times

VOL. CLXII .. No. 56,090

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How to Engage with IARPA

Getting Started with IARPA

At IARPA, we take real risks, solve hard problems, and invest in high-risk/high-payoff research that has the potential to provide our nation with an overwhelming intelligence advantage.

Are you interested in partnering with us to advance the state-of-the-art in research and development?

[Read More](#)

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Reach out to our Program Managers.

Schedule a visit if you are in the DC area or invite us to visit you

Opportunities to Engage:

RFIS AND WORKSHOPS

Opportunities to learn what is coming, and to influence programs.

"SEEDLINGS"

Typically a 9-12 month study; you can submit your research proposal at any time. We strongly encourage informal discussion with a PM before proposal submission.

PRIZE CHALLENGES

No proposals required. Submit solutions to our problems – if your solutions are the best, you receive a cash prize and bragging rights.

RESEARCH PROGRAMS

Multi-year research funding opportunities on specific topics.