

# 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

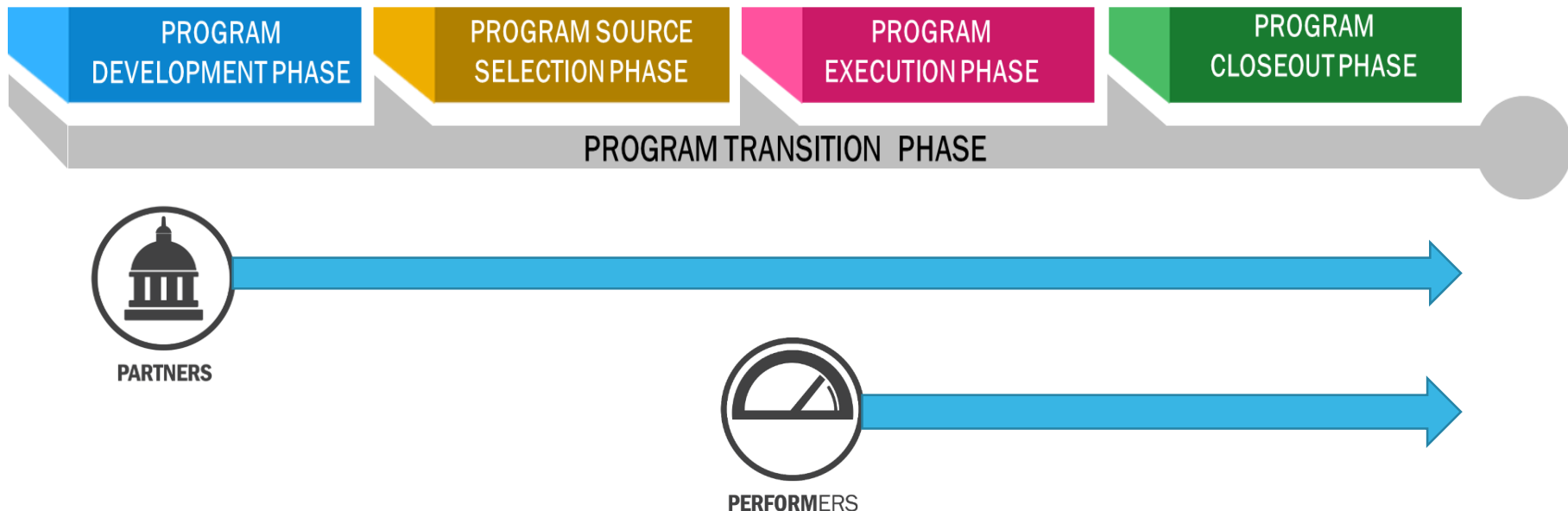
## Define and execute research programs that:

- 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



# The IARPA Program Lifecycle

- IARPA's Partners (usually government agencies) are involved throughout the program lifecycle from program development to closeout and tech transfer.
- IARPA's Performers become engaged at the start of program execution







## 4 Core Research Thrusts



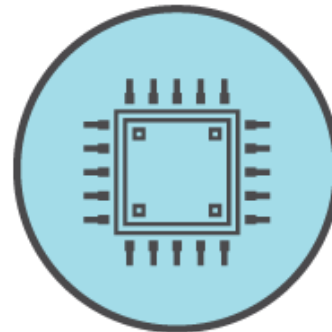
Analysis



Anticipatory Intelligence



Collection



Computing



# 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



# 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





# 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

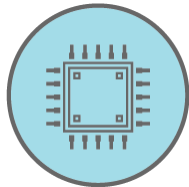


## LOCATING, TRACKING AND DETECTING

Accurately locate and track intelligence interests and detect CBRNE agents



# 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

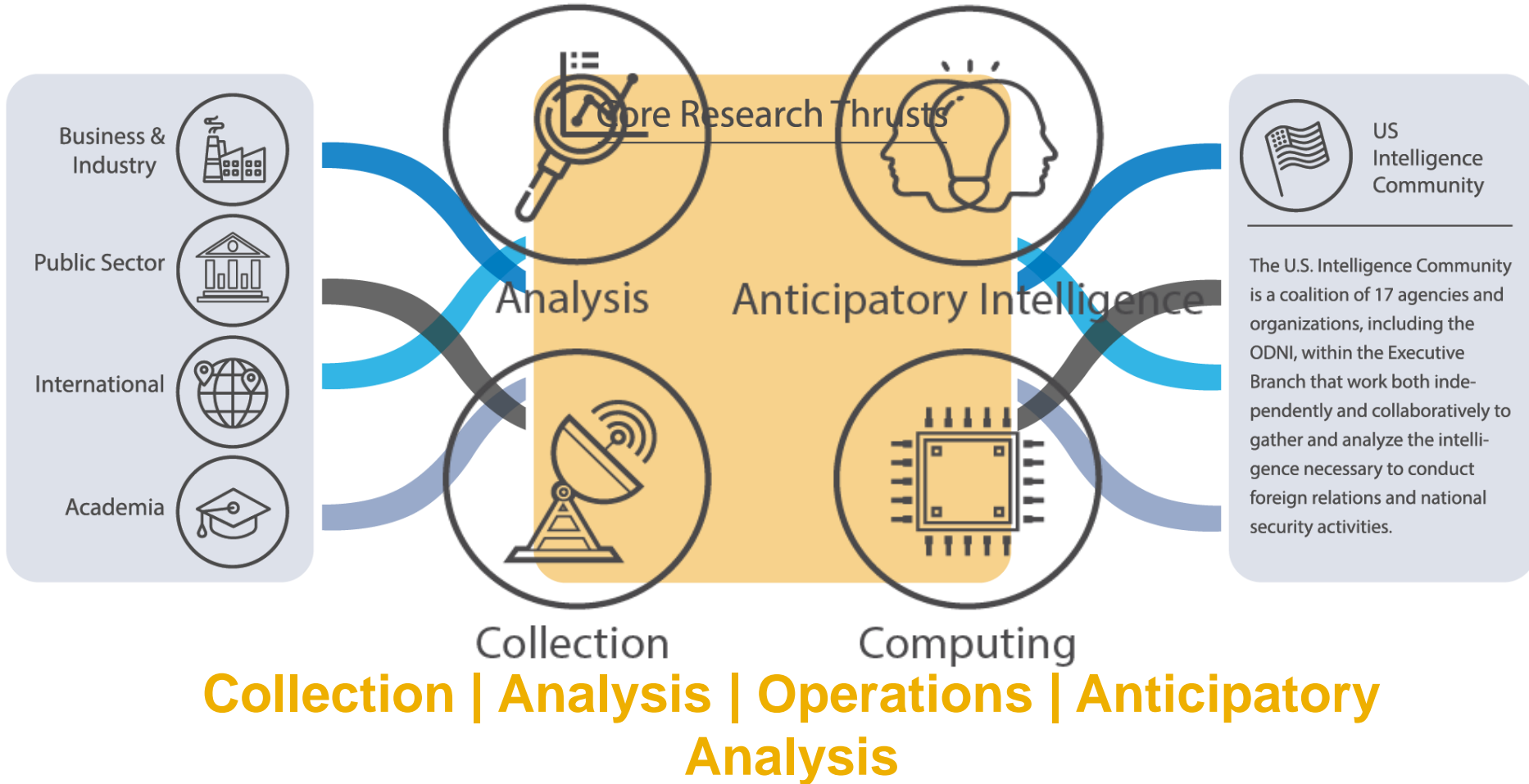


## SAFE AND SECURE SYSTEMS

Protecting systems against cyber threats



## 4 Core Research Thrusts





# 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



# 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](#)

[iarpa.gov](https://iarpa.gov) | 301-851-7500

[info@iarpa.gov](mailto:info@iarpa.gov)

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.