Intelligence Advanced Research Projects Activity (IARPA)

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This briefing is UNCLASSIFIED

Overview

IARPA
BE THE FUTURE

> The IC needs a way to sponsor high-risk/high-payoff research that has the potential to provide the U.S. with an overwhelming intelligence advantage over our future adversaries

- This is about taking real risk.
  - This is NOT about "quick wins", "low-hanging fruit", "sure things", etc.
- Failure is completely acceptable as long as …
  - It is not due to failure to maintain technical and programmatic integrity
  - Results are fully documented
- Best and brightest.
  - Competitive awards and world-class PMs.
  - Every IARPA program will start with a good idea <u>and</u> a good person to lead it. Without both, IARPA will not start a program.
- Cross-community focus.
  - Address cross-agency challenges
  - Leverage agency expertise (both operational and R&D)
  - Work transition strategies and plans

The "Heilmeier Questions"

1. What are you trying to do?

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

   – Are you aware of the state-of-the-art and have you thoroughly thought through all the options?

3. What is new about your approach? Why do you think you can be successful at this time?

   – Given that you've provided clear answers to 1 & 2, have you created a compelling option?

   – What does first-order analysis of your approach reveal?

4. If you succeed, what difference will it make?

   – Why should we care?

5. How long will it take? How much will it cost? What are your mid-term and final exams?

   – What is your program plan? How will you measure progress? What are your milestones/metrics? What is your transition strategy?

The "P" in IARPA is very important

- Technical and programmatic excellence are required

- Each Program will have a clearly defined and measurable end-goal, typically 3-5 years out.

  – Intermediate milestones to measure progress are also required

  – Every Program has a beginning and an end

  – A new program may be started that builds upon what has been accomplished in a previous program, but that new program must compete against all other new programs

- This approach, coupled with rotational PM positions, ensures that…

  – IARPA does not "institutionalize" programs

  – Fresh ideas and perspectives are always coming in

  – Status quo is always questioned

  – Only the best ideas are pursued, and only the best performers are funded.
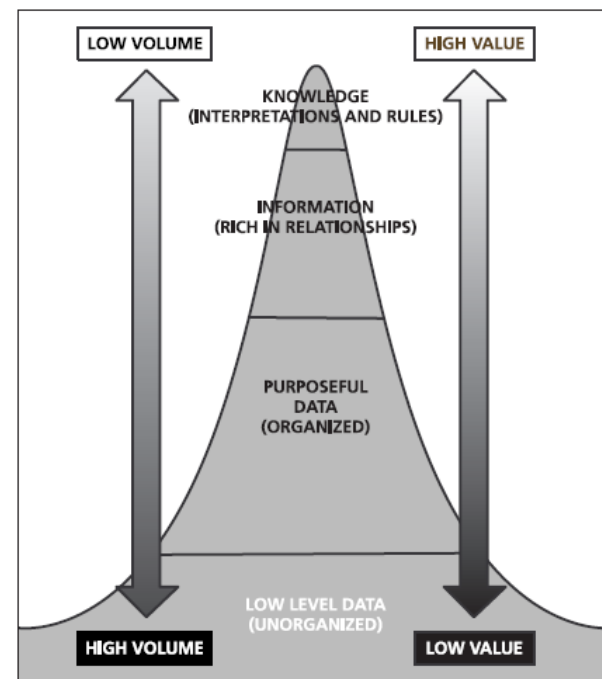
The Three Strategic Thrusts (Offices)

- **Smart Collection**: dramatically improve the <u>value</u> of collected data
  - Innovative modeling and analysis approaches to identify where to look and what to collect
  - Novel approaches to access
- **Incisive Analysis**: maximizing insight from the information we collect, in a <u>timely</u> fashion
  - Advanced tools and techniques that can handle large volumes of multiple and disparate sources of information
  - Innovative approaches (e.g., using virtual worlds, shared workspaces) that dramatically improve the productivity of analysts
  - Methods that incorporate socio-cultural and linguistic factors into the analytic process
- **Safe and Secure Operations**: countering new capabilities of our adversaries that could threaten our ability to operate effectively in a <u>networked</u> world
  - Assure the confidentiality, integrity and availability of our cyber systems
  - Quantum information science and technology

LOW VOLUME — HIGH VALUE

KNOWLEDGE (INTERPRETATIONS AND RULES)

INFORMATION (RICH IN RELATIONSHIPS)

PURPOSEFUL DATA (ORGANIZED)

LOW LEVEL DATA (UNORGANIZED)

HIGH VOLUME — LOW VALUE

Concluding Thoughts

- **Technical Excellence & Technical Truth**

  – Scientific Method

  – Peer/independent review

  – Full and open competition

- **We are looking for outstanding PMs.**

- **How to find out more about IARPA:**

  www.iarpa.gov