



# U.S. ARMY COMBAT CAPABILITIES DEVELOPMENT COMMAND – ARMY RESEARCH LABORATORY

Effective Engagement Strategies\*

\*(at least, this seems to work for me)



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# General Advice



## First Steps do your homework



- **Learn the organization**
  - Get a sense of the scope, mission, and priorities of the funding agency.
  - Make sure if you ask for a meeting, you're in the right city!
- **Read the (relevant) Broad Agency Announcement (BAA)**
  - The technical description of the program is most likely written by the PM...
    - ... which means it really IS what the PM wants.
    - ... which means you shouldn't read between the lines – the PM deliberately left things out.
- **Learn the PM and the program**
  - Ask your network if they know a PM's style / communication preferences / interests
  - Look for opportunities to introduce yourself and your ideas.
  - Pay attention to the acknowledgement of funding in papers and presentations. If the PM isn't specifically mentioned, then ask the author/presenter for details.



## Next Steps

be a person



- **Listen**

- You may get lots of advice (especially if you're new) from mentors and senior faculty, but when in doubt:
  - Provide the information the PM requests
  - Don't argue with the PM on process
  - Stop and think when the PM gives feedback. Instant responses are often frustrating.

- **Be patient**

- There are LOTS of you and 1 of me.
  - The benefit of email is that it's easy.
  - The curse of email is that it's hard.
- Sometimes it takes time for critical mass to build in a scientific focus area.
- Sometimes a great proposal still can't be selected.

- **Be a person**

- Be proactive but not provocative.
- Be persistent but not obnoxious.
- Be personable but don't take "no" personally.



So you have an idea...



# Critical Questions to Consider when pitching ideas to program officers



## Is it basic research?

- What's the scientific question?
- What foundational knowledge is not currently available about the workings of the universe?
- Proposals focused on specific devices/components/technologies are beyond the scope of ARO's mission.

## Why is it hard?

- If an "old" question, why haven't we found an answer yet?
- If a "new" question, where's the sticky part?

## Why you? Why now?

- What's been done before? Why wasn't it successful?
- What's novel about your skills/abilities/approach that makes you think there's a shot at an answer?
- What new advance provides opportunity to make new progress?

## So what? Who cares?

- What impact will the research make on the scientific community?
- What papers will be written because of your efforts? What papers will stop being written?
- What are the potential implications for the future of technology?

## Where's the risk?

- How confident are you that you're asking the right question?
- How will you know when you have an answer? If you find a different answer, will you still learn something?

## What will it take?

- What resources (time, money, infrastructure, personnel, partnerships) are required to pursue the research?



# ARO Fluid Dynamics How to Engage



## Research Menu

- 3-4 ideas, 1-2 Paragraphs each, 2 pages max
- 2 ideas aligned with the program (see the BAA)
- 1 idea outside the program (I don't know what I don't know)
- 1 idea characterized as half-baked, high-risk, possibly crazy
- Submit any time via email. Feedback "quickly."

## Whitepaper

- 5 pages max
- Provides a well-written scientific question and proposes a novel approach
- Describes the level of risk associated with the effort.
- Identifies the resources required to pursue the research (rough order of magnitude).
- Provides a short bibliography positioning the research in the body of knowledge.
- Submit any time via email. Feedback in April/October.

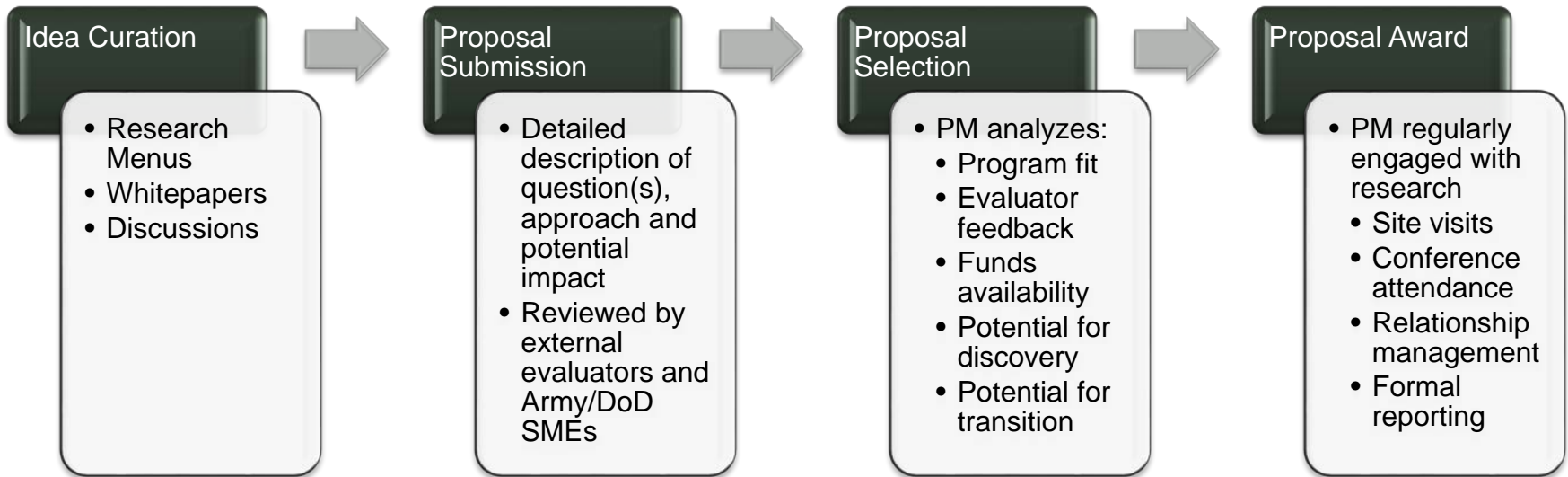
## Proposal

- Consult the ARO BAA (W911NF-17-S-0002) for full details on requirements.
- Expands on the discussion in the whitepaper to adequately describe the proposed effort.
- Provides a reasonably self-contained description; expert reviewers should not have to heavily consult the literature or supplementary material to understand the question and the approach.
- Submit via grants.gov. Preferred receipt in July/February. Decision points in November/April.



# The Process

from idea to post-award







# Questions?



# Backup



# ARO Charter



## ARO Established in 1951 and Chartered to:

- Plan and direct the research program of the Army to insure a dynamic program responsive to the future requirements of the Army
- Foster within the laboratories of the Army the best possible atmosphere for the prosecution of research
- To encourage and promote scientific training and education and to further civilian scientific activity in areas of interest to the Army

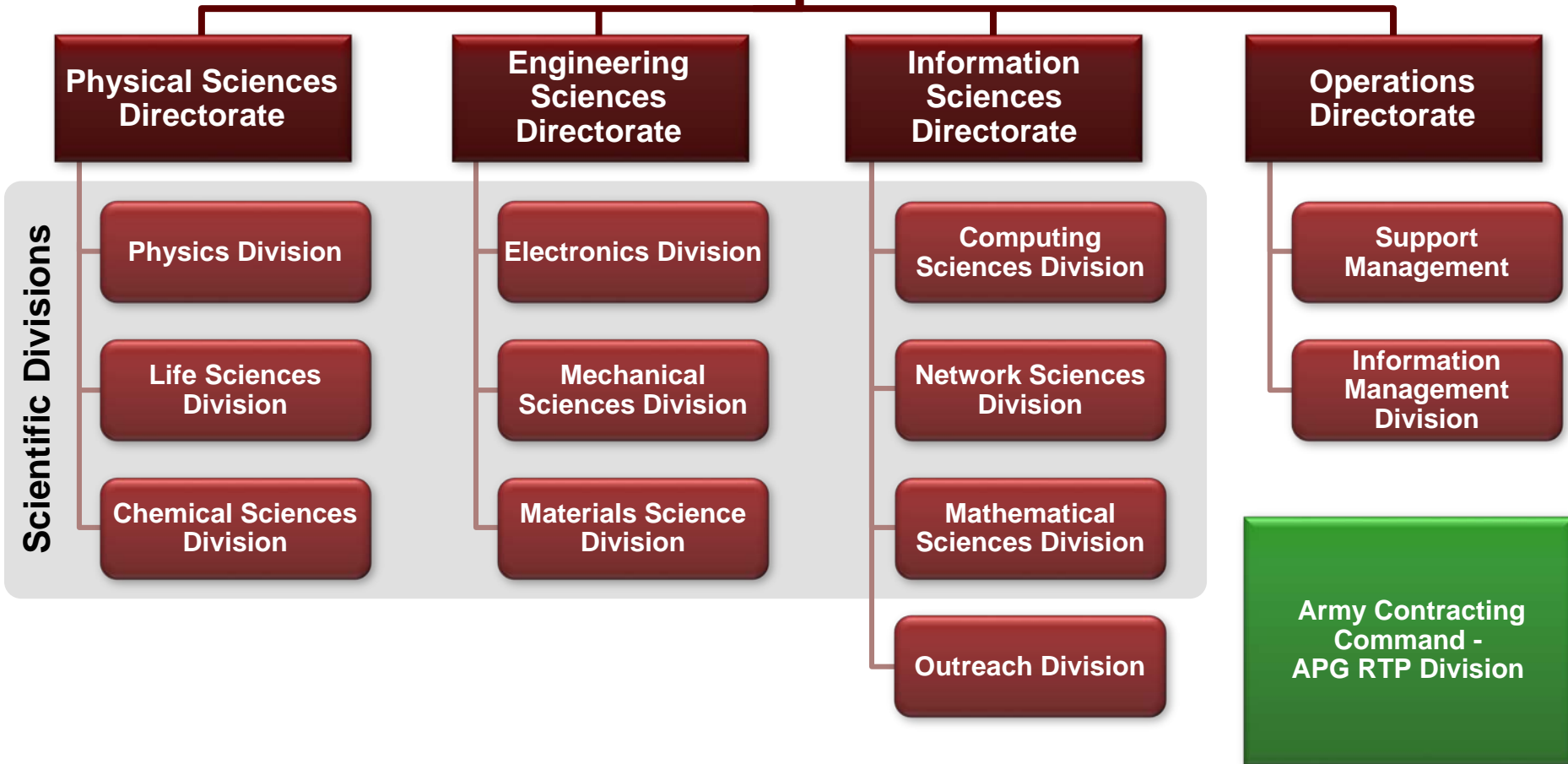
Symbolism in the ARO coat of arms represents the search for knowledge, such as the lightning bolt symbolizing “human attainment of new ideas...and their subsequent successful practical implementation” (*ARO Coat of Arms 1963*)



# ARL-ARO Organizational Structure



116 employees at ARO  
48 PhD Scientists & Engineers





# ARO and Other Government Agencies' Broad Agency Announcements



Award Type	Target	Funding
Single Investigator (SI)	Single-laboratory projects	\$140K/year (avg) for 3 years
Short Term Innovative Research (STIR)	Very high-risk pilot projects	\$60K for 9 mo.
Young Investigator Program (YIP)	Early-career PIs	\$120K/year for 3 years
Presidential Early Career Award for Scientists and Engineers (PECASE)	Promising future leaders	\$200K/year for 5 years
Defense University Research Instrumentation Program (DURIP)	Instrumentation	\$225K (avg) per award
Multidisciplinary University Research Initiative (MURI)	Large multidisciplinary programs	~\$1.25M/year up to 5 years
Historically Black College/University and Minority Serving Institutions (HBCU/MSI)	Minority serving institutions	~\$120K/year for 3 years
Small Business Technology Transfer (STTR)	Multi-phase awards bridging academia & industry	\$150K (6 mo.) to \$1M (24 mo.)
Small Business Innovative Research (SBIR)	Multi-phase research for industry transition	\$150K (6 mo.) to \$1M (24 mo.)