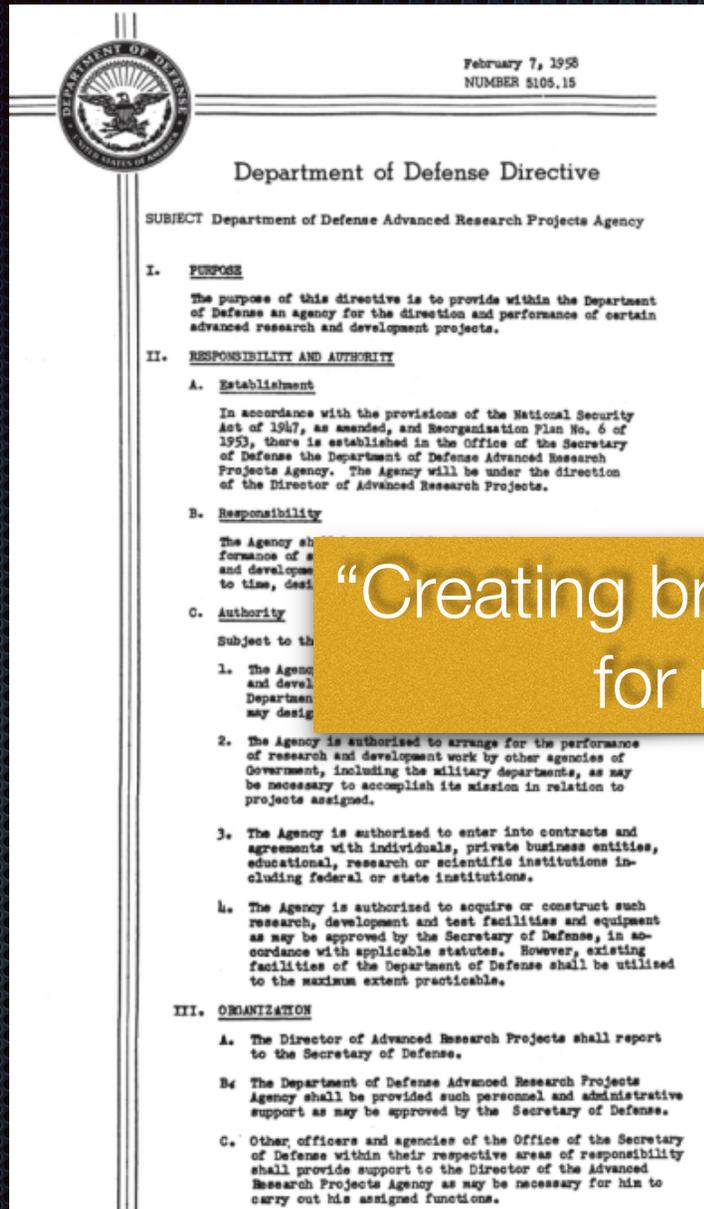


Influencing DARPA

Kathleen Fisher

DARPA's Mission



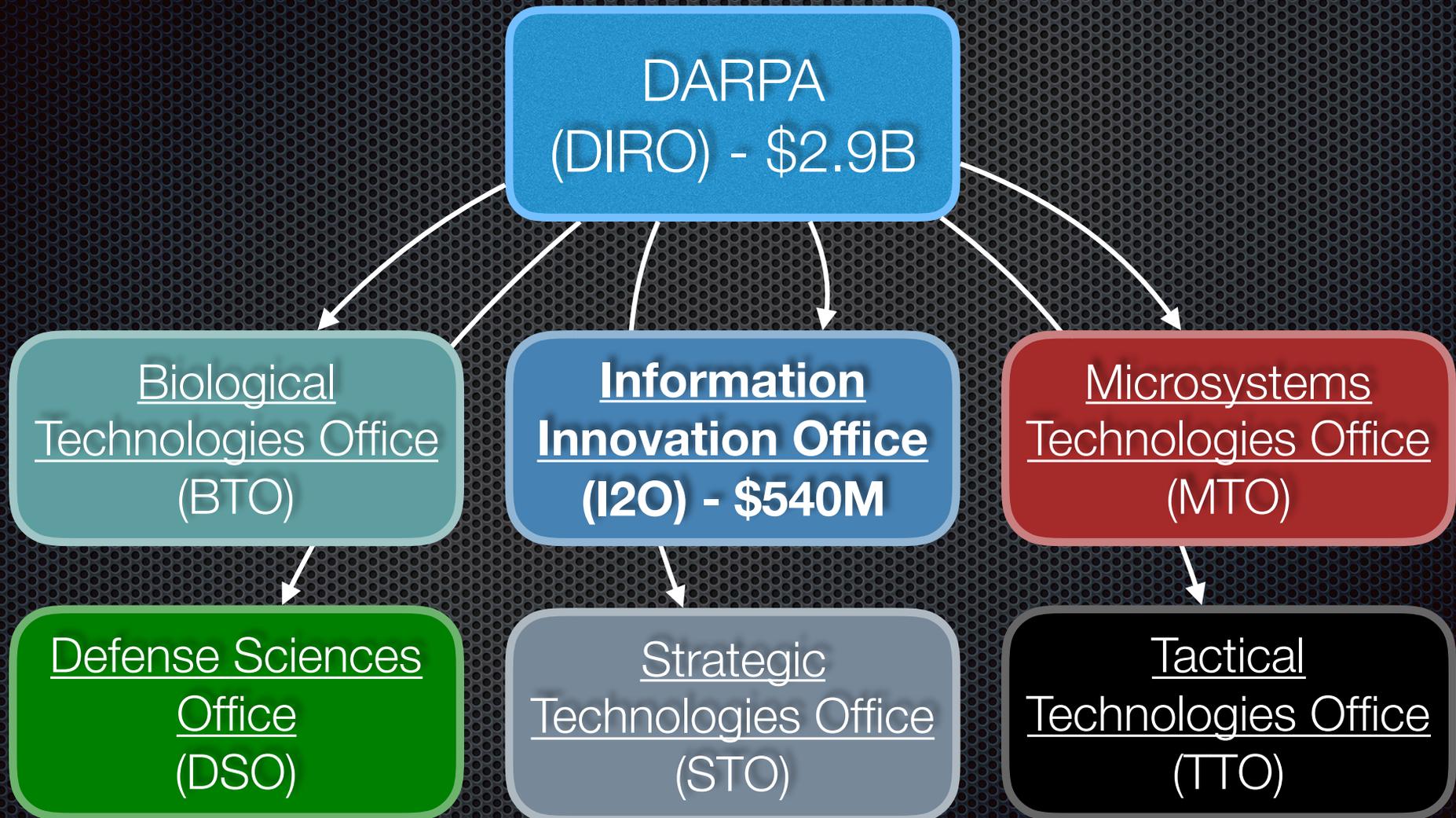
- Assure that the US leads the world in technology for national defense

- Avoid/create “Sputnik surprises”

“Creating breakthrough technologies for national security” “change-

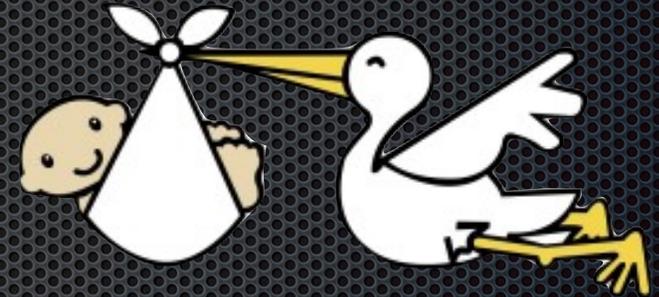
- Define challenges, develop solution concepts, demonstrate them.
- Take “technical risk” off the table

DARPA's structure



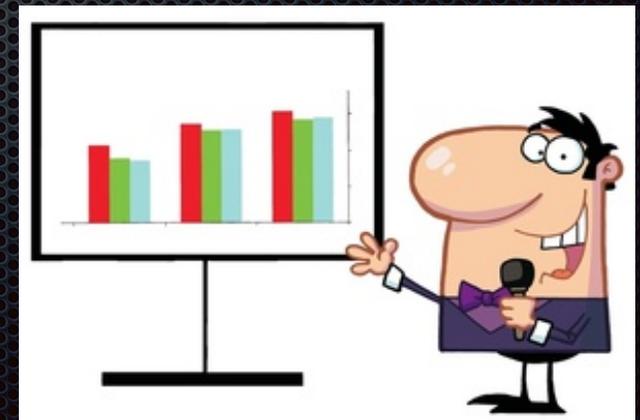
Where do DARPA Programs Come From?

- Program manager has an idea. Many sources:
 - Original motivation for joining DARPA
 - Emerges from existing program or seedling
 - Emerges from an ISAT Workshop or discussions at DARPA
 - Suggestions from members of the community.
- Program manager refines the idea. Many sources of input:
 - Potential performers and members of the technical community
 - Office Director, Deputy Director, and other Program Managers
 - SETA Staff
 - Technical papers and policy documents



The Pitch

- Hour-long presentation and Q&A to DARPA's Tech Council
- Questions that must be addressed:
 - What is the problem that needs to be solved? Why DARPA?
 - How is the problem currently addressed and why is that insufficient?
 - What is the possible new technology/approach?
 - Why does it have a chance of succeeding?
 - How will the program be structured?
 - How will progress be measured?
 - What resources will be needed?



The BAA

(Broad Agency Announcement)



- Program Manager (PM) drafts the BAA, which describes program vision, the requirements for each technical area, and the evaluation criteria.
- Once the BAA is published, the PM is constrained in talking to potential performers: can only discuss publicly available information. (But, can add things to the public FAQ as necessary).
- Questions can be sent to BAA mailing list; answers are posted to the FAQ.
- Proposals that don't follow the requirements described in the BAA can/will be summarily rejected *before it gets to the PM*.

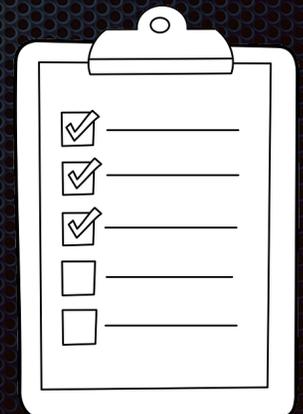
Proposer's Day

- ✦ Opportunity to:
 - ✦ Hear PM talk about the program
 - ✦ Ask a question or two
 - ✦ Hear answers to other people's questions
 - ✦ Meet other interested parties



Proposal Review at DARPA

- Selection committee of government employees. PM ensures each proposal receives three *substantive reviews* that address each review criterion from the BAA.
- **Technical Merit:**
 - What are the key technical ideas? To what extent are they plausible and relevant?
 - What are the qualifications of the key personnel?
 - To what extent are the Schedule and SOW logical and feasible?
 - To what extent is the Management Plan appropriate?
 - Does the proposal identify and offer appropriate mitigations for both technical and programmatic risk?
- **Relevance to DARPA:**
 - To what extent does the proposed work address problems relevant to DARPA?
 - Would IP issues prevent the DoD from using the developed technology?
- **Cost Volume**
 - Are the costs reasonable for the proposed work?
 - What is the basis of confidence for the cost estimates?



How are DARPA programs managed/evaluated?

- In the Spring, each PM meets with Office Leadership to summarize program results.
- In the Fall, each PM makes a presentation to DARPA leadership to summarize program results.
- If not making progress, a program can be scaled back or cut entirely.
- Management is reasonable;
 - Expect some things to go worse than expected and others to go better.
 - Looking for signs that the program hypothesis is or is not achievable.

When PM evaluates proposals, s/he is looking to put together a portfolio of performers who maximize the chance of the *overall program succeeding*.

Opportunities for Engagement

Serve as a Program Manager

- DARPA is always hiring
 - ~25% turnover each year
- All PMs and Office Directors are on term appointments
 - two to six year rotations
 - from government, industry, and academia
 - people whose “hair is on fire” to work on a particular problem relevant to national security



It's like running a lab staffed with ten of the best research groups in the world as your graduate students.



ISAT

Information Science and Technology Study Group

- **Mission:** Alert DARPA to areas of potential technological surprise the Agency may not be aware of and suggest opportunistic directions for research in information technology
- Members serve 3 year terms (by invitation only)
 - 30 thought leaders from industry and academia
 - 3 meetings a year
 - Run 8-10 ideation workshops/year with 15-35 external experts; report conclusions to DARPA

Talk to Program Managers*

- Everybody gets 30 minutes
- Go in person
- Do your homework: know their background and their current programs (if any)
- Plan for a technical dialogue: be prepared to have a *discussion* about the most urgent/exciting tech opportunities. Don't do a hard sell on your research.
- Position yourself as a resource

*Particularly when they are working on creating a new program.

Seedlings



- PMs often have money for seedlings: focused studies that either support an area of technical risk in a current program or *explore new program ideas*.
- Scale: 1-2 year period of performance, <\$1M
- Often start with technical conversation with PM
- Opportunity to influence creation of a new program

Questions?