### **Seeds of Technological Change**

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### DARPA's Mission: Breakthrough Technologies For National Security



Materials Science: semiconductors, superalloys, carbon fibers, composites, thermoelectrics, ceramics

These new capabilities require a healthy ecosystem across Service S&T, universities, and industry

DARPA's role: pivotal early investments that change what's possible



Wide range of national security challenges: evolving nation states, shifting networks

# Powerful, globally available technologies set a fast pace

Military systems' cost, pace, and inflexibility limit our operational capabilities



## **DARPA** Technical Offices











HACMS

CRASH

CGC

Strategic/tactical cyber operations



Understand, plan, and manage the cyber battlespace

PlanX











Predictable material properties and reduced qualification time through comprehensive capture, analysis, and control of manufacturing variability





Mathematical framework and tools to represent diverse knowledge and enable rapid discovery and big hypothesis generation



Important questions to consider when approaching DARPA with ideas:

- What are you trying to do? (no jargon!)
- How does this get done today?
- What is new about your approach?
- If you succeed, what difference do you think it will make?
- How long do you think it will take?
- Can your work transition (to the DoD or others)?
- How much will it cost?







We look forward to your ideas





#### Seedlings

- Usually submitted through an Office-Wide BAA that encompasses the research focus areas of a DARPA Technical Office Small short duration (6-9 months) projects Move concepts from "disbelief" to
- "mere doubt" May lead to the next generation
- May lead to the next generation of program ideas

#### Programs

- Proposals solicited through specific DARPA program BAAs that are focused on a particular research program
- Often multi-year, multi-disciplinary efforts
- Technology development to move from "possibility" to "capability"



- DSO Proposers' Day slides: <u>http://www.darpa.mil/attachments/2015DSOProposersDay\_Websitefinal.pdf</u>
- E-mail questions about the BAA to <u>DARPA-BAA-15-39@darpa.mil</u>
- FAQs posted under the BAA at <u>http://www.darpa.mil/work-with-us/opportunities</u> (filter by "DSO")
- Find PM bios and program information at <u>https://www.darpa.mil/about-us/offices/dso</u>