## Proposer's Workshop: The White Paper

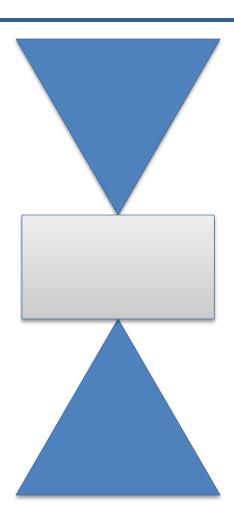
Michelle Rubin, Christine Hartmann, and Ellen Raber





## **Today's Goals**

- White papers and their role in funding
- Techniques for building a white paper strategy
- Approaches to translating strategy into a white paper





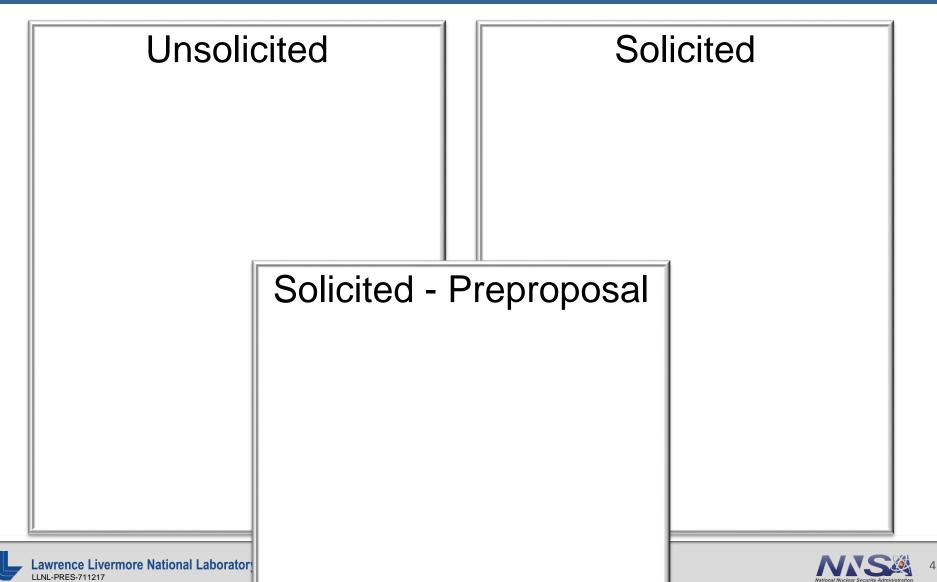
## What is a white paper?







## **Types of White Paper**





## **BAA** example

### DHSST-LRBAA14-02

### 2014 DHS S&T LRBAA

This is a Broad Agency Announcement (BAA) as comtemplated in the Federal Acquisition Regulation (FAR) 6.102(d)(2) and FAR 35.016. A separate Request for Proposals (RFP) or other Solicitation document will not be issued. The Department of Homeland Security (DHS), Science and Technology (S&T) Directorate will not issue paper copies of this Announcement. DHS S&T reserves the right to select and fund all, some, or none of the Full Proposals submitted under this Announcement. Multiple awards are anticipated to be issued under this Announcement. No funding for direct reimbursement of proposal development costs will be allowed. Proposal materials submitted under this Announcement will not be returned. Depending on proposal Markings, DHS S&T will adhere to FAR policy on handling proprietary information. It is the policy of DHS S&T to treat all submissions as "Source Selection Information" and "For Official Use Only". This is a five year announcement and will remain open until December 31, 2018, 11:59PM, Eastern Standard Time. White Papers are due by this response date; thus, if you are encouraged to submit a Full Proposal based on your White Paper submission, please be advised that the due date of the full proposal will be the date that is specified in the notification letter; and not the response date by December 31, 2018, 11:59PM, EST. However, if an offeror's proposal is not encouraged based on their White Paper submission, and the offeror still opts to submit a full proposal, they may do so within 60 days of the notification letter; and not the response date by December 31, 2018, 11:59PM. EST.

### **HOW TO APPLY**

### **Key Dates**

Pre-Solicitation Open Date: 02/25/2014

Pre-Solicitation Close Date: 12/31/2018 11:59 PM ET

Solicitation Open Date:

02/25/2014

White Paper Registration Deadline: 12/31/2018 11:59 PM FT

White Paper Submission Deadline: 12/31/2018 11:59 PM FT

Submission Deadline:

See Notice on FedBizOpps

Documents and Links





## **NA-22 Example**

### MPD solicits proposals in the following areas:

Scoping Study Proposals: the plan for FY16 is to fund three scoping studies addressing the following MPD GOR Objective B requirements to form the basis for FY17 exploratory work:

- 1Ba.1: Develop advanced tools/methods to detect, locate and characterize undeclared fuel and target fabrication facility and operations. Focus on methods to identify unique signatures that distinguish these activities from other potentially co-located fuel-cycle or industrial activities. Level of effort: 1 year at ~1-2 FTE.
- 1Bc.2: Develop advanced tools/methods to detect, locate and characterize pyroprocessing operations. Focus on methods to determine timing and frequencies of processes, starting from reactor fuel discharge, and ending with final product. Level of effort: 1 year at ~1-2 FTE.

## DNN R&D Proposal Topics of Interest



## **Avenues for discovery**

### PI Workbench

| Home FAQs                    |                             |
|------------------------------|-----------------------------|
| Sponsor Information          |                             |
| Sponsor                      | LLNL POC                    |
| DOE-NNSA                     |                             |
| NA-20                        | Brad Wallin                 |
| NA-21                        | Melinda Lane                |
| NA-22                        | Scot Olivier                |
| NA-24                        | Dan Decman   George Anzelon |
| NA-80                        | Vlad Georgevich             |
| NA-84 Technology Integration | Dave Weirup                 |
| DOE-SC                       |                             |
| ASCR                         | Lori Diachin                |
| BER                          | Henry Shaw                  |
| BES   LLNL page              | Eric Schwegler              |
| FES   LLNL page              | Harry McLean                |
| HEP   LLNL page              | Scot Olivier                |
| NP   LLNL page               | Erich Ormand                |
| DOE Other                    |                             |
| ARPA-E                       | Jeff Roberts                |
| EERE                         | Jeff Roberts                |
| FE                           | Roger Aines                 |
| NE                           | Roger Aines                 |
| OE   LLNL page               | Nate Gleason   John Grosh   |
| DARPA                        |                             |

### **Selected Funding Opportunities**

For proposal help please contact the Program Development Support Office; contact Strategic eligibility.

| DOE NNSA | DOE SC | DOE Other | DARPA | DTRA | DHS | DHS S&T | NIH | Other |
|----------|--------|-----------|-------|------|-----|---------|-----|-------|
|----------|--------|-----------|-------|------|-----|---------|-----|-------|

### Computational and Data-Enabled Science and Engineering

Wed. 30 Nov 2016 05:15:23 -0800

Funding Opportunity ID: 184834 Opportunity Number: PD-12-8084 Opportunity Title: Computational and Data-Enabled Scien Discretionary Opportunity Category Explanation: Funding Instrument Type: Grant Category of Funding Activity: Science and Te DevelopmentCategory Explanation: CFDA Number(s): 47.041

47.049

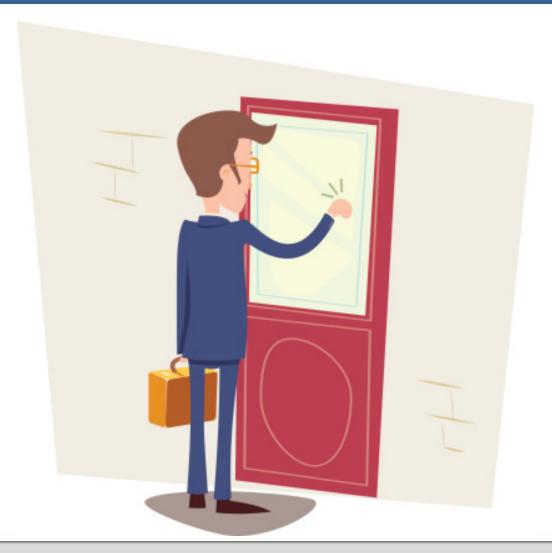
47.070 Eligible Applicants: Unrestricted (i.e., open to any type of entity above), subject to any clarification in text field entitled Information on Eligibility: Agency Code: NSFAgency Name: National Science FoundationPosted Date: Jul 17, 2012Close Dat Physics; All proposals to the Directorate for Engineering - Division of Chemical, Bioengineering, Environmental, and Transpor Manufacturing Innovation; All proposals to the Division of Chemistry - Chemical Theory, Models and Computational Methods; Astronomy and Astrophysics Research Grants; All proposals to the Division of Chemistry - Chemical Measurement and Ima Sciences - Advanced Technologies and Instrumentation; All proposals to the Division of Materials Research; All proposals to Division of Mathematical Sciences; All proposals to the Directorate for Engineering - Division of Chemical, Bioengineering, En Mechanical and Manufacturing Innovation, and Division of Electrical, Communications and Cyber Systems; All proposals to ti Advanced Cyberinfrastructure: All proposals to the Directorate for Engineering's Division of Civil, Mechanical and Manufactur Engineering's Division of Chemical, Bioengineering, Environmental, and Transport Systems and Division of Electrical, Comm. 08, 2016Award Ceiling: Award Floor: Estimated Total Program Funding: Expected Number of Awards: Description: Advanced large-scale simulations and accumulate massive amounts of data have revolutionized scientific and engineering disciplines. capitalize on opportunities for major scientific and engineering breakthroughs through new computational and data analysis a individual discipline or they may cut across more than one discipline in various Directorates. The key identifying factor is that t utilization of one or more of the capabilities offered by advancement of both research and infrastructure in computation and d

programs. The CDS&E program welcomes proposals in any area of research supporte





## Avoid "I have a widget"





## So where do I start?

## Find a person



## **Build your white paper strategy**

Need Approach Benefits Competition





## Need: Get to know your customer



## Which problems do they face?



## Which successes have they had?



## What are their general concerns?

## **Homework assignment**

| Sponsor Need Our Technology Fills |    |                 |              |          |
|-----------------------------------|----|-----------------|--------------|----------|
|                                   | SI | tate of the Art | Our Approach | Benefits |
|                                   |    |                 |              |          |
|                                   |    |                 |              |          |
|                                   |    |                 |              |          |
|                                   |    |                 |              |          |
|                                   |    |                 |              |          |
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|                                   |    |                 |              |          |



## Approach: What sets you apart



## **Quantify your innovation**

- Increase efficiency
- Decrease costs
- Synthesize existing tech
- Build something completely new



## Build a table: know your idea's features

| Feature | Sponsor Need the Feature Addresses | Strengths | Weaknesses |
|---------|------------------------------------|-----------|------------|
|         |                                    |           |            |
|         |                                    |           |            |
|         |                                    |           |            |
|         |                                    |           |            |
|         |                                    |           |            |



## Benefits: Sponsor's return on investment





## **Build a table: features and benefits**

| Feature | Sponsor Need the Feature Addresses | Strengths | Impact<br>(the So-What factor) |
|---------|------------------------------------|-----------|--------------------------------|
|         |                                    |           |                                |
|         |                                    |           |                                |
|         |                                    |           |                                |
|         |                                    |           |                                |
|         |                                    |           |                                |



## **Ask for feedback**

## **POC**

Provides sponsor perspectives

## <u>Colleagues</u>

Provides clarity filter





## Competition: Which alternatives does your sponsor have?

# Discounting your competition discounts your white paper



## How does your team/facilities measure up?

## Build a table: your features and benefits vs. others

| Solution     | Features | Benefits |
|--------------|----------|----------|
| Yours        |          |          |
| Competitor A |          |          |
| Competitor B |          |          |



## Build a table: desirable features and how the competition stacks up

| S | Solution     | Feature 1 | Feature 2 | Feature 3 | Feature 4 | Feature 5 | Feature 6 |
|---|--------------|-----------|-----------|-----------|-----------|-----------|-----------|
| Y | ours/        | X         | X         | X         |           |           | X         |
| С | Competitor A | Χ         |           | X         | Χ         | X         |           |
| С | Competitor B |           | X         | X         |           |           | X         |
| С | Competitor C |           |           |           | Х         | Х         | X         |



## **Politics are important**



## Questions about building strategy?

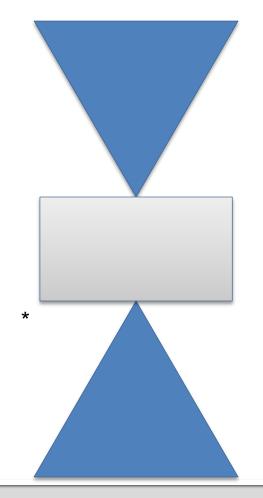
## Translate strategy into a white paper

Need Approach Benefits Competition

Need Competition pproach Benefits



### **Structure**



Need Competition Approach Benefits





### Real estate matters

Our plan gives national lab employees opportunities to understand clean-energy market needs and offers training and entrepreneurial resources once they form Lab-Corps teams (see Figure 2).

### Assemble and prepare teams

Connect Livermore Valley Pls with clean energy market needs:

- Use all LLNL/SNL-CA communication avenues, including internal news outlets, social media, and the face-to-face management chain messaging to get the word out on the new Lab-Corps program
- Schedule live events and webinars with customers and industry thought leaders, via connections established through the University of California Davis (UCD) California Renewable Energy Center and the UCD Energy Efficiency Center, i-GATE, and the Industry Advisory Board
- market and offer training resources once they Use information sharing tools, enhanced with searches of form Lab-Corps teams. existing LLNL/SNL-CA intellectual property databases, to conduct a Livermore Valley-wide call for Lab-Corps teams: recruit individuals interested in being Principal Investigators (PIs) and Entrepreneurial Leads (ELs) as well as self-identified PI/EL teams
- Schedule lightning talk sessions (5-min pitches giving by multiple individuals in rapid succession) as a forum for PIs and ELs to vet their ideas and early value propositions with each other and industry leaders, leading to a pitch competition to be considered a Lab-Corps team
- Match prospective PIs and ELs with Industry Mentors, drawn from the wide array of Bay Area entrepreneurs and experts that exist within the LLNL/SNL-CA, UCD, and i-GATE network
- Select the first Lab-Corps team(s), advised by the Industry Advisory Board, i-GATE resources, and the UC Davis Institute for Innovation and Entrepreneurship
- Send one to two teams to both Lab-Corps training sessions along with the one or more members of Andrew Hargadon's UC Davis Institute for Innovation and Entrepreneurship team, who will serve as our site's Lab Corps trainers

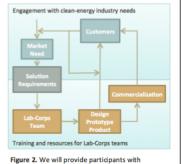
### Send an exploratory team to the I-Corps Winter Cohort

- Send an exploratory team to the I-Corps Winter Cohort
- Train site staff in Lab-Corps methodology based on I-Corps Experiences and interactions with EERE and the Lab-Corps node

#### Provide commercialization and training support:

Work with the Lab-Corps node to ensure that teams attend training sessions and develop effective commercialization plans, with Andrew Hargadon and his entrepreneurship team in the UCD Institute for Innovation and Entrepreneurship, serving as our site's

- We have already identified three potential Lab-Corps teams. working in:
- Aerogel-based desalination
- Advanced energy storage technology
- Sustainable transportation through hydrogen fuel system development
- Professor <u>Hargadon's</u> entrepreneurship team will provide coaching to Lab-Corps teams using successful startup/entrepreneurial strategies that support and enhance Lab-Corps methodology
- LLNL and SNL-CA's respective industrial partnerships organizations will provide support in navigating all aspects of industry partnership and commercialization at LLNL and SNL-CA
- LLNL/SNL-CA's industrial partnership organizations will specifically support Lab-Corps teams in developing intellectual property strategies, defining business models, conducting economic analyses, assessing partnership options, and negotiating deals



opportunities to understand the clean-energy



## Verbs matter, too

| To investigate | To develop    | To work   |
|----------------|---------------|-----------|
| To demonstrate | To map        | To hone   |
| To confirm     | To assemble   | To move   |
| To quantify    | To create     | To chisel |
| To answer      | To synthesize | To weld   |

## Find the balance between style and substance

Clarity

**Technical Competency** 

Straightforward voice

Appropriateness of approach

Easy-to-grasp visuals and text

Responsive to sponsor need

- Be clear and concise
- Use figures
- Use clear structure

#### Work Plan

Our plan gives national lab employees opportunities to understand clean-energy market needs and offers training and entrepreneurial resources once they form Lab-Corps teams (see Figure 2).

### Assemble and prepare teams

Connect Livermore Valley PIs with clean energy market needs:

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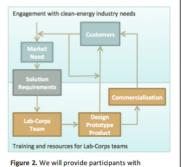
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opportunities to understand the clean-energy

2

- Make a point in each first sentence
- Specify the benefits to the sponsor



Include a call-to-action



## Go through IM

## White papers should...

"To fix \_\_\_\_\_,
we will \_\_\_\_\_,
which will allow
\_\_\_\_\_."

Include an executive summary box

## White papers should...

### **Business**

The Economist August 20th 2011

Google's takeover of Motorola Mobility

### Patently different

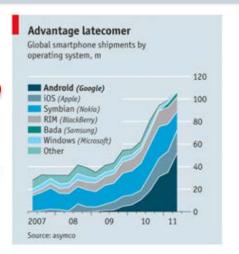
The battle in the mobile industry takes an unexpected turn

Witten and the property of the

If proof is still needed, Google's takeover of Motorola Mobility is the strongest sign yet that this will not come to pass, at least in the near future. On the contrary, the mobile-device industry will bear a closer resemblance to its other parent: the market for old-fashioned, voice-only handsets.

Start with intellectual property. In contrast with PC makers, firms in the telecoms industry have long fought over patents. If such disputes are even more common over today's mobile devices (see previous article), it is because they are exceedingly complex and based on intellectual property from many different industries.

Gaining control of Motorola's big patent portfolio will provide Google with ammunition in the ongoing battle between mobile platforms. Android, Google's operating system for smartphones and other devices, has taken the world by storm. Its global market share is approaching 50% (see chart). Yet Apple and Microsoft have found a way to slow down, and even benefit from Android's advance: going after makers of smartphones running Android for patent infringements.



against HTC which could lead to even higher payments.

Google's acquisition also illustrates the second difference between the markets for PCs and mobile devices: the latter will be more vertically integrated. Apple's big advantage is controlling all parts of its products, from the user interface to the processor. It is thus able to fine-tune them, for instance to keep power consumption low or make touch screens react faster. Most devices powered by Android are not as highly optimised—which helps to explain why Android tablets, for instance, have yet to catch up with Apple's iPad.

Owning a handset-maker allows Google to better integrate software and hardware. At the same time, the firm cannot copy Apple's model completely. If it is seen to favour Motorola's products, other device makers might abandon Android. This would defeat the operating system's purpose: making sure that Google's services—and thus its lucrative advertisements—

Help readers locate key information

## White papers should...

| Plan              | Budget |
|-------------------|--------|
| Feasibility study | 1 FTE  |
| Option Year 1     | 1 FTE  |
| Option Year 2     | 2 FTE  |

Contain a budget with a risk/mitigation plan

### Resources

- https://proposal.llnl.gov
- Handouts from today
- Electronic copies of our recommended tables



### **More Resources**

### The PDS Team:

- Christine Hartmann: <u>Hartmann6@llnl.gov</u>
- Ellen Raber: <u>Raber1@llnl.gov</u>
- Lisa Valdez: <u>Valdez24@IInl.gov</u>
- Michelle Rubin: <u>Rubin4@llnl.gov</u>
- Kathy Mauldin: <u>Mauldin2@llnl.gov</u>
- Jeanette Yusko: <u>Yusko1@llnl.gov</u>

## Quiz

- What are the three kinds of white papers?
- Where do you start when you're creating a new white paper?
- What is a successful structure for white papers?
  Hint:

