Army STTR Networking: Finding the Right Partners

Guidance on finding your partners for the Upcoming 24.B Solication

Housekeeping

Guide to Airmeet, Events, and Key Resources

Hello!

Matthew Bigman

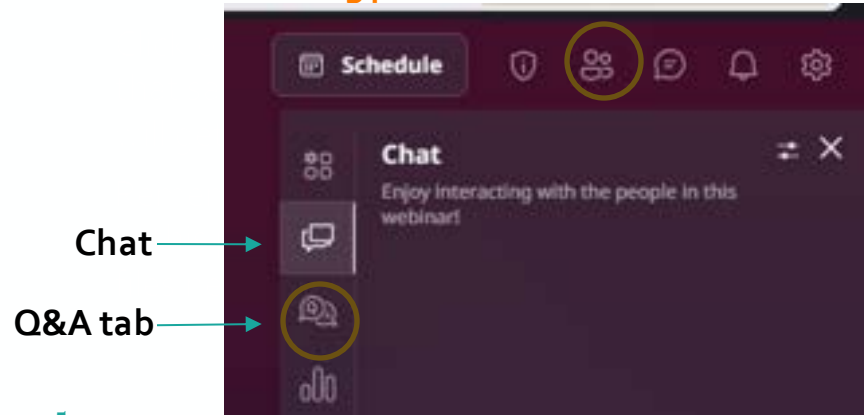# Mr. Tylar Temple

Program Manager, Army STTR

Welcome to the Webinar

Objectives:

- **Get a brief introduction to the Army STTR program**

- **Suggestions and upcoming resources for finding your Research Institution Partner for the 24.B solication**

- **Advice for your cold calls and outreach**

Ground rules

- **Please be kind and polite to our speakers**

- **Submit questions in our Q&A tab on the right side**

- **Feel free to use the chat or search bars to find networking partners**
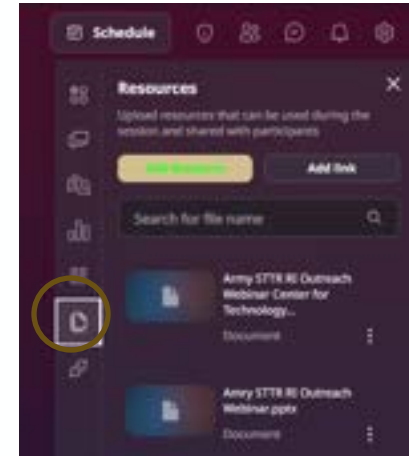

Chat →

Q&A tab →

Join us for networking after the event

- Check out profiles and tables
- Find partners you need to apply to STTR
- Connect to Peers in the field
- Exchange contact information

Resources

- Slides are available in the resources tab to the right

- Visit Armysttr.com for our mailing list and the latest updates
  - Yearly preview of the topics a few weeks prior to pre-release
  - Links to the BAA Submission portal and other resources
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  - **Coming for 2024: RI database**
    - Yearly list of RIs divided by resources and topics of interest

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- DoD SBIR/STTR Website:
    - DoD Submission Site
        - https://www.dodsbirsttr.mil
    - Technical Issues
        - DoDSBIRSupport@reisystems.com

Army STTR Overview

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○ Phase I is up to $204,000 dollars per program

○ Only 11 federal agencies do SBIRs, even less do STTRs

Investing in **your** solution, and the freedom to run the business according to **your** vision

Army STTR

The Army Small Business Technology Transfer (STTR) program encourages small, high-tech U.S. businesses (fewer than 500 employees) in partnership with research institutions to provide innovative research and development solutions in response to critical Army needs. By capturing the tremendous and varied talents of the U.S. small business community and research institutions, the STTR program benefits the Department of Defense (DoD), the private sector, and our national economy.

Each year, the Army STTR program develops a set of research topics that represent the Army's current and anticipated warfighting technology needs. These topics are included in the Army portion of the DoD SBIR/STTR Broad Agency Announcements (BAA). Proposals are developed by a small business in partnership with a nonprofit research institution (RI). Proposals must respond to a specific topic in the BAA. The STTR program does not accept unsolicited proposals.
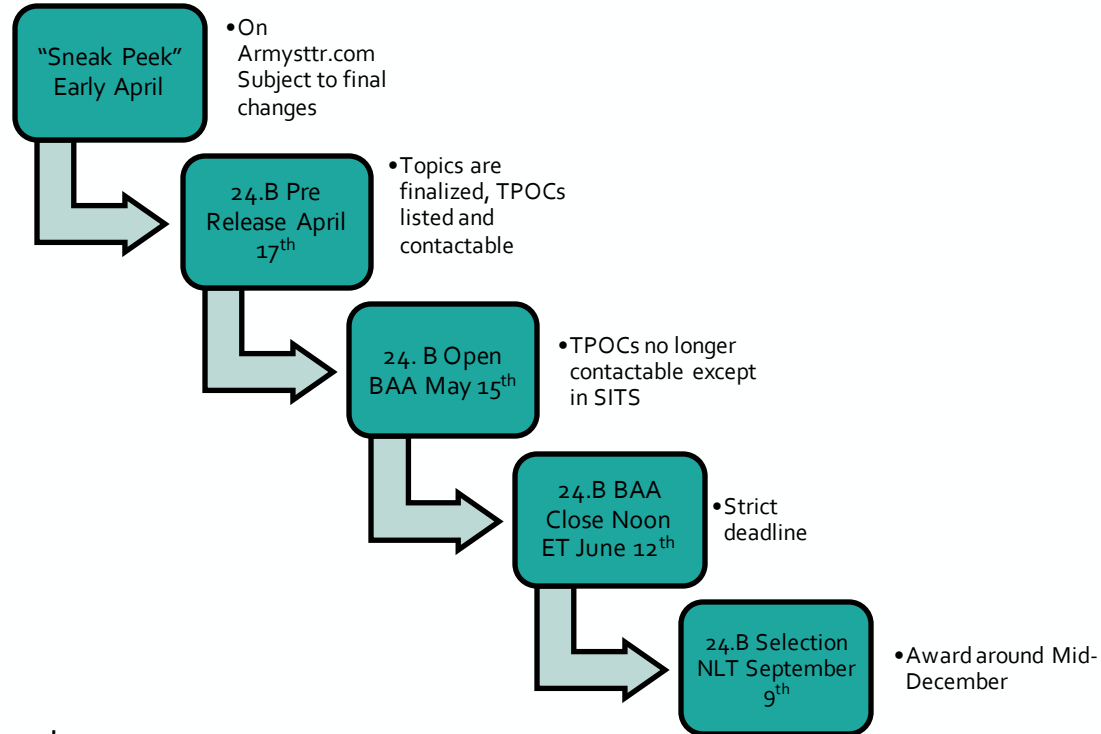
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STTR bridges the gap between small business and US research

Army is mission driven. It is has a problem it wants solved and believes that the technology is on the cusp, with dual use commerical applications

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Networking and Outreach for SB

A complilation of Advice and Best Practices

Basic STTR Partnering Requirements

- The **small business** performs at least 40% of the work, and the **partner RI** at least 30%
  - Remaining work may be done by either party or outsourced
- The **small business** is the prime, must register at sma.gov and have a CAGE code for DSIP
- The **small business** must be over 50% US-citizen-owned or permanent resident aliens (or Native-tribe-owned), and the RI should be a US based institution (also a joint venture rules)
- For an STTR award, the SBC and RI must, prior to award, sign an intellectual property agreement identifying the sharing of rights to data
- **Research institutions** can be the following:
  - US Nonprofit college or university
  - Domestic nonprofit scientific/research organization
 - Federally Funded R&D Centers (FFRDC, contractor operated)

Considerations for Partnering Success

A Phase I award helps you focus on the feasibility, technical merit, and commercial potential of your research project.

- Supports your solution
- Entrepreneurship minded growth with focus on commercialization
- Capabilities or equipment you lack, especially for feasibility testing
- Helps fill the gaps in your plan and application
- Enhances the factors you believe will make your STTR successful
- Adds a unique competitive element

Considerations for Partnering Success
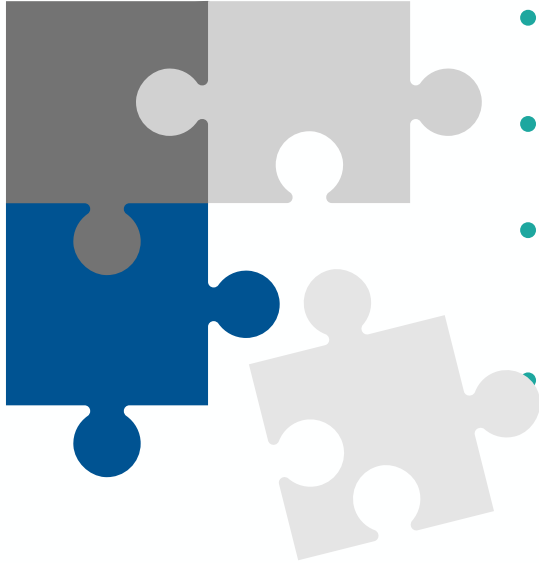
- You need ample time to do contracting and paperwork for both the SB and RI
  - The STTR deadline is strict
- Your RI partner's *size and name* do not matter; their *capabilities and how they are expressed* do
- The SB or the RI do not have fixed roles, save for the primary contracting
  - Ex: One Success Story had RI used as test bed and data collection for SB's monitoring technology
- The SB is the prime, but an indicator for Phase II success seems to be teams who are *partners*
  - Talk early & often, build relationships, visit facilities; really include both parties
  - Think about the next steps for Phase II as you plan Phase I
  - Work with contracting, IP, and finance early and often

Pitching Yourself

Showing your Fit

Know Yourself

○ What makes you a great partner?

- What S&T do you do well? Need help with?
- Why is your idea competitive?
- What are your relevant success stories or achievements?
- What can you bring beyond your business?

○ What are the mutual benefits?

- How do you leverage each other's resources, expertise, and networks to achieve your goals?
- How does the university benefit?

Know Your Partner

- Why this Research Institution?
  - Research target institution thoroughly
  - Tailor any pitch to align with their strengths and interests

- How do they enhance the technology or innovation?
  - How do you leverage each other's resources, expertise, and networks to achieve your goals?

- How does the university benefit?
  - Not just money. Opportunity, prestige, research

Know Your Futures

- Why *this* Research Institution?
  - Research target institution thoroughly
  - Tailor any pitch to align with their strengths and interests

- What defines your technology or innovation?
  - How do you leverage each other's resources, expertise, and networks to achieve your goals?
  - How does the university benefit beyond monetary compensation?

- What is your collaboration plan?
  - Roles, responsibilities, timelines, milestones
  - Resources and personnel needed

- What is the marketplace and future for the technology?
  - How does your commercialization path look?
  - How far do you want to bring this partnership?

Compile all key information into a short email or phone pitch

Goal is to get your RI contact's attention, then figure out if you are the right fit when you talk

Some Methods for Tracking Down Partners

For the Small Business
- Prior relationships/Alma mater
- Tech Transfer Office (TTOS)/ Technology Licensing Offices (TLOs), Business Development offices (BDOs), Office of Corporate Relations (OCR), Office of Sponsored Programs
  - Program Deans at smaller schools
- Look for the equipment you need and who has it on lab websites
- Attend public lectures relevant to the topic
- Local universities and non-profits are as good as a major university, if they have the capabilities you need.

Example: Intelligent Machine Systems

- High Impact Area
- State level seed funding and incubators availible
- Co-funding sources
- Multiple university and focused non profit groups

Intelligent Machine Systems Consortiums & Collaboration Centers
Stanford Artificial Intelligence Laboratory (SAIL)
Partnership on AI (PAI)
MIT Computer Science and Artificial Intelligence Laboratory (CSAIL)
Berkeley Artificial Intelligence Research (BAIR)
Oxford University Machine Learning Research Group
Carnegie Mellon University Robotics Institute
Toyota Research Institute
Allen Institute for Artificial Intelligence (AI2)
IEEE Global Initiative on Ethics of Autonomous and Intelligent Systems
Partnership on AI

Know your Topic

Look at topic reference's authors and their networks

Look at how the topic fits your company and what your collaborate can bring

Read the topic

Think about meeting objectives and Phase ½ needs

BAA has key details you need to find your partner

A23B-T009 Small Unmanned Aerial System for Surveying the Electromagnetic Spectrum

Objective: Develop a UAS mountable sensor and transmit package that will provide a standalone low-cost survey, including geolocation, of the electromagnetic spectrum without the need for corporate support.

Phase I: Develop a system design for a Class I or Class II UAS platform or platforms to map electromagnetic signal emitters including signal type and geolocation. The system should meet threshold values of a payload capacity of up to 10lbs and a minimum operational time of 15 minutes with a minimum observational range of 1 km and an objective payload weight of 5 lbs., operation time of 30 minutes, and observational range of 5km. This should include a spectrum sensing algorithm for use on a UAS and a corresponding system hardware architecture. The objective for spectral sensing should be between 3MHz-6 GHz, able to sense RF power below -90 dBm and produce an accuracy of < 100 meter of signal emitter location.

References:
Martian, A. Real-time spectrum sensing using software defined radio platforms. Telecommun Syst 64, 749–761 (2017). https://doi.org/10.1007/s11235-016-0205-z
Zhao, Xiaoyue & Pu, Fangling & Wang, Hangzhi & Chen, Hongyu & Xu, Zhaozhuo. (2019). Detection, Tracking, and Geolocation of Moving Vehicle from UAV Using Monocular Camera. IEEE Access. PP. 1-1. 10.1109/ACCESS.2019.2929760.

More Resources

- Phase Zero and State Matching Programs
- Economic Devolopment Authorities
- University Outreach Offices
- Incubators and Accelerators
- Federal Lab Consortium
- USPTO

Helpful Links

https://www.sbir.gov/local-assistance

https://www.sbir.gov/support-organizations

https://www.sbir.gov/accelerators

https://federallabs.org/flc-business/about-flc-business-77c1c2a816321eb2ce47b44233b73840

https://www.uspto.gov/learning-and-resources/startup-resources

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FAST 2023 Cohort

Networking During our Virtual Events

- Check out profiles (and build your profile) of active participants
- Visit tables related to research/geographics matching your needs
- Use the chat and private messages to reach out to people
- Have a story and a pitch
- Ask promising leads for their contact information
- Plan some topical icebreakers Ex:
  - Which topics in this research area interest your team?
  - What did you think about topic author's (thoughts)?
  - What's something that surprised you about Army needs (relevant to the topic)?
  - What's your "moonshot" plan for this area/topic if you could do one?
  - What breakthrough would make this topic infinitely easier to address?
  - What excites you the most about this topic or area?
  - **Let VT-ARC know what you need for better virtual networking in the post event Survey**

Initial Steps

- Register at sbir.gov/registration
- Register at sam.gov
- Register at https://www.dodsbirsttr.mil/submissions/login and listserv
- Sign up for Armysttr.com
- Read past BAAs and solicitations
- Look for partners
- Check out STTR events

- Watch for the topic "sneak peek" early April
- RI Networking and More on 3/19
- Prerelease April 17th
- Industry Day April 24/25
  - Micro Networking in-between the above
- Fill out the survey to let us know what else we can do

THANK YOU FOR ATTENDING!

Please complete the event survey

[https://www.surveymon key.com/r/TP6KB7T](https://www.surveymonkey.com/r/TP6KB7T)

Let us know how we can help you!

Sign up on Armysttr.com

www.Armysttr.com

Follow for upcoming events and information/updates for the 24.B cycle

Army STTR 101

Guidance and Preparation for the Upcoming 24.B Solication

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You can find me at:

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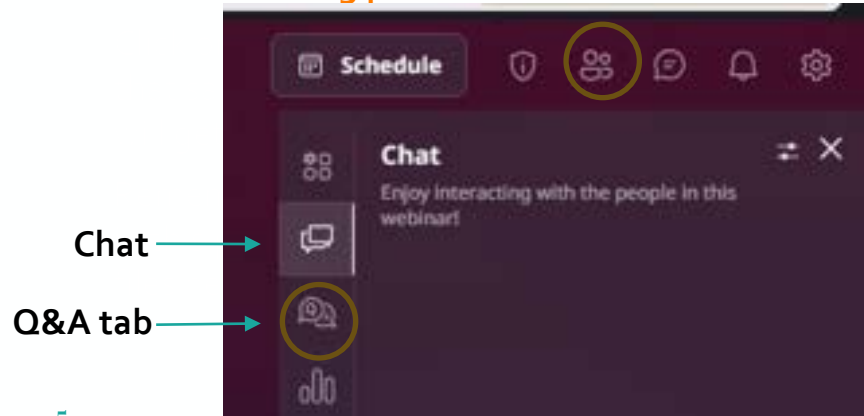
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- **Get a brief introduction to the Army STTR program**

- **Learn about the resources we provide on your road to STTR success**

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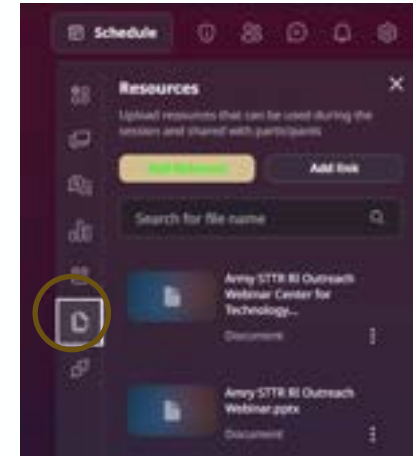

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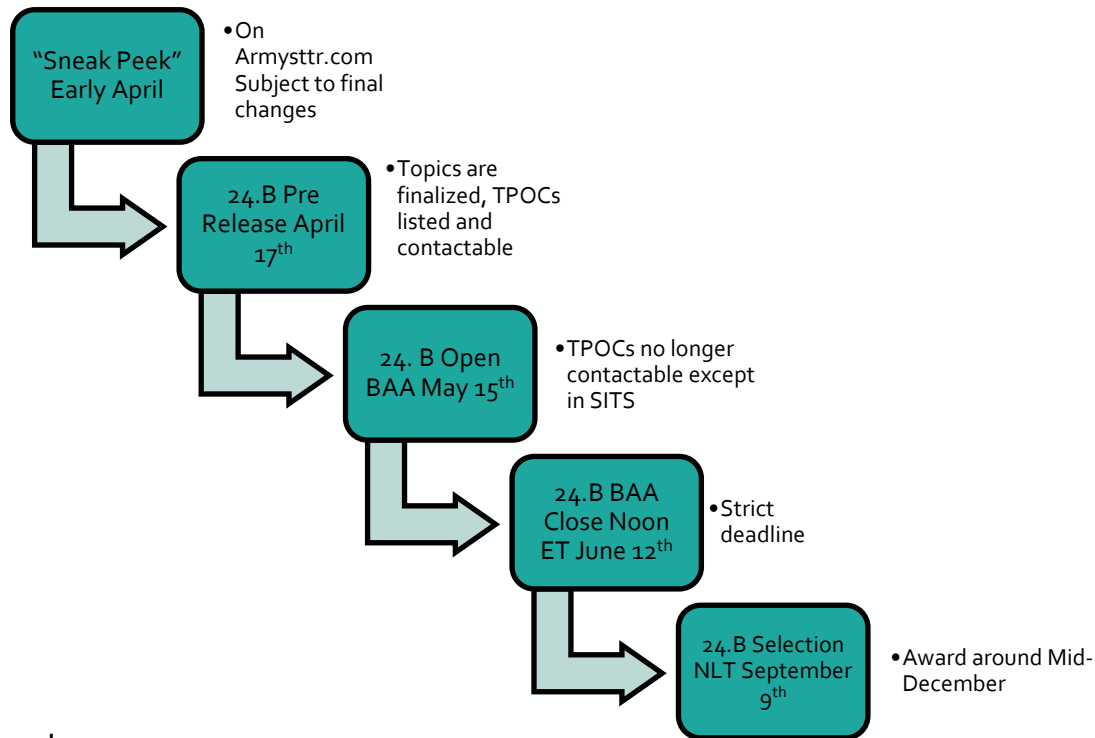
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For a Small Business

○ Non-dilutive funding
  ○ America's Seed Fund awards non-dilutive funding—owners do not give up equity or ownership—to develop your technology and chart a path toward commercialization through the SBIR and STTR programs

○ You choose how the IP is split with your research partner

○ You illustrate to other investors you have the confidence and interest of the US Army
  ○ Segway to the DoD and US Government, defense primes

○ Access to the US Army perspective and mission to accelerate your commercialization
  ○ Form lasting partnerships and insights

○ Up to $204,000 dollars over six months

○ Pathway to Phase II funding of up to $1,363,000 dollars for additional R&D derived from 24.B

○ Focus on, and sole source, commercialization rights with any federal contract matching your technology

For a Research Institution

○ More funding and IP opportunities in cutting edge research areas of interest for the government and dual use commercialization technologies

○ Technology spin off opportunities for your research

○ Access to the US Army viewpoint and expierance working with the US Army

○ Experience for your graduate students and young faculty with commercialization

○ Exposure to small business, prime contractor, and federal research environments

○ The kind of devolopment metrics state officials love from their public institutions

○ Funding

What do you need to apply for an STTR

◈ A proposed solution to an Army Solicited STTR Topic

◈ A US Based Small Business (SB) Concern (51% US citizen or permanent resident owned and operated) who acts the prime

  ◆ You must register at sbir.gov/registration and meet all SBA requirements

  ◆ You must register at sam.gov and get a CAGE code for DSIP

◈ Partnership with a U.S. non-profit Research Institution (RI)

  ◆ University, FFRDC, or other non-profit RI

◈ Budgeting for both the business (at least 40%) and research institution (at least 30%)

◈ **Willingness and time to carefully read the BAA, address the application questions, and fill out all the requirements with a solid plan**

Topics

Finding the What

Topics

○ 20-24 preselected topics each year
   ○ On average, 2 awards per topic for Phase I

○ Technical Points of Contact (TPOC) submit topics for selection months ahead of 24.B cycle
   ○ Topics are often related to key Army Research Priorities
   ○ Mix of conventional topic areas and some more niche areas of interest
   ○ No open solicitations in the STTR program

○ Topics are searchable by keywords, priorities, technical areas
   ○ Include Phase 1 Objectives
   ○ Include references to related science and research

○ During the pre-solicitation, you can learn more about the topics with direct contact with TPOCs or Industry Day/Topic Events
   ○ Once the BAA officially opens, only questions submitted in SITS will be allowed

○ Final information or clarifications will be posted at the DSIP BAA: https://www.dodsbirsttr.mil/topics-app/

The BAA is the final say on a topic

TPOCs want solutions to the objectives they outlined

The BAA

- Topic Name
- RT&L Focus Area(s):
- Technology Areas
- ITAR Requirements
- Objective
- Description
- Phase I Milestones
- Phase II Milestones
- Phase III Dual Use Applications where applicable
- Scientific References
- Keywords
- List of TPOCs and their contact info

A23B-T022 Soldier Personnel Protective Equipment from High Energy Lasers

RT&L Focus Area(s): Directed Energy

Technology Area(s): Human Systems, Materials

Objective: A lightweight and wearable Soldier PPE able to neutralize high energy laser threats upon impact and, incidentally, able to alert the wearer of the presence of such threats

Description: High energy laser (HEL) threats are expected to be deployed in the future battlefield. They exhibit many compelling features including speed-of-light engagement, a deep magazine, and limited protection against the highest powers. The threat mechanism is via optical damage and intense thermal damage. These qualities behoove the development of PPE for Soldiers. A solution to this problem does not have to provide complete protection against HELs, even partially protection can buy Soldiers enough time to evade or engage the threats. In addition, the wavelength could be in the near infrared (NIR), such as with a Nd:YAG laser, making it undetectable visually via scattered light. A PPE system was developed for industrial users of high energy lasers [1]. The PPE proposal here could involve a wearable for the Soldier or a shield-like product. HELs can have irradiances greater than 10 W/cm2 or powers greater than 500 W. Even materials with extremely small amounts of absorption in the visible or NIR, such as noble metals, will lead to optical power absorption, heating and thermal runaway as the material gets damaged. Damage leads to further absorption as the material's absorption coefficient increases. Energy can be reflected away and/or spread around to a larger volume to prevent damage.

The Partnership

Finding the Who

"*No matter how brilliant your mind or strategy, if you're playing a solo game, you'll always lose out to a team.*"

The Partnerships

○ You need both a Small Business **and** Research Institution to do the STTR, no exceptions
- ○ Both US owned (51%) and operated
- ○ 40% of budget for small business
- ○ 30% of the budget for research institution

○ ~2 months to find the right match from the topic release
- ○ Find a partner(s)
- ○ Figure out your costs, timeline, approach, and IP
- ○ Set expectations for the team
- ○ Have the small business write the proposal and get the RI inputs
- ○ **Get this approved by partner's contracting offices**
- ○ Submit

Networking and Outreach

Starting now

- Network
- Alumnus/Alumni
- Professional Organizations
- Entrepreneurship Support Orgs
- Attend networking events
- Find a breadth of potential partners
- Identify strengths and weaknesses
- Have a plan

Starting after the topics release

- Identify the right partner and get their business/contracts office involved early
- Talk to each other
- Attend our networking events
- Figure out IP requirements
- Find co-funding options in your states

Partnering Considerations

What do you need?

- What's missing?
- What are the gaps in topics and proposal?
- What resources do you need?
- Experience or hunger?
- What can you afford?

What can you give?

- What makes you uniquely great?
- Why are you a great partner?
- What resources can you share?

Logistics?

- Funding and IP plan
- Mutual understanding, expectations, requirements, motivations and formalizations
- What does Phase II look like?

The Proposal

Finding your Voice

People make the proposals work

The Proposal is hard; but if you have a solution the topic you want your solution to compete, not your proposal

The Proposal

- 2 months or less to write and coordinate with your partners
  - Clear with contracts
  - Limited Space
  - 10-page limit for Phase I for the Technical Volume
- Strict rules and requirements for each section
- **Strict deadline of noon ET June 12th, 2024**
  - Does not matter if the website is down, or one minute late
- More proposals than funding, do not be eliminated by a small error
- 24.A and 23.B can provide early hints
- Roughly 40-50 succesful STTRs for the Army each year

Proposal Advice

- Have a story
  - Live, breathe, and eat your technology solution
  - Think about research needs and customer (Phase II/III) needs

- Draft early, review and revise often
  - Get contracts involved as soon as you have a topic, solution, and partner
  - Show it your mean friend, tech savvy friend, and non-tech friend
  - Reach out to some of the *More Resources* slide options for additional reviews
  - Talk to TPOCs, attend events
  - Cut judiciously, be ruthless and fight for space
    - Use all the allotted space you need

- Read the BAA
  - Start tasking out sections early
    - Address everything required
  - Ask questions and clarifications
  - Figure out what the TPOC is looking for

- Seek Phase Zero funding and advice opportunities
  - Identify gaps in experience
    - Take course now
  - Useful skills for other government prospects

- If you don't succeed, look for similar topics in other programs, and consider the feedback provided
  - Multiple members of the Army will review proposals and provide feedback

Have a plan for Phase II

More Resources

- Phase Zero and State Matching Programs

- Economic Devolopment Authorities

- University Outreach Offices

- Incubators and Accelerators

- Federal Lab Consortium

- USPTO

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