



TechOpp CONSULTING, INC.

Where *technology* meets *opportunity*TM

Develop a Compelling DOE Commercialization Strategy

Presented by

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Introduction and Outline

Pose questions in
Meeting Chat box

- About TechOpp Consulting, Inc.
- Develop the Commercialization Plan
 - *Market Opportunity*
 - *Company/Team*
 - *Competition/Intellectual Property*
 - *Finance and Revenue Model*
- Commercialization Assistance
- Questions & Answers



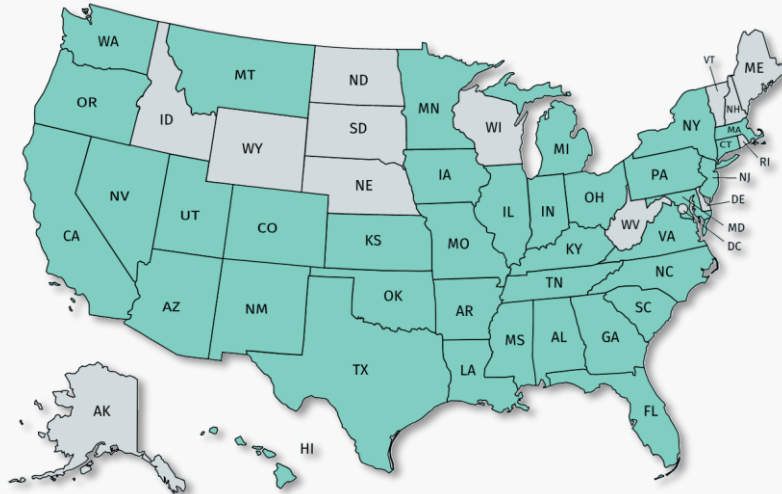
About TechOpp Consulting, Inc.



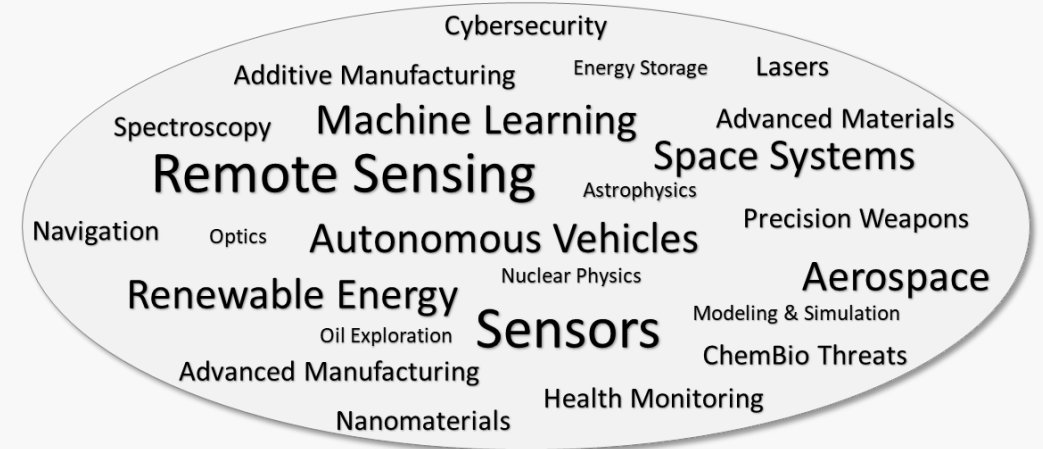


Our Mission

Moving technology from ideas to products



Over 300 Clients | 37 States



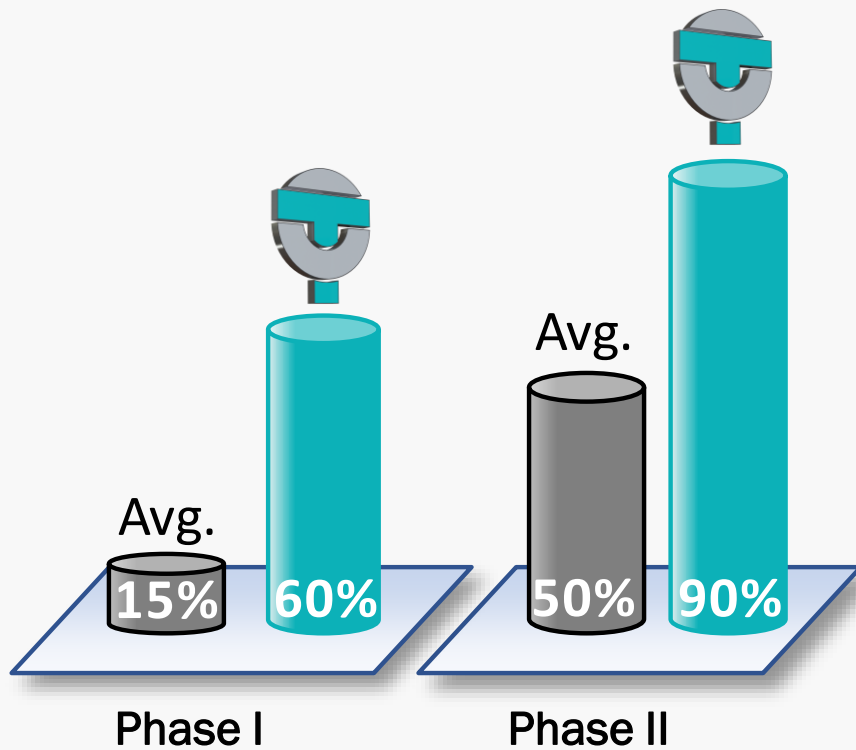
Spanning the STEM Spectrum



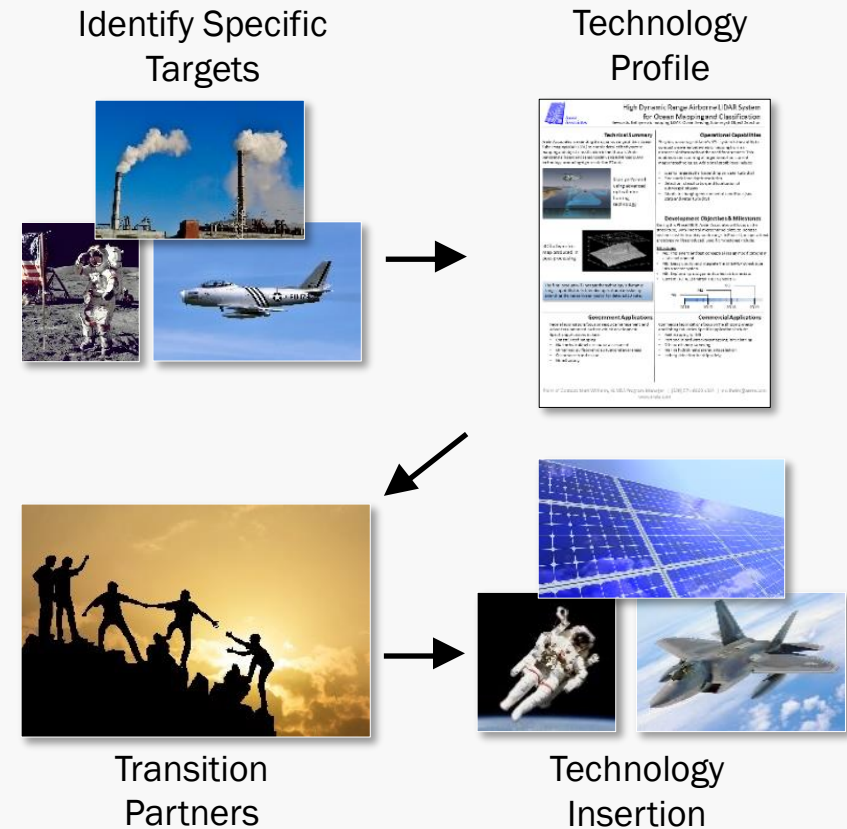
What We Provide

Technology transition,
proposal support,
training

Proposal Win Rates



Technology Transition Engine

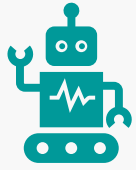


Emphasize Direct Engagement with End Users



Commercialization Strategy





TRL drives commercialization strategy

Technology Readiness Level

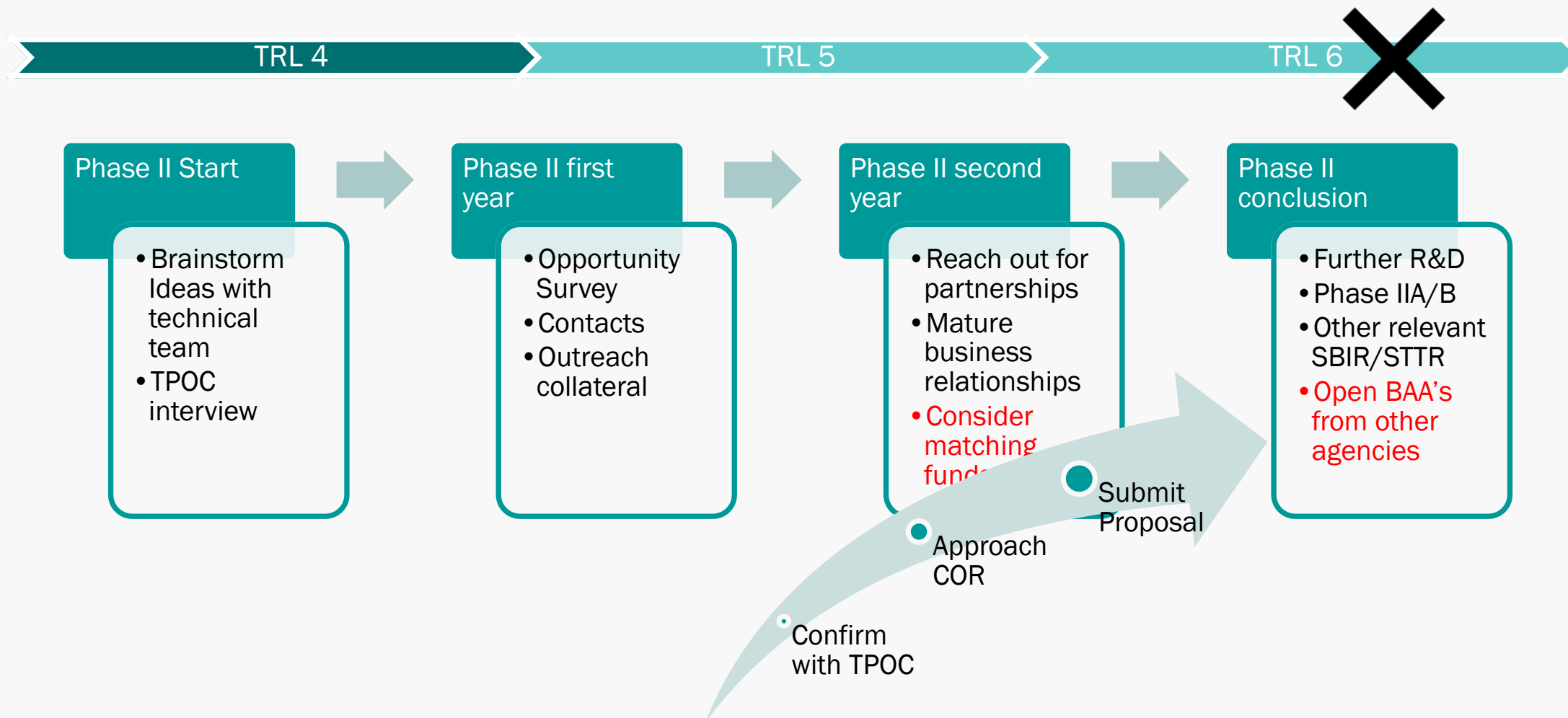
- TRL < 6, more R&D funding is required beyond Phase II
 - *DOE offers several Second Phase II projects: A,B and C*
 - Do not need matching funds from POR or Commercial Company
 - Must coordinate with TPOC and COR for timing and requirements
 - *Other relevant open Broad Agency Announcements*
 - Process: Phone call, White Paper, Proposal
- TRL > 6, ready for demonstration for potential customers
 - *Find customers within the energy sector market including federal POR*
 - From TPOC and others within DOE
 - Commercial potential customers





Project Results in TRL <6

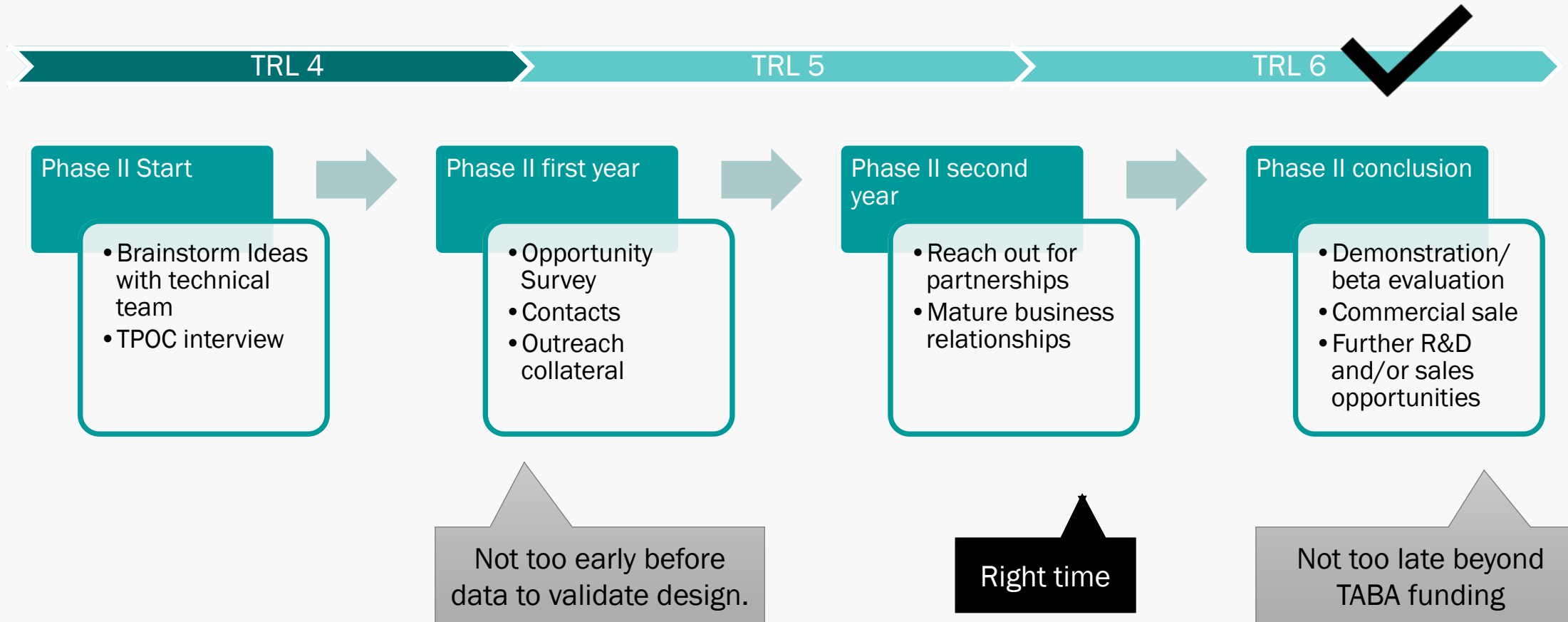
Will need more R&D funding





Project result in TRL >6

Prototype/Beta software is ready



Preparing the Commercialization Plan





Phase II Commercialization Plan

The Requirements

- Cannot exceed 15 pages
- Evaluated under “Impact” criterion
- “Roadmap” for the future: how to generate profit
- “Compelling Vision” of a “unique business opportunity”
- “Critical Element” of the application review: 1/3 of the points
 - *Often challenging to create and justify the numbers*
 - *Sometimes left to the last minute to create*



Develop the Commercialization Plan





Comm Plan Details

What to include

- Market Opportunity
- Company/Team
- Competition/Intellectual Property
- Finance and Revenue Model

- ✓ Well researched
- ✓ No unsubstantiated claims
- ✓ All the numbers add up





Market Opportunity

One of the more
challenging sections

- Product or Service description
 - *Target Customer & Critical Need Met including current solution*
 - *Price point and your Value Proposition*
- Address Market Opportunity
- Channels to reach the Target Customer
- Business Models
- Societal, Educational, or Scientific Benefits





Product or Service Description

Don't forget to go back to the Topic Description

- Market Research = Target Customers (principals operating in the market)
- Critical Needs, Current Solution, Price Point, Value Proposition = Only obtained by Target Customer interviews
 - *Research, find Decision Makers in the principals and talk to them*
 - *Define your objectives: Phase II Partner, get information, etc.*
 - *Execute call and reach your Objective*
- This cannot be done by research alone, must build business relationships by 1:1 discussions





Where to Start

Initial Market
Knowledge

- Essential to know Technical Monitor's commercialization priorities
 - *Typically not DOE, although could be a National Laboratory*
 - *Identify the topic's genesis*
 - Who is experiencing what problem and how does it impact them?
 - What benefits could they expect if you are successful?
 - *Does the TPOC have industry or federal contacts who can provide you with more information, pain-points and desired solution?*
- What if the TPOC is not engaged in the commercialization discussion?
 - *This does occasionally happen, must do your own research*
 - *Ask for other interested people in the DOE—or find them yourself*

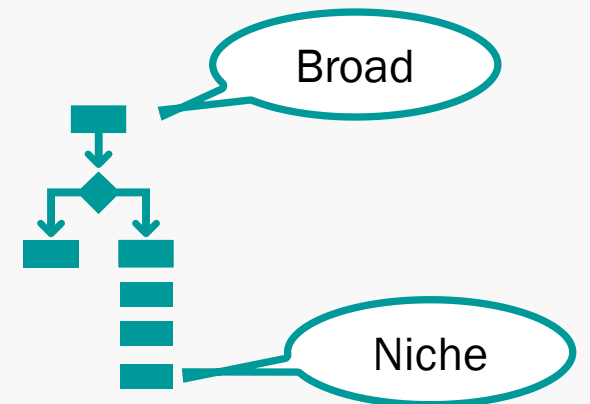




Address Market Opportunity

Who is interested in your research?

- Provide [recent] source of numerical data: market size, growth trends, barriers to entry, etc.
 - *Market Research Reports*
 - *Articles by experts in trade publications*
 - *Interviews, focus groups, surveys*
- Where do you fit in the market's Supply Chain?
 - *Find your niche market for size, growth*
- Validate assumptions and estimates in a footnote





Barriers to Entry

How hard will it be to penetrate your market?

- Cost of entering the market
 - *High startup costs*
 - Capital investment for production and product support
 - Distribution network
 - Marketing—find customers, engage and convince them to buy
 - *Challenging competition's economies of scale*
- Customer loyalty—"overcoming resistance to change"
 - *Risk associated with making a change*
 - *High bargaining power of buyers*

- Mitigation Strategies
 - *High startup costs*
 - Contract manufacturing
 - On-demand product support
 - Outsource marketing and distribution
 - *Emphasize solution's benefits that overcome price advantage*
- Customer loyalty—"overcoming resistance to change"
 - *Engage with customers 1:1*
 - *Offer warranty & excellent customer support*





How to Reach Target Customer

Not easy for start-up to get their attention

- Talk to Technical Monitor
 - *Where did the topic originate? Who stands to benefit and how?*
 - *Any contacts they can provide inside federal agencies?*
- Identify Target Customer (see previous slide)
 - *Talk to the Target Customer*
 - Validate their need, solution's applicability, price and delivery
 - Listen, listen—much more than you talk—not “selling” at this point
 - Connect the dots: need/your solution—especially address risk





Business Model

How will you make money?

Hardware Solution

- Manufacture, sell and support from in-house
- Contract Manufacturing with in-house product support
 - Must consider warranty/product support
- Outsource marketing, distribution
 - Product Support in-house (difficult to out-source)
- License IP and move on to the next R&D Project

Software Solution

- Host or distribute software in-house with Help Desk
- Keep software on your server with customer data entry
 - You use your software to provide solution data on-line
- Outsource distribution to a Value-Added Reseller
 - Help Desk/ Product Support from in-house
- License the IP and move on to the next R&D Project





Societal, Educational, Scientific Benefits

Beyond Commercial
Considerations

Can you align with on of the new
for 2021 DOE Priorities?
Briefly connect the dots

- Combating the Climate Crisis
 - *There is no greater challenge facing our nation and our planet than the climate crisis.*
- Creating Clean Energy Union Jobs
 - *Revitalize the U.S. energy and manufacturing sectors and create millions of good-paying union jobs.*
- Promoting Energy Justice
 - *The clean energy revolution must make sure those who have suffered the most are the first to benefit.*





Company/ Team

Don't introduce your company in the proposal!

- Describe your Company: answer the questions thoroughly
- Note “experience and credentials of the personnel responsible for taking the innovation to market”
 - *Critical to a believable Commercialization Plan*
 - *Outsourcing via TABA is excellent option to fill internal gap*
- Perform gap analysis on specific expertise
 - *Fill in with subcontractors, universities, consultants*
 - *Provide relevant details to assure Evaluator of team competency*





Competition/ Intellectual Property

What is competitive landscape?

- Do your homework to understand the market/ existing solutions
 - *Research patent literature and other R&D activities in the public domain*
 - *What is out there that is in your “sandbox?”*
- Define your Intellectual Property—often challenging
 - *What is it? Can you “lay it on the table?”*
 - *Important to define IP so you can structure a protection plan*





Finance and Revenue Model

“Where the Rubber meets the Road!”

- Staged finance plan built off the market opportunity
 - *Funds from SBIR/STTR, Investment, Internal, other Grants*
 - *Must be specific and credible in total cost to Phase III*
- Business Relationships leading to Phase III funding
- Return on Investment or Net Present Value estimate
 - *Must be credible values: “not 0.00587% of \$4B market”*
 - *Better to estimate sales numbers over time with estimate price*
- Annual Pro Forma/ Income Statements for next 5 years!



Commercialization Assistance





How to get (DOE-funded) Commercialization Help

Commercialization
Assistance—page 63

- DOE offers up to \$50,000 per project in addition to the grant \$\$
 - *You can choose your own provider who works for you*
 - *Don't have to settle for government-appointed provider*
- Included as Subcontractor or Consultant in your Phase II Budget
 - *Provide detailed budget justification*
 - *Does not count towards maximum grant size*
 - *Could result in maximum grant of \$1,150,000–\$1,650,000*

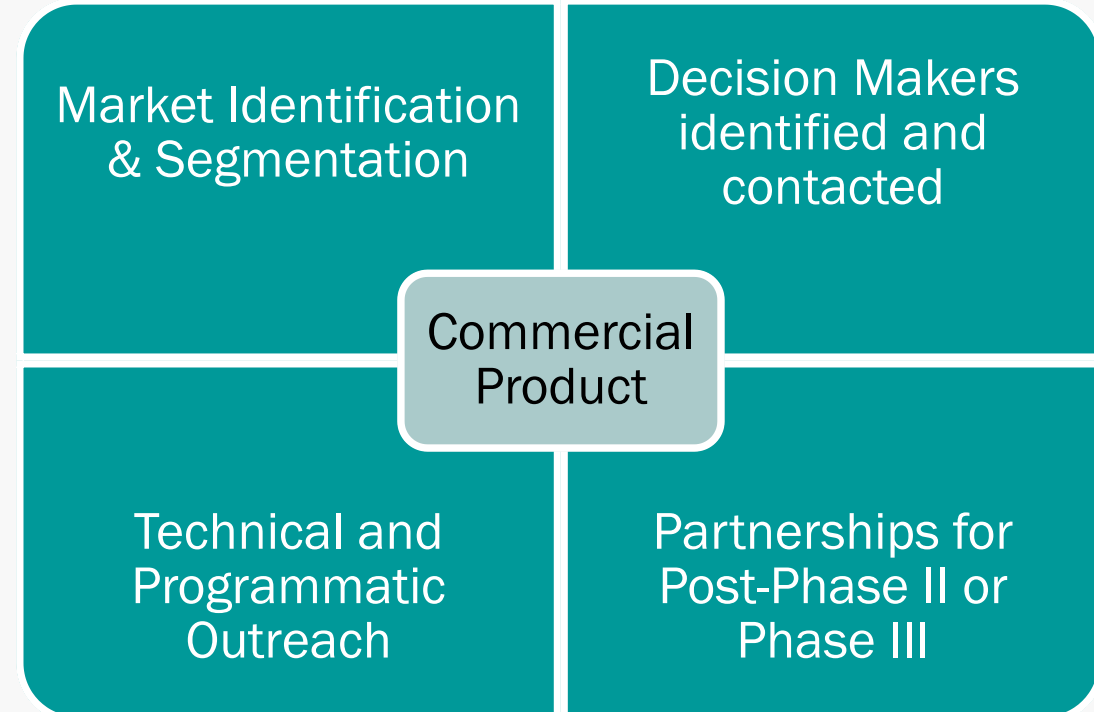




Commercialization Assistance Guidelines

Objectives for the program

- Product Sales
- IP Protections
- Market Research
- Market Validation
- Cert/Regulatory Plans
- Manufacturing Plans





Specifics

The TechOpp Approach

- Pro-active—drive schedule to completion
- Co-Owner of Business Case—intelligent partner in commercialization
- Results-driven—10 deliverables throughout the project

1	Project Kickoff Meeting and Initial Strategy	1	2	
2	Opportunity Survey (Federal and Commercial)	3	1	
3	Contacts and Gap Research, Marketing Material	4	2	
4	Technology Transition and Commercialization Plan	6	2	
5	Federal and Commercial Transition Progress Report	8	1	
6	Mid-Project Review Meeting & Updated Strategy	10	1	
7	Updated Markets & Application Survey	12	2	
8	Market Validation & Transition Strategy Report	15	3	
9	Commercial and Federal Transition Progress Report	19	3	
10	Final Report	22	1	



Next Steps

Leverage this webinar
to improve win rate

- TOC will distribute slide deck to registrants
- Consider TechOpp for Phase II commercialization assistance
 - *Send us your topic number*
 - *We will provide templates for Project Narrative and Comm Plan*
 - *Also send you what is needed to request Commercialization Assistance extra funding*
- Consider Proposal Development consulting to improve your win rate





QUESTIONS & ANSWERS

“No-Charge” consulting



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Thank You

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