Entrepreneurial Training & Consulting

Best Practices to Increase University Participation in SBIR/STTR

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University Participation in SBIR/STTR

SBIR/STTR Topics to Cover:

- Overview of SBIR/STTR Funding
- Eligibility requirements
- Reauthorization
- Budget considerations
- University subcontracts
  - What does the university need to provide
- University Participation
  - Best Practices / Common Problems

University Participation in SBIR/STTR

Ground Rules

- Universities cannot apply for SBIR funding
- Universities cannot apply for STTR funding
- Universities can only participate as a sub-contractor to the small business concern (SBC)
  - e.g., the funds come to the university through a sponsored research agreement from the SBC, not from the federal agency

University Participation in SBIR/STTR

Assumptions

- There is, or will be, a **small business***
- The small business is developing **products**
- The products are based on **technological innovation***
- The small business has, or will have, research **facilities***
- The small business has, or will have, research **personnel** employed*

*to be defined..

University Participation in SBIR/STTR

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  - Indirect costs
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What are SBIR* and STTR**?

$2.5 billion of federal funding to:

- Support **small business** to:
  - Stimulate **technological innovation** to
    - Develop **products** with **commercial merit**

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* – Small Business Innovation Research
** – Small Business Technology Transfer

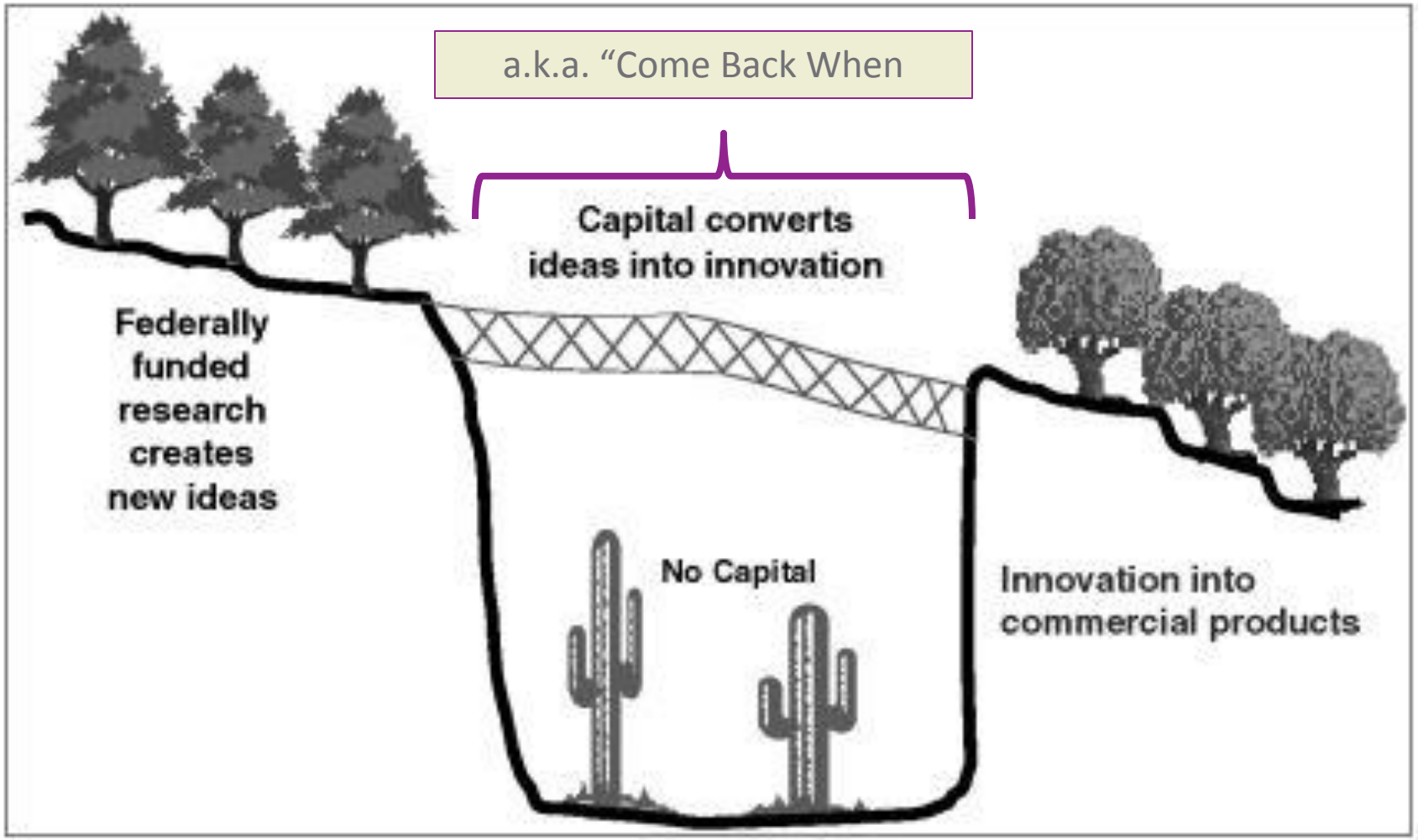
What is SBIR/STTR….

- Mandated by legislation (NDAA FY2012)
  - Current authorization for 6 years through 2017
  - Separate legislation for SBIR and STTR
- Applies to agencies with extramural research budgets that exceed certain thresholds
  - SBIR applicable to 11 Agencies
  - STTR applicable to 5 of the 11 SBIR agencies
  - Participation mandatory
- SBA “oversees” program implementation and compliance
  - SBIR/STTR Policy Directive
  - Small Business Size Regulations

Type of Funding

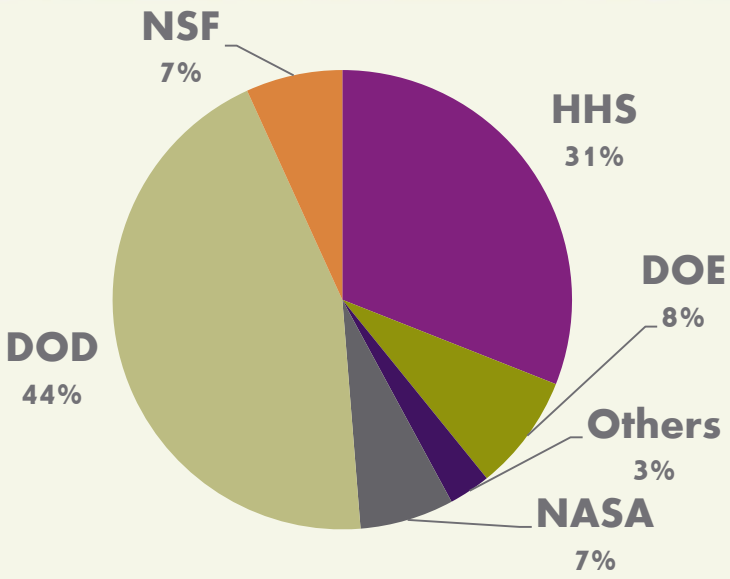
- $ Debt
- $ Equity
- $ Non-Dilutive

Goal of SBIR/STTR Programs



Source: SBIR and the Phase III Challenge of Commercialization: Report of a Symposium. NAS, 2007.

Participating Federal Agencies



TOTAL: ~$2.3 B FY 2013

SBIR and STTR	SBIR Only
DOD - $1,000 m	USDA - $18 m
HHS - $697 m	DHS - $16 m
DOE - $184 m	ED - $13 m
NSF - $153 m	DOT - $8 m
NASA - $149 m	DOC - $7 m
	EPA - $4 m

SBIR/STTR: Planning 3 Phases

For the Small Business:

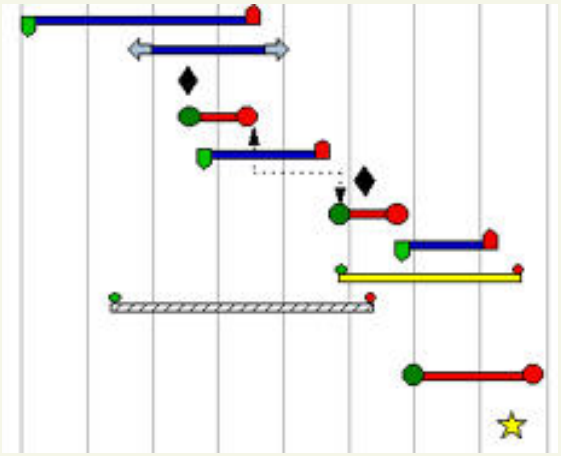
- Phase I Goal = FEASIBILITY
- Phase II Goal = Further R&D
- Phase III ULITMATE Goal= **COMMERCIALIZATION!**

Key Questions…

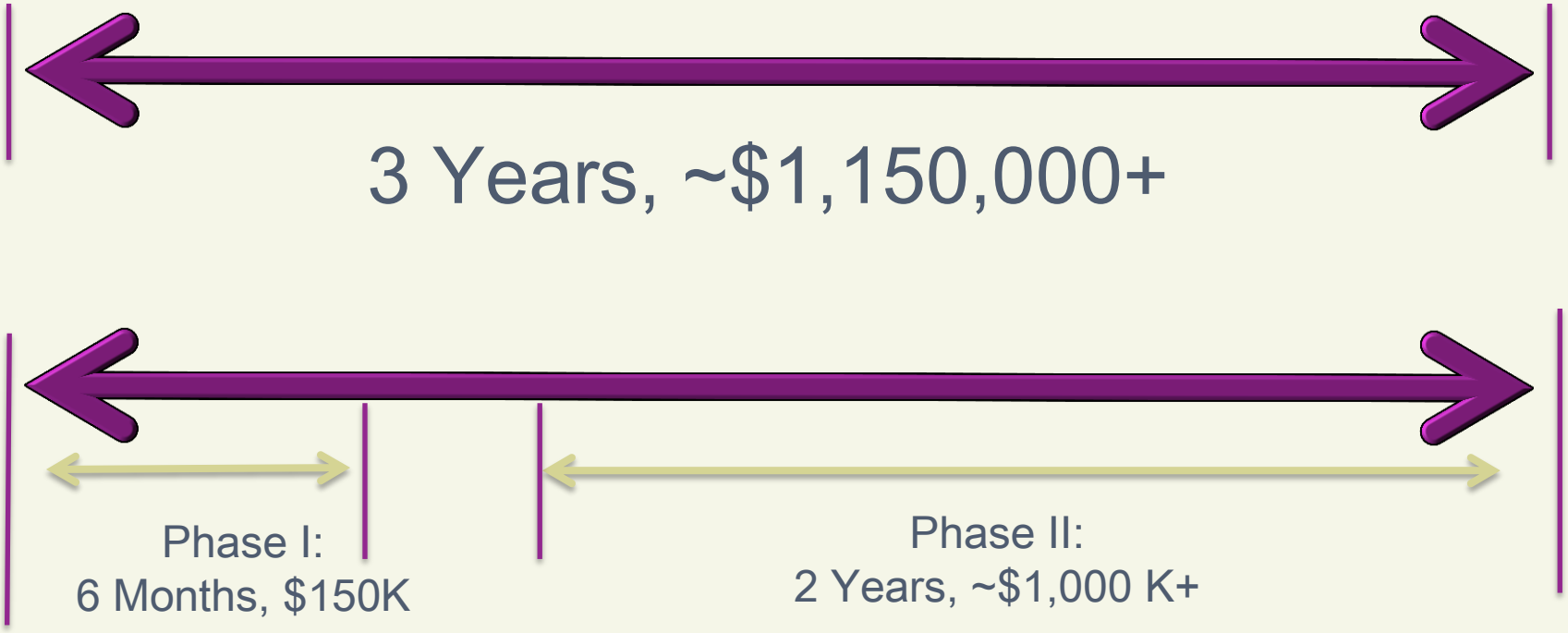
- The Project
  - What do you need the money for?
- The Company *(there has to be one…)*
  - Who owns it?
  - What resources does it have?
    - Facilities
    - People
  - Where will it get what it needs?

The Project – QUESTIONS:

- $ for PRODUCT Development
  - What is the intended product?
  - What applications will it be used for?
  - What has been done to date?
  - How much is left to do?



The Basics of SBIR: 3 Phases



Phase III: Commercialization (no federal SBIR/STTR $$)

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Developing the Business of Technology

The Project – QUESTIONS:

- Based on “technological innovation”
  - What is the technological innovation that will enable the product to achieve the desired performance?
  - How certain are you that it will work?
  - Is there risk of failure?
  - Will the product be revolutionary or evolutionary?

SBIR/STTR Long Term Goal - Commercialization

What is Commercialization?

- Ability to provide a solution to a problem in exchange for money
  - Targeted and Differentiated Solution
  - Important Problem
  - Viable Business Model

The Project – QUESTIONS:

- Credible Commercialization Strategy
  - Is there a market identified?
  - Has a competitive analysis been done?
  - How will the company generate revenue?
  - What additional resources will be required to achieve commercialization?
  - Have sources of those resources been identified?
    - Strategic Partners
    - Sources of capital

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Learn the Rules!

Eligibility for Funding

- Small business
  - For-profit
  - U. S. owned and controlled**
  - < 500 employees**
  - Located in the U.S.
  - R&D must be performed in the U.S.

**refer to 13 CFR 121.702

Facilities Requirement – for BOTH SBIR & STTR

- The research work to be performed by the awardee is to be conducted in:
  - **Company** controlled
  - **Research** space
  - Suitable to do the work proposed

SBIR vs. STTR

Primary difference is in the relationship with a non-profit research institution:

- SBIR allows but does not require the involvement of a non-profit research institution
- STTR requires the involvement of a non-profit research institution

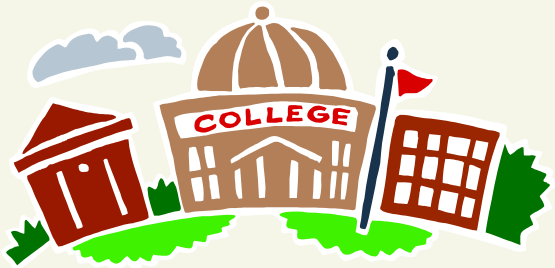
However – in either case:

The Applicant Organization is always the Small Business!

SBIR vs. STTR: Who does the work?

**** APPLICANT IS ALWAYS THE SMALL BUSINESS****

- **Subcontract percentages**
  - **SBIR**: no more than 33% in a Phase I and 50% in a Phase II
  - **STTR**: at least 40% at small business and at least 30% at partner non-profit research institution



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Developing the Business of Technology

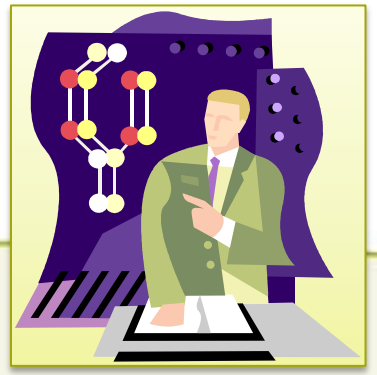
SBIR vs. STTR Facilities Requirement

Therefore the company must do:

- ≥67% of the SBIR Phase I work or
- ≥ 40% of the STTR Phase I work and
- ≥ 50% of the Phase II work in**

***Company controlled research space suitable to do the work proposed!*

SBIR vs. STTR: Where is the PI?



Principal Investigator Rules**

- **SBIR**:
  - PI at least 51% EMPLOYED at small business at the time of *and for the duration of* the award
  - At least 10% effort* on the project
- **STTR (except NSF)**:
  - PI at least 51% EMPLOYED either at small business *or* non-profit research partner
  - At least ~10% effort* on the project

**** APPLICANT IS ALWAYS THE SMALL BUSINESS**

*agency dependent

University-based Researcher Effort Issues

Summer months vs. calendar months

- PI of SBIR must be 51% effort at the time of and for the duration of the award, therefore you can't be 100% over the summer months and 0% the other 3 months
- Other Key Persons - Depending on the agency summer months may not fall within the budget period therefore effort must be available regardless

Common Misconceptions

- Universities can apply for STTRs
- If a University is involved you have to do an STTR
- If the IP comes from a University you have to do an STTR
- If the inventor and/or key scientist is faculty you have to do an STTR
- If the PI of an STTR is at the University it is the University's grant/contract
- All of the work of an STTR can be done at the University

Critical “watch-outs”

Make sure that:

- The company has company-controlled research facilities
- If the PI of an SBIR also maintains a university appointment that they reduce their effort appropriately
- You accurately represent the company’s resources

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2012 Reauthorization SBA Documents

SBIR and STTR Policy Directive

- Final Policy Directive with Request for Comments
- Published Aug 6, 2012
  https://www.federalregister.gov/articles/2012/08/06/2012-18119/small-business-innovation-research-program-policy-directive
  - Effective upon publication
  - Public comments due on or before Oct 5, 2012
- Updated Policy Directives published Jan 2014

Policy Directive

- Increased set aside over 6 years
  - SBIR 2.6% FY2012 up to 3.2% FY 2017
  - STTR 0.35% FY2012 up to 0.45% FY2017

- Increased funding "caps"**
  - Guidelines $150k Phase I; $1 million Phase II
  - Caps up to 150% of guidelines
    - $225k Phase I
    - $1.5 million Phase II

***** Refer to individual agency solicitations for specific funding guidelines and limits***

Policy Directive

- Streamline award process
  - 90 days to a decision, 180 days to funding
    - NSF and NIH up to 1 year

- Increased outreach
  - Goal to increase participation by minority and women owned firms
    - Women-owned ~13% of FY2011
    - Minority-owned ~7%
    - 26 states combined ~8%

Policy Directive

- "Invitation Only" Phase II no longer allowed
  - Applies to new Phase I awardees
  - Check with agency if prior Phase I awardee
- Can switch from SBIR to STTR or vice versa between Phase I and II
  - At agency discretion

Policy Directive

VC/PEF/HF "Quotas"

- Multiple VCOC/PEF/HF owned companies eligible to compete (Size Rules)
- Funding limited by "quota"
  - < 25% NIH, NSF, DoE
  - <15% all other agencies
- Agencies "opt in"
- Agencies can refuse to accept proposals

Other Reauthorization Items

Focus on Commercialization

- Establish commercialization benchmarks (mandated by statute)
  - Will only apply to frequent winners (e.g., >20 Phase I, >15 Phase II)
    - Phase I to II to be implemented January 2013
    - Phase II to III to be implemented October 2013
  - If don't make benchmarks may not qualify for awards for 12 months
- Increase technical assistance (e.g., 'commercialization' assistance)
  - $5,000/award/year with potential to identify service provider
- Administrative funding to agencies to support new initiatives
- Sharing best practices between agencies

$5k Commercialization Assistance

Increase technical assistance (e.g., 'commercialization' assistance)

- $5,000/award/year above the allowable cap
- Identify your own service provider
  - Note: You won't be able to participate in agency sponsored programs
- Include the cost in the budget (follow agency specific instructions)
- Include a detailed description of services your vendor will provide in the budget justification
- Secure a letter of commitment from the vendor

***confirm participation/instructions with specific agency!*

Other Reauthorization Items

Reduce Fraud, Waste and Abuse

- Eligibility
  - "Life cycle" certifications
- Performance
  - Location
  - PI employment
  - Subcontracting guidelines
  - "Double dipping"

Often occur when a university is involved

Other Reauthorization Items

Acquisition Preference

- Federal agencies and prime contractors, *to the greatest extent practicable*, shall issue Phase III awards to the SBIR Phase I or Phase II awardee
- Agencies may issue sole source Phase II awards to the SBIR Phase I or Phase II awardee
- Not all contracting officers are up to date on these changes to the law
  - "The law trumps the FAR"

Other Reauthorization Items

Data and Reporting

- Impact primarily at agency level
- Small business will have to:
  - Register at sbir.gov
  - Provide additional commercialization information
  - Additional information may be required from VC funded companies
- Commercialization database
  - Based on DoD commercialization index
  - Information will be confidential

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SBIR/STTR Budgets

- Small Businesses Should Develop Their Own Budgets!
- University should complete their own subcontract budget on agency specific forms and provide to SBC
- Be aware of *mechanism specific* unallowable costs, e.g:
  - Publication costs
  - Foreign expenses (e.g.,subcontracts, travel, supplies)
  - Other travel
  - Tuition
- Be aware of *agency specific* unallowable costs, e.g:
  - Equipment (NSF vs. NIH)
- Note: SBC IDCs have NO RELATIONSHIP to the University's IDC rates

Agency differences for SBC IDC rate negotiation

- **NIH -** DFAS (Division of Financial Advisory Services)
  - Small Business must request the negotiation (Phase II only)
- **DoD -** DCAA (Defense Contracting Audit Agency)
  - Requires annual indirect cost proposal pre-award Phase II
- **NSF -** CAAR (Cost Analysis and Audit Resolution Branch)
  - Requires an indirect cost proposal pre-award Phase II
- **DoE**
  - Requires an indirect cost proposal pre-award Phase I and support that rate each year post phase I

What rate do I** use?

What if I don't have a negotiated rate?**

- **Agencies differ in what is allowed.**

  NIH – up to 40%

  DoD – reasonable

  NSF – 150% of salaries

  DOE – must be able to support the request

**** I = the small business!**

NIH SBIR/STTR Budgets

- **Direct Costs**
- **Indirect** Costs (F&A)
  - 40% Phase I, **40% Phase II or be prepared for an IDC rate negotiation**
  - Basis is “total direct costs”
  - *A rate of 40% of total direct costs is requested. This amount is appropriate to cover the company’s current projected indirect costs and is consistent with NIH’s policy for Phase I SBIR proposals when the company does not already have a previously negotiated indirect cost rate.*
- **Fee**
  - *A fee of 7% of total costs (direct and indirect) is requested. This fee contributes to the growth of the small business concern by allowing expansion of resources and personnel development. The fee is consistent with a normal profit margin provided for research and development work.*
- **Unallowable Costs**

NIH BUDGET FIGURES- Plan for this

	Phase I	Phase II
Direct	$ 150,000	$ 1,000,000
Indirect@40%	$ 60,000	$ 400,000
Fee@7%	$ 14,679	$ 97,860
Total	**$ 224,679**	**$ 1,497,860**

- SBC direct costs include subcontractors' TOTAL COSTS
- Subcontractors' TOTAL COSTS = direct costs + indirect costs
- Therefore:
  - SBC gets indirects on subcontractor indirects
  - The lower the subcontractor IDC rate the more funds available for the SBC to achieve their goals (especially critical for Phase I)

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Subcontractors

What does the small business need?

- For submission**
  - Research plan content
  - Budget information
  - People, facilities, resources
  - Letters of commitment

**Specific requirements will be agency dependent

What does the SBC Need from the Subcontractor?

- Information necessary for research approach section
- Description of facilities and resources
- Biographical Sketches/information
  - Required for all Key Persons employed at the subcontractor that will have measurable effort on the project
  - Each should be listed on the budget
- Detailed Budget
  - Must be completed on a subaward budget form
  - Must include a detailed budget justification
- Letter of Commitment
  - Signed by the appropriate office (not the PI)

	Company	Subcontractors	Consultants	Others
Introduction (resub)	?			
Project Narrative	√			
Abstract	√			
Specific Aims	√			
Research Strategy	√	◊	◊	?
Human Subjects	√	?		
Vertebrate Animals	√	?		
Bibliography	√	?	?	
Budget	√	√	◊	?
Budget Justification	√	√		
Biographical Sketches	√	√	√	?
Facilities & Resources	√	√		?
Equipment	√	√		?
Select Agents	√	?		
Subcontactor Arrangements	√	√		
Letters of Support		√	√	?
Cover Letter	√			
Commercialization Plan (PH II)	?			
Forms	√			

Subcontractors

What does the small business need?

- Pre-Award JIT if recommended for funding**
  - Model agreement if STTR at NIH
  - Subaward contract
  - Current & Pending support for key persons
  - Final budget
  - IRB and/or IAUCUC approvals if relevant
  - Employment status documentation

**Specific requirements will be agency dependent

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SBIR/STTR: Planning 3 Phases

Where does the University fit?

Preliminary Data

SBC: Phase I Goal = Feasibility

SBC: Phase II Goal = Further R&D

SBC: Phase III GOAL= **Commercialization**

Subcontracted R&D

Royalties

(if University derived IP)

“Best Practices”

University Participation in SBIR/STTR

- Remember that the SBC should drive the process, NOT the university
- Promote SBIR/STTR as a key funding tool for commercialization of technology, NOT as an alternate source of research funding into the university
- Keep roles clearly defined (e.g., faculty at university vs. PI at the company)
- Provide access to company-controlled R&D facilities (e.g. incubators)

“Best Practices” (cont.)

University Participation in SBIR/STTR

- Don’t do the SBC’s budget. It is their budget.
- Don’t treat the subcontract budget as a basic-research budget (e.g., no tuition!)
- Negotiate a reduction in IDCs, especially on Phase I sub-contracts
- Provide training opportunities for faculty, research staff, post-docs on SBIR/STTR so that they understand this unique funding mechanism

Other Considerations

Intellectual Property

- An executed license agreement is not required for the SBC to submit or receive an SBIR/STTR award
- A credible commercialization strategy is necessary for the SBC to be competitive
- A credible commercialization strategy requires that the SBC show how they will have the rights to commercialize the technology, therefore:
- In the absence of a license agreement an option and/or evidence of initial good faith negotiations will strengthen the SBCs project

Other Considerations

Conflict of Interest

- Primarily based on university-specific policies which can vary significantly between institutions
- General recommendations:
  - Keep all key persons working in just one place
  - Make sure university inventors understand:
    - Limitations they will have if the IP is licensed to a company that they have a financial interest in
    - Limits on companies they own subcontracting back to the institution (e.g., their lab)
- Everyone involved in the project on both sides needs to remember which hat they are wearing at all times

University Participation in SBIR/STTR

Common Problems

- Over estimate stage of development of science/technology
- Misconstrue relationship to funding agency and small business
- Responsiveness to small business's funding timelines
- (Lack of) Understanding of resource requirements, especially as it pertains to SBC's facilities requirements
- Misapply university budget guidelines to SBC budget
- Lack of appreciation for differences between SBIR/STTR "research" proposals and basic research grants like RO1s

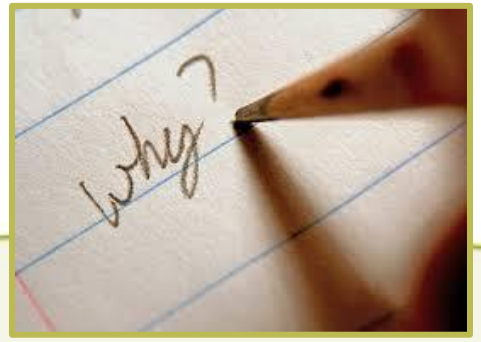
University Participation in SBIR/STTR

The most common common problem**

Over Confident & Under Prepared

** not including waiting until the last minute but I've totally given up on that one….

SBIR/STTR and Universities



Why?

- Facilitates tech transfer into university-initiated start-up companies
- Enables new collaborations between existing small businesses and universities
- Measurable income through sponsored research agreements with small businesses
- Increases impact of federal basic research funding (e.g. “lineage”)

Why not?

- Basic research pay lines are decreasing
- Need new revenue to fund basic research

Questions I have for you

- How do you work with small businesses?
  - Is there a difference between University affiliated small businesses?
- What lead time do you need to approve the subcontract budget and get the letter of commitment?
- If funding award to be made how long to get a contract in place?
  - Who drafts the contract?
  - Do you do any diligence to ensure that the company is compliant?
- How do you track labor hours/percent effort of your key persons working on the subcontract?
- Is there oversight to ensure that the company portion of the work is NOT done in university facilities?
- What issues do you have in working with the small businesses?

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About BBCetc

BBCetc works with technology-based entrepreneurs and companies on strategies to advance R&D efforts to commercialization. Through training courses and one-on-one counseling, the BBC team coaches clients in:

- Commercialization Planning
- SBIR/STTR and Other Research Grant Assistance
- SBIR/STTR and Commercialization Training
- Grants/Contracts Management
- Tech-Based Economic Development Programs

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