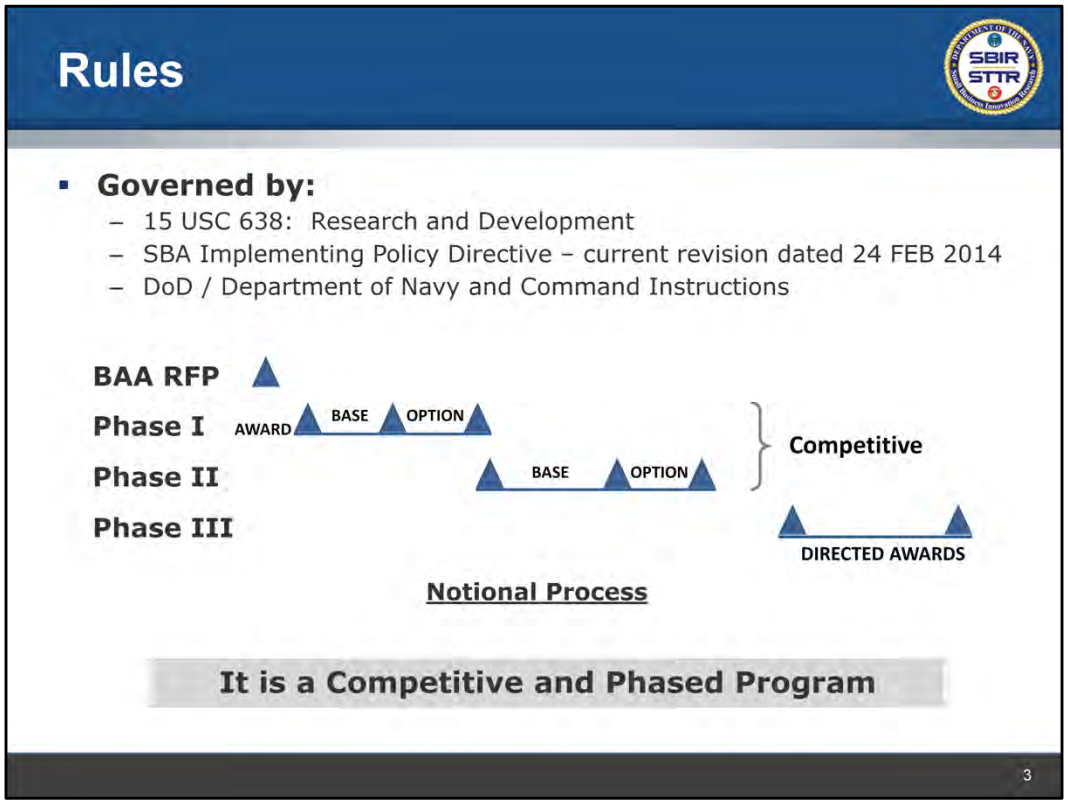
Slide 1 – intro

Hi I am going to discuss with you the SBIR program rules and procedures that govern your ability to mine the SBIR inventory to your best advantage, through "the reachback process". This process has contributed technologies of value to the Fleet and Force, with efficiencies of cost, schedule and performance. This talk will give you a baseline understanding of the process and then introduce you to using the SBIR program to benefit your Navy ACAT program as a Navy PM, or your industry working with an acquisition program.

Slide 2 – SBIR program

Initiated in 1982 by the NSF this program was put in place to encourage innovation and technology development by small business. It has been continuously reauthorized. It is for SB of 500 employees or less. It has essentially no revenue limits and is a competitive 3 phase program where Phase 3 is seen as the government's return on its SBIR investment.



Slide 3 Rules

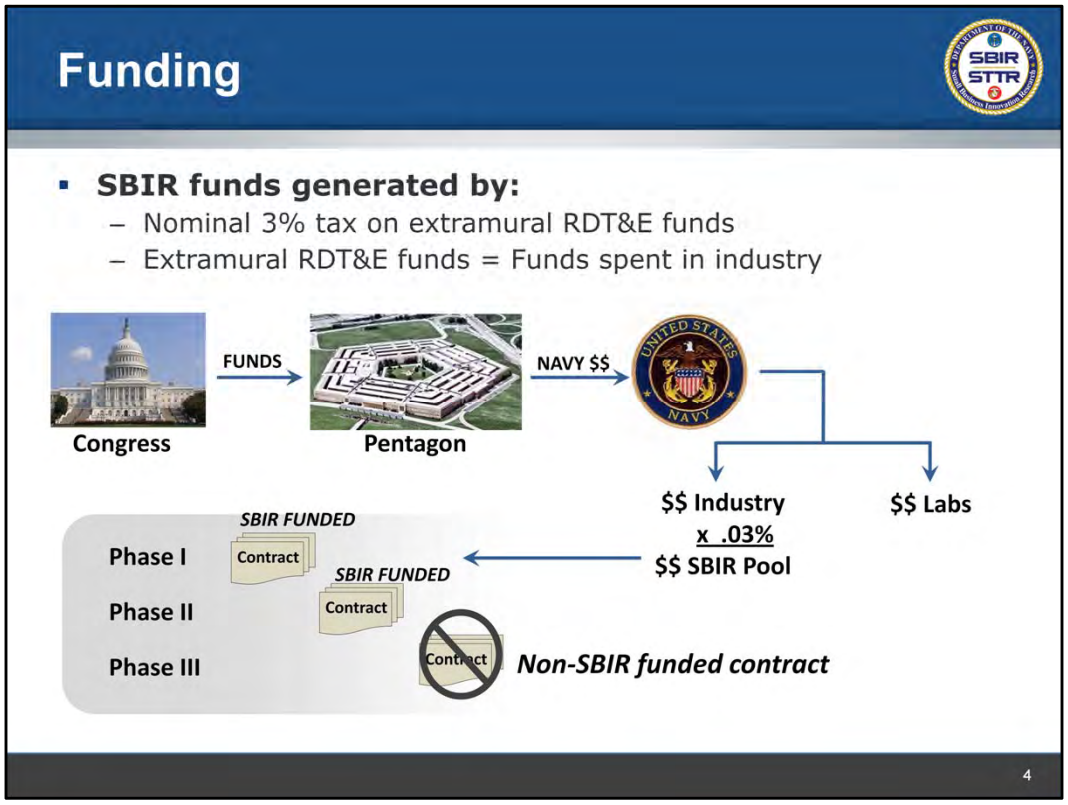
The rules for the program are covered by 15 USC 638, the SBIR Policy Directive and local agency practices that satisfy the Policy and Statute. Pertinent rules include competition for Phase 1, competition for Phase 2 and directed award authority (including sole source awards) for phase 3 without further competition.

SB set aside for Phase 1 competitions are conducted 3 times a year for SBIR and twice a year its sister Program STTR as part of a DOD wide solicitation. In this talk, I'm going to focus on SBIR.

SB Phase 1 winners compete for Phase 2 based on Phase 1 performance

Phase 2 winners then market their technologies to the acquisition community and to the defense industry, to win Phase III awards.

As I'll describe later in this talk, Congressional reauthorization of SBIR in 2012 resulted in SBIR procedural changes you need to be aware of to ensure best value use of the SBIR resource. Further, there are some differences in the way our System Commands manage SBIR, and I'll briefly discuss these as well.



Slide 4 Funding

Funding for the program comes from extramural RDTE – basically Navy R&D funds spent in industry.

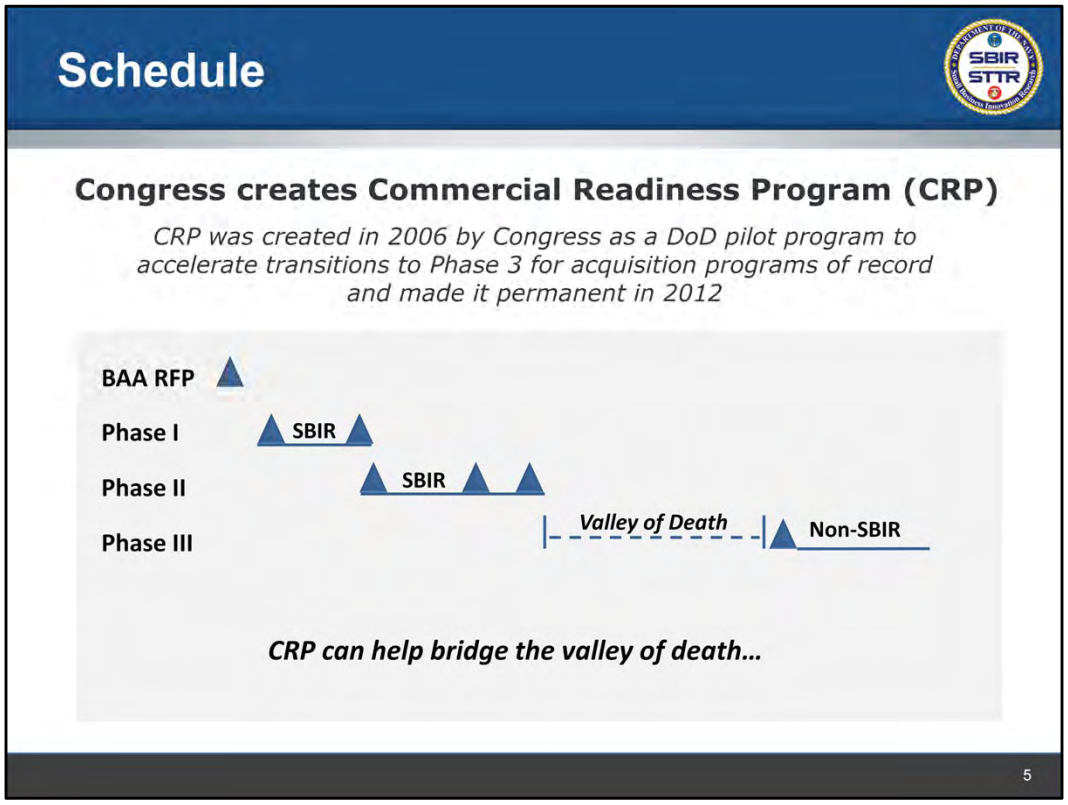
Phases 1 and 2 are paid for with SBIR funds (taxes from the extramural funds)

The 15 USC 638 law established the Commercialization Readiness Program (CRP) within the SBIR program and is a DOD wide program where SBIR funds are matched with program office funds. In the

Phase 3 is funded with government mission dollars, or by industry investment in a SBIR technology – either directly or through a subcontract--, and not with SBIR dollars.

Phase 1 is $80k base with $70k option PO

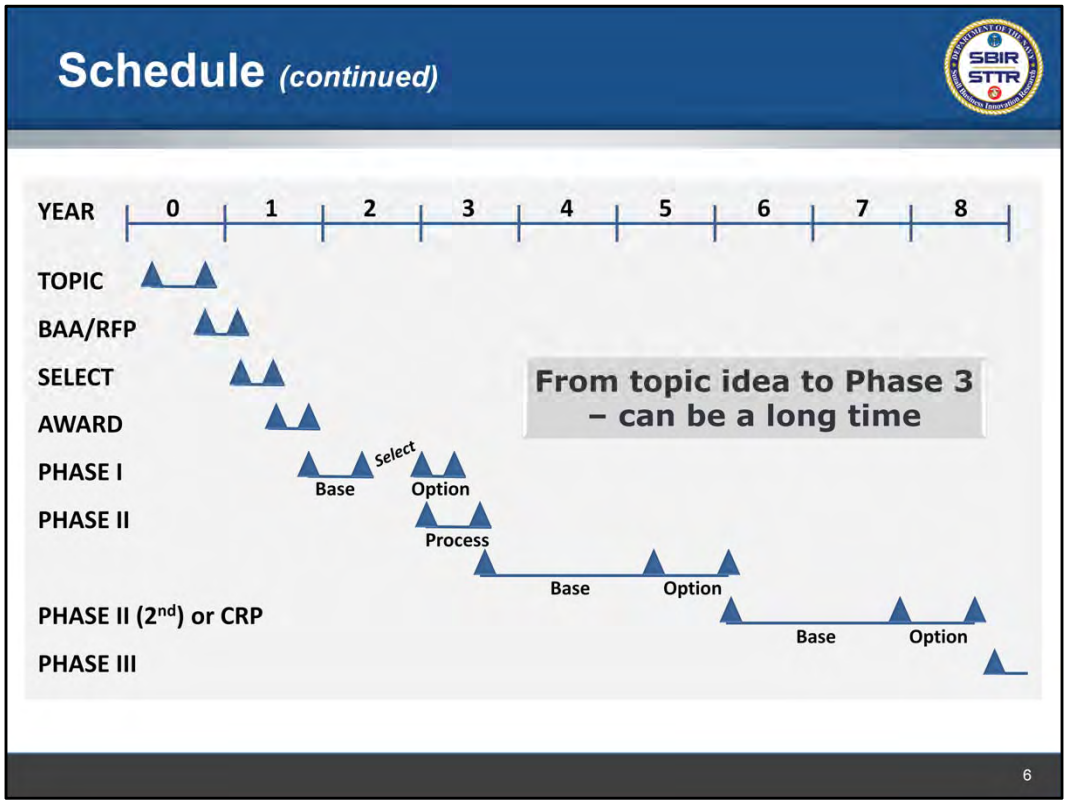
Phase 2 is a CP contract valued up to $1M base with $500k option



Slide 5 Schedule

CRP is like any Phase 2 but must have matching program funds for every SBIR dollar over $1.5M. No more than $3.0M in SBIR funds can be awarded to one company on one topic.

On the government side, Phase 3contracts are awarded only with program funds –"mission dollars", I said a minute ago -- and is unlimited in value or types of money and awarded directly (including sole source) since the requirement for competition has been satisfied during phases 1 and 2. The SBA's SBIR Policy Directive clearly states a Phase 3 award is authorized for direct award (including sole source) through FAR 6302-5 – which states that statute requires or authorizes this exemption to competition.



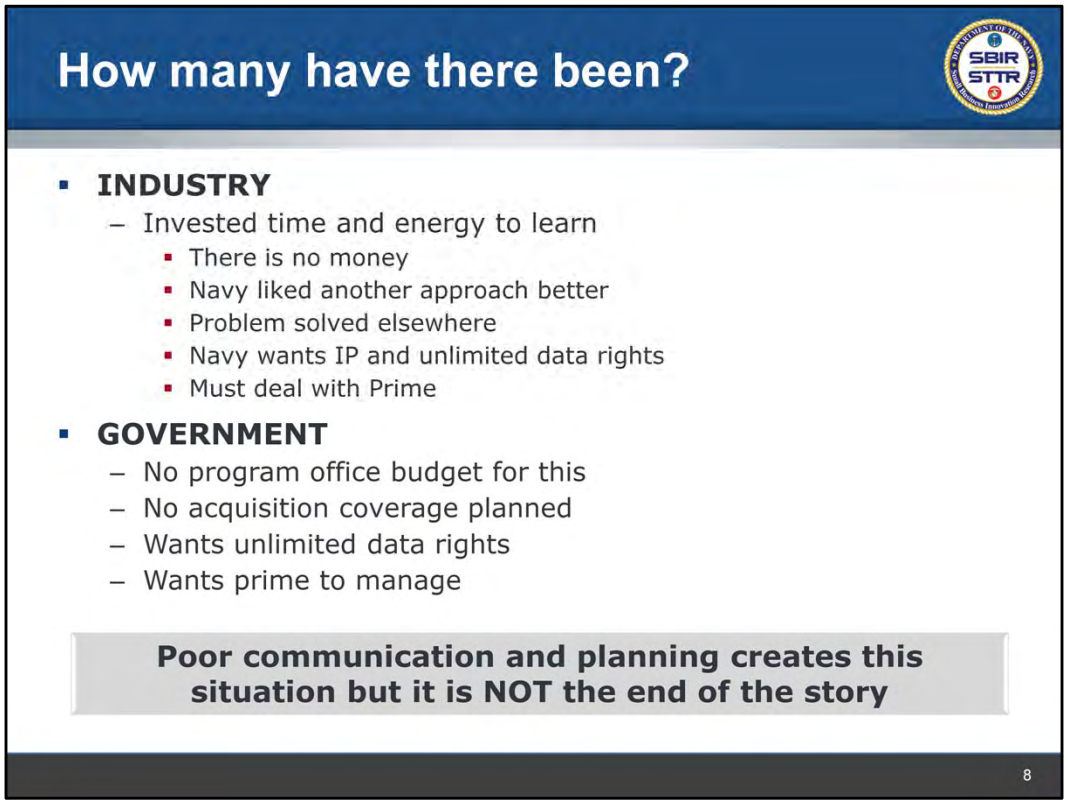
Slide 6 Schedule -Let me walk you through the timeline of a Topic generation, its advertisement and award Phases so you can get a picture of what goes on.
Phase 1 BAA RFP Topic Call starts in Feb of each year – let's call it year 0.
Validating and culling topics occurs at various levels within Navy through about August when they are delivered to DOD for Publication in the first RFP of the FY in about December. For this dec the RFP will be called the 17.1 FFP. There will be 2 more throughout the FY.
The RFP is actually released in December of year 0 and closes in Feb of Year 1
Awards are announced in May of Year 1
Phase 1 PO is awarded in Aug of Year 1
Phase 1 contract $80K base goes on for 6 months ending in Jan of year 2
Phase 2 award winners are announced in April and
Phase 1 $70K options exercised about a month later in May of Year 2
Phase 2 base contract (usually between $500k and $1M depending upon the managing organization practices) is awarded about 5 months later in Oct of year 2
Base Phase 2 runs 2 years for $1M completing in Oct of Year 4. It is at this time one knows if they will be going to a phase 3 or not. If yes, then
Phase 2 option is exercised for $500k and a period of 6 months to a year which gets us to Oct of Year 5
The theory is that any Phase 2 winner going to a Phase 3 will now have some matching money in mission dollars from the program office to bridge the "valley of death", which provides funding to keep the company afloat and interested and making progress while a Phase 3 contract is put in place. This is why a CRP/Phase 2B contract is awarded just like a Phase 2 but must have matching non-SBIR funds for every dollar over $1.5M of SBIR funding.
If the first Phase 2 was valued at $750K total, then a second Phase 2 can be awarded for another $750k. But any addition SBIR funds must be matched with Program Office funds after that up to $3M total. Here, I need to say again that there are some differences between the SYSCOM SBIR organizations regarding funding details – what I've just given you is a Navy-wide overview.
So you can see the value of the SBIR funding plans for each topic prepared. If money dries up then awards stop - with no poor reflection on the company or its innovation. Congressional actions resulting in things like Continuing Resolutions and Sequestration make SBIR particularly vulnerable to a disruption of cash flow. But, Congress is increasingly aware of these negatives, and given the high value Congress attaches to the SBIR program, we hope that the next reauthorization – which should be completed by mid-2016 – will better support the SBIR program.

Slide 7 Where are we?

At this point the Navy and SBIR company have invested nearly 5 years to get to a point where we believe there is an innovation worth taking to Phase 3 and applying program funds upon. The test drive is over and non-SBIR Phase III dollars from government or industry, or both, will carry this innovation forward.

Not exactly a rapid program. As you can see it takes 18 months to get the first Phase 1 dollar (of $80k) applied to a problem identified when the topic was prepared. Maybe 15 proposals were received and 3 selected. Maybe 2 get to Phase 2 and none get to Phase 3.

It is no wonder Program managers do not count on SBIR to help them unless they have a crystal ball and can predict the future. But luckily many try to seed the topics so they may produce useful innovations later on that may be needed.

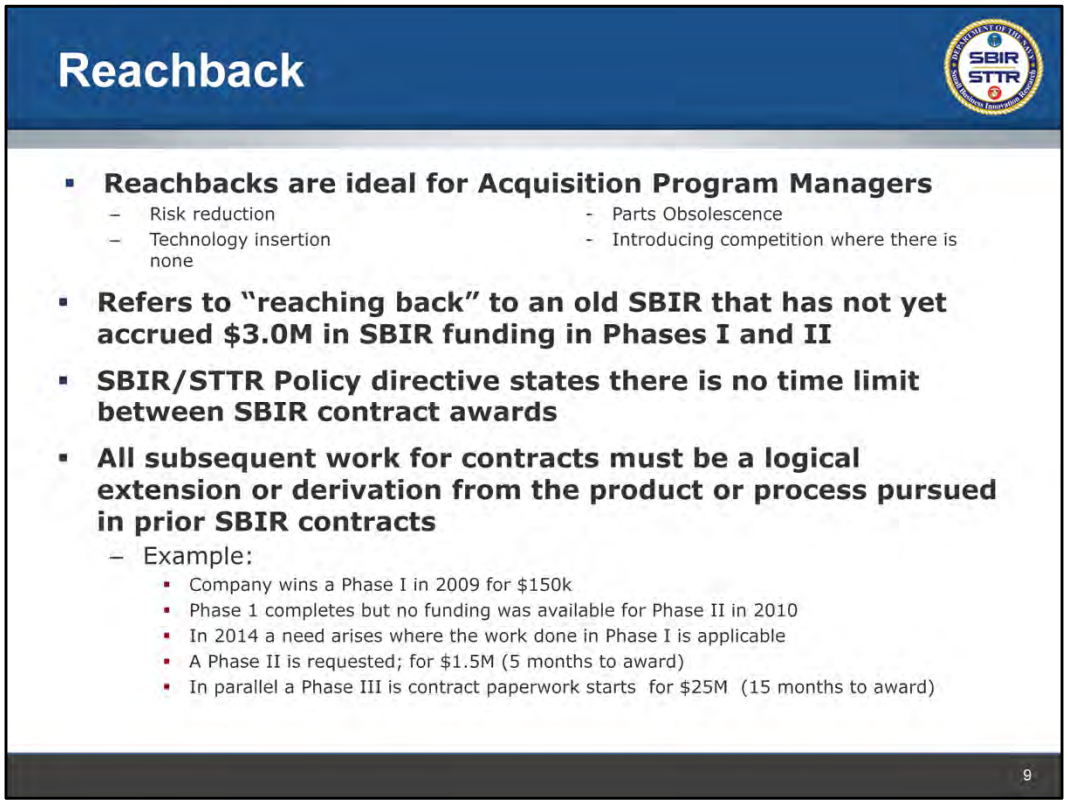


Slide 8 How many have been here?

Dead ended at losing a Phase 1 that never went to Phase 2 or a Phase 2 that never went beyond the initial Phase 2 or ever got Phase 3? Feel like putting the final report on the shelf and letting it collect dust? I've seen that.

Did someone in the Fleet or Force tell you that they loved the technology but had no money? Or they loved it but had no SBIR funds to award to winners when they went to Phase 3 or Phase 2? You were a winner but oftentimes were too early – ahead of need, or unlucky due to lack of money…or the interested TPOC retired and moved away. Stuff happens!

Fear not – good ideas do not have a shelf life.



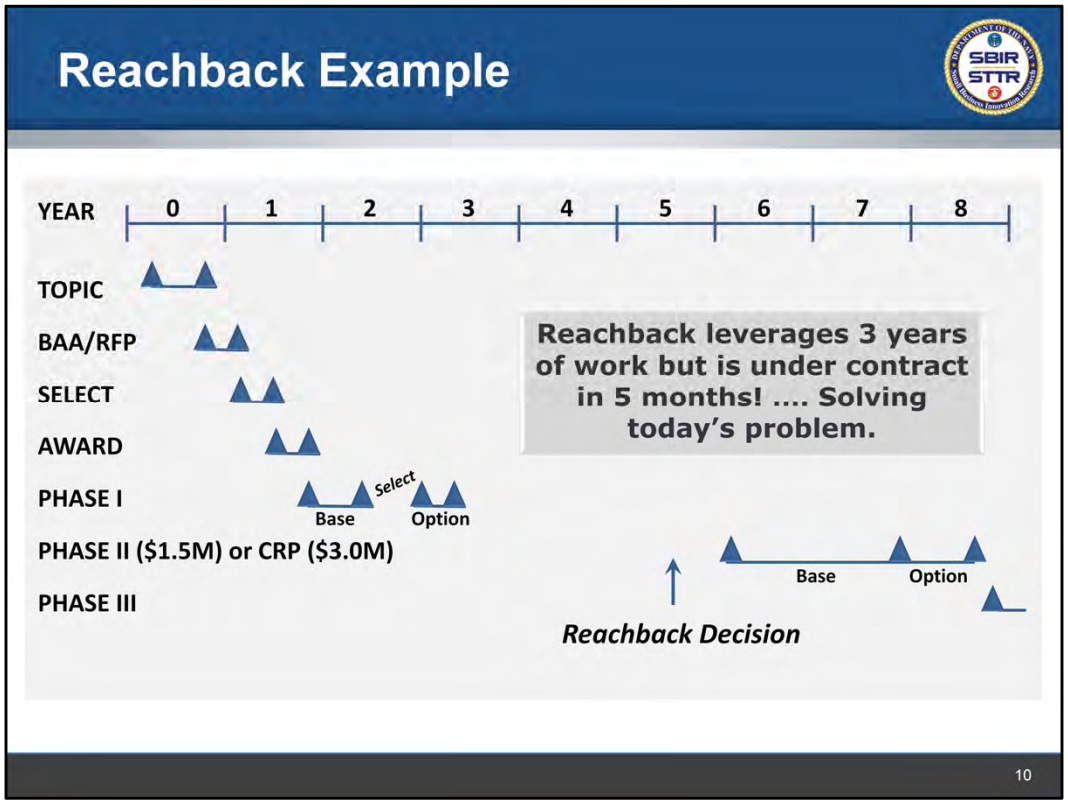
Slide 9 Reachback

As PM I always had risk in my programs. I rarely had enough funding to reduce that risk within the program funds. So I used to write topics in hopes I guessed correctly. Well in some cases I did but usually out of synch when I needed the work done. But I did learn to look at older topics winners and meet some very smart people. I also looked at other people's topics.

So when a risk came to the point where I needed some work done, I would first look at older topics and see if what I needed was related to the work already accomplished – iaw SBIR Policy directive if it was a "…logical extension derivation or conclusion to the product or process worked on under prior SBIR contracts".

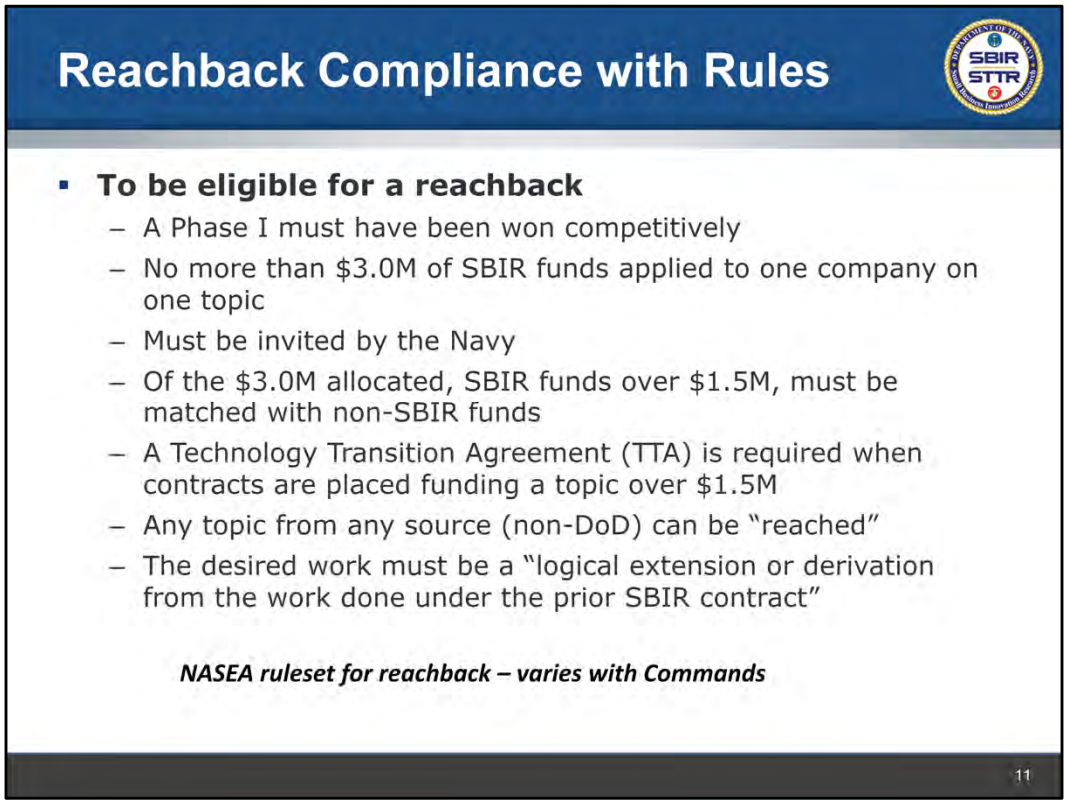
If you read the documents I noted earlier you will see that the rules do not always tell you what you can do. For instance there is no time limit between Phase 1 and Phase2 and Phase3. A Phase 1 winner in 2005 is always a winner – if they went to Phase 2 or not. Ditto for a Phase 2 winner who never went to Phase 3.

So when you open your eyes, you realize you have access to every SBIR Phase 1 winner awarded since 1982! It is quite a discovery. Just think at NAVSEA alone we averaged say 25 topics a year for 30 years = 750 Topics and on average we awarded 2 winners per topic – I have 1500 winners to choose from! But because I can draw from any navy or any DOD topic Think 10s of thousands and now we can pull from any agency …..think of even more!



Slide 10 – reachback schedule example

Reachback example shows how a Phase 1 winner does not get selected for Phase 2 even though they had a good idea, but the PM did not have enough money to fund it. As you can see several years later a problem is found and the SBIR is a solution so a reachback is appropriate. The PM in this case got the benefit of 3 years of work and only took 5 months to restart work.

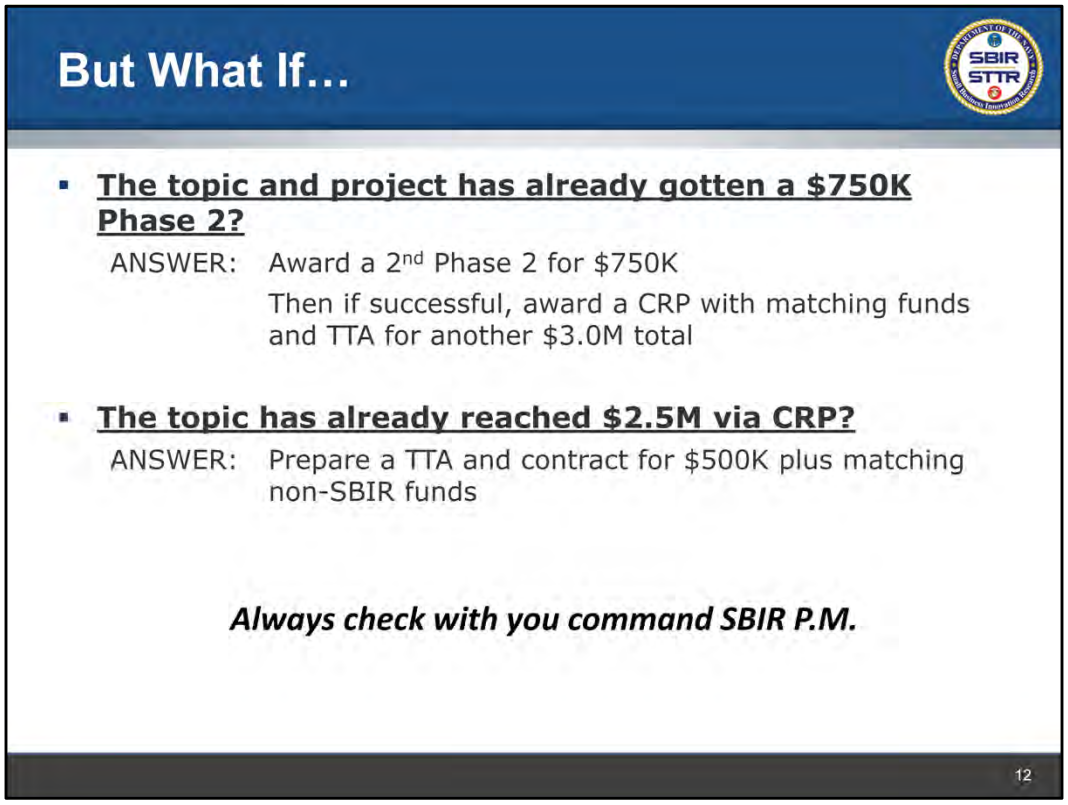


Slide 11 reachback compliance with rules

We need to comply with regulations that have been piling on in recent years – but we have suffered from unintended consequences.

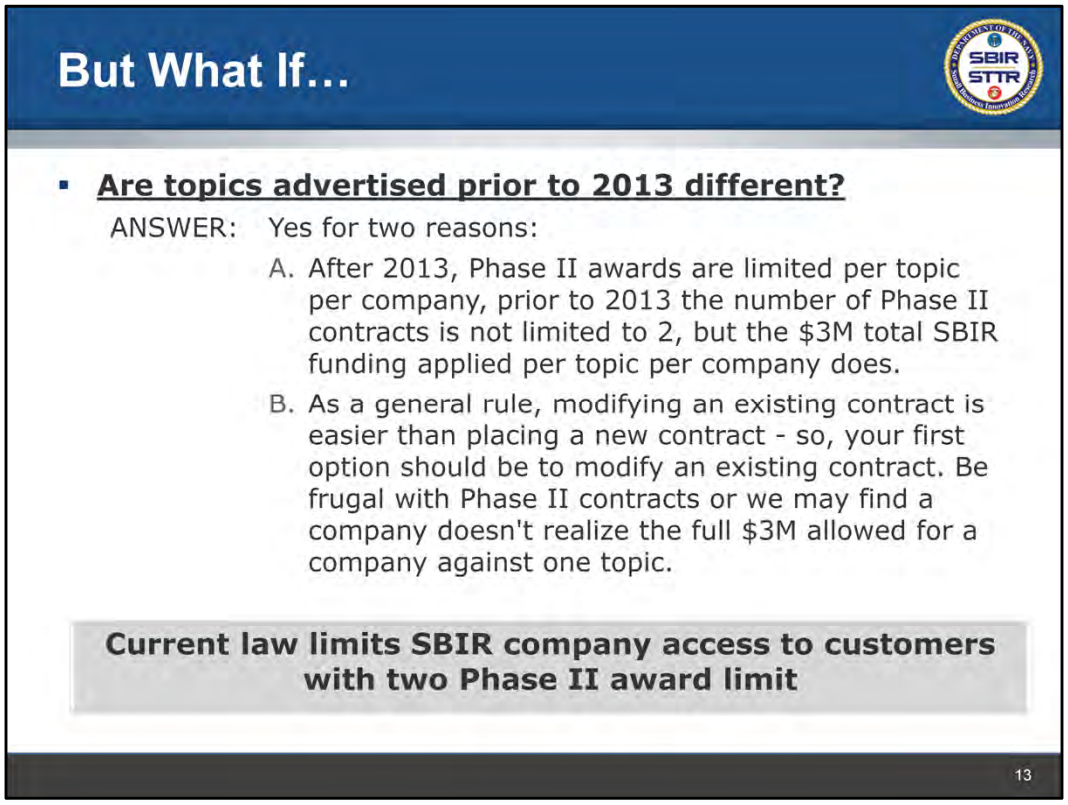
So let's see what that 2005 Topic has to offer. By reading the topic and the report I learn it had some good ideas on algorithms that could not be run on the hardware in a plane back then – couldn't fit the hardware on the plane. The TPOC said it was a solid company with smart people. But now after application of Moores law I have an algorithm developed that can run on my wristwatch – it can fly on a drone.

In 3 to 5 months I can get a Phase 2 awarded and apply $1.5M to solving my problem spent over 12 or 30 months – my choice! Nothing required but an agreement between me and the SBIR PM and of course there will be a need for the SBIR money to be there. A signed memo gets me this. Found money and talent to solve my problem.



Slide 12 But what if…

If that project had gone to a Phase 2 and spent $1.5M of SBIR money what could I do?
I'd have had to prepare an 8 page Tech Transition Agreement (TTA), provided up to $1.5M of my Program office funds to get up to $1.5M of SBIR funds applied (or any combination thereof to place a CRP/Phase2B contract.
So this SBIR topic would have had a Phase 1 awarded a Phase 2 awarded and a CRP/Phase2B to solve my problem and bridge to a Phase 3.



Slide 13 but what if

Someone had taken this to a Phase 2 with $750K? What do I do then?

Award a second Phase 2 contract valued at $750k with no TTA even required. That then maximizes my $1.5M SBIR funding and still stages me for follow on CRP effort to bridge me to Phase 3.

Can I put more than 2 Phase 2 contracts in place on one topic and one company?

This is where Congress has made life a little confusing….the answer is that depends.

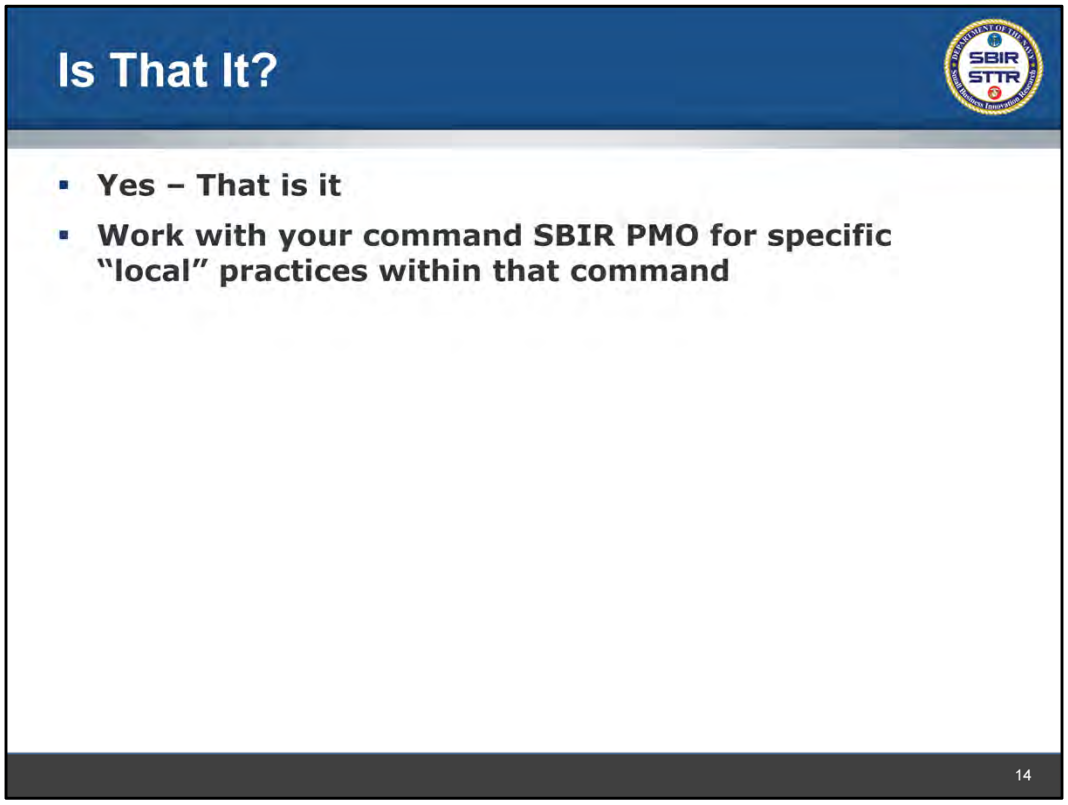
If the topic was advertised prior to 2013 reauthorization there is no limit on the number of Phase 2s that can be awarded….but $3.0M is the max SBIR funding to be applied, with the second $1.5M Phase II requiring matching funds, as I discussed in an earlier slide.

After 2013 the limit is 2 sequential Phase 2 awards on the topic and company by a single PMO. But a CRP/Phase 2B is still allowed and $3.0M is still the maximum SBIR funding allowed per topic per PMO.

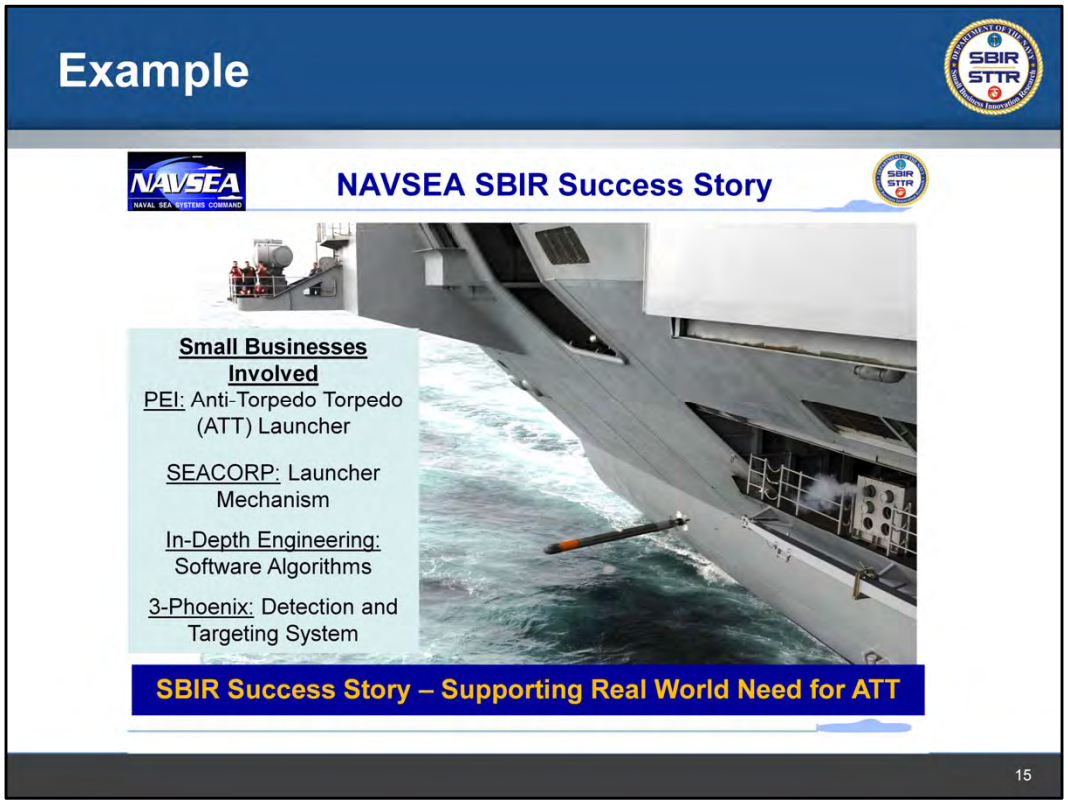
I should also state that starting in 2013 there are some peculiar rules regarding how many companies you can reachback to. These specific processes are local to each awarding agency. For example if there are 3 phase 1 winners, none got to a Phase 2, all 3 may be invited to submit a proposal to the PM reaching back to evaluate.

Decide what you want to do and work with your SBIR PM to understand what is expected of you and your team. These are not elaborate evaluations, but must be done and done well. As examples the company must still be small iaw SBIR guidelines and their proposals satisfy your needs.

Prior to 2013 topics you can invite only the award you want.



Slide 14 Is that it?
Not really – now you have the fundamentals. See how they fit together.
Aagin using that 2005 Topic example I need that algorithm on a drone in 2 years.
I reachback and award a Phase 2B contract in 4 months. That Phase 2B has $1.5M SBIR funding and $1.5M Program office funding. But I needed a total of $5M to get accomplished what I needed in 24 months, so there is another $2M of Program Office funds. For a $5M total. I get a Protoype drone design flown for that. This occurs over 3 FYs so it is easier to collect the funding over 3 years and the contract is structured that way as is the SOW.
Once the SBIR Phase 2B contract is getting processed to be put in place, I start with my Phase 3 sole source award – which will take 14 months because it will be valued at $45M and will be the source for my preproduction drones of which I will need 10 to do T&E.
So you can see by using the Phase 2B contract to "kickstart" my job with a contract vehicle and seed (SBIR) money I am prepared when my Phase 3 is put in place. It is like getting a headstart over tradition program contracts.
Plus I am working with a company that had been test driven.
Prior to the Pre-Production contract completing in 5 years, I then award a production contract for another 5 years – sole source and maybe include all logistical support ot the project - since this is all a logical extension and derivation from the original project to develop and algorithm that needs to fly.

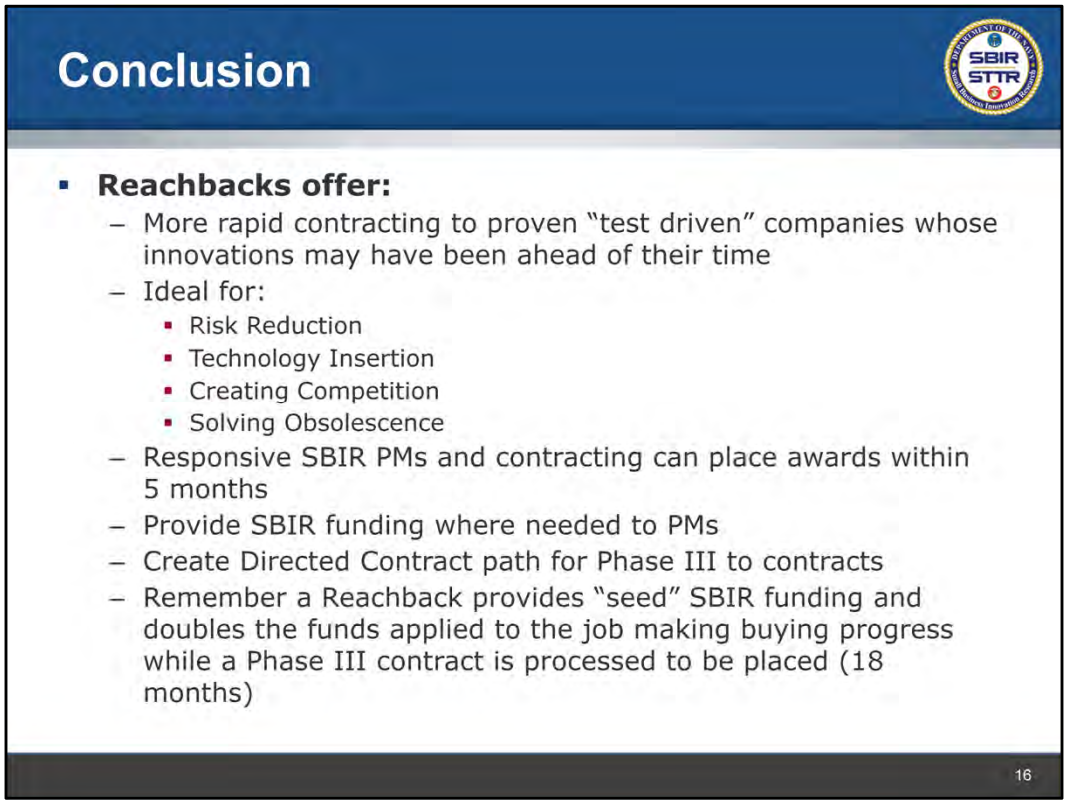


Slide 15
This is a story that shows how SBIRs can be used to solve real problems.
An urgent CNO requirement came to PEO SUBs to provide an anti torpedo capability for USS Bush as it went to the Mid east. ARL PSU was building the ATT, but it needed a detection, targeting and launcher system. There was about a 2-3 year horizon to get the capability to the carrier before it deployed - the "Push for Bush" and funding was not readily available like a normal "program"

The PM looked at options and developed a plan that leveraged 3 SBIRs (PEI, SEACORP, 3Pi) and another SB (IDE) and worked with Navy Lab at NUWC. Between a 3PI Phase 3 and reachback Phase 2s with all of the companies the available funding was doubled, contracts placed in rapid fashion and the program executed to meet the required schedule.

Yes there were loose ends, but in a procurement world where competitive contracts take 2+ years after proposals are received and where funding takes 3 years to get in place – the SBIR program got them contracts and SBIR funds and program matching funds in less than 5 months. Using the Phase 3 in place with 3PI to help bridge any gaps these companies were able to extend and derive from prior work the products needed to meet the schedules.

Since then Phase 3 contracts have been put in place as the program has gone from prototype to a real production effort.



The SBIR program was conceived and structured to be flexible to satisfy many needs back in 1982. The concept of a reachback may not have been on their mind at NSF, but I believe this is a tool that makes SBIR agile enough to really help program managers and their programs today.
Reachback also provides an avenue for SBIR Phase 1 winners to get a second chance to market their innovations and no longer only be tied to the agency that advertised the topic.