Air Force Small Business Innovation Research (SBIR)

-- Commercialization Pilot Program (CPP)

23 August, 2007

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Technology Transition Division
Requirements Directorate
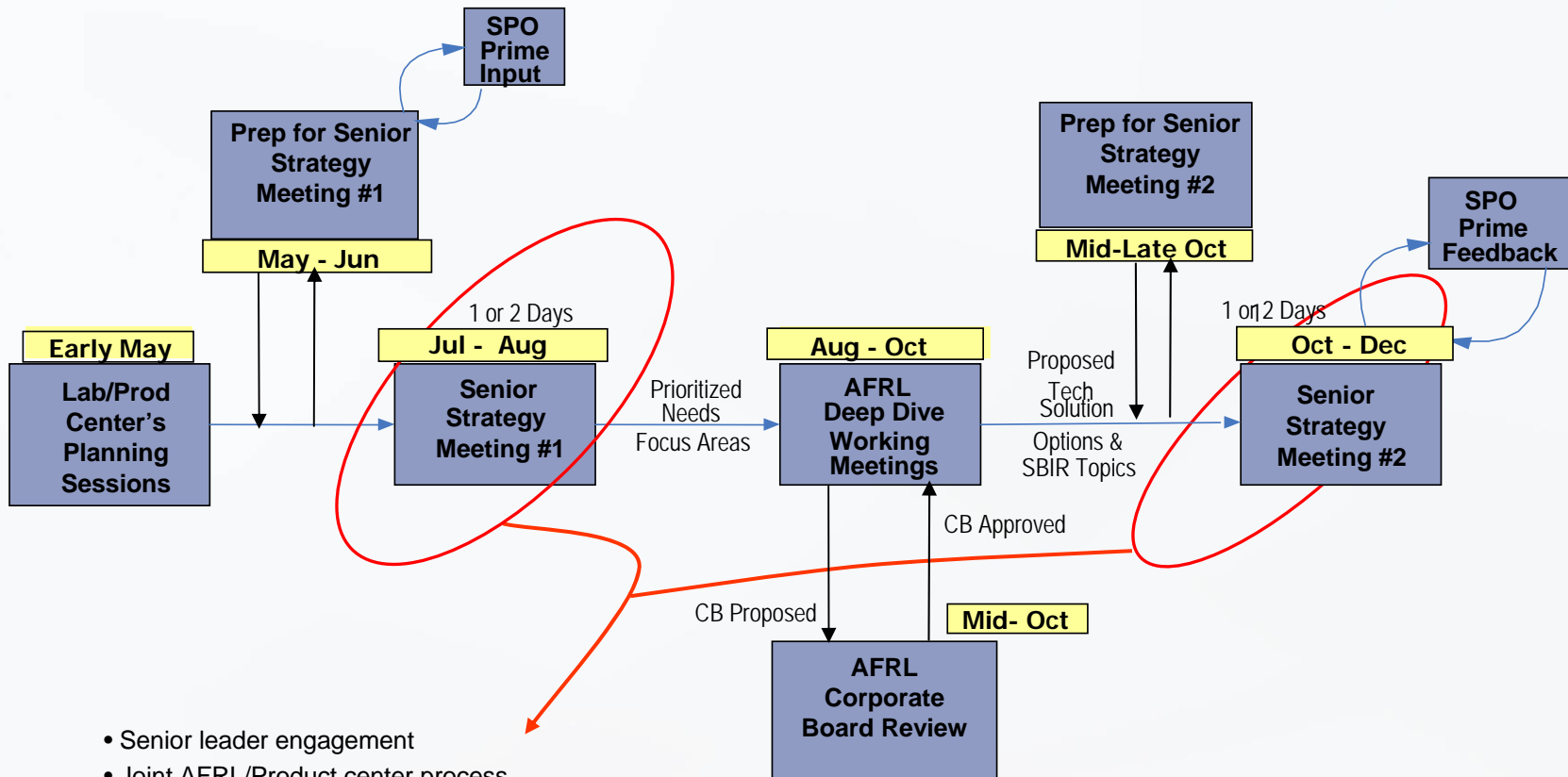**Air Force Research Laboratory**
richard.flake@wpafb.af.mil

- # New SBIR Topic Allocation Distribution
  - Based on $$ Contribution: 64% allocated to PEOs vice 47% last year
  - Goal: Focus on near term funded acquisition technology based needs

- # Strategy vs Tactics
  - More strategic topic generation process with closer ties to acquisition community and prime contractors

- # Air Force SBIR Commercialization Pilot Program (CPP)

Air Force Technology Needs Gathering Process

SPO Prime Input

Prep for Senior Strategy Meeting #1

May - Jun

Prep for Senior Strategy Meeting #2

Mid-Late Oct

SPO Prime Feedback

1 or 2 Days

Early May

Lab/Prod Center's Planning Sessions

Jul - Aug

Senior Strategy Meeting #1

Prioritized Needs Focus Areas

Aug - Oct

AFRL Deep Dive Working Meetings

Proposed Tech Solution Options & SBIR Topics

1 or 2 Days

Oct - Dec

Senior Strategy Meeting #2

CB Approved

CB Proposed

Mid- Oct

AFRL Corporate Board Review

- Senior leader engagement
- Joint AFRL/Product center process
- Multi-directorate AFRL engagement
- PEO/TEO approval
- SPO Primes participation

Strategy Driven Process

Product Center Needs
--Identification/Documentation Template

Program of Record:_____**Product Center Need Id # (ex. ESC-07-001):**_____

Technology Need Description:_____
_____
_____
_____
_____
_____

Technology freeze date if applicable:_____

Desired Key Performance Parameters:
_____
_____
_____
_____
_____

_____
Product Center's POC to support AFRL Deep Dive team (Name & Contact Info):

Related Development Efforts:_____
_____
_____
_____
_____

PEO Priority	
High	☑
Medium	☐
Low	☐
System Specific?	☑
or	
Pervasive Need?	☐
Prime Input to YES	☑
Tech Need? NO	☐

Product Center/AFRL
-- Tech Need Solution Template

Technology Challenge Description:

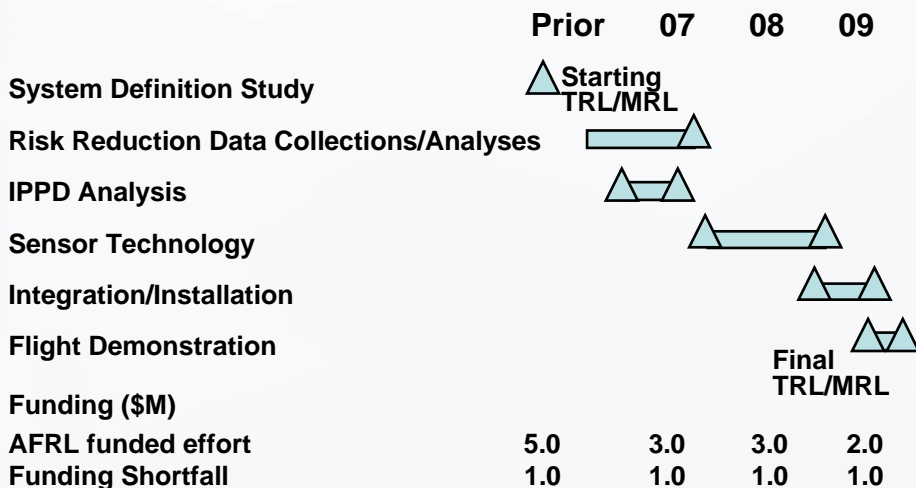**Product center defined need**

Prog Office: **F-15 (POC name)**

AFRL Proposed Approach:
- **Brief description of the proposed solution**

Core	☑
POM	☐
SBIR	☑
ManTech	☐
IR&D	☐
Referral	☐

List TDs participating in solution and Include Lead POC

Technology Investment Schedule (FY)

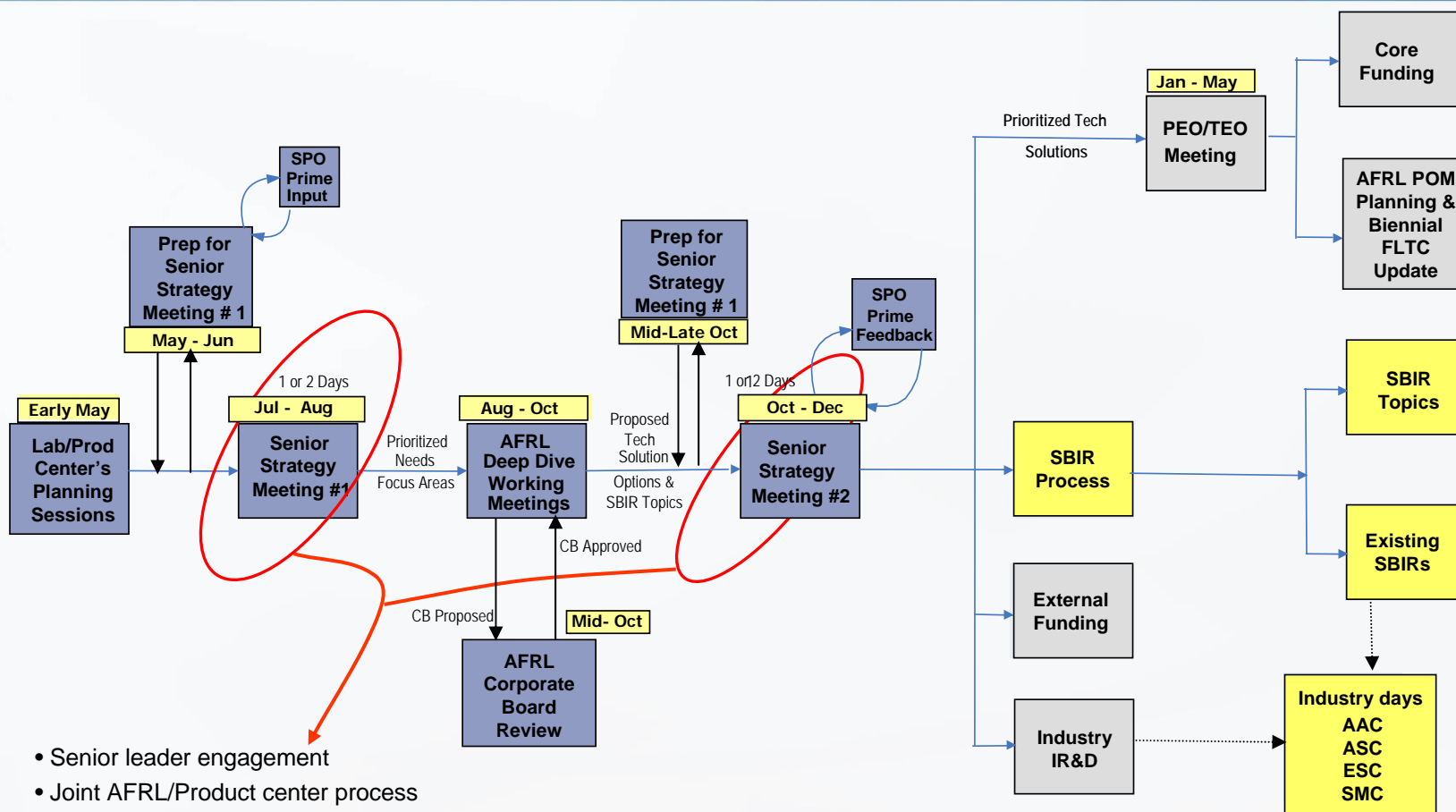|	Prior	07	08	09
System Definition Study	Starting TRL/MRL			
Risk Reduction Data Collections/Analyses				
IPPD Analysis				
Sensor Technology				
Integration/Installation				
Flight Demonstration			Final TRL/MRL	
Funding ($M)				
AFRL funded effort	5.0	3.0	3.0	2.0
Funding Shortfall	1.0	1.0	1.0	1.0

Solution Options:
- **Core Funding - Modify existing program (6.2 or 6.3)**
- **New AFRL POM Initiative (6.2 or 6.3)**
- **SBIR**
  - **Topic: "Interesting SBIR prog" (ID potential Jumbo topics) in FYxx**
  - **Modify existing Phase I or II prog**
- **7.8 (ManTech) Effort**
- **IR&D opportunity**
- **Identify other agency S&T efforts**
- **External programs (Customer, other agency)**

Air Force Technology Needs Gathering Process

- Senior leader engagement
- Joint AFRL/Product center process
- Multi-directorate AFRL engagement
- PEO/TEO approval
- SPO Primes participation

Strategy Driven Process

AF CPP Strategy

- Utilize CPP to significantly strengthen the impact and appreciation of the SBIR Program for AF PEOs and staff

  - Strategic vs. Tactical framework

  - Improve connectivity among all critical AF SBIR program participants

    - PEO Organizations/Log Centers/Test Centers

    - AF Research Lab

    - PEO Prime Contractors and Suppliers

  - Increase technology transition opportunities to support the Warfighter

- SBIR Phase 2 Success Stories
  - Track and record all AF SBIR product transitions (Phase III)

- Coordinates with Local AF SBIR Program Managers
  - Assists in identifying SBIR Phase 2 programs with high probability of transitioning

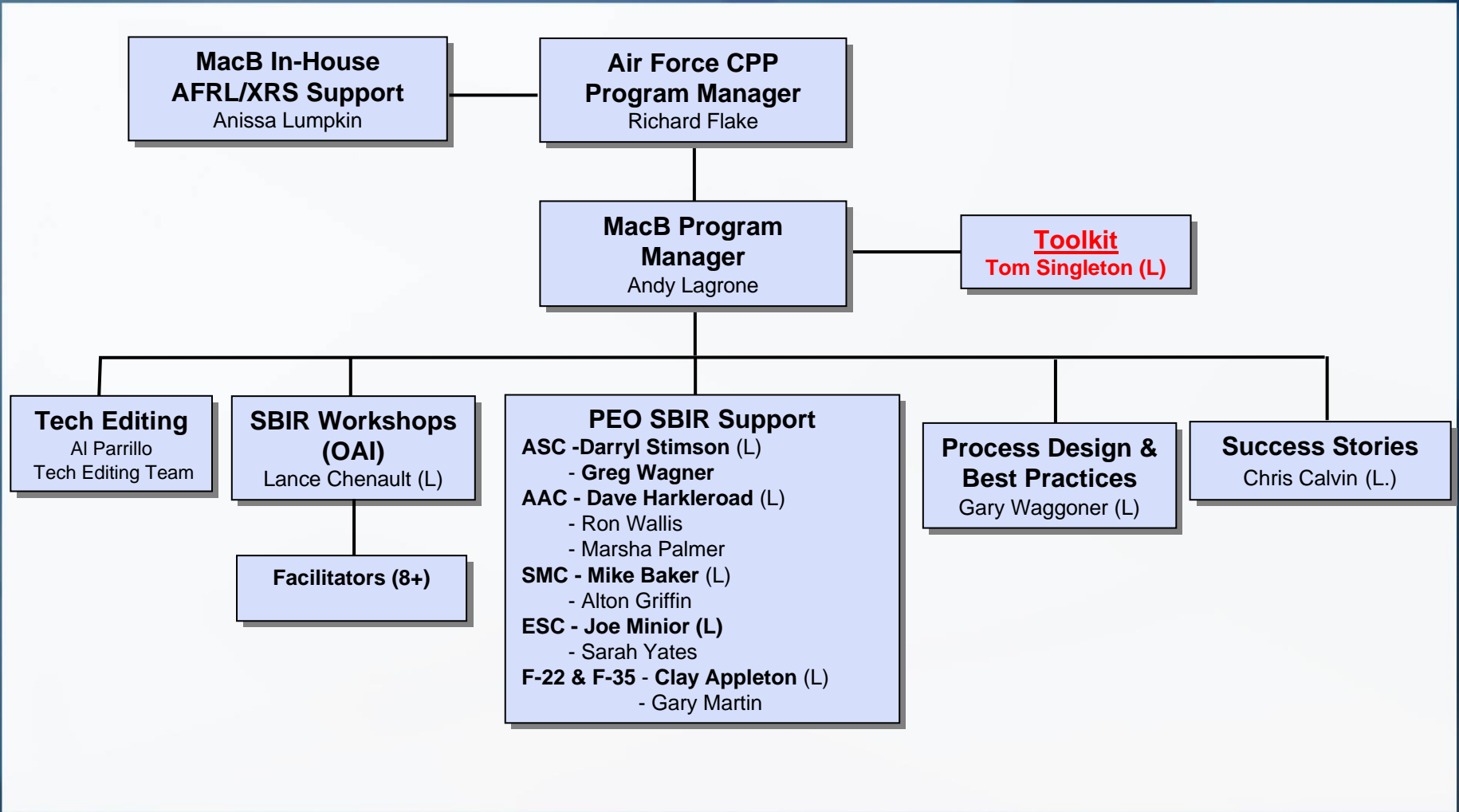- Facilitates all aspects of SBIR Workshops

Air Force CPP Implementation

- Use needs gathering process to identify SBIR Topics tied directly to Acquisition Technology Based Needs
  - Transition Agents are Active members on AF PEO Need gathering teams

- Supports AF acquisition program offices in gathering topic inputs
  - provide a bridge between the laboratory & product centers & both program offices (JSF & F-22);
  - Product Centers:
    - Space and Missile Systems Center (SMC)
    - Aeronautical Systems Center (ASC)
    - Electronic Systems Center (ESC)
    - Air Armament Center (AAC)

- Coordinates Prime Contractor Input
  - Assist with Specific SBIR Topic Generation

- Helps develop transition strategies, plans & agreements
  - **S**BIR **T**echnology **T**ransition **P**lan (STTP)

SBIR Transition Support Team
-- *"Transition Agents"*

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┌─────────────────────────┐        ┌─────────────────────────┐
│    MacB In-House         │        │     Air Force CPP        │
│  AFRL/XRS Support        │────────│   Program Manager        │
│   Anissa Lumpkin         │        │    Richard Flake         │
└─────────────────────────┘        └─────────────────────────┘
                                               │
                                    ┌─────────────────────────┐      ┌─────────────────────────┐
                                    │    MacB Program          │      │       Toolkit            │
                                    │     Manager              │──────│  Tom Singleton (L)       │
                                    │    Andy Lagrone          │      └─────────────────────────┘
                                    └─────────────────────────┘
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Tech Editing
Al Parrillo
Tech Editing Team

SBIR Workshops (OAI)
Lance Chenault (L)

Facilitators (8+)

PEO SBIR Support
ASC -Darryl Stimson (L)
 - **Greg Wagner**
AAC - Dave Harkleroad (L)
 - Ron Wallis
 - Marsha Palmer
SMC - Mike Baker (L)
 - Alton Griffin
ESC - Joe Minior (L)
 - Sarah Yates
F-22 & F-35 - **Clay Appleton** (L)
 - Gary Martin

Process Design & Best Practices
Gary Waggoner (L)

Success Stories
Chris Calvin (L.)

Tool-Kit (Assistance Instruments)

- SBIR
  - Enhancements
  - Extensions
- Mission funding
  - AFRL
  - PEO
- IR&D funding
- Mentor-Protégé
- Manufacturing Technical Assistance Production Program (MTAPP)
- Etc.

SBIR Workshop Planning Process

- Data Mining
  - Match PEO needs to existing Phase II SBIRs
- Technical POC
  - Make contact with Government Technical POCs to verify SBIR status
- Small Business
  - Collect information from Small Business Principle Investigators
- Primes/Industry
  - Review SBIR Business summary reports
  - Select small business for invitation to workshop
- AF Acts as "Honest Broker" & Workshop Facilitator
- MacB Transition Team
  - Facilitate one-on-one sessions between SBIR & supply chain contractors

SBIR Workshops

- Air Force conducts interchange workshops between industry supply chain & small business contractors

  - JSF & F-22 Industry Workshop   Nov 07
  - ESC Industry Workshop   Feb 08
  - SMC Industry Workshop   Apr 08
  - ASC Industry Workshop   Summer 08

- Objectives of Workshops
  - Identify areas of mutual interest
  - Initiate a "Way Forward" for small businesses and supply chain contractors

Small Businesses - By invitation only

Technical Information Document

- SBIR Topic Number/Contract Number/SBIR Project Title
- Company Name
- Government SBIR PM and TPOC
- Description of Work (Phase II Abstract)

Collected prior to TPOC calls

- Verify Company PI and POC contact information
- Additional Funding (Extension/Enhanced)
- Current status of Technology Development
  - Meeting milestones
  - Expected TRL at completion
- Potential match for PEO need?

Collected from TPOC

Business Information Document

- SBIR Topic Number/Contract Number/SBIR Project Title
- Company Name
- Company PI and POC contact information
- Description of Work (Phase II Abstract)

Collected prior to TPOC calls

- Do they have:
  - Tech Transition/Commercialization Experience
  - Ability to manufacture the technology
  - Past/current contact with major DOD Primes/Suppliers
  - Industry certifications (ISO 9001, ASE, EN 2000, etc.)
- Do they intend to:
  - Manufacture the technology
  - License the technology

Collected from TPOC
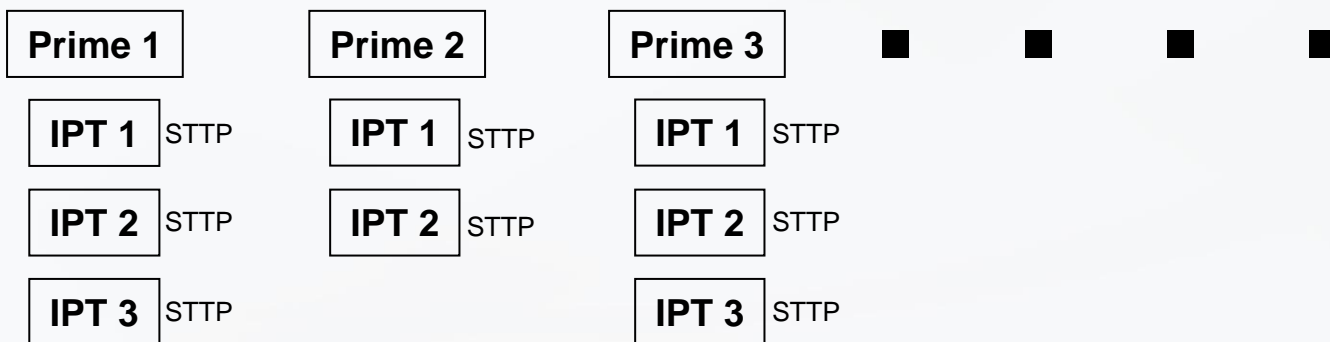
Business Summary Document

- SBIR Topic Number/Contract Number/SBIR Project Title
- Company Name
- Company PI and POC contact information
- Description of Work (Phase II Abstract)
- Status of:
    - Funding (Extension/Enhanced)
    - Technology Development
- Company Qualifications:
    - Tech Transition/Commercialization Experience
    - Ability to manufacture the technology
    - Past/current contact with major DOD Primes/Suppliers
    - Industry certifications (ISO 9001, ASE, EN 2000, etc.)
- Company intend to:
    - Manufacture the technology
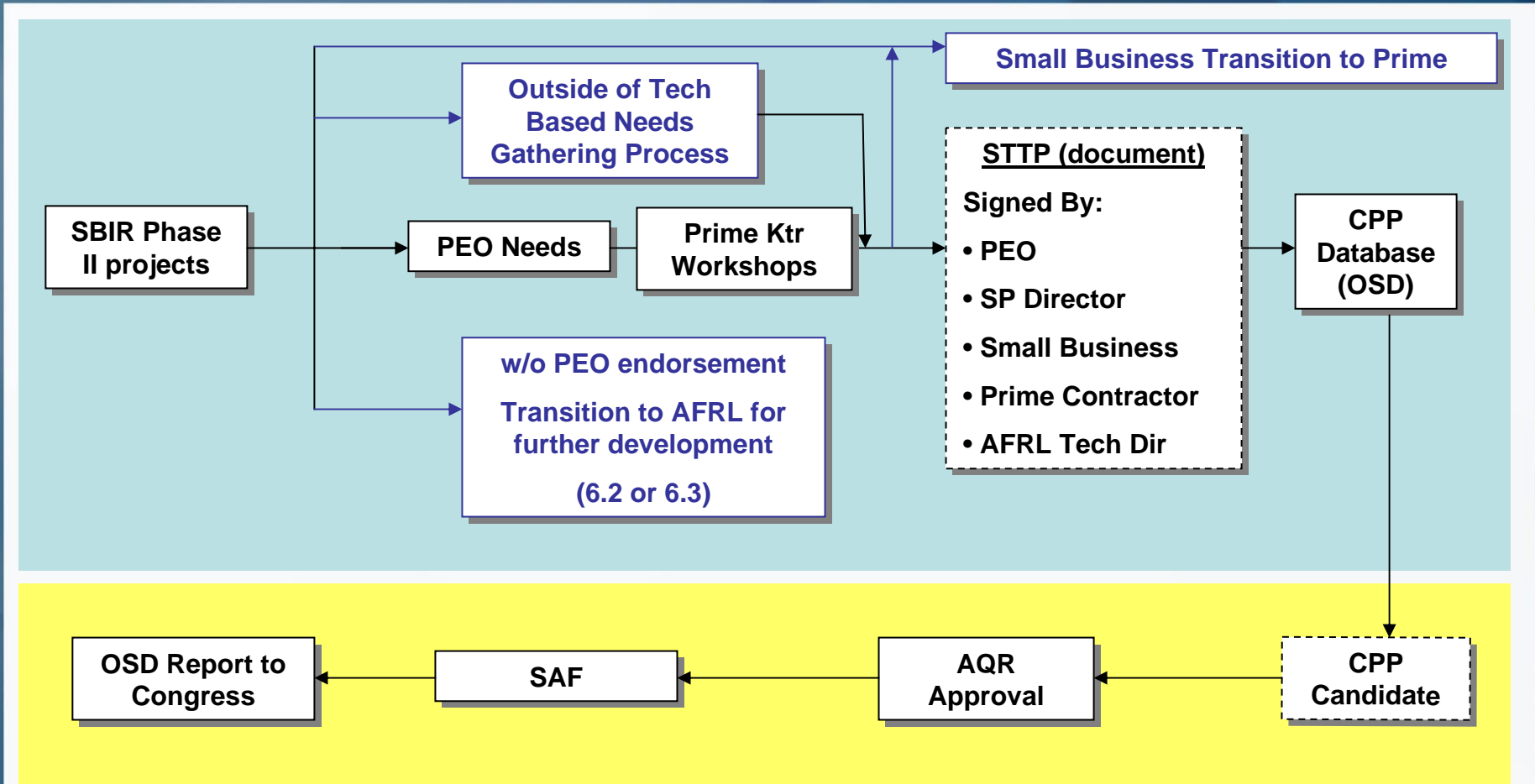   - License the technology

Workshop Follow-Up Process

- Facilitators Conduct One-on-One Wrap-Up for each session

- Transition Team conducts follow-up telecons, arrange meetings, etc.

- Transition Team coordinates plans with AF stakeholders
  - Initiates SBIR Technology Transition Plan (STTP) as needed

Prime 1	Prime 2	Prime 3	■	■	■	■
IPT 1 STTP	IPT 1 STTP	IPT 1 STTP				
IPT 2 STTP	IPT 2 STTP	IPT 2 STTP				
IPT 3 STTP		IPT 3 STTP				

Primes – Be Proactive!

AF SBIR Transition Support Process

SBIR Phase II projects → **PEO Needs** → **Prime Ktr Workshops**

Outside of Tech Based Needs Gathering Process

Small Business Transition to Prime

w/o PEO endorsement
Transition to AFRL for further development
(6.2 or 6.3)

STTP (document)
Signed By:
- **PEO**
- **SP Director**
- **Small Business**
- **Prime Contractor**
- **AFRL Tech Dir**

CPP Database (OSD)

CPP Candidate

AQR Approval

SAF

OSD Report to Congress

☐ **AF SBIR CPP Manager**   ☐ **MacAulay-Brown Inc.**

- Provides new SBIR Topic Allocation
  - Increased Focus on Product Center Tech needs/challenges

- Doesn't require a data call
  - Internal AF Process
  - Transition agents facilitating necessary collaborations

- Accelerates technology transition of successfully developed SBIR technologies

- Provides method to rapidly address critical SBIR technologies identified by warfighters

AF SBIR program is CPP