Joint Science and Technology Office

Chemical and Biological Defense Program

Beyond SBIR Phase II:
Bringing Technological Edge to the Warfighter

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Defense Threat Reduction Agency
Chemical/Biological Technologies Directorate

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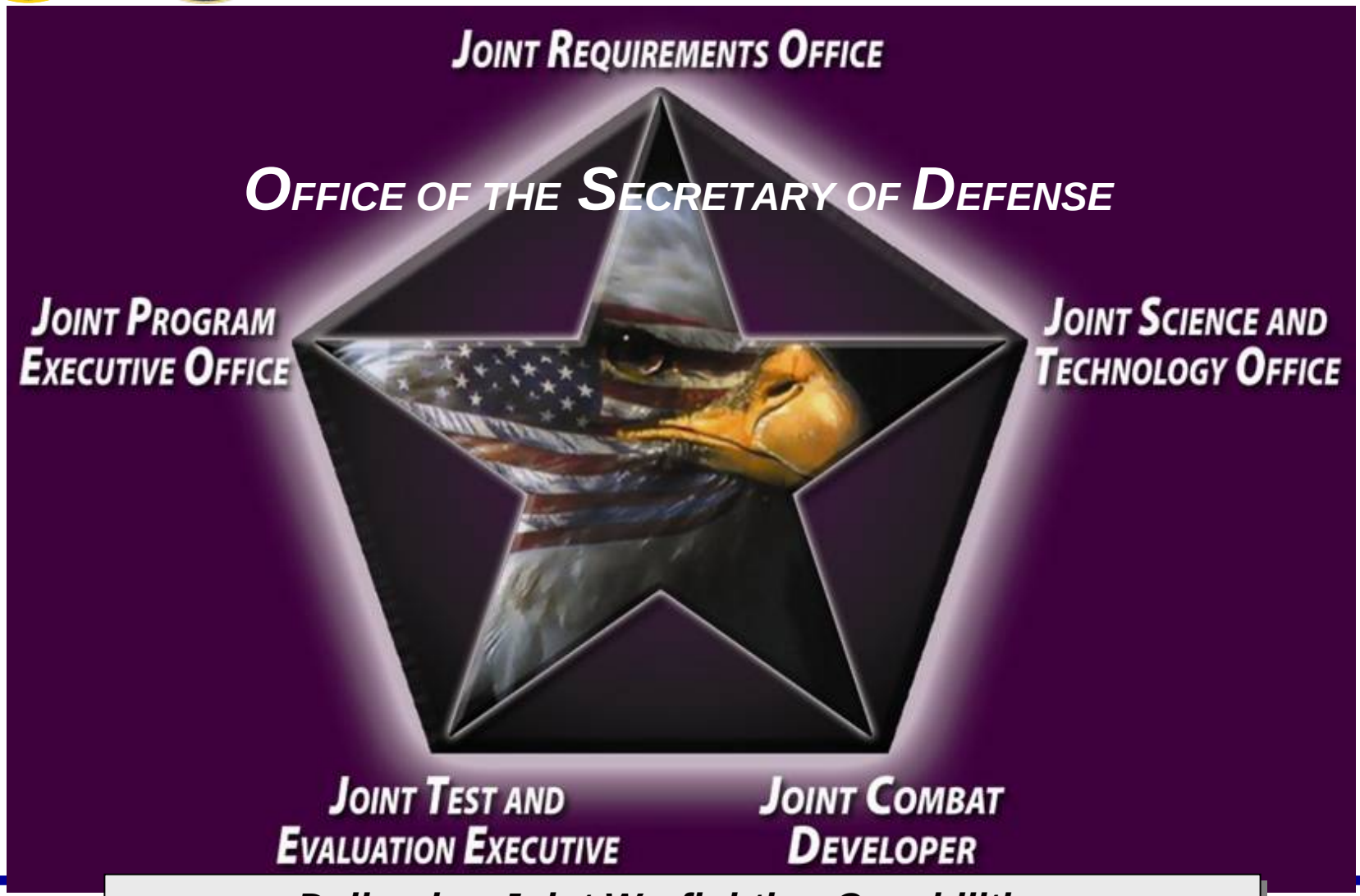
Agenda

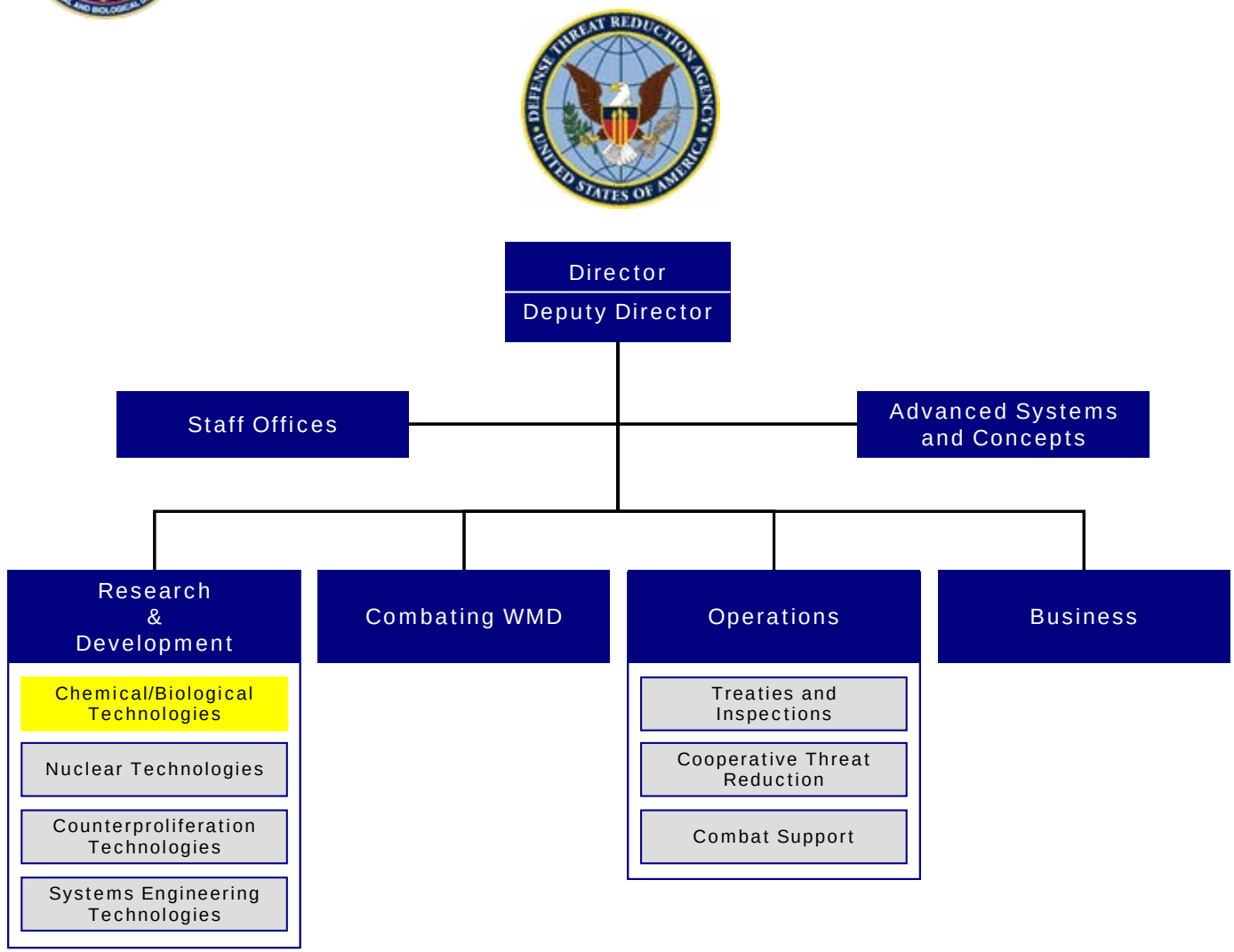
- Who are we – CBDP Program Overview
- CBD SBIR Program
- Phase III & Beyond – Maximizing Your Opportunities

We are the S&T arm of the CBDP



Delivering Joint Warfighting Capabilities

We live in two worlds…as a part of DTRA



...and as a part of the Chemical and Biological Defense Program team

- Combatant Commanders
- Services

OSD provides oversight

Joint Requirements Office (JRO)

Required Capabilities

JFOCS

Prioritized Needs

Test & Evaluation

S&T Gaps

Joint Science & Technology Office DTRA/CB

Mature Technologies

Joint Program Executive Office (JPEO)

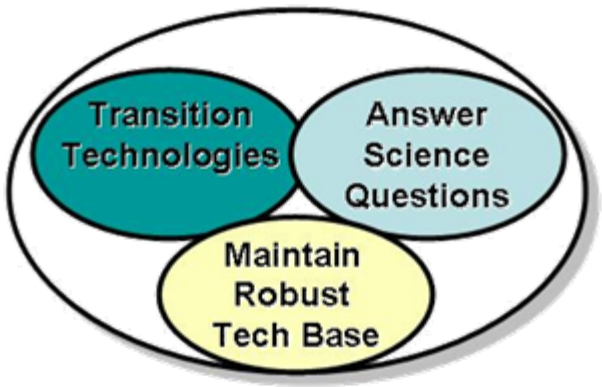
Solutions

6.1-6.4

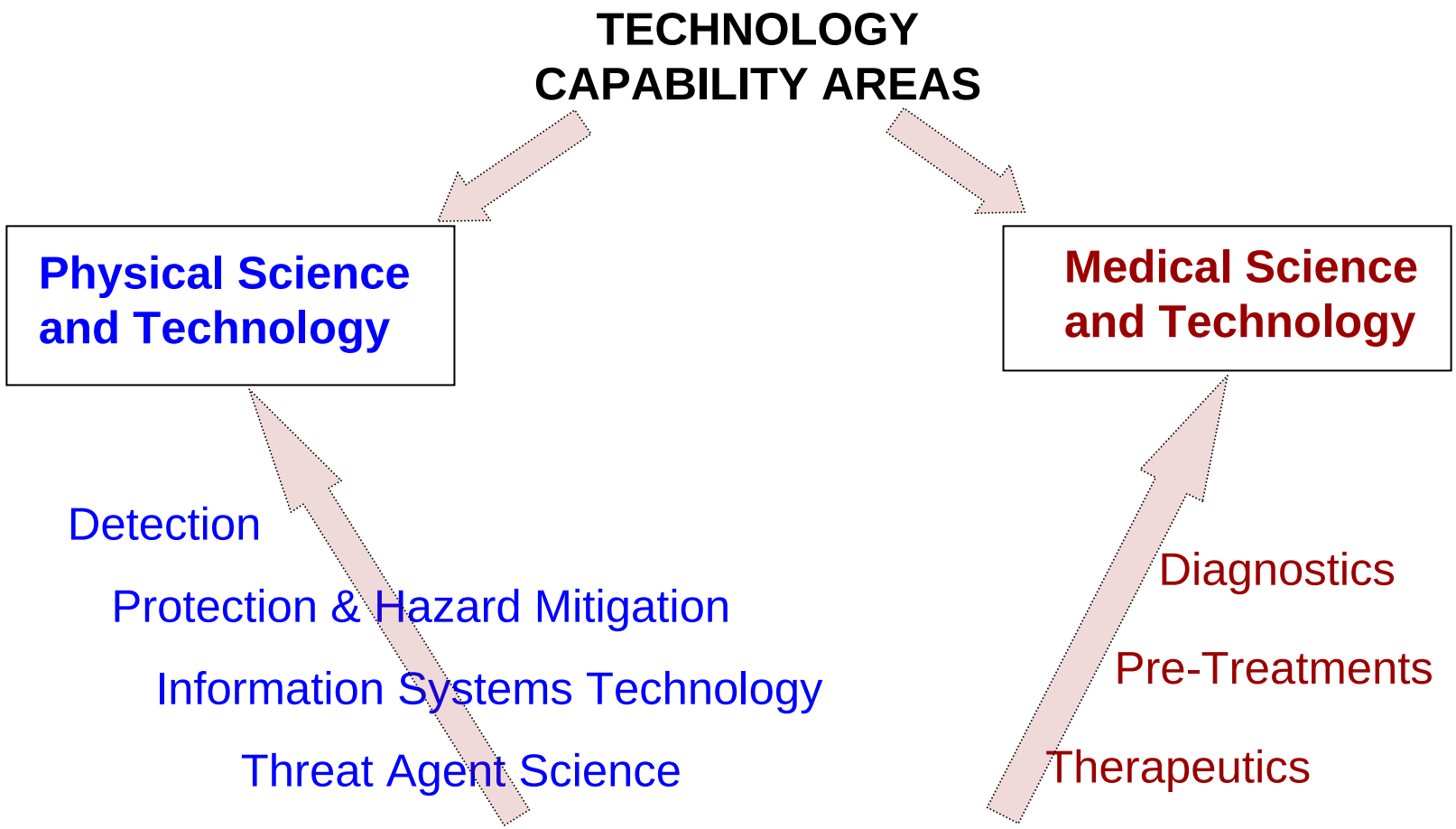
6.4-6.5, Procurement

Our S&T mission

DTRA Chem Bio Technologies Directorate manages and integrates the development, demonstration, and transition of timely and effective chemical and biological defense solutions for the Department of Defense, while serving as the focal point for science and technology expertise. The DTRA Chem Bio Technologies Directorate provides the most innovative capabilities by collaborating with mission partners, other government agencies, industry and academia.



Joint Chemical and Biological Defense Program Taxonomy



Our S&T capability areas support the major CB operational concepts

Sense

CBRN Detection
- Point
- Stand-off
- Reconnaissance
- Medical Diagnostics

Detection

C4ISR

Shield

Individual Protection
- Percutaneous
- Respiratory
- Ocular

Protection & Hazard Mitigation

Collective Protection
- Mobile
- Transportable
- Fixed

Prophylaxis
- Biological
- Chemical
- Radiological

Pretreatments

C4ISR

Sustain

Decontamination
- Individual
- Equipment
- Fixed Site

Protection & Hazard Mitigation

Medical Treatments
- Chemical
- Biological
- Radiological

Therapeutics

Medical Diagnostics

Diagnostics

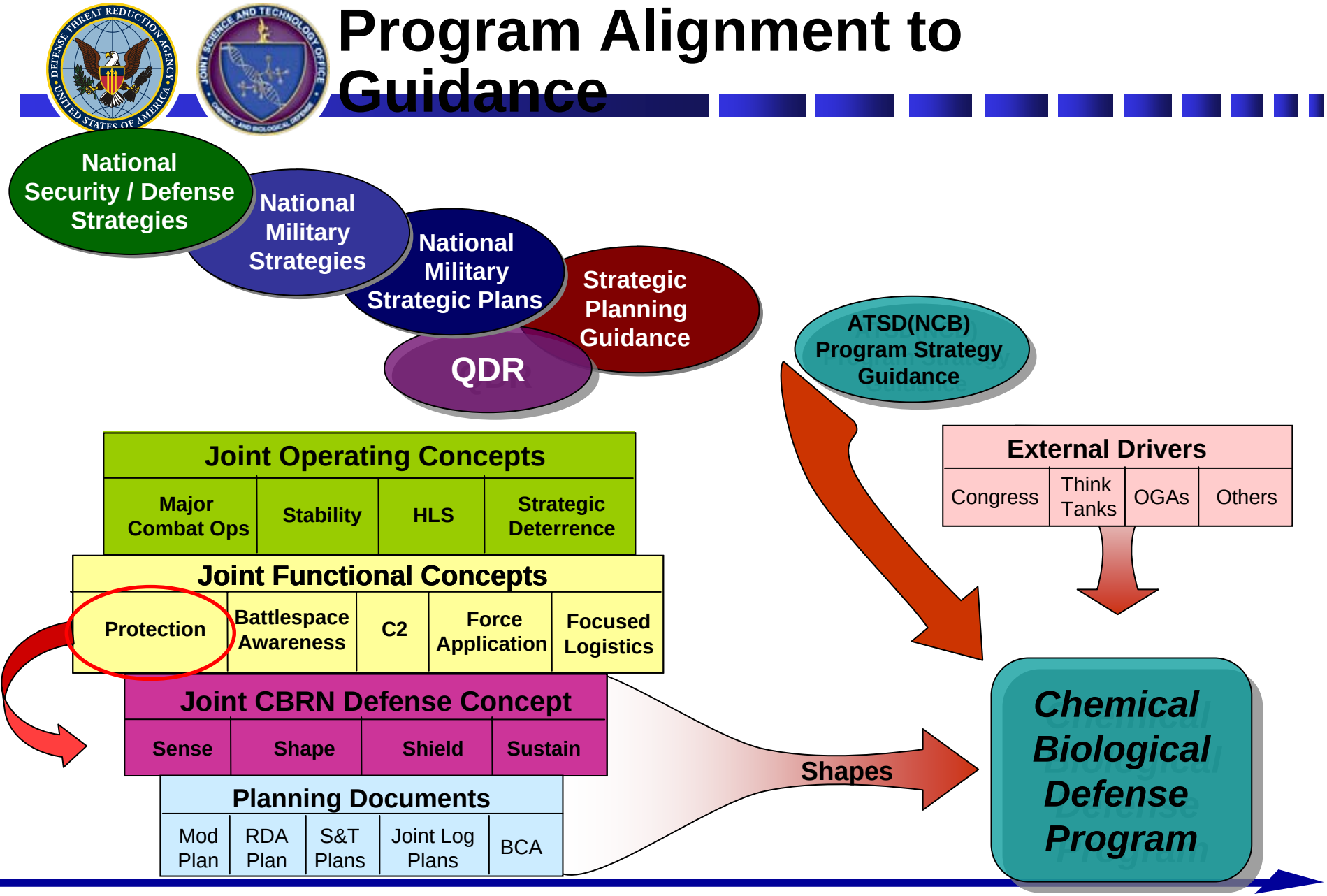
C4ISR

Shape

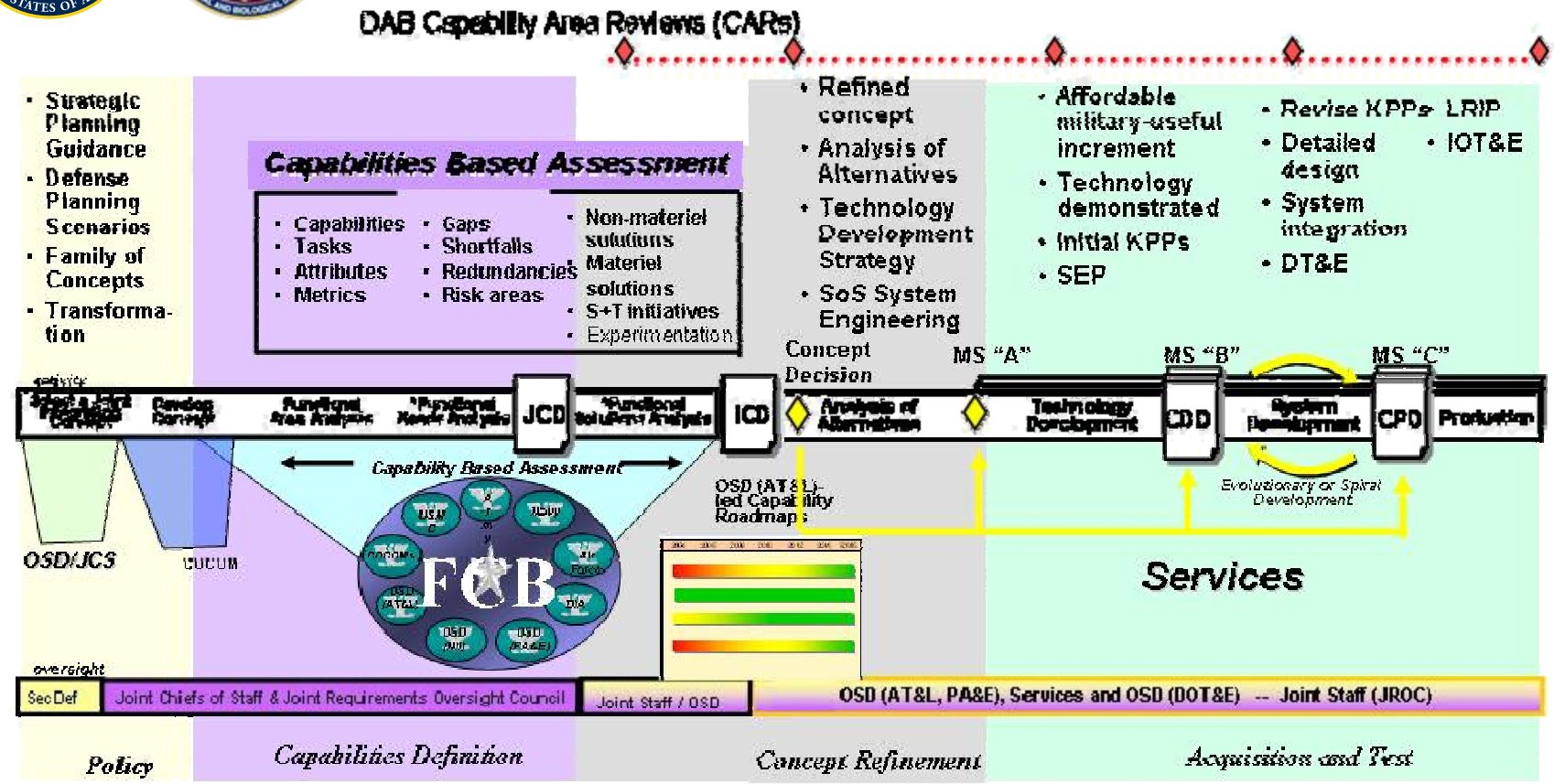
Battle Analysis
Battle Management
Modeling
Simulation - Training
Integrated Early Warning
Medical Surveillance

Mod-Sim & Battlespace Awareness

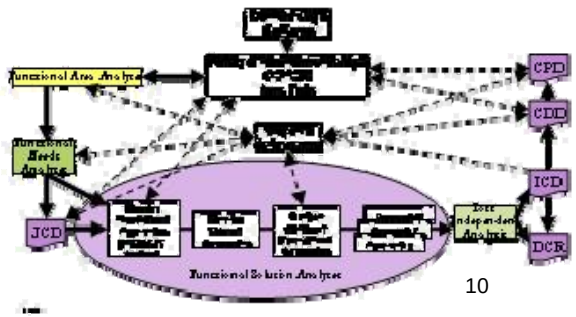
Program Alignment to Guidance



Capability, Acquisition & Test Process



JCIDS Process Map from 3170



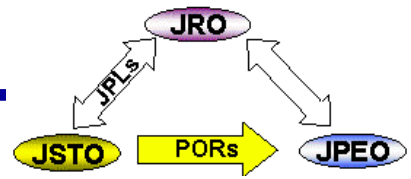
Our CBDP projects target the Joint Priority List

Capability	No. Efforts	($K)
(1) Respiratory and Ocular Protection	7	3,090
(2) Integrated Early Warning	8	4,431
(3) NBC Reconnaissance		
(4) Biological Standoff Detection	4	9,848
(5) Percutaneous Protection	7	4,398
(6) Chemical Standoff Detection	3	1,508
(7) Biological Prophylaxis	48	32,298
(8) Biological Point Detection	12	14,233
(9) Individual Decontamination	0	0
(10) Chemical Point Detection	5	3,627
(11) Chemical Prophylaxis	20	17,630
(12) Medical Surveillance (M&S)	4	1,848
(13) Radiological Standoff Detection		
(14) Battle Mgmt Systems	19	11,494

Capability	No. Effort	($K)
(15) Transportable Collective Protect.	11	2,450
(16) Medical Diagnosis	41	23,012
(17) Equipment Decontamination	9	4,393
(18) Radiological Point Detection		
(19) Battle Analysis	24	9,898
(20) Medical Therapeutics Biological	70	34,704
(21) Medical Therapeutics Chemical	78	40,303
(22) Human Factors and Interfaces		
(23) Mobile Collective Protection	9	1,975
(24) Medical Therapeutics Radiological	6	3,737
(25) Sensitive Equipment Decon	5	3,372
(26) Radiological Prophylaxis	0	0
(27) Fixed Site Collective Protection	13	3,111
(28) Modeling and Simulation Support		
(29) Fixed Site Decontamination	2	800

NOTE: (#) equates to the Joint Priority List rankings

Physical S&T Area Medical S&T Area Adv Develop Area



New S&T is solicited from many sources

…to include the small business community

- Total CB SBIR funds invested with small businesses during FY05-FY07 exceeds $25M.
- 58 Phase I and 32 Phase II contract awards have been made to 54 small businesses during the past three years.
- Small businesses in 26 states have received awards from JSTO-CBD to conduct research and development projects.
- Conduct one Phase I solicitation, annually; invite Phase II proposals annually based on Phase I outcome.

CBD SBIR Process

Phase I

Feasibility Study

$70K, 6 months

(+ $30K option upon Phase II selection)

Phase II

Prototype Development

$750K, 2 years

Problem Transition Area: The Valley of Death

Phase III

Commercialization

no SBIR Funds

Phase I + Phase II = $850K Total SBIR

All projects are funded via contract

Overcoming the Phase II transition hurdle – help us help you

- Know your customer – they are your best proponent
- Know the organization's mission needs & technical requirements
- Know the end-user(s) & the ConOps
  - As early as Phase I, the deployment and use scenarios of the technology must be considered
- Substantiate performance with test & evaluation – data speaks volumes!
  - Provides credibility to your Science & Technology

Technology Transition: Phase II vs. Phase III

- Phase II
  - Technology Readiness Level is one element used to identify prototype utility at conclusion of Phase II
  - Accelerate development cycle: complete Phase II in less than 24-months
- Phase III
  - No SBIR Funds
  - Must fund from either: CBDP ‘core’ funds through JSTO or JPEO budget activities; other U.S. Government sources; or non-Government sources

Conclusions

"New ideas pass through three periods:

- ✓ *It can't be done.*
- ✓ *It probably can be done, but it's not worth doing.*
- ✓ *I knew it was a good idea all along !"*

— Arthur C. Clarke