

Business Conference Workshop

Integrated Product Teams



Bradford M. Brown

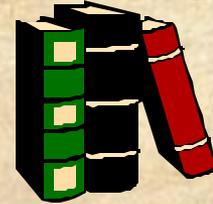
May 12, 2004

Objectives for Today



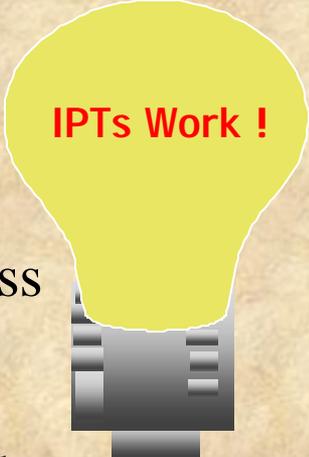
- Understand the Genesis of Integrated Product and Process Development (IPPD)
- Discuss Integrated Product Team (IPT) Processes and Products
- Discuss Key IPT Issues in Defense Acquisition (DAB) Decisions

IPPD Genesis



- IPPD Evolved from the Concurrent or Systems Engineering Process
 - Systematic approach to the integrated design of products
 - Balances all aspects of total system performance and total ownership costs
- IPPD simultaneously integrates
 - All essential acquisition activities
 - Through the use of multidisciplinary teams to optimize the design, manufacturing and supportability processes
 - Key tenet is multidisciplinary teamwork through the use of IPTs
- IPTs are composed of representatives from appropriate disciplines
 - To build successful programs
 - Identify and resolve issues
 - Make sound and timely recommendations to facilitate decision making

Why IPTs



IPTs Work !

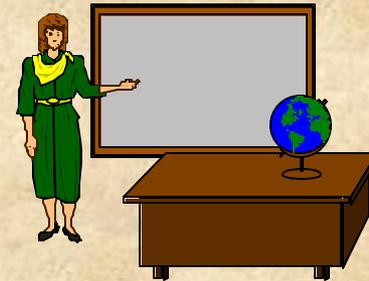
- **Performance and results** have replaced process as the main drivers in the acquisition system
- IPTs have been recognized and singled out as the **most significant improvement** in acquisition reform
- **“Integrated product teams work.** Effective integrated product teams can make significant product development decisions quickly and without relying heavily on consultation with organizations outside the **team.” GAO Report 2001**

IPT Purpose and Types



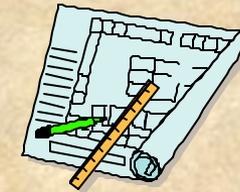
- **PURPOSE:** All functional disciplines work together to:
 - build successful, balanced programs
 - identify and resolve issues
 - make sound and timely recommendations
- **Many types of IPTs.** For example:
 - **Overarching IPTs (OIPT):** focus on strategic guidance, program assessment and issue resolution
 - **Working Level IPTs (WIPT/IIPT):** focus on identifying and resolving program issues, determining program status, and seeking opportunities for acquisition reform
 - **Program IPTs :** focus on program execution

IPT Roles



- For each program, there will be an OIPT and at least one WIPT
- Integrating IPT will coordinate WIPT efforts and cover all topics not otherwise assigned to another IPT
- WIPTs will focus on a particular topic, (e.g. test, cost/performance, contracting)

IPT Types, Focus, and Participant Responsibilities

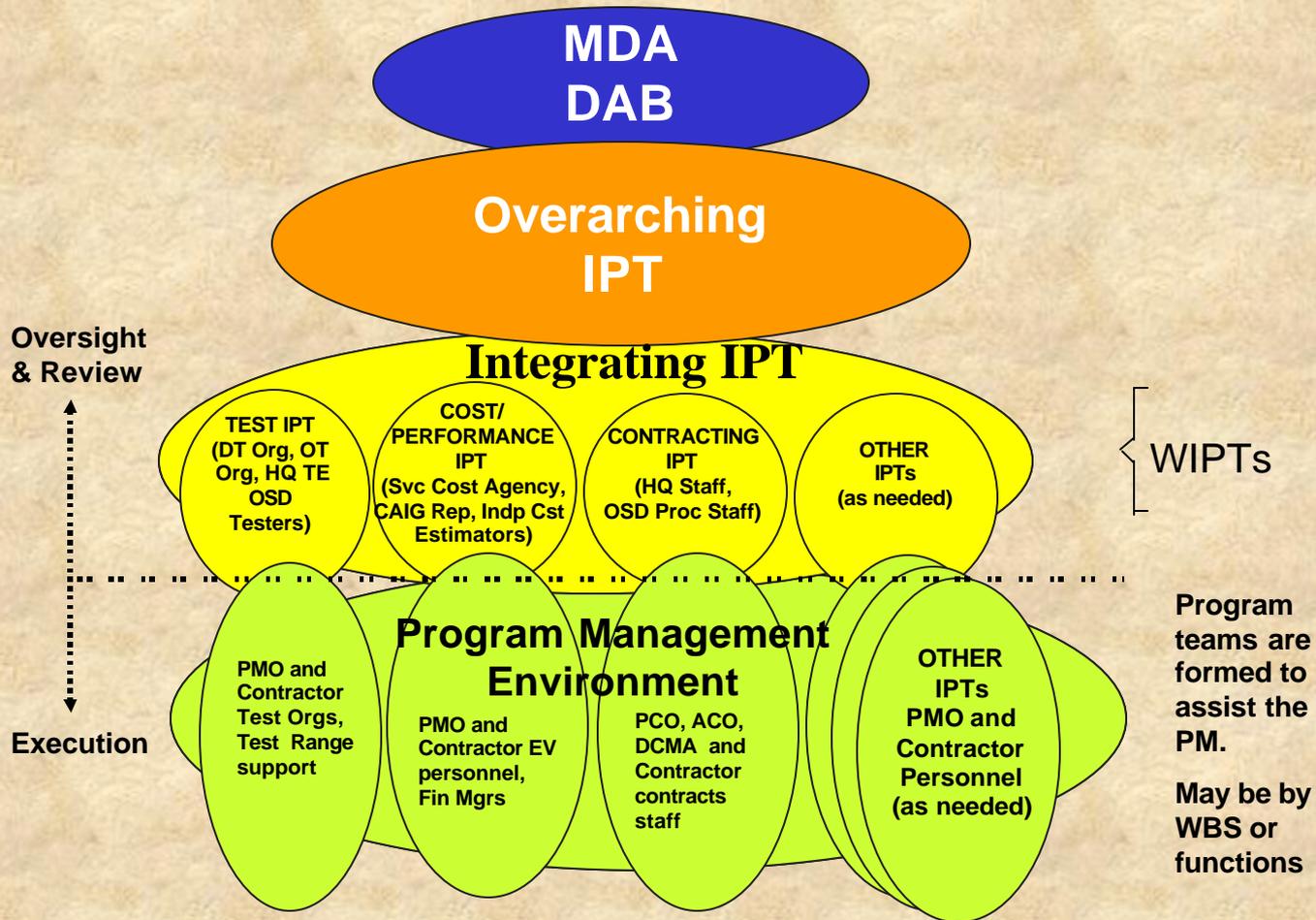


Organ-ization	Teams	Focus	Participant Responsibilities
OSD & Components	OIPT*	<ul style="list-style-type: none"> -Strategic Guidance -Tailoring -Program Assessment -Resolve Issues Elevated by WIPTs 	<ul style="list-style-type: none"> -Program Success -Functional Area Leadership -Independent Assessment -Issue Resolution
	WIPTs*	<ul style="list-style-type: none"> -Planning for Program Success -Opportunities for Acquisition Reform (e.g. innovation, streamlining) -Identify/Resolve Program Issues -Program Status 	<ul style="list-style-type: none"> -Functional Knowledge & Experience -Empowered Contribution -Recom.'s for Program Success -Communicate Status & Unresolved issues
Program Teams & System Contractors	Program IPTs**	<ul style="list-style-type: none"> -Program Execution -Identify & Implement Acquisition Reform 	<ul style="list-style-type: none"> -Manage Complete Scope of Program, Resources, & Risk -Integrate Gov't & Contractor Efforts for Report Program Status & Issues

* Covered in "Rules of the road"

** Covered in "Guide to Implementation and Management of IPPD in DoD Acquisition"

Defense Acquisition IPT Structure



Role of Overarching IPTs



- **Address and resolve issues as they arise:**
 - Analyze completed activities
 - Examine plans for future activities
- **Structure and tailor functionally oriented WIPTs for:**
 - Cost
 - Supportability
 - User Needs
 - Schedule
 - Testing
 - Risk mgmt
 - Technical
 - Software
 - Etc.
- **For ACAT ID, OIPT Chair and MDA meet to:**
 - Determine readiness of program to proceed to M/S reviews
 - If all issues are resolved/manageable - an ADM can be issued without a formal DAB
- **Special access programs use same procedures** - except for special security arrangements

Role of IPTs and WIPTs



- Establish IPT plan of action & milestones
- Propose tailored document and milestone requirements
- Review & provide early input to documents
- Coordinate WIPT activities with the OIPT members
- Resolve or evaluate issues in a timely manner
- Assume responsibilities to obtain principal's concurrences, as well as with applicable documents or portions of document

Principles of Success Oriented IPTs



- Charter, Launch, Initiation
- Goal alignment
- Open discussions with no secrets
- Empowered, qualified team members
- Dedicated, committed and proactive participation
- Issues raised and resolved

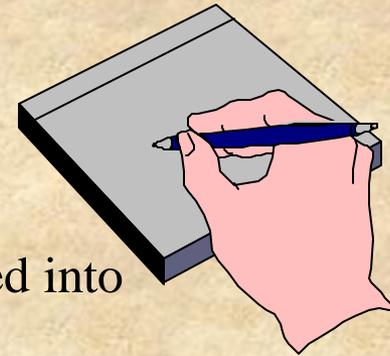
Advantages of Implementing IPPD



- Reduced overall time to deliver an operational product.
- Reduced system (product) cost.
- Reduced risk.
- Improved quality.
- Improved response to customer needs

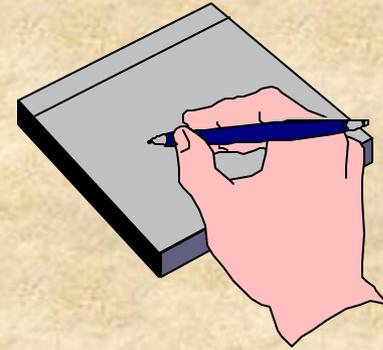
Difficulties of Applying IPPD

- Lack of top management support
- Team members not empowered
- Cultural Change
- Functional Organization not fully integrated into the IPPD process
- Lack of planning for team effort
- Staffing requirements conflict with teams
- Team members not collocated
- Insufficient team education/training
- Lessons learned and good practices not shared across teams/programs



Difficulties of Applying IPPD (continued)

- Inequality of team members
- Not invented here
- Inadequate resources
- Use of IPPD directed by contract
- Contractor uses IPPD - DoD doesn't
- DoD asks for IPPD in RFP but awards to traditional approach bidders
- Contractor proposals describe an IPPD approach that is theoretical with no first hand experience



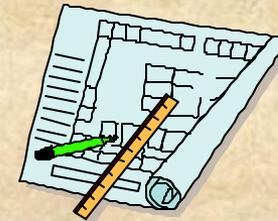
Global Lessons Learned



- **IPT philosophy takes leadership commitment from the top**
- **Need constant effort to improve communication/integration**
- **Functionals must clearly understand their roles and responsibilities**
- **Involve all stakeholders who have an interest in the outcome**
- **Training to function as a team is paramount**
- **All representatives must be empowered to make decisions**
- **Honest, open dialogue in a non hostile environment is a must**

Getting to a DAB

- What kind of teams are needed?
 - ACAT and Milestone
- Who should the team members be?
 - Level of the IPT
 - Type of Program
- What are the timelines for a DAB review?

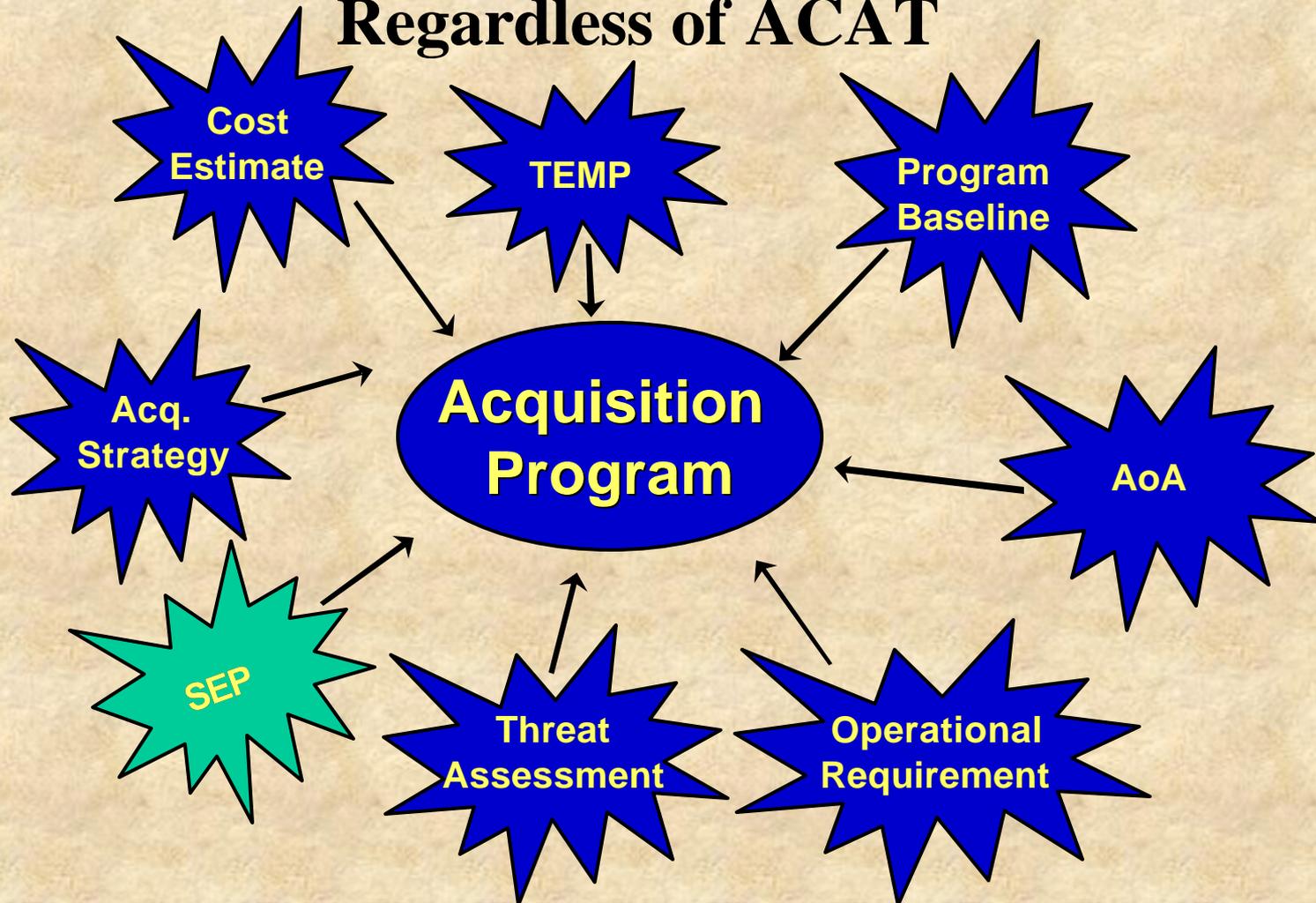


Acquisition Categories (ACAT)

Major Defense Acquisition Programs	ACAT 1D: ACAT IC:	<ul style="list-style-type: none"> • DAB review • Designated by DAE • Decision by DAE • Component review • Designated by DAE • Decision by Svc Sec/CAE 	<div style="border: 1px solid black; background-color: yellow; padding: 5px;"> \$365M RDT&E or \$2.19B Procurement (FY2000 Constant \$) </div>
Major AIS Acquisition Programs	ACAT IAM: ACAT IAC:	<ul style="list-style-type: none"> • ITOIPT review • Designated by ASD(N&II) • Decision by ASD(N&II) • Component review • Designated by ASD(N&II) • Decision made by Component Chief Information Officer 	<div style="border: 1px solid black; background-color: yellow; padding: 5px;"> \$378M Life Cycle Cost or \$126M Total Prog. Cost or \$32M Prog. Cost in any single year (FY2000 Constant \$) </div>
Major Systems	ACAT II:*	<ul style="list-style-type: none"> • Does not meet ACAT I Criteria • Designated by Svc Sec/CAE • Decision by Svc Sec/CAE 	<div style="border: 1px solid black; background-color: yellow; padding: 5px;"> \$140M RDT&E or \$660M Procurement (FY2000 Constant \$) </div>
all other systems (except for Navy & USMC)	ACAT III:	<ul style="list-style-type: none"> • Does not meet ACAT I, IA or II Criteria • Designated IAW Component policy • Decision at lowest appropriate Level 	<div style="border: 1px solid black; background-color: yellow; padding: 5px;"> No Fiscal Criteria </div>
Navy USMC	ACAT IV:	<ul style="list-style-type: none"> • Not otherwise designated ACAT I, IA, II or III • Designated IAW Component policy • Navy/USMC ACAT IVT/IVM • Decision at lowest appropriate level 	<div style="border: 1px solid black; background-color: yellow; padding: 5px;"> See SECNAVINST 5000.2B (Navy and Marine Corps) </div>

*Army has an ACAT IIA category for AIS reviewed at Army CIO level I

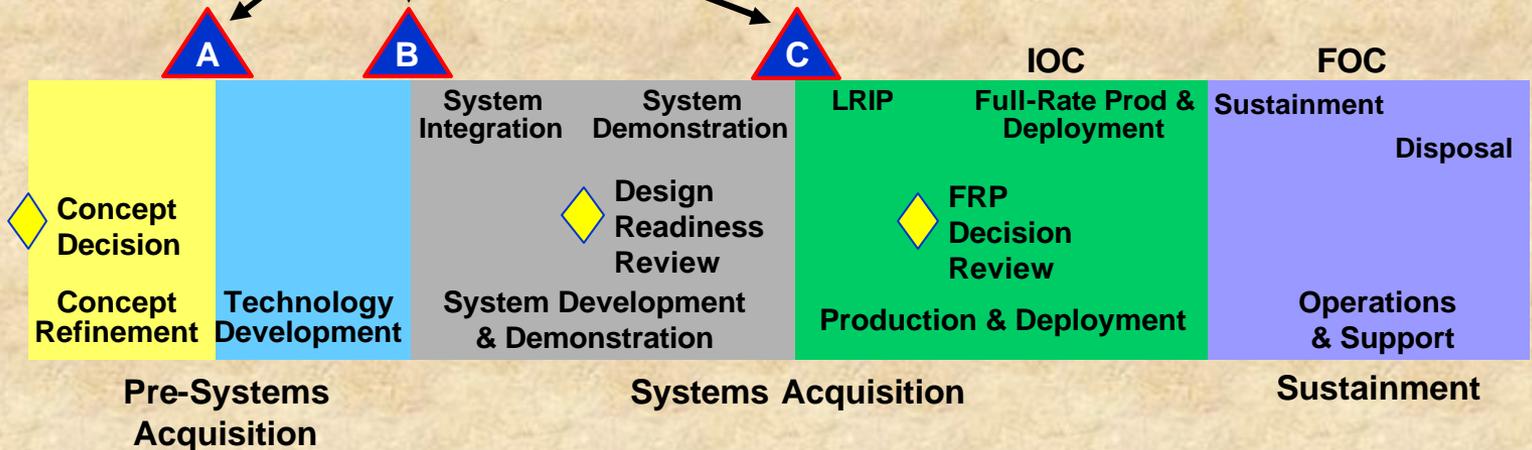
Common Elements Regardless of ACAT



The Defense Acquisition Management Framework

Technology Opportunities & User Needs

- Process entry at Milestones A, B, or C
- Entrance criteria met before entering phases
- Evolutionary Acquisition or Single Step to Full Capability



Initial Capabilities Document (ICD)

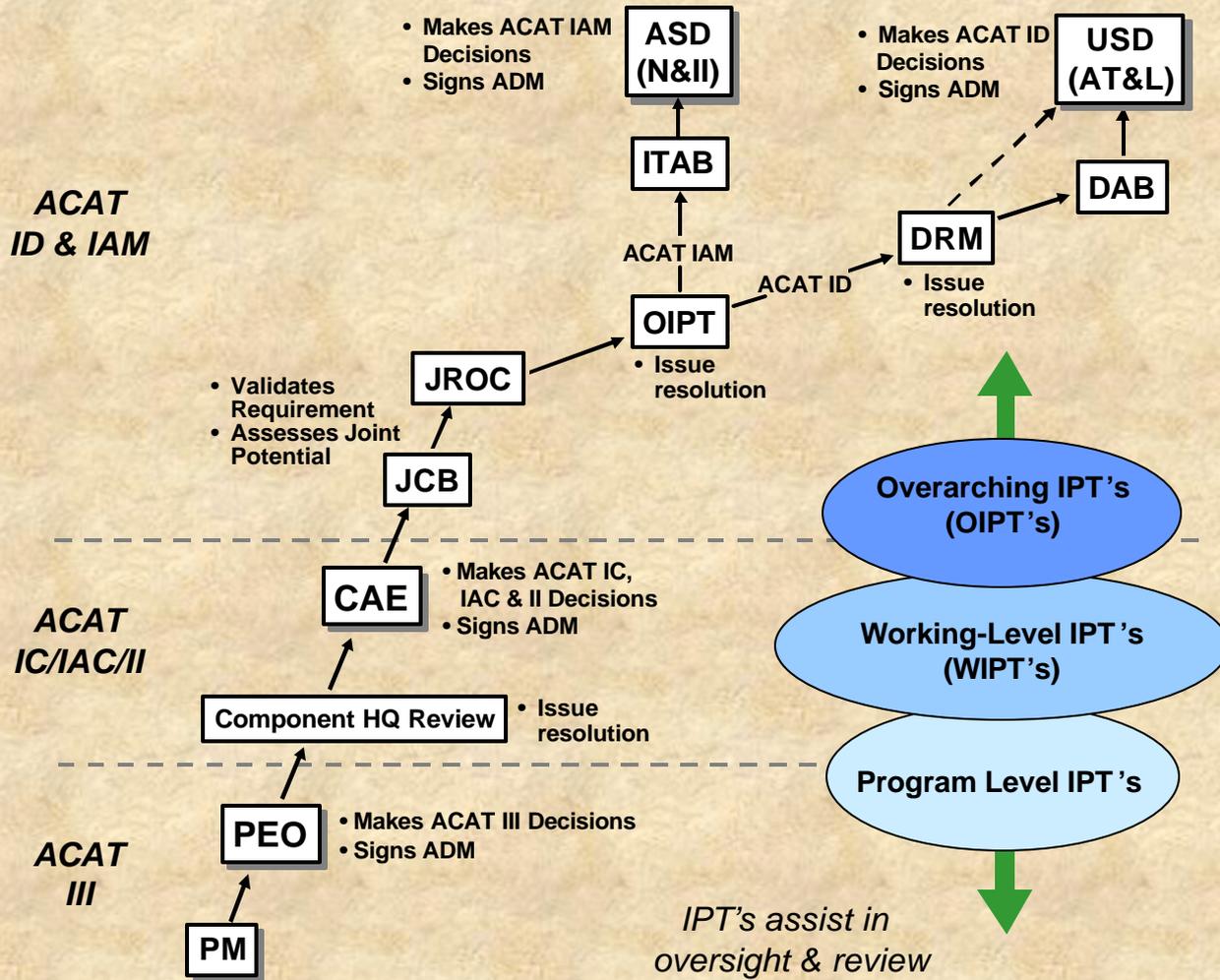
Capability Development Document (CDD)

Capability Production Document (CPD)

Validated & approved by operational validation authority

Relationship to Requirements Process

Milestone Review Process (Illustrative)



Purpose of the DAB



- Oversees ACAT ID Programs
- Conducts formal review at each milestone
- Recommends concept direction studies
- At MS B through MS C assesses:
 - Previous phase execution
 - Readiness for next phase
- May conduct program reviews between milestones

DAB Members

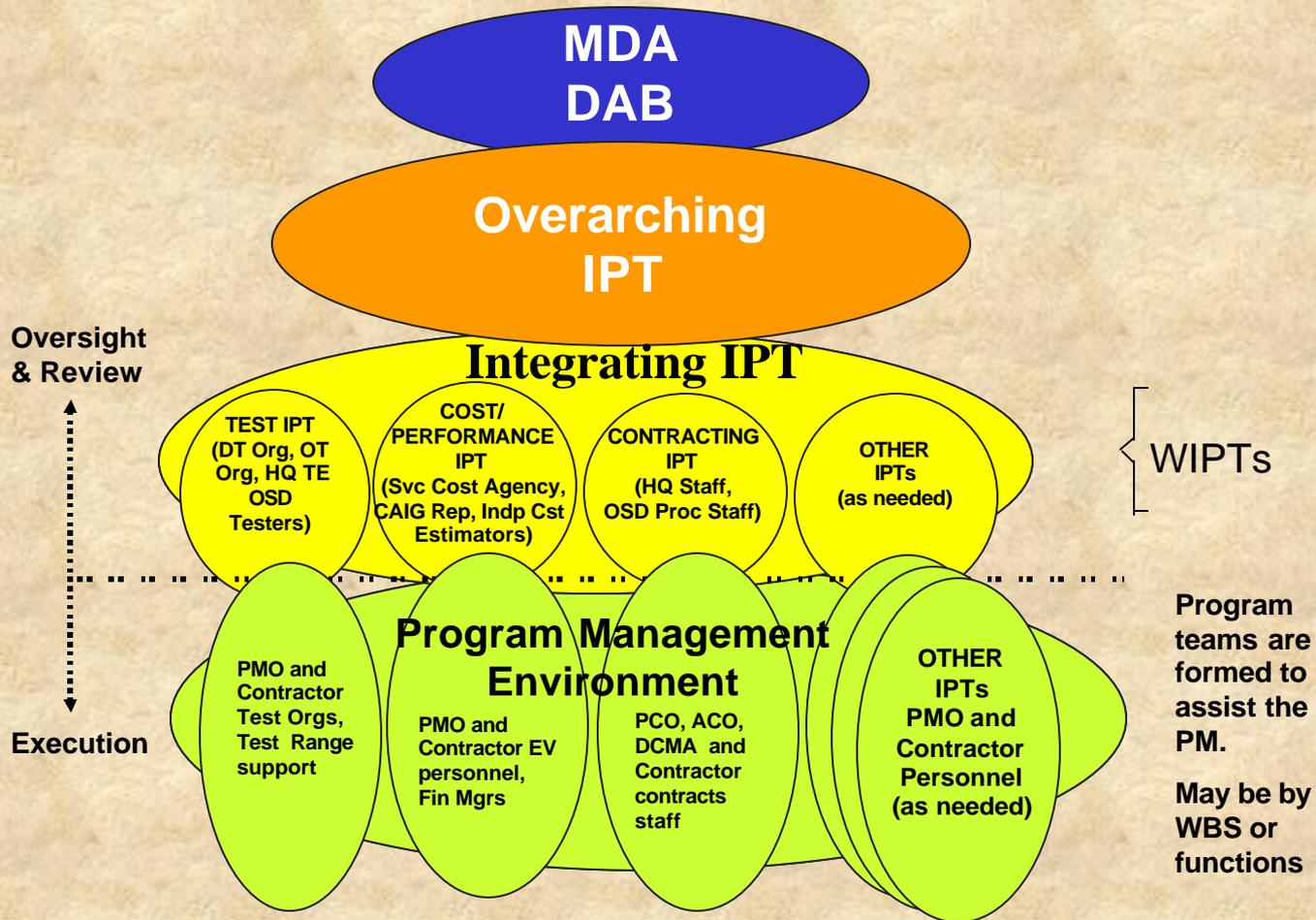


- Under Sec of Defense (Acq, Tech & Logistics) (Chair)
- Vice Chairman, JCS (Vice Chair)
- Under Sec of Defense (Comptroller)
- Under Sec of Defense (Policy)
- Under Sec of Defense (Personnel & Readiness)
- Under Sec of Defense (Intelligence)
- Asst Sec of Defense (Networks & Information Integration)/DoD CIO
- Director, Operational Test & Evaluation
- Secretaries of the Army, Navy, and Air Force

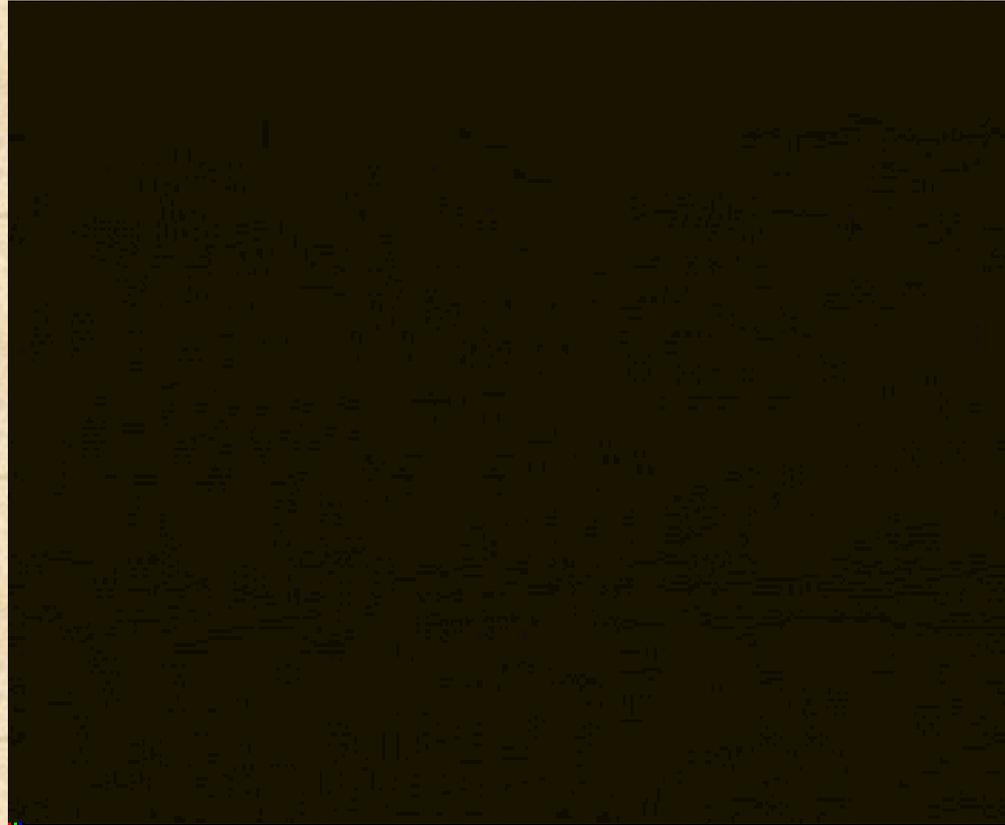
Other attendees:

- **PM briefs**
- **PEO, OIPT Leader**
- **Joint Forces Command to address JROC issues on interoperability and integration**
- **Others as invited by the DAE.**

Defense Acquisition IPT Structure

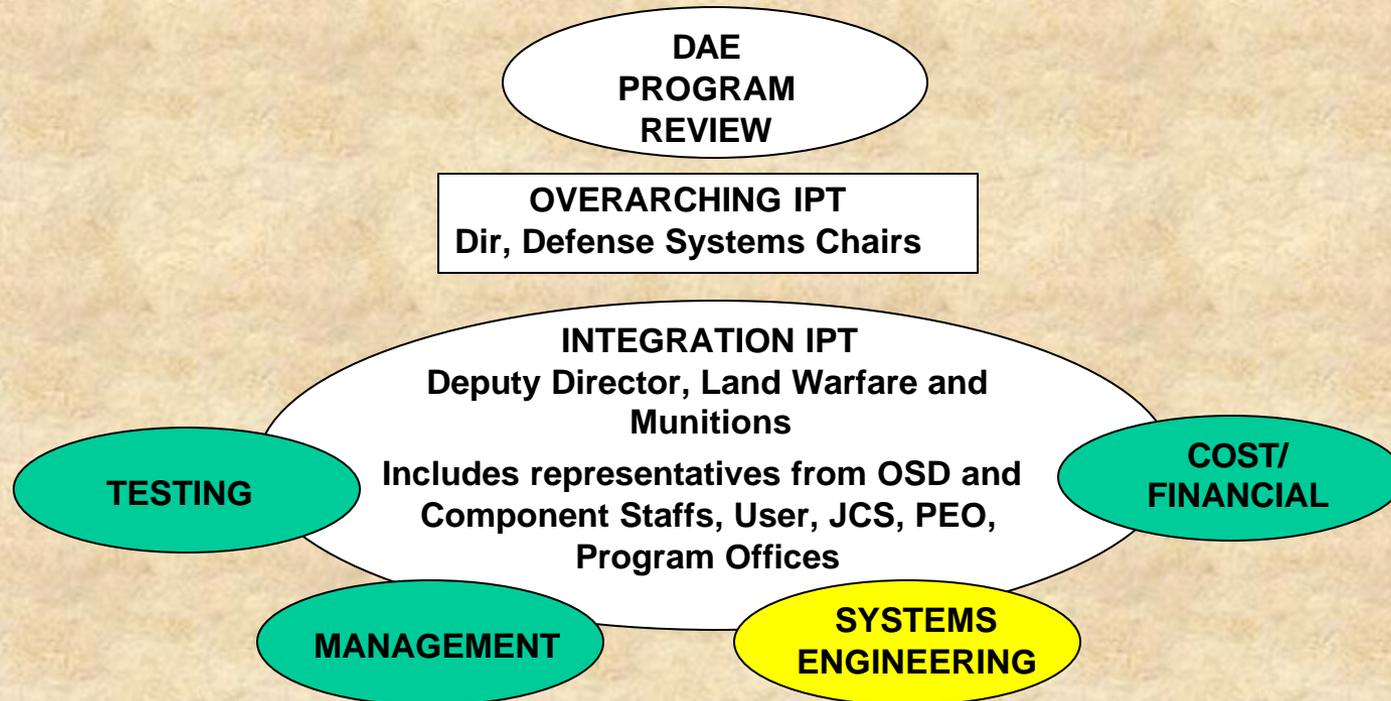


DABs are About Weapons Systems



Stryker DAB Review, February 20, 2004

IPT Structure Stryker Program

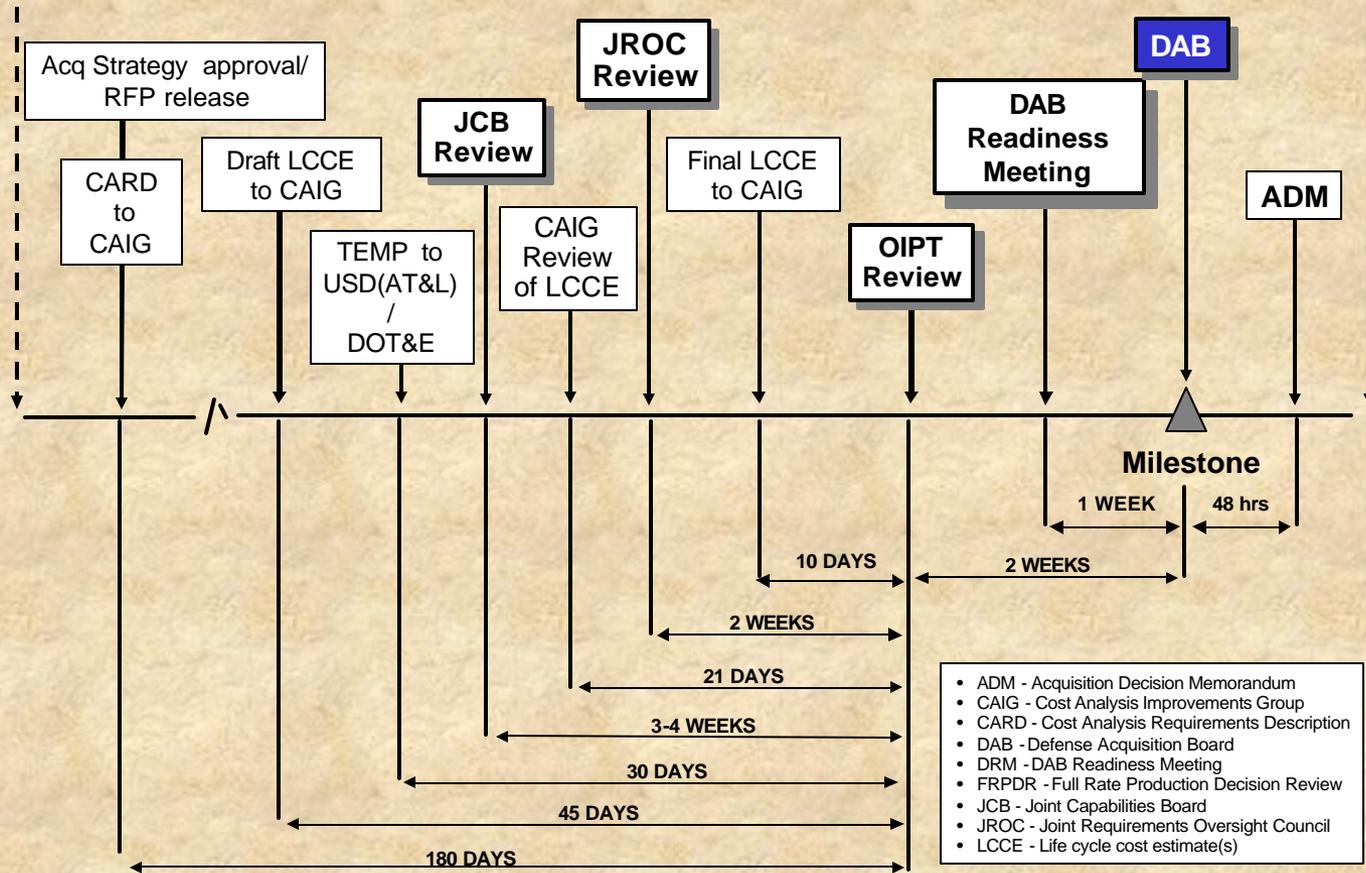


Issues are identified and resolved as part of the Functional IPT process, those issues that cannot be resolved at the lowest level are reviewed/resolved at the OIPT (if necessary)

DAB Timeline

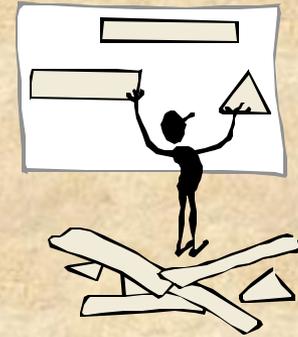
(Milestones B, C & FRPDR)

OVERARCHING INTEGRATED PRODUCT TEAM (OIPT) MEETINGS



Typical Milestone Issues

- Cost growth/CAIV
- Schedule delays
- Technical threshold breaches
- Supportability issues
- Threat assessment
- Acquisition Strategy
- Test and Evaluation issues
 - Operational effectiveness/suitability
- Cooperative development/joint service concerns
- Manpower evaluation





Stryker “Take-Aways”

- Keep your “eye on the ball”
 - The devil is in the details
- Key issues and problems (as always)
 - Cost (Full funding and O & M)
 - Schedule (Split milestones for Stryker)
 - Performance (LRIP fielding results)
- Team Action Officers must be empowered
- Solve problems – do not seek consensus

Stryker Acquisition Decision Memorandum

Hand Out



Summary

*Alone we can do so little.
Together we can do so much.”*

-- Helen Keller



Presented by:

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BACK UP SLIDES

IPPD/IPT Key Tenets

- Customer Focus
- Concurrent Development of Products and Processes
- Early and Continuous Life Cycle Planning
- Maximize Flexibility for Optimization and Use of Contractor Approaches
- Encourage Robust Design and Improved Process Capability



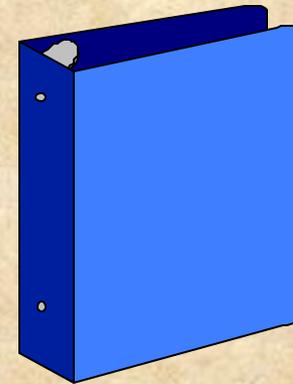
IPPD/IPT Key Tenets (Continued)

- Event-Driven Scheduling
- Multidisciplinary Teamwork
- Empowerment
- Seamless Management Tools
- Proactive Identification and Management of Risk



Key References – DAU Publications

- Rules of the Road
- DoD IPPD Handbook
- DAU Introduction to Defense Acquisition Management
- DAU Program Managers Tool Kit



Overarching IPT's

