DoD
Executive Agent
for
Automatic Test Systems

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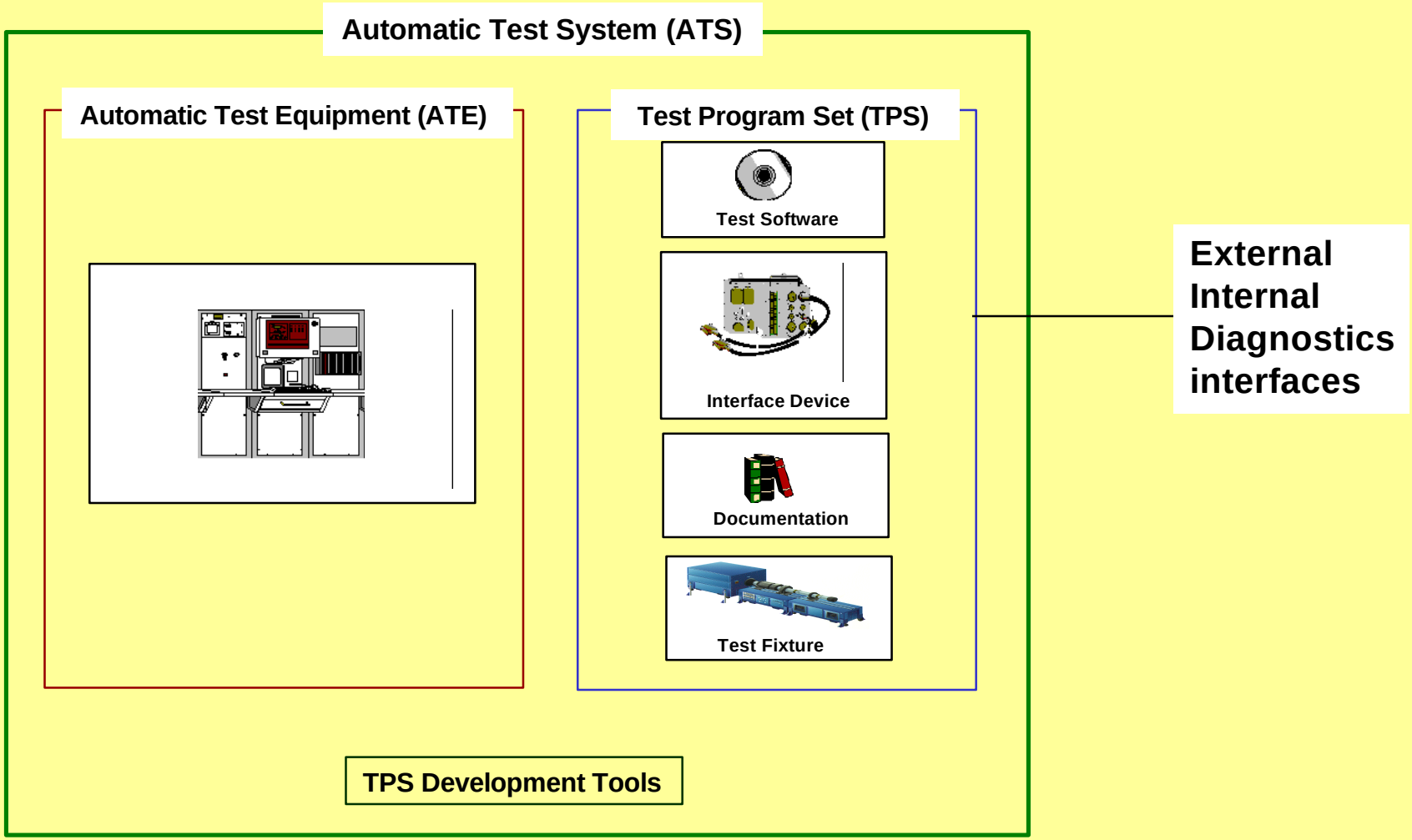
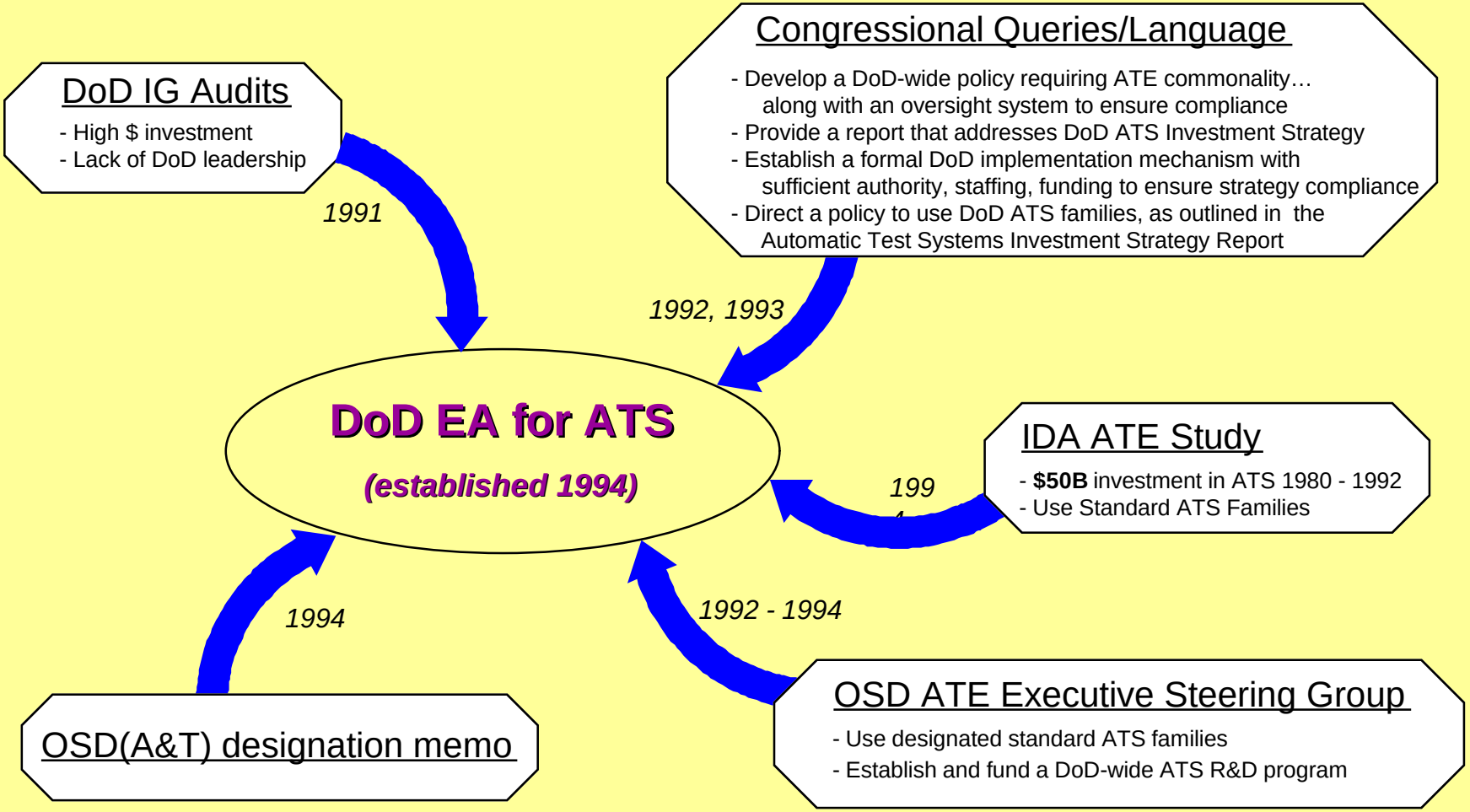
What is an ATS?



Why a DoD EA for ATS?



What Do We Do?

DoD EA for ATS

DoD 5000.2-R
para 4.3.3.4

ATS Acquisition Policy Functions

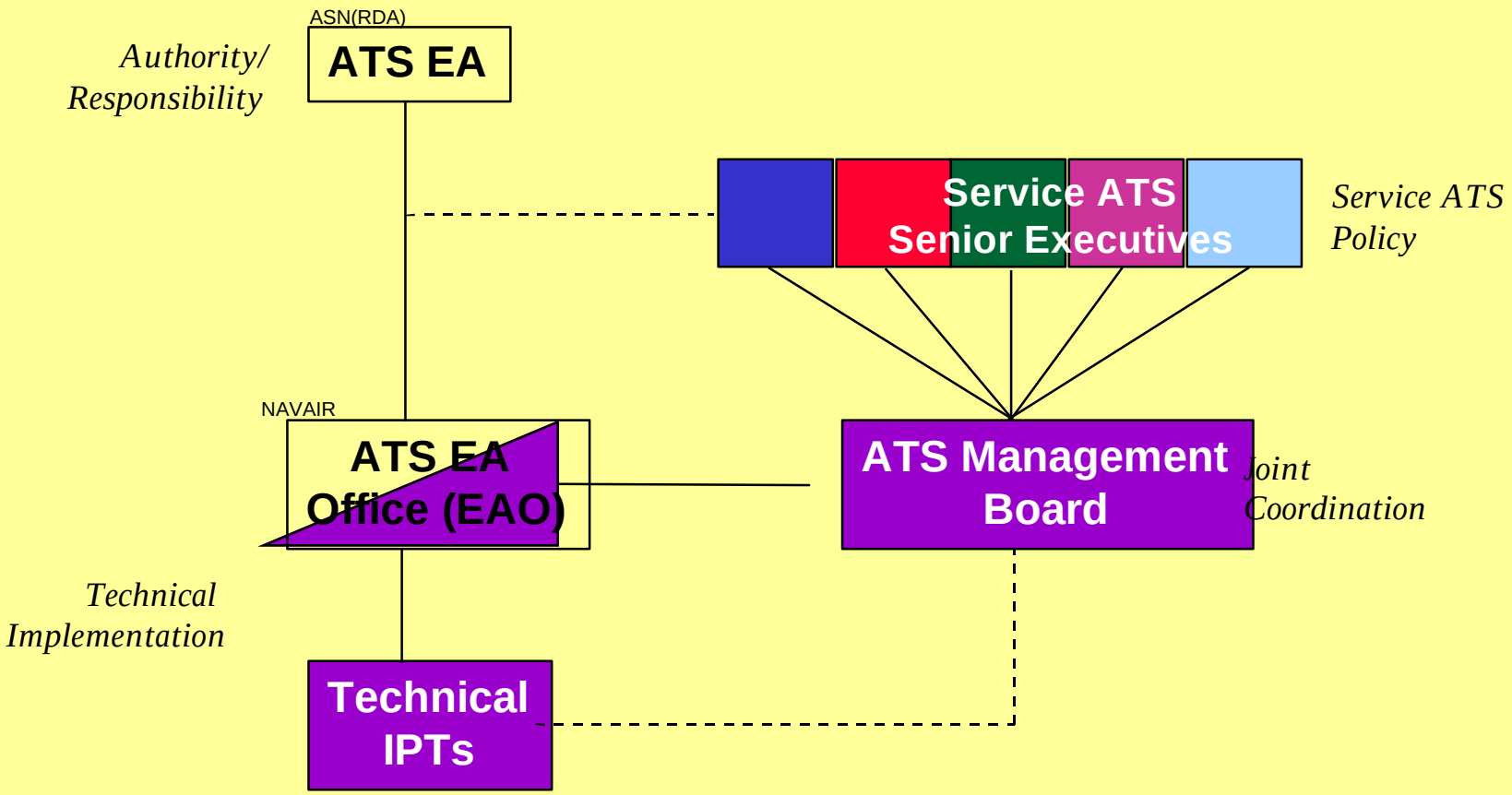
- Establish Joint implementing processes
- Monitor compliance

ATS Technology Functions

- Establish a Joint ATS R&D Program
  - Systems convergence
  - Systems modernization
  - Open Systems Approach

Customers = Weapon System Program Managers throughout DoD

Organization



What Are DoD's Goals?

- Reduce total cost of ownership of DoD ATS
-
- Provide greater flexibility to the warfighter through Joint Services interoperable ATS

13 ATS Objectives to Satisfy the Goals

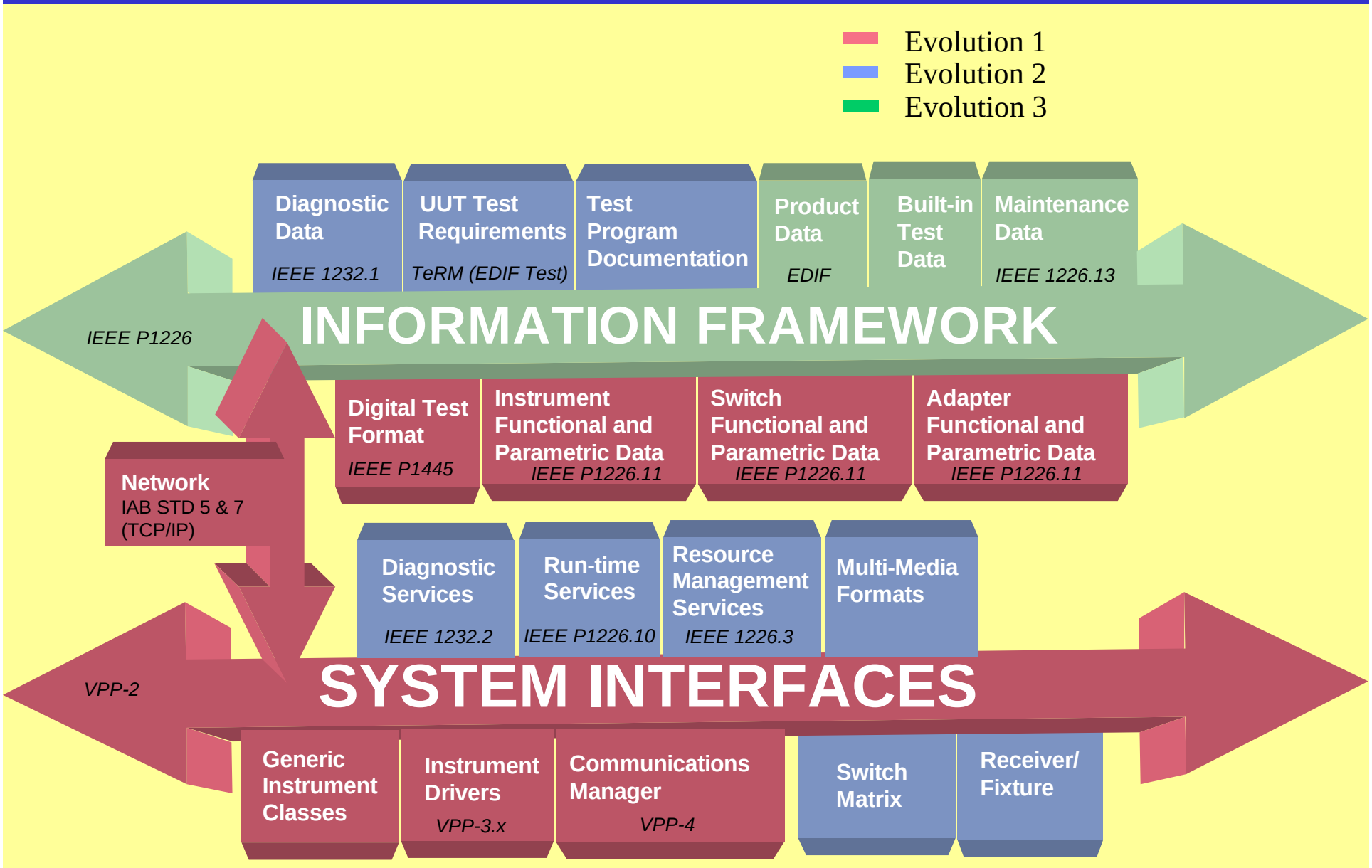
1. Improve Instrument Interchange
2. Make ATE more Scaleable with no penalty to requirements
3. Faster Technology Insertion
4. Improve TPS Rehost
5. Improve TPS Interoperability
6. Use Model Based Programming Techniques
7. Modernize Test programming Environment (Next Generation ATS Programming Environment)
8. Define a TPS Performance Specification
9. Greater use of Commercial Products
10. Capture Design-to-Test Data
11. Use Weapon System-to-Test Data
12. Use Knowledge Based TPSs
13. Define interfaces with the Integrated Diagnostics Framework

Test & Diagnostics Systems Engineering

- ATS R&D IPT (ARI)
  - Joint Services and industry team - led by ARI
  - Has been working the 13 objectives for over 3 years
  - Defined the ATS Open System Approach
    - »
- Integrated Diagnostics Architecture Study
  - 10 case studies of existing ID architectures
  - Industry/government ID workshop
  - Leveraging on work done by the ARI, recommend a course of action for an ID Open System Approach
  - Study complete end of Sept ‘98
    - »
- Test & Diagnostics Consortium being established

ATS Open Systems Approach

Reference Model



What is Next for DoD?

- Complete the ATS Open System Architecture and update the ATS Technical Architecture (JTA)
  - »
- Leverage on the ATS OSA to define an ID OSA
  - »
- Establish a DoD Test & Diagnostics Center of Excellence
  - Establish R&D funding
  - Integrate on-going Service T&D projects
  - »
- Participate in the Test and Diagnostics Consortium to work areas of common interest with industry

Evolution of ATS in DoD

1970s - 1980s

PM stovepipe buys

- Many weapon system unique ATE solutions
- Some **Service standard ATE**

1994

DoD ATS Families

- **DoD Standard ATE** approach

1996

Commercial ATS

- **Commercial ATE** approach
  - COTS with partial DoD defined critical elements

1996 - 2000

DoD ATS OSA Defined

- **Open System** Architecture Approach
  - Defined Critical Elements
  - Based on commercial specs
- Led by DoD

- ***Integrated Diagnostics*** *Studies*

FUTURE

Consortium T&D OSA

- **Commercial ATE** approach
  - COTS with Consortium defined critical elements

1998

Test & Diagnostics Consortium

- DoD is one of many stakeholders

DoD "Revolution in Business Affairs" *

1. Implement aggressively acquisition reform initiatives:
   - "Increase use of commercial practices"
   - "Greatly expanded purchase of commercially available items"
   - "Institutionalize concept of Total Cost of Ownership"
   -
2. Work to bring about far greater civilian/military industrial integration:
   - "Seek greatly expanded partnership with commercial industry"
   -
3. Shift from infrastructure and support to modernization:
   - "Reduce support costs"
   - "Capture commercial technology"
   -

* Mr. Gansler, OSD(A&T)