



Volpe
National
Transportation
Systems
Center

U.S. Department
of Transportation

Research and
Special Programs
Administration



***Volpe Center Overview Briefing
to
Department of Energy's
Society for Effective Lessons Learned
(SELL) Workshop***

**John A. Volpe National Transportation Systems Center
Cambridge, Massachusetts**



Volpe Center Presentation Objectives



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- **Share general information on the Volpe Center**
 - **Our beginnings**
 - **Historical shifts**
 - **Today's Volpe Center**
- **Outline select areas where lessons learned experience played a key role in our success and/or leveraging of future work**

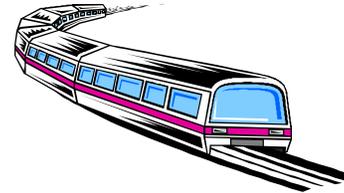


Volpe Beginnings

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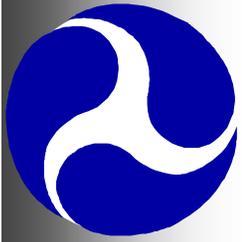


NASA ERC



TSC

1970



Historical Support Timeline

Major Work Focus Shifts

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R & D
Engineering

Ground
Systems

CG R&D
Center

Systems
Engineering
“Soft Sciences”
CG OPS & FAA

Logistics &
Operations

IS/IT

Environmental
Engineering

DOD, DOE,
EPA & USPS



Early 1970's

Late 70's & 80's

Mid 80's & 90's



Today's Volpe Center

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- **Part of DOT's Research and Special Programs Administration (RSPA)**
- **Fee-for-Service operation**
 - **300+ projects in progress**
 - **\$200+ million annual workload**
 - **500 Federal full-time permanent staff**
- **Teaming arrangements with industry and academia**



A National /Global Transportation & Logistics Resource

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Addressing national and global transportation and logistics challenges related to

- System/Operations efficiency & effectiveness
- Mobility
- Safety & security
- Environmental improvement
- Economic growth and trade

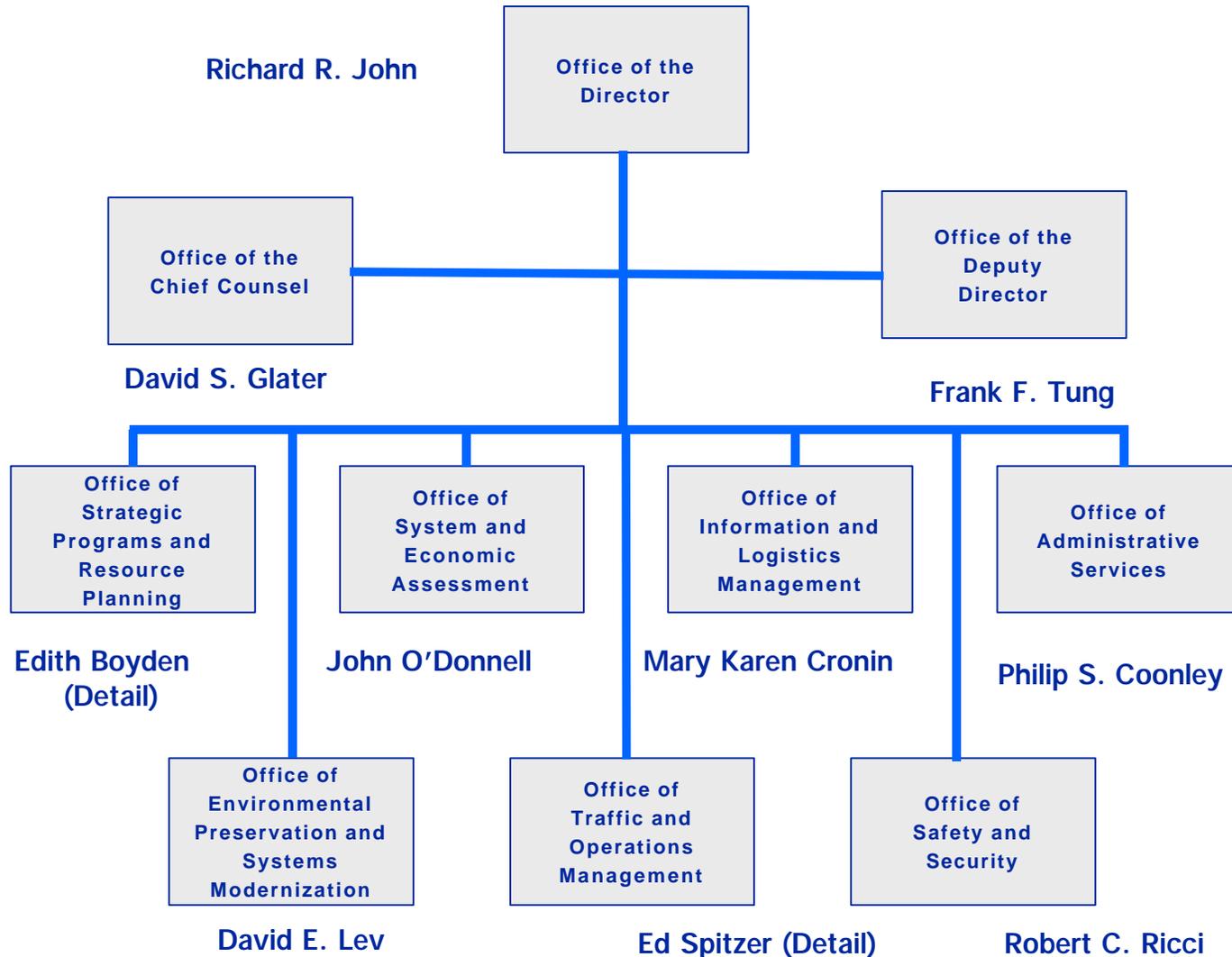


Volpe Center Organization

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Funding Approach

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- **Fee-for-Service Federal operation**
- **Funding derived from working agreements with customers**
- **Direct funding transfer from customer – not an acquisition/contract activity**
- **Does not allow Volpe to compete with private industry through Request for Proposal (RFP) mechanism**



Representative FY00 Program Sponsors

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**TOTAL FY00
OBLIGATIONAL
AUTHORITY**

**\$347
Million**

USDOT

FAA
FHWA
FRA
FTA
USCG
NHTSA
RSPA
OST

\$210M

Other Federal

DOD

Air Force
Army
Marines
Others

\$58M

EPA
DOE
DOS
Interior
NASA
USPS

\$76M

Foreign And Non-Fed

Australia
Canada
England
Panama Canal

\$ 3 M



Why our customers choose Volpe



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- Extensive, proven **core capabilities**
- Flexibility (as a Federal resource) to meet customer needs with minimal risk, and adjust, as necessary, due to external influences.
- Established, **long standing relationships** with their partners, e.g., FAA, CG, DOD elements
- Established access to and ability to manage Federal and non-federal resources
- Demonstrated record as an “**honest broker**”, within a sponsor’s team framework
- **Ability to meet commitments** – on time, within budget



Typical Volpe Support Roles

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- **Analyst** of requirements, business processes/needs, technologies, and implementation alternatives
- **Engineer** and system designer/developer
- **Integrator** of systems and processes
- **Agent** for Independent Verification & Validation (IV&V)
- **Manager** for technical program / projects
- **Deployer** of systems and infrastructure
- **Developer/deliverer** of customer-specific training courses and material
- **Researcher** of best practices for operations improvement and technology insertion



IS/IT Deployment: Where the Rubber Meets the Road

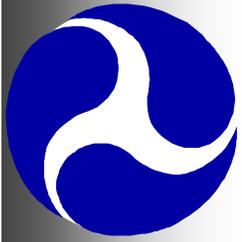
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- Arguably the most important part of the life cycle, from the users perspective
- 70% of IS/IT projects never get deployed; many fail at deployment because
 - The user was ignored
 - Change isn't managed
 - The infrastructure doesn't measure up
 - Training is inadequate
- Planning and managing this process and the resulting change is critical



Department of Transportation Enterprise Network and Docket Management System

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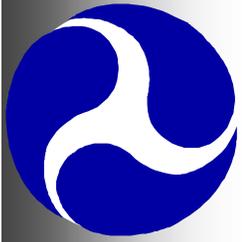
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- Assessment of regulatory docket management system requirements.
- Life-cycle engineering of an Enterprise Network (EN) for local, metropolitan, and nationwide communications.
- Docket Management System (DMS) “pilot” development.
- DMS pass off, with lessons-learned, for DOT full scale implementation.



 **DMS Web**
Docket Management System





Intelligent Transportation Systems

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- **The ITS Promise is increased efficiency, mobility, and safety.**
- **Implementation barriers are primarily non-technical**
- **Volpe focus areas**
 - Technology assessment
 - Standards development
 - Decision-making & institutional impediments
 - Knowledge transfer
- **A major partnership with Federal, state, local, private, and academia resources**



**2 Billion Hours Stuck
in Traffic**

\$100B lost productivity



Panama Canal Communications, Traffic Management, and Navigation System

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- Tracks ships and PCC assets over 45 mile canal route
- Increases revenue and safety
- Leveraged prior Volpe experience
 - CNS Technology, e.g., GPS, sensors
 - St. Lawrence Seaway
 - FAA ASD
 - Scheduling (*)



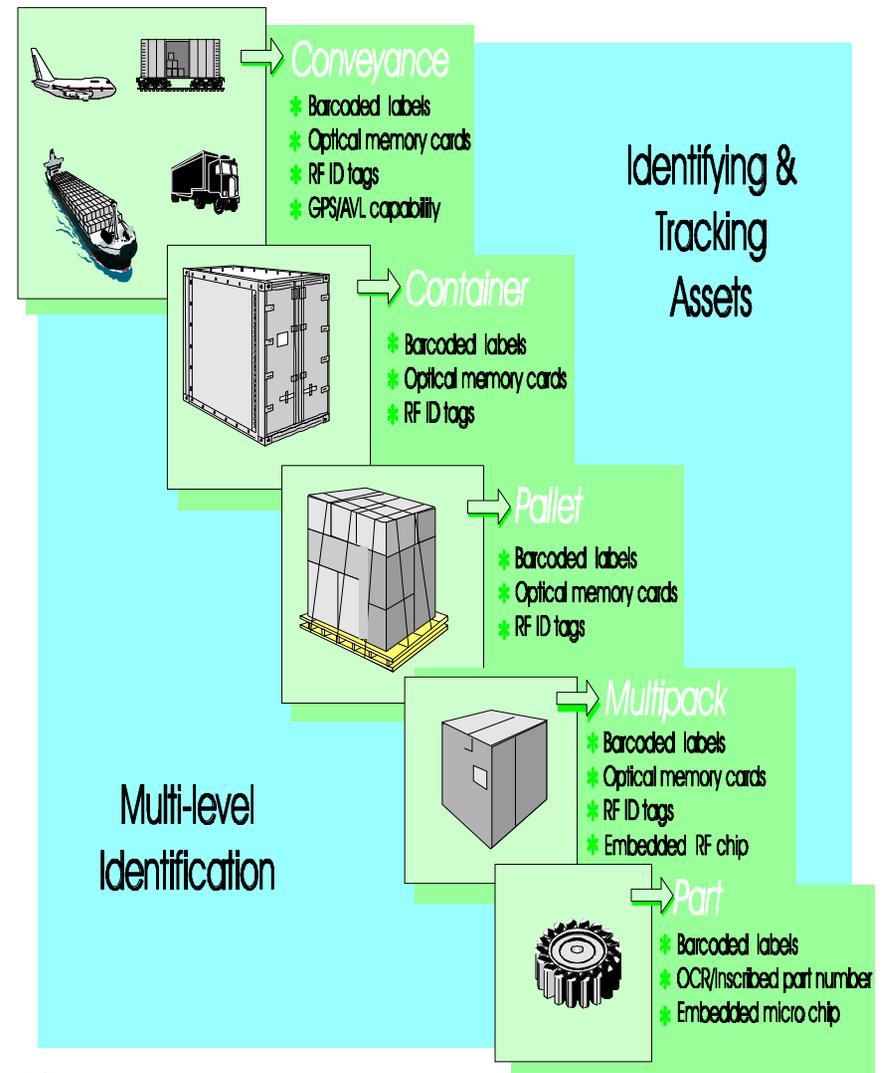
DOD Automatic Identification Technology (AIT) Experience

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- **Tracking DOD shipments for in-transit visibility**
- **Technology evaluation of AIT**
 - **Barcodes & scanners**
 - **Optical memory cards**
 - **Radio frequency tags**
- **Asset tracking, RF system operation, data collection and analysis**



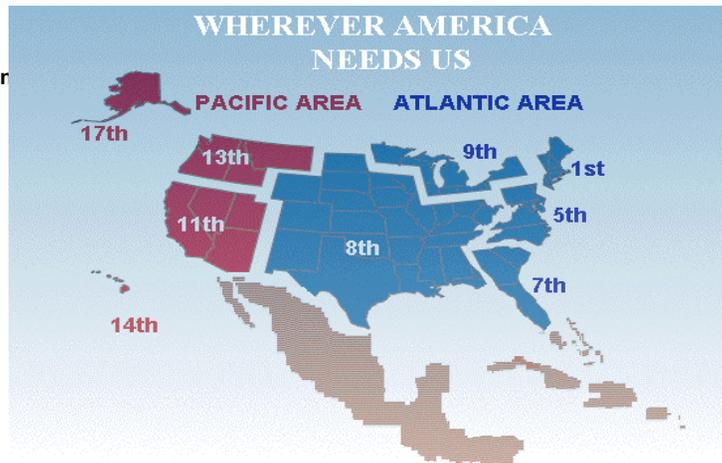


Serving our customers...

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- Available to our nation and others!
- Focused on guiding our customers to the best solutions to meet their transportation, logistics and environmental needs.
- Committed to excellence!