U.S. Federal Enterprise Architecture

World Bank Seminar

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E·GOV

E-Gov Results – Services to Citizens

E-Gov provides benefits across the nation… to citizens, businesses, first responders, job seekers, and grant-seekers among others…

- **GovBenefits.gov**
  - Obtain information and apply for over 1,000 benefits programs administered by the Federal Government.
  - Served over 22 million visitors and provided over 5 million citizen referrals to benefit programs.

- **Grants.gov**
  - Single point of access for grants offered by the 26 Federal grant making agencies and provides grants-seekers access to 100 percent of Federal grant programs (over 1,000 programs).
  - To date, over 102,000 grant applications have been electronically received.

- **E-Rulemaking**
  - Obtain free and easy access to Federal rulemaking information.
  - Increases public access to the rulemaking process by providing the opportunity to contribute views via the Internet.
  - In 2006, Regulations.gov averaged 4.3 million website page views per month.

- **IRS Free File**
  - For the 2006 filing season, more than 3.9 million citizens have filed taxes online for free using the Free File.

E-Gov Results – Cost Savings

E-Gov increases the efficiency of the federal government…

- **E-Payroll**
  - Consolidated numerous payroll systems reducing the cost of payroll processing.
  - Department of Health and Human Services (HHS) - Reduced annual costs of payroll processing for its 65,000 employees by $11 million, from $259 to $90 per employee.
  - The Environmental Protection Agency (EPA) also reduced its average cost from $270 to $90 per employee; with its staff of 18,000 the agency has realized an annual savings of approximately $3.2 million.

- **E-Gov Travel**
  - The Department of Labor (DOL), one of the first agencies to complete the implementation of E-Gov Travel Services, reported a decrease in cost per travel voucher from $62.59 to $24.75, more than 60%.
  - Additionally, the time required to process vouchers at DOL decreased from seven to three business days.

- **FM LOB**
  - The Department of State and U.S. Agency for International Development are collaborating on financial systems and functions to improve service and save money.
  - In November 2005, they combined operations staff, software and hardware costs, saving the government over $20 million over the 10 year life of the project.

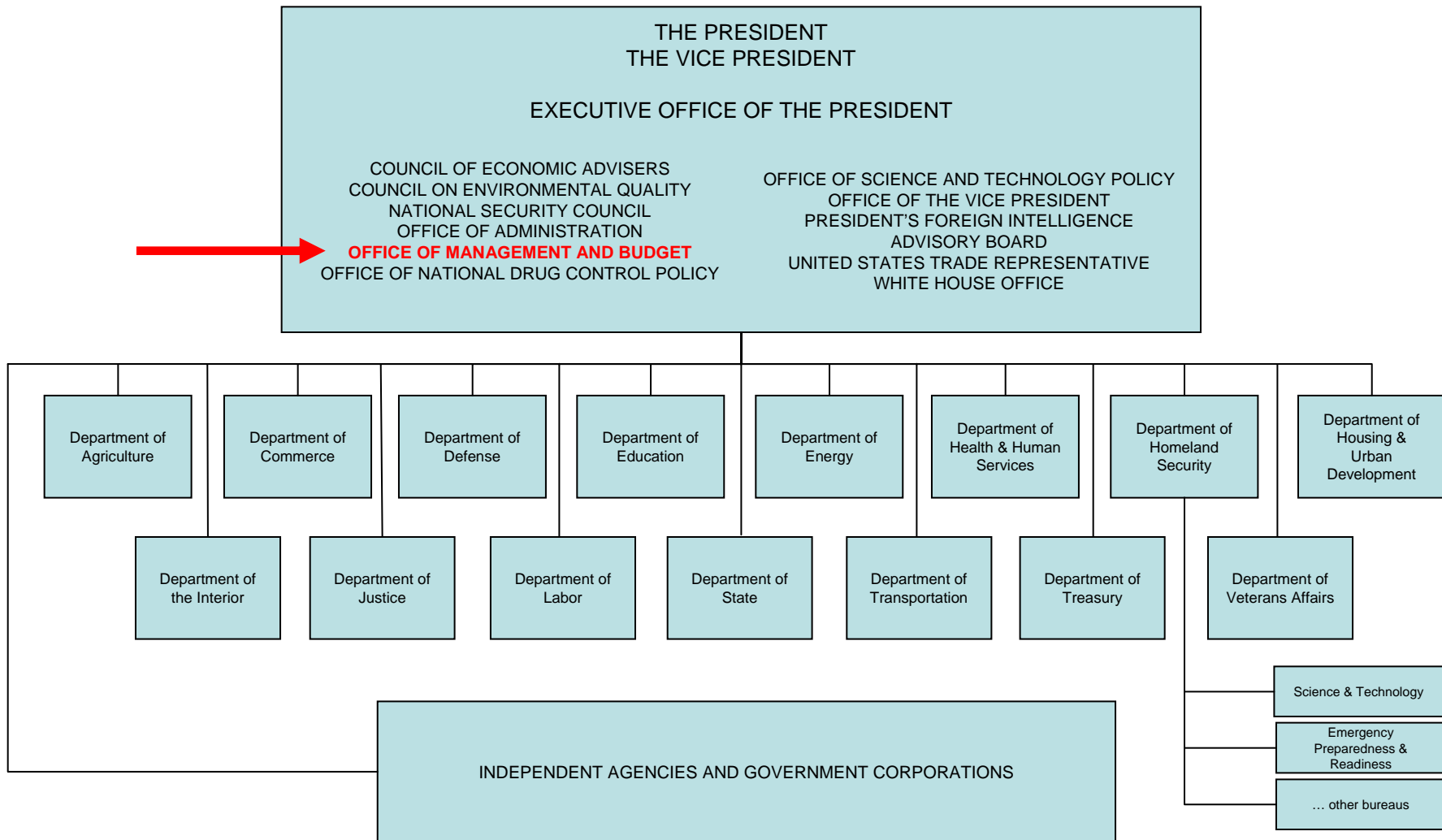- # Operational excellence

- # More customer intimacy

- # Better services to citizens (customers)

- # More strategic agility

Source: *Enterprise Architecture as Strategy*, Jeanne Ross, Peter Weill and David Robertson

U.S. Federal Government Organization

THE PRESIDENT
THE VICE PRESIDENT

EXECUTIVE OFFICE OF THE PRESIDENT

COUNCIL OF ECONOMIC ADVISERS
COUNCIL ON ENVIRONMENTAL QUALITY
NATIONAL SECURITY COUNCIL
OFFICE OF ADMINISTRATION
OFFICE OF MANAGEMENT AND BUDGET
OFFICE OF NATIONAL DRUG CONTROL POLICY

OFFICE OF SCIENCE AND TECHNOLOGY POLICY
OFFICE OF THE VICE PRESIDENT
PRESIDENT'S FOREIGN INTELLIGENCE
ADVISORY BOARD
UNITED STATES TRADE REPRESENTATIVE
WHITE HOUSE OFFICE

Department of Agriculture

Department of Commerce

Department of Defense

Department of Education

Department of Energy

Department of Health & Human Services

Department of Homeland Security

Department of Housing & Urban Development

Department of the Interior

Department of Justice

Department of Labor

Department of State

Department of Transportation

Department of Treasury

Department of Veterans Affairs

Science & Technology

Emergency Preparedness & Readiness

… other bureaus

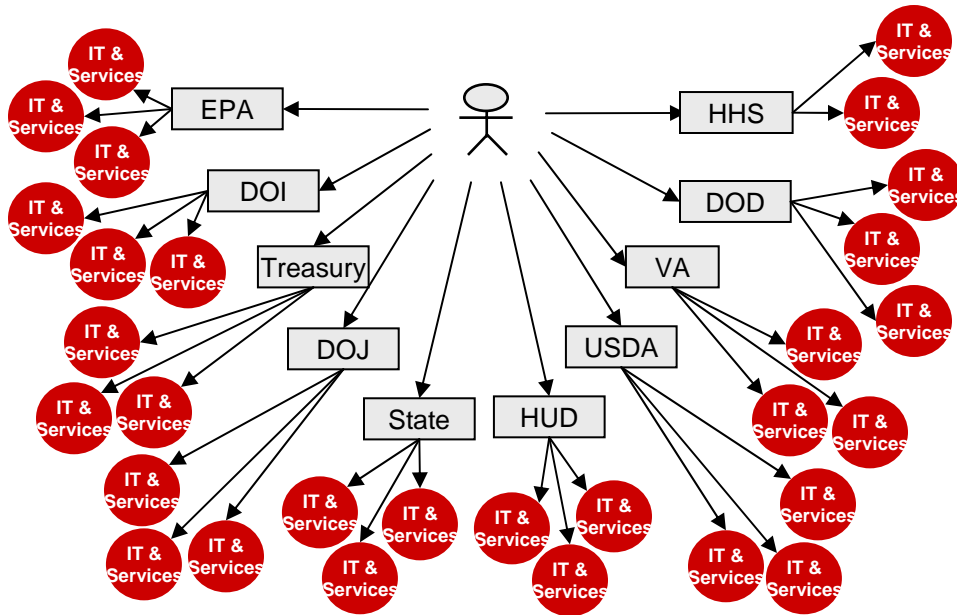INDEPENDENT AGENCIES AND GOVERNMENT CORPORATIONS

Architecture Principles for the Federal Government

- The federal government focuses on citizens

- The federal government is a single, unified enterprise

- Federal agencies collaborate with other governments and people

- Security, privacy and protecting information are core government needs

- Information is a national asset

- The federal architecture is mission-driven

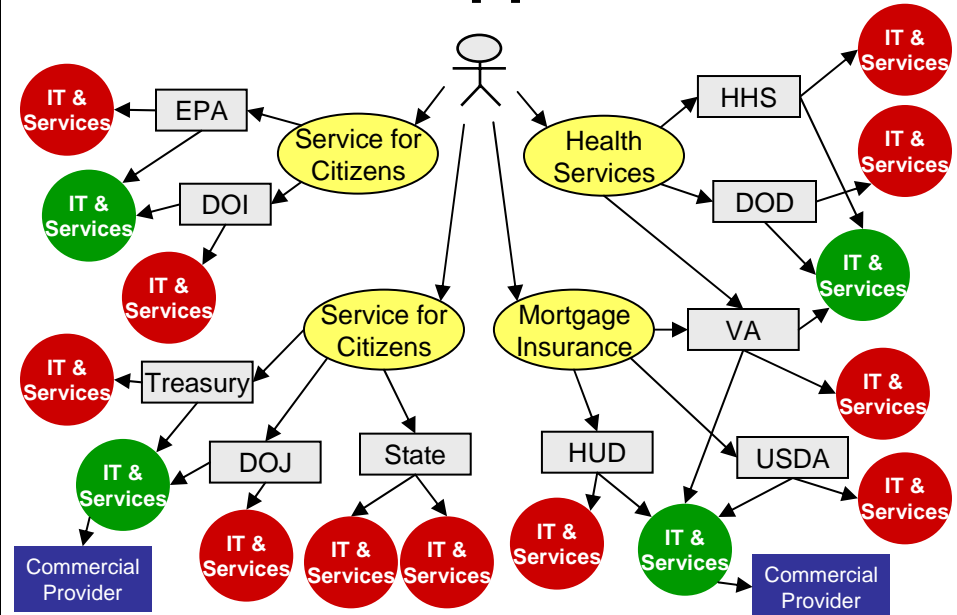- The federal architecture simplifies government operations

Citizen-Centered Services
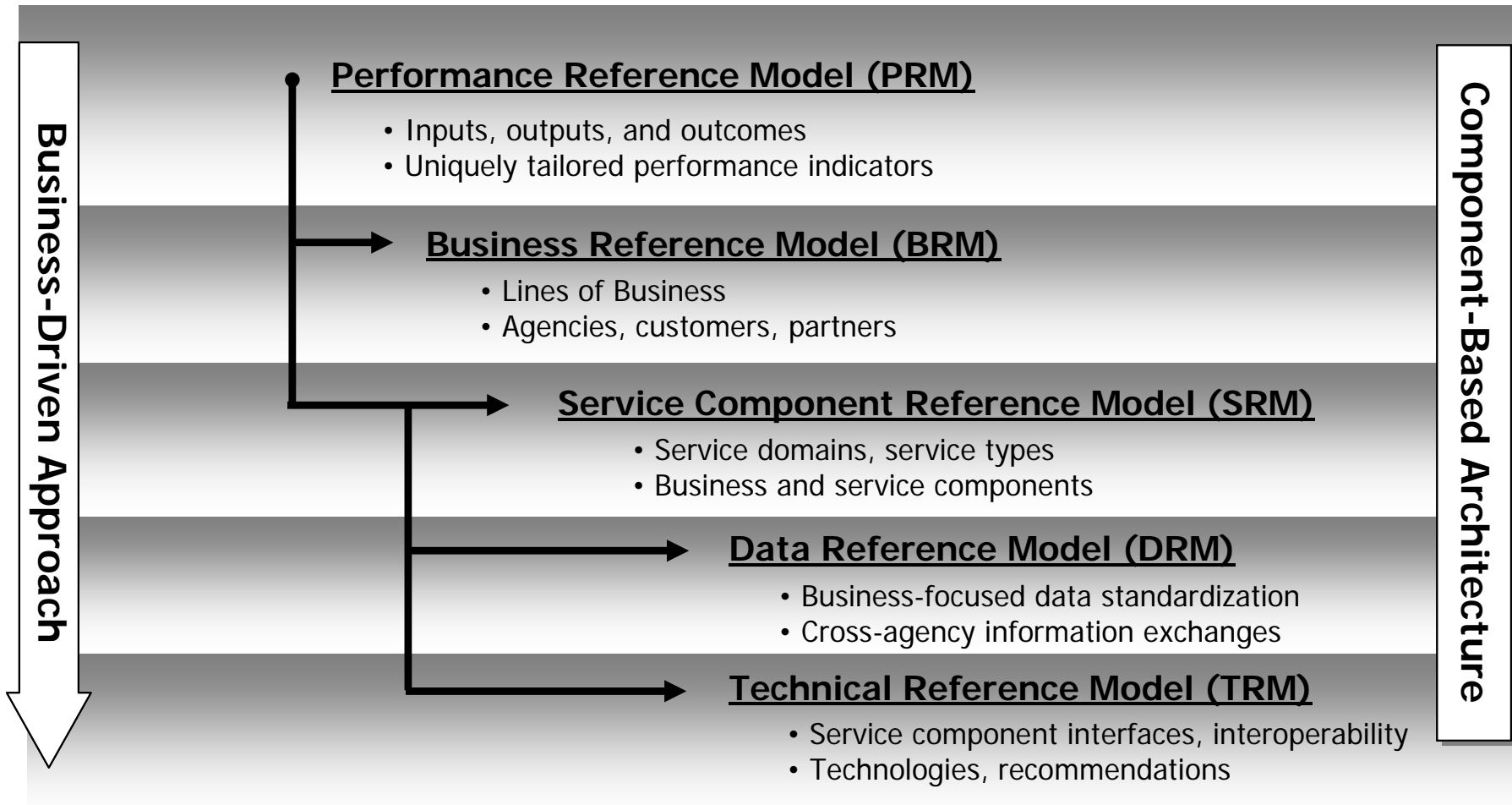
The Historical Approach …

The Future Approach …

Legend:

- (Service for Citizens) = Service for Citizens
- (IT & Services) = Agency-specific Service
- (IT & Services) = Common Service
- (Commercial Provider) = Commercial Provider

FEA Reference Models

Business-Driven Approach →

Component-Based Architecture

Performance Reference Model (PRM)

- Inputs, outputs, and outcomes
- Uniquely tailored performance indicators

Business Reference Model (BRM)

- Lines of Business
- Agencies, customers, partners

Service Component Reference Model (SRM)

- Service domains, service types
- Business and service components

Data Reference Model (DRM)

- Business-focused data standardization
- Cross-agency information exchanges

Technical Reference Model (TRM)

- Service component interfaces, interoperability
- Technologies, recommendations

Business Reference Model (BRM)

The Business Reference Model (BRM)

Services for Citizens → Business Areas (4)

Purpose of Government:

Defense and National Security
Homeland Security
Intelligence Operations
Law Enforcement
International Affairs & Commerce
Litigation & Judicial Activities
Correctional Activities

Education
Energy
Health
Transportation
Income Security

Environmental Management
Natural Resources
Disaster Management
Community & Social Services
Economic Development
Workforce Management
General Science & Innovation

Lines of Business (39)

Mechanisms Used to Achieve Purpose:

Mode of Delivery

Direct Services for Citizens
Knowledge Creation & Mgmt
Public Goods Creation & Mgmt
Regulatory Compliance & Enforcement

Federal Financial Assistance
Credit & Insurance
Transfers to States & Local Governments

Government Operations Support Functions:

Support Delivery of Services

Legislative Relations
Public Affairs
Regulatory Development
Planning & Budgeting

Controls & Oversight
Revenue Collection
Internal Risk Mgmt & Mitigation
General Government

Resource Management Functions:

Management of Government Resources

Supply Chain Management
Human Resource Management
Financial Management

Administrative Management
Information & Technology Management

Lines of Business

The Lines of Business (LoBs) take an architecture-based approach to identifying, developing, and providing common solutions and components across the government....
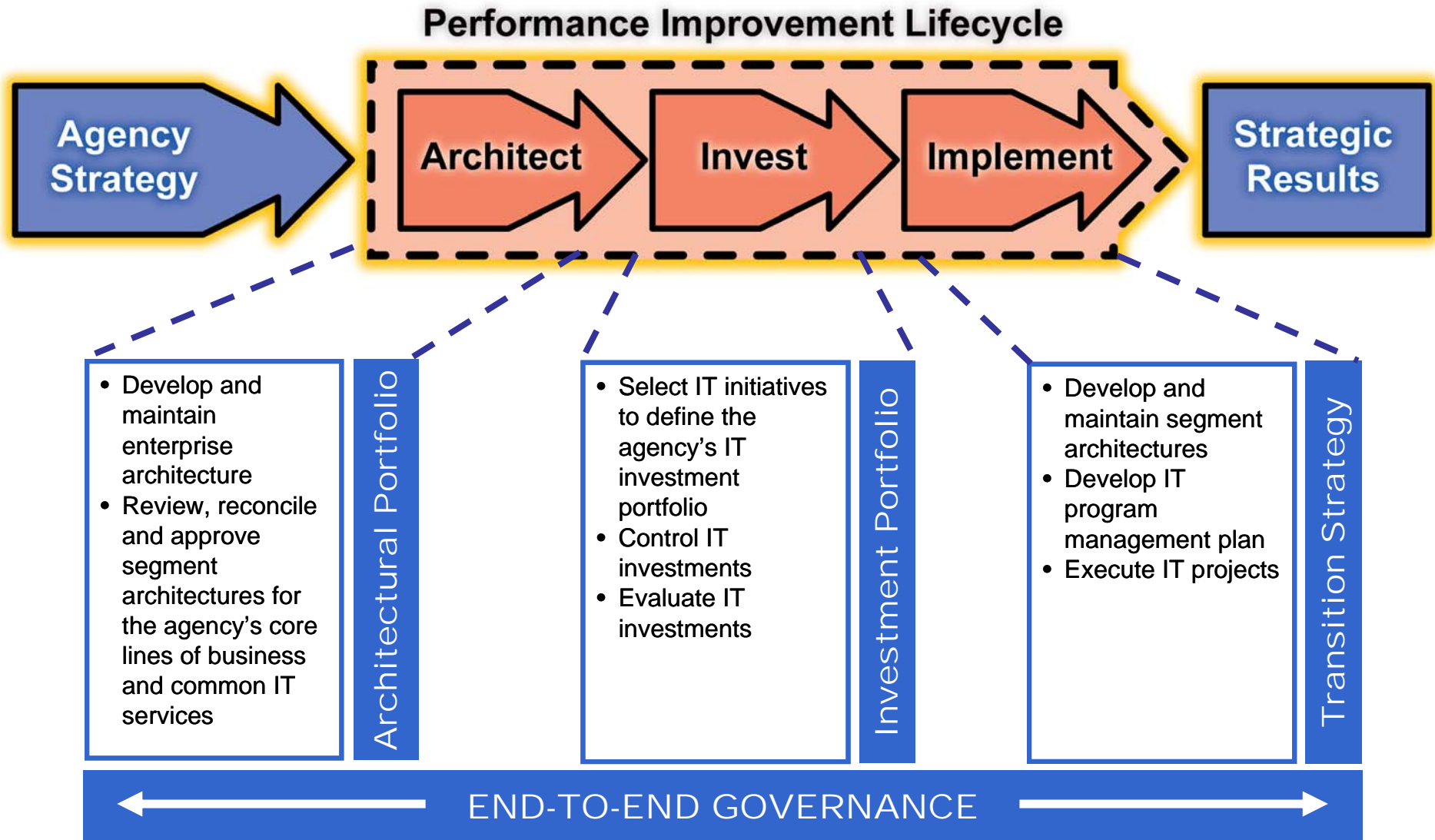

2004 – 2005 LoBs
- Human Resources Management
- Financial Management
- Grants Management
- Case Management
- Federal Health Architecture
- Information Systems Security

2006 LoBs
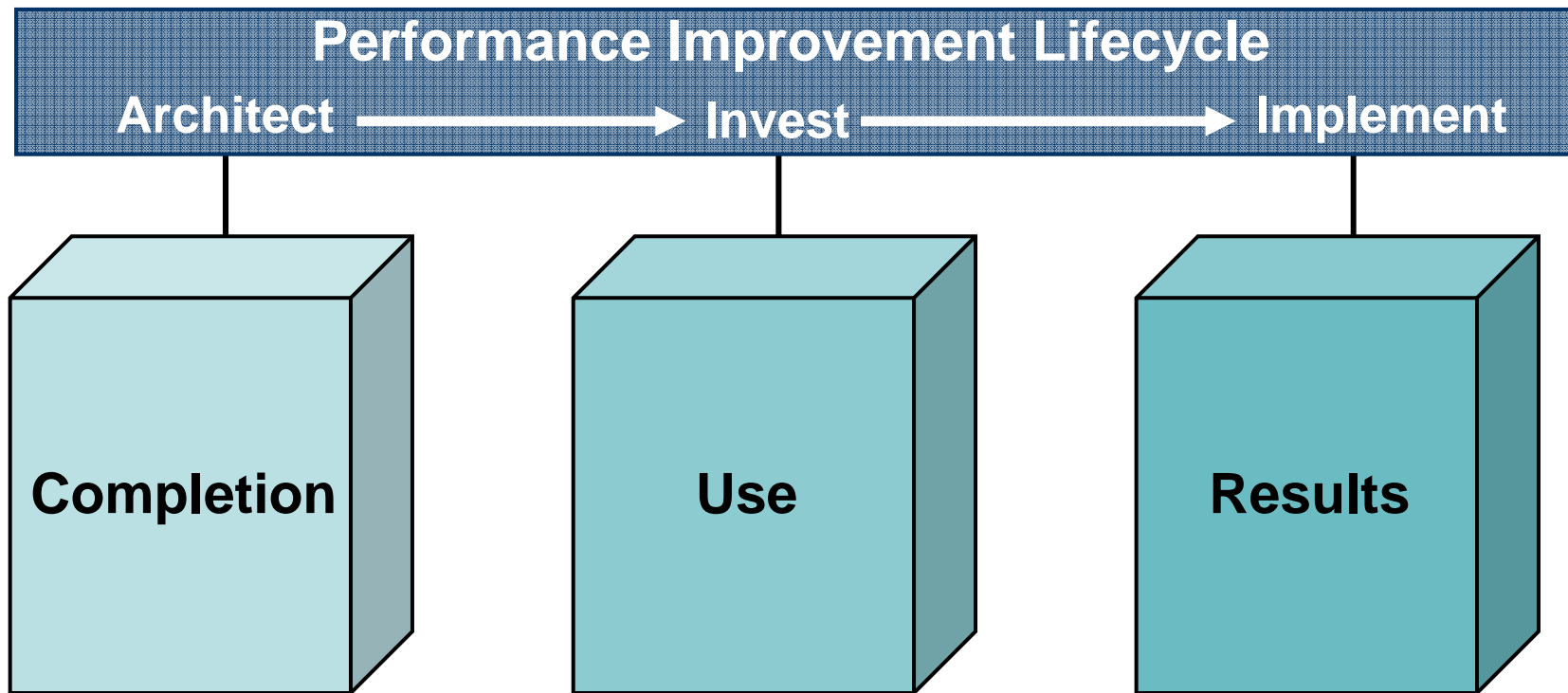- IT Infrastructure Optimization
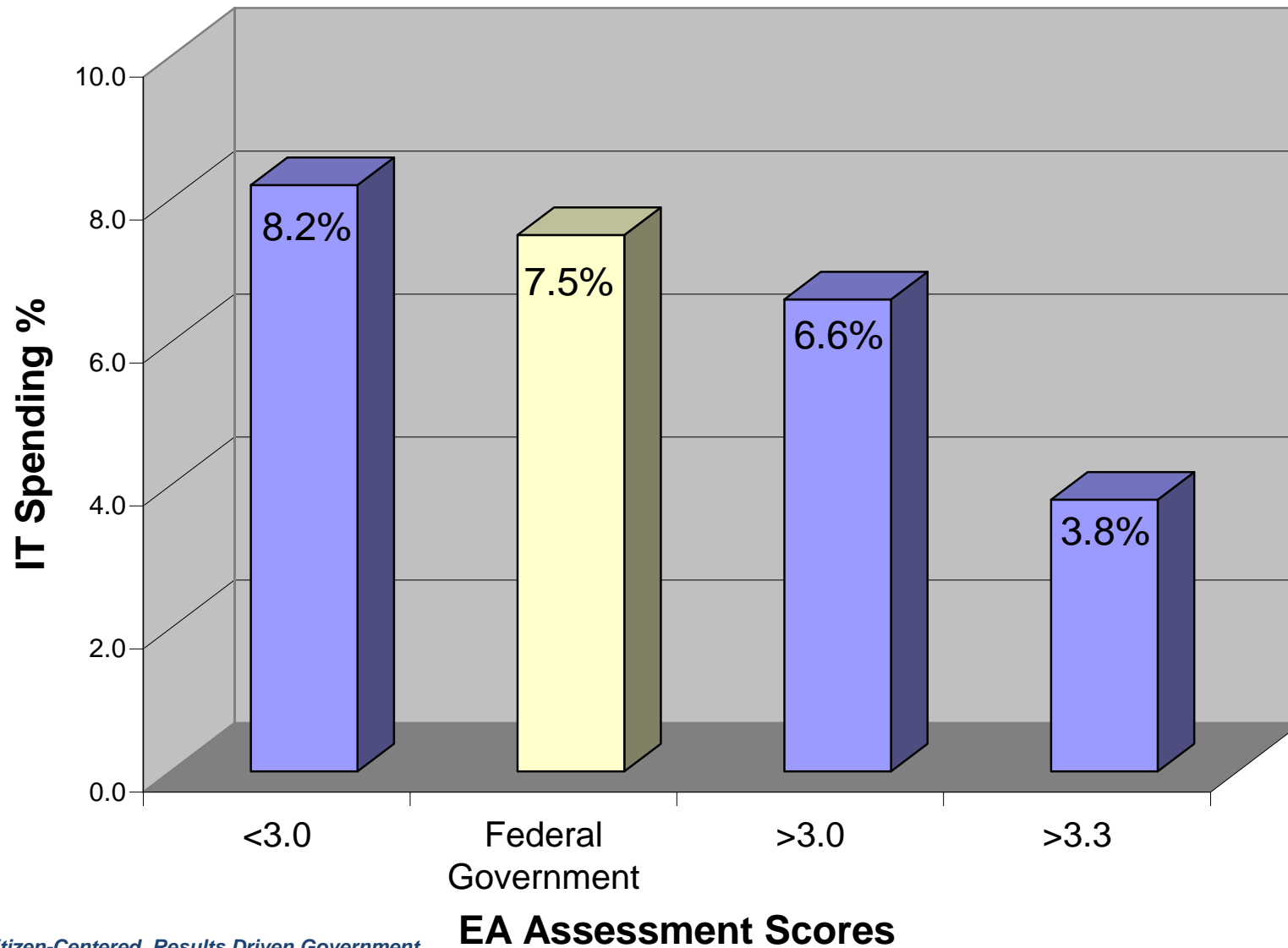- Geospatial
- Budgeting

Performance Improvement Lifecycle

Performance Improvement Lifecycle

Agency Strategy → **Architect** → **Invest** → **Implement** → **Strategic Results**

- Develop and maintain enterprise architecture
- Review, reconcile and approve segment architectures for the agency's core lines of business and common IT services

Architectural Portfolio

- Select IT initiatives to define the agency's IT investment portfolio
- Control IT investments
- Evaluate IT investments

Investment Portfolio

- Develop and maintain segment architectures
- Develop IT program management plan
- Execute IT projects

Transition Strategy

END-TO-END GOVERNANCE

EA Assessment Framework

Performance Improvement Lifecycle

Architect ⟶ Invest ⟶ Implement

Completion

Use

Results

Relationship of EA to IT Spending

Agency Example:

Housing Mortgage Insurance
at the
Department of Housing and
Urban Development

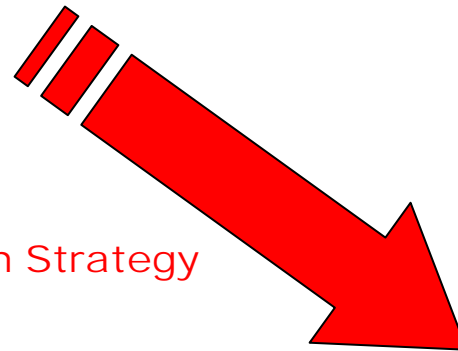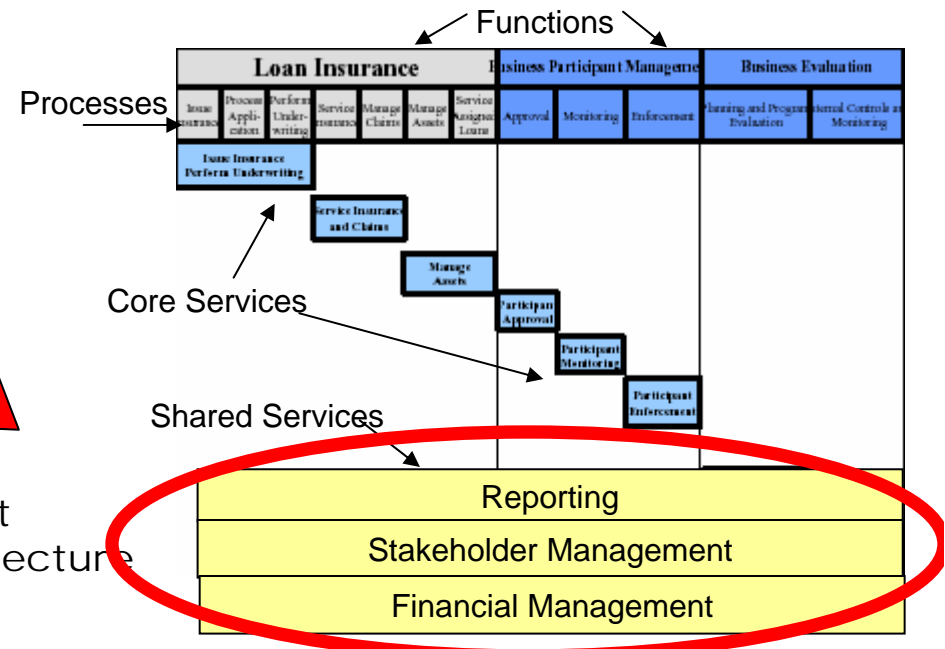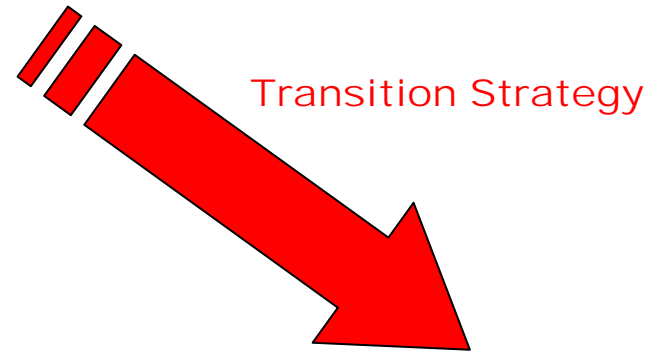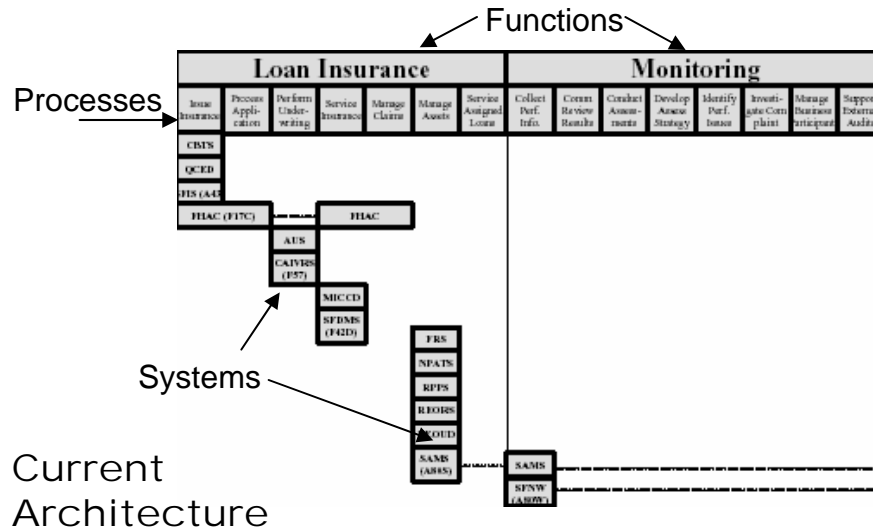# Mortgage Insurance LoB: Current Architecture
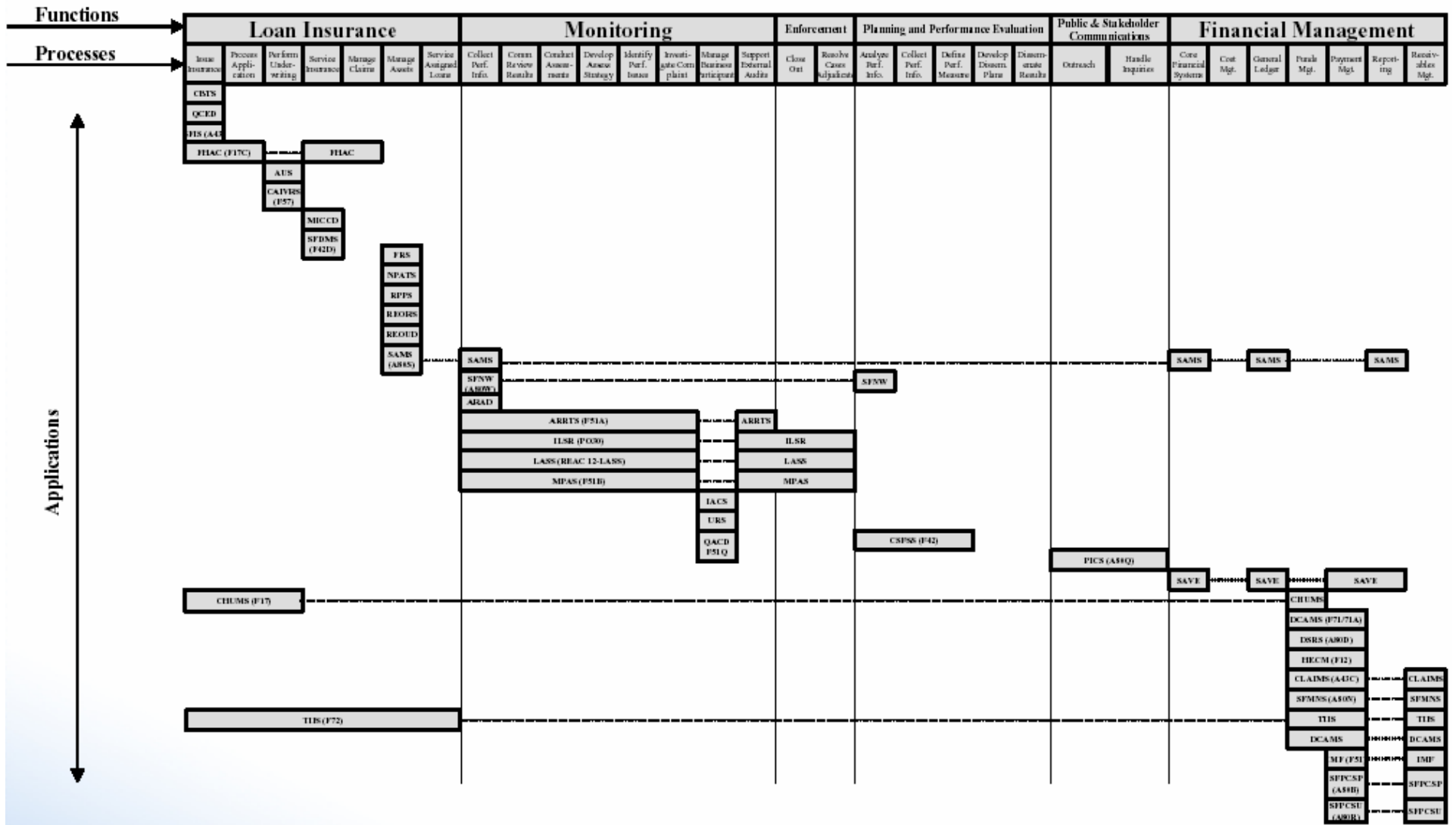
Mortgage Insurance LoB: Target Architecture
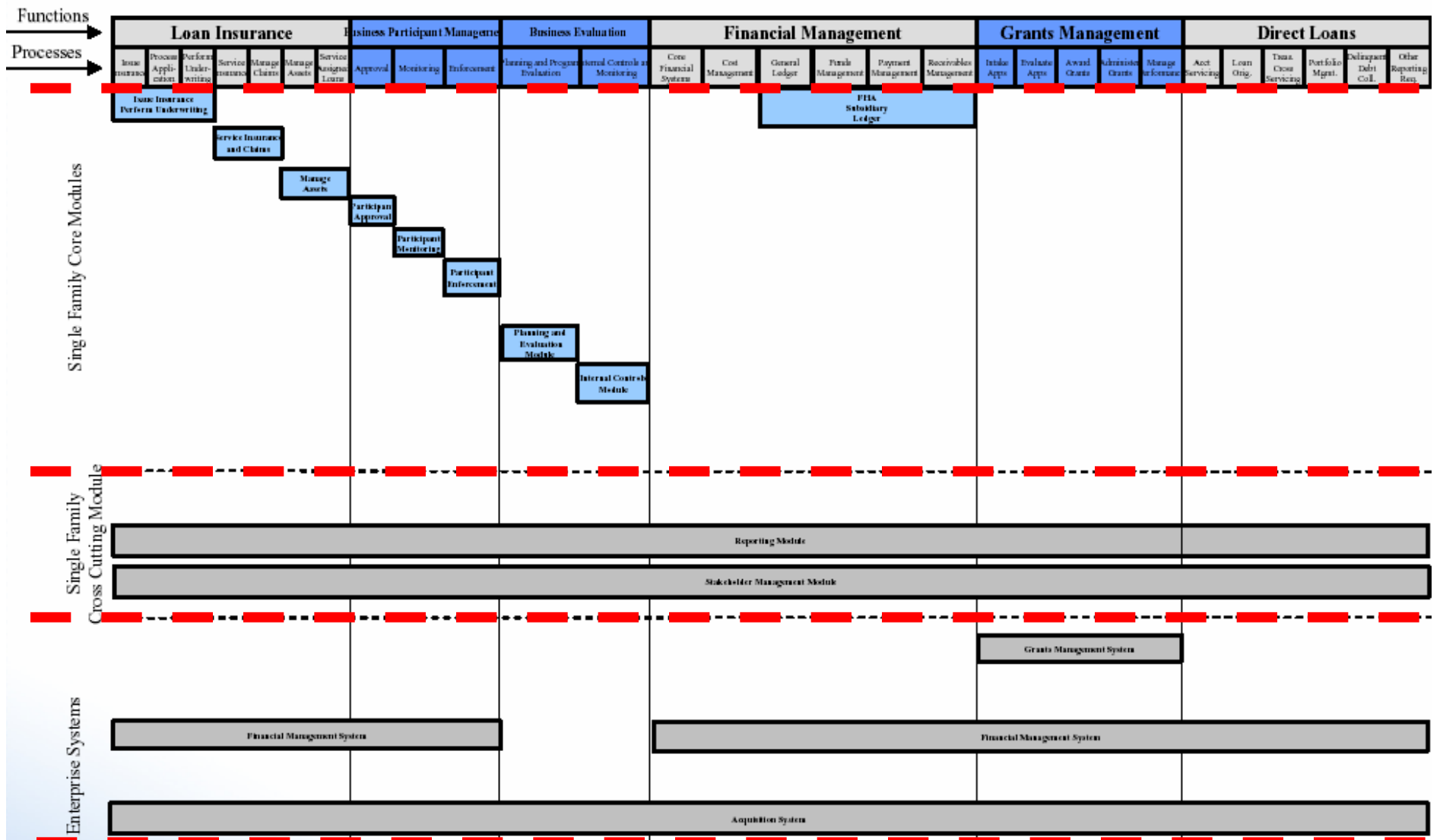
Result: More Efficient Support for the Business

Return on Investment

Inputs
- Four months of time from Architects and Program Officials
- Three years to transition to target state
- $9 million dollars in DME (not including infrastructure)

Outputs
- Reduced the number of systems by nearly 80%
- Minimized functional overlap in the Mortgage Insurance LoB
- Modernized HUD's technology base
- Decreased the total cost of ownership from $28 million dollars to $16 million

Outcomes
- Increased the number of loans processed per day
- Identified faster, the number of lenders who are illegally discriminating
- Identified earlier, the lenders providing HUD with bad loans
- Identified non-viable lenders, and responded faster

For Further Information:
www.egov.gov