The University of Hong Kong

Institute for eCommerce

eGovernment in the United States

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Outline

- eGovernment in the U.S.
- U.S. Office of eGovernment
- FirstGov.gov
- Federal Enterprise Architecture
- Authentication
- Services available
- State eGovernment
  - Florida

U.S. e-Government

Intra-agency

Inter- and Intra-governmental

Agency to business

Agency to the public

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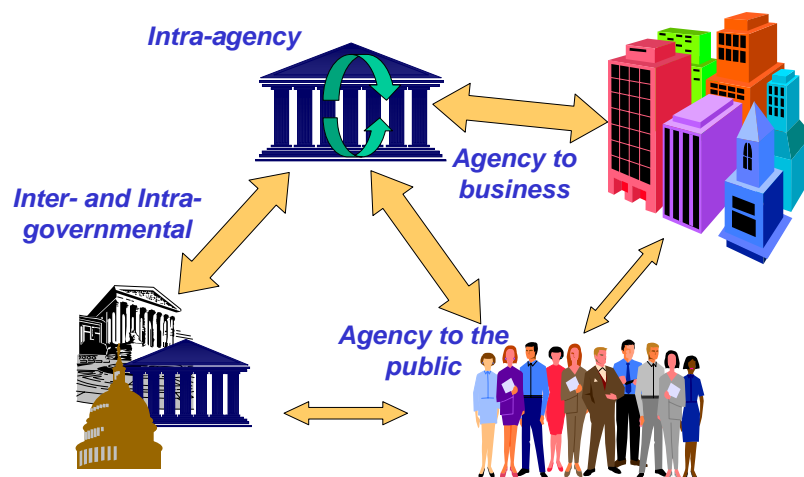
eGovernment Act of 2002

- **Office of Electronic Government**
  - New office within OMB, presidential-appointed administrator
- **E-Government Fund**
  - $345 million over 4 years for interagency e-gov projects
- **Privacy**
  - Requires privacy impact assessments for new IT systems
- **Internet Guidelines**
  - Basic standards for agency websites
- **GIS Standards**
  - Common protocols for geographic information systems
- **Judicial Information**
  - Requires federal courts to put information online, including docket information and written opinions

U.S. Office of Electronic Government

E-Government Based on Citizen Needs

- ◆ For individuals
  - Easy-to-find, one-stop shops for citizens
  - Single points of entry to high-quality governmental services
- ◆ For businesses
  - Reduce paperwork burden on businesses via Internet
- ◆ For government agencies
  - Ease state and local reporting requirements, with better performance measurement
- ◆ Internal efficiency and effectiveness
  - Reduce costs of Government administration: supply chain management, financial management, and knowledge management
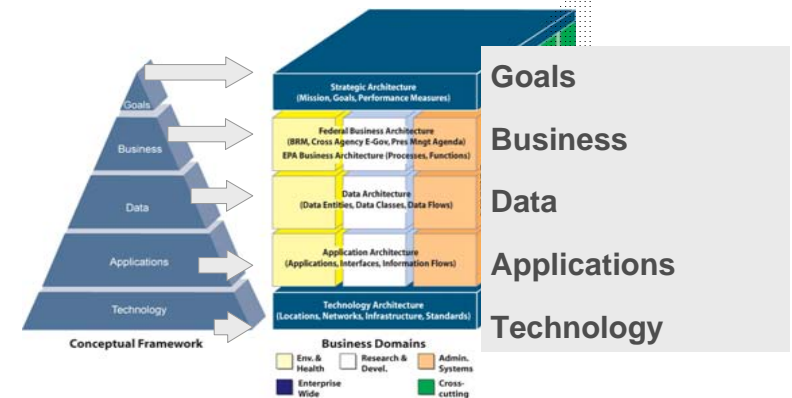
SOURCE: JOHN PRYZSUCHA, DOE

FirstGov.gov (3 Clicks)
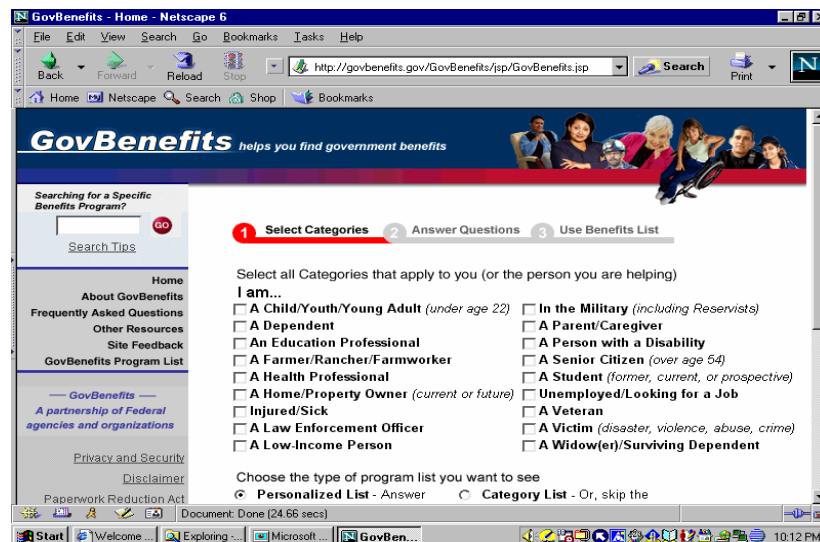
SOURCE: MARY MITCHELL

Environmental Protection FEA Framework

Goals

Business

Data

Applications

Technology

Slide 1 (top-left)
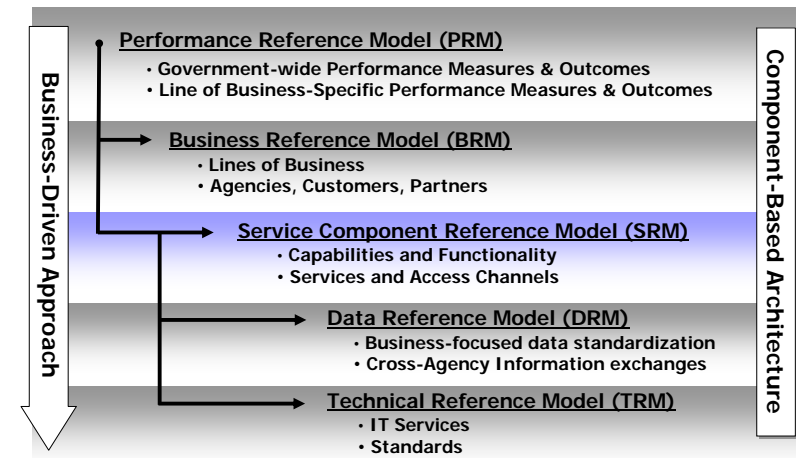
Duplication and Overlap in Critical Government Functions

- 50 agencies implement Federal drug control strategies
- 29 agencies administer 541 clean air, water, and waste programs
- 23 agencies administer 200 programs of assistance to countries formerly part of the Soviet Union
- 13 agencies administer 342 Federal economic development-related programs
- 12 agencies administer more than 35 food safety laws

SOURCE: JOHN PRYZSUCHA, DOE

Slide 2 (top-right)

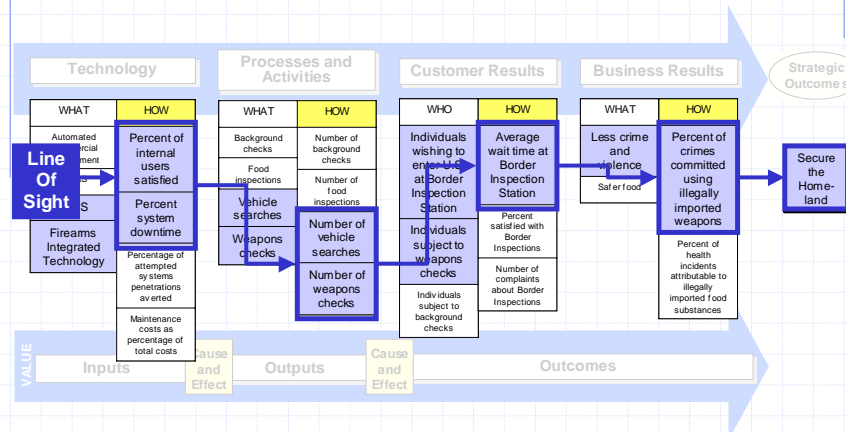# Federal Enterprise Architecture (FEA)

Business-Driven Approach

Component-Based Architecture

Performance Reference Model (PRM)
- Government-wide Performance Measures & Outcomes
- Line of Business-Specific Performance Measures & Outcomes

Business Reference Model (BRM)
- Lines of Business
- Agencies, Customers, Partners

Service Component Reference Model (SRM)
- Capabilities and Functionality
- Services and Access Channels

Data Reference Model (DRM)
- Business-focused data standardization
- Cross-Agency Information exchanges

Technical Reference Model (TRM)
- IT Services
- Standards

Slide 3 (bottom-left)

Performance Reference Model

Relates inputs and outputs to desired outcomes

Slide 4 (bottom-right)

Federal Enterprise Architecture
Shared Lines of Business
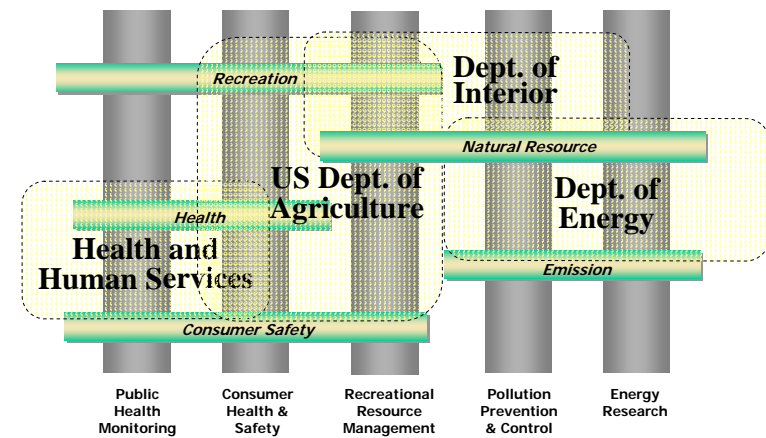
Recreation — Dept. of Interior — Natural Resource

Health — US Dept. of Agriculture — Dept. of Energy

Health and Human Services — Emission

Consumer Safety

Public Health Monitoring | Consumer Health & Safety | Recreational Resource Management & Tourism | Pollution Prevention & Control | Energy Research

SOURCE: DOUG NEBERT, FGDC

Federal Enterprise Architecture
Solution Architects Working Group

Expanded structure based on demand for skills

Government CTO
- Executive Management
- Directional Oversight

Chief Architect
- Recommendations
- Program Management

Senior Solution Architect
- Delivery Oversight
- Communication/Outreach

Solution Architects

PRESENTATION (FirstGov)	PLATFORMS & DB (FirstGov)	BUSINESS LOGIC (GSA)	SECURITY (GSA)	MESSAGING (GSA)
Forms, Scripting **DHTML, XSL, XML** **JSP, ASP** **HTML, JavaScript** **FirstGov Integration**	**J2EE, .NET** **SQL, Databases** **Services** **Architecture**	**EJB, COM, COM+** **UML, Use Cases**	**SSL, e-Authentication** **Encryption** **Security**	**SOAP** **Web Services** **XML** **ebXML**

GSA = GENERAL SERVICES ADMINISTRATION

Online Rulemaking and Management

FIRSTGOV Your First Click to the U.S. Government

Point of Entry, Authentication, Service Directory

Customer

Public/Citizen Services

Policy Search Engine	Publish Docket Calendar	Policy Review	Feedback
Policy Profile	Discussion Forums	Alerts and Subscriptions	FAQ's, Links

Government Services

Policy Repository   Business Rules

Common Business Processes
- Content Publishing
- Content Management

Policies, Local repositories

Agencies

DOT	USDA	EPA	HHS	ENERGY	INTERIOR
TRANSPORT	AGRICULTURE	ENVIRONMENT	HEALTH		

SOURCE: MARY MITCHELL

Federal eGov Authentication Policy

Policy

IEE = INTERNAL EFFICIENCY AND EFFECTIVENESS

G2C	G2B	G2G	IEE

OMB E-Authentication Guidance

Level 1
Level 2
Level 3
Level 4

PKI for Federal Employees

Policy   Operations

NIST Technical Guidance

SOURCE: MARY MITCHELL

ID Assurance Levels

Level 1	Level 2	Level 3	Level 4
Little or no confidence in asserted identity (e.g. self identified user/password)	Some confidence in asserted identity (e.g. PIN/Password)	High confidence in asserted identity (e.g. digital cert)	Very high confidence in the asserted identity (e.g. Smart Card)

Established by Office of Management and Budget

SOURCE: JUDITH SPENCER

Assurance Level Risks

Potential Impact Categories for Authentication Errors	Assurance Level Impact			
	1	2	3	4
Inconvenience, distress or damage to standing or reputation	Low	Mod	Mod	High
Financial loss or agency liability	Low	Mod	Mod	High
Harm to agency programs or public interests	N/A	Low	Mod	High
Unauthorized release of sensitive information	N/A	Low	Mod	High
Personal Safety	N/A	N/A	Low	Mod High
Civil or criminal violations	N/A	Low	Mod	High

SOURCE: JUDITH SPENCER

Token Type by Assurance Level

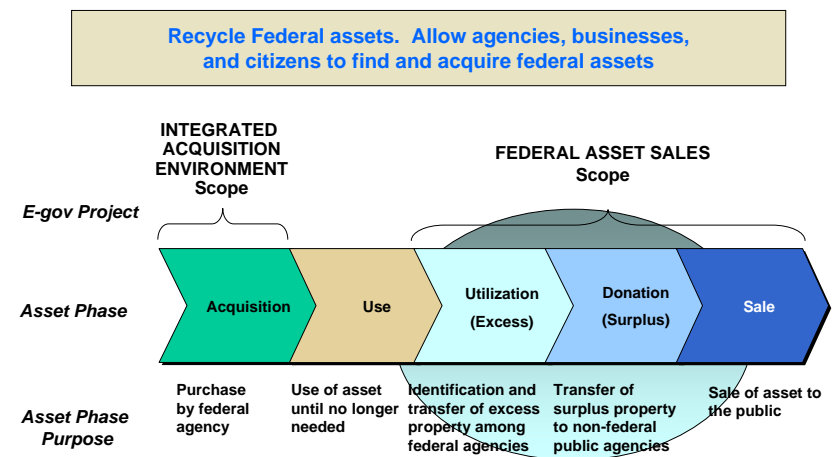| Allowed Token Types	Assurance Level			
	1	2	3	4
Hard crypto token	√	√	√	√
Soft crypto token	√	√	√	
Zero knowledge password	√	√	√	
One-time Password Device	√	√	√	
Strong password	√	√		
PIN	√			

SOURCE: JUDITH SPENCER

Federal ID Required Proof

- Level 1
  - Self assertion, minimal records
- Level 2
  - On-line, instant qualification may be possible
    - Verify by mail, phone or (possibly) e-mail
- Level 3
  - In-person registration not required, but verification delay ensues
    - Verify by mail or phone
- Level 4
  - In-person proof
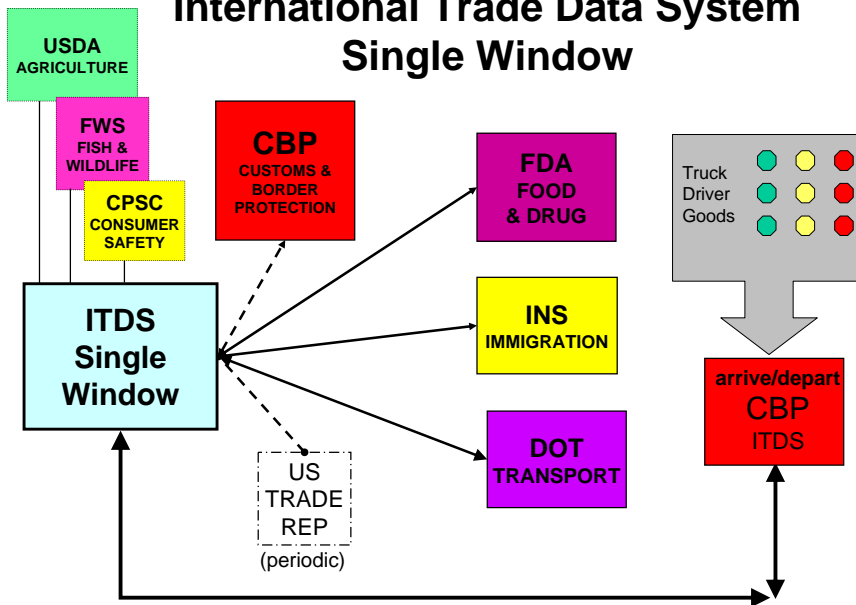   - Record a biometric - later prove who got the token

SOURCE: JUDITH SPENCER

Asset Recovery and Disposition

Recycle Federal assets. Allow agencies, businesses, and citizens to find and acquire federal assets

INTEGRATED ACQUISITION ENVIRONMENT Scope

FEDERAL ASSET SALES Scope

E-gov Project

Asset Phase: Acquisition | Use | Utilization (Excess) | Donation (Surplus) | Sale

Asset Phase Purpose:
- Purchase by federal agency
- Use of asset until no longer needed
- Identification and transfer of excess property among federal agencies
- Transfer of surplus property to non-federal public agencies
- Sale of asset to the public

SOURCE: MARY MITCHELL

## International Trade Data System Single Window

Electronic Permitting

- Internet approval of permit applications using Web-based geo-spatial data, maps and databases
- Automation of business permit processes such as document tracking, permit statusing and report management
- Secure Internet forms with digital signatures and other security components
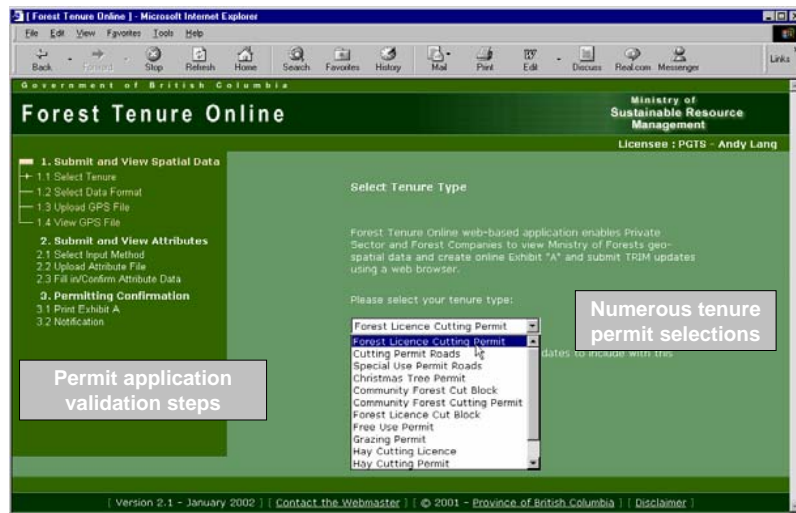- Online payment capability

*true*PERMIT™ System Architecture
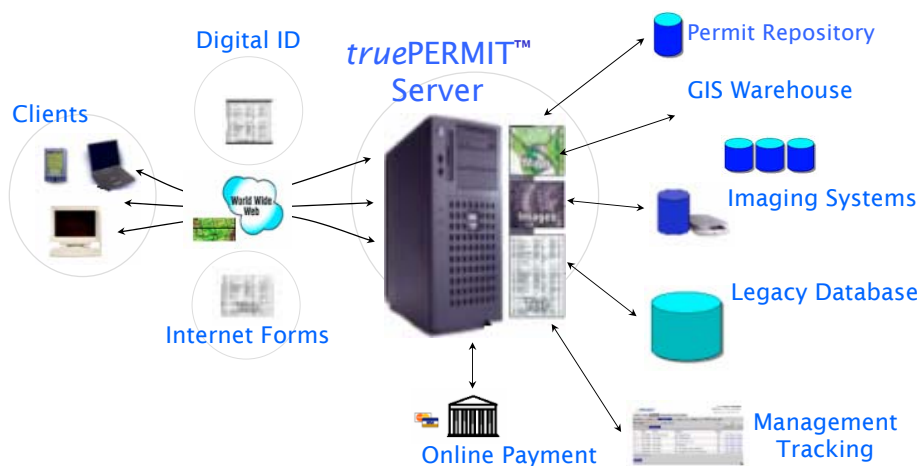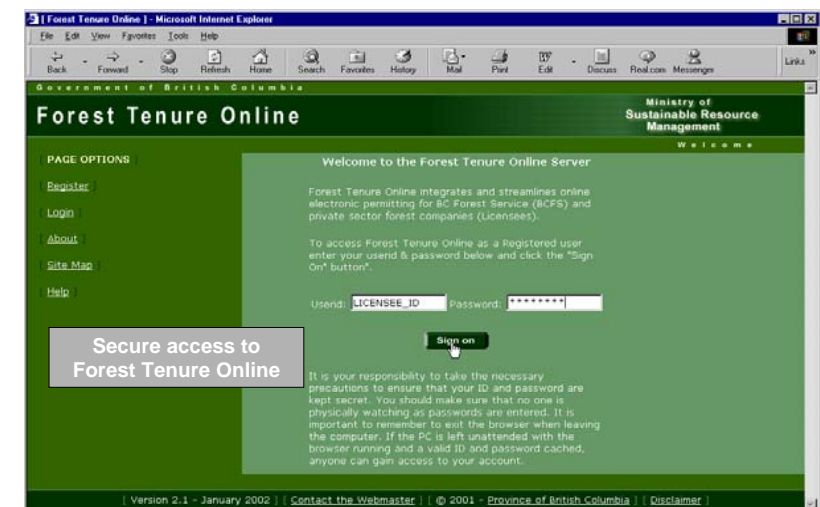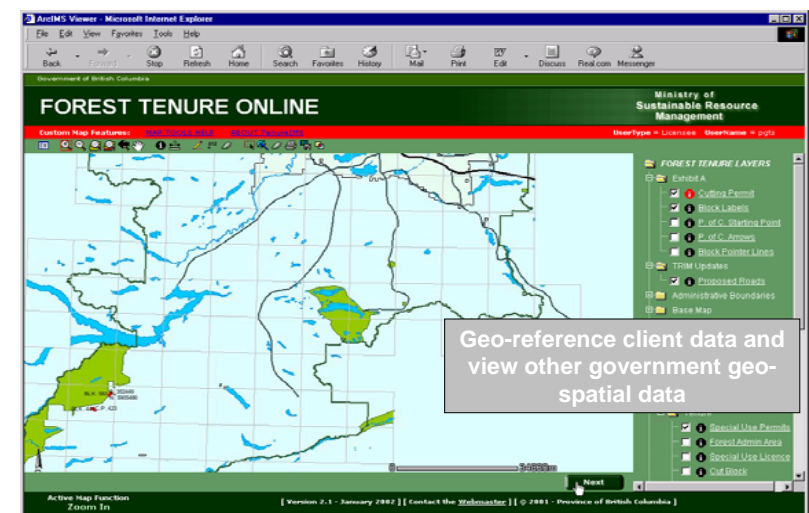
*true*PERMIT™ Forest Cutting

SOURCE: PACIFIC GEOTECH
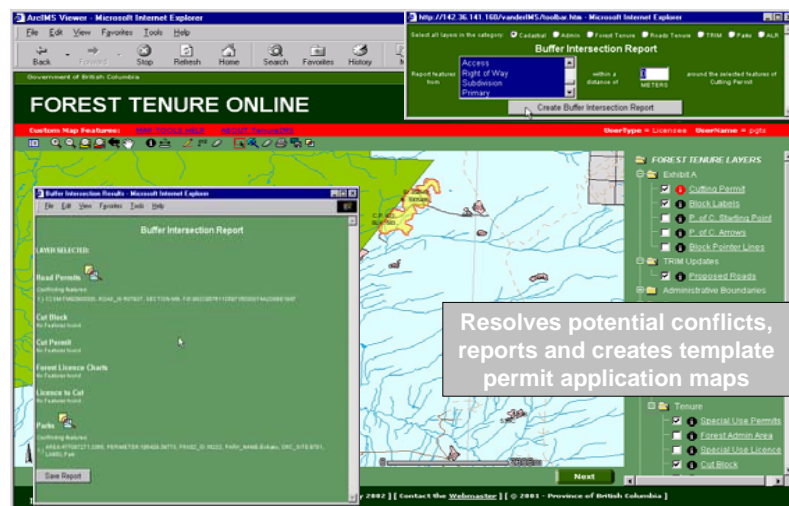
*true*PERMIT™ Forest Cutting

Permit application validation steps

Numerous tenure permit selections

SOURCE: PACIFIC GEOTECH

*true*PERMIT™ Forest Cutting

Geo-reference client data and view other government geo-spatial data

SOURCE: PACIFIC GEOTECH

*true*PERMIT™ Forest Cutting

Resolves potential conflicts, reports and creates template permit application maps
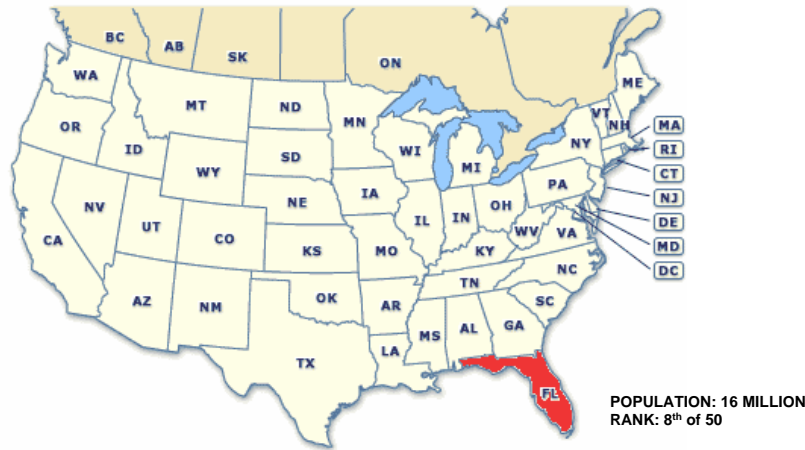
SOURCE: PACIFIC GEOTECH

State Systems

- Political communication
  - Politicians show accomplishments
- State services
- Cost reduction (government and private sector)
- Information source
- Brings citizens closer to government
- Vast number of public access databases online

Florida eGovernment
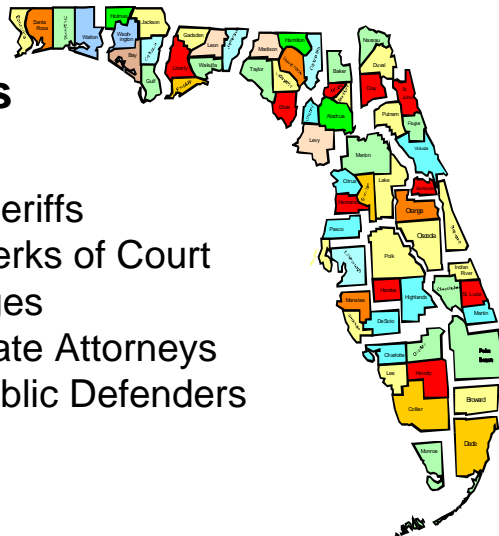

POPULATION: 16 MILLION
RANK: 8th of 50

Florida Data Policies

- Sweeping public records law

- Open Meetings Act

- Maintain only data that are auditable, or can be determined to be accurate, valid, and reliable.

- Share data among different agencies without requiring major redesign of individual systems.

- Integrate data by establishing standard definitions, formats, and integrated electronic systems
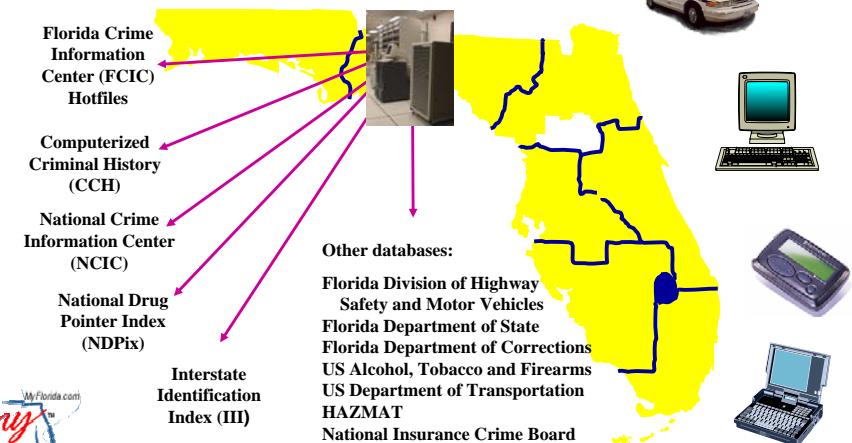
- Make data available on the Internet

Florida Stakeholders

- 67 elected Sheriffs
- 67 elected Clerks of Court
- 20 Chief Judges
- 20 elected State Attorneys
- 20 elected Public Defenders

Florida Criminal Justice Net
Some Examples

Florida Crime Information Center (FCIC) Hotfiles

Computerized Criminal History (CCH)

National Crime Information Center (NCIC)

National Drug Pointer Index (NDPix)

Interstate Identification Index (III)

Other databases:

Florida Division of Highway Safety and Motor Vehicles
Florida Department of State
Florida Department of Corrections
US Alcohol, Tobacco and Firearms
US Department of Transportation
HAZMAT
National Insurance Crime Board

Criminal History Data Flow

Sheriff or Juvenile Justice

Arrest Data

Livescan at booking and Juvenile Justice assessment centers
• **10 minute ID standard**

Offenders

Bondsman

Clerks of Court

Victims
Disposition Notification

State & National Interfaces

Court Data Case Management

State Attorney

Judges

Jurors

Court Facilities

Warrants, Dockets, Schedules, Offender Information, Disposition

Law Enforcement/Corrections/ State Court Administrator/ Juvenile Justice

Dispositions Criminal History

Defense Attorneys

Witnesses

Media & Public

eGovernment Future

- Large-scale replacement of paper records
- Vast interconnection between arms of government
- Increasing importance of XML
- Coming: the semantic web
- Wireless support
- Connection to business sector systems
- Greater efficiency and oversight in government
- Attention to workflow and automated processes

Q&A