E-Government:
How Technology Can Improve Government Effectiveness

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Technology Trends

- **Key technology transitions in the last three decades**
  - 1950s – 1960s:
    - Narrowly focused, transaction processing
    - batch data entry
    - Centralized ‘Mainframe’ computers
  - 1970s – 1980s:
    - Distributed, ‘Departmental’ transaction processing
    - Interactive terminal access via wired connections
    - Distributed ‘Mini’ computers
  - 1990s – 2000s:
    - Intranet and Internet-based information access
    - Web browser and ‘personal computer’-based access
    - Distributed ‘Web’ servers
  - 2000s – 2010s:
    - Internet-based information and transaction ‘self-service’
    - Web browsers on desktops, laptops, mobile devices
    - Extension of computing services to Mobile devices
    - Consolidated and highly managed computing centers
How We Are Enabling New Processes

• **Self-service**
  – Web sites for:
    • General information
    • Process descriptions
    • Transaction processing
    • Support and issue resolution
  – Reduced reliance on phones and paper mail process management

• **Reduction of Paper Flows**
  – E-mail notifications
  – Web-based reference materials
  – Transition through ‘opt-out’ of paper statements, bills

• **On-line Transactions**
  – Secure on-line payments
  – Credit Card protections (and fees)

• **Workflow and Business Rules Management**
  – Consistent processes
  – Validation of step completion and hand-off
  – Automated escalation and approval processes

• **Deeper Integration Across Organizations**
  – ‘Web Services’ used to look up and correlate information in real-time
  – ‘Shared Services’ used to consolidate common processes such as identity management and document management
Commonwealth Organizations

Commonwealth of Massachusetts (May 2012):

Legislative

Executive
Administration and Finance
Executive Office for Administration and Finance
Appellate Tax Board
Bureau of State Office Buildings
Civil Service Commission
Department of Revenue
Developmental Disabilities Council
Division of Administrative Law Appeals
Division of Capital Asset Management
George Fingold Library
Group Insurance Commission
Human Resources Division
Information Technology Division
Office on Disability
Operational Services Division
Public Employee Retirement Administration Commission
Teachers' Retirement Board

Education
Executive Office of Education
Community Colleges
Department of Early Education and Care
Department of Elementary and Secondary Education
Department of Higher Education
State Colleges
University of Massachusetts

Energy and Environmental Affairs
Executive Office of Energy and Environmental Affairs
Department of Agricultural Resources

Department of Conservation and Recreation
Department of Energy Resources
Department of Environmental Protection
Department of Fish and Game
Department of Public Utilities
State Reclamation Board

Health and Human Services
Executive Office of Health and Human Services
Children, Youth, and Family Services
Department of Elder Affairs
Department of Veterans' Services
Office of Health Services
Office of Disabilities and Community Services

Housing and Economic Development
Executive Office of Housing and Economic Development
Consumer Affairs and Business Regulation
Department of Business Development
Department of Housing and Community Development
Department of Telecommunications and Cable
Division of Banks
Division of Insurance
Division of Professional Licensure
Division of Standards
Massachusetts Marketing Program

Labor and Workforce Development
Executive Office of Labor and Workforce Development
Department of Labor
Department of Workforce Development

Public Safety and Security
Executive Office of Public Safety and Security
Criminal History Systems Board
Department of Correction
Department of Fire Services
Department of Public Safety
Department of State Police

Emergency Management Agency
Merit Rating Board
Military Division / Massachusetts National Guard
Municipal Police Training Committee
Office of the Chief Medical Examiner
Parole Board
Sex Offender Registry Board

Transportation and Public Works
Executive Office of Transportation and Public Works
Highway Division
State Highway Assets
DCR Parkways
DCR Bridges
Tobin Bridge
Turnpike
Mass Transit Division
Massachusetts Bay Transportation Authority
Regional Transit Authorities
Freight and Passenger Rail
Aeronautics Division
Municipal Airports
Registry of Motor Vehicles
MassDOT Board of Directors
Office of Planning and Programming
MassPort

Other Organizations
Board of Library Commissioners
Commission Against Discrimination
Commission on the Status of Women
Disabled Persons Protection Commission
District Attorneys
Inspector General
Office of Campaign and Political Finance
Office of the Comptroller
Sheriffs
State Ethics Commission

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Examples of Improved Effectiveness

- **Legislative**
  - Massachusetts Budget Application
    - Near real-time budget reconciliation with House changes

- **Judiciary**
  - Jury Duty System
    - Jury Duty Registration and notification

- **Executive**
  - **Administration and Finance**
    - Executive Office for Administration and Finance
      - Massachusetts Budget Application
        - Near real-time budget roll-up to Agency level
  - **Education**
    - State Colleges
      - College Student Management System
        - Student Portals
        - On-line registration and payment of fees
  - **Energy and Environmental Affairs**
    - Department of Conservation and Recreation
      - DCR Monitoring System
        - Remote monitoring of sensitive resources
    - Department of Fish and Game
      - Licensing System
        - On-line purchase of licenses

- **Health and Human Services**
  - Executive Office of Health and Human Services
    - EIM/ESM
      - On-line submission and matching of service invoices and payments
  - Registry of Vital Statistics
    - eVitals
      - Integration of Hospitals, Medical Examiners, Funeral Directors, Cities & Towns with the Commonwealth for managing Birth, Death, and Marriage information
  - Children, Youth, and Family Services
    - JJEMS
      - Location-independent access to court-order and other documentation
  - Office of Health Services
    - Electronic Disease Surveillance System
      - Disease incidence monitoring

- **Public Safety and Security**
  - Criminal History Systems Board
    - CORI
      - On-line CORI checks instead of paper/mail processing

- **Transportation and Public Works**
  - Registry of Motor Vehicles
    - Registration Renewal System
      - On-line renewal and payment of vehicle registrations
Improved Effectiveness:
- Court Orders available without delays
- ‘Permission to Treat’ available regardless of movements of Clients between locations
- Case data always available to Case Workers without shipping delays
- Best data available for departmental Continuum of Care (CoC) and emergency care

Improved Efficiency:
- Case documents routinely scanned
- Laptops used for field access to case data instead of just in offices
- All documents kept together
- Workflow management ensures completion of steps
Improved Effectiveness:
- All Birth and Death records for last century added to electronic registry
- Consistent data validation ensures accuracy
- Speed of communications between external agents (Hospitals, Funeral Directors, Medical Examiners), Cities and Towns, and Commonwealth government improved

Improved Efficiency:
- Certificate reprints ‘on-demand’ at City and Town offices
- Fully managed hosting with redundancy for high-availability, business continuity, and disaster recovery
New iCORI Service

The DCJIS has launched a new online criminal history request service called iCORI. This service will allow individuals and organizations to request and obtain Massachusetts criminal offender record information (CORI) over the internet. To access this new Service please click the iCORI link below. Please note you will need to register in order to use the iCORI Service.

While iCORI is an automated service and most responses to CORI requests will be returned immediately, there will be instances in which a CORI request will require manual processing. In these cases, responses will most likely be delayed. Your CORI results will appear in your CORI Results list as soon as they are processed by DCJIS staff. There will be no notification when a delayed request has been processed. You will need to keep checking your CORI Results list for responses.
Virtual Gateway is a one stop EOHHS wide web-based portal that provides access to health and human service programs to public, clients, providers and agency staffs.

450,000 registered users.

Hosts more than 30 HHS computer systems (applications).

Provides a shared platform to host the business applications with the following shared services at 1/3 of the cost:

- Access and Identity Management Service (AIMS)
  Single sign-on and end-to-end security to business applications

- Enterprise Service Bus (ESB)
  Support for internal messaging and file transfers.

- XML Gateway
  Gateway for system-to-system integration with internal and external systems using secure web service.

- HHS Interchange
  Managed Secure File Transfer with internal and external systems.

- Electronic Document Management (EDM)
  Central document repository integrated with FAX and scanners to digitize the paper documents

- Common Services - Virus scan, File transfer
Improved Effectiveness:
- Purchase of Services Invoicing automated via Enterprise Invoice Management system, part of Virtual Gateway
- Technical Optimization was accompanied by Process Optimization through standard rate setting and negotiation of single contracts for common vendors across HHS agencies
- Measurable outcomes through reporting
- Compliance to Chapter 257 requirements

Improved Efficiency:
- Submission of invoices, validation, and payment cycles improved
- Savings through early payment discounts
Improved Effectiveness:

- Integrate budget process for $27B, 80,000 employees, 156 agencies, 2,500 accounts
- Provide a data collection and reporting solution to meet ARRA federal requirements and state transparency requirements
- Coordinate the House and Senate budget processes
- Coordinate the Commonwealth Capital expenditure management processes
- Implement ARRA transparency reporting requirements

Improved Efficiency:

- All data stored in one place allowing for incremental assessments
- Impact of budgetary adjustments seen immediately
- Adjustment and amendment cycles far faster than in the past
- Managed hosting for high-availability and disaster-recovery
The current approach is unsustainable

- Too complex
- Difficult to maintain
- Difficult to keep secure

Opportunities resulting from consolidation

- Becoming a technology leader by incorporating industry leading practices
- Building unified information systems that interact, improving internal and external services
- Increasing capabilities to secure information, protecting vital data and systems
Commonwealth of MA Government
Emerging Areas of IT Evolution

- Integration of Mobile Devices
- Health Information and Insurance Exchanges
- Expanded Fiber Networks
- Expanded Voice over IP
- Expanded use of Private and Public Clouds
- Single Sign-on for Accessing Multiple Web Applications
- Broader use of MassGIS and other services
- Consolidated HR for State Employees
- Continued Process and IT links with Cities and Towns