

Commonwealth of Pennsylvania

Enterprise Portal

Digital Government: Government-to-Citizen (G to C)

Executive Summary

The Commonwealth Keystone Technology Plan provides the information technology blueprint for Pennsylvania. The plan directs business and technology leaders to leverage evolving technology trends to better align information services with public policy objectives. Additionally, the plan aligns technology with business needs and addresses the increasing expectations of citizens for seamless and unobstructed access to government information and services.

A government-to-citizen enterprise portal is an important means to meet some of the key objectives of the Keystone Technology Plan. Prior to the implementation of an enterprise portal, the Commonwealth's forty-eight agencies, boards, and commissions had multiple, distributed content management systems that provided organizationally dependent views of government information and services resulting in navigation and search difficulties for citizens.

Establishing an enterprise standard for a centralized portal became the key initiative in developing an overall Services-Oriented Architecture (SOA) and required concurrent implementation of enterprise standards for security, application development, and integration to ensure the overall success of the portal.

A primary critical success factor was migrating citizen-facing agency Web sites from their current legacy platforms into a shared services environment that enables operational efficiencies through standardization, code reuse, cross platform data sharing, and improved government to citizen electronic communications and information sharing. This was the cornerstone to success that relied on sound governance, management, and implementation practices.

The use of an enterprise portal demonstrates that Commonwealth government could reduce the number of entry points for citizens to government information and services. This government-to-citizen nomination discusses the critical success factors and benefits achieved while better serving the constituents of Pennsylvania through a consistent, shared, and collaborative e-government framework for information delivery. Highlights of the benefits achieved include:

- A single face of government to citizens
- Enhanced information sharing between government and citizens
- Cost savings through standardization (over \$10 million to date)
- Improved public engagement and increased employee productivity through collaboration tools
- Improved service through shared resources

Description

In 2004 the Commonwealth of Pennsylvania recognized the need to unify its architecture and approach to delivering Web content and applications to citizens and employees. Hundreds of Web sites and applications used a variety of diverse technologies distributed across the Commonwealth's forty-eight agencies, boards and commissions.

In 2005 the Bureau of Enterprise Architecture (BEA) within the Governor's Office of Administration began forming a SOA to meet the objectives of the Keystone Technology Plan. Enterprise Architecture, using the Commonwealth's information technology (IT) governance structure, assembled teams of technology leaders from the Commonwealth's agencies, boards and commissions. These domain teams researched, conducted product evaluations, analyzed, and designed architectures to set enterprise standards. Security, information, application development, network infrastructure, systems management, project management and privacy domain teams worked in concert to establish an enterprise portal standard that met the following objectives:

- Secure portal for employees, business partners, and citizens that integrated with Commonwealth's enterprise identity management solution
- A single standard for Web content management with consistent enterprise branding
- A portal to Commonwealth applications (standardized on .NET and Java platforms)
- A rich collaboration environment for teams and workgroups to work together and share information
- A unified set of presentation layer services to promote application interoperability, foster data sharing, and make citizen interaction with government easier

In 2006 BEA AquaLogic Portal User Interaction Product Suite (know internally as enterprise portal) was established as a standard along with many other products, technologies, and policies that formed a comprehensive enterprise architecture. Concurrent with establishing the enterprise portal standard was the formation of Commonwealth-wide shared service focused on achieving the following set of operational objectives:

- Establish a single face of government to citizens
- Improve public engagement and increase employee productivity through collaboration tools
- Promote information sharing between citizens and government
- Reduce costs through standardization
- Improve service through shared resources
- Standardize training and reduce time to implement

Significance

Establish a Single Face of Government to Citizens

A single face of government to citizens provides a consistent interaction and high-levels of services to citizens. The enterprise portal achieves this through a consistent look and feel (branding) and the ability for citizens to find services without knowing which organizations within government provide the services. Through the reuse of user interface elements or “portlets,” it is possible to have the same mechanisms used across all government services in the portal which allows citizens to “learn once” about how to interact with government.

The enterprise portal (www.pa.gov) provides citizens with six major categories of interaction with government through a menu prominently placed below the portal’s header. The interaction categories are “Live,” “Work,” “Play,” “Learn,” “Media,” and “Government.” Under the “Live” menu, citizens will find government services arranged by areas of interest. For instance citizens can access “Vehicles & Transportation” to obtain a driver’s license. Previously when citizens wanted to acquire a driver’s license they needed to interact with the Bureau of Driver’s Licensing within the Department of Transportation. This is no longer the case, as everything is presented as a service from a single face of government. Citizens are no longer encumbered by government organization names and bureaucracy.

Other examples of services offered to citizens include “Children & Family” under the “Live” menu of the portal. All services related to children and family are found there, including birth certificates, assistance programs, daycare, child support, community resources, and nursing homes. The same features exist under the “Play” menu accessible from the portal home page, where citizens can explore the Commonwealth’s rich history, heritage, and outdoor recreation opportunities.

While establishing a single face of government has a positive impact for citizens needing to interact with the Commonwealth, there are significant cost savings as well. Prior to the enterprise portal standard, decentralized branding of Web content cost approximately \$40,000 to \$90,000 with an average of \$65,000 per Web site. With the implementation of the enterprise portal, these costs have been drastically reduced through standardization of infrastructure, governance processes, training, and methods to deploy Web content and application that have resulted in savings of over \$3.1 million.

Improve Public Engagement and Increase Employee Productivity through Collaboration Tools

The enterprise portal has a full collaboration suite which allows teams to organize, manage, and share information on projects. The projects using the collaboration suite may include members that are employees, citizens, and/or business partners. This is achieved

in a secure manner that leverages the Commonwealth's robust, enterprise security infrastructure.

Since 2006 over 660 secure collaboration projects have been created in the enterprise portal for employee-to-citizen, employee-to-employee, and employee-to-business partner collaboration. The speed and the reduced cost at which collaboration projects are created rely on the centralized governance and management of the portal.

Collaboration projects feature group calendars, document repositories, message board discussions, messaging and subscription/alerting services. A prime example of alerting services is an eAlert notification that can be sent to any citizen who subscribes to the Chief Information Security Office's Cyber Security community. State Threat Level eAlerts are sent to citizens via e-mail when there is a threat level change.

Promote Information Sharing between Citizens and Government

The Commonwealth's enterprise portal provides a significant contribution to solving the problem of information sharing. The portal is part of a larger SOA that provides presentation layer services while integrating with a common security infrastructure, portlets, collaboration tools, applications, and Web services. The end result of these integrations is the ability to share information with the right people in the correct context.

The security infrastructure provides authentication and authorization services to the portal that ensures that the correct users are able to access and share information. Integration with portlets, collaboration tools, applications, and Web Services allows users to share information from disparate sources and platforms in a context that aligns to the user's needs; i.e., citizens have the right information at the right time and in the right place to complete transactions with government and receive government services.

For instance a citizen who needs to obtain social services can gain access to general information on social services, find the programs for which they are currently enrolled, obtain statuses on applications, and enroll into programs through the portal. The information and services may originate from multiple government organizations and agencies, but to the citizen, they access all of these capabilities through the "Children & Family" category from the "Live" menu on the portal home page.

The process of promoting information sharing using the portal's presentation services has led to the standardization and reuse of a number of services that connect to different platforms. This is a significant benefit since existing infrastructure can be leveraged from new applications in a rapid and proven manner without the expense of the design and implementation of new solutions to share information. Leveraging existing infrastructure is a force-multiplier where less time, effort, and dollars are expended in the creation of ubiquitous solutions that meet citizens' needs.

Reduced Costs through Standardization

An impediment to standardization is often disparate entities or organizations, each having its own business objectives and technology infrastructures. This impediment was overcome in the Commonwealth by involving the agencies, boards and commissions in the process that set the enterprise portal standard. Business and technology leaders from many organizations across the Commonwealth established the enterprise portal standard and the policy requiring the use of the enterprise portal.

The implementation of the enterprise portal centralized the management and reduced the footprint related to content management and Web-based applications. The enterprise portal is currently deployed on thirteen servers in a centralized hosting facility. This compares to a decentralized deployment of content management software on over 150 servers prior to the creation of the enterprise standard.

A shared services approach was used for server management and configuration of the enterprise portal that has reduced costs by consolidating those functions. Concurrently with the deployment of the enterprise portal, it was possible to reduce the product portfolio being maintained to provide similar functionality. Additional savings of 72 percent have been achieved by standardizing portal governance, design and management practices.

Improved Service through Shared Resources

Significant external dependence has existed to support legacy content management, Web development, and administration platforms throughout the Commonwealth. This dependence directed funds toward contractors and away from enhancing government services to citizens. Along with contractor dependence there were varying levels of performance, governance, functionality, and quality of service. Transitioning to the enterprise portal substantially reduces contractor dependence, reduces costs, and increases performance and quality of service.

The Commonwealth's approach to the transition uses shared resources known as the Portal Migration Team (PMT). The PMT mission is summarized as follows: to support agencies on their migration from legacy Web site content management systems to the enterprise portal by providing a structured process for each agency team to follow. Using the PMT and a structured, repeatable process results in the following benefits:

- Lower cost and faster turnaround for deploying citizen-facing Web sites.
- Higher quality of citizen-facing Web sites.
- More consistent Web sites across the Commonwealth.
- More secure Web sites that protect citizen's identity and information.

From a cost perspective, there is a 40 percent to 50 percent reduction in overall costs achievable through sharing existing IT human resources with projected cost savings of

approximately \$9.7 million to \$12.1 million. These dollars can now be directed towards information, content, applications and services that benefit the citizens of Pennsylvania.

Benefits

The Commonwealth of Pennsylvania strategy aligns technology with business needs and addresses the increasing expectations of citizens for seamless and unobstructed access to government information and services. The strategy also evolves IT into commoditized-shared services following industry best practices of citizen-centric service delivery. It promotes the standardization and reuse of technology infrastructure and services, and the reallocation of recovered resources to support business objectives.

The enterprise portal has the following tangible, financial benefits:

- Reduced product management costs savings from technology standardization: \$850,000
- Cost savings from cross platform data sharing: \$150,000
- Cost savings derived from an enterprise “Branding” standard: \$3,120,000
- Cost savings derived from a shared resources model: \$9,696,000 - \$12,120,000.

Additionally, the enterprise portal has resulted in the following intangible, non-financial benefits:

- Single face of government – enabling citizens to obtain government services in an easy and consistent manner.
- Improved system availability - 24/7, 365 days per year availability of enterprise portal operations enabling citizens to access and use Commonwealth Web sites at any time.
- Secured citizen to government to citizen online communications and data sharing functions.
- Standard user interface designs for improved usability and accessibility to secured information and data sources.