eGovernment
Enterprise Portal Strategy

Oakland County, Michigan
http://www.co.oakland.mi.us

Prepared by
Oakland County Department of Information Technology
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Executive Summary

Oakland County’s eGovernment plan is already well underway. An important element of that plan is our Enterprise Portal strategy, which puts essential technologies in place that are fundamental to our continued growth and success in providing digital solutions to improved workflow, productivity, security and service.

The Enterprise Portal is an infrastructure that will be shared by all units of Oakland County government and benefit everyone with short- and long-term benefits. The Portal allows for someone to access various proprietary applications, shared software, information, and data stores by using a single log-in and password.

The Portal will also facilitate a self-service environment, in which an employee (for instance) will be able to update their own Personnel information (if they change addresses), and/or view other data relevant to their own employment history and benefits.

It will also allow a diverse audience, from potentially many different locations, to log-in using the Oakland County Web site to share resources and work in a potentially collaborative and secure environment – entirely online!

Meeting the challenge of providing improved services and increased efficiencies in government will require that we all work together to minimize duplication of efforts and increase the sharing of common resources. The Portal will enable us to reach this goal and achieve excellence in delivering the right solution, at the right time.
Introduction

Across the nation and within Oakland County, a common opinion has emerged that articulates “eGovernment” as a promising mechanism for achieving better, faster and cheaper government. Those government entities considered as leaders in transforming and improving the relationship between government and its citizens are implementing integrated “e-Portals” as technology centerpieces. Citizens are expecting online interactions with government to parallel consumer experiences offered by the private sector. To that end, Oakland County must continue to build on its eGovernment initiative to meet and exceed these expectations with Internet-accessible services, interactions and transactions that are convenient, secure, easy to use and responsive to citizens’ needs.

eGovernment at Oakland County is already well underway with the successful implementation of a Content Management System and its related infrastructure technologies.

This system provided a solution that is shared by all departments, units and agencies, enabling each Web site under the Oakland County “banner” to be managed by a wide variety of people with no prior experience maintaining a Web site. This solution also reduced long-term expenditures necessary to maintain an eGovernment Web site for every department and agency involved, as well as provided a common foundation from which to implement technologies that are essential to implementing the next step in our eGovernment evolution – installing the “e-Portal” (or Enterprise Portal) framework.

Like the Content Management System, the Enterprise Portal framework provides us with a fundamental technology that will be shared by all units and will benefit every area of Oakland County with short- and long-term cost savings and service infrastructure.

The Portal technology provides fundamental capabilities that will allow a person to log-in to the County’s applications from the home page of the Oakland County Web site (www.co.oakland.mi.us). From there, they will be able to use and view a wide variety of resources that were previously only accessible if you were on a computer within the County’s network or via dial-up connection. Even then, a system and user have been greatly limited by not having access to applications or information that may reside in another unit or agency, or on someone’s computer hard drive.
The Portal technology will break down the boundaries that currently exist between information and applications, and provide us with much greater ability to efficiently manage the enormous amount of data currently maintained sometimes two, three, four or more times over within individual units of the County.

The Enterprise Portal technology enables access never before possible by identifying a person by their log-in ID (single sign-on) to provide them with access to whatever application or information is available to them based on their role (or duties).

Employees, for instance, will be able to see the eHealth application, view the latest Homeland Security training initiatives, and check on their own Personnel information, such as how much vacation time they have remaining (without ever picking up the phone to call someone in Human Resources).

The Portal will enable all local CVTs to sign-in to share in potentially all applications developed by Oakland County via the Internet. This will allow for common documents and information to be shared in a format consistent with their needs, and therefore consistent in the delivering of it to citizens. It will also bring this common network of local governments together in a potentially collaborative environment. This will allow local government workers to serve their own constituents better by having access to government information on a regional scope. Each will be able to deliver their own “one stop shop” to their citizens.

Most importantly at this time, Portals are providing the framework for redefining traditional business practices and processes internal to the organization. Research shows that organizations implementing Portals are seeing enormous returns on investment and increased employee satisfaction.

Most widely affected in the early stages of Portal implementation is the Human Resource function, whereby employees are able to use the Web browser interface to sign-on once, with a single employee ID and password, to access and manage their own personal/personnel information in a secure environment. This is drastically reducing costs related to new hires, payroll maintenance, benefits services, employee reviews and a host of other personnel services that may now be handled in a “self-service” environment.

In addition, the Procurement function is realizing tremendous efficiencies in terms of vendor management. A vendor can sign-up for an account and then log-in anytime of the day to view the latest bids, check on the status of a proposal, find out who was awarded a bid, check on order/receipt status and payments. Vendors will have dynamic real time access to information in a secure environment, giving each vendor exclusive views of payment status details.
In this time of tight budgets, a retiring workforce, and limited new hiring, the Portal solution is an answer to the question:

“How do we provide the same, and an even better, level of service without as much money or people to do it?”

Meeting the challenge of providing improved services and increased efficiencies in government will require that departments and agencies work together cooperatively, minimize duplication of efforts, increase their sharing of common information technology resources, and foster innovation in the application and deployment of information technology.

This proposal outlines the plan for Oakland County’s Enterprise Portal implementation, which will provide us with the essential single sign-on capability in a secure environment, and is in full support of our existing eGovernment Strategic Plan. It sets forth the vision, guiding principles and implementation objectives that will help Oakland County meet the challenges we face in the 21st century. The plan also fully supports the objectives set forth in the Oakland County 2000-2001 Information Technology Master Plan. It provides further detail about how we plan to move forward to establish an enterprise-wide integrated Portal strategy and to promote multi-department/agency collaboration and cooperation across the numerous eGovernment projects currently underway.

**Definition — Integrated Portal**

A Portal is a starting, or anchor, point for an organization that seamlessly connects users to related services and information. It is a cost-effective way to integrate existing applications on the Web and to deliver new eGovernment services quickly, offering developers a ready-made Web services platform and a user experience that reaches a large audience. A Portal contains content such as news, policies and instruction, and access to various independent applications; provides mechanisms for commerce; and delivers the framework for interaction among people with common interests (a community).

On the back end, an integrated Portal houses all information and applications in a single, scalable environment. Most of today’s so-called Portals simply offer links to other Web pages. A true Portal is an integrated site, one that cuts across back-end processes and seamlessly provides both information and transaction capabilities from multiple agencies.

Within Oakland County, the implementation of the Enterprise Portal technology will connect programs and databases across many different departments so that technology developed for one may be leveraged by all. The Enterprise Portal framework is an open environment for managing and delivering Web applications. The Enterprise Portal is the foundation technology necessary for delivering the combined applications and systems environment into a single interface. It also provides the platform for developing future applications in a more cost-effective and efficient manner.

The result is an environment that spans the entire enterprise, open to all platforms, and available to potentially all audiences. Providing a common foundation for Web applications built on any platform lowers infrastructure and development costs; also, integrating resources from different systems into Web
applications increases the return on those systems, and creates a common user experience for audiences across the enterprise to work together (driving enterprise productivity and increased cost savings).

Sharing applications in the future will also create a more consistent warehousing of data resources and other content assets. Information will be managed once for use by all. Any updates to customers’, citizens’ or employees’ names, contact information, and other personal information will be handled only once, and then correctly represented in the database to whom ever logs in to see the information next.

A common misconception of a Portal is the notion that it is linked to a particular technology, specifically the World Wide Web. Although most of today’s Portals are Web sites and are primarily accessed via a browser running on a personal computer, this architecture would be too limiting given the diversity of a county-wide, even region-wide, user bases and rapid advancements in new technologies.

A Portal must be flexible, supporting a number of interface devices, including telephone and wireless devices such as personal digital assistants (PDAs), pagers and cell phones. Each of these devices would access the same database of information and services and thus empower the employees, citizens, businesses and other governments with numerous options for communicating with Oakland County. One example of Oakland County’s plans for expanded device options for viewing Portal data include the creation of PDA presentation templates for properly displaying Web content and delivering customized services for online and other device-specific customers.

Therefore, a Portal is best conceptualized as an electronic means of delivering information and services from an organization or group of organizations. It is also important to distinguish data elements that are common across organizations, such as a citizen’s address. Common information can be drawn from a single shared information source.

A Portal is also a secure gateway to internal and external data. A Portal has:

- A single point of access to Web-based applications and legacy systems.
- Sophisticated search capabilities.
- Role-based information delivery.
- Single sign-on with unified password for easy, secure system use.

A Portal is not only a vehicle for transitioning current practices and procedures to the Web, but it is a new way of working and building a strategic and competitive government. The Portal is a new level of sophistication that creates speed, efficiency and a level of collaborative interaction that creates gains in productivity. A Portal may be a fully personalized browser with everything employees need to do their jobs – all of which are just a couple of clicks away from the enterprise home page.

**Single sign-on**

Single sign-on is convenient and, more important, makes it possible to allow employees, business partners, and others in the community to interact with our network. Single sign-on is the key to doing business online in the future. Whether we’re dealing with a CEO of an Automation Alley member company or a Clerk in the Vital Records unit, we need to see ID. Easy and reliable personal authentication is important in organizations of any size.
A significant advantage of the integrated solution is the minimized number of log-ins required to grant authorized users access to all the enterprise resources they need, including the Portal itself, and those resources available through the Portal. The single sign-on capability is enabled beyond the Portal environment to cross multiple domains, providing secure and seamless Web access even when the user navigates outside of the Portal environment. All of this is done with the assurance that users can access only the applications and resources that they are authorized to access based on their profiles.

The unhindered, seamless access provided improves user operating efficiency, thereby improving their overall productivity. Particularly important for employee and partner Portals is that the single sign-on capability significantly enhances end-user satisfaction.

In addition, single sign-on administration for employees will be handled through a provisioning system that parallels employee new hire processes. When someone is hired, their employee information is entered into the system, automatically providing them with their single system ID, and the appropriate Portal access privileges are set. When the all-to-common job transfer to another unit of the County occurs, their new role is identified in the Human Resources system and is automatically translated to their new access privileges in the Portal. More importantly, when employees leave service with the County, access to systems and applications can be immediately and automatically terminated. This is a security feature that has never before been possible, leaving the County at severe risk of exposure from potentially disgruntled employees.

The following is an example of some of the major categories for establishing roles/identities and corresponding permissions into the Portal:

- External/citizens
- External/businesses
- External/local governments
- External/other (determined by project)
- Internal/enterprise
  - Department
  - Division
  - Unit
  - Team (project)
  - Individual

Directory Services is also a part of single sign-on that is a central database that keeps track of every resource and user in the enterprise-wide network. Everyone in the County will have dynamic, real-time access to employee contact information (phone extension, e-mail and mailing location). This will eliminate managing the upkeep of employee directories and improve efficiencies related to finding updated information.
How it works

A user enters the Oakland County Portal by logging on, either with their Oakland County Network ID, or with an ID assigned to them for the purpose of accessing any Portal system that allows them access privileges. Once a person establishes an identity, a centralized service will authenticate and provide access to information, applications and services. Without single sign-on, a typical scenario of using various applications and accessing information within the County would look like this:

- Start computer; log-in to network (separate ID required).
- Check e-mail (separate ID required).
- Open application specific to your job/department (separate ID required).
- Access documents stored on network (only allowed to view files in your hard drive).

Single sign-on sets the stage for the next step of eGovernment. Providing single access means that authorized users can get to the data and programs they need in a streamlined, consistent and personalized way. We will reduce the number of proprietary client programs people have to learn, and provide Web access to all resources. Single access to all resources through a browser lets users tap into our network over an Internet connection in hotels, airports and homes. It lets them use browser-equipped cell phones and other new access devices. And it will let our citizens, business partners, local governments and employees to easily access appropriate information from anywhere, at any time of day or night.

Enhanced Security

The Portal framework provides powerful authentication and authorization services that yield enhanced Portal security. A major part of the Portal infrastructure is the authentication component, which establishes security profiles that interrelate with other applications. This allows the Portal to support LDAP and to access the wide range of secure resources available to each user via different profiles. User ID and passwords will be synchronized to establish rights to multiple applications.

The administration of permissions will be handled in the same way network access is currently handled (per department/agency). Groups and individual roles may be set as detailed (or granular) as needed. Password management functionality complements existing processes for administering permissions for the numerous applications in and around the County. Identity workflow is a simple process that will be automated as much as possible.

Benefits of an Integrated Portal

The primary reason for developing an integrated Portal is to improve internal efficiencies by centralizing shared technology resources and providing a “self-service” environment that is secure and easy-to-use. This sets the stage for streamlining business processes and delivering custom Portal solutions to our customers who require secure application and data processing. Oakland County will also improve the level of service to citizens, but will do so at a lower per transaction cost because of the process improvements realized from the installation of the Portal infrastructure.

Citizens will be able to access numerous cross-agency services without having to know who to contact and where to go. The bureaucracy of government will be transparent to them in this “self-service”
environment. Citizens will also have access to these services through a single user account with the
government, avoiding the hassle of establishing and keeping track of separate accounts with each
government organization. Many governments have adopted the slogan “get online and get out of line.”

In addition, the benefits of Portal technology go far beyond the Web site application of delivering
online services. The Portal will enable secure information from potentially multiple application resources
to be delivered to virtually any type of user with a single log-in ID – a capability we currently do not
have. This means that employees will be able to access their own personnel and payroll information,
common business forms, and database applications and information that may have in the past been
unavailable because of desktop computing and network limitations.

For example, our local cities, villages and townships will be able to leverage Oakland County
information, services and technologies in a way never before possible. Municipal Health administrators,
public safety officers, emergency response personnel and others will be able to log-in through the
Oakland County Web site home page and never need more than a browser, such as Internet Explorer,
to gain access to the systems and mission-critical information they need in a secure environment. The
Enterprise Portal manages access to information based on the users’ roles and permission settings.
Whether someone is in the field, at the office, or in a home-based situation, they will be able to log-in and
work from potentially any number of computing devices – personal digital assistants (PDAs), wireless
laptops, thin clients, cell phones, pagers, or traditional desktop systems.

Governments, like the private sector, across the country are turning to Portal technology to empower
local public safety officers, emergency responders and health workers with a communications tool never
before possible. The impact this will have on state and federal emergency response, as well as information
gathering and sharing initiatives, is immeasurable. Risks associated with traditional communications
models (phone, in-person, etc.) will be mitigated in this new communications environment, allowing key
personnel at all levels of government (national, state, regional and local) to share information efficiently
and effectively from any computing or communications device anywhere at anytime.

Geographically dispersed organizations with traditional communications infrastructure spend hundreds
of thousands of dollars each quarter distributing sales materials, policies and procedures, and news via
physical media. The Portal will serve as a personalized destination for employees, businesses and citizens
to visit whenever they want to do business with us. It can serve as a vehicle for updating the extended
enterprise more frequently at a lower cost. “Portals with a searchable knowledge base are well suited for
distributing and warehousing corporate communications,” (Plumtree Software Corporate Portal Report,
2002). Many organizations deploy a Portal to project organizational culture and mission to audiences that
are often difficult to reach – i.e., distributed work force at various locations with varying hours and work
schedules. As a medium people can access from a kiosk, laptop, handheld device or home computer, the
Portal offers greater continuity and impact than is possible with the quarterly package of binders or
reports traditionally distributed (that often times is simply thrown in the garbage!).
The benefits of a Portal deployment are substantial:

- **More cost-effective, powerful Web infrastructure:** Web-enable applications and deliver eGovernment services cost-effectively.
- **Lower network, storage costs:** Reduce e-mail distribution of large files by allowing employees to share documents via the Portal, lowering storage and network costs.
- **Lower intranet, extranet administration costs:** Allow employees to contribute in a self-service way to an organized, secure intranet or extranet, reducing administration costs.
- **Lower training costs:** Give people a simple interface to the most useful services from different applications, limiting training on complex CRM, ERP and data warehousing clients to the specialists who use the tools all day.
- **Lower communication costs:** Empower employees, partners and customers to get what they need from us via the Portal, rather than by calling someone at a help desk, in human resources or in any other call center, improving service at a lower cost.
- **Improve customer service:** Drive access to County government by offering a Portal into government services that provides electronic resources 24 hours a day, 7 days a week.
- **Increase productivity:** Change the way people work; improve productivity by giving everyone we do business with one place to go to get all of the electronic resources available from the County, minimizing time spent searching or training on complex applications.
- **Improve collaboration across the County/lower travel costs:** Use the Portal as a platform for employees and partners to work together more efficiently without having to meet face-to-face every month, every quarter, etc., reducing travel costs.
- **Improve teamwork across projects:** Use the Portal as a collaboration forum for project groups and teams to work more closely, driving projects to completion faster.

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**Lower Network, Storage Costs: The Portal Distributes Large Files More Efficiently**

Using e-mail as a document distribution and management system is a widespread but often inefficient practice. Using e-mail with large attachments as the primary vehicle for distributing graphics-laden presentations and other files to large audiences of employees and partners has caused network and storage costs to skyrocket. Because many organizations lack an organized enterprise-wide framework for accessing information easily, employees are reluctant to delete messages or files, often storing out-of-date content locally rather than connecting to servers for the latest copy when they need it.

Portals that feature a document directory can index content distributed via e-mail at the edges of the network or stored in scattered file servers or databases. The result is that information is stored only once, anywhere on the network, and is available for everybody to find it when they need it without having to replicate that content to each person’s personal computer. As a result, the County can delay or avoid costly upgrades to networks and storage systems. To quantify the benefit, consider the number of two-megabyte files distributed to hundreds or thousands of people as attachments every month, and how much hardware and networking equipment that is involved to accommodate that traffic. Furthermore, Portals that include advanced document management solutions will further reduce the churn of heavy e-mails by allowing document sharing to take place through the Portal.
Savings in eGovernment: the Bottom Line

One of the biggest advantages that eGovernment can offer is the streamlining of services. This often translates directly into lowered costs. For example, papers do not have to be routed through various departments, human computational errors are eliminated, and paper and document storage costs are also significantly reduced. Recent reports, such as from Jupiter Communications Group, confirm the very real dollar savings organizations everywhere realize from their Portal technology. Many organizations are seeing a return on their initial investments within the first year.

In fact, the Association for Computing Machinery projects savings from eGovernment could reach $110 billion a year. The following are just a few examples of governments reporting impressive returns on investment:

- In Hillsborough County, Florida, processing an auto tag renewal in person costs $8; by Internet and telephone, that cost drops to $1. (Tampa Tribune)
- In Riverside County, California, a traditional property tax payment costs the county anywhere from $2.50 to $5.50; an electronic payment costs 22 cents. (EzGov)
- Registering motor vehicles in Arizona costs the state $6.60 for a manual transaction, but on the Internet, registration costs $1.60. These fees save Motor Vehicle Division nearly $2 million a year. (Washington Technology)
- In Alaska, the traditional DMV registration-renewal process costs the government $7.50 per transaction, but that cost falls to less than a dollar when done online. (Government Technology)

By helping demonstrate the link between online services and efficiency, the cost savings realized by governments is helping fuel eGovernment at all levels (From EZ Gov Bulletin – an online newsletter for eGovernment in the U.S., April 2, 2001). The technology solution that the Portal provides enables some of the most routine transactions to be conducted online rather than by phone, in-person or by mail. Project specific applications and detailed information for each is provided in “Appendix A” (at the end of this document).
eGovernment Saving Oakland County Taxpayer Dollars

In many communities, the term “eGovernment” is an undefined buzz word with little life and even less backbone.

In Oakland County, the definition is crystal clear:

*eGovernment = a savings of taxpayer dollars.*

Through the implementation of its new Web site and content management system, Oakland County Web site visitors have downloaded a monthly average of almost 17,000 individual files during the last six months. These files include various County forms, handbooks and fact sheets. Each one represents one car trip NOT made to the County Seat, one line NOT waited in, one phone call NOT made (or answered), and one letter (or document) that did not have to be mailed or faxed.

The figures below provides an estimate of how much money is being saved to date through Oakland County’s eGovernment initiative.

These conservative figures include only the most obvious associated costs. Final numbers will likely exceed the estimated $500,000 annual savings shown here.

And this is only the beginning.

As eGovernment grows, so will the expanding menu of services being offered online. With each new service will come additional savings of time and money for Oakland County Web site visitors and taxpayers.

**BASIC COST IMPACT FACTORS**

**Clerk:**

| Base 0 salary with fringe (10.1178*1.411) | $14.28 hourly |
| Per Minute Rate | $.24 |

*Average time to respond to call:* Estimated 5 minutes $1.20

*Printing/envelope* costs to mail requested papers $ .50

*Postage/bulk rate* $ .27

*Total cost per request* $ 1.97

Average downloads over past 6 months 16,963

**NET BENEFIT (monthly)** $33,417.11

**NET BENEFIT (annual)** $401,005.30
History of Oakland County eGovernment

Throughout our development and marketing efforts we have been constantly evaluating ways to move toward digital government. We are uniquely positioned to centralize service offerings, reduce duplication and capitalize on reusable technologies to bring unprecedented levels of convenience to the people of Oakland County and efficiency to our internal business practices – but only with the implementation of the Enterprise Portal technology.

On January 25, 2002, Oakland County took its first major step toward embracing eGovernment by launching its first generation Portal interface. At that time, the groundwork was laid for this brand new way of working and serving the public – servers and software were installed in anticipation of the next steps. This Portal interface is represented by the new design of the Internet Web site, which turned the structure of government on its head – presenting information and services according to users needs rather than by a departmental structure. Departments, divisions and units with existing Web sites were transformed under this new Portal strategy – and all adopted a common design, architecture, content standards and platform for service.

By adopting this new architecture and successfully deploying its Content Management System, Oakland County took a major step toward providing government services online. Our accomplishment of these tasks set the stage for the next step – implementing the Portal technology that will enable a multitude of valuable service opportunities and business process improvements.

Additionally, in 2002 Oakland County’s Information Technology Department developed a strategic plan for eGovernment implementation that outlined the necessity for providing policies, processes and technologies that will help us achieve successful eGovernment at Oakland County. The strategic plan specifically outlined five projects that serve to represent the initial groundwork. Of those five projects, the first priority was to complete the Oakland County Web site redesign project. The Web site redesign project included not only the Web site redesign, but also the installation of state-of-the-art servers, a Content Management System, the development of a common logo and mission statement, and the policies necessary for each to succeed.

As of September 2002, we have successfully achieved this goal, represented by the migration and representation of all critical areas of Oakland County Government, including departments, units and key projects relevant to all aspects of fulfilling our mission. To date, the Oakland County Web site has more than 8,000 pages of information, downloadable forms and publications, and some online services, most notably represented by @ccess Oakland.

In addition to achieving the successful completion of our initial goals (on schedule and within budget), we have exceeded expectations in terms of internal support, public awareness and industry recognition. Very few governments in the nation have achieved the kind of success that Oakland County has achieved with its content management implementation and standardization across all areas of County government.
More importantly, we have laid a solid foundation for implementing the next important phase of eGovernment – Oakland County’s Portal framework that will lay the foundation for the true delivery of eGovernment services and features.

The County’s current situation represents a stage in the evolution of eGovernment that is characterized by some level of interactivity on the Web site and a degree of electronic commerce. At present, the most successful components of the Oakland County Web site are downloadable forms and the @ccess Oakland application.

In an effort to build on the successes of these current online services, we need to adopt a Portal strategy that most significantly enables single user sign-on, secured data processing, and more robust e-commerce capabilities. Without the critical next step of implementing the Enterprise Portal, Oakland County will be unable to continue with its eGovernment objectives, and will remain static its delivery of online services.

**Vision for an Integrated Portal**

This vision presents a bold new model for government – one that empowers the citizen by providing unprecedented access to public information and services through the use of technology. Citizens are expecting online interactions with government to parallel consumer experiences offered by the private sector.

To that end, Oakland County must commence an integrated Portal initiative to meet and exceed these expectations with Internet accessible services, interactions, and transactions that are convenient, secure, easy to use, and responsive to citizens’ needs. The mission of the Oakland County Portal is to make interacting with Oakland County Government easy, intuitive, and pleasant, yet private and confidential as well.

Oakland County aims to serve as a self-supporting and cost effective electronic gateway that provides and enhances access to public information stored in electronic form. Oakland County recognizes the right of citizens to access public information and perform government transactions while respecting the laws that protect privacy and confidentiality. This is accomplished by providing an electronic gateway for the County, by hosting and managing government applications, and by working with County departments and agencies to help facilitate their Internet goals.

What’s more, customer service is at our foundation. We will track service usage, conduct customer satisfaction surveys, and speak directly to our customers in order to better understand and therefore meet their electronic government needs.

Oakland County will be a County:

- Where the effective implementation of technology will drastically redefine a citizen’s relationship with government—putting them in charge of when, where, and how they interact with government to attain services or information.

- Where personal privacy is paramount, where government is trusted and efficient, and where organizational bureaucracies are transparent to the citizen.

- Whose vision leaves no one behind, especially those living in rural communities, those who are economically disadvantaged, or who face a physical challenge.
Portal Infrastructure: The Next Logical Step

Oakland County has clearly done a superior job at implementing the first part of our strategic eGovernment goals. We have achieved a county-wide information architecture, represented by the new design of the Oakland County Web site, have implemented some of the key enabling technologies necessary (Content Management System), and have developed essential data and application development standards. The critical next step is to install and configure the PeopleSoft software that will enable the Enterprise Portal infrastructure. This step is the crucial component that will enhance communication, collaboration, and the sharing of information and information technology resources. The installation of this software is the foundation to support improved customer service and decreased costs through the electronic government processes.

As technology shifts from a software (single application) model to a Web services model, a framework for assembling those services on behalf of County users becomes strategic infrastructure. An Enterprise Portal is a cost-effective way to integrate existing applications on the Web and to deliver new eGovernment services quickly, offering developers a ready-made Web services platform and a user experience that reaches a large audience. The platform and software selected for Oakland County’s Enterprise Portal provides for a security and authentication schema, personalization features, a customizable user interface, and a host of ready-to-publish “pagelets”, or features, that may be deployed immediately upon successful implementation. To help alleviate the pressure on development resources, our Portal “pagelets” will be used whenever possible to achieve successful results.

The Web site (Portal interface) is the single entry point from which a variety of information sources, products and services are easily accessible. It is the goal of the Portal to redefine how people do business by developing and integrating the resources employees, citizens, businesses and others need to interact with their government into a single, secure centralized gateway. The Portal ultimately will have a profound impact on the way government, businesses and citizens interact. The Portal provides the framework to:

- Coordinate and integrate existing services and products available on the Internet.
- Enhance capacity to use information and information technology across departments and agencies.
- Provide quality service to the public, our employees and our local governments.
- Strengthen efficiency and accountability.

The Oakland County Portal has the following overarching strategies:

- Build a successful base of operations.
- Position enterprise eGovernment solutions.
- Create the next-generation Oakland County Portal.
- Develop specific eGovernment services to meet the needs of the County while generating cost recovery for a financially viable network.
Oakland County Portal Architecture

The Portal Architecture is determined by the community of users it primarily serves. Specific content and applications are detailed later in this document, but all will have key components, or features, common to any user group. These include:

**Content:** An enterprise-wide County Intranet will be developed with basic information relevant to all employees; individual modules (sub-Portals) will be developed for a variety of user groups (i.e., law enforcement personnel, emergency first responders, health organizations and individuals, etc.). Content will come from a variety of sources, including the existing County Web site, current applications, and data documents stored on the network. The following will be included:

- Newsletters, other information resources
- E-mail
- Calendar
- Document Library (Search Engine)
- Employee Dashboard (Personnel Portal)
- Application(s)
- Links

**Document Library:** The Oakland County Portal will feature a sophisticated document directory with integrated full-text searching and complete Web console for distributing administration throughout the enterprise. By sending e-mail or saving a document to a public server, County Portal users can publish documents to an organized, indexed Web directory, slashing intranet or extranet maintenance costs. This source of savings by itself was so significant for an office supply retailer, cited in a Plumtree Software Corporate Portal Report (2002), that it justified the cost of an enterprise-wide Portal deployment all by itself.

**Search:** The search engine will provide full text document/application searching, empowering users to simultaneously search multiple repositories of information that reside in any variety of different virtual locations.

**Services (Applications):** Enterprise applications will be integrated in the Portal on a rolling basis. Applications are currently being prioritized and will be addressed in the Portal Implementation Plan. Integration is facilitated by the Portal infrastructure, which delivers pre-packaged “pagelets”, or interface modules, which will reduce time-to-market delivery.

Portal Applications: Building on the Infrastructure

The crucial step in delivering any Portal application is the implementation of the Enterprise Portal infrastructure, as detailed in the previous section. Once this is in place, then we will begin to identify priorities and requirements for the successful deployment of County Web applications. Provided in “Appendix A” are some of the initial projects associated with Phase 1 Portal applications. The potential return on investment for each is significant.
At the core of several of these modules are applications that hold the potential for being reused as components of other county-wide Portal projects. These early implementations must be leveraged to the fullest extent possible. The focus is on those services that can be fully completed online. Ultimately, there will be hundreds of applications. There is also a list following each that represent potential future projects that will be list of online services is not intended to be fully inclusive or exclusive.

**One Portal: Many Sub-Portals**

A multi-Portal approach does not imply separate physical systems, in fact each will leverage the same underlying infrastructure components and content. However, each will offer different viewpoints, organizations, and sets of services. User registration will be required to access any information or application that is not publicly available (employee or agency information systems, for example). User registration may also be required for citizens and businesses who set-up accounts for use of services, or who wish to use the self-service modules, such as updates to personal information (tax records, vital records, etc.).

In addition, this initial Portal strategy focuses on Law Enforcement and Emergency Response & Preparedness as critical priority applications. These two audience groups represent a public safety component for Oakland County that is uniquely positioned to deliver innovative solutions of local and regional communications systems in the event of a terrorist event or threat, and/or other safety and security concerns.

“Appendix A” represents some examples of secured (sub)Portals we will be developing over the next 12-18 months that will represent the greatest impact to the user communities represented, as well as provide the greatest return on investment in terms of process improvement.

Each project is organized by the audience it serves. The categories identified are aligned specifically to the audience base Oakland County identified in its Web site redesign project: Citizen, Business, Government and Education. These audiences are labels with “Government to Citizen”, “Government to Business”, “Government to Government”, etc., with Oakland County serving the role of “Government” in the first instance.

**Conclusion:**

**Seamless Government**

Although almost all states, some county, and a few local level governments have set a goal to achieve consistency across their Portals (with regard to look and feel and navigation) none have been able to realize this objective. Oakland County has achieved this goal with the conclusion of the first phase of eGovernment implementation – the Content Management System. The installation of this enabling technology just under two years ago created a technological infrastructure from which all departments could leverage. And the benefits go beyond our own governmental boundaries. Now, cities, villages and townships will be able to use the technology to commit their content and services online.

The importance of establishing enabling technologies as a key strategic vision for the entire County cannot be emphasized enough. The Enterprise Portal technology will serve a similar function in that it
will create the foundation from which numerous applications can be applied to benefit all functional areas of the County, as well as our agencies and local cities, villages and townships.

In a study published by Reuters on April 3, 2002, it states "One in three U.S. adults has skipped long lines and interminable phone calls to reserve camping sites, download tax forms or use other government services on the Internet. As federal, state and local governments boost e-government efforts, more citizens are turning to the Internet to get information or services."

The Portal presents a bold new model for government – one that empowers the citizen by providing unprecedented access to public information and services through the use of technology. County departments and units, government agencies, and local municipalities will not only improve the level of service to citizens, but will also do so at a lower per transaction cost (From Cyber-state.com/State and Federal E-Government in the United States, 2002, By Darrell M. West, Center for Public Policy, Brown University, Providence, RI).

Oakland County’s Department of Information Technology has worked hard to develop a solution that will benefit all of Oakland County. The Enterprise Portal infrastructure will provide us with the long-term foundation necessary to deliver government services in today’s cultural environment. This perspective takes into account global trends in information management, best practices evidenced in the private sector, the needs of our citizens and other local customers, and County employees, who serve the public as well as one another. The County government of the future will inevitably include the electronic frontier, and it is the mission of this project to prepare and deliver it in a cost-effective and efficient way, while maintaining the highest standards of integrity and end results.
Law Enforcement Portal

Overview
Police officers, sheriffs, corrections employees and administrators will use the Oakland County Portal to share common information that was previously unavailable.

Government to Citizens

Public Site Features: The following features will be possible on the Oakland County Web site:

- Incident Report: File an incident report entirely online. This feature will reduce the amount of basic data entry and customer service required for filing an incident report over the phone or in-person. Currently, the information is recorded by hand (written) and then entered into the mainframe system. Automation will greatly reduce the amount of time involved in processing these reports and provide more accurate results that in past may occur from clerical, or data entry, errors.

- Citizens’ Complaint Form (against police personnel): Citizens are sometimes intimidated by walking into a precinct to make a complaint against them. Many valid complaints are never registered, thus making it difficult to address any existing internal issues that may make a police department vulnerable to liabilities associated with employees. Making this service available online will enable citizens to file complaints against police or public safety officers in a more neutral setting.

- Confidential tip registry: Again, citizens may be reluctant to place a call or appear in-person to provide information about a crime or criminal activity. Providing this opportunity via the Portal will enable greater communication between public safety officers and the public.
• **Missing animals:** A searchable database of missing animals is seen by our police departments as a valuable time-saving tool. Currently, each precinct handles many calls everyday related to missing animals. The Portal will enable us to link public safety information together with animal control and provide the public with a single place in the community to report and find missing animals.

• **Jail bookings/Who’s in jail?** The Sheriff’s office receives many calls everyday about people looking for someone who is missing and may be in the County jail. They report spending a great deal of time every day answering this phone requests. The Portal will enable the County to publish this information in real-time (upon booking, the person’s name will appear automatically in the registry).

**Government to Government**

**Police Officers’/Law Enforcement Portal Features:** This Portal will be accessible by logging-in from the Oakland County home page. Police officers, Sheriffs and corrections employees will all be allowed access to their own individual Portal, representing the systems and information they need to do their jobs.

*Features enabled by the Portal include:*

• **Roll-call information (per user/per group):** Includes important announcements and information about their coverage areas, special situations to be aware of, breaking news, shift pass-over information and more. This tool will bring the concept of “roll-call” back to departments and agencies that have had to eliminate it because of budget constraints. The result of eliminating roll-call on a department by department basis has resulted in the loss of knowledge and information that may be critical to public safety issues in a neighborhood or precinct district.

• **Daily logs (individual):** Public safety and corrections officers will have the ability to record important information about their shifts, so that the next shift workers will be able to understand any key issues or problem areas to look out for or address in the current shift. This also provides standardization of data capture and potential re-use of the information in reports, summaries or statistical data gathering.

• **Missing kids network (school photos):** Like the Amber Alert that has been successful in the state of California, Oakland County will also be able to communicate information about missing children instantly to patrol officers across the region. Not only can notifications be pushed to all officers in any or all areas, but photos can be pushed and displayed on monitors in patrol cars. The ability to find a missing child is most critical in the first hours they are reported missing. Using this Portal network will facilitate the sharing of missing persons information within seconds of getting a report, greatly increasing the chances of finding someone.

• **Hot Sheet (stolen car reports):** A police officer or administrator in one precinct will be able to publish information about stolen cars to a single database that is shared by all in the region.
• **Dynamic GIS mapping** with up-to-date statistical data charted. Select 7-8 categories of incidents to plot and be able to view crimes by category. Crime View” crimes to date, stats, geographic locations, by date, by category etc. (index)

• **Reference Material**: Michigan Criminal Codes, Michigan State Vehicular Code, Health Division (index/look-up): All of these reference tools are valuable everyday to a patrol officer on the beat, as well as administrators, managers and others in the public safety field. With the Portal, a patrol officer will be able to look-up information from the patrol car during routine traffic stops to make sure any tickets they write, or other activities, fall well within the guidelines established. In many cases, tickets and other arrests end up thrown out because a ticket wasn’t correctly written, for example. This will reduce the chances for mistakes in trying to remember codes.

**Links:** The Portal will also have a section where officers can set links to other Web sites that help them do their jobs better. For example:

- Sex Crimes Offenders’ Site/database
- Parolees of State Correctional Facility/database (Dept. of Corrections)
- LEIN (Law Enforcement Information Network)

**Standard features of the Law Enforcement Portal**

- E-mail (individual)
- Calendar/events
- Document Library
- Training
- Notes
- Forms (dog bite, waivers, etc.)
- Agency/policy & procedures information
- Workflow

**Functionality**

- Ability to capture IP addresses, if possible, to authenticate submissions (provides tracking mechanism in case an investigation is necessary for false reports, etc.)
- Interface with GIS for location detail. Will use @ccess Oakland property information with photos, so when a patrol officer goes to a location, he/she will be able to view an image of the property prior to their arrival on site.
- Customizable interface for each agency (change logo/image/”patch” and other identifiable elements)
- Protocol/workflow determined by each agency (who have access to post, etc.)
- Complete control over content development and publishing by individual agency
- Authenticated “read” receipts on roll-call information
- Signature pad for on-site form submission (or printers for cars)
Emergency Response and Preparedness Portal

Overview
Emergency responders within Oakland County and all of southeastern Michigan will benefit from the implementation of this Portal. There is currently no common gateway for communication for this audience in the region. The Portal will create a virtual “community” for first responders and others where they can go for forms and to share information. The ER&P Portal will provide a gateway for access to the WebEOC application currently installed, and provide the security essential to maintaining it as a private network.

Government to Government; Government to Business

The ER&P Portal will establish a community of users that is essential to the security of Oakland County. Currently, Oakland County’s ER&P is the coordinating agency for many different types of groups and users. They keep track of hazardous materials (hazmat) and hazmat sites within the business community, shelters and evacuation procedures, training materials and classes, regional threat assessment conditions and notifications, regional event security and monitoring, and host of many other security activities.

The Portal puts all of these different user groups together in a single, secure online environment where they can share information and automate common processes.

Features enabled by the Portal include:

• WebEOC interface standardization and a single access point for emergency responders: The Portal will provide the security layer and single-sign on functionality that will make the WebEOC interface a user-friendly and practical solution for any emergency situation. First responders will have an opportunity to learn about the Portal and how it works prior to an actual emergency; and in the event of an actual emergency, their attentions can be focused on using the tool rather than learning it.
• Online forms to reduce paperwork and data entry redundancy
• Best-practices repositories for documents, forms and other information
• Current training activities (schedule) available from ER&P and other outlets throughout the County.
eHealth Portal

Overview

eHealth provides a critical collaborative environment for Health field workers to access and deliver key information and services.

Government to Government

Serving Oakland County’s Citizens through Effective Collaboration. In spite of a long-term commitment to effective service delivery and to enhancing the lives of its citizens, the efficient delivery of health and human services (HHS) to Oakland County’s residents is often frequently hindered by disparate information systems, counter-intuitive processes, and the bureaucratic culture of the various agencies and entities involved. Veteran HHS administrators cite instances where their employees often must enter duplicate client data multiple times, into multiple information systems -- depending upon the data needs of the county, city, or state. As is true about many governments, citizens are often confounded by government business processes that rarely represent an intuitive process, or effective way for them to access to critically needed services.

Shared Front-End for Client Data Entry. By linking information systems, health workers on the local and County levels will be able to access and share information through a “front-end.” The project will culminate in a shared front-end intake data entry screen with for supporting related business government processes. —i.e. pertinent information can be entered once, shared across multiple levels of government (local, county, state), and across multiple programs. The objectives of the project include:

- Increased consumer knowledge, access, and satisfaction with HHS delivery;
- Improved efficiencies and employee satisfaction with access procedures, and
- A mechanism to support strategic planning activities for Oakland County’s health and human services.

Health services the County provides touch many lives across disciplines, including:

- Oakland County Health and Human Services
- Public Health
- Mental Health/Mental Retardation/Substance Abuse
- Senior Services
- Oakland Public Schools
- Schools
- Juvenile Justice
- Juvenile Court
- Child Support Enforcement

Specifically, implementing the Portal will enable eHealth the single sign-on access from any remote location to a potentially wide variety of people in the community.
@ccess Oakland Portal

Overview
This successful transaction- and subscription-based project uses Geographic Information Systems (GIS) and tax/treasury information to provide a variety of land and tax record information products. Banks and other lending institutions, along with realtors, mortgage companies and citizens are using it to access tax and finance information, liens, property data and other information. With Portal technology, @ccess Oakland will expand to become the single gateway to conducting any type of commerce-based transaction with the County. These will include ordering Vital Records, paying taxes and tickets, and more.

Government to Business

By implementing the Portal technology, Oakland County will be able to provide valuable, customer-centric information and services that parallel the level of service currently being delivered in the private sector. The Portal will provide Access Oakland with the state-of-the-art security and privacy options that make doing business with the County an attractive option. The Portal will strengthen Oakland County’s position as a “One Stop Shop” for services and information for businesses doing business in the County, or looking to relocate here.

Government to Citizen

Citizens currently use @ccess Oakland services as tools in buying or selling a house. They can find information about back taxes, compare price ranges for similar houses in an area, and make sure that someone is giving them a fair deal; they may also download pictures of houses/parcels to use in sales literature.

Additional @ccess Oakland services will include a variety of citizen-focused services, saving people time and money by delivering government online rather than “in line”. Rather than driving to a County office or picking up the phone, people will be able to go to the Oakland County Web site and click “Online Services” (or “@ccess Oakland) to find the various ways they can make payments electronically, download and/or submit forms for applications (permits, licenses, etc.), order publications or reports, and more.

Government to Government

Why should we all pay for the same technology? The Portal will enable local CVTs to sign-in to share in potentially all applications developed by Oakland County via the Internet. This will allow for common documents and information to be shared in a format consistent with their needs, and therefore consistent in the delivering of it to citizens. It will also bring this common network of local governments together in a potentially collaborative environment. This will allow local government workers to serve their own constituents better by having access to government information on a regional scope. Each will be able to deliver their own “one stop shop” to their citizens.
Human Resources/Personnel Portal

Overview
Employees will be in control and informed about every aspect of their employment that is relevant to them. Now, people have to call Personnel to ask for information about time-off, benefits, payroll, have forms sent to them (or you pick them up). With the Portal single sign-on interface, you can click to see your payroll and 401(k) status, how much time you have left for vacation, and every human resource form you can imagine. In addition, information about County events and other county-wide activities and resources will be included.

Government to Employee

Portal/self-service initiatives will change the way the County’s organizational units add value to the enterprise as it supports the management and effective performance of our “human capital,” which benefits the County and its employees. By using a Portal that is derived from Human Resource data alone, employees will have a better and faster access to information they need in the daily business of doing their jobs. Industry research shows that implementing employee/manager self-service solutions is an excellent starting point when implementing a Portal because it builds support for the internal Portal applications by improving services to employees and managers.

- Employee self-service provides employees the opportunity to access their data anywhere, anytime.
- Employees and managers have the ability to log onto the Portal with a single ID and retrieve information from potentially a number of information systems, or change and manage their own personal information.
- With employee self-service, employees can perform administrative tasks such as enrolling in benefits programs, updating dependent information, view payroll data, update address and emergency contact information.
- Managers can use the Portal as a means of gathering employee data without having to contact the Human Resources department.
- Portals may also provide links to outside services and agencies for relevant information.
- Portals provide the opportunity for all employees to spend more of their time focused on performing more strategic work.
- Greater employee satisfaction leads to reduced turnover, which in turn leads to reduced costs of employee replacement.

Employees will have online access to:

- directories
- organizational charts
- policies, rules and procedures
- online training opportunities
- forums for suggestions
• online applications for time and attendance tracking, travel, scheduling, approvals, reimbursements, benefit changes and enrollment
• job postings and access to online employment services offered
• tracking employee information
• posting of current news and information for both the state County enterprise as a whole and also specific to a department or division
eProcurement Portal/Vendor System

Overview

eProcurement provides a electronic method for processing vendors information, bid announcements, bid awards and a host of other purchasing processes.

Government to Business

Portal implementation will facilitate this electronic end-to-end purchasing system that will provide online posting of procurement opportunities, receipt of bids, selection, approval, ordering, receiving, and payment.

Vendors have dynamic real time access to information in a secure environment, giving each vendor exclusive views of payment status details. This system sets the stage for the improvement of services and other business functions by the County. Registration for a user account is required.

"We looked for the most cost-efficient ways of doing that, to both increase access and to improve efficiencies," Jerry Poisson said. "Procurement is a big part of that. We've done e-mailing before [for bid notifications], but we wanted a true e-market."

After an open bidding process, the advantages of going with PeopleSoft became obvious, according to Poisson. The county had been using PeopleSoft solutions for years to run its human resources department, and the advantage of a suite solution that would also include procurement and financial processes was "sizable" from a cost perspective, he said.

Another advantage is that the PeopleSoft system provides a Web portal for the procurement system that can also be used as a Web-based "single access point" for delivering other government information, and as the public front-end of the GIS.

Government to Government

Oakland County’s Portal will also enable municipalities to better exploit the County's procurement contracts. They can do that now, but the hassle of the involved paperwork makes it worthwhile only for the largest contracts, Poisson explained, and going online would enable municipalities to use the smaller contracts also.
One Stop Shop Portal/Decision Support Center

Overview
The One Stop Shop Portal/Decision Support Center (OSS-DSC) is Oakland County’s on-site support center for citizens and businesses. Currently, it is physically located in the main lobby area of the Executive Office Building at the County Campus. The OSS-DSC provides print and electronic resources to people on a walk-in or appointment basis, as well as a staff who are available to answer questions and help with economic development activities, new business start-ups, assistance with licensing or permit processes, etc.

Government to Business
The OSS-DSC Portal will enable people running small or large-scale businesses in the County to order resources online, subscribe to information newsletters, download current demographic and research data and interact with OSS-DSC personnel in an interactive environment.
Upon Portal implementation, Oakland County may deploy additional intranet applications when they are identified that will streamline agency-to-agency processes. In order to fully realize the sharing of data relating to intra-agency customer services, several applications included in our PeopleSoft package include:

- **Enterprise Financial Reporting.** To provide web-based access for requesting, viewing, printing and downloading of agency financial, budgetary and monitoring data. Also provides an online method for agencies to submit required annual financial statement and federal disclosure information.

- **Enterprise Budgeting and Allotment.** To provide a suite of web based tools for agency use in the budget development and monitoring process.

- **Performance Tracking.** To provide a means to record planned and actual performance objectives against enterprise strategic goals.

- **Version Reporting.** To provide agencies with rapid access to comparison reports for the various budget versions as the Governor and the Legislature release them.

- **Asset Management.** To provide asset management tools including surplus inventory management.
Oakland County Enterprise Portal
Appendix B—Repository Documents (eGovernment)

The following documents are all completed and will reside in the “Document Library” portion of the Portal:

eGovernment Policies:

- Oakland County eGovernment Strategic Plan
- Application Development Process
- Content Development Process
- Application Development/Technology Standards
- Application Development Image Bank
- Content Standards Guide
- Logo/Identity Guidelines
- Information Architecture
- Discovery Documentation—Stakeholder Feedback Results
- Marketing Plan
- Privacy Policy
- Security Policy
- Accessibility Statement
- Training Guides: Workbooks A and B
- Oakland County's Enhanced Access Policy
- Data Sharing Policies
- ArcGIS Training Plan
- ArcGIS Migration Plan
- 1999 GIS Strategic Plan
- 1997 Digital Information Service Center Organizational Report
- GIS User Needs Assessment