

APPENDIX D

Information Technology

The transformation of how technological and data access work is performed in the Department is due in part to rapid changes in computer technology. The technology industry has evolved from word processors to microprocessors, from collecting data to warehousing data, and from information management to knowledge management. In order to leverage these advances, HHS's business model must be supported by its technical model. Both must become fully synchronized to realize the strategic goals and objectives of HHS.

Over the past several years, each HHS division has developed its own means and methods of dealing with computer technology, resulting in a network of separate systems that have limited capacity to interact with each other in a seamless fashion. HHS has now implemented an Enterprise Architecture program that addresses planning from an enterprise perspective to ensure that the allocation of resources is aligned with the effort to realize the HHS strategic goals and objectives. Within this enterprise planning activity, information resources and technology are not only aligned in support of the HHS strategies, but also focus on the facilitation of interoperability, data sharing, and overall efficiency and effectiveness across the Department and with HHS's external partners.

This appendix offers a broad overview of the initiatives that the Department is currently undertaking, and some of the innovations and trends that are planned.

Initiatives

Two basic pieces of legislation have framed how the Federal Government operates and provides services to the public. The first is the E-Government Act of 2002 (Public Law 107-347), which seeks to enhance management and promotion of business through the Internet, reduce a paper-based environment, and increase citizen services and access to Government information. The second piece of legislation is the Federal Information Security Management Act of 2002 (Public Law 107-347), which provides for a comprehensive framework to ensure that access to information is kept safe and secure.

This legislation creates a trend in the Government that requires a higher level of attention to security than ever before. The drive for greater efficiency in information technology spending, combined with an ever-increasing need to share networks, services and support, and information, has resulted in both placing more business transactions online and creating a need for increased attention on the Department's security.

Secure One HHS

On the basis of the best practices of the Government Accountability Office and the standards and guidance provided by the National Institute of Standards and Technology, HHS has set up an overarching information technology security program called *Secure One HHS*. The emphasis of *Secure One* is to create strong governance with clearly defined roles, responsibilities, and security expertise. Established at the headquarters level, *Secure One* seeks to achieve a consistent security baseline across operating divisions by supporting universal information technology security requirements. The *Secure One* program is driven by close coordination and collaboration with each operating division to ensure that any needs and expectations are identified and addressed.

Infrastructure

Cost-effectiveness in technology represents responsible stewardship over taxpayer dollars as well as responsible and effective management of human resources. Over the years, as divisions developed their

own methods of managing computer technology, the basic infrastructure for a unified Departmentwide computer system was overlooked. To unify these disparate systems, reduce duplication of effort, and stabilize the technical environment, the Department has initiated several strategies for improving the technological infrastructure.

IT Consolidation. This strategy employs the sharing and reuse of common, standards-based materials and programs that support the business of computer technology. An example of this strategy is using the same physical systems (networks, servers, and help desks).

Software Standardization. A preliminary inventory of software packages used across the Department revealed that more than 12,000 unique types of software had been loaded on computers. A major initiative is underway to streamline the amount and type of software loaded on employee machines. The standardization process ensures that security is not compromised and that all software is up to date.

Health Information Technology

The Department is committed to the principles, objectives, and strategies of the Office of the National Coordinator for Health Information Technology (ONC), in the Office of the Secretary. This major initiative is being supported by the Office of the Chief Information Officer, and is discussed in depth in *In the Spotlight: Advancing the Development and Use of Health Information Technology*. The Office of the Chief Information Officer will coordinate consultation for ONC in the areas of standards, best practices, reviews, and support.

HHS Data Council

The HHS Data Council advises the Secretary on data policy and serves as a forum for coordination and consideration of those issues. The Council also coordinates the Department's data collection and analysis activities and ensures effective long-range planning for surveys and other investments in major data collection. The Council also serves as the Department's focal point for data standards and national health information issues.

Confidentiality and Data Access Committee

This group provides a forum for staff members of Federal statistical agencies who work on confidentiality and data access topics.

Web Services

Citizens, employees, and stakeholders now use the Internet for most of their information needs. The Internet has become the standard for conducting business transactions, finding key information, and engaging in knowledge sharing with others of like interests. The Department recognizes the need to have the most up-to-date strategies involving the Internet, from structure to design, and from functionality to accessibility. Several initiatives are underway to ensure that the rich repository of information and knowledge within HHS is easily accessible and effectively displayed, and that the format of Web pages is usable to the average visitor.

Governance. The HHS Department Web site exists to empower citizens, its business and service partners, and its employees by providing information, work processes, services, and opportunities to be involved in their government effectively, efficiently, and in a timely manner. Therefore, they can improve their lives, solve their problems, and accomplish their objectives. To that end, the Department is developing Web governance principles, strategies, and recommendations so that HHS's Web presence will be more consistent and coherent across divisions. HHS Web governance principles will maximize the creative use of people, policy, and processes to manage short- and long-range goals, mitigate ambiguity, and resolve conflicting cross-Department needs and priorities. They will provide a framework for establishing clear Web management responsibilities, identifying and allocating necessary resources, promoting Departmentwide standards for best practices, and providing recognition and support for the Department's Web community.

Usability. On the basis of sound research, the Department has developed a cutting-edge guide to Web design and usability. Produced by HHS and the General Services Administration, this guide is an invaluable tool for Web developers, Web designers,

and Web site managers. The guide was created to deliver better and more usable health and human service sites for the Department. HHS is mandated to provide clear information in an efficient and effective manner to patients, health professionals, researchers, and the public. Translating the latest Web design research into a practical, easy-to-use format is essential to the effective design of the numerous Department Web sites. In addition, the Department has set standards and criteria for all Web sites to be in full compliance with Section 508 of the Rehabilitation Act of 1973 (29 USC 794d), as amended, which requires the Internet to be accessible to individuals with disabilities.

Innovations and Future Trends

E-Government

E-Government is the President's goal of utilizing technology to improve how the Federal Government serves citizens, businesses, and agencies alike. Federal employees are serving citizens, businesses, and local communities via E-Government. E-Government uses improved Internet-based technology to make it easy for citizens and businesses to interact with the Government, save taxpayer dollars, and streamline citizen-to-government communications. E-Government uses technology to its fullest to provide services and information that are centered on citizen groups.

The Department will continue its investment in E-Government initiatives by using standards-based Web services. This means that reliable and consistent methodologies will be used to create and support Web and Internet services. The Department uses Internet Web sites, an Intranet Web site, and an internal HHS Web portal. These sites have provided timely and important communications to stakeholders and the public.

In the coming months, HHS will launch a software program, known as Content Management Solution, which will reduce the time and effort to modify Web pages and update information. This software will make Internet maintenance more streamlined and convenient for contributors.

Integrated Planning

HHS is adopting a strategy, the *Capital Planning and Investment Control* (CPIC) program, in which investments in technology will be based on strategic goals and objectives. For each strategy, the questions will be posed: "How will technology support this? How much is needed, how will it be measured, how will it perform?"

In this model, the investments in technology are treated as a *portfolio*, with information available on measurement, results, and return on investment. This approach will allow senior managers to access up-to-date information on program performance from a top-to-bottom view of the Department. Information technology portfolio management is implemented within the context of the HHS information technology CPIC program, which is strongly integrated with the HHS Enterprise Architecture program to ensure that the information technology investments proposed for portfolio inclusion are effectively aligned in support of the HHS strategic goals and objectives.

In addition, the model includes a framework for a centralized information management system. This will mean that the multiple requests for information that HHS receives can be handled centrally without duplication or redundancy. The model also promotes sharing and reusing data across HHS once they are collected in the centralized database.

The CPIC program will fulfill several general requirements. Strategic planning and performance management will be integrated with other information technology processes. The CPIC program will be able to permeate the entire Department, and accommodate new data and legislative requirements as they arise. Data reusability will solve the problem of repeated requests for information that is individually managed in a time-consuming process. The CPIC program will support the right information collected at the right time so that it can be formatted and presented to meet demands.

Information technology is sometimes seen as an enabler of the mission and strategic plan, rather than a direct contributor. The CPIC program realizes the need to give insight to how information technology is leading

business and mission outcomes, through objectives and measures. This insight can help foster a culture of accountability and increase management's effectiveness.

Knowledge Management

HHS is a knowledge-intensive organization and faces significant opportunities and challenges in generating value from its intellectual and knowledge-based assets. Knowledge Management is a way of doing business that capitalizes on the knowledge of an organization and its individual employees.

Knowledge Management provides the processes and structures to create, capture, analyze, and act on information. It highlights both the conduits to knowledge, as well as the bottlenecks. The emphasis in Knowledge Management is on human know-how and how to enable it to bring maximum return for an organization.

Information technology is critical to facilitate knowledge sharing and can be seen as the vehicle for effective Knowledge Management. Getting the right knowledge to the right person for the right task at the right time is the goal. Whether to improve organizational efficiency, or embrace innovation, Knowledge Management efforts and initiatives add great value to an organization.

Knowledge Management:

- Facilitates better, more informed decisions;
- Contributes to the intellectual capital of an organization;
- Encourages the free flow of ideas that leads to insight and innovation;
- Eliminates redundant processes, streamlines operations, and enhances employee retention rates;
- Improves customer service and efficiency; and
- Can lead to greater productivity.

HHS is charged with communicating information to citizens, customers, employees, and Federal, State, and local governments. The management and sharing of knowledge within HHS is of paramount importance to its stakeholders. The collaborative nature of activities depends on advancing the understanding of this innovative business model. HHS is committed to implementing this innovative business process throughout the Department.

