

Message from the Chief Information Officer

The Department of Energy (DOE) *1997 Information Management Strategic Plan* revises the original *1994 Information Management Strategic Plan* and establishes a shared vision for the information management community. The Plan provides overall direction for managing information, reflects a strong customer focus, seeks an increased understanding of DOE business lines and missions, and fosters a corporate, collaborative approach to information management. As a blueprint for strategic information management direction, it serves as a framework for developing specific information management initiatives and operational plans for DOE elements and sites.

The information management community, its stakeholders, and customers collaborated in developing this Plan for intended use by Federal information management professionals as a guide for implementing strategic solutions that will benefit all DOE customers. This Plan covers all information technology and primarily focuses on business and administrative information management and the Department's supporting information infrastructure.

This Plan complies with the Paperwork Reduction Act of 1995 [U.S.C. 44 ¶ 3506(b)(2)] requirement. The goals rely on commonly accepted practices for conducting DOE information management business and technologies that support intercommunication. The strategies encourage collaboration, sharing, standard business methodologies, and effective interface and integration. Success of this Plan will be measured by the information management community's ability to provide access and reliable information for customers to meet constantly evolving information needs.

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INFORMATION MANAGEMENT



Mission

The Information Management mission is to provide DOE employees and contractors with the capability to readily acquire, share, protect, disseminate, and store the information needed to successfully accomplish their jobs.

Vision

Our customers rely on us to create and implement timely, intelligent, and cost-effective technology solutions to their information needs.

INFORMATION MANAGEMENT GOALS

Customer service and satisfaction are the foundation of the goals developed for this Plan. The Departmental information architecture is an important element of information management strategy. The architecture provides a management and technology framework that supports: business decision making; information sharing; a basic structure for organizing information, applications, organizational and technological components, and their interrelationships. The framework also establishes the principles and guidelines that govern planning and implementing information systems. Information systems and processes fitting within the framework guarantees the best management of information. Information management crosscuts all business and programmatic functions, and is essential to Departmental projects and missions and Departmentwide process improvement.

RELATIONSHIP OF INFORMATION MANAGEMENT STRATEGIC GOALS TO DOE INFORMATION ARCHITECTURE

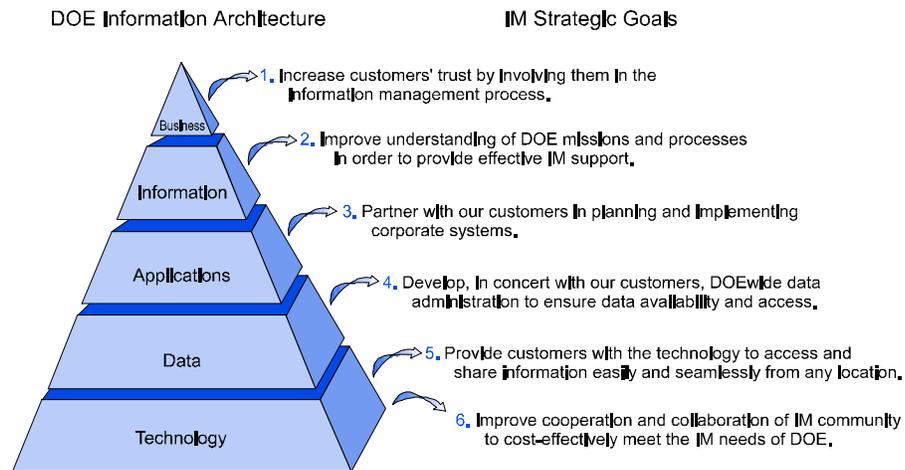
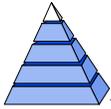


Figure 1

Goals 1 through 5 tie directly to the five layers of the DOE Information Architecture. Goal 6 focuses on the working relationships and partnerships necessary to effectively and efficiently achieve the other goals.



Goal 1: Increase customers' trust by involving them in the information management process.

Business and program offices must be assured that cost savings and other benefits can be achieved by partnering with the information management community to support their organizations through consolidation, standardization, resource sharing, and centralized management. It is also vital that senior managers with key business area programmatic responsibility are directly involved in prioritizing and selecting information management initiatives.

STRATEGIES

1.1 Form empowered customer groups to analyze, evaluate, and recommend information management initiatives and investments.

Focused customer working groups or committees will continue their charters, or be formed, to analyze information management issues, evaluate alternative solutions, and recommend investments or guidance to satisfy common requirements.

1.2 Partner with our customers to develop information management policies and procedures.

Requirements of the Clinger-Cohen Act of 1996 form the foundation for the DOE Information Management Program. Discipline, involvement of senior management with programmatic responsibility in key business areas, accountability, and focus on risks and returns using quantifiable measures are required components. The DOE Executive Committee for Information Management, consisting of program secretarial officers, serves as the investment board and oversees the corporate information technology investment portfolio.

The Chief Financial Officer in partnership with the Chief Information Officer will establish policies and procedures to ensure Departmental accounting, financial and asset management, and other information systems are designed, developed, maintained, and used effectively to provide performance data.

1.3 Include all customers in information management planning and budgeting processes.

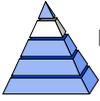
Members of existing and newly formed working groups will be involved in the information management process as they work within their organizations in planning and budgeting corporate information systems and initiatives that support the Departmental infrastructure. The CFO will partner with the CIO and program budget offices to ensure that information technology investments are integrated into the budget process and that development and submission of crosscut budget information are coordinated.

1.4 Provide an action plan based on the results of customer feedback.

Lessons learned from working groups and customer feedback will direct future information management strategic plans and assist in formulating site or organization action plans. These plans may be required to implement the decisions of a working group or respond to results of customer satisfaction or requirements surveys.

SUCCESS MEASURES

- Existing groups identified and new groups formed by the first Quarter of 1998.
- Portfolio of information management performance measures developed and updated annually.
- Investment decisions tracked and outcomes published.
- Fiscal year budget and plan for information management published annually.



- Annual customer survey showing at least a 5 percent improvement in level of satisfaction each year for 5 years.

Goal 2: *Improve understanding of DOE missions and processes in order to provide effective information management support.*

Understanding organizational and Departmental missions, goals, objectives, and processes is fundamental to providing information management and systems support. In DOE there are two perspectives from which this understanding must occur: programmatic and corporate. The information management community needs to be aware of all Departmental missions to improve interoperability, coordination, and communication.

Although organizational missions, goals, and objectives are usually well publicized and highly visible, organizational processes may be less apparent and dynamic. Improving the effectiveness and productivity of information resources will provide the foundation for more effective systems and a more efficient information architecture.

STRATEGIES

2.1 *Understand Departmental missions and the underlying information management strategy.*

The information management community was directly involved in developing the Departmental Strategic Plan to ensure that the philosophy and methodology used by each business line to develop strategic goals and objectives were understood. Information management initiatives and approaches will be developed to help customers accomplish business goals and Departmental strategies.

The information management community will also participate in organizational planning efforts to ensure information management strategy aligns with DOE missions. This collaborative approach ensures the information management community is involved in all aspects of information management planning and is informed of changes to Departmental missions, goals, and objectives.

2.2 *Establish a common process analysis methodology and tool set.*

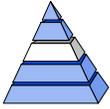
Business processes and tools will be identified, analyzed, and benchmarked using various methodologies. The information management community will partner with customers to select a standard approved methodology for the Department and to develop a process analysis guide incorporating the selected methodology.

2.3 *Identify and analyze business and program management processes.*

Using the process analysis methodology, the information management community, with their customer partners, will analyze organizational business and program management processes and define the information management requirements to support each process identified. Recommendations will be made to consolidate common and cross-cutting processes into existing or proposed corporate processes where feasible and efficient.

SUCCESS MEASURES

- Publish Departmental standard methodology for process analysis by June 1998.
- Publish process analysis guide by September 1998, including compatible process analysis tools.
- Publish first corporate processes implementation plan in June 1999.



Goal 3: Partner with our customers in planning and implementing corporate systems.

Corporate information, defined as mission and administrative data that crosscuts programmatic and staff organizations, is maintained and transported by systems used by multiple DOE elements (Headquarters offices, operations/field offices, laboratories, and contractors). The ability of Departmental customers to obtain and share corporate information is a major requirement in the decentralized DOE environment. There has been a major movement toward corporate systems since the 1995 Strategic Alignment Initiatives. For example, the Corporate Human Resource Information System (CHRIS), is replacing more than 80 Year 2000 non-compliant and duplicate human resource systems. This single, shared system provides decentralized operation to meet human resource needs DOEwide.

The movement toward corporate information systems (CIS) is stronger than ever, with emphasis placed on corporate management as described in the 1997 DOE Strategic Plan. The information management community will work with business function owners to design corporate systems that meet mission and program needs.

STRATEGIES

3.1 Align current information systems related policies, guidelines, and procedures to address CIS.

As part of the Strategic Alignment Initiative, the Department is establishing a flexible, responsive decision-making process for CIS selection and implementation. A CIS working group, comprised of key staff DOEwide, will develop strategy for instituting an effective corporate systems environment to include information access, sharing, and dissemination. Significant focus will be placed on improved communication and coordination among information resource managers, system users, and business functions.

CIS selection and implementation processes will be implemented to create a robust CIS environment to provide flexible systems to allow for growth and redirection. This integrated environment will strengthen the Department's ability to coordinate activities and improve tactics used to acquire future information systems. Corporate systems will have a three-stage process: (1) research and analysis; (2) design, integration, and implementation; and (3) maintenance and operation.

3.2 Establish an information sharing mechanism to identify potential CIS initiatives.

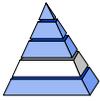
Design, develop, implement, and document the update process for a Web-based system that contains information regarding potential new corporate systems. In addition, include a bulletin board area for posting "want ads" for partners to design and develop new corporate systems.

3.3 Establish a system for capturing and distributing information identifying existing CIS.

A catalog of corporate systems will be available DOEwide that contains information to help customers determine whether a system can be used in their environments.

SUCCESS MEASURES

- Establish a CIS working group by December 1997.
- Implement an information sharing mechanism for CIS in FY 1998.
- Establish an automated corporate systems catalog by October 1998.
- Increase corporate system partnering initiatives implementation by 20 percent between 1999 and 2002.



Goal 4: *Develop, in concert with our customers, DOEwide data administration to ensure data availability and access.*

Informed decision making depends upon good information, which assumes, and depends upon, accurate and reliable data. As the DOE view of automated IM matures, managers are directing that corporate information be accessible via personal computers while at work, at home, after hours, on flexiplace, or on travel. Furthermore, DOE strategic objectives will be met only if corporate systems information is accessible and usable by Departmental elements and customers. Therefore, this Goal maintains the Departmental openness policy, while ensuring information is properly stored and protected throughout its useful life. As in the private sector, data in the Department are owned and maintained by individual offices. However, unlike many private sector firms, data in DOE are not typically shared in electronic form. A DOEwide data administration system requires a corporate commitment to share data while maintaining ownership for that data within the office responsible for the respective business operation.

STRATEGIES

4.1 *Establish a DOE Corporate Data Model.*

The model will include the following:

- Dictionary of definitions (attributes)
- Data element relationships and between elements and business processes
- Data element ownership identification
- Time-validity (update cycle) of each element

Corporate data contained in the model includes financial, human resource, procurement, Environment, Safety and Health, and project. This metadata set provides the basis for development of the data infrastructure. There are computer systems that can partially automate data model production.

4.2 *Define and Construct a Corporate Data Warehouse.*

The data warehouse is a repository for corporate data, accessible by corporate systems. Use of open systems standards minimizes the effort required to develop corporate systems. The term *warehouse* is used generically in this Goal, and does not imply a specific design or a single centralized warehouse.

SUCCESS MEASURES

- Establish a corporate data model by October 1998, which includes a significant fraction (>20%) of critical data.
- Reduce number of redundant databases by the year 2000.
- Annually reduce costs for developing and maintaining management information systems after construction of warehouse.

DATA WAREHOUSING

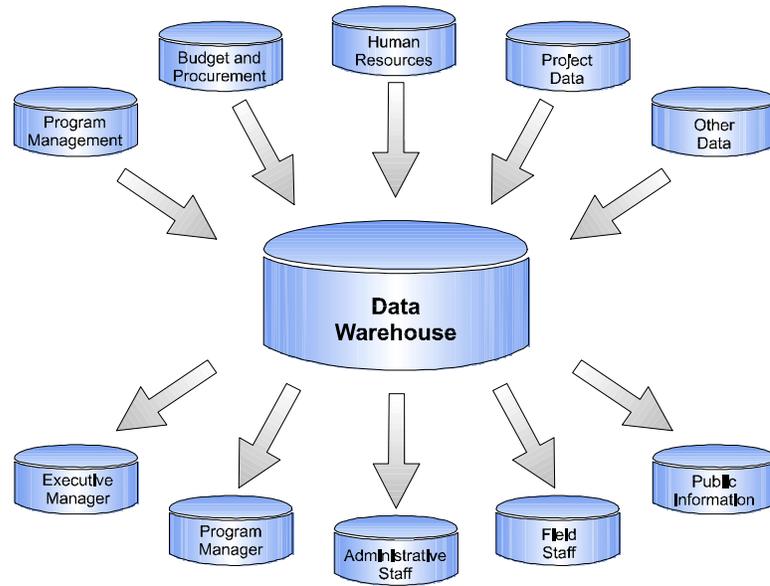
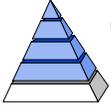


Figure 2



Goal 5: *Provide customers with the technology to access and share information easily and seamlessly from any location.*

This goal focuses on the computing and communications infrastructure necessary for accessing and sharing data and/or information efficiently and effectively from any location. To facilitate this, it is paramount to eliminate unnecessary, non-value added work processes while becoming compatible and interoperable. Areas the Department needs to improve include electronic mail services, remote network access, Internet/Intranet, web site access to corporate systems, data warehouses, and telecommunications wide area network connectivity.

STRATEGIES

5.1 *Baseline and define interoperability standards.*

The numerous methodologies, systems, and processes that currently exist significantly limit the ability to seamlessly communicate with other organizations and/or access information needed to accomplish program missions. The interoperability standards developed will be customer-driven to provide a minimum level of commonality. Standards developed for systems and processes will be identified and prioritized by working groups comprised of Headquarters and field organizations. Implementation of the agreed-upon standards may require changes in systems processes that are not presently planned or funded. However, the improved interoperability benefits, such as enhanced productivity, will significantly exceed any additional costs. Infrastructure requirements will be analyzed to develop a migration plan.

5.2 *Enhance computing and communications infrastructure based on defined standards*

The evolution from basic to business quality services in the Department requires enhancement of the underlying communications capabilities, protocols, and applications services with emphasis on interoperability standards. The supporting coalescence of technologies at DOE imposes a high demand for infrastructure enhancements. Components of the virtual office, including networking technology, need to be viewed as a shared, collective infrastructure that efficiently and effectively moves a vast array of information to internal and external users.

Minimum interface and interoperability standards for DOE workstations will be developed by the working groups to strengthen the information infrastructure and improve access and use of Departmental corporate systems.

5.3 *Develop and implement a configuration management process for interoperability standards.*

Efficient configuration management, based on best industry standards, ensures development and acquisition of applications and systems that can be integrated to improve connectivity and interoperability of the entire DOE community. This strategy will also be consistent with the DOE IA vision.

SUCCESS MEASURES

- DOE Information Management Council establishes an interoperability standards configuration management board and process by January 1998.
- A comprehensive assessment of the extent of Departmentwide interoperability issues completed by April 1998.
- Configuration management board completes baseline of interoperability standards by July 1998.
- Agreed-upon DOE interoperability standards published by January 1999.
- 100 percent of DOE community migrated to DOE interoperability standards within 5 years of issuing the DOE Interoperability Standards document.

Goal 6: *Improve cooperation and collaboration of information management community to cost-effectively meet the information management needs of DOE.*

The information management community will continue to play a major role in helping the Department function more effectively, efficiently, and economically. A decentralized environment will provide the expertise and support necessary for the Department to manage its vast and valuable corporate asset—*information*. Working together as an efficient team with clear roles and responsibilities will allow the information management community to achieve the goals stated in this Plan.

This goal identifies working relationships and establishes mechanisms that promote sharing, cooperation, and collaboration in the information management community. In the future, these mechanisms will be evaluated to see if they are working as promised. Benchmarking and other measurement methods will be used to assess and document the effectiveness of information technology tools and resources.

STRATEGIES

6.1 *Collaborate in addressing common issues based on clear working relationships.*

Information management staff must work within their specific organizational structures to provide information management products and services to their customers and user community. They must also work together to provide access to and facilitate sharing the information needed and produced at their sites to support DOE missions. The following diagram shows the working relationships of the information management community.

INFORMATION MANAGEMENT COMMUNITY WORKING GROUPS

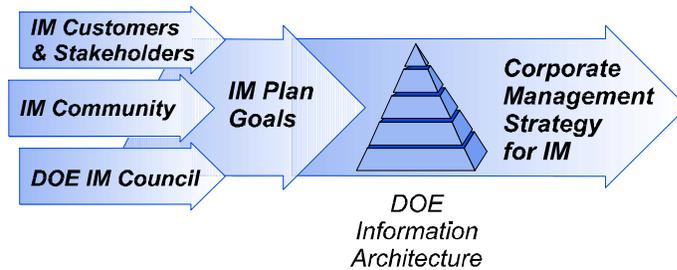


Figure 3

The Executive Committee for Information Management, comprised of senior program and staff officers of the Department, directs use and sharing of corporate information; sets priorities to ensure the information management program is consistent with the Departmental strategic vision; and serves as the final arbitration point for any disputes not resolved at lower management levels. Through periodic reviews, they assure the Secretary of Energy that Departmental information management initiatives and investments are based on mission-oriented performance measures and that sound business practices, consistent with applicable laws and regulations, are being used.

The DOE Information Management Council, with representation from each Departmental element, plots the course for Departmentwide information management initiatives, including designation of funding sources and leadership roles. The Information Management Council sponsors and maintains a framework of committees and working groups to coordinate information management policies, direction, and activities. Collectively, these groups ensure that Departmental missions and information management goals are met.

Programs and field sites who manage information management initiatives are represented in these two forums at different management levels. The Chief Information Officer's responsibilities and involvement in both forums ensure activity coordination, clearly stated priorities, and consistent direction for information management initiatives.

6.2 *Guide information management activities using the Corporate Information Management Guidance Process.*

The information management community will partner to develop, promote, and disseminate the appropriate level of guidance needed for effective information management. The foundation for the guidance is the Information Management Program, DOE Order 200.1, commonly referred to as the *Information Management Umbrella Order*. Manuals and guidelines that support the Order will be developed and disseminated as required; e.g., manuals containing required records management actions or computer security procedures.

The DOE Information Management Corporate Guidance Group, sponsored by the Information Management Council, provides corporate-focused guidance for common information management interest areas. The Corporate Guidance Group is comprised of representatives from principal Headquarters organizations who implement information management funding and policy. They solicit, develop, and oversee information management guidance through a DOE Information Management Guidance Adoption Process. This process supports the planning and budgeting processes of DOE information management managers, ensures interoperability of information technology, avoids unnecessary costs from duplicate and uncoordinated efforts, and fosters efficient and effective use of information management resources DOEwide. Information management guidance is not mandated. However, the extent to which the guidance is adopted by DOE sites will be reviewed by the Executive Committee for Information Management, the Information Management Council, and the Chief Information Officer. DOE contractors are also encouraged to consider this guidance when making information management plans and decisions.

6.3 *Establish a common information management product line and services structure by which the information management community can consistently plan, budget, and manage activities and resources.*

The Headquarters Information Management Collaboration Group, which was formed to address common information management issues at DOE Headquarters, defines a common information management product line and services structure that covers the spectrum of projects and operational areas. This structure helps to identify and communicate opportunities for collaboration, gaps in services, and duplication of effort among DOE entities. It provides a means to categorize operational expenses to be included as investments in the information management investment portfolios, and creates an opportunity to establish rules-of-thumb for the percentage of information management funds allocated to various functional areas.

6.4 *Implement a DOE-wide information management planning process that adopts the common information management product line and services structure.*

The common information management product line and services structure provides a foundation for the DOEwide information management planning process. It enables better communication and identification of program and site-level information management investments that should be promoted to the corporate-level investment portfolio. The structure allows functional breakdowns of plans so that DOEwide implementation teams can be formed.

The new information management planning process supports enhancements to the DOE information architecture and enables institution of common/consistent performance measures.

SUCCESS MEASURES

- Number of sites adopting corporate guidance items increases annually.
- Common DOEwide IM product line and services structure adopted by all Headquarters and field sites.
- Percentage of IM budget dedicated to collaborative projects increases annually. (Use FY 1997 budget as baseline.)

NEXT STEPS

This Plan supports the DOE Strategic Management System and the DOE Strategic Plan. The Strategic Management System provides DOE senior management with information to support decision making and a formal accountability tracking process.

The DOE Executive Committee for Information Management serves as the Departmental corporate information technology investment board and approves major corporate information management investments. Teams that continue to influence information management direction were those formed to address Strategic Alignment Initiatives (SAI) recently endorsed by Secretary Peña. The information management community worked together to *Integrate Information Management* under SAI 39, and served on other teams to accomplish those Departmental mandates. Many of those efforts (e.g., Corporate Information Systems) are still active in the information management community and continue to direct strategic planning.

Collaboration and cooperative support are crucial to achieving Department and information management strategic visions. The information management community will use an integrated, complexwide framework for planning, budgeting, evaluating, and implementing information management solutions to accomplish DOE missions. Teaming with stakeholders and customers to implement corporate solutions ensures resources are adequately budgeted, funded, and allocated to promote resource sharing.

DOE elements (Headquarters offices, operations/field offices, laboratories, and contractors) can use this Plan as a guide to perform their information management strategic planning and implementation activities. Heads of Departmental elements will designate a performance measurement evaluation point of contact for the Plan. The performance measurement evaluation point of contact will oversee defining performance indicators, gathering data, and reporting results, as necessary.

Plan performance measurement evaluation points of contact will assist the information management community in future information management strategic planning exercises and the formulation of individual operational plans where detailed schedules are documented and responsibility for accomplishing each strategy is identified.