



IRM Strategic Plan 1991-1995

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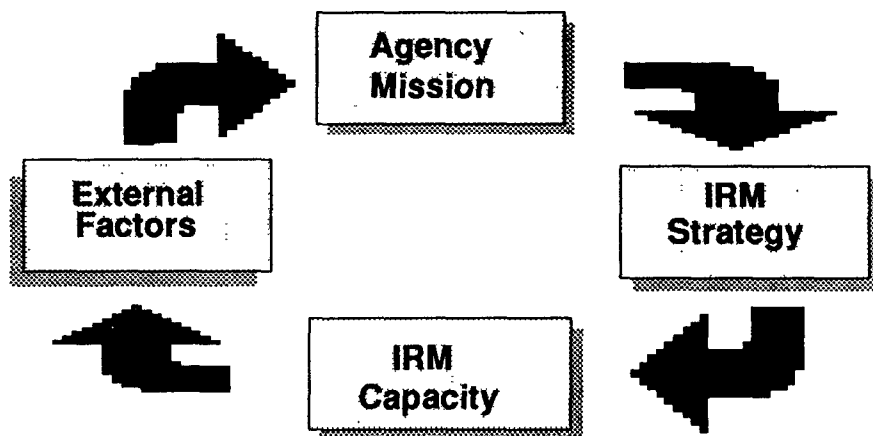
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Executive Summary



Executive Summary

This Strategic Information Resources Management (IRM) Plan defines *the mission of the Environmental Protection Agency's IRM program and establishes the accomplishments, resource needs and responsibilities generally required to achieve the vision anticipated by the IRM mission statement*. The Strategic IRM Plan represents the results of more than a year of assessment by the Office of Information Resources Management (OIRM) and the National Data Processing Division (NDPD). Our assignment was to envision a *proactive IRM program that enhances EPA's effectiveness through the 1990s*.

This strategic IRM plan serves both as a component of the Office of Administration and Resources Management's strategic plan and as a response to Federal requirements for annually updated mission-based information resource management plans linked to the budget process. This plan indicates investments essential to a productive IRM environment and should inform EPA's budget decisions in the future.

OIRM and NDPD have primary roles in delivering IRM expertise and services to the Agency. Recognizing our leadership role, OIRM and NDPD prepared this IRM plan which has been refined through extensive review by others in the Agency responsible for IRM as well as by our clients. The plan will be updated annually reflecting IRM's commitment to strategic planning as a continuous process.

The Strategic IRM Plan is organized into four sections in addition to this Summary.

The **Mission Statement** defines IRM as providing *leadership in managing and delivering information resources and services to further the Agency's mission*. A strategic vision of the Agency's IRM program is briefly described. This mission emphasizes IRM's role as *EPA's information broker* where success is measured by the extent that data and information products are available for productive use by EPA staff, the States and local governments, other national governments and international organizations, the scientific community and the American public.

The **Externalities Analysis** evaluates external factors and trends in six key areas — *environmental protection; State partnership trends: research and development; work environment; information technology; and oversight and legislation* — with significant impact on EPA's IRM program. The major conclusion is that EPA managers face fundamental changes in their agenda. This significant broadening of EPA's environmental scope and leadership role only

enhances the value of *information and information technology as a shared, Agencywide asset* and reinforces EPA's critical *information partnership with the States*.

Strategic Issues related to *balancing leadership and service; comprehensive Agencywide data administration; access to information; and modernization of EPA's information systems* are *highlighted*. The key question is *how does the Agency continue to move forward and apply the capabilities of EPA's information utility to promote and enhance the usefulness of information for environmental decisionmaking?*

Goals and Objectives, responding to the vision anticipated by the IRM mission statement and the issues articulated in the previous section, are defined in eight major strategic areas:

- *Establish data integration tools and activities.*
- *Create and manage information systems supporting the environmental community.*
- *Establish a program to promote information sharing.*
- *Renew EPA's technology base to provide increased functionality and/or to reduce costs.*
- *Manage a data administration program to ensure the Agency's ability to use its data fully.*
- *Enhance productivity through the educated use of technology.*
- *Improve planning and communications to ensure effective deployment of information and technology.*
- *Provide quality service with proactive leadership as custodians of EPA information and systems.*

OIRM and NDPD will consult extensively with EPA managers and their IRM staff, the States and other key providers and users of environmental data as this strategic IRM plan leads to more detailed, operational plans and resource commitments for improving the Agency's IRM program over the next five years.

I

Mission Statement



I

MISSION STATEMENT

It is the mission of the Environmental Protection Agency's Information Resources Management (IRM) program to ***provide leadership in managing and delivering information resources and services to further the Agency's mission.*** Accomplishing this mission would result in significant improvements in the Agency's effectiveness through the following achievements:

- ***EPA leverages its information for environmental results.***
- ***EPA has integrated environmental information.***
- ***EPA is a leader and reliable partner in sharing environmental information.***
- ***The public has access to environmental information.***
- ***EPA employees make productive use of information and technology.***
- ***EPA is committed to information plans and programs.***
- ***The Agency views IRM as understanding its business and providing value-added services.***
- ***Technology is transparent to users.***

This strategic vision of the Agency's IRM program is briefly described below.

- ***EPA leverages its information for environmental results.***

Information is collected, analyzed, stored and retrieved to promote environmental assessments and decisions which anticipate and prevent environmental problems. EPA has access to comprehensive sets of environmental, health, economic, legislative and social demographic information to evaluate remedies for a broad domestic and international environmental agenda.

- ***EPA has integrated environmental information.***

There is recognition and understanding of information that is common or shared throughout EPA and the environmental community. As a shared resource, this information is managed as a corporate resource readily accessible in usable form. Vigilant management ensures that data definitions, data formats and data quality are effectively designed into automated systems and document collections.

- ***EPA is a leader and reliable partner in sharing environmental information.***

Information is collected, managed and stored with the intent of ensuring its availability in useful form to the environmental community. Our partnerships in data sharing extend to all members of the Agency, the States and local governments, other Federal agencies, scientific communities, the American public and other national governments and international organizations.

- ***The public has access to environmental information.***

EPA information resources are known to the public and can be supplied to enhance their understanding of the Agency's environmental decisions and for their own use.

- ***EPA employees make productive use of information and technology.***

EPA employees have ready access to information and technology. This access maximizes the effective use of their time and encourages high standards of performance for their own work.

- ***EPA is committed to information plans and programs.***

High user awareness and executive understanding result in a management commitment to long-range information and technology investments. EPA's commitment, in turn, persuades oversight agencies, such as the Office of Management and Budget (OMB) and the General Services Administration (GSA), to also commit to EPA's decisions.

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- ***The Agency views IRM as understanding its business and providing value-added services.***

The Office of Information Resources Management (OIRM) and the National Data Processing Division (NDPD) consistently demonstrate leadership initiative and reliable expertise which result in a high demand for our services.

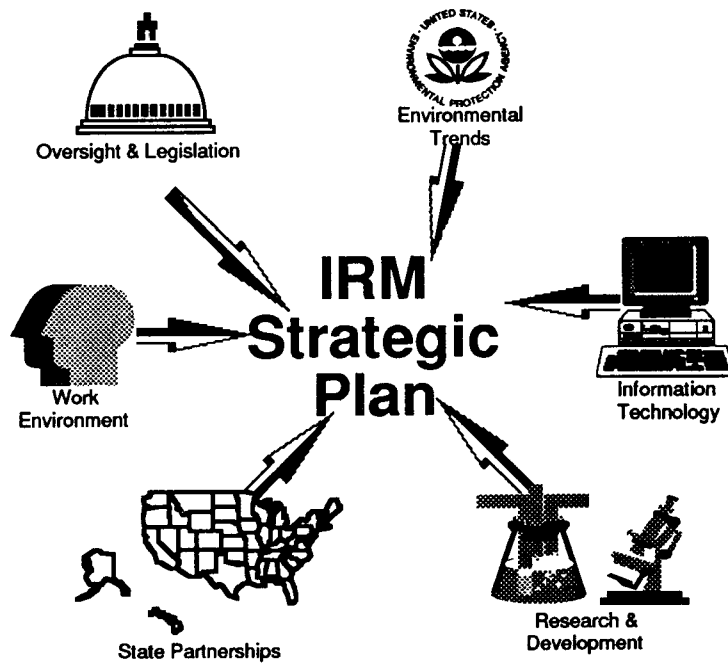
- ***Technology is transparent to users.***

EPA information resources and services are designed and managed so that users devote minimal time to learning their technical aspects.

This mission recognizes IRM's role as information broker for the Agency. The best data and information products are those that prove helpful and add value to the work of those accessing and using them. It is the responsibility of EPA programs and laboratories to define the Agency's information needs and to oversee the collection and analysis of data. It is IRM's responsibility to ensure the Agency receives the full return on this investment in data acquisition. IRM promotes access to information and ensures that standards, technology and management processes are performing to deliver responsive and meaningful data and information products.

II

Externalities Analysis



II

EXTERNALITIES ANALYSIS

This section provides a visionary look into the 1990s through a discussion of external forces or megatrends which have a direct impact on Information Resources Management (IRM) at EPA.

- *Environmental trends*
- *State partnership trends*
- *Research and development trends*
- *Work environment trends*
- *Information technology trends*
- *Oversight and legislation trends.*

The implications of each of these areas for the Agency's IRM program are discussed in separate sections which follow.

1. ENVIRONMENTAL TRENDS

Trends in environmental management have a direct impact on the future of EPA. Several trends will change the scope and complexity of environmental management. These trends will have a major impact on the demands for IRM to support the management structure in an effective and efficient manner.

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- ***Private/public partnerships and increased technology transfer among the environmental community, industry and academia.***

Industry, academia, State and local governments and other external parties are becoming increasingly involved in environmental issues. External parties conduct environmental analysis, research and development. The enhanced relationship between EPA and its private partners requires extensive data sharing and integration efforts to ensure improvements in data analysis and to realize environmental results.

- ***Greater international cooperation for addressing global problems.***

There is a thrust towards international cooperation to solve environmental problems. Worldwide forums have been established and will continue to expand their influence to address global environmental issues. An important element of international cooperation will be progress in the area of data sharing. This will present a considerable challenge for the future given the diversity of information systems around the world.

- ***Greater community outreach by the government and increased public involvement.***

The public's concern for and involvement in environmental issues will continue to grow. The public will demand more environmental information in fulfilling its increasingly proactive role in not only solving environmental issues but also anticipating and preventing them. The government will continue to expand community outreach programs to facilitate the sharing of information.

- ***More timely and aggressive enforcement actions by environmental oversight agencies.***

Increased emphasis on enforcement actions will demand improvements in information system capabilities. Environmental monitoring systems will be required to indicate effectively an environmental problem when it occurs and target the responsible party. This will help enforcement agencies to take action against the responsible parties to facilitate clean-up and cost recovery efforts.

- ***Greater emphasis on the prevention of potential environmental threats.***

The government has been primarily reactive in addressing environmental problems, concentrating its efforts on clean-up and enforcement. Today, greater emphasis is placed on preventive measures. These include such activities as recycling and conservation of resources. This change in emphasis creates a demand for new types of data and analytical capabilities.

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- ***Advancements in measuring techniques and modeling to improve environmental research and refine remedies.***

More advanced information collection and measurement techniques will improve the accuracy and completeness of data. Enhancements of environmental models will allow more accurate research and analysis. These advancements will result in more precise solutions to environmental problems, improving environmental results.

- ***Growing acceptance that maintaining environmental quality and protecting natural resources is needed to sustain long-term economic growth globally.***

Internationally, it is recognized that poor natural resource management threatens economic development. The economic benefits of controlling pollution, and the fact that it is cheaper to prevent pollution than to clean it up, have prompted environmental regulations, monitoring and enforcement on a global scale.

These environmental trends indicate that EPA media programs are facing fundamental changes in their mission and activities. Media program strategic plans emphasize increased demands for more complex data analysis, greater use of models, and access to economic, public health and social demographic data as well as environmental data.

2. STATE PARTNERSHIP TRENDS

EPA is committed to State/Federal partnership in environmental decisionmaking and to delegation of Federal environmental programs. This commitment underscores the critical role of the State/EPA Data Management Program in achieving a broad environmental agenda.

- ***Greater demand for State environmental data.***

States are the primary collectors of environmental data, enforcers of environmental legislation and decisionmakers weighing environmental, economic and social priorities. EPA will continue to emphasize building State capacity and providing information exchanges which promote proactive public policy. The environmental community and the general public will demand information on local and regional environmental issues.

- ***Greater demand for access and data security.***

EPA national databases must be designed with flexibility to accommodate State's needs. As demand for access to national databases continues to grow, EPA and the States will be required to provide responsible access to appropriate State data stored in EPA databases. While the environmental community and the general public will look to EPA as accountable for national environmental data management, the States will be responsible for defining responsible access which safeguards State private data.

- ***Greater State participation in IRM decisionmaking.***

The States will become more active partners in decisions about the collection of information and information systems for national databases. As primary providers and users of data, the States will become active partners in defining requirements, selecting feasible alternatives and implementing solutions that address both Federal and State information needs.

- ***State advances in environmental analysis.***

As economic pressures mount, the States will exercise creativity in environmental decision-making to achieve sustainable development. The States will pioneer the development of environmental assessment technologies and data integration tools which promote pollution prevention and environmental protection goals in State and Regional initiatives.

3. RESEARCH AND DEVELOPMENT TRENDS

The Agency's strategic emphasis on better EPA science and data management as the basis for more intelligent, proactive public policy has direct consequences for the IRM program. If EPA is to regain its place as a leader in environmental research, the tools must be available to support EPA laboratories and scientists.

- ***Environmental models will dramatically facilitate analysis and understanding with graphic rather than numerical results.***

The Agency will depend heavily on mathematical models to assess and compare the merits of alternative abatement scenarios. The use of Geographic Information Systems (GIS) by EPA, the States, other Federal agencies and the broader international environmental research community will continue to explode. Standards and protocols are needed to ensure these data and models can be exchanged. Environmental assessments will require the ability to join previously unrelated data collections, many collected and maintained outside EPA by other Federal agencies, universities and

research organizations. The power of this new generation of environmental models is reflected in their outputs, which will be visual, not numerical. Producing these assessments, however, will demand increased data base capability, graphics and telecommunications requirements.

- ***Large environmental assessment models will require high performance computing capabilities.***

High performance computing is required to process large volumes of atmospheric, global climate and detailed ecological data which are analyzed in sequences of mathematical models. High performance computing coupled with graphic outputs will bring a need for sophisticated support and training. Applied mathematics and specialized programming skills are particularly essential for full utilization of scientific computing capabilities.

4. WORK ENVIRONMENT TRENDS

Another important area to understand in assessing the future IRM environment in EPA involves changes in the work environment of the future. Several factors will affect the work environment in general and, more specifically, the work environment of EPA and other Federal agencies.

- ***The Federal government will perform a greater role as a gatherer and broker of information.***

With the increased delegation of authority to State and local governments, the Federal government will increase its role as manager of information resources. Government agencies will become brokers of information by collecting, processing and disseminating information. While responsibility for program implementation will shift to State and local authorities, accountability for data management will remain with EPA. Accountability will require EPA to improve management of information as our role in brokering information increases.

- ***Proliferation of computers will allow greater access to information.***

Computers have become an integral part of the office environment. In the future, the ratio of computers to employees will increase. EPA is rapidly approaching one personal computer for each employee. This change, coupled with improved communications technology, will allow increased access to and presentation of information at each worker's desk. In the future, virtually every employee will have the capability for immediate access to information.

- ***Minimum basic computer skills will be necessary for the majority of positions.***

As offices become more automated, computer skills become more critical for all levels of employment. Technology advancements will provide more automation of information management. The need for computer skills will be particularly critical in an information-intensive environment such as EPA.

- ***Entry-level workers will lack basic skills.***

While the need for minimum computer skills increases, more entrants to the workforce will lack not only these skills but basic mathematical and verbal skills necessary to utilize information technology. The public sector is particularly vulnerable as it competes with the private sector for highly trained, skilled workers in technology-based jobs in the future.

New Workers: 50% women, 10% minorities

Education: Most jobs require post high school with good speaking, math, writing, and computer skills

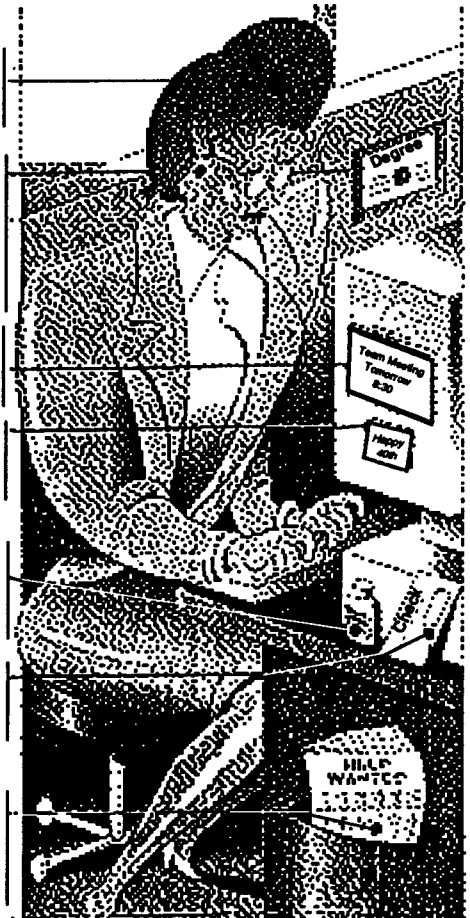
Skill Mix: Jobs will require multiple skills

Age: Average age will increase as baby boomers get older

Stress: Advances in technology mean more frequent training and job changes

Pay: Most new jobs will pay better than average

Skills Gap: Too few skilled workers for available jobs and many with skills too low.



- ***Demand for Federal services during nontraditional work times will increase.***

The public will demand information from the Federal government at night and on weekends. In order to meet these demands without increasing the Federal work force, technical solutions for information management and dissemination will be evaluated.

- ***Smart buildings will promote productive use of technology.***

Facilities will be designed to optimize use of technology in a productive work environment. Managers will invest in ergonomic furniture, lighting and other improvements which complement their investment in information technology by addressing health and stress problems.

- ***Increasing numbers of people will work at home.***

The proliferation of computers and increased communications capabilities will make it more feasible for employees to work at home. This will create an increased demand on communications

and other IRM resources to facilitate access to information from a greater number of locations.

These changes in the work environment will place additional demands upon EPA's information resources management community. Major enhancements in communications capabilities and improvements in computer skills through advanced training programs will be in great demand.

5. INFORMATION TECHNOLOGY TRENDS

Information technology is a vital element of any IRM organization because it provides the power to drive the data management operations. EPA is committed to and relies on an advanced computing and telecommunications environment. This environment facilitates the collection and sharing of information with EPA's national field operations at Regional offices and laboratories, with the States and with external parties. Guidance on electronic collection and dissemination of information is being reviewed for potential revisions to OMB Circular A-130. These revisions are expected to encourage increased use of information technology as a means of data collection, access and sharing.

Continuing assessment of the adequacy of existing resources and emerging future needs is important to keep EPA management abreast of new products and capabilities to improve our technology investments. Following an era of dramatic technical breakthroughs, the computing industry is anticipating a period of more stability and consolidation which should result in compatible technologies meeting national and international standards. The emergence of a more predictable computing environment in the marketplace will enhance EPA's ability to plan and implement enhancements which directly increase performance and productivity. EPA is currently experimenting through prototypes and pilot projects with several emerging technologies to determine their applicability in the Agency.

- ***High performance computers will provide new insights into research and development through advanced modeling capabilities.***

High performance computers are expected to have an increase in power equal to 1000 times existing capabilities. This will provide the necessary power to run the many iterations of data required by advanced environmental models briefly discussed above under the Research and

Development Trends section. This technology will play a significant role in EPA's ability to predict environmental impacts and to plan remedies for environmental problems.

- ***Workstations and personal computers will become more powerful and networking will provide increased access to information.***

Workers will have access to greater power, more information sources and larger communication networks. Enhanced processing and communicating capabilities will improve worker productivity and effectiveness of government decision-making and services.

- ***Telecommunications networks will have the capabilities to handle voice, data, image and video transmissions at high rates of speed with high reliability.***

Increases in satellite and terrestrial technologies will increase the speed, reliability and capability of telecommunications networks. As the Federal government moves toward the implementation of the new FTS-2000 network, many of these capabilities will become available. This will provide many opportunities for improvements in data sharing among distributed locations.

Advancements in information technology will provide the ability to meet the increased demands levied by the current environment and future trends. The key to achieving the promise of technology is understanding EPA's needs and where new technologies can be applied successfully.

6. OVERSIGHT AND LEGISLATION TRENDS

The enactment of new legislation, Congressional hearings and regulations of oversight agencies, such as the Office of Management and Budget and the General Services Administration are major influences on EPA's information resources management program. The impact of the following trends can permeate the planning, acquisition and operation of the IRM programs.

- ***Public access requirements will necessitate the development of a coordinated dissemination system***

Both the House and Senate versions of the bills to give EPA cabinet-level status, as well as proposals to revise the Paperwork Reduction Act mandate affirmative dissemination of environmental information in ways that support analysis and understanding. There are provisions for the establishment of a Center for Environmental Statistics, which would provide integrated assessments

of environmental conditions and trends. These mandates will require the Agency to seek more efficient information dissemination strategies, including electronic distribution.

- ***More interdepartmental management of information and data.***

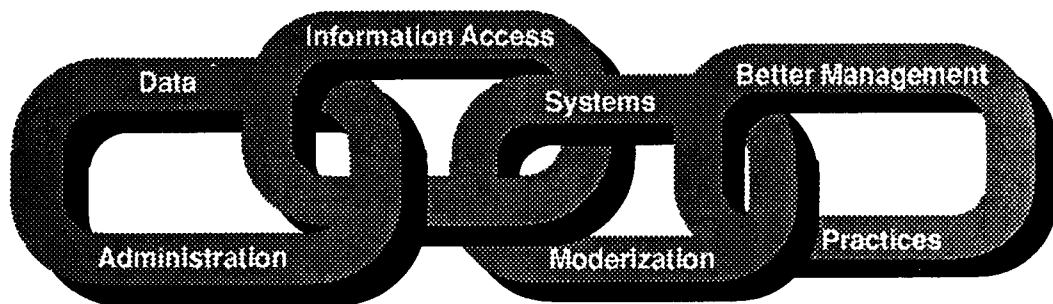
Pending legislation to revise the Paperwork Reduction Act seeks greater efficiencies across the government in collecting and management of data, and mandates sharing of common data across program and Agency lines. In order to accomplish this, much planning and cooperation in the area of data administration needs to occur among the Agencies who share data. With the large volumes of data, which can be accommodated in some of the scientific computerized modeling applications, it is much more cost effective to utilize appropriate data, which resides in another Agency.

- ***Greater oversight scrutiny on IRM planning and acquisitions***

GSA has been revamping its process for reviewing IRM acquisition plans in an attempt to better target reviews and to improve response time overall. While smaller purchases will be processed very quickly, Agencies can expect larger procurements to receive a more scrutiny. Under the revised Paperwork Reduction Act, OMB's Office of Information and Regulatory Affairs, will assume a greater leadership role and review IRM budgets for consistency with long range plans.

III

Strategic Issues



III

Strategic Issues

Understanding the needs and opportunities generated by the analyses presented in previous sections establishes the framework to develop IRM strategic issues. The strategic vision for IRM emphasizes the role of the information broker. The success of IRM in promoting the Agency's mission depends upon raising the quality of data for more valid and reliable environmental assessments. Data quality increases as data are put to productive use. The Agency's IRM investments have build an integrated hardware, software and telecommunications "utility." Strategic IRM issues center on the data themselves. How does the Agency continue to move forward and apply the capabilities of EPA's information utility to promote and enhance the usefulness of the data? How does the Agency continue to facilitate the exchange of data with the States to further a broad environmental agenda?

- ***IRM must provide proactive leadership while maintaining high quality service.***

IRM must actively propose and implement initiatives to achieve the Agency's mission. IRM must articulate and implement a vision of how technology will improve the personal productivity of EPA employees and promote the Agency's broad environmental policy agenda. A proactive leadership role increases the need for improved communications and planning. IRM staff must continue professional development to deliver reliable expertise. In particular, skills in implementing and managing advanced technologies and systems need to be developed. Consultation and teamwork with Agency managers, as well as with State, international and environmental leaders are needed on collaborative and multidisciplinary initiatives.

- ***IRM must establish a comprehensive Agencywide data administration program.***

EPA increasingly needs data which are managed as a shared Agency resource. Such a shared or "corporate" database concept is essential to data integration and sharing. At the same time, technological breakthroughs and reduced equipment costs are spawning rapid expansion in EPA systems and in the number of EPA staff directly managing databases and equipment. A comprehen-

sive data administration program establishes the basic principles, standards and mechanisms for coordinated access and analysis of data from these many different environmental programs and operating systems. In addition, EPA must establish basic expectations for data quality and data transfer to participate in meaningful information exchanges with a growing, diverse and demanding community outside the Agency.

- ***IRM must provide information to a diverse user community.***

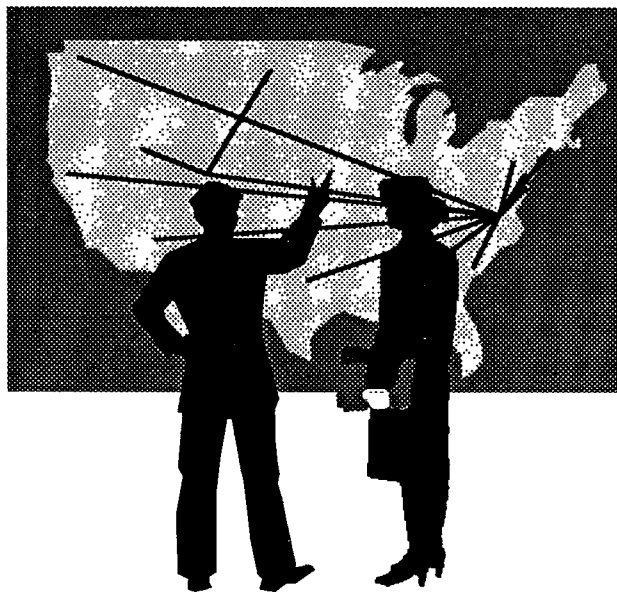
EPA's computing utility and information services have been designed and managed for EPA's internal use in carrying out specific legislative and regulatory mandates. While EPA staff will also benefit from improved information sharing, the Agency must design, fund and implement changes in existing resources and capabilities to open access in an appropriate and responsible manner. Key users include the States and local communities; international organizations and national governments; other Federal agencies; the scientific and research community; the environmental community and the American public. The United States Government has a fundamental obligation to collect and disseminate information no other social institution is empowered to provide. Innovation and dedication are essential for addressing the complexity of the technical, managerial and cost issues associated with information sharing.

- ***IRM must modernize information systems.***

Agency managers face fundamental changes in their agendas and ways of doing business. State-of-the-art technology offers potential benefits for working smarter and more effectively. IRM must inform and advise Agency managers of opportunities for modernization. In addition, IRM must assume responsibility for creative technical and financing plans to introduce and manage systems which better serve the Agency's needs. Most of the Agency's current portfolio of systems have been operational for some time and were built to meet specific, often narrow, regulatory and enforcement objectives. Extensive enhancements are required if these systems are to meet the Agency's new environmental priorities and broader policy and information exchange agendas. Programs cannot manage and finance these changes single-handedly. IRM must lead the modernization initiative with a strategic view of what Agency systems ought to accomplish and how they should look and feel as well as a comprehensive plan for revitalizing the Agency's mission-critical information systems.

IV

Goals & Objectives



IV

GOALS AND OBJECTIVES

The major strategic goals for IRM respond to the vision anticipated by the IRM mission statement as well as the implications of analyzing IRM strengths and weaknesses and external opportunities and threats. There are eight major strategic IRM goals:

- ***Establish data integration tools and activities.***
- ***Create and manage information systems supporting the environmental community.***
- ***Establish a program to promote information sharing.***
- ***Renew EPA's technology base to provide increased functionality and/or to reduce costs.***
- ***Manage a data administration program to ensure the Agency's ability to use its data fully.***
- ***Enhance productivity through the educated use of technology.***
- ***Improve planning and communications to ensure effective deployment of information and technology.***
- ***Provide quality service with proactive leadership as custodians of EPA information and systems.***

Each goal is discussed in a separate section below.

1. Establish data integration tools and activities.

Background

EPA needs to integrate comprehensive sets of environmental, health, economic, legislative and social demographic information to evaluate remedies for a broad domestic and international environmental agenda. Information that is shared with the larger environmental community is recognized and managed as a corporate resource. Advanced environmental models and analytical techniques promote more intelligent, proactive public policy.

Objectives

IRM will develop the management processes, technical capabilities and expertise for data integration through the following:

- Provide connectivity for seamless access to data through EPA's hardware, software and telecommunications capabilities.
- Define formats and protocols that facilitate the exchange and the meaning of environmental and laboratory data.
- Design, develop and implement common user information access techniques for major EPA program databases.
- Design, develop and implement electronic reporting capabilities for major EPA program databases.
- Incorporate data integration tools and activities into EPA Regional offices and a majority of the States' Information Resources Management programs.

Consequences of Failure to Respond

Data integration is pivotal to achieving the Agency's overall mission and goals. The current priority assigned to a broad environmental agenda presents the best opportunity since EPA was established to restructure our data and capabilities outside the narrow and restrictive confines of single regulatory or media approaches.

2. *Create and manage information systems supporting the environmental community.*

Background

Information systems are cost-effectively developed to respond to the Agency's information needs and to promote best practices in software engineering and maintenance. EPA develops systems which add value and productivity to Agency's work. The Agency's expertise in systems development provides analytical results and outputs which support broad domestic and policy analysis.

Objectives

EPA has initiated the Systems Development Center and the Systems Modernization Fund as corporate investments to improve the performance of information systems. Objectives to meet the IRM strategic vision include:

- Develop and implement a software engineering development program.
- Develop an application tool kit.
- Provide systems with flexibility to promote State/EPA information partnership.
- Provide systems to ensure the accuracy, consistency and efficiency of Agency laboratory networks.
- Develop improved national administrative control and program systems.

Consequences of Failure to Respond

The thrust of systems improvements comes from basic retooling and modernization of existing systems at the end of their useful and productive life and from building into all EPA systems the capabilities needed to share and integrate data from many sources. No one EPA office can make these investments constructively so that all EPA user expectations for common capabilities and levels of performance can be achieved.

3. *Establish a program to promote information sharing.*

Background

EPA's initiatives in sharing data with the States provide a foundation for the Agency's new mandates to share information with the public and the larger international community.

Objectives

New programs, capabilities and services must be established in consultation with a large and diverse community through the following objectives:

- Provide tools and capabilities to facilitate information sharing within EPA and between EPA and other environmental organizations.
- Manage and deliver information and technology transfer for improved access and use of data needed by EPA staff to perform effectively.
- Manage and deliver information and technology transfer for public access.
- Manage and deliver information and technology transfer for international environmental programs and organizations.
- Manage and deliver information and technology transfer for the States.

Consequences of Failure to Respond

These are new activities for the Agency. EPA's computing capability and information services have been developed, managed and funded to serve our internal needs. Fundamental restructuring and additions are required to meet this mandate. This is a highly visible initiative and failure to respond would erode confidence in the Agency's commitments to a broader environmental agenda.

4. *Renew EPA's technology base to provide increased functionality and/or to reduce costs.*

Background

Technology offers many opportunities for improving EPA's immediate work environments, employee productivity and overall effectiveness. The benefits of advancements in technology must be carefully weighed against the cost of new investments and the disruption of change.

Objectives

IRM provides a comprehensive service to ensure that EPA's technology base is responsive, affordable and manageable through the following objectives:

- Assess the Agency's business needs, the direction of technology and specific technologies and capabilities.
- Procure selected technologies and capabilities to meet Agencywide needs.
- Implement technology in an orderly manner and evaluate results.

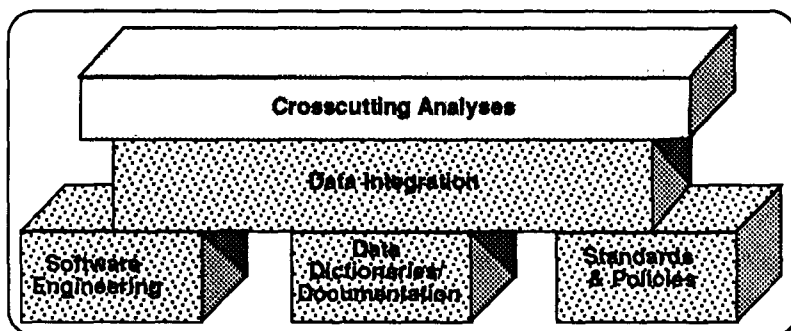
Consequences of Failure to Respond

EPA enjoys a powerful and responsive computing environment today. Fundamental changes in the Agency's mission create needs for enhanced computing and telecommunications capabilities. The Agency will not be positioned to deliver better science and analyses to support EPA's risk reduction, enforcement, policy, globalization and State partnership objectives without a strategic commitment to technology renewal.

5. *Manage a data administration program to ensure the Agency's ability to use its data fully.*

Background

Data integration and sharing objectives demand a focused and sustained data management program. IRM must establish a data administration program to meet expectations and provide standards for sharing corporate information resources and to provide a forum for resolving data issues.



Objectives

As a new activity, objectives broadly define the functions that must be established to meet this goal:

- Define EPA's information architectures to evaluate corporate or shared data needs and provide models for management of program, administrative and scientific data.

- Establish data standards for corporate or shared data.
- Establish and manage a process for an effective Agencywide data administration program.
- Provide tools and capabilities which promote common data management approaches for program, administrative and scientific data.

Consequences of Failure to Respond

A successful, comprehensive Data Administration Program is essential for the Agency to meet its planned commitment to share meaningful information with other organizations. A proactive Data Administration Program will set and enforce the standards which make shared data meaningful. A failure to create and manage an Agencywide Data Administration Program would require that data issues somehow be resolved in the context of competing priorities focused on hardware, software, telecommunications, and individual application systems. Without a program strictly focused on data advocacy, integration and effective use of the Agency's data will be difficult, if not impossible.

6. *Enhance productivity through the educated use of technology.*

Background

The Federal emphasis on integrated administrative systems coupled with technology advances and relocations of EPA to improved office environments offer an opportunity to implement IRM's vision of the office of the future.

Objectives

The achievement of this goal enhances individual worker productivity through common tools and capabilities implemented throughout the Agency. Individual office systems that prove innovative and successful can be transferred to other EPA offices.

- Establish and manage training programs for IRM professional development.
- Establish and implement training programs for client communities, including States, program offices and the scientific community, which promote teamwork and information sharing.
- Provide tools and capabilities to improve personal productivity of EPA staff.
- Provide tools and capabilities to improve organizational productivity and effectiveness.

Consequences of Failure to Respond

EPA managers need all the resources at their disposal to meet the challenges of EPA's broad environmental agenda. Information and information technology can increase individual productivity and promote organizational effectiveness. Like all domestic agencies, EPA faces resource constraints which increase reliance on productivity gains not achieved by more staff or dollars but by working smarter through information tools and capabilities.

7. *Improve planning and communications to ensure effective deployment of information and technology.*

Background

Proactive leadership and high quality service demand improvements in IRM planning, outreach and communication. IRM plans and priorities must be known and understood by the Agency as the basis for other management decisions and initiatives. Feedback from the Agency and other users of IRM is essential for continuous improvement.

Objectives

- Develop and implement a cooperative process for IRM strategic planning on an annual basis.
- Develop Agencywide information architecture for program, administrative and scientific systems and hardware/telecommunication which includes Information Strategy Plans (ISPs), major acquisitions and maintenance.
- Engage in active outreach to the Agency and the environmental community including newsletters, annual IRM reports, orientation tools, expanded participation in internal and external work groups and other routine communication opportunities.
- Evaluate and reorganize IRM management and communications networks.

Consequences of Failure to Respond

Education is more effective than enforcement. The success of the Agency's IRM program depends upon how well EPA executives and staff understand their own needs for information and how technology can improve their performance. The risk is management investment decisions which are costly and do not deliver the services and capabilities needed to accomplish the Agency's mission.

8. *Provide quality service with proactive leadership as custodians of EPA information and systems.*

Background

IRM is the responsible custodian of Agency information, such as the library, and of mission-critical information systems, including EPA's administrative systems and water program systems.

Objectives

- Ensure security of Agency information, systems and ADP equipment.
- Operate and maintain national systems, including hardware/telecommunication infrastructure ensuring a high level of system performance through continuing evaluation and quality improvement.
- Maintain and expand the library network to include an on-line catalogue, interagency CD-ROM, local area networks and improved collections and reference databases to improve access to information.

Consequences of Failure to Respond

Corporate information resources the Agency depends upon will be incomplete and out-of-date, therefore, unresponsive to EPA management and staff needs.

For further information on this Strategic Plan or other IRM issues, you may contact the following IRM managers:

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