

United States Department of the Interior
Bureau of Land Management

Information Resources Management

Strategic Plan

2002 - 2005

DRAFT

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EXECUTIVE SUMMARY

This IRM Strategic Plan has been drafted to support the Bureau's overall Strategic Plan and implement the Bureau's Enterprise Architecture and may be modified to address any changes that may be made to those documents. Furthermore, this plan is designed to provide the direction and contain the flexibility to support the Secretary's Management Reform Action Plan to move the Department of Interior to consolidation of information technology, procurement and personnel activities to improve delivery of information, increase our capability to procure goods and services more effectively and enhance our human capital management.

The plan emphasizes:

- Implementing an integrated information technology architecture to support the Bureau's core business of restoring and maintaining the health of the land.
- Improving cooperation, consultation and communication in the service of conservation in order to serve current and future publics by providing information and services electronically to our external customers and our own organization.
- Promoting collaborative leadership by using databases available from other sources and sharing our databases with others.
- Serving current and future publics by implementing data standards and posting metadata
- Maximizing human capital by employing, training and retaining a highly skilled workforce.

This plan is comprised of three goals, followed by objectives, desired outcomes, performance measures, and specific actions that will be taken over the next five years to accomplish the goals.

The three IRM Goals focus on:

- Technology -- its acquisition (goal 1) and implementation (goal 3).
- Information and data -- its access, use, protection and disposition (goal 2).
- People -- serving customers and hiring, training, and retention of capable employees (goal 3).

Included under each objective is a section that identifies measurements that will be used to judge the effectiveness of the actions that will be taken to achieve the goals and objectives of the plan. At the action level, the plan identifies responsible parties as well as action dates. Many of the actions needed to achieve the objectives are significant undertakings in their own right. Where appropriate, individual activity plans will be developed to guide and ensure successful completion of those actions.

1.0 BLM MISSION

It is the mission of the Bureau of Land Management to sustain the health, diversity, and productivity of the public lands for the use and enjoyment of present and future generations. *(From BLM Strategic Plan 2000-2005)*

1.1 THE IRM MISSION

Information Resources Management (IRM) is responsible for supporting the Bureau's mission by facilitating the development and implementation of business solutions among its State/Field Offices, National Centers, and the Headquarters Office. Information Resources Management will focus on providing value added support and services to meet customers' expectations, while ensuring that information technology investments effectively support the Bureau's core business goals by linking investments to the attainment of the BLM's Strategic Plan performance goals.

1.2 THE IRM VISION

Using Information Technology to make information and services available when and how they are needed by our customers for their business solutions.

1.3 INTRODUCTION

The Bureau of Land Management (BLM), an agency of the Department of the Interior (DOI), is responsible for managing 264 million acres of surface lands and approximately 700 million acres of Federally owned mineral estate nationwide. Furthermore, the Bureau has cadastral and mineral-related technical service responsibilities on 56 million acres of Indian Trust lands. A series of land management statutes, culminating in the Federal Land Policy and Management Act of 1976, mandates that BLM manage these lands and related resources for the benefit of the people of the United States and future generations. BLM increasingly relies on information technology to assist in its efforts to carry out these responsibilities. This IRM Strategic Plan describes the direction BLM will take to manage its information resources over the next five years.

The BLM's IRM investments in information systems throughout BLM will be implemented through phased or sequential development and implementation. These investments are approved for acquisition or development based on their contribution to improving BLM's core business processes and on priorities identified by BLM, the Department of the Interior and the Office of Management and Budget (OMB). The central focus of this strategy is to develop integrated systems that help BLM meet national and local needs in the management of the lands and natural resources, while supporting the mission and goals outlined in the BLM Strategic Plan.

Specific performance goals contained in the BLM's Strategic Plan relate directly to IRM. The strategies and actions to achieve those performance goals are the foundation of this document and represents the high-level technical aspects for implementing the BEA.

1.4 PURPOSE AND SCOPE

The IRM Strategic Plan describes the Bureau's IRM approach for the years 2002-2005. This plan provides policy and direction for planning the BLM's information resource investment in order to support the BLM's mission and goals and to meet the IRM goals of the DOI. This plan is to be used as a basis for preparing the State and Center IRM plans and for decisions affecting the acquisition and management of information resources.

Bureau managers who use this plan when making decisions that affect information and technology resources include the:

- Bureau's Information Technology Investment Board, chaired by the Director,
- Assistant Director for IRM, who is BLM's Chief Information Officer (CIO),
- Assistant Directors, State and Center Directors, who direct the implementation of information and technology resources,
- State and National Center CIOs and ITIBs responsible for operational implementation in direct support of the BLM's mission.

1.5 INFORMATION RESOURCE PLANNING ASSUMPTIONS

The following planning, management, and technology assumptions have been made in developing this Strategic Plan:

- The Department of Interior will consolidate information technology acquisition and services currently provided by the individual Bureaus.
- BLM customers expect reliable electronic access to more BLM's information and services in order to apply for permitted uses of the public lands, verify land ownership, and conduct research on the state and trends of the health of the land.
- The implementation of electronic government in all four segments will continue to be an Administration priority.
- Our customer base will have broader expertise and will be located in a wider range of places.
- Knowledge needed to serve customers will often reside outside the BLM in partners,
- Employee expertise will be widely distributed, both organizationally and geographically,
- A retiring workforce represents a potential loss of existing information and knowledge, and
- A retiring workforce, and its knowledge, will be difficult to replace
- A baseline of historical spending will be established against which future spending will be controlled . Therefore, information technology investments must be carefully planned and executed so as to directly improve the productivity, efficiency and effectiveness of business processes that will achieve the performance and business goals of the BLM.

1.6 MEASUREMENT and ASSESSMENT of PERFORMANCE

The BLM is committed to objective and systematic measurement of its performance as a tool for tracking progress toward attaining its goals and as a means of identifying opportunities for improvement. This plan is designed to enable BLM to implement the fundamental practices found in the U.S. General Accounting Offices, Accounting and Information Management Division, *Executive Guide, Measuring Performance and Demonstrating Results of Information Technology Investments, Washington, D.C., GAO 1998, GAO/AIMD-98-89*. The GAO considers IT performance management and measures to be **subsets** of overall performance management systems. In structuring an effective approach to performance management it is important to:

- Differentiate between IT's impact on intermediate versus final program outcomes,
- Use a good balance of different kinds of IT measures,
- Understand that measures may differ by management tier within an organization, and
- Evaluate both the overall performance of the IT function within an organization and the outcomes for the individual IT investments

The Government Performance and Results Act of 1993, the Paperwork Reduction Act of 1995, and the Clinger-Cohen Act of 1996 all require that agencies take steps to significantly improve the management of their information systems and the acquisition of information technology after completing business process re-engineering. These laws require that assessments be made of the

effectiveness of the programs and systems used by federal agencies. The Chief Information Officer will monitor and evaluate the performance of information resources using established accounting procedures and auditing practices.

To accomplish this, BLM will:

- For each action item identified in this plan, the CIO will assign a lead responsible party who will develop a schedule for completion of the action and report progress to the CIO quarterly.
- Develop and implement a performance measurement plan that will address the following practice areas adopted from the U.S. General Accounting Offices, Accounting and Information Management Division, *Executive Guide, Measuring Performance and Demonstrating Results of Information Technology Investments, Washington, D.C., GAO 1998, GAO/AIMD-98-89.*:
Practice Area 1: Follow an IT “Results Chain”
Practice Area 2: Follow a Balanced Scorecard Approach
Practice Area 3: Target Measures, Results, and Accountability at Different Decision-making Tiers
Practice Area 4: Build a Comprehensive Measure, Data Collection, and Analysis Capability
Practice Area 5: Improve Performance of IT Business Processes to Better Support Mission Goals
- Periodically review the appropriateness and effectiveness of IRM policies to achievement of the BLM’s goals and core business practices.
- Conduct risk assessments of its infrastructure and key systems to guard against service interruption and loss or compromise of data.
- Evaluate the performance of major Bureau systems to determine their effectiveness in meeting the Bureau’s business requirements and seek to determine the actual return on investment.
- Solicit and respond to feedback from our customers and providers to ensure that information services being provided meet their needs and to identify areas in which additional services/information may be needed.
- Analyze BLM's information technology acquisitions to determine whether the investment in new technology is the result of reengineered business processes, is cost effective with an acceptable level of risk, meets the overall requirements of the BLM’s business practices, and conforms with the principles of the Clinger-Cohen Act of 1996.
- Review its information technology support structure to ensure that it meets the needs of BLM offices and conforms with the Secretary’s initiative for competitive sourcing.
- Ensure the Bureau is making satisfactory progress implementing the desired enterprise architecture.

The results of these assessments will be used to gauge the effectiveness of the IRM Strategic Plan, and will provide the basis for adjusting the plan to further improve BLM's information resources.

2.0 IRM STRATEGIC GOALS

IRM STRATEGIC GOALS

Goal 1: Improve Management of Information Technology Assets

The selection of IT investments will be based on quantified and verifiable criteria directly related to the support of the BLM's mission. BLM will strive for cost savings in the acquisition and operation of assets while maintaining quality and currency of its hardware and software. The acquisition, development, testing and deployment of investments will be controlled and managed as projects. Deployed investments will be evaluated periodically to assess cost effectiveness of the results.

Goal 2: Enhance the Transformation of Data into Knowledge

Procedures and standards will be established and implemented that govern the creation, protection and interpretation of data that is used for making knowledgeable decisions that affect the achievement of the BLM's mission. Knowledgeable and documented decisions are the essential end result of information management. A clear and common understanding of the meaning of the data and its metadata is essential to its transformation into knowledge.

Goal 3: Support the Bureau's Mission by increasing the Effectiveness and Timeliness of Service Delivery and Effectiveness of its Human Capital

Information technology investments, in and of themselves, are of no value to the BLM or the citizens. It is the use of those investments by skilled employees and citizens that deliver value to the organization and the American public. The BLM will ensure that its investments effectively enhance service delivery by making them relevant, comprehensive in their utility, and intuitive to use; educating its workforce and the customer whenever necessary.

2.1 RELATIONSHIP BETWEEN IRM GOALS and BLM's STRATEGIC GOALS

The following table illustrates the relationship between BLM's IRM goals and the mission goals identified in BLM's Strategic Plan for FY 2000-2005. An "N" indicates that the IRM goal is necessary to achieve that BLM Mission goal. An "F" indicates that the IRM goal facilitates the achievement of that Strategic goal.

BLM IRM Goals	<i>Improve Management of Information Technological Assets</i>	<i>Enhance the transformation of Data into Knowledge</i>	<i>Support the Bureau's Mission by increasing the Effectiveness and Timeliness of Service Delivery and Effectiveness of its Human Capital</i>
BLM Strategic Goals			
Serve current and future publics	N	N	N
Restore and maintain the health of the land	F	N	F
Management Strategies to Improve Organizational Effectiveness	N	N	N

3.0 IRM STRATEGIC PLAN GOALS AND OBJECTIVES

The fulfillment of these IRM Goals during the next four years will enable BLM to attain its strategic business goals by enabling the reengineering of business processes.

IRM STRATEGIC PLAN GOALS AND OBJECTIVES	
Goal 1: Improve Management of Information Technology Assets	
Objective 1	Develop a secure information technology architecture responsive to changing business processes and technologies
Objective 2	Improve the capital planning and investment control process by achieving Stage 5 of GAO’s IT Investment Management Maturity Framework
Objective 3	Improve cost management and budgeting for IT assets
Objective 4	Improve software acquisition by achieving Level 5 of SEI’s Capability Maturity Model for Software Acquisition
Objective 5	Ensure that safeguards are in place to protect BLM's data and information technology investment.
Goal 2: Enhance the Transformation of Data into Knowledge	
Objective 1	Incorporate information management principles and procedures into the BLM’s business processes.
Objective 2	Develop and maintain corporate information that support the BLM business processes by increasing the adoption and use of common standards, metadata and other protocols.
Objective 3	Ensure proper handling of the BLM's Official Agency Records.
Objective 4	Increase access to data and information via the internet to support both internal and external customers.

Goal 3: Support the Bureau’s Mission by increasing the Effectiveness and Timeliness of Service Delivery and Effectiveness of its Human Capital

Objective 1	Improve business operations by thoroughly understanding business needs and by planning, implementing and managing the best information technology solutions available
Objective 2	Recruit and/or retain skilled IRM personnel that are competent in both current and emerging technologies
Objective 3	Provide easy to use decision-support tools to all BLM employees that enhance the transformation of data to knowledge
Objective 4	Provide vision, leadership, and a framework for evaluating emerging technologies and implementing proven information technology solutions
Objective 5	Provide citizens, external customers, and BLM staff with convenient access to appropriate information and services through technology
Objective 6	Operate a reliable communication and computer infrastructure on which to efficiently conduct BLM business operations today and in the future
Objective 7	Develop and maintain a user community that understands and can employ modern technologies to maximize business benefits

3.1 ACHIEVING OUR GOALS

Goal 1: Improve Management of Information Technology Assets					
Objective 1: Develop a secure information technology architecture responsive to changing business processes and technologies					
<p>The BLM seeks to create and implement an IT architecture that provides appropriate shared secure access to all BLM information. The BLM has installed a hybrid of computer platforms and operating systems. The objective is to create an environment in which appropriate access to information is available to any BLM employee or customer, regardless of the computer system he/she is using and with minimal interruption or adjustment for changes in format, hardware, or software. The following products and actions will move us toward achieving the desired outcomes.</p>					
Outcome	Performance Measure	FY 2002 goal	FY 2003 goal	FY 2004 goal	FY 2005 goal
<i>Adherence of technology acquisitions to a comprehensive and flexible architecture</i>	% of existing assets that conform to the architecture	20%	30%	40%	50%
<i>Reduced number of single purpose systems</i>	number of stand alone national systems	Base-Line	-10%	-10%	-10%
Product	Action/Method	Responsible Party			Date
Configuration Management (CM) Manual and Handbook	Consolidate and update CM guidance.	ADs SDs CDs			FY-02
FY 2005 IT Architecture defined	Define the IT Architecture that is sought by FY2005	AD-IRM NIRMC CIOC			FY
Technology replacement strategy	Involve CIOC and OIRM in assessment of current and target BEA and information architecture.	AD-IRM			FY-03
Approved use of classified and emerging technologies	Apply classified technologies to assist in land management.	AD-IRM AD-200 AD-300			FY 2002 - 2005

	Seek de-classification of information and technology for civilian use.	AD-IRM	FY 2002 - 2005
	Apply emerging technologies including hand-held computers to help BLM personnel gather and store data.	AD-IRM	FY 2002 - 2005

Goal 1: Improve Management of Information Technology Assets

Objective 2: Improve the Capital Planning and Investment Control Process by achieving Stage 5 of GAO’s IT Investment Management Maturity Framework

The GAO has developed a model that recognizes 5 stages of an organizations ability to manage its IT investments. Stage 5 is the highest level of maturity characterized by an organization that is enterprise and strategically focused and has comprehensive policies and procedures that are adhered to. The BLM will use this model to improve its investment management processes and measure itself against this model to assess progress.

Outcome	Performance Measure	FY 2002 goal	FY 2003 goal	FY 2004 goal	FY 2005 goal
<i>Increased cost effectiveness of IT investments</i>	\$ saved by consolidated purchases as measured against GSA schedule or list price	\$1m	\$2m	\$3m	\$4m
	ROI reviews completed on at least 2 significant investments calculating an average ratio of projected to actual ROI	ratio of 0.5	ratio of 0.8	ratio of 0.9	ratio of 1.0
	Certification	Stage 2	Stage 3	Stage 4	Stage 5
Product	Action/Method	Responsible Party			Date
Certification Achievement Plan	Develop and implement a plan to achieve certification at each GAO stage	WO-550			FY-02
<i>Independent certification for:</i> IT Investment Board Operation	Establish and comply with ITIB operating procedures	ITIB			FY-02
	Perform an analysis of the effectiveness of IT investments	WO-550			FY-02
IT Project Oversight	Federal CIO Council review of BLM’s investment practices	Fed CIOC			FY-02
	Review projects in select, control and evaluate stages	ITIB, WO-550 & WO-570			annual
	Develop and implement a performance measurement plan that will address the GAO’s 5 practice areas	AD-500			annual

IT Asset Tracking	Develop a portfolio of IT assets and populate a portfolio management tool	WO-550 develop System Owners implement	National by 02, State by 03
	Conduct oversight of portfolio performance	WO-550	annual
Business Needs Identification for IT Projects	Document standards for business needs identification for projects in Manual/Handbooks	WO-570 develop AD, SD, CD implement	FY-02
IT Proposal Selection	Document IT proposal/selection criteria in Manual/Handbooks	WO-570 develop National & State ITIB implement	FY-02

Goal 1: Improve Management of Information Technology Assets

Objective 3: Improve Cost Management and Budgeting for IT Assets and Activities

The BLM is committed to performance based budgeting and has established an annual limitation on the amount of funds that will be expended on information technology. Successful implementation of these policies depends upon the ability to accurately track costs and relate those costs to performance planned and achieved.

Outcome	Performance Measure	FY 2002 goal	FY 2003 goal	FY 2004 goal	FY 2005 goal
<i>Improved accounting of IT expenditures</i>	Confidence in completeness and accuracy of IT cost accounting based on CFO and ITIB approval	baseline	+10%	+10%	+10%
<i>Budget forecasting based on performance measures</i>	Budget based on performance measures	FY 03 cost target	FY03 MYR & FY 04 Justification	All Budget phases	All Budget phases
Product	Action/Method	Responsible Party			Date
Quarterly reports of IT expenditures	Incorporate all DOI budget object cost codes relating to IT into the BLM accounting system	AD-800			2002
	Record data accurately	All Offices			2002
	Analyze data and report Quarterly	WO-550, SD & CD			2002
Activity Based Costing implemented at the IRM program level	Determine activities requiring cost tracking	AD-500			2002
	Develop a method for coding IRM activities regardless of mission activity	AD-800			2002
	Record data accurately	All Offices			2003
	Analyze data and report Quarterly	WO-550, SD & CD			2003

Annual IRM budget requests based on performance costs	Analysis of historical ABC data from MIS	WO-550 SD, CD	2003
	Analysis of investment proposal data	WO-550 SD, CD	2002
Accurate out year budget requests	Develop a Life Cycle Cost Model for BLM's IT investment.	WO-550	FY 2003
	Develop a 3 year funding strategy for investments	WO-550	FY 2003
Standard radios/ communication (Narrowband)	Plan, schedule, and implement Narrowband Radios throughout BLM.	WO-560 SD, CD	FY 2002-2005

Goal 1: Improve Management of Information Technology Assets

Objective 4: Improve Software Acquisition by achieving Level 5 of SEI's Capability Maturity Model for Software Acquisition

The Software Engineering Institute at Carnegie Mellon University has developed a model that identifies the characteristics that represent five levels of an organization's maturity for developing and otherwise acquiring software. The BLM will use this model to fashion its organizational activities to achieve each of those levels up to and including the highest level. BLM will conduct periodic assessments to ensure eligibility for certification at each level.

Outcome	Performance Measure	FY 2002 goal	FY 2003 goal	FY 2004 goal	FY 2005 goal
<i>Increased cost effectiveness of systems acquisition</i>	Certification	level 2	level 3	level 4	level 5
Product	Action/Method	Responsible Party			Date
Level 5 Certification for: Goals	Develop and implement a certification achievement plan for each key process area	WO-570			FY 2002 - 2005
	Develop and implement a plan for software acquisition	WO-550 develop SD & CD implement			FY 2002 - 2005
Commitment to Perform	Achieve ITIB investment approval	WO-570 SD, CD			FY 2002 - 2005
	Ensure project sponsorship	WO-570 SD, CD			FY 2002 - 2005
Ability to Perform	Train prospective project managers on: - performance based contracting - requirements management, - project planning, execution and - cost accounting	WO-570 SD, CD			FY 2002 - 2005
Activities Performed	Track project development activities	WO-570 SD, CD			FY 2002 - 2005

Measurement and Analysis	Establish quantitative performance measurements	WO-570 SD, CD	FY 2002 - 2005
Verifying Implementation	Develop and implement a verification plan	WO-570	FY 2002 - 2005
	Perform self assessment	WO-570 SD, CD	annually
	Achieve IV&V certification	WO-550 WO-570	annually

Goal 1: Improve Management of Information Technology Assets

Objective 5: Ensure that safeguards are in place to protect BLM's data and information technology investment.

BLM must ensure that its information technology infrastructure is adequately protected against threats to the physical network and the data and systems residing on it. Interior will programmatically implement Department-wide computer security requirements for all National Critical Infrastructure Systems, National Security Information Systems, and the most significant Interior Mission Critical Systems during FY 2002, based on an asset valuation by Interior managers. Included in Interior Mission Critical Systems are Indian Trust Management and Financial Management systems. This approach adopts the Federal doctrine that application of computer security measures should be risk based, implemented uniformly and consistently, applied commensurate with the potential for loss, and quantifiable measurement.

Interior has adopted the CIO Council's Federal Information Technology Security Assessment Framework to measure the success of the IT security program. The BLM will meet or exceed the Interior schedule for compliance.

Outcome	Performance Measure	FY 2002 goal	FY 2003 goal	FY 2004 goal	FY 2005 goal
<i>Prevention of service disruption</i>	Unscheduled Network down time	2%	1.5%	1%	0.75%
	Time from DAT availability to 100% installation	base-line	-10%	-10%	-10%
<i>Systems meet Federal CIO Council Framework Guidelines</i>	Certification of compliance with Federal IT Security Assessment Framework for:				
	National Critical Infrastructure Systems,	level 2&3	-	level 4	level 5
	National Security Information Systems,	level 2&3	-	level 4	level 5
	BLM Mission Critical Systems	33% at level 2&3	80% at level 2&3	level 4	level 5
Product	Action/Method	Responsible Party			Date

IT Security Program Plan	Develop an IT Security Program Plan that specifies security implementation under the Departmental IIA guidance	WO-560	FY 2002
Standards for minimum acceptable risk for major systems developed and implemented	Establish and determine security requirements from the business requirements perspective.	WO-560 develop SD, CD, System Owners implement	FY 2002
	Develop and implement a risk assessment plan		
Security and risk mitigation implementation plans	Develop security plans/ implementation schedules to secure systems Bureauwide.	WO-560 develop System Owners implement	FY 2002
Continuity of operations plans (COOPs) for all major systems	Develop contingencies to ensure major systems are up and running.	AD-IRM SDs System Owners	FY 2002
100% of the Intranet perimeter network access points are protected by firewall and network control devices (DOI)	Test intranet perimeter	WO-560	FY 2002
	Map the current telecommunications topology		
	Implement the Intranet security program		
100% of security policies, procedures, and implementation guidance's are documented (DOI)	Issue BLM revised Security Manual & Handbook	WO-560	FY 2003
100% of systems within the Intranet conform to Department-wide IT security requirements (DOI)	System Owners certify compliance with DOI requirements	System Owners comply WO-560 validate	FY 2004

Investment proposal business case & exhibit 300s address security issues and costs	Document ITIB operating procedures that require proposals to adequately address security risks and mitigation costs before approval in Manual/Handbook	WO-560 & 570 develop, Project Managers implement	FY 2002
Privacy Act determination for systems, data, and records	Analyze and determine which systems, data, and records are subject to Privacy Act controls.	WO-560 & System Owners	FY 2002
Security training completed	Implement a training program to enable successful security program implementation for Interior's managers, auditors, security managers, system administrators, and system users	WO-560 NTC	FY 2003

Goal 2: Enhance the Transformation of Data into Knowledge					
Objective 1: Incorporate information management principles and procedures into the BLM's Work Processes					
This objective lays the groundwork for having our managers in all disciplines apply principles for managing data and information as a part of doing business. This also includes having procedures in place to ensure the Bureau's information resources are effectively and efficiently managed and our systems are appropriately integrated. The following products and actions will move us toward achieving the desired outcomes.					
Outcome	Performance Measure	FY 2002 goal	FY 2003 goal	FY 2004 goal	FY 2005 goal
Demonstrate commitment to data standards for more effective mission performance	Expand number of assigned Data Stewards toward target	50%	75%	90%	100%
<i>Reduced time to acquire data for BLM decision making</i>	Data gathering, input, access and analysis is fully automated	25%	50%	75%	80%
Product	Action/Method	Responsible Party			Date
Data Management Plan	Develop data management procedures and conduct training on their application.	AD-300 AD-500			FY 02
Data Stewardship responsibilities documented in Position Descriptions	Identify existing and potential Data Stewards for all Programs	ADs			FY 04
IT Plan to Support Implementation of the Data Management Plan	Develop an IT Plan that delivers the means to automate data at all levels of the Bureau	AD-500			FY 03
IT Plan to Support Implementation of a Web-based strategy for Information Sharing	Develop an IT Plan that delivers Bureau data and information on the web for internal and external use	AD-500			FY 03
Training Plan	Provide training to all levels of the organization to support the goal.	ADs, SDs, CDs & FOMs			FY 02

Data Stewardship added to BLM's culture and business processes	Add roles and responsibilities to Program Leads & Manager's Pds, provide training.	ADs, SDs, CDs & FOMs	FY 02
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Goal 2: Enhance the Transformation of Data into Knowledge

Objective 2: Develop and maintain corporate information that support the BLM business processes by increasing the adoption and use of common standards, metadata and other protocols.

Common standards are needed to communicate within BLM and to ensure that the information in BLM's databases is known and defined to its customers. This objective is designed to ensure that the program areas concerned with carrying out BLM's mission have the data and tools they need to get accurate and understandable information. The development of data definitions and standards is the responsibility of the BLM program organizations and individuals that manage and use the data. Information resource professionals can ensure that consistent standards are documented and made available to staff. Standardized data allows resource programs to improve sharing of information and databases with others and provides a basis for tracking changes in the data over time.

Outcome	Performance Measure	FY 2002 goal	FY 2003 goal	FY 2004 goal	FY 2005 goal
<i>Decisions supported by repeatable and maintained Bureau Corporate Data</i>	Define Baseline definition of the Bureau's Corporate Data	70%	80%	90%	95%
	% of Bureau Data conforming to Corporate Data Standards	25%	50%	75%	80%
<i>Decisions based Bureau Corporate Data, on Adaptive Management and Public Involvement</i>	% of new Resource Plans developed with Public involvement via web-based interaction	25%	50%	75%	100%
	% of new Resource Plans designed to be maintained via periodic update and review of Bureau Corporate and publicly available data	25%	50%	75%	100%
Product	Action/Method	Responsible Party			Date
Approved data standards for BLM program areas	Assist programs in developing standard data elements for information systems.	ADs, SDs, CDs & FOMs			FY 02
BLM Corporate Data Dictionary	Agree and adopt standard data elements and document the results.	ADs SDs Director/DD			FY 03

Compliance with FGDC Standards	Adapt data structures and system data elements.	System Owners	FY 02
Interagency Standards	Agree upon standards BLM will use with federal agencies, and state and local governments.	ADs SDs	FY 04
American National Standards Institute (ANSI) Standards	Establish agreed upon multi-agency standards as federal standards.	AD-IRM Other Agency Officials	FY 04
Compliance with Metadata Standards	Document metadata on collected data.	SDs	FY 02

Goal 2: Enhance the Transformation of Data into Knowledge

Objective 3: Ensure proper handling of BLM's Official Agency Records.

Proper information management includes complying with the laws governing federal records. As a federal agency, BLM has a responsibility to its customers, and to the American people, to maintain records of its decisions, deliberations, and relevant correspondence, whether in paper form, automated forms, or any other media. Recent legislation and court decisions have held managers and staff responsible for maintaining and preserving the record of decisions they make and the basis for them. As an agency that maintains land title information, BLM is also responsible for ensuring that information is accurate and up to date. BLM's records managers and administrators can alert managers and staff as to what constitutes the Official Agency Record (OAR) and the criteria used to make such a determination. However, the employee is ultimately responsible for making a determination as to whether a particular record falls into the OAR category. Therefore, this objective stresses the need for training and alerting BLM employees as to their responsibilities for good records management.

Outcome	Performance Measure	FY 2002 goal	FY 2003 goal	FY 2004 goal	FY 2005 goal
Minimal suits for improper records handling and upholding of BLM's rulings when contested before the Interior Board of Land Appeals (IBLA), and in court	Reduce # of law suites due to improper record keeping.	Base-line	-10%	-10%	-10%
	% of Automated systems with approved OARD	Base-line	+10%	+30%	+50%
	Percent of records and systems maintained according to statutory and regulatory mandates	25%	50%	75%	100%
Product	Action/Method	Responsible Party			Date
Automated Land Records	Implementation of NILs	ADs, SDs, SCIOs			FY 03
Customer use of data used to support BLM's decisions	Provide customer access of Bureau data and records	ADs, SDs, SCIOs			FY 03
Training course materials, lesson plans, training schedules	Increase the awareness of all BLM employees of their responsibility for records.	ADs SDs			FY 03

Briefing package for managers	Increase managers' awareness of the impact of records management on daily work activities.	ADs SDs	FY 02
Evaluations and follow-up	Ensure compliance as required by law and regulations.	ADs SDs	FY 04
Official Agency Record Designation Document (OARDD)	Establish requirement for both existing and new systems	WO-560	FY 02
	Complete signed designation as official agency records	System Owners	FY 02-05

Goal 2: Enhance the Transformation of Data into Knowledge

Objective 4: Increase access to data and information via the internet to support both internal and external customers.

In the natural resources field, the audience for and the providers of data include not only BLM employees but other federal agencies, state and local governments, and the private sectors. In order for data to truly pass between these groups, they need to know how it is defined, the format(s) it is in, and the methods used to access or transfer the data. This objective builds on the development of data standards described in Objective 2, by publishing BLM's data standards in a Corporate Data Dictionary and establishing agreements with other agencies to use those standards, where appropriate. It also seeks to expand the Corporate Data of BLM by using other agency data standards and databases. *(See Goal 3, Objective 5 for providing of information)*

Outcome	Performance Measure	FY 2002 goal	FY 2003 goal	FY 2004 goal	FY 2005 goal
<i>Reduced cost of data collection through the use of other organizations' databases</i>	Increase # of Interagency Data Sharing Agreements for mission critical data	base-line	+10%	+20%	+20%
	Increasing # of Web-based Data sharing procedures, by	25%	50%	75%	100%
Product	Action/Method	Responsible Party			Date
MOUs and MOAs on data collecting and sharing	Expand information collection and sharing partnerships with other agencies, government, and organizations for specific data themes.	ADs SDs			FY'03
BLM metadata available to the public	Post metadata on publicly accessible servers.	SDs			FY'02
Public access to Bureau records	Implement E-FOIA and Electronic Reading Rooms.	ADs SDs CDS			FY'02
BLM resource data sets available from remote sites	Promote Internet access to resource data sets.	ADs SDs CDS, and FOMs			FY'03
Catalog of data gathered with other organizations	Develop catalog of data sources and points of contact for access.	AD-IRM SDs			FY'03

Goal 3: Support the Bureau's Mission by increasing the Effectiveness and Timeliness of Service Delivery and Effectiveness of its Human Capital

Objective 1: Improve business operations by thoroughly understanding business needs and by planning, implementing and managing the best information technology solutions available

As business processes become more and more dependent on IT solutions, IT staff must understand the business needs and procedures in addition to the technology. To respond to these needs, a training strategy will be developed that uses a mix of training techniques and technology to reach as wide an IT audience as possible.

Outcome	Performance Measure	FY 2002 goal	FY 2003 goal	FY 2004 goal	FY 2005 goal
<i>Increased participation of IT staff on business interdisciplinary project teams</i>	Number of ID teams IT staff actively participated on	base-line	+10%	+10%	+10%
<i>SCIOs can effectively communicate business needs to IT technical staff</i>	From user feedback, an increase in customer satisfaction	base-line	+10%	+10%	+10%
Product	Action/Method	Responsible Party			Date
Program adopted by the ITIB	Develop a cross-discipline familiarization program, which may include temporary details of IRM staff to jobs outside their discipline	AD-500 AD-700			FY03
Annual user satisfaction survey	Develop and implement an annual questionnaire, based on best practices, to be used on an enterprise basis	AD-500 AD-800			FY02

Goal 3: Support the Bureau's Mission by increasing the Effectiveness and Timeliness of Service Delivery and Effectiveness of its Human Capital

Objective 2: Recruit and/or retain skilled IRM personnel that are competent in both current and emerging technologies.

As part of managing IT assets, BLM must invest in timely, appropriate, and industry-standard education and training to ensure technical staffs in national and field offices understand and can apply current and future technologies. This strategy involves both a commitment to recruit, train, and retain talented BLM personnel as well as collaborating with other agencies and organizations to fully utilize their talented individuals and share resources wherever possible. Arrangements with other agencies will also be used to share technical personnel in an era of diminishing budgets. BLM will also stay abreast of emerging trends through an ongoing program of technology evaluation. New technologies will be introduced through pilot projects where both the automation and its business benefits and costs can be evaluated prior to any Bureau-wide adoption or full-scale deployment occurs.

Outcome	Performance Measure	FY 2002 goal	FY 2003 goal	FY 2004 goal	FY 2005 goal
<i>Increased availability of IT resources</i>	Avg percentage of time that national systems are unavailable	2%	1.75%	1.5%	01.25%
<i>Increased customer confidence</i>	Customer feedback increases in value section	-	baseline	+10%	+10%
<i>Improved performance of IT resources</i>	Percentage of times IT problems are resolved in one service call.	baseline	+10%	+10%	+10%
	Length of time to resolve problem.	-20%	-20%	-20%	-20%
<i>Skilled IRM support staff to manage and maintain the Bureau's systems</i>	Average length of service once employees are considered 'skilled'	baseline	+5%	+5%	+5%
Product	Action/Method	Responsible Party			Date
Baseline IT performance statistics	Conduct a study of common IT performance statistics to be collected annually	AD-500			FY02
Implementation of Innovative Personnel Management Practices for IRM staff	Conduct a study of incentives and other new alternative management practices for use in BLM	AD-500 AD-700			FY03
Development of Cross-agency sharing and other IRM efforts	Participate in Department-wide teams that are charged with Interior-wide responsibilities	AD-500			On-going

Goal 3: Support the Bureau's Mission by increasing the Effectiveness and Timeliness of Service Delivery and Effectiveness of its Human Capital

Objective 3: Provide easy to use decision-support tools to all BLM employees that enhance the transformation of data to knowledge

One of the hallmarks of a successful transformation into the 21st century, is the transformation of data into valuable information. As the technological world has matured where a significant number of people have personal computers operating in a graphical environment, BLM must provide the same ease of use in its attempt to add value to IT investments. The following products and actions will move us toward achieving the desired outcomes.

Outcome	Performance Measure	FY 2002 goal	FY 2003 goal	FY 2004 goal	FY 2005 goal
<i>Repeatable results in a decentralized environment</i>	Programmatic review results	base-line	+10%	+10%	+10%
	From citizen feedback, increase in BLM credibility in decision making	-	base-line	+10%	+10%
<i>BLM is highly regarded for its information and supported by stakeholders</i>	Survey of stakeholders	-	base-line	+10%	+10%
Product	Action/Method	Responsible Party		Date	
Web-Based Planning	Establish Planning Guidelines that mandate web-based public involvement processes	AD-200		FY 02	
Adaptive Management-based Planning	Establish Planning Guidelines that use Monitoring and Adaptive Management for Plan Maintenance	AD-200		FY 02	
Baselined customer feedback on data, information, and knowledge accuracy	Conduct questionnaire sampling of users of BLM data, information, knowledge, which addresses perceptions of decision-making, accuracy of data, repeatability, etc.	AD-500 AD-800		FY 03	
Report on number of legal cases that are based on data interpretation or adequacy issues	Inventory and analysis of legal cases over a defined time period.	AD-200 AD-300 AD-500		FY 04	

Baselined user feedback on ease-of-use of enterprise applications	Conduct questionnaire of users of BLM enterprise systems using best practices for ease-of-use	All system owners; AD-500 AD-800	FY 03
Training on value chain of data to information to knowledge	Develop a training class on value chain for both employees and managers	AD-500	FY 04

Goal 3: Support the Bureau's Mission by increasing the Effectiveness and Timeliness of Service Delivery and Effectiveness of its Human Capital

Objective 4: Provide vision, leadership, and a framework for evaluating emerging technologies and implementing proven information technology solutions.

In the 21st century, technological change will occur even more rapidly than the recent past. Emerging trends such as 'smart' products, etc. will drive our staff's need to understand these emerging trends and assess these trends for potential applicability to BLM's work. At the same time, staff will be expected to implement current technological solutions. Without a framework to perform evaluation, implementation of new technologies will be haphazard, expensive, and without full support of the users.

Outcome	Performance Measure	FY 2002 goal	FY 2003 goal	FY 2004 goal	FY 2005 goal
<i>Identification, testing, and implementation of new technologies without significant disruption to BLM's work.</i>	Number technology upgrades successfully tested	base-line	+15%	+15%	+15%
Product	Action/Method	Responsible Party			Date
Manual/Handbook/Guide	Establish and document standards for evaluation and testing of new technologies	AD-500			FY 03
IRM Research and Development Laboratory.	Conduct a study of industry-standard best practices in how to evaluate new technology. The lab may be 'virtual' in that small levels of resources are devoted to field use of technology not currently used to determine usefulness, applicability, and necessary changes in both the IRM and business sides of the house.	AD-500			FY03

Goal 3: Support the Bureau's Mission by increasing the Effectiveness and Timeliness of Service Delivery and Effectiveness of its Human Capital

Objective 5: Provide citizens, external customers, and BLM staff with convenient access to appropriate information and services through technology.

Information technology is the enabler allowing us to provide better, more comprehensive information and services electronically. The BLM is taking action to enhance our E-Government services. Once completed, the manner in which BLM provides goods and services to the public and how it acquires commercial resources to support its mission will be more efficient and effective. The way employees perform their work may be significantly different through application of technologies already successfully used by commercial organizations. (See Goal 2, Objective 4 for data)

Outcome	Performance Measure	FY 2002 goal	FY 2003 goal	FY 2004 goal	FY 2005 goal
<i>Make it easier for States to meet reporting requirements, while enabling better performance measurement and results, especially for grants. (Government to Government)</i>	Number of E-grants performed	base-line	+25%	+50%	+75%
	Number of thematic layers available for use in Geospatial Information one-stop.	-	1	3	5
<i>Reduced burden on businesses by using Internet protocols and consolidating the myriad of redundant reporting requirements (Government to Business)</i>	Number of systems that are re-using data previously collected.	base-line	20%	40%	50%
	Number of systems that are using ebXML or other open standards to receive transmissions.	base-line	20%	40%	60%
<i>Deployed easy to find one-stop shops for citizens, including single points of easy entry to access high quality government services (Government to Citizen)</i>	Number of systems that are integrated through Firstgov.gov, cross-agency call centers, and offices or service centers.	base-line	20%	40%	60%
<i>Improved performance and reduced cost of Federal government administration by using e-business best practices. (Internal Efficiencies)</i>	Reduce the following using before and after implementation of e-government data: (1) Time to complete an action; (2) BLM cost to perform an action	base-line	-10%	-30%	-50%
Product	Action/Method	Responsible Party			Date

Support of efforts to move business processes from manual to automated	Structure IT investments to support Government-wide E-Gov initiatives	ITIB	FY 02-05
External electronic access to BLM's business lines	Develop, within the context of the Government-wide E-Gov initiatives, new systems to provide full electronic access to appropriate BLM business lines.	All ADs	FY 02-05
By FY2005 implement or participate in DOIwide systems: customer relationship management, supply chain management, enterprise resource management, or knowledge management best practices	Coordinate with DOI as their Strategic Plan is implemented and provide support as needed. Design, create, and implement systems.	ITIB, All ADs	FY 05
Baseline business line time to delivery and cost studies	For each business line to be offered electronically, collect, using best practices, statistics on time to and cost of delivery.	All ADs	FY 02-03
Five systems that are integrated in DOIwide systems	Increase the number of systems that are integrated in DOIwide systems: customer relationship management, supply chain management, enterprise resource management, or knowledge management best practices	All ADs	FY 02-05
Five business lines that are available on businesslaw.gov	Increase the number of business lines that are available on businesslaw.gov	All ADs	FY 02-05

Goal 3: Support the Bureau's Mission by increasing the Effectiveness and Timeliness of Service Delivery and Effectiveness of its Human Capital

Objective 6: Operate a reliable communication and computer infrastructure on which to efficiently conduct BLM business operations today and in the future.

As business processes become more and more dependent on IT solutions, IT must provide a platform that is reliable, available to anybody at anytime, is cost effective, and readily modifiable to meet new and unplanned future needs.

Outcome	Performance Measure	FY 2002 goal	FY 2003 goal	FY 2004 goal	FY 2005 goal
<i>Access to BLM information at anytime from any place</i>	Network performance statistics Time to receive a product from a BLM system	-	base-line	-10%	-20%
<i>Increase in perceived value of IT investments</i>	Value ranking through feedback from both internal and external users	-	base-line	+20%	+20%
Product	Action/Method	Responsible Party			Date
Decision Paper concerning outsourcing computer and communications infrastructure	Form an inter-disciplinary team using cost management methodology to evaluate current and projected costs of acquisition, operations and maintenance of the infrastructure and various organizational alternatives to make BLM more cost efficient	ADs500/800/700			FY03
Baseline of network performance statistics	Document and annually update by use of best practices from private industry and other sources commonly used network performance statistics	AD500			FY02

Goal 3: Support the Bureau's Mission by increasing the Effectiveness and Timeliness of Service Delivery and Effectiveness of its Human Capital

Objective 7: Develop and maintain a user community that understands and can employ modern technologies to maximize business benefits

As information systems become the responsibility of the program managers, they need to be aware of the issues and problems that arise in managing them. BLM employees need to become familiar not only with how to use the technologies, but with their responsibilities as information collectors and providers. To respond to these needs, a training strategy must be developed that uses an appropriate mix of training techniques and technology to reach as wide an audience as possible. This objective involves an examination of current business processes to determine what steps could be made to make them more efficient. In order to lower the cost of doing business, BLM needs to examine whether technology provides solutions that enable its employees to operate both smarter and more efficiently.

Outcome	Performance Measure	FY 2002 goal	FY 2003 goal	FY 2004 goal	FY 2005 goal
<i>More efficient work processes</i>	Cost of overall work process	-	base-line	-10%	-15%
	Time to deliver work product	-	base-line	-10%	-20%
<i>More effective knowledge management</i>	Average level of knowledge and application of proper information management techniques	-	base-line	+10%	+10%
Product	Action/Method	Responsible Party			Date
Core competencies assessment	Identify core IRM competencies for employees and managers and assess deficiencies.	ADs			FY 02-04
Training course/ applications training courses	Train BLM employees and managers to achieve core IRM competencies.	ADs SDs			FY 05

APPENDIX A:

ORGANIZATIONAL STRUCTURE

BLM ORGANIZATION

BLM offices are organized to provide on-site service in a responsive and timely manner. BLM's organizational structure focuses on supporting on-the-ground managers:

- The 12 BLM State Offices provide regional coverage for the states under their jurisdiction, serving as the support arm for 257 field offices. The State Offices are divided as follows:
 - ▶ 7 State Offices managing activities in one state only
(AK, AZ, CA, CO, ID, NV, UT)
 - ▶ 5 State Offices managing activities in several states:
 - MT covers the states of MT, ND, and SD
 - OR covers the states of OR and WA
 - WY covers the states of WY and NE
 - NM covers the states of NM, TX, OK, and KS
 - Eastern States Office covers activities in the remaining 31 states
- The Headquarters organization, located in Washington D.C., is responsible for policy, guidance, and overall direction for the land and resource programs of BLM.
- The National Centers (NARSC, NBC, NHRMC, NIRMC, and NTC) are responsible for providing technical assistance, management control, and guidance to the field in the performance of their duties.
- The National Interagency Fire Center (NIFC), located in Boise, Idaho, is the Headquarters for BLM Fire and Aviation. NIFC is a multi-agency center coordinating and directing wildland fire fighting activities throughout the United States. NIFC supports fire management efforts including fire control, fire logistics, and aviation management not only for BLM, but for other Federal, State and local agencies.

IRM ORGANIZATION

The IRM structure within BLM parallels the organizational structure identified above:

- The Assistant Director for IRM serves as the BLM's Chief Information Officer (CIO). The CIO is responsible for advising the Director on and ensuring effectiveness of the Bureau's Information Technology and IRM processes. This is achieved by monitoring and evaluating the performance of information technology programs and assessing the skills the Bureau possesses in information resources management. The CIO, together with the Chief Financial Officer, assists the Director in ensuring that accounting, financial, asset management, and

other information systems support performance measurement of Bureau processes.

- The BLM field offices have an IRM support staff under the direction of the IRM Chief in the State Office.
- The IRM Headquarters provides overall guidance and policy on records administration, IRM security, the management of Washington Office (WO) records, information access, data administration, and related functions. The staff is located in Washington, D.C., and in Denver, Colorado.
- The National Information Resources Management Center (NIRMC) in Denver, Colorado, provides centralized services for BLM in systems development, testing facilities, operations and maintenance, and technical expertise to the field for automated information systems. They are also responsible for supporting the Bureau's information technology infrastructure. In addition, NIRMC serves as the project office for the technical management of the BLM's telecommunications network.

IRM Responsibilities and Authorities

The Assistant Director for Information Resources Management (AD-IRM) is responsible for maintaining the BLM IRM Strategic Plan. The other Assistant Directorates are responsible for components of the IRM Strategic Plan as it affects their mission areas. Legislation affecting information resources management, particularly the Information Technology Management Reform Act (ITMRA) of 1996, as amended; the Paperwork Reduction Act of 1994, as amended; the Freedom of Information Act (FOIA); and the Privacy Act, provide specific requirements for information management in federal agencies. The Bureau's IT Investment Board, representing BLM high-level managers, plays a direct role in the decisions affecting information resources. The Associate State Directors provided input into the development of this Strategic Plan and are responsible for its implementation in their States.

The Role of BLM's Chief Information Officer (CIO)

Oversight of IRM throughout the Bureau rests with the AD-IRM. He/she is a member of the Corporate Team reporting to the Director and Deputy Director and functioning as the Chief Information Officer (CIO) for the BLM. The ITMRA outlines the duties of the CIO:

- To advise senior management on all aspects of information technology planning and implementation.
- To assess the information needs of the organization.
- To advise management on the acquisition of information technology and develop strategies to acquire the appropriate information technology tools to respond to the

agency's needs.

- To ensure that trained and skilled technology personnel are retained to support the information technology infrastructure.
- To determine what opportunities exist to share information resources, especially with other agencies.
- To determine how information can be made available and accessed by the public.
- To ensure managers and personnel are trained to use information technology.
- To appropriately monitor and allocate IT funding within the Bureau.
- To evaluate IT program performance and compliance with the Bureau's policies and laws and regulations.
- To develop policies, handbooks, and guidelines for appropriate management of IT resources for the Bureau.

APPENDIX B:

DEFINITIONS

Terms used in this document are defined in accordance with the Office of Management and Budget (OMB) Circular A-130 (Executive Order No. 12472):

Information: Any communication or representation of knowledge such as facts, data, or opinions in any medium or form, including textual, numerical, graphic, cartographic, narrative, or audiovisual forms.

Information Management: The planning, budgeting, manipulating, and controlling of information throughout its life cycle.

Information Resources: This term includes both government information and information technology. Information technology refers to the hardware and software operated by a federal agency or by a contractor of a federal agency or other organization that processes information on behalf of the federal government to accomplish a federal function, regardless of the technology involved, whether computers, telecommunications, or others. It includes automatic data processing equipment as that term is defined in Section 111(a)(2) of the Federal Property and Administrative Services Act of 1949. Automatic data processing and telecommunications activities related to certain critical national security missions, as defined in 44 U.S.C. 3502(2) are included in this definition.

Information Resources Management: The process of managing information resources to accomplish agency missions. The term encompasses both information itself and the related resources, such as personnel, equipment, funds, and information technology.

Information System: A discrete set of information resources organized for the collection, processing, maintenance, transmission, and dissemination of information, in accordance with defined procedures, whether automated or manual.

Information Technology: The hardware and software operated by a federal agency or by a contractor of a federal agency or other organization that processes information on behalf of the federal government to accomplish a federal function, regardless of the technology involved, whether computers, telecommunications, or others. It includes automatic data processing equipment as that term is defined in Section 111(a)(2) of the Federal Property and Administrative Services Act of 1949.

Records:

Books, papers, maps, photographs, machine-readable materials, or other documentary materials, regardless of physical form or characteristics, made or received by an agency of the United States Government under federal law or in connection with the transaction of public business and preserved or appropriate for preservation by that agency or its legitimate successor as evidence of the organization, functions, policies, decisions, procedures, operations, or other activities of the government or because of the informational value of the data in them. Library and museum material made or acquired and preserved solely for reference or exhibition purposes, extra copies of documents preserved only for convenience of reference, and stocks of publications and of processed documents are not included.