United States General Accounting Office
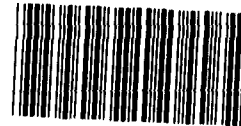
GAO

Report to the Administrator, Agency for
International Development

INFORMATION RESOURCES MANAGEMENT

Initial Steps Taken But More Improvements Needed in AID's IRM Program

147635

GAO

Information Management and
Technology Division

B-249404

September 29, 1992

The Honorable Ronald W. Roskens
Administrator, Agency for
  International Development

This report provides the results of our review of the Agency for International Development's
(AID) information resources management program, which we conducted as part of a general
management review of AID operations. We reviewed AID's program under our legislative
authority to evaluate federal agencies and programs.

This report provides an overall assessment of how effectively AID is managing its information
and supporting technology in compliance with the Paperwork Reduction Act and related
guidance. Recommendations to you are provided in chapter 5.

We are sending copies of this report to the Chairmen of the House Foreign Affairs Committee,
the Senate Foreign Relations Committee; the House and Senate Appropriations Committees; the
Director, Office of Management and Budget; and the Administrator of General Services. We will
also make copies available to others upon request. This report was prepared under the direction
of Samuel W. Bowlin, Director, Defense and Security Information Systems. Other major
contributors are listed in appendix IV.

Ralph V. Carlone
Assistant Comptroller General

Executive Summary

Purpose

Like other agencies, the Agency for International Development (AID) depends on information to sustain its programs and operations. AID administers economic assistance programs and supports agency operations at AID headquarters and in more than 70 developing countries worldwide. The agency also needs information to fulfill a multitude of internal and external reporting requirements and to evaluate program performance in response to legislative concerns. Given AID's broad objectives and the current environment of decreasing staff and financial resources, it is essential that AID use its information and supporting technology resources as efficiently as possible.

As part of a general management review of AID operations, GAO reviewed AID's information resources management (IRM) program at headquarters and selected missions worldwide to determine how effectively the agency manages its information and supporting technology in compliance with the Paperwork Reduction Act and related guidance. In particular, GAO (1) sought to determine whether AID's IRM program meets the criteria for a quality IRM program, as stated in federal statutes and guidance, and (2) assessed strategic IRM planning efforts to address agency IRM deficiencies and requirements.

Background

The integrated management of information and technology is achieved through an IRM program, which involves the planning, budgeting, organizing, training, controlling, and management activities associated with the collection, creation, use, and dissemination of agency information. Effective IRM is expected to improve program management, increase productivity, and decrease an agency's information processing burden. AID, however, has a history of ineffective IRM. In recent years, studies by OMB, AID's Office of Inspector General, and other internal AID organizations have identified a pattern of longstanding IRM shortfalls at AID. These shortfalls included undefined agency information needs to support technology decisions; duplicate data; redundant, outdated, ineffective, and unintegrated information systems; user complaints of inadequate IRM support; and nonexistent data standards and procedures. Recommendations resulting from these studies have included developing a structured strategic IRM plan to address identified deficiencies.

In 1990, AID contracted with a management consulting firm to review its IRM program and develop a strategic IRM plan to correct identified deficiencies. The plan it developed was intended to guide the agency in its new strategic IRM direction, which includes identifying information needs,

institutionalizing data administration, transitioning from a proprietary to an open information systems environment, installing local area networks, replacing or enhancing corporate information systems, and developing an infrastructure to manage IRM more effectively. AID updated the plan in 1991.

Results in Brief

AID has taken steps to improve its strategic IRM program. For example, AID has established a high-level Information Management Committee, created an IRM planning office, and begun developing an IRM planning handbook. Despite such individual improvement efforts, however, AID remains unfocused in its overall IRM approach. Specifically, AID has not developed an agency business plan—one prerequisite to effective IRM planning. As a result, the agency has no foundation on which to develop its IRM program. AID's senior official for IRM lacks authority to carry out IRM agencywide. Further, AID lacks the program management framework—policies, standards, structured planning process, controls, training, and budget priority—essential to support an effective IRM program. The agency therefore has no assurance that initiatives to correct longstanding IRM deficiencies will be implemented or complied with agencywide.

AID is just beginning to shift its focus from obtaining information technology, with little control or standardization of data or systems agencywide, to managing information as a corporate resource. Until this shift is complete, there remains no assurance that identified information requirements are directing information technology acquisitions, and problems with inefficient and unintegrated systems will persist.

Principal Findings

IRM Management Framework Not Effective

AID lacks the management framework necessary to support an effective IRM program. Specifically,

- AID's senior IRM official lacks the authority to enforce compliance with IRM policy agencywide.
- AID's IRM planning process is not linked to an agency business plan and does not incorporate substantive user input.
- IRM plan initiatives are not linked to the budget process, which means that agency funding priorities may not always include IRM goals.

- Plan initiatives are not coordinated to ensure effective implementation of IRM goals.
- AID policies and standards to govern IRM agencywide are out-of-date, inadequate, and not centrally managed.
- Controls, accountability, and training to ensure implementation of IRM initiatives by users do not exist.

In the absence of a management structure and controls in support of an effective IRM program, AID has no assurance that current IRM plan initiatives to improve information and technology management will be implemented agencywide.

Focus on Information Management Has Lagged

AID is just beginning to place priority on managing information as a corporate resource. However, there is as yet no systematized management of information to meet internal and external reporting requirements. Instead, a variety of work units separately fulfill reporting requirements, which continues to result in duplication and inefficient use of data resources. Further, the IRM initiative to identify information requirements and develop an information architecture to guide information technology decisions was substantially delayed due to budget decisions that favored spending on other priorities. Efforts to institutionalize data administration and establish data standards and policies are underway and have not yet had an impact on agencywide IRM.

Information Technology Not Effectively Managed to Meet Agency Requirements

Progress has been made in individual initiatives to acquire information technology; however, in the absence of effective information management and identification of information requirements, there is no assurance that AID's information technology investment is meeting agency information needs. Until information management initiatives come to fruition, AID will continue its past pattern of making the procurement of technology a higher priority than actually addressing specific information needs. Longstanding problems with unintegrated, duplicate, and inefficient information systems are perpetuated by this focus on technology.

Recommendations

To better ensure that information resources are managed to meet agency mission and business needs, GAO recommends that the Administrator, AID, take the following actions:

- Develop a functional business plan to provide the agency with a framework for conducting IRM.
- Formalize the designation of the AID senior IRM official and assign agencywide leadership for IRM to this official.
- Direct the Senior IRM Official to take the following actions to establish an effective management structure:

1. Formalize its IRM planning process so that it includes formal and systematic participation by all levels of the organization; requires that at least major organizations, such as missions and bureaus, develop IRM plans based on AID's business plan and strategic IRM plan; ensures coordination of initiatives for effective plan implementation; and is linked to the agency budget process. At a minimum, the linkage should include a funding plan that reflects top management commitment to improving IRM.

2. Place priority on developing, updating, and consolidating policies and standards to guide users of information resources.

3. Educate managers agencywide on the benefits of IRM initiatives and hold them accountable for implementing these initiatives in their units.

To ensure that information requirements are driving the agency's technology investment, GAO further recommends that the Administrator direct the IRM organization to focus its efforts and resources on completing initiatives to identify information needs. Once these information needs are determined, the agency can best determine what hardware systems and software applications are required to address them.

Agency Comments and GAO'S Evaluation

GAO obtained oral comments from AID's senior IRM official and his staff on a draft of this report. GAO has incorporated their views where appropriate to update or clarify the report.

In general, these officials agreed with GAO's overall findings and recommendations and indicated that they had already taken significant steps to improve IRM in line with the recommendations. For example, they stated that AID has drafted delegations of authority to formalize, define, and enforce the authority of IRM officials; they also reported having placed priority on updating and consolidating IRM policies and procedures. However, they also stated that the recommendation that IRM planning include formal and systematic participation by all organizations is neither a federal requirement for effective IRM nor appropriate for AID. They

believed that such an approach would create unnecessary work for agencywide users and may encourage them to devise their own directions rather than conform to the agency plan. GAO continues to believe that systematic user input is essential to thorough IRM planning and a means of ensuring user commitment and interest. While not a federal requirement, this concept is embodied in federal IRM planning guidance and AID's methodology for developing the agencywide Information System Plan.

GAO is encouraged by the initial steps AID has taken to improve its overall IRM program. GAO believes, however, that additional action is needed and improvement efforts must be sustained to effect a lasting change on how the agency views its information resources.

Contents

Abbreviations

AID	Agency for International Development
GAO	General Accounting Office
GSA	General Services Administration
IMTEC	Information Management and Technology Division
IRM	Information Resources Management
OMB	Office of Management and Budget

Introduction

Government information is a valuable national resource. It provides citizens with knowledge of their government, society, and economy—past, present, and future. It is a means to ensure the accountability of government. It is also an essential tool for managing federal operations.

Like other agencies, the Agency for International Development (AID), created in 1961, depends upon information to support virtually every facet of its management and operations. The agency—which is the primary U.S. agency for administering foreign economic assistance—relies on information about the countries it serves and the numerous and varied programs it runs. Financial and human resource information is key to supporting AID's worldwide organizational structure and operation. The agency also delivers a great deal of information, often in the form of either required or requested reports to support internal agency decisionmaking and satisfy external legislative or executive branch concerns. The better the quality of information supplied to meet these needs, the more efficiently, effectively, and economically AID activities can be carried out in accordance with congressional and presidential requirements.

A succession of internal and external reviews, including reviews by AID's Inspector General and the Office of Management and Budget (OMB), disclosed weaknesses in AID's planning, integrating, and managing its information resources. In 1990, AID launched a planning initiative to overcome its deficiencies, and since then has made a number of improvements, particularly in its preparation of a strategic information resources plan. We conducted our review of AID's IRM program to assess the impact of these planning and improvement efforts.

Quality Information Is Needed to Support Agency Programs

AID has two basic types of economic assistance programs: development assistance, ordinarily in the form of specific projects or groups of related projects, and economic support, usually in the form of outright transfers of funds or commodities. In fiscal year 1990, AID's assistance portfolio totaled about $7.5 billion, and included approximately 2,000 projects and programs.

Changes in AID's focus and related increases in the number of projects, as well as additions to the agency's original objectives through the years, have heightened AID's dependence on quality information to support agency project management functions. For example, in its early years, AID focused on large infrastructure projects to foster development. In the early 1970s, however, the philosophy of U.S. development assistance changed.

Accordingly, AID reoriented its strategy, emphasizing instead numerous small-scale projects, which were collectively more complex to manage. The number of AID projects has increased from 1,500 in the mid-1970s to the approximately 2,000 projects managed today. (Fig. 1.1 includes scenes from typical AID development assistance projects.) Along with this increase in projects, the Congress has added to AID's responsibilities. The Foreign Assistance Act of 1961, which has been repeatedly amended, now includes over 30 different directives covering a wide range of development assistance objectives. These objectives include promoting human rights, protecting tropical forests, integrating women into the economies of developing countries, and using appropriate technology for small farms and businesses.

Figure 1.1: Scenes From Typical AID Development Assistance Projects
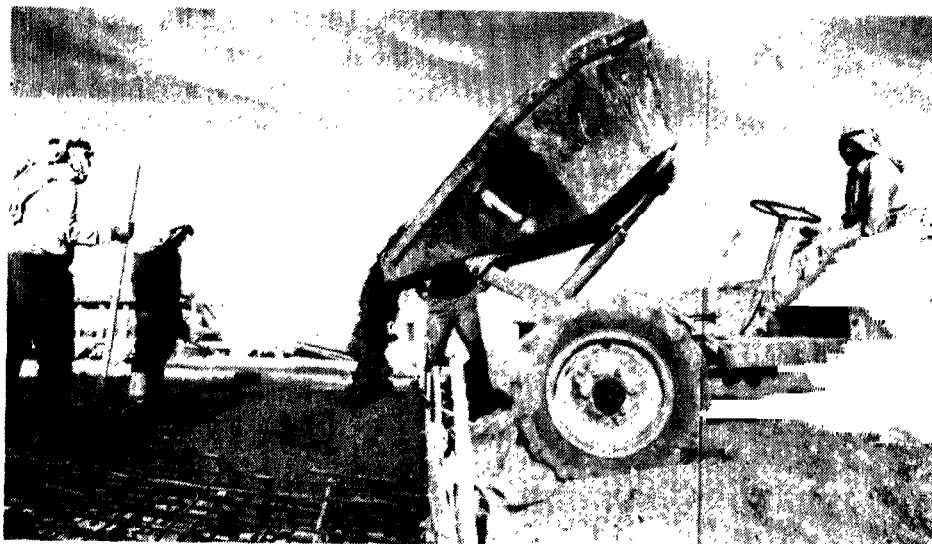
Source: AID's Office of External Affairs.

Quality Information Is Needed to Support Agency Operations

Quality information also plays a key role in sustaining operations and supporting staff at AID headquarters and overseas. AID headquarters, located in the Washington, D.C., metropolitan area, consists of the Office of the Administrator; various staff offices; three directorates for operations, policy, and finance and administration; and functional and geographic bureaus. (See fig. 1.2 for an organization chart of AID headquarters.)

AID's overseas presence is maintained by missions and offices located in over 70 developing countries worldwide. (See fig. 1.3 for a map of countries receiving AID assistance.) Such decentralized operations make effective management and oversight difficult and information-intensive.

Figure 1.2: AID Organization Chart

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                          Administrator
                       Deputy Administrator
                       ┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄
                          Office of the
                        Executive Secretary

Office of Equal   Office of the    Office of Small        Office of the   Bureau for     Office of
Opportunity       Inspector        and                    General         Legislative    External
Programs          General          Disadvantaged          Counsel         Affairs        Affairs
                                   Business
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         Directorate                        Procurement    Directorate for   Management
         for Policy                         Policy and     Finance and       Control Staff
                                            Evaluation     Administration
Executive                                   Staff
Management
Staff
                                                                            Administrative
                                                                            Management
                                                                            Staff
Office of      Office of Policy
Strategic      Analysis and
Planning       Resources
                                   Office of      Office of Human    Office of       Office of
                                   Overseas       Resources          Financial       Information
Office of      Center for          Management     Development        Management      Resources
International   Development        Support        and                                Management
Donor          Information &                      Management
Programs       Evaluation
                                       Office of       Office of        Office of       AID/
                                       Budget          Procurement      Administrative   Washington
                                                                        Services        Complement
                          Directorate
                          for
                          Operations

              Program                Management
              Resources and         Coordination
              Coordination          Staff
              Staff
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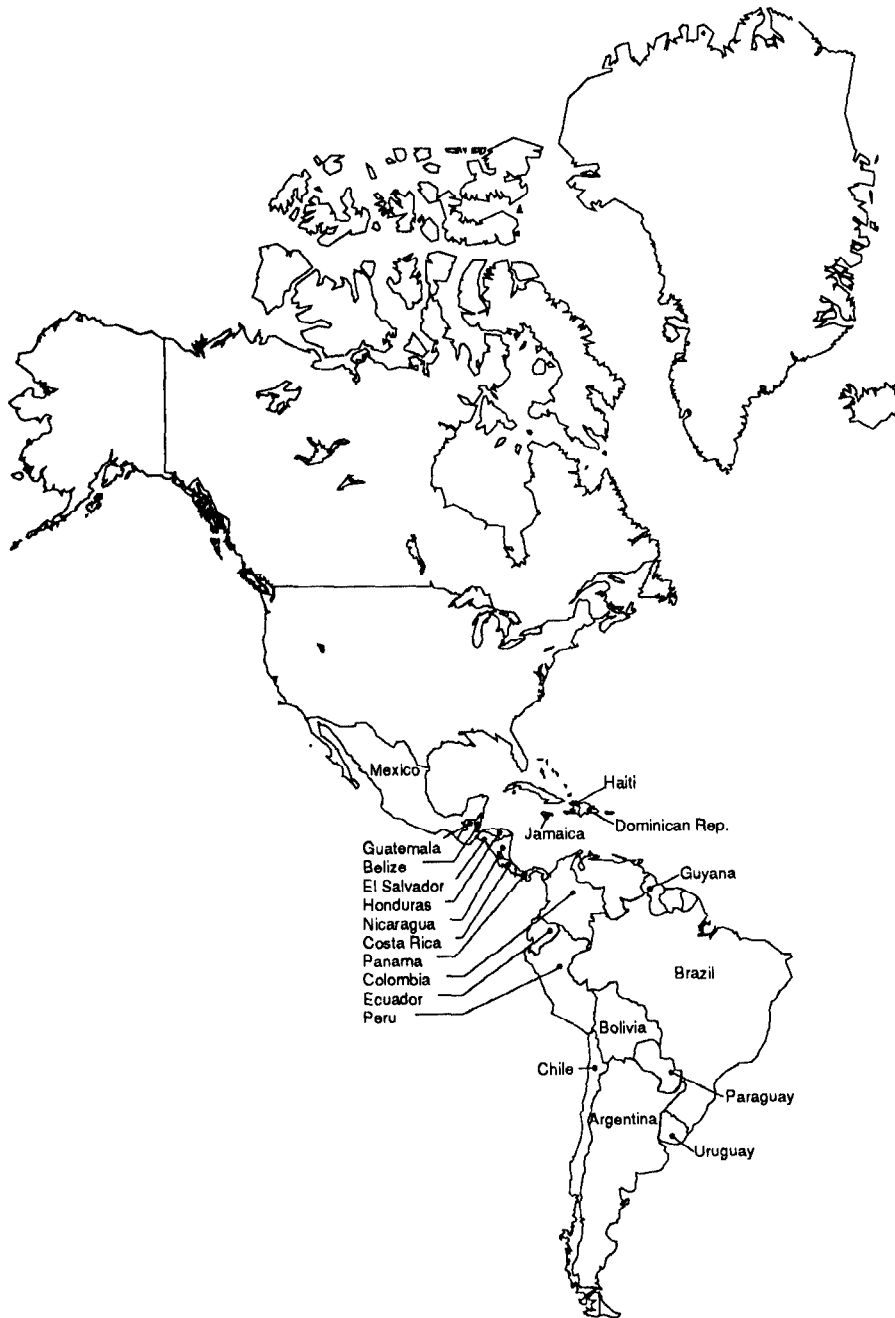
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Bureau for   Bureau for   Bureau for   Bureau for      Bureau for   Bureau for   Bureau for       Bureau for
Africa       Asia         Europe       Latin America   Near East    Private      Research and     Food and
                                       and the                      Enterprise   Development       Humanitarian
                                       Caribbean                                                   Assistance
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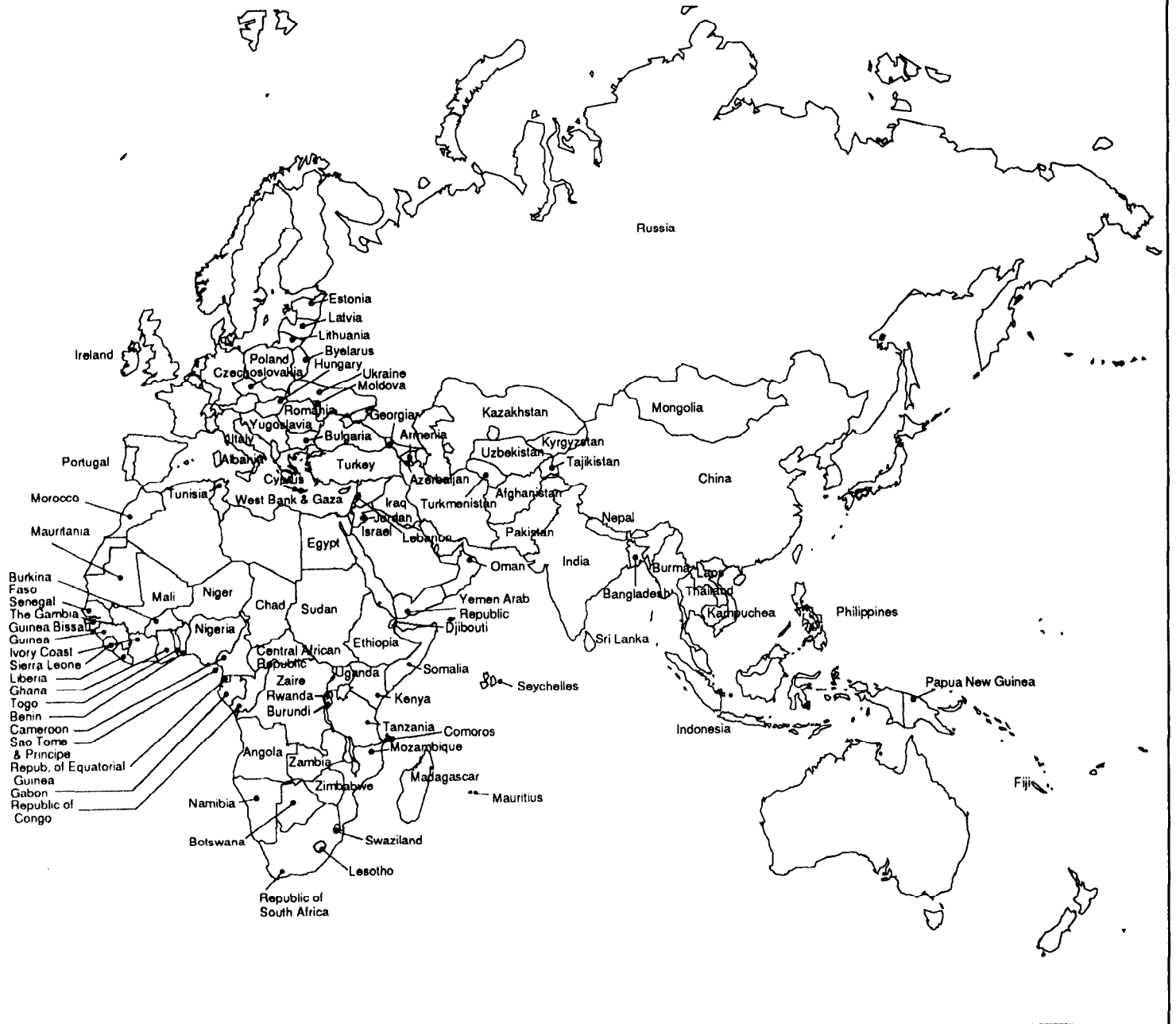
Source: AID's Office of Human Resources Development and Management.

Figure 1.3: Countries Receiving AID Assistance

Mexico
Haiti
Dominican Rep.
Jamaica
Guatemala
Belize
El Salvador
Honduras
Nicaragua
Costa Rica
Panama
Colombia
Ecuador
Peru
Guyana
Brazil
Bolivia
Chile
Paraguay
Argentina
Uruguay

Russia

Estonia
Latvia
Lithuania
Byelarus
Ireland
Poland
Hungary
Czechoslovakia
Ukraine
Moldova

Romania
Georgia
Kazakhstan
Mongolia
Yugoslavia
Italy
Bulgaria
Armenia
Kyrgyzstan
Portugal
Albania
Turkey
Uzbekistan
Tajikistan
Cyprus
Azerbaijan
China
Morocco
Tunisia
West Bank & Gaza
Iraq
Turkmenistan
Afghanistan
Mauritania
Egypt
Israel
Jordan
Lebanon
Pakistan
Nepal

India
Burkina
Faso
Mali
Niger
Yemen Arab
Burma
Laos
Senegal
Chad
Sudan
Republic
Thailand
The Gambia
Djibouti
Bangladesh
Kampuchea
Philippines
Guinea Bissau
Nigeria
Guinea
Ethiopia
Sri Lanka
Ivory Coast
Sierra Leone
Central African
Liberia
Republic
Somalia
Ghana
Zaire
Uganda
Seychelles
Togo
Rwanda
Kenya
Papua New Guinea
Benin
Burundi
Cameroon
Tanzania
Comoros
Sao Tome
Indonesia
& Principe
Angola
Mozambique
Repub. of Equatorial
Zambia
Guinea
Madagascar
Gabon
Zimbabwe
Fiji
Republic of
Namibia
Mauritius
Congo

Botswana
Swaziland

Lesotho
Republic of
South Africa

Source: The President's Commission on the Management of AID Programs: Report to the President—An Action Plan, Apr. 16, 1992.

Decentralized AID operations are complicated by a declining number of staff resources and an increased dependence on contractors to carry out those operations. As the number of contractors increases, so too does the amount of information AID must process to coordinate and oversee contracted services.

To meet U.S. fiscal constraints and address concerns about the concentration of staff at headquarters, the Congress has steadily cut back on the levels of direct hire staff allotted to carry out AID operations. For example, at its peak in 1966, AID supported a full-time staff of 18,000 U.S. and foreign nationals. By 1992, that number had been reduced to approximately 4,327, though the number of countries AID serves had increased. To compensate for the decline in permanent staff, AID has had a corresponding increase in contract services. The number of contractors has grown to a point where, in 1990, 69 percent of the agency's extended workforce consisted of contractors.

Quality Information Is Needed to Meet Reporting Requirements

AID needs information to meet a multitude of reporting requirements. For example, AID headquarters annually requires that overseas missions submit a number of internal reports, such as budget presentations, country strategy statements, project papers, and action plans to assist in monitoring operations and in agencywide decision making. The agency also fulfills numerous external reporting requirements to the Congress and executive branch agencies. According to a 1988 study, AID is annually required to assist in addressing over 100 recurring foreign assistance reporting requirements levied by the Congress alone. In addition, AID must address numerous one-time reporting requirements, including those outlined in various congressional committee reports and legislation in a given year; the number of such requests is indeterminate because they are not monitored agencywide.

In addition to these reporting requirements, the Congress has called for AID to measure its performance and report on the impact of its programs on developing countries. The Congress requests such information to justify continued funding for AID operations and foreign economic assistance. AID is currently working to develop a program performance information system for strategic management to address the Congress' concern. The quality of the performance information output from the completed system, however, will only be as good as the quality of multinational data that are managed, collected, and input to the system.

Quality Information Is Obtained From an Effective IRM Program

Definition of IRM

Information management, or controlling the investment in information, involves identifying needs and sharing information; ensuring standardization, security, and integrity of data; and managing records. Information *technology* management involves controlling the computer hardware, software, and telecommunications used to help manage information. Identified information requirements should drive technology solutions.

The integrated management of information and technology is achieved under what is known as IRM. The term "IRM" is more broadly defined as the planning, budgeting, organizing, directing, training, promoting, controlling, and management activities associated with the collection, creation, use, and dissemination of information by agencies, and includes the management of information and supporting resources such as automated data processing equipment.[1] Benefits of effective IRM include improving service delivery and program management, increasing productivity, reducing waste and fraud, and decreasing the government's information processing burden.

Federal Requirements for an Effective IRM Program

Section 3506 of the Paperwork Reduction Act of 1980 establishes a broad mandate for each federal agency to perform its information management activities to ensure that they are carried out efficiently, effectively, and economically. It also requires that each agency have a Designated Senior Official for IRM who reports directly to the agency head. The act's 1986 revision more specifically requires that each agency develop and annually revise a 5-year plan[2] in accordance with appropriate guidance provided by OMB for meeting the agency's information technology needs.
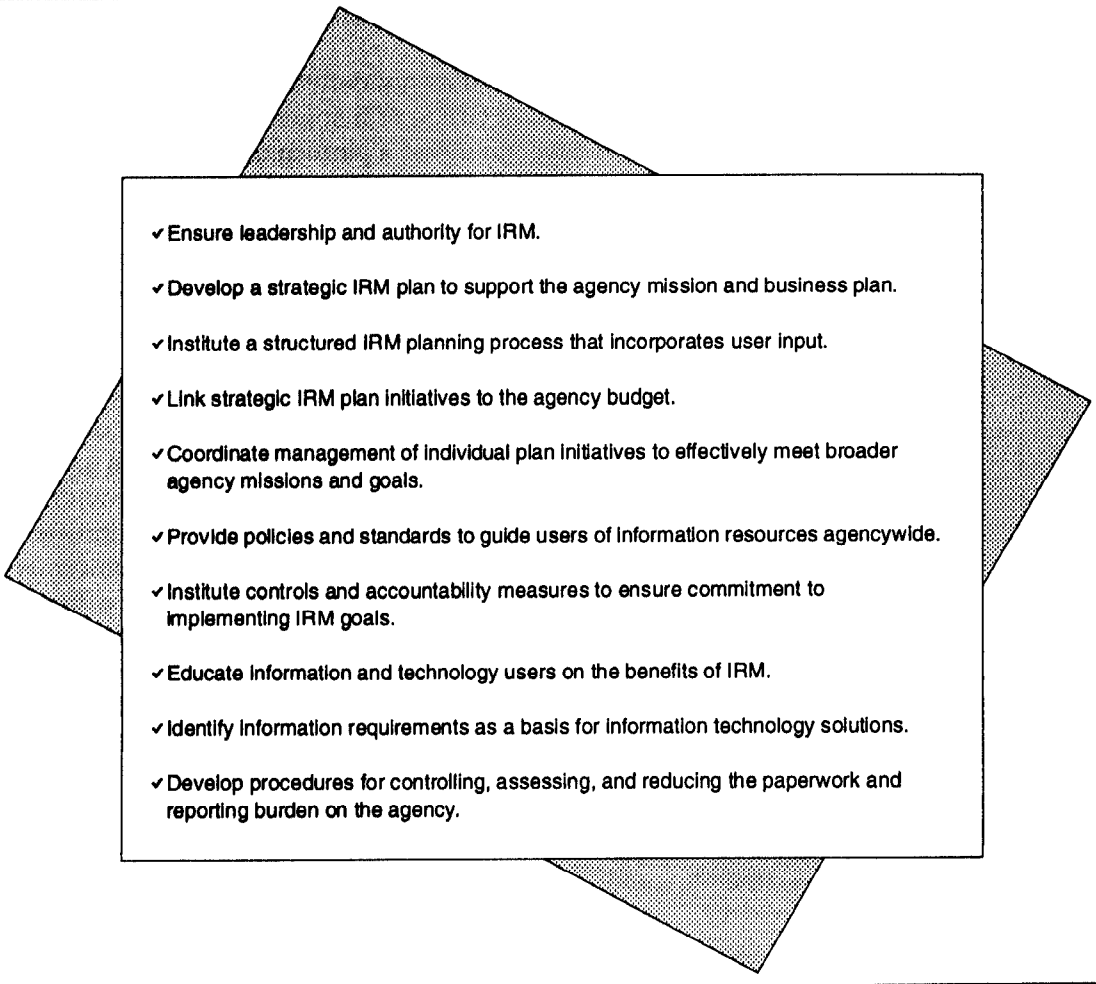
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[1]The Paperwork Reduction Act of 1980, as amended, 44 U.S.C. Section 3502 (13).

[2]Strategic IRM planning, critical to successful management and use of IRM resources, develops and documents the direction for the information management and technology programs within the agency and specifies necessary IRM activities and resource requirements. A strategic IRM plan describes the agency's current environment in terms of IRM, its overall goals, and how it plans to attain them.

OMB, with assistance from the General Services Administration (GSA), has oversight responsibility for federal agency IRM. OMB Circular A-130 implements provisions of the Paperwork Reduction Act and establishes policies and standards for federal information resources planning and management activities. OMB, GSA, GAO, and the IRM community have developed additional guidance and principles for agencies to use in developing strategic IRM plans and conducting effective IRM. (See app. I for a list of the criteria we used in assessing AID's IRM program.)

Based on the criteria we consulted, we identified a number of elements which we believe are key to a quality IRM program. (See fig. 1.4.)

Figure 1.4: Key Elements of a Quality IRM Program

✔ Ensure leadership and authority for IRM.

✔ Develop a strategic IRM plan to support the agency mission and business plan.

✔ Institute a structured IRM planning process that incorporates user input.

✔ Link strategic IRM plan initiatives to the agency budget.

✔ Coordinate management of individual plan initiatives to effectively meet broader
   agency missions and goals.

✔ Provide policies and standards to guide users of information resources agencywide.

✔ Institute controls and accountability measures to ensure commitment to
   implementing IRM goals.

✔ Educate information and technology users on the benefits of IRM.

✔ Identify information requirements as a basis for information technology solutions.

✔ Develop procedures for controlling, assessing, and reducing the paperwork and
   reporting burden on the agency.

History of AID's IRM Program

Recognized IRM Deficiencies During the 1980s

To ensure that its requirements for quality information are met, AID needs to manage information and its supporting technology as agency resources. Its past IRM activities have focused on information technology—hardware, software, and telecommunications—and have not fully addressed information management issues. For example, throughout the 1980s, AID contracted out for a series of information technology plans. These plans

were developed without agencywide participation and did not address AID-wide concerns about information systems deficiencies.

AID itself has recognized its IRM deficiencies. Studies contracted out by AID or conducted by AID's Office of Inspector General and other internal organizations have identified a pattern of longstanding IRM shortfalls at AID. Their reports stated that AID's information systems were poorly developed, lacked integration, and were inadequate for supporting management decision making. Their reports further indicated that AID needed to place priority on information management, identify its information requirements, and institute data policies and standards.

In 1988, AID came under scrutiny by OMB for its information management practices. According to OMB officials we contacted, OMB became concerned about AID's IRM as a result of a request for additional IRM funds in AID's fiscal year 1990 budget. AID officials briefed OMB, providing justification for the additional budget request. OMB interviews with information technology users at several AID bureaus, however, disclosed numerous complaints about the inadequate support provided by AID's IRM office. OMB officials were troubled by AID's dependence on proprietary systems, which was indicated in the agency's information technology budget submission. OMB officials were also concerned about the agency's Financial Accounting and Control System which, after more than 10 years of design and implementation, and the expenditure of over $30 million, was only partially operational and did not provide for an accurate accounting control of agency resources. As a result, OMB set a cap on AID's IRM spending until a satisfactory IRM plan was developed.

Efforts to Improve IRM

In 1990, in response to the concerns identified by OMB and internal organizations, AID contracted with a management consulting firm to review agency IRM and develop a plan to meet identified IRM deficiencies. The subsequent plan became operational in September 1990. Initiatives in the 1990 plan included developing an infrastructure to manage information resources more effectively, institutionalizing the data administration function, transitioning from a proprietary to an open information systems environment, installing local area networks,[3] replacing or enhancing corporate information systems, and developing a strategy for a telecommunications network. After reviewing AID's plan, OMB removed the cap on AID's IRM expenditures. AID officials updated the plan in 1991.

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[3]A local area network is a group of computers and other devices dispersed over a relatively limited area and connected by a communications link that enables any device to interact with any other in the network.

AID has made progress in IRM since development of its strategic IRM plan. For example, a number of the initiatives included in the 1990 plan have been completed. These completed initiatives include reorganization of the agency's IRM office, establishment of additional technical support centers throughout AID headquarters, acquisition of commercial software tools supporting the new methodology AID is adopting, and development of a new contract information system and an improved time and attendance system. Many other initiatives listed in the 1991 plan are well underway. (App. II provides a complete list of initiatives included in the 1991 strategic IRM plan.) AID estimates the cost of carrying out all of the initiatives scheduled for fiscal year 1992 at $5.7 million. The total estimated cost of IRM initiatives for fiscal years 1992 through 1997 is approximately $38 million. (Fig. 1.5 provides a breakdown of these costs.)

Figure 1.5: IRM Proposed Initiative Funding for Fiscal Years 1992 to 1997 (Dollars in Thousands)
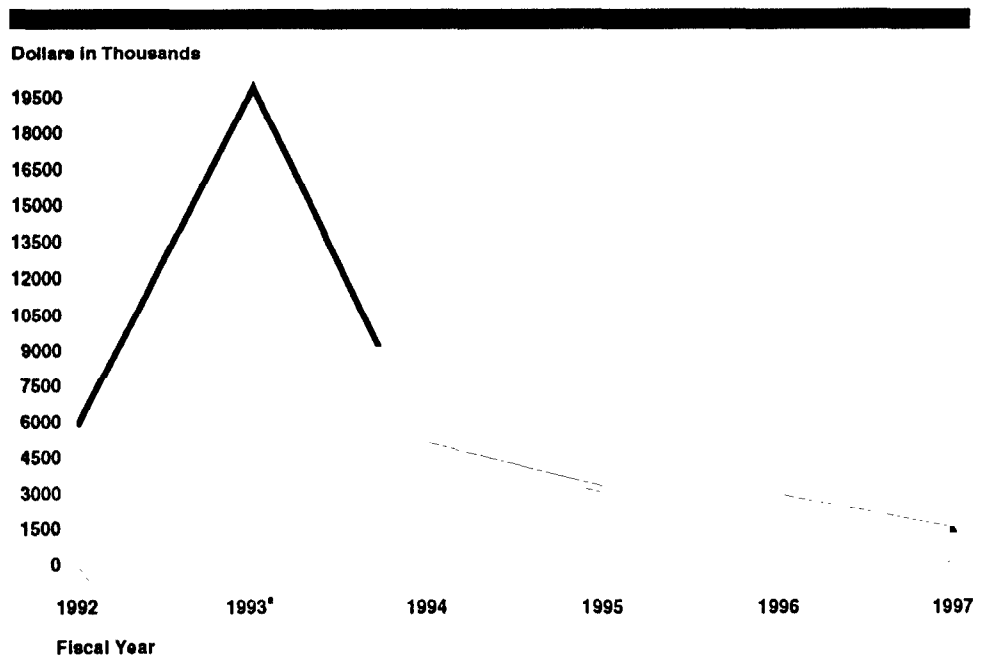
aMajor increases in funding levels from fiscal year 1992 to 1993 are due to initiatives involving procurements of computer hardware for the Excellence Through Automation, Open Systems Migration, Mainframe Computer Replacement, and AID/Washington Information Systems initiatives. (App. II provides a description of these initiatives.)

AID Was the Subject of Two High-Level Management Reviews

AID was the subject of two high-level reviews that, although not focusing specifically on IRM, addressed the adequacy and functionality of individual AID information systems. In September 1991, a Presidential Commission on

the Management of AID Programs began a study of a number of issues, including the adequacy of the agency's automated systems in supporting agency management, operations, and program performance evaluation. The Commission concluded that AID needs to develop a performance evaluation system and strengthen and standardize its information systems, to make the agency's work more effective and accountable. The Commission reconvened in August 1992 to continue its review.

In January 1992, OMB and AID formed a joint team to review AID management and financial systems and procedures. The overall team was separated into five different subgroups, one of which was specifically charged with (1) reviewing AID's financial systems for tracking and evaluating program and project management performance and (2) making recommendations to assure proper monitoring of contract, grant, program, and project award and execution. The team's final report was published in July 1992. The report stated that AID could not fully define its information needs and that managers agencywide were relying heavily on ad hoc methods to satisfy recurring information requirements. Further, the report stated that AID's information systems—which often are not integrated, lack essential data, and do not collect information in a consistent manner—lead to inconsistent, inaccurate, and incomplete reporting that managers frequently do not trust. The team recommended that AID formally specify and communicate its information needs and develop and implement agencywide standards for reporting on its program activities to support specific agency responsibilities.

Objectives, Scope, and Methodology

As part of a GAO general management review of AID operations, we conducted an IRM review of AID to determine how effectively the agency is managing its information and technology programs. Specifically, we sought to (1) determine whether AID's IRM program meets the criteria for a quality IRM program, as stated in federal statutes and guidance, and (2) assess strategic IRM planning efforts to address agency IRM deficiencies and requirements.

We determined that it is generally agreed in the federal IRM community that there is no model IRM program. There is also no single methodology or simple set of analytical tools available to evaluate agencies' IRM programs. Federal guidance and requirements for strategic IRM plans and programs are not well-defined, well-organized, or well-known, and not all of the guidance available is applicable or feasible for every agency. Therefore, we collected and reviewed a variety of congressional, OMB, GSA, GAO, and

other criteria on strategic IRM, and identified elements we believed to be critical and relevant to the AID environment. We discussed and received agreement from senior AID IRM managers on these elements. (The criteria reviewed are listed in app. I.) We assessed AID's strategic IRM plan and program against that guidance and judgmentally determined what significant elements had been included or excluded.

To assess AID's strategic planning efforts, we examined AID's September 1990 strategic IRM plan, its 1991 update, and supporting documentation. We met with officials who were contracted to develop AID's 1990 IRM plan to determine how they conducted their review and to discuss their results. We also obtained copies of notes from interviews they conducted as part of their review. We met with senior AID IRM officials to discuss prior IRM plans and activities, the genesis of the current plan, planning guidance used, and overall IRM planning processes. We met with AID officials agencywide to discuss implementation of plan initiatives and determine their input to strategic IRM planning efforts.

Further, we compared AID's IRM plan with plans developed by other federal agencies, including the Department of State, the Veterans' Administration, and the Department of Health and Human Services. We also contacted representatives of interagency planning groups to learn of their objectives and AID participation. We met with OMB and GSA analysts to determine the extent to which they oversee AID's IRM planning and whether the current plan fulfills their requirements.

We used a five-fold approach for assessing the adequacy of AID's IRM program in supporting AID's objectives and organization. We focused on the following program elements, which cover virtually every aspect of IRM: program management, information management, hardware, software, and telecommunications.[4] We began our IRM assessment by reviewing prior GAO reports and AID documents to obtain background information on these program elements. We met with officials from both AID and the Department of State's Office of the Inspector General to discuss their perspectives and reviews of AID operations and IRM and obtain copies of reports about these issues. Numerous discussions with AID's IRM officials provided us with information concerning past IRM activities and the status of ongoing improvement initiatives.

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[4]We did not conduct an in-depth analysis of either AID telecommunications or computer security activities, but decided to postpone such reviews for a later date.

Discussions with officials at various AID headquarters and worldwide locations provided us with varying perspectives on AID's IRM. We visited officials in the geographic bureaus and in 10 overseas missions to learn about their IRM activities, agency interrelationships, and support provided by the agency's IRM office. We met with officials of AID's Financial Management and Records Management offices, the Office of General Counsel, the Bureau for Legislative Affairs, and the Center for Development Information and Evaluation to learn about IRM responsibilities or projects that they share with the IRM office. Budget officials provided us with information on funding for IRM operations and initiatives.

We coordinated our findings with other GAO teams working on the overall general management review and participated in testimony before the Senate Committee on Appropriations, Subcommittee on Foreign Operations. We also discussed our findings and recommendations with high-level AID management, the Presidential Commission on AID, and members of the joint AID/OMB review team. We obtained formal agency comments on a draft of this report and have incorporated the comments where appropriate.

We conducted our review at AID headquarters in the Washington, D.C., area and 10 randomly selected overseas missions in Bangladesh, Costa Rica, Egypt, Guatemala, Honduras, Jordan, Kenya, Niger, Philippines, and Sri Lanka. We performed our audit work from January 1991 through June 1992, in accordance with generally accepted government auditing standards.

AID's Management Framework Does Not Support Effective IRM

Developing a comprehensive strategic IRM plan will not by itself bring about quality IRM at AID. An effective management framework is also required to support IRM and ensure implementation of improvement efforts. AID, however, has not established the IRM management framework—organizational authority, structured planning process, budget processes, policies, standards, training, and controls—essential to support an effective IRM program. As a result, the agency has no assurance that initiatives to correct longstanding IRM deficiencies will be implemented or complied with agencywide.
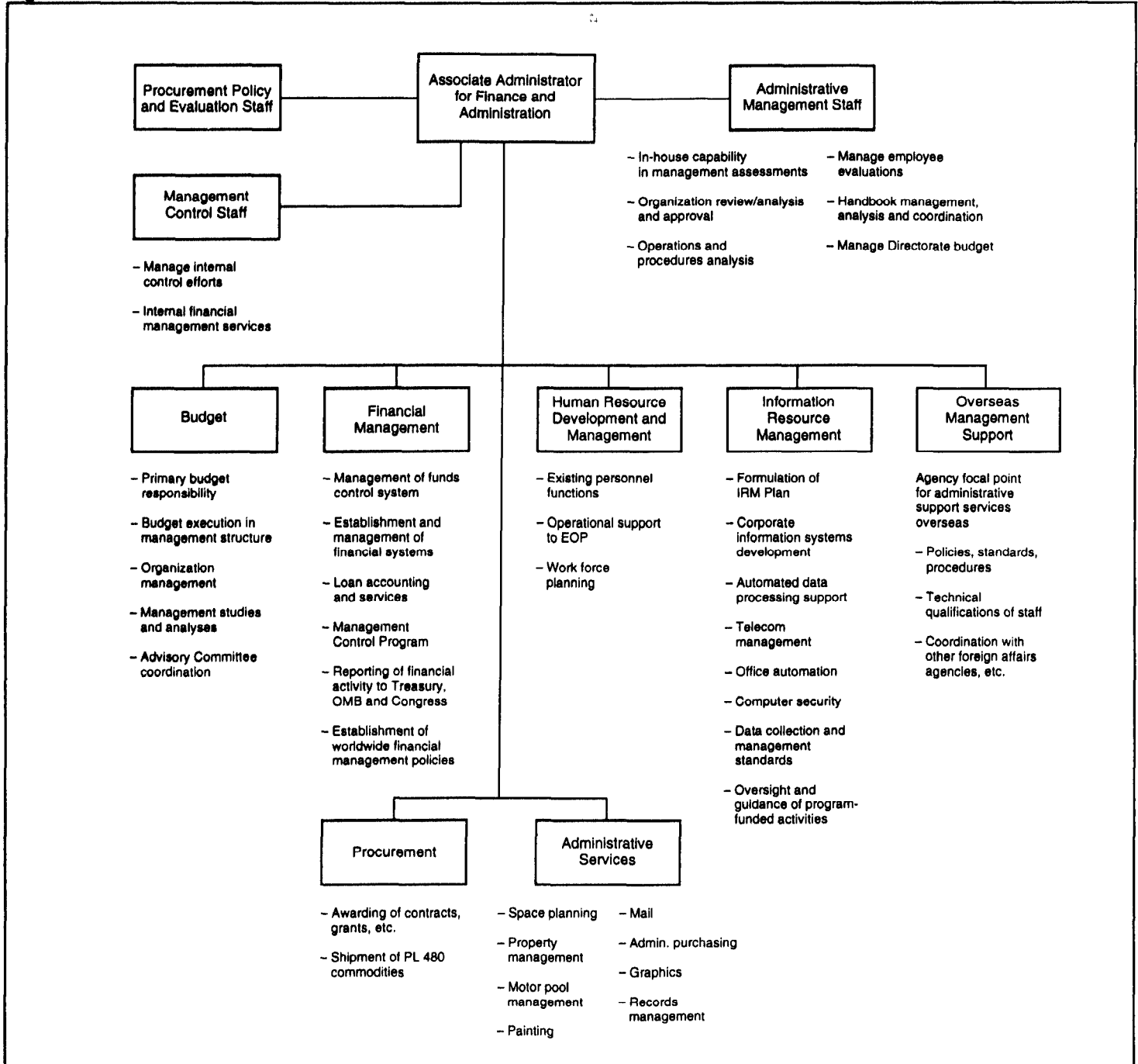
Senior IRM Official Lacks Responsibility for Agencywide IRM Activities

As indicated in chapter 1, the Paperwork Reduction Act, as amended, requires that each agency designate a senior IRM official to have responsibility for implementing federal and agency information policies, principles, standards, and guidelines with respect to the various agencywide IRM activities. These IRM activities include information collection, paperwork reduction, records management, information sharing and dissemination, and information technology acquisition and use.

AID's Associate Administrator for Finance and Administration, who is also the Chief Financial Officer, is acknowledged by the officials and staff we interviewed as the agency's senior IRM official. There is, however, no formal documentation delegating agencywide IRM authority to him. According to the organizational structure, the Associate Administrator for Finance and Administration only has control of the IRM activities conducted within the IRM and Administrative Services Offices. (Fig. 2.1 provides an organizational chart of the Finance and Administration Directorate.)

Figure 2.1: Finance and Administration Directorate

Procurement Policy
and Evaluation Staff

Associate Administrator
for Finance and
Administration

Administrative
Management Staff

– In-house capability
  in management assessments

– Manage employee
  evaluations

Management
Control Staff

– Organization review/analysis
  and approval

– Handbook management,
  analysis and coordination

– Operations and
  procedures analysis

– Manage Directorate budget

– Manage internal
  control efforts

– Internal financial
  management services

Budget	Financial Management	Human Resource Development and Management	Information Resource Management	Overseas Management Support
– Primary budget responsibility	– Management of funds control system	– Existing personnel functions	– Formulation of IRM Plan	Agency focal point for administrative support services overseas
– Budget execution in management structure	– Establishment and management of financial systems	– Operational support to EOP	– Corporate information systems development	– Policies, standards, procedures
– Organization management	– Loan accounting and services	– Work force planning	– Automated data processing support	– Technical qualifications of staff
– Management studies and analyses	– Management Control Program		– Telecom management	– Coordination with other foreign affairs agencies, etc.
– Advisory Committee coordination	– Reporting of financial activity to Treasury, OMB and Congress		– Office automation	
	– Establishment of worldwide financial management policies		– Computer security	
			– Data collection and management standards	
			– Oversight and guidance of program-funded activities	

Procurement

Administrative
Services

– Awarding of contracts,
  grants, etc.

– Space planning

– Mail

– Shipment of PL 480
  commodities

– Property
  management

– Admin. purchasing

– Motor pool
  management

– Graphics

– Painting

– Records
  management

Source: AID's Finance and Administration Directorate.

AID's IRM office is responsible for managing automated systems and technology. The Administrative Services Office is responsible for records management activities, which include standardizing records creation, dissemination, storage, and reporting processes within AID.

Other than the IRM and Records Management Offices, though, AID's designated senior IRM official has little control over the various IRM activities of other organizational units, each of which may develop systems unique to its own responsibilities. For example, the agency's Center for Development Information and Evaluation develops and operates its own database of development information. Further, missions worldwide have control of their own information technology budgets and IRM activities.

These IRM activities are all managed separately, without the effective coordination and integration essential to an IRM program. The establishment in 1988 of an Information Management Committee, chaired by the designated senior IRM official and comprised of senior management from AID organizational units, has provided a forum for proposing and discussing improvement initiatives, but has not yet succeeded in effectively coordinating the various IRM activities.[1]

IRM Director Is Constrained in Meeting IRM Needs

According to GSA guidance, the designated senior official for IRM must ensure that when his or her IRM responsibilities are delegated to an IRM director, the authority necessary to carry out the responsibilities is also delegated. Without the authority, the responsibility means very little, and the organization lacks accountability.

Further complicating AID's diffused IRM structure, the designated senior IRM official has informally delegated his responsibility to an IRM director. Like the designated senior official, the IRM director lacks authority to enforce agencywide compliance or acceptance of approved IRM goals and objectives. For example, the IRM director cannot mandate agencywide use of IRM-sponsored systems; instead, headquarters units and overseas missions may develop their own unique systems.

The IRM director's effectiveness is also constrained in that he can only encourage, but not require, missions to accept and fund his agencywide IRM plan. Further, he has no formal controls for monitoring or obtaining

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[1]When we first began our review, the Information Management Committee was not an executive-level committee, but rather included representation from all levels—from associate administrators to support staff. During the course of our review, IRM chartered a new Information Management Committee with representation at the associate administrator level.

feedback on IRM plan implementation at the missions. Given his limited authority and the related constraints, the IRM director has been unable to provide IRM leadership agencywide.

Agencywide users we interviewed perceived the IRM office as remote from the rest of the agency, sometimes responsive only on demand, and conservative and slow in its approval of systems acquisitions. Many users further believed that IRM officials are not knowledgeable of AID operations and requirements. As a result, users have circumvented the IRM office and relied upon their systems administrators or other offices such as Records Management for the IRM leadership and support they need. Many users have also devised their own means of obtaining the technology systems that they require. For example, to maintain its database of development information, the Center for Development Information uses computers that are neither compatible nor integrated with agencywide IRM-sponsored systems. The Center also introduced compact disk/read only memory technology within AID. While users are generally aware of the recent changes in IRM management and initiatives to improve information and technology management agencywide, given the history of AID's IRM office, many users remain skeptical as to the results of such efforts.

Key Elements of a Quality IRM Planning Process Are Missing

Although AID's IRM plan is an improvement over its past plans, it does not include elements key to meeting agency IRM needs. In particular, the IRM plan is not linked to an agency business plan and does not provide for a structured process to ensure input from those who use the technology and information. The plan is not linked to the agency budget and, as a result, the current plan and process for improving future plans do not ensure that AID's IRM needs will be met. Further, IRM plan initiatives are not coordinated to ensure that they will culminate in effective implementation of IRM plan goals.

IRM Planning Is Not Linked to the Agency Mission and Business Plan

According to federal guidance on IRM planning, an effective strategic plan should use an agency's mission requirements to direct the IRM planning process and provide the rationale for any planned initiatives. The guidance further states that an agency needs a business plan, which provides a projection of what an agency expects to accomplish by a specified time and what activities and strategies are needed to achieve the agency's mission, goals, and objectives.

As we recently reported,[2] however, AID does not have a clearly articulated strategic mission. AID's current responsibilities include support for free markets, concern for the economic and social well-being of individuals, and support for democracy. These objectives are too broad to provide adequate direction for developing a strategic IRM plan.

Further, AID's responsibilities have not been articulated in a business plan which translates the agency's mission into measurable goals and objectives. Once goals and objectives are established, organizations responsible for reaching these goals can plan for their achievement. Officials we interviewed agreed that IRM planning efforts are hindered by the lack of a business plan.

Planning Process Does Not Ensure Systematic User Input

According to GAO guidelines, an agencywide IRM plan should be the product of an established, regularly scheduled planning cycle. GSA guidelines state that the planning structure should be institutionalized to ensure continued sponsorship, implementation, and commitment. OMB guidelines further state that the planning structure should include all levels of the organization and ensure input by users, technical staff, and top management.

AID, however, has no established process that ensures substantive user input to its strategic IRM plan. In the course of updating its 1990 IRM plan, AID has begun to lay the foundation for formalizing such a process.[3]

IRM planning at AID has basically been confined to the agency's IRM office. Users were not required to document their own requirements or plans for incorporation in the IRM plan. Rather, AID managers and users at AID headquarters and its missions—those who use the technology and information systems—were selectively interviewed during plan development. Once the IRM plan was completed, users were asked to comment at field conferences, or informally, through bureau officials and IRM office representatives. Users indicated, however, that these efforts to understand overall agency needs were not as effective as they could have been. Users said that when they provided input, they saw no evidence of its incorporation into the plan. IRM officials told us that they included user

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[2]AID Management: Strategic Management Can Help AID Face Current and Future Challenges (GAO/NSIAD-92-100, Mar. 6, 1992).

[3]See app. III for initiatives and improvements that AID has underway to formalize its IRM planning process.

input; however, they could not specifically identify what input was obtained or how it was used in the final IRM plan.

In the absence of an agencywide planning process that effectively incorporates user input, users have displayed little commitment to AID's IRM plan. While several of the mission and program officials we interviewed believe that IRM plan goals and initiatives appear useful, many officials contend that the goals and initiatives do not reflect the needs of their respective offices. These officials believe that IRM planning concentrates primarily on systems that provide administrative support rather than on systems that meet program or project needs. IRM officials counter that though this was true in the past, the information systems plan to identify information requirements will correct this deficiency. (Ch. 3 discusses AID's information systems plan initiative.) Some mission officials have nonetheless expressed reluctance to fund or commit to plan initiatives and goals and have adopted a "wait and see" attitude toward the new IRM direction and technologies that the plan advocates.

IRM Plan Not Linked to Agency Budget Process

OMB Circular A-130 cautions that agency strategic IRM plans should reflect budget constraints and provide the basis for budget requests. Further, GSA's 1987 strategic planning handbook states that required resources should be identified and priorities established.

However, despite top management expressions of commitment to the strategic IRM plan, we saw no evidence that the IRM plan was linked to the agency budget process. IRM officials told us that they did not even ask for the total funding needed to support their plan. (Fig. 2.2 provides a comparison of IRM plan funding requirements and the agency's IRM budget request for fiscal years 1992 and 1993.)

Figure 2.2: AID's IRM Budget Request to Congress Versus AID's Strategic IRM Plan Funding Needs

Dollars in thousands

Fiscal Years

☐ IRM Budget request to Congress[a]

▨ Strategic IRM plan funding needs[b]
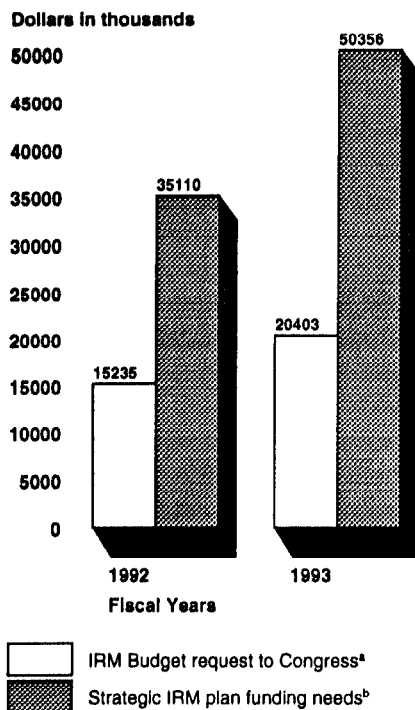
[a]AID's IRM budget request to Congress was provided by the Office of the IRM Director.

[b]Base level funding estimates were taken from the 1990 strategic IRM plan plus initiative estimates included in the plan's January 1992 update.

According to IRM officials, uncertainties in the budget process, including competing priorities and unexpected contingencies that require funding, make it difficult to establish and implement rational planning. In fact, AID budget officials characterized the IRM plan as "more of a menu than a blueprint." Further, IRM and budget officials told us that funding for some of the IRM plan's initiatives was dependent upon the availability of year-end funds. As a result of the disconnect between IRM planning and agency budget processes, AID cannot ensure that its strategic IRM plan will be implemented as planned.

IRM Plan Initiatives Not Coordinated

OMB planning guidance advises that initiatives should be integrated so that solutions to problems are not simply a series of independent actions. Without such integration, an agency can end up with a collection of individual projects that implement poorly integrated systems, hardware, and software. These in turn can result in data redundancy.

At AID, however, we found no coordinated management of IRM initiatives. The initiatives in AID's strategic IRM plan are a list of independent information management and information technology projects. For example, AID's current initiatives include updating IRM policies, instituting data guidance and standards, developing an information architecture, buying computer equipment, and developing software applications—all of which are managed as separate and distinct projects. Consequently, there is no assurance that consistent policies and standards are applied to new systems procurements or developments. Similarly, there is no assurance that new computer equipment will fit the information architecture once it is developed, or be matched with appropriate training and the development or conversion of corresponding software.

When we pointed out such problems and AID's need to be prepared to deal with them, the IRM Director and his Deputy agreed that their office needed to coordinate management of their IRM plan initiatives. In fact, these officials stated that they had taken steps to better manage their strategic IRM improvement effort. They stated that their quarterly reviews of individual activities help them coordinate their IRM initiatives. Further, they stated that in February 1992, their office began developing a master schedule to manage the procurement of hardware and corresponding conversion of applications software as they transition from proprietary to open systems. As of July 1992, however, the office still had not completed a logical, comprehensive schedule for the conversion. IRM officials explained that their initiative to identify information requirements had caused them to rethink the advisability of converting these systems, as opposed to replacing them with new, integrated systems.

Policies and Standards Are Inadequate to Guide IRM

According to GSA guidance, strategic direction for managing an agency's information resources must be clearly communicated to agency users. IRM officials should create agencywide standards and procedures for managing information and coordinating decentralized technology. These IRM policies and standards should reflect the fundamental principles of an agency's IRM program and support the agency's goals and objectives.

AID's IRM Guidance Is Outdated and Confusing

At AID, the agency's strategic IRM direction has been broadly communicated through the 1990 IRM plan and its 1991 update. However, this plan has not been accompanied by adequate policies and standards to govern agencywide IRM operations on a daily basis. For some time, AID has used a variety of internal documents to provide agencywide IRM guidance. These

documents primarily consist of AID handbooks, directives, and cables. However, the handbooks and many of the directives are several years out-of-date. For example, the handbook concerning information services has not been updated since 1988 and does not (1) include the current federal requirement for nonproprietary, interoperable systems; (2) reflect the recent IRM office reorganization and transfer of reports management responsibility from the IRM office to the Administrative Services unit; and (3) reflect current IRM objectives of establishing local area networks agencywide. IRM officials advised us that they have recently begun efforts to update the IRM handbooks.

AID's IRM office has attempted to fill the void left by the outdated and inadequate handbooks and directives by issuing a series of ad hoc cables to missions worldwide. These cables primarily provide updates and explanations of the current IRM organization and approach.

Decentralized Dissemination and Management of IRM Guidance Has Led to Inconsistent IRM Policies and Standards

Responsibility for managing and disseminating IRM policy guidance is not coordinated within AID. No single entity serves as a focal point for IRM policies and standards agencywide; rather, this responsibility is shared. For example, various organizations AID-wide, such as the IRM and financial management offices, are responsible for developing handbook guidance on their respective information and technology management functions. No mechanism exists to ensure the coordinated management of IRM policies and standards.

IRM officials told us that there is no definitive base or repository of agencywide IRM policies and standards. For example, all of the 10 missions we visited had different assortments of what they believed to be the governing IRM policies and standards. Officials at six of the missions stated that the guidance was too broad and cumbersome for use in managing their day-to-day IRM. Officials also complained about the persistent lack of up-to-date agencywide guidance on telecommunications, software development standards, and procurement regulations for program- versus operating expense-funded automation. (As we discuss in ch. 3, data standards and an information architecture[4] to provide a blueprint for information technology decisions are under development.) Inadequate agencywide IRM policies and standards have led to the development of

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[4]An information architecture defines information requirements, flow, and system interfaces and shows how individual systems and major components fit together to form a comprehensive whole. For additional information on information architectures, refer to Strategic Information Planning: Framework for Designing and Developing System Architectures (GAO/IMTEC-92-51, June 1992).

unit-specific operating procedures and duplicative information systems, as discussed in chapter 4.

Agencywide Understanding of IRM Initiatives Is Lacking

According to GSA guidance, training should be provided to agency automation users to familiarize them with IRM plans and objectives. GSA guidance further states that, since the main purpose of IRM is to support agency goals and objectives, it is imperative that users be made aware of the direction that the IRM office has taken and that they agree with it.

Managers and information and technology users we interviewed at AID, however, stated that the IRM training they received has been generally on the use of word processing and other software applications. Managers and users knew little about the purpose or benefits of IRM and, as such, expressed reluctance to comply with or support the funding of IRM initiatives. When we discussed with IRM officials earlier this year the need to educate users agencywide on the meaning of IRM and the value of plan initiatives, they told us they intended to develop a marketing strategy for the IRM plan and hoped that it would increase user commitment and support. The marketing strategy that IRM officials subsequently developed outlines a plan to educate users on the objectives of the strategic IRM plan and how it is integral to agency work. (Users include IRM staff, contract managers, systems administrators, senior headquarters and mission officials, and external agencies such as OMB.) The strategy indicates that the plan will be marketed through a variety of means including mailings, briefings, and conference presentations; however, the strategy does not include a timetable for implementation and completion.

AID Needs to Better Manage Information as a Corporate Resource

AID's overarching lack of an IRM management framework has in turn led to ineffective management of its information resources and failure to comply with Paperwork Reduction Act requirements. AID currently compiles data as needed to meet reporting requirements. Generated data are, however, often inadequate, unused, or improperly formatted to meet these reporting requirements. AID is beginning to focus on managing information as a corporate resource, and to place priority on initiatives to identify requirements. However, until information requirements are identified and the new focus on information proves fruitful, AID cannot ensure the efficient, effective, and economical use of information resources agencywide.

Information Management Is Not Systematized

AID manages its information on an as needed basis, gathering data and compiling reports upon request to support the information requirements of AID managers and legislative and executive branch officials. Formal mechanisms for managing the flow, format, and content of internal reports have been neglected. Processes for monitoring external reporting requirements are not systematized. As a result, AID continues to experience long-standing problems with inadequate, duplicate, and improperly formatted information.

Internal Reports Management Function Is Not Carried Out

AID has de-emphasized the importance of internal reports management, a function that is crucial to effective information management. Internal reports management is the way that an agency manages and controls the flow of information to meet internal reporting requirements.[1] Efficient internal reports management is critical, since AID managers stated that they devote an extensive amount of time and resources to fulfilling internal reporting requirements. These internal reports include annual budget submissions, country development strategy statements, action plans, project papers, work force reports, and property inventories. Such reports are used in determining policy; planning, controlling, and evaluating operations and performance; making administrative decisions; and preparing other reports.

According to Records Management officials, however, AID's internal reports management is now virtually nonexistent. These officials stated that from 1983 to 1990, reports management was under the domain of the

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[1] AID's reports management objectives are to achieve efficiency, economy, and simplicity in reporting by (1) ensuring a uniform, well-defined flow of information; (2) limiting reporting requirements; (3) ensuring that all available data are used before new requirements are levied; and (4) ensuring that reports are obtained from the best sources and at the least cost.

IRM office. During those years, the reports management function was inadequately staffed to manage the work load. As a result, reports management began to be carried out on an as needed basis. In 1990, the senior IRM official transferred the reports management function to the Records Management Office, in the agency's Administrative Services Bureau. However, Records Management officials stated that their office does not have adequate staff resources to either carry out the function or implement their proposals for improvement. IRM officials expect that the current information systems planning exercise to define information needs will help address the reports management concern.

External Reporting Requirements Are Not Effectively Managed

Responsibility for meeting legislative and executive branch reporting requirements is diffused throughout AID, and no mechanism for coordination exists. No one has comprehensive knowledge of what reports are required and whether or not these requirements are actually fulfilled. As a result, AID has been unable to monitor annual report levels, eliminate redundancy, facilitate information flow, or ensure task completion by the scheduled deadlines.

In the absence of an effective management process, there is no way to control the external reporting requirements work load. Officials in many AID offices we visited could not fully determine the time and resources they devote to meeting these requirements. However, officials complained that the requirements are a burden that they would like to see decreased.

Ineffective Information Management Results in Inadequate Data

As a result of not managing information as a corporate resource, AID has no assurance that the data it generates are adequate to help carry out the agency's objectives and function, support management and operations, and meet reporting requirements. Long-standing problems with AID data availability, accessibility, compatibility, redundancy, and format continue. For example, as we reported earlier this year, because of AID's database limitations, we were unable to develop a complete profile of AID operations with regard to such aspects as contractor staffing levels, regional and representational offices overseas, and development assistance coordination.[2]

Additionally, officials at 4 of the 10 missions we visited stated that many of the data they generate remain unused. In particular, the Systems

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[2]Foreign Assistance: A Profile of the Agency for International Development (GAO/NSIAD-92-148, Apr. 3, 1992).

Administrator in Honduras and the Deputy Mission Director in Cairo
stated that the Mission Accounting and Control System produces
voluminous data not because the mission uses the information—but
because the system was designed to generate it.

Officials at nine of the missions we visited stated that at times, data were
either in the wrong format or unavailable to meet internal or external
reporting requirements. One such instance occurred in U.S. AID/Niger
when a request was received for a listing of U.S. vendors by state that had
provided services to the mission. Mission databases were not designed to
provide information by that category, and mission staff were detailed—at
considerable time and expense—to conduct the search manually.[3]
Similarly, in February 1991, we reported that AID did not have data readily
available to fulfill congressional reporting requirements concerning
funding for its microenterprise development program.[4] Since AID had no
information system to monitor the program, the agency sent a
questionnaire to its overseas missions and used the information gathered
on their microenterprise activities to report to the Congress. Our analysis
of AID's report and test of the supporting documentation showed, however,
that much of the data AID reported was based on assumptions or estimates
and was therefore of questionable validity. As a result of our review, AID
began taking steps to establish an information system for better oversight
of its microenterprise development program.

Once data have been assimilated into a report, further management
problems interfere, resulting in difficulties in tracking the reports.
According to an official in the Bureau for Legislative Affairs who is
responsible for channelling requested reports and other information to the
Congress, since there is no system or individual responsible for tracking
all reporting requirements, there is always a possibility that reports might
be overlooked or late.

Finally, both headquarters and mission officials believed that resources
are sometimes unnecessarily and inefficiently expended to address
reporting requirements. Some officials sensed that some reporting
requirements are requested by rote and that the responses are not even
read. Headquarters and missions officials also agreed that they seldom

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[3]We later learned that this information was requested of and provided by all AID missions. Many
believed that this would become a recurring request, but no one has initiated action to collect the
information in a more effective way to ease the burden.

[4]AID defines a microenterprise as a business or enterprise with 10 or fewer employees. For additional
information, refer to Foreign Assistance: AID's Implementation of Microenterprise Program Guidance
(GAO/NSIAD-91-78, Feb. 15, 1991).

receive feedback on the information they provide, are generally unable to identify the recipients of their reports to conduct follow-up, and rarely see how their information is used. In several instances, officials were contacted by internal or external requesters asking for information that had already been submitted.

Such mismanagement is not irreparable. For example, officials at several of the missions we visited have taken actions to reverse redundancies in reporting requirements. Specifically, after demonstrating that the requirement for annual submissions of the Country Development Strategy Statements was resulting in redundant information, a program officer in Costa Rica was instrumental in obtaining the regional bureau's permission to submit the report on an as needed basis. Similarly, the Acting Deputy Mission Director in Guatemala acknowledged that the Annual Budget Submission duplicates much of the information that the missions are required to report in their action plans. He suggested combining the two reporting requirements. Both cases exemplify how better attention to information management could help AID create more efficient, effective operations.

Little Priority Has Been Placed on Initiatives to Manage Information

Until recently, AID has placed little priority on identifying information requirements and managing information as a corporate resource. AID's information management initiatives to identify agency information requirements and institute data administration are still in the early stages. These initiatives are important first steps. However, AID must follow through on these initiatives to focus its IRM program on information, the basic element of IRM.

Identification of Information Requirements Has Not Been a Priority

AID has recently given priority to an IRM initiative to develop an information systems plan, which is to assist in the identification of information requirements and provide the framework for linking data needs and information technology systems to support agency operations. According to the 1990 strategic IRM plan, AID was to have begun efforts to develop the agencywide information systems plan at the beginning of fiscal year 1991. During the agency budget process, however, it was determined that AID did not have sufficient funding to begin the initiative, and plans were made to postpone it until fiscal year 1992. However, when it was determined that funds were available in the fourth quarter of fiscal year 1991, the initiative was started. It is now anticipated that the information systems plan will be completed by October 1992. Developing an information systems plan is

nonetheless only the initial step in a multi-step, multi-year process to ensure that information requirements direct technology acquisitions. IRM officials are concerned that funding will not be available to continue and complete the process.

Data Administration Not Fully Instituted

Data administration is a crucial activity for effective information management. It encompasses the responsibilities for managing and maintaining the corporate data resources with respect to standardization, integrity, and sharing. Although AID established a data administration unit within the IRM office in fiscal year 1991, the lack of emphasis placed on information management has taken its toll in this area, too. For example, the data administration office has drafted policy guidance, procured commercial tools to develop a data dictionary,[5] and developed operational plans. However, such policies and standards have not yet been disseminated for use agencywide.

Indeed, a number of data administration tasks have been suspended awaiting completion of the information systems plan. AID officials have determined that these tasks are logical follow-ons to plan development. For example, the data standards committee has not been formed, data element design has been postponed, no pilot projects have been identified, and no data administration training is planned pending the information systems plan's completion. As plan completion is delayed, the data administration effort is also hindered. To hasten progress, the data administration staff have all shifted their time and attention to assisting in the information systems plan development effort.

Development and dissemination of data administration policies and standards will not guarantee agencywide usefulness. Due to its organizational placement, the data administration office may still have a problem in implementing those guidelines agencywide. Instituted as a small unit within the IRM office, the data administration office does not have the authority to provide the necessary cross-functional direction to and influence over the rest of AID. The office is at too low a level in the IRM structure and has no mechanism for obtaining agencywide user commitment or enforcing compliance to its guidelines.

We are not the only ones to voice concerns about the shortcomings of this critical data management function. In 1991, the contractor assisting AID

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[5]A data dictionary is a database that describes all of the files, programs, and other elements of a database system.

with its data administration reported that AID's decentralized
organizational structure does not readily lend itself to supporting data
administration. He stressed that the data administration office must be
properly positioned and supported by management to ensure its priority
and leadership role in driving the agency's data-related activities.
Unfortunately, AID has not taken steps to ensure that its data
administration effort does not fall by the wayside.

Information Technology Management Is Ineffective

In accordance with its strategic IRM plan objectives, AID has undertaken individual initiatives to develop or improve its information technology. However, without having identified information requirements, AID continues to focus on information technology, with little data control or standardization agencywide. In the midst of the current uncertainty about information requirements, long-standing problems with inefficient and unintegrated systems persist.

AID Undertakes Technology Initiatives

AID has individual strategic IRM plan initiatives to develop, upgrade, or procure its hardware and software systems. For example, AID has completed a number of initiatives, including acquisition of commercial tools to assist in software development, improvement of its time and attendance system, and development of a new contract information system.

Additionally, a project to make the transition to a local area network is well underway. As part of this project, 1,800 of the 2,500 headquarters personnel whose work stations will be part of local area networks have received new or replacement personal computers. Further, AID's IRM office has provided agencywide users with up-to-date word processing and spreadsheet applications for use on the new local area network file servers.[1]

Information Technology Initiatives Are Not Yet Driven by Requirements

GSA's 1987 strategic planning handbook indicates that information comprises the basic and fundamental element of IRM and that information technology should not determine how information is to be managed. Rather, GSA states that information needs should provide the basis for technology solutions. As discussed in chapter 3, AID does not have effective information management and has not yet identified its information requirements. Consequently, AID has no assurance that its information technology initiatives are meeting agency information needs.

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[1]A file server is a file-storage device on a local area network that is accessible to all users on the network. The file server not only stores files but manages them and maintains order as network users request files and make changes to them.

Problems With Information Technology Systems Persist

Correction of long-standing information systems deficiencies, which include inefficient, unintegrated, and duplicate systems, is not directly addressed in AID's current strategic IRM plan. AID officials believe that once the information systems plan is completed, the plan will be used to direct future actions to address systemic problems. In the interim, according to AID officials, there are no plans to redesign or improve inefficient systems such as the Mission Accounting and Control System. Instead, out of urgency, this system will be converted for use on an open systems platform. We found that problems with the system are numerous, including the fact that it lacks an ad hoc query capability and does not adequately provide financial data to meet reporting requirements concerning program and project management. After about 10 years of operation, the system remains only partially implemented and does not record and report detailed asset and liability entries at the transaction level.

Additionally, many of AID's financial management systems are not integrated. In fact, AID's two primary financial management systems—one for its headquarters activities and another for its overseas missions—are not able to automatically exchange data. It is not yet certain whether development of a replacement financial management system at headquarters will resolve the deficiency. The two primary systems are not effectively supported by AID's subsidiary financial management systems because the subsidiary systems are slow, error-prone, and do not transfer information in an efficient manner. Specifically, many of the systems require that information be re-keyed before it can be transferred to related systems. Re-keying has proven to be a redundant, time-consuming, and error-prone process.

AID has undertaken several systems development efforts without adequate planning or foresight. For example, AID's IRM office began developing the Mission Information Decision Assistance System to provide program managers with the financial data they needed for decision making. AID began the development effort without having adequately identified the information needs that the system would support. After spending 2 years and over $1.4 million on development, the system was canceled for a number of reasons, including inadequate resources, lack of mission management support and hardware to operate the system, and recognition that the system would not operate in the projected open systems environment. Similarly, after spending almost 4 years and over $500,000 in support of a missions center to develop the Mission Management Information System, many anticipated benefits of the system may not be

realized. This system was developed to support the administrative responsibilities of mission executive officers. The system was developed in the current proprietary environment, and its use may remain limited until AID determines how to reengineer it to operate in the open systems environment to which AID is currently making a transition.

Finally, the current strategic IRM approach does not address the fact that mission officials can develop their own systems if they find IRM-sponsored systems inadequate or just do not like them. AID's IRM office does not maintain a complete inventory of systems agencywide. Consequently, development of redundant or mission-unique systems continues unchecked. For example, AID has at least eight property inventory systems, but nonetheless lacks accountability and control of property and vehicles used at headquarters and overseas missions. Similarly, we found that though the IRM office has provided a voucher tracking system for mission use, the mission in Bangladesh developed its own duplicate system to perform the function. Niger uses a voucher tracking system developed by the mission in Senegal. Further, the mission in Egypt uses its own vehicle management system instead of the one provided by AID headquarters. Duplicate systems are sometimes inadequately documented or tested, rendering them useless when their developers or primary users leave the agency.

Conclusions, Recommendations, and Agency Comments and Our Evaluation

Conclusions

Despite recent initiatives, AID's IRM program remains deficient, and more needs to be done to address long-standing problems. As an agency, AID has just begun to recognize and manage information as a corporate resource. In addition to this, however, AID needs to establish the leadership and commitment to overcome long-standing cultural barriers to IRM. Although AID has a de facto senior official for IRM, this official lacks the authority needed to carry out his responsibilities. We believe this lack of authority, along with the continuing diffusion of responsibility for managing information resources, are the primary causes for AID's inability to institute the necessary elements of an effective IRM program.

Further, it is essential that agency information systems be developed in concert with an agency business plan. As recommended in numerous internal and external studies, AID needs to develop such a plan. Once this plan is documented, AID can more effectively manage its information and supporting technology as a "corporate resource" for accomplishing its goals.

Recommendations

To better ensure that information resources are managed to meet agency mission and business needs, we recommend that the Administrator, AID, take the following actions:

- Develop a functional business plan to provide the agency with a framework for conducting IRM.
- Formalize the designation of the AID Senior IRM Official and assign agencywide leadership for IRM to this official.
- Direct the Senior IRM Official to take the following actions to establish an effective management structure:

1. Formalize its IRM planning process so that it includes systematic participation by all levels of the organization; requires that at least major organizations, such as missions and bureaus, develop IRM plans based on AID's business plan and strategic IRM plan; ensures coordination of initiatives for effective plan implementation; and is linked to the agency budget process. At a minimum, this linkage should include a funding plan that supports IRM at a level commensurate with expressed agency commitment to improving IRM operations.

2. Place priority on developing, updating, and consolidating policies and standards to guide users of information resources.

3. Educate agencywide decision makers on the benefits of IRM initiatives and hold them accountable for implementing these initiatives.

To ensure that information requirements are driving the agency's technology investment, GAO further recommends that the Administrator direct the IRM organization to focus its efforts and resources on completing initiatives to identify information needs. Once these information needs are determined, the agency can best determine what hardware systems and software applications are required to address them.

Agency Comments and Our Evaluation

We obtained oral comments from AID's senior IRM official and his staff on a draft of this report. We have incorporated their views where appropriate to update or clarify the report. They generally agreed with our findings and the intent of our recommendations and indicated that in several instances, they had already taken significant steps to improve IRM in line with the recommendations. The steps include the following:

- AID recognizes the need to develop a strategic management process. In a May 4, 1992, letter responding to a previous GAO report on strategic management,[1] the Acting Associate Administrator for Finance and Administration stated that AID has taken steps to institute a strategic planning process as a means to define the agency's mission and direction. Strategic planning may also provide a framework for development of a business plan, which would help direct the IRM program. IRM officials believe, however, that developing a strategic plan will not be a realistic task until the Congress and the Administration negotiate an agreement on the objectives of the U.S. foreign assistance program in the post-Cold War era.
- The IRM office recently drafted delegations of authority to formalize, define, and enforce the authority of the senior official for IRM and the IRM director. As of August 10, 1992, these delegations were awaiting the signature of the AID Administrator. Further, the committee working to identify agency information requirements is currently studying the IRM structure to determine whether it is effectively organized to support IRM goals agencywide. This study is scheduled to be completed in the first quarter of fiscal year 1993.
- AID has placed priority on projects to update the IRM handbook and consolidate corresponding policies and procedures. AID expects to complete these projects by October 1, 1992.

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[1]AID Management: Strategic Management Can Help AID Face Current and Future Challenges (GAO/NSIAD-92-100, Mar. 6, 1992).

- Involvement of senior AID managers in the development of the information systems plan to identify information requirements is expected to help educate these decision makers and hold them accountable for implementing IRM initiatives. IRM views education as an ongoing requirement to be exploited at every opportunity. The information systems plan is expected to be finalized in the first quarter of fiscal year 1993. However, AID has not established a timetable of its initiatives to educate managers and users on the benefits of a quality IRM program.
- Information systems planning and other IRM objectives are now receiving more priority consideration in the current budget preparation process. However, IRM officials could not provide any documentation on the continuing support for funding these IRM initiatives.

The only exception to the IRM officials' agreement with our recommendations was with regard to the IRM planning process. The IRM director stated that our recommendation that organizational units formally and systematically participate in planning is neither a federal requirement nor appropriate for AID. This official believed that such an approach would hamper the information systems planning process, represent a significant workload imposition on agencywide users, and encourage users to devise their own directions rather than conform to the agency plan. We continue to believe that systematic user input is essential to thorough IRM planning and is an effective means of ensuring user commitment and interest. While not a federal requirement, this concept is embodied in federal IRM planning guidance and AID's methodology for developing the agency's information systems plan.

We are encouraged by the initial steps AID has taken to improve its overall IRM program. We believe, however, that additional action is needed and improvement efforts must be sustained to effect a lasting impact and cultural change in how the agency views its information resources.

Criteria Used to Assess AID's Strategic IRM Plan and Program

A Five-Year Plan for Meeting the Automatic Data Processing and Telecommunications Needs of the Federal Government. Volume 1: Planning Strategies, Office of Management and Budget, U.S. General Services Administration, U.S. Department of Commerce, Apr. 1984.

The IRM Organization: Concepts and Considerations, Federal IRM Planning Support Center, U.S. General Services Administration, May 1989.

Meeting the Government's Technology Challenge: Results of a GAO Symposium, (GAO-IMTEC-90-23, Feb. 1990).

OMB Circular A-130, Management of Federal Information Resources, Dec. 12, 1985.

The Paperwork Reduction Act of 1980, Dec. 11, 1980, (P.L. 96-511).

The Paperwork Reduction Reauthorization Act of 1986, Oct. 30, 1986, (P.L. 99-591).

Questions Designed to Aid Managers and Auditors in Assessing the ADP Planning Process, Accounting and Financial Management Division, U.S. General Accounting Office, Sept. 30, 1982.

Strategic Information Resources Management Planning Handbook (Revised), Federal IRM Planning Support Center, U.S. General Services Administration, Oct. 1987.

AID's 1991 Strategic IRM Plan Initiatives

Strategic Business Plan: AID's IRM office will work with the agency's new strategic planning office to ensure that the IRM plan fully supports the agency's plan when it is formulated.

Information Engineering: This involves implementation of a methodology for analyzing the agency's business data needs.

Strengthening Field Support for IRM Activities: This initiative is to address the need for increased IRM support to the missions.

Quality Assurance Program: Institutionalization of quality assurance programs and procedures within IRM is to decrease systems life cycle costs and improve user satisfaction.

Data Administration: Institution of data administration, data dictionary maintenance, and data modeling are keys to streamlining the agency's inventory of systems and permitting data sharing across systems.

Automated Data Processing Security: This involves security policy formulation, conducting risk assessments, and bolstering security through the acquisition of appropriate hardware and software devices.

Excellence Through Automation: The objective of this initiative is to achieve a 100-percent workstation-to-employee ratio to improve productivity. It is also a first step in the move to open systems.

Open Systems Migration: This initiative includes acquisition, training, development of a detailed migration strategy from proprietary to nonproprietary systems, and conversion of key mission applications.

Records Management: The focus is on formulating an integrated strategy for new technologies like imaging and compact disk-read only memory, with a view toward the agency's total documents management needs, including consideration of the "paperless office" concept.

Capacity Planning: This initiative is to bolster AID's capabilities to capture data, establish benchmarks, and do modelling of capacity utilization, so that systems growth and utilization can be better planned and monitored.

Mainframe Computer Replacement: Studies are undertaken to assess the benefit of replacing the aging technology of the current mainframe with new-generation equipment.

AID/Washington Accounting System: This is a program to replace the agency's financial systems.

Outsourcing Payroll/Personnel Systems: Cost/benefit analyses and feasibility studies are to assess AID's ability to improve and reduce costs for conducting payroll and personnel services.

AID/Washington Information Systems: Systems development projects include Buy America, workforce planning, participant training, and inventory tracking.

Program Performance Information System for Strategic Management: This is a new project to strengthen the role of program evaluation in the agency.

Network Architecture Planning: This involves defining network resource requirements, developing a physical and logical network design, and evaluating alternative approaches for international data communications.

Telephone Management: The focus is on instituting procedures and controls to better manage AID's costs and improve the quality of telephone services provided by the Department of State.

Cable Room Upgrade: Replacement of hardware and software in the cable room is expected to pay for itself through reduced maintenance, printing, and staff costs.

Initiatives and Improvements to Lay a Foundation for an IRM Planning Framework

With the development of the 1990 plan, AID has taken initial steps to improve its IRM planning. Plan development and update have resulted in several initiatives that lay a foundation for formalizing the IRM planning framework. For example, AID's IRM office has

- established a high-level Information Management Committee, chaired by the Designated Senior Official for IRM and consisting of senior management from major organizational units;
- assigned IRM staff to work with Information Technology Committees, which are to be established within bureaus/offices at AID headquarters;
- reorganized its divisions along functional lines (for example, information planning, information policy, client support, and telecommunications);
- established a central IRM planning office to revise the 5-year plan and update it on an annual basis;
- begun participating in an Interagency IRM Planning Group to share IRM plans and remain current on IRM concerns and policy changes in the federal government;
- begun developing a planning handbook to document steps taken in developing the strategic IRM plan;
- begun updating its IRM plan annually;
- developed a separate tactical plan, which is a short-term plan to translate the strategic IRM plan into a meaningful plan of action; and
- instituted a quarterly review process to monitor plan implementation against milestones.

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Related GAO Products

Strategic Information Planning: Framework for Designing and Developing System Architectures (GAO/IMTEC-92-51, June 1992).

Foreign Assistance: Management Problems Persist at the Agency for International Development (GAO/T-NSIAD-92/31, May 1, 1992).

Foreign Assistance: A Profile of the Agency for International Development (GAO/NSIAD-92-148, Apr. 3, 1992).

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United States
General Accounting Office
Washington, D.C. 20548

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