

DEFENSE COMMUNICATIONS AGENCY
CENTER FOR INFORMATION MANAGEMENT

PROGRAM AND RESOURCE PLAN

JUNE 3, 1991

CENTER FOR INFORMATION MANAGEMENT

PROGRAM AND RESOURCE PLAN

This document defines the key initiatives and resources required by the Center for Information Management to execute its Program Plan in FY92-FY98.

The mission of the Center for Information Management is to lead and support DoD in implementing improved Information Management practices. The Center will perform such functions as:

- support the information technology standardization area of the Defense Standardization and Specification Program;
- assist in the production of process and data models;
- help to identify alternative approaches, methods and tools for the development of process models and data models;
- develop DoD standard information technology architectures;
- assist in the development, coordination and execution of the DoD data administration program and provide the technology support to achieve the objectives of that program; and
- assist in assessing the efficiency and effectiveness of information services in DoD.

(See Appendix A for additional definition of responsibilities from DMRD 924 and the DoD Implementation Plan for Corporate Information Management).

Our vision is that within three years, the Center for Information Management will be:

"The recognized center of excellence for information management assisting customers achieve continual improvement and cost reduction in their DoD mission areas."

To implement this vision, the Center developed this program plan. DCA will continue to refine the plan based on coordination of this document with the OSD, Services, and Agencies. The plan follows the principles and vision of the Executive Level Group (ELG's vision and strategies are provided in Appendix B).

An important goal of DoD is improving the efficiency and effectiveness of the Department's Information Management program. The approach reflected in this plan envisions five ways for DCA to support achieving the overall DoD goal:

- a. Assisting in identifying better ways of doing business through improved business methods and practices, tied to quantifiable measures of performance (e.g., fee-for-service).
- b. Promoting efficiencies and standardization in software engineering, development, and maintenance (i.e., via CASE tools).
- c. Assisting in developing common information systems for each functional area, built upon standard data and business methods.
- d. Promoting open systems standards to allow use of commercial products and to facilitate open competition for services.
- e. Assisting in developing an efficient and effective computer and communications infrastructure via evolution to an open systems common user utility.

In order to provide the required technical support, the Center for Information Management will establish programs in data management, information systems engineering, infrastructure engineering and standards. A planning, integration and customer support program area will be initiated to provide planning, coordination among the other program areas and to ensure responsiveness to customer requirements. Each program area is discussed in the following sections.

A. Data Management.

The Center for Information Management is being established as the Executive Agent for the DoD Data Administration Program. Included in the data management program is technical support and common methodologies and tools for functional information managers. Near term high priority tasks for this program area are discussed in the following

paragraphs. ¹

1. The highest near-term priority is to participate actively in the scoping, transition planning and early implementation effort led by the Army. The task also includes defining and planning the organization and early activities necessary to assume responsibilities being executed in the interim by the Department of the Army. An example high priority activity is the definition of the DoD Information Repository. This task has to be coordinated closely with the Army's Data Element Dictionary effort, to ensure consistency and compatibility in both directions. An initial implementation of the populated IRDS will be available in October 1992.
2. In the functional information management area, a high priority is to plan the transition of the management and support of the functional groups from DCA to the functional community. In addition, the Center must provide the manpower support for the functional integration agents required by the DDI. In keeping with the customer-orientation, it is necessary to develop capabilities for assisting functional customers with information management tools and methodologies. That includes assisting in developing process and data models, applying business case tools and methodologies and assisting in developing commercial benchmarks for comparing performance. Also important is to support cross-functional integration across different functional areas and perform a quality assurance function to ensure consistency in the modeling efforts across functional areas. Transitioning the management of functional groups will be completed in November 1991.
3. A third priority is the development and publication of DOD 5000.11-M. This manual will establish guidelines, practices and procedures for data management and will

¹ The Army has been asked to serve as the temporary Executive Agent, with the view of transitioning the Executive Agent role to DCA in 12 months.

serve as the basis for long-term implementation of a robust Data Administration program. Early emphasis will be placed on data element standards. This chapter will be issued for coordination in June 1991.

- B. Information System Engineering. This program will focus on improving the efficiency and effectiveness of applications software. It will develop and maintain an information systems architecture to promote standardization and interoperability, where required, across functional boundaries. This program will also establish software engineering guidelines and implementation practices, and it will manage tools applied throughout the entire software life-cycle. Finally, the program will assess the status of software engineering practices and products across DoD to prepare and implement new approaches.
1. The first priority is to develop a top-level integrated information systems architecture and plan. The architecture and plan will provide requirements for development and resource needs and will address transition to fee-for-service. Key near-term tasks include: establishing a DoD-wide information systems architecture; working with the Services/Agencies to develop a transition plan to evolve DoD's current information systems to the target architecture; and providing mechanisms to ensure compliance with the architectural guidelines and standards. This effort will also support the different functional managers in their evolution toward common systems by providing cross-functional technical integration of information systems including reusable utility components, developing standard interfaces for data exchange, and ensuring interoperability of developed systems. A draft DoD information system architecture and transition plan will be developed by October 1992.
 2. The next near-term priority is to establish a program to evaluate and improve the cost effectiveness of current DoD software engineering practices, support environments, and information systems. This will provide the baseline for decisions and improvements. Key near-term tasks will include: developing common DoD software engineering metrics for all stages of the

software life cycle; planning for monitoring and assessing the status of the software process in DoD; benchmarking the commercial world for comparisons; and working with the Services/Agencies to assess the quality, maintainability and cost of the existing DoD software inventory. An initial assessment capability will be provided by October 1991 and performance metrics by October 1992.

3. The third priority is to provide software engineering tool support to the entire software life cycle. Key immediate tasks include: integrating the efforts of the Air Force Systems Support Center with those of CIM and planning for their transition to the Center; developing criteria for assessing the utility of existing development environments and tools; performing assessment of environment and tools based on productivity measures; and developing an acquisition approach or vehicle for a DoD tool set. With the assistance of the Air Force Standard System Center, an acquisition approach will be provided by September 1991.

- C. Infrastructure Engineering. This program will promote a DoD-wide computer and communications open systems infrastructure that is efficient and effective. In the near-term, this program will provide methodologies for developing an open system architecture, and will establish a baseline of DOD infrastructure resources. In the mid and long term, this program will benchmark the efficiency and cost-effectiveness of the existing infrastructure and plan for a DoD open system information utility that supports DoD Information System requirements and fee-for-service operations. This utility will evolve over the next decade.

There are three basic components of an evolution to an efficient and effective DoD-wide computer and communication infrastructure operated on a fee-for-service basis. Each of these will be addressed with near-term program initiatives.

1. As the highest priority, the program will work with the Services and Agencies to establish procedures and

mechanisms to monitor the current status of DoD's hardware and communications capabilities. This effort will capture the performance and cost of the current systems as a basis for identifying opportunities for improvements. A plan for providing a DoD infrastructure baseline and benchmarks of performance, which emphasize distributed execution, will be developed by Dec. 1991. An initial baseline and performance report will be produced by July 1992.

2. A secondary priority is to establish an open-systems target architecture and evolution strategy for initial use in DoD in FY92 and beyond. The architecture will employ the standards established through the DoD-wide standards program. The Center will help institutionalize this approach across DoD by providing common tools, training, and technical advice. The Center will enable the implementation of the open architecture through promoting common acquisitions. The payoff will be an agreement among the MILDEPs on standards and features to be acquired on all new ADP acquisitions, thus promoting interoperability and competition and reducing the costs of diversity. Initial architecture guidelines and standards will be provided by Jan. 1992.
3. The third priority is to assess options and plan for long term, continuing evolution to a common DoD computer and communications utility that will operate in a competitive, fee-for-service environment. This utility will offer open environments for new applications and legacy environments to support older software. This utility will provide quality service at competitive rates comparable to the best in commercial practice while offering superior security and disaster recovery. Initial efforts will involve: evaluating options based on overall DoD cost, performance and schedule; specifying the utility services to be provided; and planning the utility implementation. These activities will be coordinated with the functional groups, consolidation efforts, and industry. An options analysis and initial recommendation will be provided by September 1992. A strawman utility with a plan for its implementation will be provided by

September 1993.

D. Standards. This program will manage the development, establishment, maintenance, and implementation of information technology standards for the DoD; promote DoD interests in federal, national, international, and other standards related bodies in coordination with the National Institute of Standards and Technology (NIST); identify external standards and their development; determine DoD standards requirements and take appropriate steps to provide the needed standard; and provide coordination among all three information technology standards areas (Information, Information Processing and Information Transfer). This plan does not address the resources required to provide functional data management support for C3I systems and the resources required to manage the Information Transfer area. Resources for information transfer are provided by a different program area.

1. Develop a close working relationship with the NIST to ensure it addresses DoD needs and represents DoD's positions in external standards bodies. An initial framework for cooperation between the NIST and DCA will be established by August 1991. A memorandum of agreement formalizing the relationship will be finalized by December 1991.
2. Place emphasis on the area of information processing standards. It is intended that the Information Processing Standards for Computers (IPSC) standardization area will be transferred to the DCA by July 1991. An information processing standards steering group will be chartered by October 1991. Major non-DoD information processing oriented standards bodies will be cataloged and an initial list of designated DoD representatives prepared by January 1992.
3. Focus on the development and configuration management of information processing standards profiles to satisfy user needs. Identify areas in the information technology architecture where standards would provide the most assistance in satisfying user needs. Existing standards catalogs will be updated by March 1992 and

analyzed to determine their applicability by April 1992. An initial prioritized list of standards deficiencies will be developed by May 1992. Based on the deficiencies, key standards projects will be defined by July 1993. Standards acceptable for DoD use will be documented in initial standards profiles by August 1992.

4. Work with the Services and Agencies to develop and institutionalize a disciplined standards process for DoD. This process will ensure DoD requirements are identified, prioritized and channelled to the proper standards bodies; that there are single focal points in DoD for specific standards; and that DoD centralizes its involvement with standards bodies, industry and the R&D community. The goal is to accelerate development and implementation of standards and use of commercial products. An overall plan for an improved process will be provided by November 1991. The requirements process will be put in place initially by January 1992 and a program to leverage DoD's participation in all standards efforts will be presented in June 1992.

5. Transition the Army's standard data element dictionary to DCA. Maintain the DoD data dictionary and be the proponent for DoD data interests at non-DoD standards bodies. DCA will provide 24 hour per day on-line access to the data dictionary; respond to users' operational needs, complaints and questions regarding the dictionary and its capabilities; ensure hardware/software and data base security; maintain supporting files and software; and generate and distribute required reports and documentation.

- E. Program Planning, Integration, & Customer Support. This program will monitor, guide, and coordinate the technical activities of the Center program areas, and associated DoD efforts, and provide a focal point for Center customers. This will ensure an integrated, complete, and consistent Center program within the context of a top-level information management methodology and an integrated view across the Center's program areas. This program area will ensure that providing responsive service to customers is a major emphasis of the entire CIM program. There are three

key elements that will help integrate activities and products.

1. The Center's Program Plan represents a long-range framework for the entire range of Center activities. It also provides near-term focus on critical tasks and products. As another early planning initiative, the Center will work closely with OSD to establish a DoD-wide fee-for-service strategy. The program planning activity will develop the Center's Strategic Plan incorporating inputs from senior DoD managers and outside advisors. A Strategic Plan will be developed by February 1992.
2. The Integration activity has two high priority tasks. The first is to develop a top-down information management life-cycle model and methodology that integrates business case analysis, process modelling and data modelling, information systems life-cycle methodologies, and infrastructure design and open systems migration methodologies. The second task is to perform top level integration across the Center's program areas and to interact with external activities of the Services and Agencies to ensure consistency, completeness and adherence to information management policy, goals and objectives. An example activity would be developing an integrated, coordinated approach to security. An initial information life-cycle methodology will be developed not later than January 1992.
3. Finally, the Customer Support activity will be the single focal point for customer interaction. Activities include determining customer requirements, responding to customer requests, and ensuring customer satisfaction under a total quality management concept. A set of liaison procedures will be established by August 1991. An initial survey of customer needs will be conducted by November 1992. Brochures and other media for informing customers about Center services will be issued throughout FY92.

The Center is focused on producing value added products and services for its customers and will expand its capabilities and

services carefully and deliberately in accordance with the overall DoD information management philosophy. This plan captures the programmatic direction of the Center. This programmatic direction will be corrected continually and evaluated to support the overall DoD information management program.

Although the plan is comprehensive, there are additional areas for the Center that may deserve further exploration, such as a centralized acquisition function for DoD. These will be examined as part of the Strategic Planning function.

The following activity/milestone chart (Figure 1) depicts the summarized key initiatives and aligns them with the anticipated dates for delivery of the products or services.

Figure 2 provides the manpower and dollar requirements to support the Center for Information Management program.

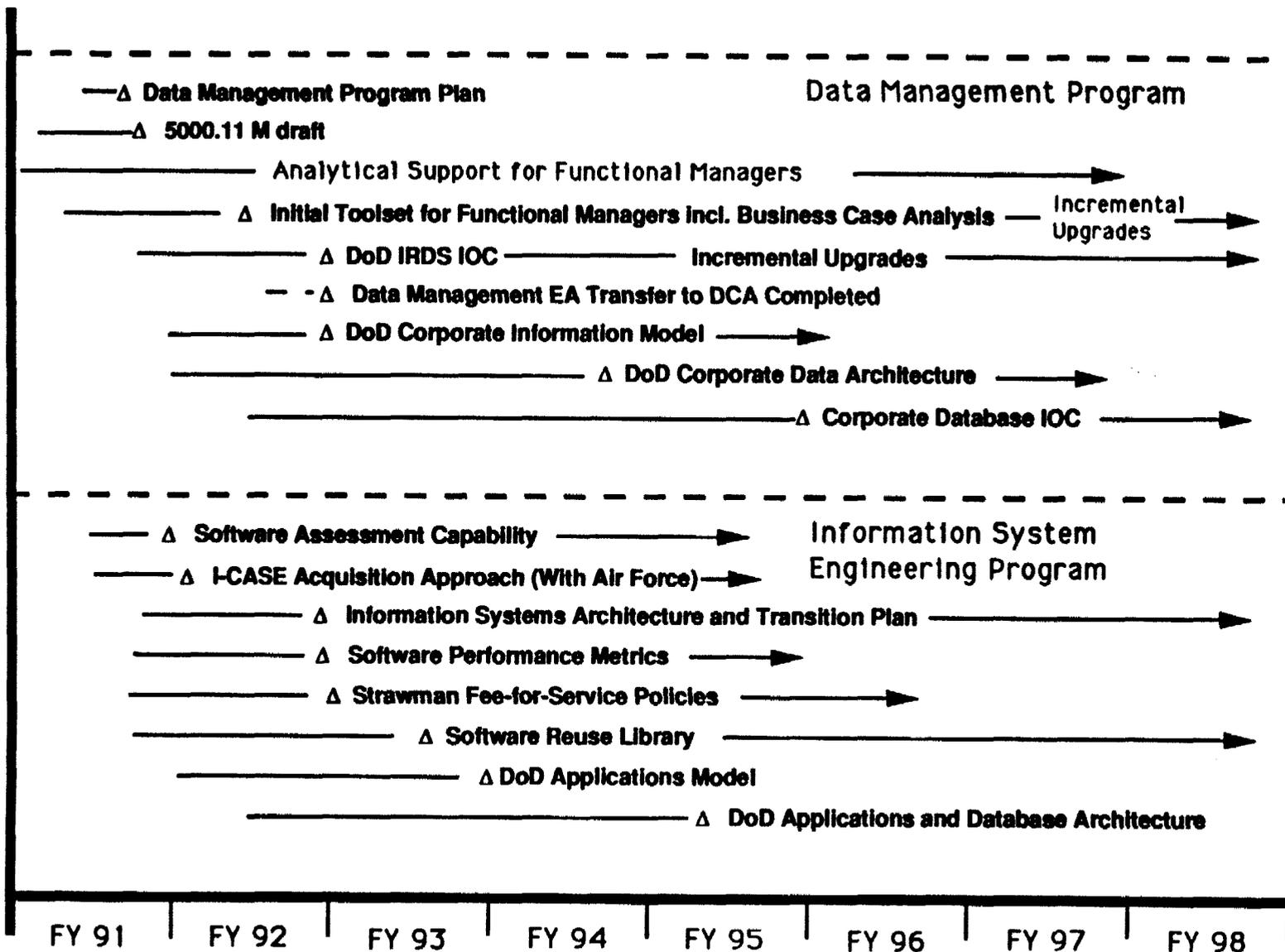


Figure 1. Schedule

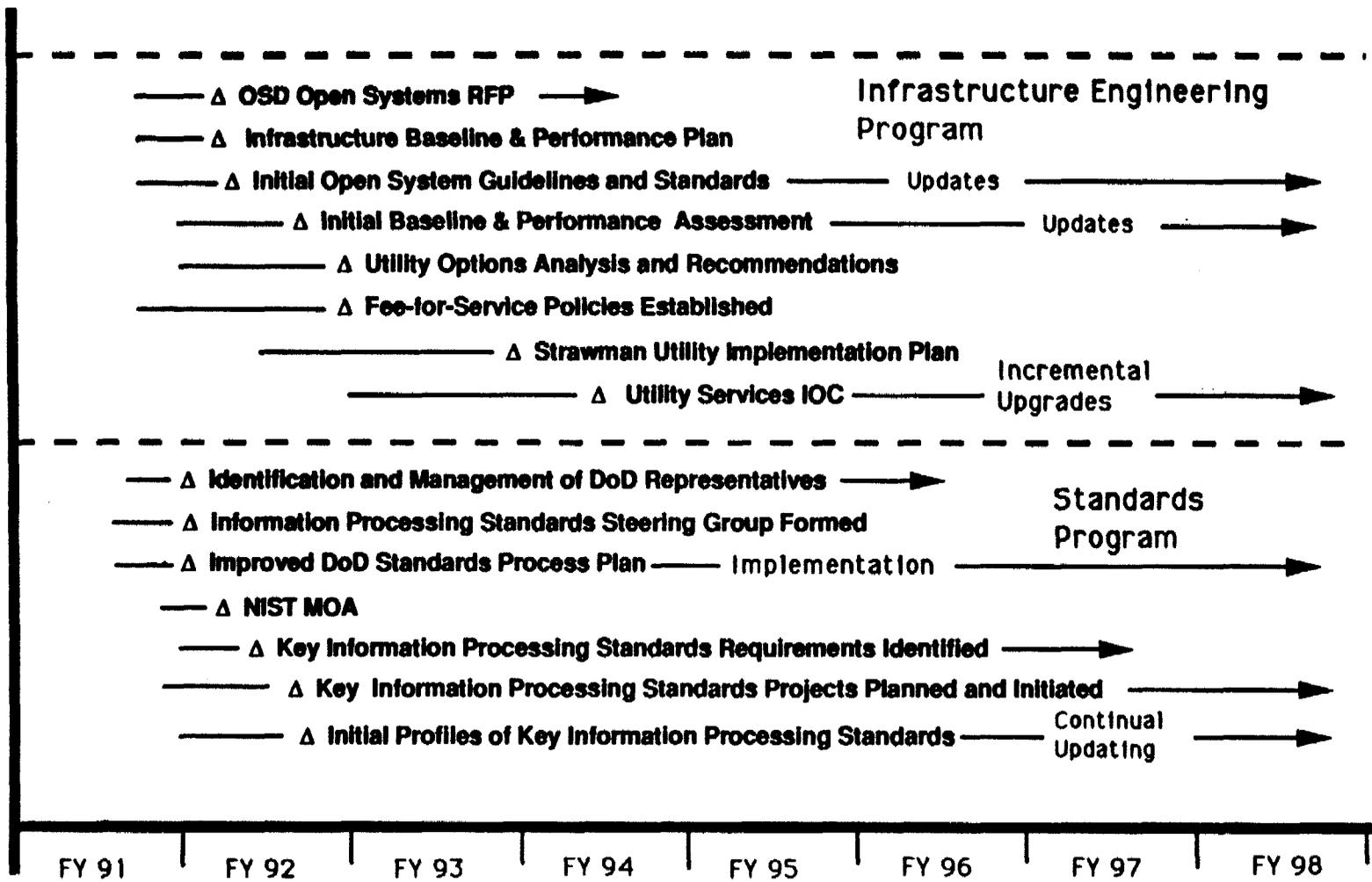


Figure 1. Schedule (Continued)

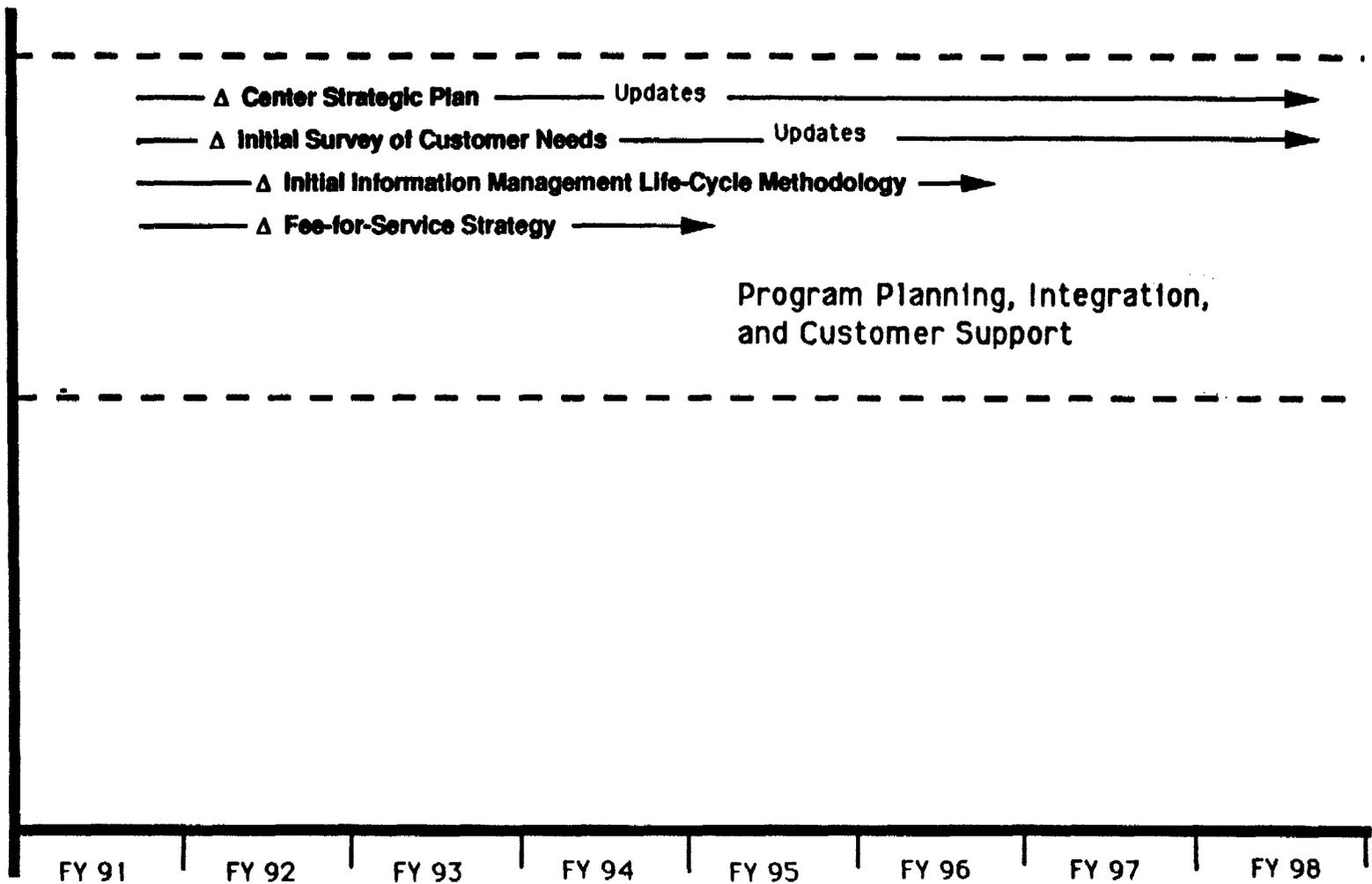


Figure 1. Schedule (Concluded)

CENTER FOR INFORMATION MANAGEMENT RESOURCE SUMMARY

(\$000)

	<u>FY 1992</u>	<u>FY 1993</u>	<u>FY 1994</u>	<u>FY 1995</u>	<u>FY 1996</u>	<u>FY 1997</u>	<u>FY 1998</u>	
<u>O&M</u>	<u>35,869</u>	<u>45,759</u>	<u>47,641</u>	<u>49,499</u>	<u>51,243</u>	<u>53,311</u>	<u>55,111</u>	
CIVILIAN PAYROLL	17,380	27,708	28,928	30,128	31,344	32,600	33,816	
CONTRACTS	10,950	11,356	11,765	12,177	12,591	13,019	13,441	
OPERATING COSTS	7,339	6,695	6,950	7,194	7,308	7,692	7,854	
<u>PROCUREMENT</u>	2,100	3,000	3,572	4,145	4,718	5,293	5,866	
			(END STRENGTH)					
<u>MANPOWER</u>	<u>414</u>	<u>497</u>	<u>500</u>	<u>500</u>	<u>500</u>	<u>500</u>	<u>500</u>	
CIVILIAN	350	433	433	433	433	433	433	
MILITARY	64	64	67	67	67	67	67	

FIGURE

APPENDIX A: ASSIGNED DCA FUNCTIONS

DIRECT RESPONSIBILITIES FROM DMRD 924:

1. Development, implementation and enforcement of architectures and standards for computers data bases and networks.
2. Planning and integration of telecommunications and information processing technical requirements.
3. Planning future consolidation of processing centers and software design activities into a DoD support utility.

DIRECT RESPONSIBILITIES FROM IMPLEMENTATION PLAN FOR CORPORATE INFORMATION MANAGEMENT:

4. Support information management principles and programs.
5. Support information management technical implementation.
6. Perform such functions as:
 - a. Support the information technology standardization area of the Defense Standardization and Specification Program.
 - b. Assist in the production of process and data models.
 - c. Help to identify alternative approaches, methods and tools for the development of process models and data models.
 - d. Develop DoD standard information technology architectures.
 - e. Assist in the development, coordination and execution of the DoD data administration program and provide the technology support to achieve the objectives of that program.

- f. Assist in assessing the efficiency and effectiveness of information services in DoD.
- 7. Assume functions of Computer Aided Logistics Support (CALS) Test Network and the technical support elements of the Defense Logistics Agency (DLA) Electronic Data Interchange (EDI) activity.
- 8. Provide backbone telecommunications and Information Management equipment, technical standards, system engineering, and architectural services.
- 9. System operations.
- 10. Funds Information Management and telecommunications programs (Defense Industrial Fund).
- 11. Provides common user equipment and software.
- 12. Software design activities.

ASSOCIATED FUNCTIONS AS DESIGNATED SUPPORT ACTIVITY OF OSD OFFICES:

- 13. For Deputy Director, Functional Information Management
 - a. Establish, manage, and oversee on a day-to-day basis, the operation of the CIM Functional Groups chartered to identify and document functional requirements.
 - b. Support the Information Policy Council and the CIM Functional Steering Committees to facilitate implementation of the products of the CIM Functional Groups.
 - c. Formulate and maintain a methodology for identifying and documenting DoD functional requirements.
 - d. Perform supporting functional integration, configuration management, and quality assurance actions in support of CIM processes and products.
- 14. For Deputy Director, Information Management Policy, Methodologies, & Data Administration

- a. Serve as Executive Agent for DoD Data Administration Program.
 - b. Provide common definition and structure of data within DoD, coordinating among DoD components.
 - c. Provide data management guidelines and ensure availability of products for effective and efficient use of data.
 - d. Represent DoD on matters pertaining to development and adoption of data standards to other Government agencies, external standards bodies and industry.
 - e. Develop, operate and maintain the DoD data administrative support capability (DoD data dictionary, data models, etc.) which is easily accessible to all DoD components and users.
15. For Deputy Director for Information Technology
- a. Define and develop guidelines for information architectures and standards for computer and communications infrastructure.
 - b. Plan and oversee implementation of IT architecture.
 - c. Oversee implementation of standards in IT infrastructure.
 - d. Propose DoD standards and methodologies for information systems engineering tools.
16. For Director, Performance Assessments
- a. Develop standard cost and performance tools and models which will assist in measuring the return on investment.
 - b. Develop and conduct a program to perform management assessments.
17. For Director, Systems Oversight

- a. Develop and conduct a program to compile AIS data and statistics and maintain a quarterly tracking system for all major DoD AISs.
- b. Monitor all DoD components for compliance with IRM policies and procedures.

18. For Director, Information Services

- a. Develop a methodology for identifying key management indicators for information Processing centers.
- b. Establish a data base of all DoD AISs.
- c. Collect, analyze and present data on existing DoD information processing centers.

19. For Director, Information Management Resources

- a. Maintain an ADPE inventory data base and provide management analyses to the DDI and DASD(IS).
- b. Develop and conduct a program to compile trend analyses and projections on AIS, ADP and fiscal resources.

APPENDIX B: EXECUTIVE LEVEL GROUP GOALS AND STRATEGIES

Four goals are identified in the Plan for Corporate Information Management for the Department of Defense, published by the Executive Level Group for Defense Corporate Information Management, 11 September 1990:

1. Process models that document new and existing business methods are developed by FYxx.
2. Standard data definitions are available for the Department's business and mission areas by Fyxx.
3. A set of common information systems for each function, built upon standard data and business methods, is implemented by Fyxx.
4. An open systems computing and communications infrastructure, transparent to the information systems that stand upon it, is implemented by Fyxx.

To achieve the four goals, eight strategies are identified:

1. Develop process models that document new and existing DoD business methods.
2. Develop data standards with emphasis on data modeling.
3. Develop and implement a set of cost-effective, common information systems based on process models and data standards.
4. Develop and implement a communications and computing infrastructure upon the principles of open systems architecture and systems transparency, to include but not be limited to:
 - Operating Systems
 - Database Management
 - Data Interchange
 - Network/Communications Services
5. Manage expenditures for information, regardless of the

technology that is applied.

6. Institute life-cycle management methodology that addresses process models, data models, updated system development and acquisition methodologies, and educate the user and technical communities on its use.
7. Establish measures of information management effectiveness and efficiency.
8. Educate Department personnel in the concepts of corporate information management and the plans to apply it.