FINAL REPORT OF THE ADAPT TASK FORCE

RECOMMENDATIONS FOR THE COMPLETION OF THE APPLICATION BENEFIT DELIVERY AUTOMATION PROJECT (ADAPT)

TO THE GOVERNOR AND
THE GENERAL ASSEMBLY OF VIRGINIA

HOUSE DOCUMENT NO. 10

COMMONWEALTH OF VIRGINIA
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COMMONWEALTH of VIRGINIA

August 8, 1996

The Honorable George Allen
Governor of Virginia

The Honorable Stanley C. Walker
Co-Chairman, Senate Finance Committee

The Honorable John H. Chichester
Co-Chairman, Senate Finance Committee

The Honorable Yvonne B. Miller
Chairman, Senate Rehabilitation and Social Services Committee

The Honorable V. Earl Dickinson
Chairman, House Appropriations Committee

The Honorable David G. Brickley
Chairman, House Health, Welfare and Institutions Committee

The Honorable W. Tayloe Murphy, Jr.
Chairman, Joint Legislative Audit and Review Commission

Dear Governor and Chairmen:

The General Assembly mandated the creation of the ADAPT Task Force in House Bill 29. The charge given to the ADAPT Task Force was to develop a recommendation for completion of an automated eligibility determination system for Food Stamps, Aid to Families with Dependent Children (AFDC), and Medicaid. In accordance with this mandate, the ADAPT Task Force was convened and has been working toward the goal of recommending a viable and cost effective strategy for delivering automated eligibility determination and case management to local departments of social services.

Attached is the final report of the ADAPT Task Force which recommends that the Commonwealth continue with ADAPT automation moving in a controlled and orderly manner away from mainframe dependency.

The ADAPT Task Force has reviewed and analyzed all relevant ADAPT information and has come to this recommendation confident that it can produce a reliable, cost effective solution that will serve the local need for eligibility processing and benefit calculation while allowing movement toward the future goals of automation in Virginia.

The ADAPT Task Force trusts that this recommendation will be helpful in reaching a decision and appropriating resources for this automation effort.

Sincerely,

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Council on Information Management

Mr. W. E. Endicott
Department of Information Technology

Ms. Jeanine LaBrenz
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Ms. Delores Veal
Newport News Department of Social Services

ADAPT Task Force

Final Report

Final Recommendation

This is the recommendation of the ADAPT Task Force. The ADAPT Task Force was established by House Bill 29 and given the charge of reviewing all relevant ADAPT material and recommending to the Governor and the General Assembly a viable and cost effective strategy for delivering automated eligibility determination and case management support to local departments of Social Services.

Final Report of the ADAPT Task Force
Report Summary

The Application Benefit Delivery Automation Project (ADAPT) is an umbrella project which included enhancements to the Virginia Client Information System (VACIS), implementation of the Multiple Systems Inquiry (MSI) and the Multiple Systems Update (MSU), a long-term plan for social service automation, and development of the automated system for eligibility determination, benefit calculation, and case management for three major social services programs -- Aid to Families with Dependent Children (AFDC), Food Stamps, and Medicaid. The Department of Social Services (DSS) initiated the project to help local social services agencies process client applications for benefit programs more efficiently and effectively.

As a part of the automation effort, local social services agencies have begun, and some have completed, a major re-engineering of the benefits application process. The new process has included the adoption of a "one client-one worker" approach to application processing. This approach is highly dependent on an automated system such as ADAPT. With proper support in the form of automation, the new processes used in local agencies promise improved service to clients and more efficient, effective processing of applications for benefit programs.

Background

The ADAPT project began in 1991, and was to have been completed by March 1993. In November 1992, the project was expanded to include the development of a rule-based system for eligibility determination and benefit calculation. By December of 1995, only the Food Stamps portion of the system had been deployed in 10 pilot agencies. Because of questions raised about the costs and viability of the system, the Secretary of Health and Human Resources directed the Commissioner of Social Services to freeze development and implementation of the ADAPT system.

In response to the suspension of the ADAPT project, the 1996 General Assembly established an ADAPT Task Force to develop a viable, cost effective strategy for completing an automated eligibility determination and case management system for local social services agencies. The Task Force defined its mission as: "to review and evaluate all relevant data and recommend the best approach to complete the development of an automated rule-based eligibility/case management system for Food Stamps, AFDC and Medicaid."

Since its first meeting on June 14, 1996, the ADAPT Task Force has met 17 times; reviewed prior reports and evaluations of the ADAPT project; directed additional research by DSS, the Department of Information Technology (DIT), and the consulting firm of Booz-Allen and Hamilton; and evaluated alternative strategies for completion of the ADAPT project. This report completes the work of the Task Force as directed by the 1996 Appropriation Act, and recommends a specific course of action for completion of the ADAPT system. In addition, the report makes several recommendations for improvements in the leadership and management of the ADAPT project.

Functional Requirements for ADAPT

The Task Force identified a number of functional requirements for the ADAPT system, which are essential for any rule-based system. These include:

- capacity to process expected transaction loads with reasonable response times,
- system reliability,
- flexibility in database and program design,
- integrity of data,
- availability of data for reporting, and
- connectivity to other automated systems.

In its search for a strategy to complete an automated system for local agencies, these requirements formed the foundation for all of the alternatives considered by the Task Force.

The Task Force Decision Process

In carrying out its charge from the General Assembly to select a viable and cost effective strategy for automating the eligibility determination and case management process in local social services agencies, the Task Force developed a systematic approach for evaluating alternative strategies. The Task Force was assisted in the evaluation by the consultant hired by DSS, as well as by staff from DSS and DIT. The approach used by the Task Force had five basic steps:

- documentation of the current state of development for the ADAPT system;
- identification and development of potential alternative strategies for development of the system;
- selection and prioritization of criteria for evaluating the alternative strategies;
- development of cost estimates for each alternative strategy; and
- scoring of the alternative strategies using the criteria.

Each of the steps in the process used by the Task Force is summarized below.

Documentation of the Current State of the ADAPT System. The first effort of the consultant hired by DSS was to document the current state of development of the ADAPT system. This step was necessary to determine if the current system was far enough along in development to be a viable alternative strategy for completion of a system within a reasonable timeframe.

The consultant's initial report on the status of the system was reviewed by the Task Force, which requested significant modification and revision. Subsequent drafts of the current status report were also reviewed in detail by DSS technical and functional staff, and further refinement of the analysis was made.

At the request of the Task Force, the consultant interviewed staff from the 10 pilot agencies currently using the Food Stamp component of ADAPT. The consultant also made site visits to the four original pilot agencies. The consultant's finding from this effort was that the existing Food Stamp component of ADAPT provides the necessary functionality for local staff and performs as expected. This confirmed a similar finding by the Joint Legislative Audit and Review Commission (JLARC) in its review of the ADAPT project.

The final report of the consultant was determined by the Task Force and DSS staff to be an accurate appraisal of the current system. The report confirmed that completion of the current ADAPT system could be considered by the Task Force as one of the alternative strategies.

Identification and Development of Alternative Strategies. The second step in the process was to identify and develop alternative strategies to be evaluated by the Task Force. As with the documentation of the current system, the DSS consultant developed the first draft of the alternative strategies. The consultant developed four alternatives which were intended to be a broad range of strategies, though not a comprehensive set of all possible alternatives.

The four initial alternatives suggested by the consultant were modified based on input and direction from the Task Force. After review of the range of alternatives provided by the consultant, the Task Force identified one additional alternative strategy to be researched and documented by the consultant for evaluation by the Task Force.

The five alternatives evaluated by the Task Force were:

Alternative 1: Current Mainframe System. The first alternative is to complete the current system by implementing the AFDC and Medicaid components of the system in MAPPER, and do all processing on the DIT Unisys mainframe.

Alternative 1a: Mainframe with Companion Unix Server. The second alternative, which is the one recommended by the Task Force, is to complete the current system by implementing the AFDC and Medicaid components in MAPPER, and run most processing on the Unisys mainframe with the exception of the Eligibility Determination/Benefit Calculation (ED/BC) modules. The ED/BC modules would be "off-loaded" to a Unix server operated by DIT. This would reduce mainframe processing requirements. In the future, additional modules could be migrated to the Unix server.

Alternative 2: Unix Server with MAPPER. The third alternative is to move the current system from the Unisys mainframe to a Unix server running MAPPER. The MAPPER database structure and code from the current system would be maintained in the new MAPPER for Unix environment. The AFDC and Medicaid components would be developed and implemented in the Unix MAPPER environment.

Alternative 3: Unix Server with SQL. The fourth alternative is to migrate the existing data and program code to a Unix server with an SQL (Standard Query Language) compliant database. Automated tools would be used to convert the MAPPER database to an SQL database. AFDC and Medicaid would be developed and implemented in the new environment.

Alternative 4: Distributed Client Server. The final alternative is to develop the Food Stamp, AFDC, and Medicaid components in a completely new environment, developing new application program code. Automated tools would be used to convert some of the existing data in ADAPT. To implement this system, 10 separate Unix servers distributed across the state would be used for processing.

Selection and Prioritization of Evaluation Criteria. The next step in the process was for the Task Force to select criteria for evaluating the five alternative strategies, and to determine which of the criteria would be given greater weight in the decision process. Initially the Task Force used a set of 16 criteria as recommended by JLARC in its evaluation of the ADAPT project. The 16 criteria were ranked, and the first eight were selected for use in evaluating the alternatives. The eight criteria were weighted in terms of importance by each member of the Task Force using a 100 point scale, and an average weight (number of points) was calculated. The points were used to score each of the five alternative strategies.

The eight criteria and the points assigned by the Task Force are:

- System Functionality (23 points): The alternative meets all functional requirements established for the automated system.

- Cost (16 points): The alternative has lower estimated costs.

- Time to Implement (13 points): The alternative provides the shortest time for completion of development and implementation of the system in local agencies.

- Organizational Impact (13 points): The alternative minimizes the need for changes to the benefits application and eligibility determination process at the local social services agencies.

- Maintainability (9 points): The alternative results in a system which can be modified

easily over time to account for changes in policy.

- Personnel (9 points): The alternative requires minimal personnel for development, implementation, and maintenance.

- Reliability (9 points): The alternative results in a system with a minimum of "downtime" and ensures that data are accurate in an on-line, real-time environment.

- Ease of Use (8 points): The alternative results in a system which is logical and easy to use by eligibility workers in processing applications for social services benefits.

Development of Cost Estimates for Each Alternative. The DSS consultant, with assistance from DSS technical staff and DIT staff, developed estimated costs to implement each alternative. The costs estimates are for completion of the system, and for the first five years of processing. Costs include purchase of hardware and software, development and/or conversion of application code, conversion of data, training of staff, maintenance of the application, communications, computer usage and operations, and systems maintenance.

Alternative 1 requires upgrading the Unisys mainframe from four to ten processors at a cost of approximately $10.6 million. Alternative 1a requires five new processors for the Unisys mainframe at a cost of about $8.6 million. Alternatives 1a, 2, 3, and 4 require significant investments in server hardware and software ranging from $2.5 million to more than $15.3 million. These hardware costs are included in the estimates for the alternatives where appropriate.

The cost estimates were revised several times based on input and direction from the Task Force. It is emphasized that these cost estimates provided the basis for the relative evaluation of the alternatives and may not reflect the actual development and operational costs of the project. DSS will need to refine these estimates and closely monitor actual costs as the project progresses.

An essential element of the costing of the alternatives was the inclusion of changes (reductions or increases) in costs to other DSS automated systems as a result of increased processing on the DIT Unisys mainframe in alternatives 1 and 1a, and greatly reduced processing on the mainframe with alternatives 2, 3, and 4. The net estimated cost of each alternative, including development and five years' operation, is shown below:

Net Cost of ADAPT Alternatives
Five Year Life Cycle in Millions

Alternative	1	1a	2	3	4
Net Cost	$27	$26	$31	$45	$46

Though not key in the evaluation of the alternative, the Task Force also requested information on the anticipated cost impact of the alternatives on other agencies in state government. Analysis by DIT showed that alternatives 1 and 1a reduced DIT mainframe processing costs for other agencies by about $2.5 million annually. However, alternatives 2, 3, and 4 increased DIT costs for other agencies by about $1.7 million annually.

Scoring of the Alternatives Using the Evaluation Criteria. The DSS consultant provided an evaluation of how well the alternatives met the evaluation criteria. Based on the consultant's work, the members of the Task Force individually scored the five alternatives using the evaluation criteria. Alternatives with higher scores were considered those which better met the criteria established by the Task Force. The total scores for the five alternatives are shown in the table below:

Scoring of ADAPT Alternatives

Alternative	1	1a	2	3	4
Score	89	90	82	76	72

Recommended Alternative

Recommendation (1). Based on the scoring of the alternative strategies, including the estimated net costs, the ADAPT Task Force recommends that eligibility automation continue using alternative strategy 1a (Mainframe with Companion Unix Server).

This alternative uses the Unisys mainframe with MAPPER for most processing, with the ED/BC processing off-loaded to a Unix server at DIT, also using MAPPER. This solution meets all of the requirements set by the ADAPT Task Force, while reducing the system's dependence on the mainframe.

This recommendation is framed by the practical considerations facing the Task Force – specifically, that it was not practical to select the most technically advanced solution without wasting costly development efforts which produced the system now in use by the pilot agencies. Moreover, while this solution might not be the most desirable if this were a new development effort, it is the best practical approach given current circumstances.

This alternative provides a number of advantages in addition to those quantified in the evaluation criteria. It provides a greater level of flexibility by incorporating a clear path for migration of the ADAPT system from a mainframe environment to a server-based environment. This is consistent with the DSS strategic plan for information systems. While offering a path for migration to server technology, it avoids the risks associated with the wholesale, rapid migration of a mainframe system to a client-server platform. The recommendation of the Task Force is in large part a practical solution which balances functionality, system costs, timeliness of implementation, and flexibility to migrate the system to newer technologies when appropriate.

Other Task Force Recommendations

In reviewing prior reports on the ADAPT project completed by various consultants and by JLARC, the Task Force noted numerous concerns related to project leadership and management. To address these concerns and ensure that the APAPT project is implemented in a sound manner, the Task Force recommends the following corrective actions:

Recommendation (2). The Department of Social Services should work with the private sector to complete the ADAPT project by contracting with a qualified vendor for management of remaining application development, worker training, and deployment of the system in local social services agencies. This effort would enhance Virginia's ability to leverage state and private expertise. The Department would retain responsibility for the functional definition of the system.

Recommendation (3). The Department of Social Services should develop and execute a management plan to ensure that adequate staffing and other resources are available for the completion of ADAPT.

Recommendation (4). The Department of Social Services should improve project accounting practices, including the assignment and reporting of costs to appropriate Advanced Planning Document (APD) tasks.

Recommendation (5). The Governor and the General Assembly should continue the ADAPT Task Force to provide ongoing oversight of the development and statewide implementation of the ADAPT system. Funding for the activities of the Task Force should be drawn from existing administrative appropriations to the Department of Social Services.

Recommendation (6). The Secretary of Health and Human Resources should establish a systems integration committee with representatives from each state

agency that interfaces with ADAPT and other social service systems.

Recommendation (7). The Secretary of Health and Human Resources should establish a work group, composed of staff from the Department of Social Services and the Department of Medical Assistance Services, for future development of Medicaid policies and procedures.

Recommendation (8). The Department of Social Services should require the ADAPT contractor to identify and employ, where appropriate, automation techniques used successfully in other states.

Recommendation (9). The Department of Social Services should document its business objectives and practices prior to the solicitation of a contractor for completion of the ADAPT system.

Recommendation (10). The Department of Social Services should require the ADAPT contractor to employ a development methodology which contains clear milestones and deliverables tied to payment under the contract.

Recommendation (11). The Department of Social Services should ensure that project planning for ADAPT is comprehensive, sets out necessary resources for completion of ADAPT, and includes regular progress reporting to the Secretary of Health and Human Resources, the General Assembly, and relevant federal agencies.

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MISSION STATEMENT

The ADAPT Task Force shall review and evaluate all relevant data and recommend the best approach to complete the development of an automated rule-based eligibility/case management system for Food Stamps, AFDC and Medicaid. Provide a report to the Governor and the General Assembly including evaluation criteria and decision rationale.

Mandates

Clarence H. Carter, Commissioner of the Department of Social Services (DSS), convened the ADAPT Task Force on June 14, 1996. The Task Force was mandated by House Bill 29 (HB29) and is comprised of:

- Representatives from four of the ten agencies currently using the Food Stamp component of the ADAPT rule-based system;
- A representative from a non ADAPT agency;
- A representative from the Council on Information Management (CIM);
- A representative from the Department of Information Technology (DIT);
- A representative from the Department of Social Services (DSS);
- A representative from the Joint Legislative Audit and Review Commission (JLARC);
- A representative from the Department of Medical Assistance Services (DMAS).

Additional support staff worked at the guidance of the Task Force to secure information and provide logistical support as needed. (Appendix B)

The Task Force members worked as a team. All issue resolutions, recommendations and decisions made were accomplished through a consensus approach to the extent possible. The primary focus throughout the Task Force meetings and research efforts was the need to make a recommendation that will provide the Commonwealth with cost effective and efficient automation of the eligibility determination process in local agencies.

While the focus was on automation support for the eligibility determination process, the Task Force addressed many other issues. These issues include:

- The diversity of local government technology strategies and the need for them to co-exist with the state and with each other;
- State, local government and local social services agency staffing;
- Future migration of Welfare Reform automation to ADAPT and the ability to interface with VEC and other agencies supporting Welfare Reform;
- Industry (public and private sector) standards;
- Telecommunications and future growth;
- Building a foundation for continued coordination and support among the state agencies, local governments and local social services agencies.

Working with these variables, the ADAPT Task Force quickly reached consensus on the need for timely automated support which will provide full eligibility determination functionality (the number one priority of the ADAPT Task Force) in Food Stamps, Aid to Families with Dependent Children (AFDC) and Medicaid. Overall organizational impacts and several critical components that define the cost of any solution chosen were also high on the list of priorities.

Context

The Application Benefit Delivery Automation Project (ADAPT) was a response to a complex set of pressures felt by both state and local social services agencies. The effort to automate and re-engineer eligibility practices in Virginia was a state/local collaboration focused on addressing caseload growth and the constant change and increasing complexity of federal policy in AFDC, Food Stamps and Medicaid. The automation effort had to be weighed against and was limited by the realities of shrinking state and local resources, expanding workload and changing expectations for local eligibility workers.

It is within the context of expanding workload and shrinking resources, that the Task Force set its Mission Statement. The group reviewed all available information (most of which focused on technical and cost data) and evaluated it from within the context of user need. Users include local agencies, DSS, DMAS, DIT, CIM and the Commonwealth which must balance its administration of social services programs with stewardship of taxpayer resources.

ADAPT began as an umbrella project that included four deliverables; VACIS enhancements (including FAMIS certification), interface with the Medicaid Management Information System (MMIS), through the Multiple Systems Inquiry (MSI) and the Multiple Systems Update (MSU), the long term plan for DSS information systems and the enhanced application process. In November 1992, the ADAPT project was expanded to automate the eligibility determination process for three major social services benefit programs - Aid to Families with Dependent Children (AFDC), Food Stamps, and Medicaid. DSS initiated the project to help local social services agencies process client applications, calculate benefits and manage expanding caseloads more efficiently.

The ADAPT project began in 1991, with completion originally scheduled for March 1993. However, in 1992, with the concurrence of the local social services agencies, DSS expanded the scope of the project significantly to incorporate a rule-based design. A rule-based system takes client information provided by the eligibility worker and makes eligibility determinations and benefit calculations using a programmed set of rules.

In December 1995, the Secretary of Health and Human Resources directed the Commissioner of the Department of Social Services to freeze the development and further implementation of the ADAPT project. This pause was based on information available at the time from several reports relating to the project which included reviews by Broughton Systems Inc., the Acting Chief of Staff of DSS and the California State Auditor regarding the system from which ADAPT was developed. The information available at the time identified three major areas of concern:

Context

- Weakness in project leadership
- Inability to meet delivery schedules
- Escalating cost

The cost of the project was questioned because of the long period of development without full implementation. There were questions about the costs of processing the large amounts of data required by a rule-based system on the mainframe at DIT and whether the costs of new hardware would be added to the costs already known. In addition to the size and growth of project costs, there was also concern that full and reliable cost data was not available and needed to be obtained.

Another area questioned by all who reviewed the project was whether the project as planned could deliver the functionality required by the system in the areas of technical performance and in determining eligibility in the three major benefit programs.

The third consistent area of concern was the repeated need for delay in completion of the project and chronic questions about the manner in which DSS was managing the project.

Given the information available at the time and the consistently defined areas of concern, the decision was made to stop and evaluate the project, gather new and more complete information and decide the best way to proceed to reach the goal of an automated eligibility determination system.

Item 15 of House Bill 29 (1996) directed the Joint Legislative Audit and Review Commission (JLARC) to investigate the Department of Social Services' procurement and implementation of the ADAPT project. The 1996 General Assembly directed this review because of conflicting information about the functionality of the system. The study mandate directed JLARC to report its findings by June 30, 1996, to the chairmen of the following committees; House Appropriations; House Health, Welfare and Institutions; Senate Finance; and Senate Rehabilitation and Social Services.

The JLARC review of the implementation of the ADAPT system and procurement for the project found that:

- Though innovative, the inclusion of the rule-based design added greatly to the complexity of the ADAPT project and resulted in significant delays in completing the fourth deliverable of the project;

Context

- DSS has spent about $20.2 million for the ADAPT project, most of which was for the development of the rule-based system; DSS may have very little money available to complete the development of the system without additional appropriations and federal government approval;

- Successful project implementation has been impeded by fragmented authority and responsibility, poor financial management, and the lack of continuous high level management support of the project;

- Despite the incomplete status of the ADAPT system, the Food Stamp portion of the project is currently operational in 10 localities; it provides these localities with needed automated tools to assist eligibility workers and is easy to use; many of the technical concerns which led to the suspension of the project have been at least partially addressed.

House Bill 29 also mandated that an ADAPT Task Force be established and given the charge of reviewing all relevant ADAPT material and recommending to the Governor and the General Assembly a viable and cost effective strategy for delivering automated eligibility determination and case management support to local departments of social services. In compliance with this mandate, the ADAPT Task Force began its work on June 14, 1996.

To fully understand the impact on local departments of social services, eligibility workers, and support staff, it is necessary to look at each of the public assistance programs. In policy discussions concerning the ADAPT project, reference has been made to a reduction being experienced in the public assistance caseloads across the Commonwealth. While there has been some decrease in the Aid to Families with Dependent Children caseload, the other public assistance programs show consistent gains. Since many eligibility workers are responsible for multiple programs, caseload must be defined as ALL cases an agency handles. Appendix C graphically displays workload in charts and text.

Along with the increased workload of local eligibility workers as measured by application and caseload growth, two other factors, not as easily measured, must be considered as well. The types of cases that eligibility workers are encountering are more complex. These complex cases contain fluctuating earnings, complex resource analysis, etc. In addition, local eligibility workers in many agencies are taking on new roles as part of improvements in customer service initiatives and the implementation of Welfare Reform. The new responsibilities include activities not formerly handled by eligibility staff such as evaluation of work readiness.

Many of these responsibilities were distributed expecting the automated support of

Context

ADAPT and full implementation of one customer-one interview service delivery. Not having supplied the automated support, has complicated this situation.

A rule-based system is intended to avoid increasing administrative expenditures for additional staff while still maintaining or improving the level and quality of customer service. A rule-based system would automate case intake, verification, assessment, eligibility, referrals, case management functions, and case monitoring in a move from a manual paper-intensive system. This automated system would allow eligibility workers to perform eligibility processes more accurately, improve service delivery to customers, and help prevent and detect fraud. Such a system would also increase productivity and reduce reproduction costs by eliminating manual paper forms. It would increase the accuracy of benefit calculations thereby reducing payment errors and federal sanctions, and would allow for simultaneously processing multiple programs and generating administrative efficiencies. Appendix C also contains expanded information on cost avoidance and federal fiscal sanctions.

Functional/System Requirements

There are basic functional requirements necessary for any rule-based system. Among the essential features of any system are:

- the ability to handle the data processing transaction load within a reasonable response time;
- flexibility and reliability, demonstrated by minimal down time, ease of coding changes, complete documentation;
- sufficient backup and recovery resources;
- the ability to retrieve data in a useful format and to produce reports; sufficient edits and safeguards to ensure data integrity;
- the ability to connect to other automated systems;
- that it be user friendly.

The Task Force determined ADAPT must be able to manipulate the large amount of data stored and used by a rule-based system. The size of the caseload, the number of rules, and the amount of demographics and historic data stored demand a system that has a large capacity for manipulation and storage. Processing must allow for online, immediate access to the data to be entered, evaluated, retrieved, and updated. Data from across the state must be available to each user regardless of location. The response time must not exceed an established maximum number of seconds per transaction. The system must be expandable to other programs after its initial development in the three primary public assistance programs. Transactions must be updated nightly and the data must be available for downloads in a format that is easily readable and transferable to other applications. The system must allow for the creation of routine and ad hoc reports as needed for management, financial tracking, and operational performance.

The ADAPT system must be able to assure a high degree of data integrity by employing edits to ensure consistency of data and technical support to prevent data degradation. Security must meet the state and/or agency mandated standards, and other features as needed. The ADAPT system must offer connectivity that is compatible with the state's future direction in information management. It must be able to utilize personal computers and connect to outside users such as mainframes and LANs for data matches and sharing of information.

The ADAPT system must maintain flexibility and must be able to keep up with the changing nature of public assistance programs. It must allow for amendments to rules and forms within a short time frame and without significant cost. Federal mandates in AFDC, Food Stamps and Medicaid define the size and complexity of the system. Many of the program rules cannot be made to match one another. Even with the possibility of block grants for states this situation will not be simplified. For example, the recent Welfare Reform Bill only complicates the states situation. Medicaid will be allowed to match AFDC regulations in some areas but will be mandated to keep the entire current rule-base as well. The Food Stamp program will be required to track work hours at such a detailed level that automation of this policy will be necessary for any degree of accuracy to be maintained. It is this complexity that drives the size and scope of the ADAPT project.

The storage capacity necessary for ADAPT will be comparable to the Virginia Taxation system once it is fully functional statewide. Both systems use about 55 gigabytes of file storage.

Documentation must be provided which maps the system's rules and which eases identification of areas in need of change when requirements or rules change. Development and maintenance costs should be reasonable; they should not grow faster than the yearly inflationary index for consumer goods and services.

Finally, the ADAPT system must be a reliable tool for use by the local Departments of Social Services to use in their daily interaction with the public. Even when fully stressed, the system should be reliable, with business-critical applications availability 99.5% of regular work hours of 7 am to 6 pm.

Decision Parameters

The ADAPT Task Force made its decision based on all available ADAPT material and within the realistic constraints set by the need to capitalize on the considerable development already completed in ADAPT. In addition the Task Force felt the responsibility to use tested and reliable technology while beginning the migration away from mainframe dependency. The delimiting factors within which the Task Force made its decision are:

- the urgency of need for automated support at the local level;
- federal advice that automated support can improve program performance and reduce the likelihood of fiscal sanctions;
- the need to capitalize on cost already incurred for ADAPT development;
- the responsibility to honor mainframe cost obligations incurred by the Commonwealth;
- federal advice that distributed databases in the eligibility determination process are untested.

Decision Process

The ADAPT Task Force originally reviewed sixteen system evaluation criteria. These criteria were taken from page 68 of the JLARC report "Review of the ADAPT System at the Department of Social Services" dated June 24, 1996. The ADAPT Task Force rated each criteria according to importance and came up with a priority ranking. See the ADAPT Task Force Interim report dated July 15, 1996 for a more detailed description of this process.

The method used by the ADAPT Task Force to reach a decision was to develop, with the help of the DSS vendor, a Feasibility Matrix. This matrix contains the eight most important evaluation criteria ranked in descending order of priority. Each of the five alternatives reviewed was then ranked by the group. Each criteria was scored by each Task Force member assigning it a weight of 3, 2, or 1 with 3 being the highest score. These were then added together and the group developed a score for each criteria. The Feasibility Matrix follows and after that is the rational used by the group as a basis for the evaluation and weighting process.

Evaluation Criteria Ranking

Criteria		Alternatives Evaluated				
		1	1a	2	3	4
#1	Functional	21	21	18	16	15
#2	Costs	15	16	13	9	9
#3	Time to Implement	13	13	11	11	9
#4	Organizational Impact	11	11	10	10	10
#5	Maintainability	7	7	7	8	8
#6	Personnel	6	6	7	6	5
#7	Reliability	8	8	8	8	8
#8	Ease of Use	8	8	8	8	8
Total		**89**	**90**	**82**	**76**	**72**

Using these weighted evaluation criteria, the ADAPT Task Force applied them to five alternative technology strategies initially developed by the DSS vendor and later expanded by the Task Force.

These alternatives are described in the next section.

Introduction

The ADAPT Task Force evaluated a total of five alternatives. As prescribed in House Bill 29, DSS contracted with an independent consulting firm, Booz-Allen Hamilton, to provide alternative solutions. The vendor initially provided a range of four alternatives. These alternatives were based on industry standards, industry costing and other information provided to the vendor. The alternatives were modified based on input and direction from the ADAPT Task Force members. The modifications included refinement of the alternatives based on actual cost data; clarification and refinement of the assumptions originally used by the vendor and local agency input. The vendor met with representatives of the ADAPT agencies and state officials. After review of the range of alternatives originally provided by the vendor, ADAPT Task Force members identified one additional alternative to be researched. This alternative was researched and documented for the ADAPT Task Force members to evaluate.

The five strategies represent a continuum of possibilities for the future development of ADAPT. The range of alternatives does not include every one possible and is not intended to represent the entire domain of possibilities. Each alternative provides a shell of technical options. These shells allow for considerable flexibility in designing the future path for ADAPT.

The alternatives reviewed are:

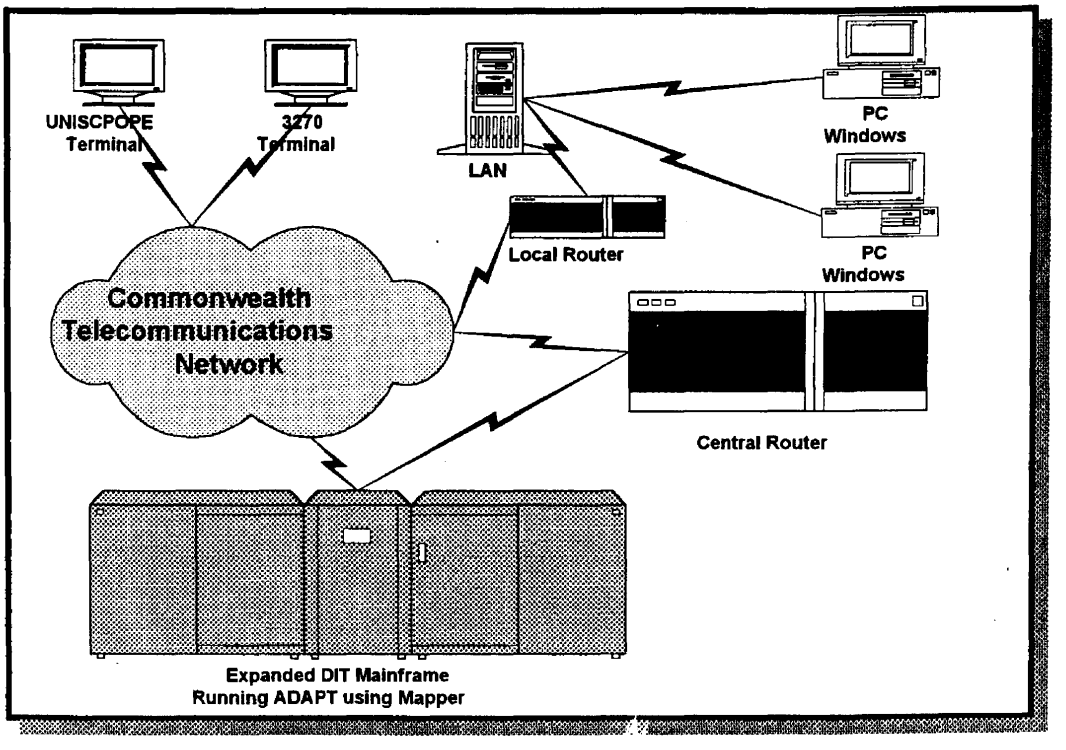
- 1- Mainframe Centric
- 1a - Mainframe with Companion Unix Server
- 2 - Unix Server with MAPPER
- 3 - Unix Server with SQL
- 4 - Distributed Client/Server

Following are graphical representations and descriptions of each alternative evaluated.

MAINFRAME CENTRIC

Alternative 1: Complete the current ADAPT system by implementing the AFDC and Medicaid components and run all processing on an expanded state mainframe. The existing investment in hardware, software, data and user training would be retained. Upon successful implementation, a second phase can be initiated which will incorporate desktop (PC) computing for selected portions of ADAPT.

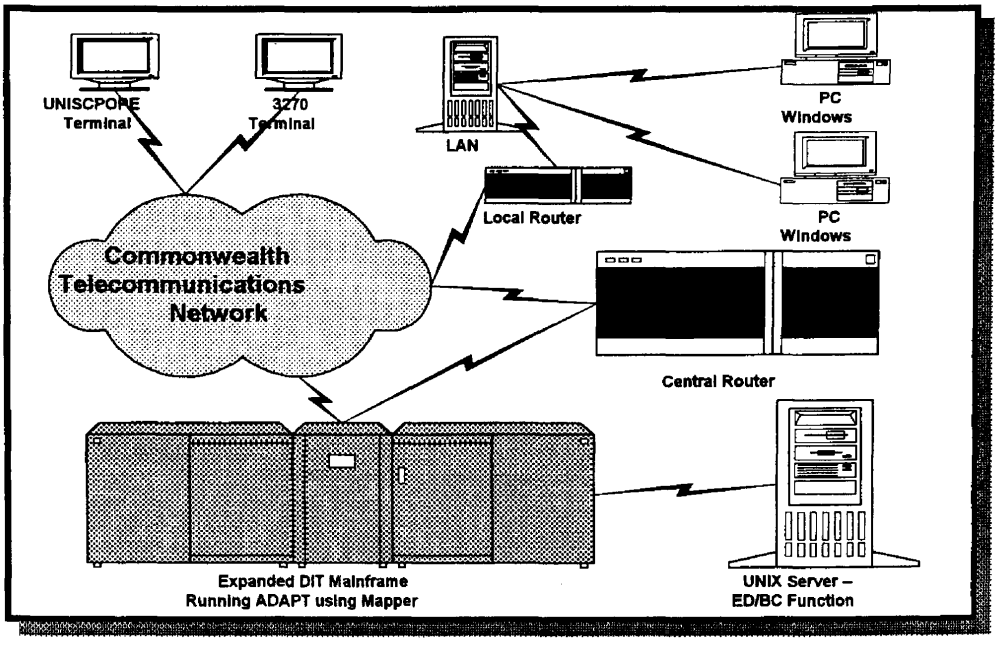
Continue Current System



MAINFRAME WITH COMPANION UNIX SERVER

Alternative 1a: Complete the current ADAPT system by implementing the AFDC and Medicaid components and run processing, excepting the Eligibility Determination & Benefit Calculation modules (EDBC), on an *expanded* state mainframe. The EDBC modules would be transferred to a Unix* server, thereby reducing the amount of mainframe expansion required. In the future, other modules may be transferred to the Unix server. The existing investment in hardware, software, data and user training would be retained. A vendor would be contracted to transfer the EDBC modules to the Unix environment. Upon successful implementation, a second phase can be initiated which will incorporate desktop (PC) computing for selected portions of ADAPT.

<u>Continue Current System w/ ED/BC on Servers</u>



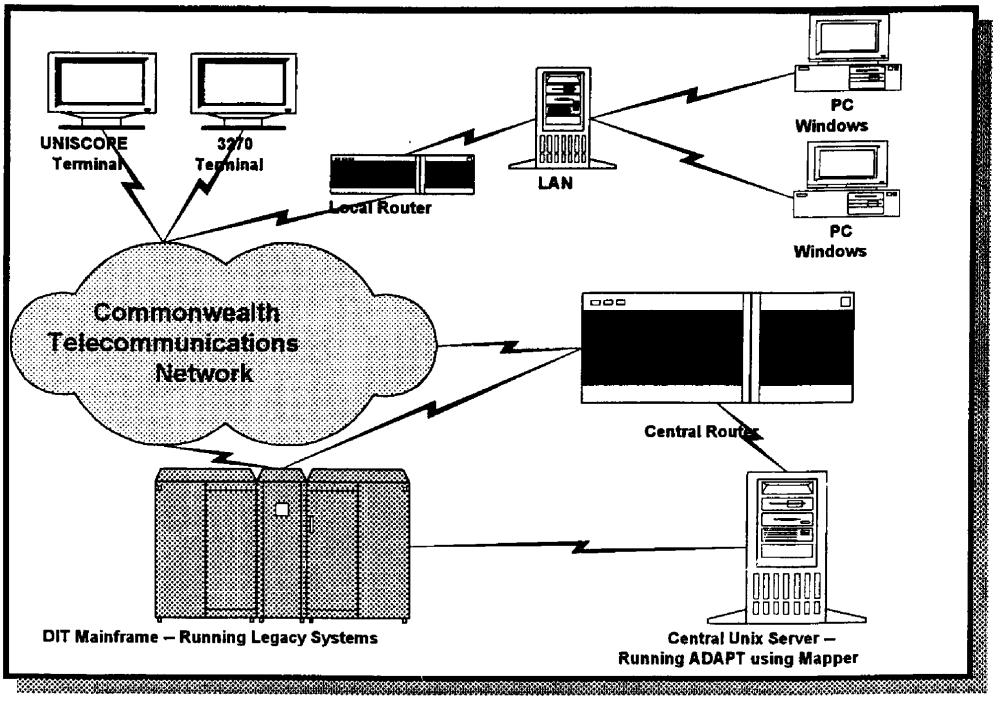
* Unix is an operating system which was developed by Bell Labs primarily for the minicomputer market. It is currently regarded as the standard among minicomputer vendors.

UNIX SERVER

Alternative 2:

Transfer ADAPT from the state mainframe to a Unix server, maintaining much of the structure, program code and functionality of the current system. The AFDC and Medicaid components would be developed in the server environment. The existing investment in data and user training would be retained along with a sizable portion of the software. A vendor would be contracted to transfer both the ADAPT data and program code to the Unix environment. Upon successful implementation, a second phase can be initiated which will incorporate desktop (PC) computing for selected portions of ADAPT.

Replace Mainframe with Unix Server

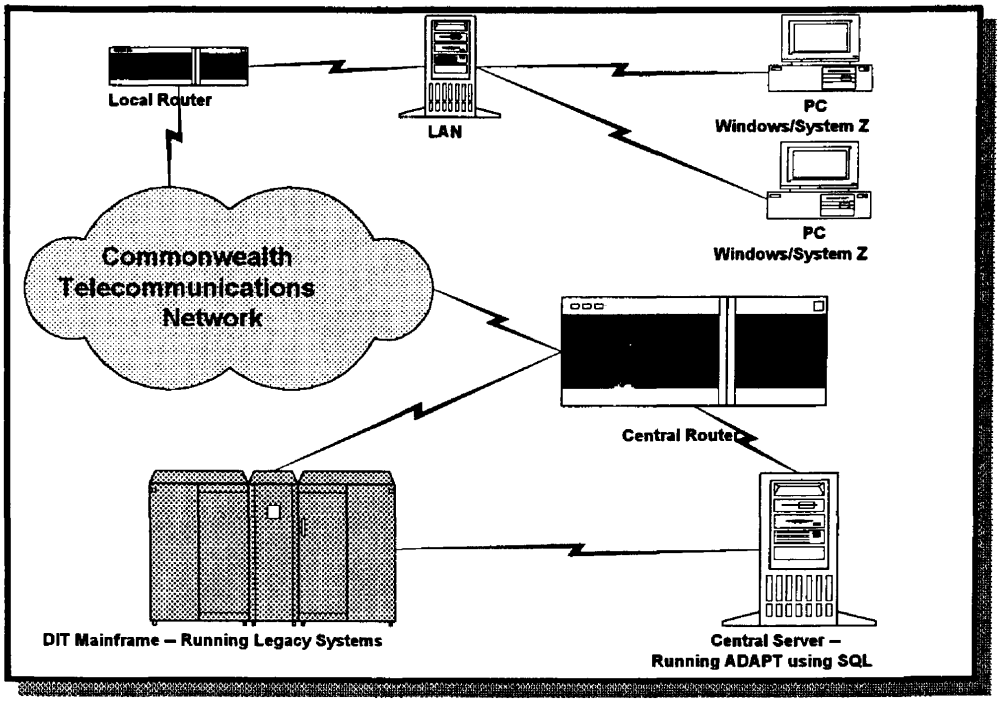


UNIX SERVER WITH SQL

Alternative 3:

Migrate ADAPT to a Unix server employing use of a vendor tool to automate conversion of much of the data and a limited amount of program code into a client/server environment. The AFDC and Medicaid components would be developed in the new environment. An SQL*-compliant relational database would be used to house the data. Due to the automated data conversion, some of the existing investment in data would be retained. New investments would be required for hardware, software and user training.

Convert Mapper to SQL



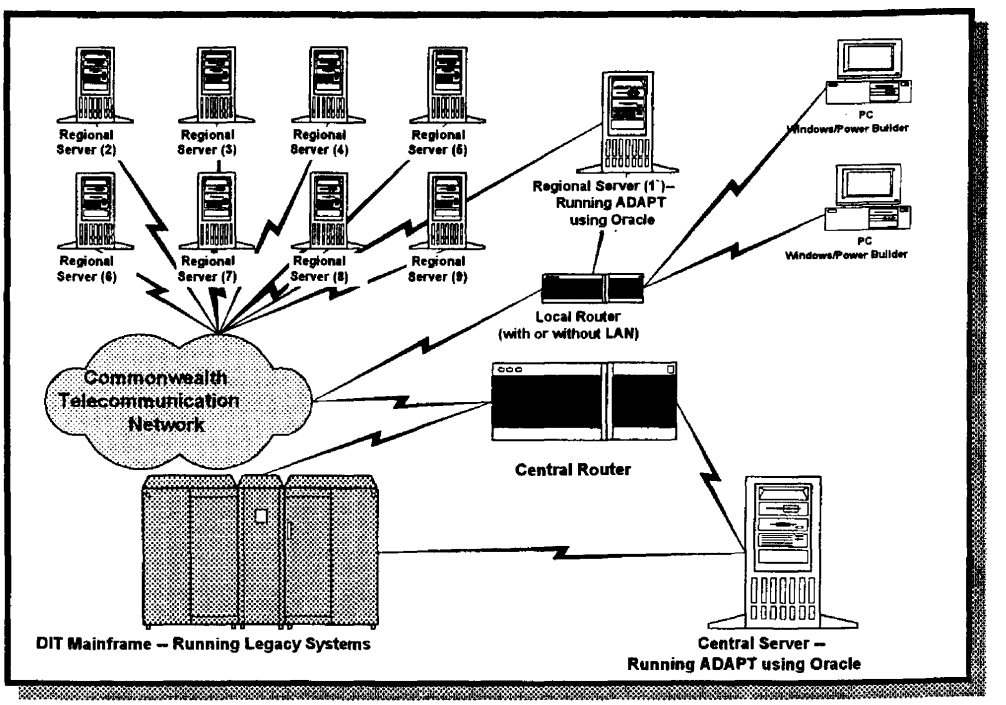
* SQL (Structured Query Language) is currently regarded as the standard computer language for access to relational database models.

DISTRIBUTED CLIENT SERVER

Alternative 4:

Develop an entirely new ADAPT system comprising the Food Stamps, AFDC and Medicaid components. A single central Unix server would be used along with nine additional regional Unix servers. Each server would utilize the Oracle SQL-compliant relational database model to house the data. A portion of the existing investment in data would be retained through use of a vendor tool to automate conversion of the data into the new environment. New investments would be required for hardware, software and user training.

Redesign ADAPT for 3-Tier Client/Server



Selected Alternative

The ADAPT Task Force, as structured by the General Assembly, represents a coalition of major users and stakeholders who will be interacting with ADAPT in its future form. The group's mission in reviewing and evaluating relevant data, led to detailed analysis of previous studies and reports from this comprehensive viewpoint. Additional sources of information, including revised DIT costs, a thorough capacity study, and a transaction/invoice review of direct ADAPT costs led the ADAPT Task Force to alter certain conclusions reached in studies completed prior to the availability of this full range of data.

The ADAPT Task Force's focus is more holistic than any of the other recent reviewers. The focus is on reviewing all relevant ADAPT information and determining the best way for the Commonwealth to proceed.

In December 1995, when the system was paused, information available identified three broad categories of problems existing in ADAPT implementation. These categories were the cost of system development, scheduling delays, and whether the system would be able to deliver functional requirements of the local agencies. These concerns initiated the freeze until further analysis could be done.

At that time, the ten agencies using ADAPT felt strongly that the product was worth saving and was in fact necessary to efficient management of local caseloads. As a result of strong local support for ADAPT, the General Assembly mandated the JLARC study of ADAPT and established the ADAPT Task Force to review all available information and recommend an appropriate action for the Commonwealth. Appendix E contains two grids that explain how the ADAPT Task Force's conclusions differ from those of other reviewers and a current status report on the ADAPT system implementation status.

Recommendation One

The ADAPT Task Force recommends that eligibility automation continue, using the UNISYS Mainframe with the addition of a companion Unix server (Alternative 1a) to off-load the eligibility determination, benefit calculation processing, and other modules in the future. This solution meets all of the requirements set by the ADAPT Task Force, while reducing the amount of mainframe expansion by strategically utilizing the companion Unix server for ADAPT's most machine intensive process. Additionally, by introducing Unix into the solution, the framework will be developed for a reduction in dependence on the mainframe and is compatible with the states strategic plan for future automation efforts.

In addition to the benefits, inherent in the eight evaluation criteria used by the ADAPT Task Force, this solution offers the following additional benefits:

Recommendation

Selected Alternative

1. **Administrative Cost Avoidance**

This alternative provides an opportunity for administrative cost avoidance realized by moving to the one worker-one customer concept that automated eligibility processing will support. Using the DSS caseload standards system as a measure, this would avoid some portion of the $32,215,941 in annual staffing dollars which are currently unfunded but are needed to handle eligibility caseloads without automation.

Federal sanctioning due to increasing error rates will continue to be a possibility unless automated rule-based support is provided that will begin to bring the errors under control. This alternative will move most quickly toward reductions in the error rates of all three major programs, and ultimately reduce the risk of future sanctions.

2. **Movement Toward Reducing Mainframe Dependency**

This alternative, by introducing the companion Unix server, would be a first step away from 100% dependency on mainframe technology. While eligibility determination and benefit calculation will be the first component moved off the mainframe, server capacity will exist to allow other modules or subsystems of ADAPT or other applications to follow suit. While the mainframe will still expand to meet ADAPT's requirements, the server will reduce the amount of expansion.

Currently, distributed data bases for production eligibility determination systems do not exist in the United States. Nebraska and Delaware are beginning the process of moving to distributed data bases for eligibility determination. In addition, the industry outside the social services arena also has had mixed results with such systems. The research done by the ADAPT Task Force reinforced the decision to migrate toward a distributed data base architecture in a controlled and orderly way. For these reasons the ADAPT Task Force does NOT feel comfortable moving directly into a distributed environment.

This alternative will allow for controlled migration away from a mainframe dependency while allowing immediate automated support from a proven technology. It is important to begin moving away from mainframe dependency in order to capitalize on new and more efficient processing technologies that are less expensive and are generally less proprietorial in nature allowing for a more open procurement arena and thus lower costs.

Selected Alternative

3. Federal Concurrence

The federal agencies that will work with Virginia in this process concur with this option.

New Dollars Required

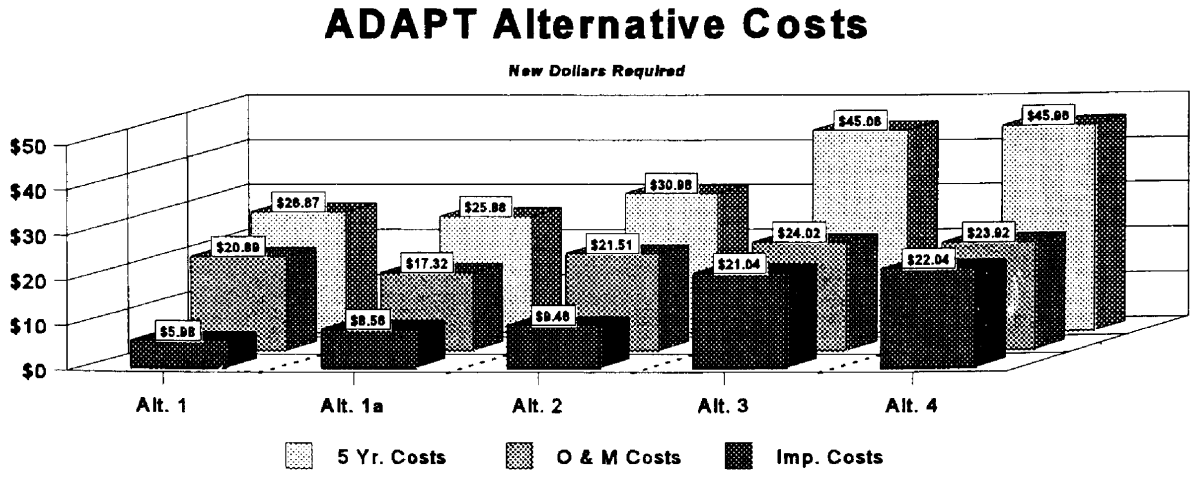
Costs were developed based on market data and capacity forecasting. The ADAPT Task Force is confident that these numbers reflect realistic cost estimates that can be relied on to prepare a detailed Request for Proposal (RFP) resulting in a vendor contract within estimated ranges. More detailed cost information is contained in Appendix D.

COMPARISON OF ALTERNATIVES ADAPT APPROACHES

ADAPT ALTERNATIVES EVALUATED					
Component	Mainframe	Mainframe with Companion Unix Server	Unix Server with Mapper	Unix Server - Convert Mapper to SQL	Distributed Client Server
Implementation Costs	$5,980,000	$8,560,000	$9,460,000	$21,039,000	$22,040,656
Adjusted Operations & Maintenance	$20,894,000	$17,323,000	$21,519,000	$24,019,000	$23,919,000
Total 5 Year Costs	**$26,874,000**	**$25,883,000**	**$30,979,000**	**$45,058,000**	**$45,959,656**

Selected Alternative

- All alternatives include costs for procurement of staff to complete and/or develop required application code;
- All alternatives five year total costs have been computed assuming core DSS staff assigned to the project - DSS staff costs have been removed from new dollars required;
- All alternatives computed based on $0 existing appropriations;
- All alternatives computed based on cost to the Department of Social Services;
- All alternatives computed based on an adjusted operations and maintenance cost - this adjustment was made after an ADAPT caseload projection and cost analysis with the Department of Information Technology;
- Dollars are represented in millions;
- The back row is a total of the first two rows.



VI. Project Leadership Issues and Recommendations

Issues

The Task Force's recommendation to proceed with Mainframe with Companion Unix Server is made after reviewing all available information on ADAPT, and significant new information relating to cost, functionality and performance. The one area that has been uniformly criticized and for which there is no new information is the area of DSS project leadership.

Clarence H. Carter, current Commissioner of the Department of Social Services, reported to the Task Force that the Department takes responsibility for the following weaknesses in ADAPT project leadership:

1. Poor project plan (Project Manager was not given authority to make project decisions, to allocate resources or to prioritize project tasking);
2. Diffuse decision points;
3. Lack of accountability;
4. Poor project accounting design;
5. Poor accounting practices;
6. Failure of Steering Committee (the ultimate decision making body) to deal with project issues raised in that forum;
7. Strategic error in programming ADAPT with MB1 policy, resulting in a loss of several months of Medicaid programing. (For a detailed description of this issue, see the JLARC report on ADAPT.)
8. Failure to deal with DSS/DMAS cross programmatic and automation issues.

Recommendations (Continued)

The Task Force makes the following additional recommendations for corrective action to minimize project leadership problems for the remainder of this project:

Recommendation Two

The Department of Social Services should work with the private sector to complete the ADAPT project by contracting with a qualified vendor for management of remaining application development, worker training, and deployment of the system in local social services agencies. This effort will enhance Virginia's ability to leverage state and private expertise.

DSS should:

- Develop an RFP to hire a vendor;
- Design clear outcome oriented contract intended to hold the vendor responsible for overall operation and functional performance;
- Define the cooperative arrangement between the Department and the vendor;
- The Department would retain responsibility for the functional definition of the system.

Recommendation Three

The Department of Social Services should develop and execute a management plan to ensure that staffing and other resources are available for the completion of ADAPT:

- Revise the ADAPT project plan;
- Assign a full time Project Manager to work with the vendor management team;
- Assign proper authority to the department's Project Manager;
  - Authority to assign staff;
  - Sole authority to approve project vouchers;
  - Authority to prioritize work;
- Assign adequate functional and support staff;
- Tie the project directly to the Chief of Operations.

Recommendation Four

The Department of Social Services should improve project accounting practices:

- Move project accounting within the project;
- Require Project Manager signature on all vouchers;
- Require 100% project time accounting rather than using a Random Moment Sample (RMS);
- Assure that costs are assigned to correct Advanced Planning Document (APD) tasks;
- Be able to report costs by project, time period, APD, APD tasks; vendor and personnel expenditures.

Recommendation Five

The Governor and the General Assembly should continue the ADAPT Task Force to provide continuing oversight of the development and statewide implementation of ADAPT. Funding for the activities for the Task Force should be drawn from existing administrative appropriations to the Department of Social Services. The Task Force's oversight functions would:

- Retain the ADAPT Task Force to provide oversight of
  - strategic planning;
  - functional goal setting;
  - interagency and user communications vehicle;
- Retain the ADAPT Task Force to act as the department's automation steering body for local eligibility automation issues.

Recommendation Six

The Secretary of Health and Human Resources should establish a systems integration committee with representatives from each state agency that uses ADAPT and other social services systems that interface with it.

Recommendation Seven

The Secretary of Health and Human Resources should convene a work group composed of staff from DSS and DMAS for future development of Medicaid policy and procedures. This process should assure that:

- DMAS and DSS receive input and feed-back from local users of Medicaid/ADAPT policy;
- Functions within the process are not duplicated by both agencies;
- The policies issued to the field are correct and in line with the State Plan;
- The policies developed are automation amenable.

Recommendation Eight

The Department of Social Services should require the vendor, in cooperation with the department's staff to identify and employ where possible automation and business techniques used successfully in other states.

Recommendation Nine

The Department of Social Services should document its business objective and practices prior to the solicitation of a contractor for the completion of the ADAPT system. This applies to the following:

Recommendations (Continued)

- Response time;
- Documentation;
- Disaster Recovery;
- Reliability;
- Acceptable levels of systems support for each program automated;
- Planning for migration of other programs on to the rule-based system;
- Transfer of rule-based products from other state systems.

Recommendation Ten

The Department of Social Services should require the vendor and associated DSS staff to employ a development methodology which contains clear milestones and deliverables which are tied to payment under the contract. This will ensure that the progression of the system is in accordance with the RFP and the strategy selected. The contractor will be required to demonstrate availability of sufficient staff to meet objectives and must make an appraisal of the need for DSS staff knowledge and skills needed to work with them.

Recommendation Eleven

The Department of Social Services should ensure that project planning for ADAPT is comprehensive, sets out necessary resources for completion of ADAPT, and includes regular progress reporting to the Secretary of Health and Human Resources and the General Assembly and relevant federal agencies. Staff re-assignments must not jeopardize the ongoing work of the department, particularly to the detriment of higher priorities of the department. Regular progress reports will be prepared for the Secretary of Health and Human Resources and the federal agencies involved with the project. These reports will explain scheduling compliance and will raise issues needing attention from those levels of support.

VII. Recommendations for Immediate Action

DSS Activities Pending Issuance of an RFP

On the recommendation of the ADAPT Task Force, Clarence H. Carter, Commissioner of the Department of Social Services, reported that the following actions will be taken by the Department prior to issuance of the RFP and hiring of a vendor or vendors.

1. **Determine Staffing Level**
   Plans will be made to ensure that the project can be adequately staffed. Once a determination is made of the staffing needs, the department should develop a comprehensive plan to provide this staffing. All staffing alternatives need to be evaluated including contract staff and outsourcing. It will be necessary to ensure that functional resources are available to prevent delay of the project.

2. **Finalize Medicaid Policy**
   The current plan to revise Medicaid program procedures will be reviewed and updated to ensure that all decisions are made and in place. The Department will assess the need for temporary staff to assist with the completion of all manual updates to ensure that decision making does not delay the development and implementation of the Medicaid rules within the system.

3. **Complete Requirements**
   The department will assign staff to ensure that all requirements are completed as soon as possible. For those policies that are extremely difficult to bracket and which affect a small portion of the cases to be served, alternative methods of automating, (e.g., only automate summary data), should be developed to ensure that the implementation of the system is not delayed unnecessarily. Keep requirements updated with current policy.

4. **Review Training Needs**
   The department will revisit the ADAPT training plan to ensure that all needs can be met. This may require a reassessment of the numbers to be trained. In addition, plans should be made to ensure training sites will be equipped and ready to operate as soon as possible. Plans should be developed for the staffing and preparation for ongoing ADAPT training.

5. **Begin AFDC Production**
   The department will determine which portions of the AFDC module can be released quickly to the 10 agencies and should get as many of these ready for production as soon as possible. The 10 agencies can serve as "testing" environments for AFDC portions of ADAPT and how it interfaces with the Food Stamp portion.

DSS Activities Pending Issuance of an RFP

6. **Modify the Food Stamp Component**
   To the extent possible, those enhancements identified as critical for the food stamps module will be re-examined and put in place before development of the rest of the system.

8. **Develop New Worker Training**
   Training of new staff will be designed to incorporate policy and systems instruction in one curriculum package. The package must be developed quickly.

9. **Make Data Available for Local Use**
   Local agencies will have access to their own information to be used for evaluation and ad hoc reporting.

10. **Develop an RFP**
    Develop an RFP based on information gathered by and at the direction of the ADAPT Task Force.

VIII. ADAPT Task Force Caveats

Caveats

The ADAPT Task Force believes that its recommendation to complete ADAPT by using a Unix companion server along with the mainframe, will deliver a complete eligibility determination system that will improve the accuracy and speed of eligibility determinations resulting in fewer errors and a reduction in misspent program dollars. Evidence appears to support the conclusion that the resulting system will be cost effective and allow the Commonwealth to avoid the administrative costs of added staff and increasing federal sanction dollars. At the same time, the system will improve customer service delivery by allowing for seamless eligibility delivery for the programs on the system and vastly reduce time frames for determinations of eligibility.

However, the ADAPT Task Force feels a responsibility to inform readers of the report that the recommended course will succeed only to the extent that we have learned from our mistakes and proceed with a new commitment to avoid those mistakes.

Critical to the success of this project will be the following:

1. DSS implements corrective actions related to project leadership and contractor collaboration;

2. High level commitment to ADAPT remains consistent and adequate within the Secretariat and among ALL state agencies in ADAPT as users or stakeholders. This especially applies to DSS and DMAS who have equal and co-existing responsibilities that are largely dependent on ADAPT and on MMIS automation. It also includes a continuing involvement, cooperation and communication with DIT, CIM, local departments of social services and federal partners in ADAPT.

3. Continuing commitment within both the legislative and executive branches of State government that will allow for adequate project resource support and will carry through development and on into continuing maintenance efforts.

4. A realization that the changing nature of technology will require the ability to alter systems efficiently as new and better ways of communicating and processing data appear on the market.

5. An understanding that this recommendation is a response framed by the practical considerations facing the Task Force which was charged with completing a project already well underway. It was not practical to pick the most technically advanced solution

Caveats

without wasting costly development efforts that are usable while not being the most desirable solution if starting from scratch.

6. The ADAPT Task Force wants to emphasize that these cost estimates provide the basis for the relative evaluation of alternatives and may not reflect the actual development and operational costs of the project. DSS will need to refine these estimates and closely monitor actual costs as the project progresses.

Legal Mandates

Language from House Bill 29

Out of this appropriation shall be provided $150,000 in the second year from the general fund for the Department to hire a consultant to evaluate the future viability of the Application Benefit Delivery Automation Project (ADAPT) system, and/or to recommend other systems that will achieve the General Assembly's goal of having an efficient, effective, automated, rule-based system for use in eligibility programs by local social service departments as they implement welfare reform. The consultant shall report findings no later than June 30, 1996, to an ADAPT Task Force. The ADAPT Task Force shall include representatives from the Council on Information Management, the Department of Information Technology, the Department of Social Services, the Joint Legislative Audit and Review Commission, and at least four local social services personnel to be selected by the Virginia League of Social Service Executives from the four original and six new pilot sites for the food stamp portion of the ADAPT system."

Language from the 1996 Appropriations Act

The Application Benefit Delivery Automation Project (ADAPT) Task Force shall report its recommendations to the Governor and the Chairmen of the following committees: House Appropriations, House Health, Welfare and Institutions, Senate Finance, and Senate Rehabilitation and Social Services no later than July 15, 1996. Before implementing any of the Task Force's recommendations or their actions pertaining to an automated eligibility system, the Commissioner shall advise these Committee Chairmen of the feasibility and cost of implementing the recommendations. If any of the Committee Chairmen determines that a public hearing is desirable, they shall so advise the Commissioner within 15 days. Implementation of the recommendations shall thereafter be delayed for up to 30 days. The results of any recommendations implemented shall be reported to the Committee Chairmen by December 1, 1996.

ADAPT Task Force

ADAPT TASK FORCE MEMBERS

Name	Organization
Hudnall Croasdale	Council on Information Management
W. E. Endicott	Department of Information Technology
Jeanine LaBrenz	Department of Social Services
Ben Owen	King William Department of Social Services
Ursula Palmer	Charlottesville Department of Social Services
Suzanne Puryear	Norfolk Department of Human Services
Gordon Ragland	Henrico Department Social Services
Joseph M. Teefey	Department of Medical Assistance Services
Glen Tittermary	Joint Legislative Audit and Review Commission
Delores Veal	Newport News Department of Social Services

Alternate Members

Morris Campbell	Norfolk Department of Social Services
Barbra Caris	Department of Social Services
Ann Cook	Department of Medical Assistance Services

ADAPT Task Force

Deborah Giffin	Department of Medical Assistance Services
John Kownack	Norfolk Department of Human Services
W. Douglas Moran	Department Social Services
Burt Richman	Department Social Services
Pamela Rhoney	Department of Social Services
Mary Ellen Roberts	Department of Social Services
Jerry Simonoff	Council on Information Management
Jerry Varner	York/Poquoson Department of Social Services

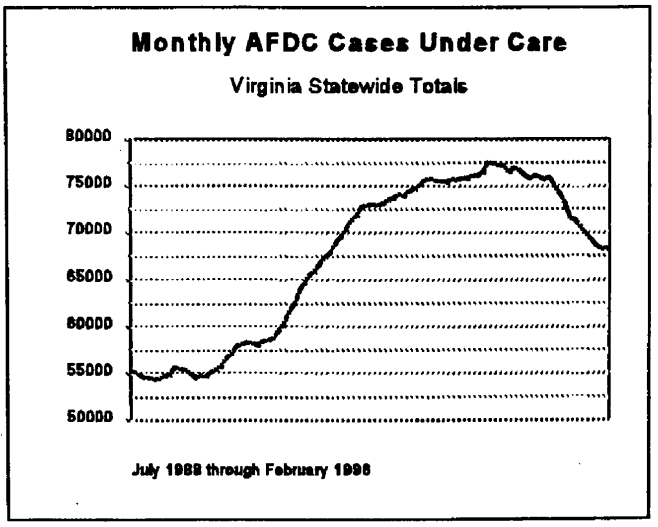
Support Groups

ADAPT Project Team
Department of Social Services, Division of Information Systems
Department of Social Services, Division of Management and Customer Services
Department of Information Technology
Council on Information Management
Local Government Advisory Committee to CIM

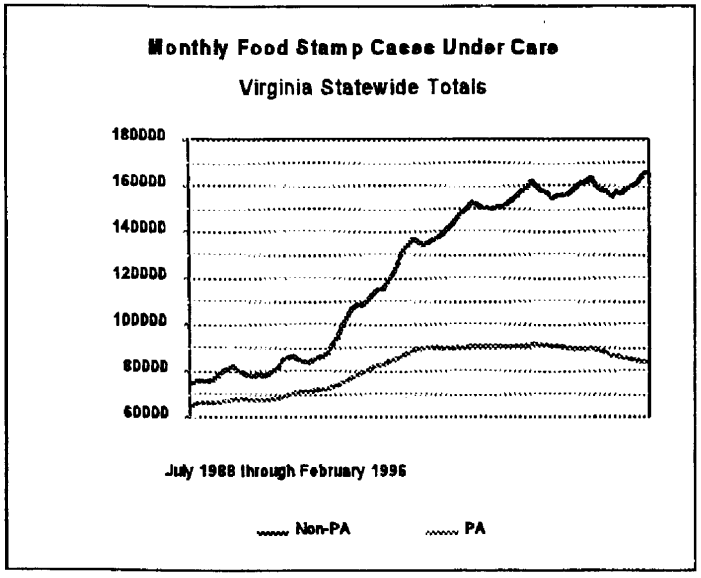
Facilitator	June Duffy

Caseload Trends

Aid to Families with Dependent Children



To fully understand the impact on local departments of social services, eligibility workers, and support staff, it is necessary to look at each of the public assistance programs. Caseload must be defined as ALL cases an agency handles. The figure on the right confirms that the Aid to Families with Dependent Children (AFDC) caseload hit its high mark in March 1994 and has maintained a steady downward trend since that time. However, these figures do NOT include the cases processed for Diversionary Assistance which are not in the AFDC caseload counts. Local agencies have taken and approved 339 applications for Diversionary Assistance in fiscal year 1995-1996.

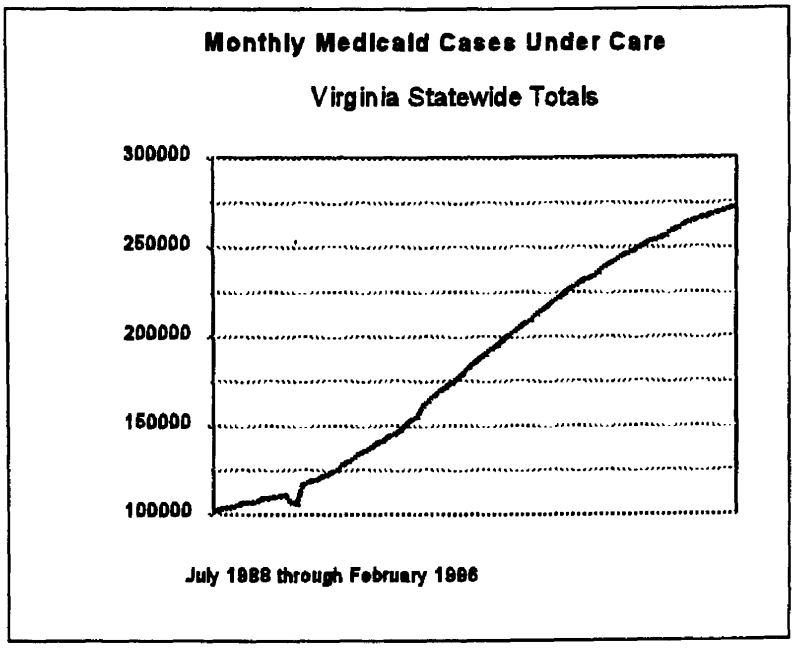


Food Stamps

The Food Stamp caseload is divided into two categories, those cases in which all members receive some form of public assistance (PA Food Stamps) and those cases in which at least one member receives no public assistance (Non PA Food Stamps). It is necessary to look at these two categories separately. The figure on the left illustrates the difference in the two categories. PA food stamps is reflecting the general decline seen in the AFDC caseload. However, non-PA food stamps is now at the highest level in the history of the program. People who move off of AFDC are going into part time and minimum wage employment are still eligible for food stamps. The growth in non-PA food stamps is dwarfing any reduction in AFDC. (Graph-The bottom line is PA and the top line is Non-PA).

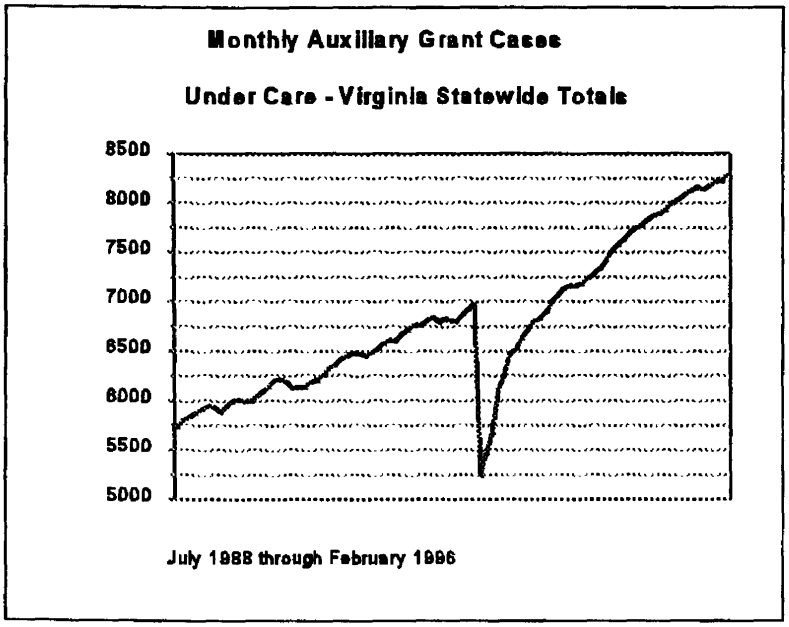
Medicaid

Benefits are provided to indigent children, individuals who are aged, blind, disabled, AFDC recipients, children in foster care, and women who are pregnant and meet stringent income and resource requirements. Medicaid is not so much affected by general economic conditions as by policy decisions made at the state and national level. Medicaid has sustained constant growth over the last nine years, as shown in the figure on the right. The current case count represents an increase of 166% since 1988.

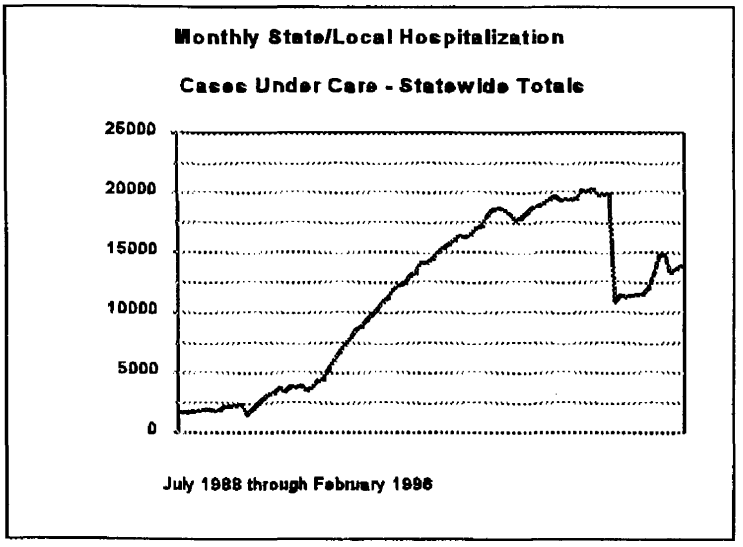


Auxiliary Grants

This program provides supplemental payments for aged, blind, and disabled individuals living in Adult Care Residences or approved Adult Family Care Homes. As with Medicaid, the Auxiliary Grant program is more reflective of the increasing number of elderly and disabled Virginians needing long term care rather than changes in the general economy. The figure on the left shows the substantial and sustained growth that has occurred in this program.



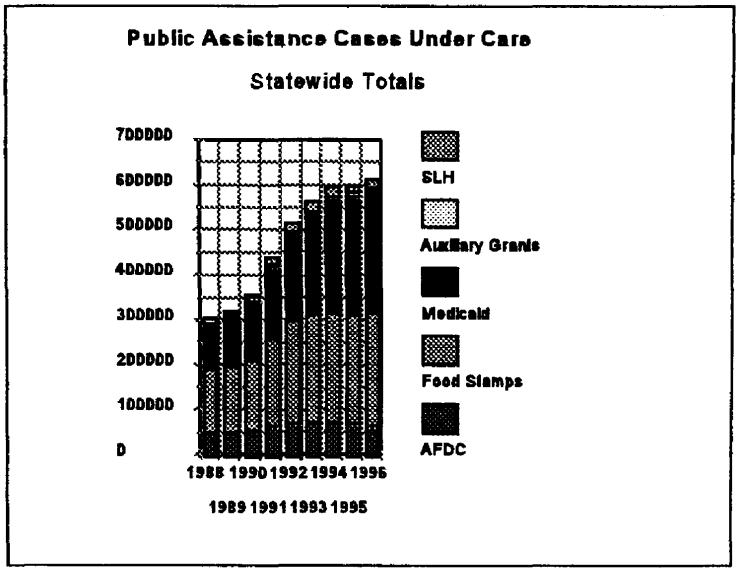
Note: The sharp drop in cases is due to a clean-up of cases by local agencies which corrected manual case counts. The upward trend, however, is still apparent.



State/Local Hospitalization

This program provides direct payments to hospitals for indigent patients who are not eligible for Medicaid. This program, has sustained significant growth in the last nine years. Indeed the trend of the line in the figure on the left is almost an exact match of the Medicaid line.

Note: The sharp drop in cases in February 1995 is the result of a clean up of cases by local departments of social services which corrected the manual case counts. The upward trend, however, is still evident.



Statewide Caseload trends

In summary, any evaluation of workload in local departments of social services must take into account all of the public assistance programs processed there. The figure above plots all of the public assistance cases in the Commonwealth from 1988 to 1996. During that time the local agency caseload has increased 100%.

Workload

The caseload standards system is based on assigning work hours needed to process applications, perform mandated case reviews, and manage ongoing cases. The number of work hours is divided by the hours available for casework during a typical month to estimate the number of staff needed to accomplish the work properly. The DSS caseload standards system continues to show a need for additional eligibility workers in local departments.

For the first 11 months of state fiscal year 1996, the system showed that the monthly average number of eligibility workers needed statewide was 2,653. During the same period, the number of full time equivalent eligibility worker positions which the state assisted in funding was 2,144, for a shortage of 509 eligibility workers.

Along with the increased workload of local eligibility workers as measured by application and caseload growth, two other factors, not as easily measured, must be considered as well. The types of cases that eligibility workers are encountering are more complex. They contain fluctuating earnings, complex resource analysis, etc. In addition, local eligibility workers in many agencies are taking on new roles as part of improvements in customer service initiatives and the implementation of Welfare Reform. These include activities not formerly handled by eligibility staff such as evaluation of work readiness.

Staffing Needs

The staff shortages discussed under Workload represent estimated median salary/benefit levels and must be considered as administrative costs that would have to be borne if eligibility automation is not delivered in a fairly short time frame. While it may not be possible to fill all of these positions, the ones left unfilled represent costs of work done poorly, late, or not at all.

The following chart shows the cost of filling needed eligibility positions currently unfilled across the state.

	Full Time equivalent position required	***Salary/Benefit Median Cost***
Eligibility Workers	509	$20,034,371
Eligibility Supervisors	85	$3,836,243
Clerks	175	$5,737,037
Administrative Staff	65	$2,608,290
Total cost to fill	**834**	**$32,215, 941**

Note: This chart appeared on page 15 of the ADAPT Task Force Interim Report. The figures in that chart were incorrect. These figures reflect unfunded local eligibility positions needed to process caseloads as measured by the Caseload Standard system. These costs would be annual personnel costs.

ginia Rates

FOOD STAMPS

Fiscal Year	Virginia	National
1988	7.45%	9.97%
1989	8.45%	9.97%
1990	6.96%	9.81%
1991	9.49%	9.31%
1992	8.91%	10.69%
1993	10.77%	10.83%
1994	11.62%	10.32%
1995*	13.37%	9.72%

AFDC

Fiscal Year	Virginia	National
1988	4.47%	6.79%
1989	4.67%	5.70%
1990	4.14%	5.98%
1991	3.39%	4.96%
1992	4.66%	5.65%
1993	6.37%	6.08%
1994*	5.45%	N/A
1995*	5.26%	N/A

MEDICAID

Fiscal Year	Virginia	National
1988	2.936%	2.02%
1989	1.066%	1.95%
1990	0.988%	1.91%
1991	1.1531%	1.80%
1992	0.5874%	N/A
1993	2.1636%	N/A
1994	1.5873%	N/A
1995*	1.61%	N/A

Virginia has had rising error rates in the AFDC and Food Stamp programs as illustrated in the charts on the following page.

A sophisticated rule-based system, such as the proposed ADAPT system, can assist in error containment 'he following ways:

Assist local agency staff to avoid finding ineligible cases eligible at intake, or paying eligible cases incorrect benefit amounts;

- Assist local agency staff to manage their cases, to reflect changes in a customer's circumstances that should result in a change in benefit level or eligibility status.

Sanctions are imposed on states whose payment error rate exceeds the national average error rate for all states. A productive rule-based system can help control eligibility determination errors.

*1994 and 1995 AFDC Virginia Error rates are estimates only.

Cost Analysis Data

ADAPT TECHNICAL STRATEGIES - ASSUMPTIONS FOR COST COMPARISONS

Component	1 - Mainframe	1a - Mainframe with Companion Unix Server	2 -Unix Server with MAPPER	3 - Unix Server- Convert MAPPER to SQL	4 - Distributed Client Server
Hardware	UNISYS 2200 - Upgrade Costs in Computer Costs No Server Required No PC upgrade required	UNISYS 2200 - Upgrade Costs in Computer Costs UNISYS Opus Server **$2 M** No PC upgrade required	No Mainframe Costs UNISYS OPUS Server **$2 M** No PC upgrade required	No Mainframe Costs 2 Alpha Servers 8400 **$2.6 M** ($1.3M ea) PC 8 MB RAM & 500 MB hard drive upgrade - **$1.54M** ((3,040 PC * ($179/RAM + $179/hard drive) + (3,040 PC * $3 hr/PC @ $50/hr to perform upgrade))) = $1.54M	No Mainframe Alpha Servers 2100A5/300 **$2.6M** (9 servers + 1 central server @ $130K each = $1.3M +each server duplicated for fault tolerance) Upgrade PC 8 MB RAM & 500 MB hard drive upgrade - **$1.54M** ((3,040 PC * ($179/RAM + $179/hard drive) + (3,040 PC * $3 hr/PC @ $50/hr to perform upgrade))) = $1.54M Replace PC **$5.16 M** - (3,040 PCS * $1.5K/per PC) + (3,040 * load cost @ $200/PC (4hr/PC @ $50/h = $5.16M)

Software	No new development tools No new DBMS No new System Management tools required	No new development tools Unlimited copy of Parallel Mapper **$450K** No new System Management tools required	No new development tools Unlimited copy of Parallel Mapper **$450K** No new System Management tools required	TranZform $20K Unix license for Z - $140K ZGUI $20k Transaction Processing software $20K **$200K total** ($20K + $140K + $20K + $20 K = $200K) Oracle 7 for 1,220 license * 3 licenses needed $7.5M (3* $2.5M/each copy) Tivoli Management Environment **$1.13M**	**$30K** - 10 person license PowerBuilder @ 3K each Oracle 7 for 10 servers **$6M** (10 copies * $600K/each copy) Tivoli Management Environment **$1.13M**
Application	Complete code **$4.08M** (2 years * 34 person LOE *60K) No Code conversion costs No data conversion costs	Complete code **$4.08M** (2 years * 34 person LOE *60K) Convert existing ED/BC rules to servers **$80K** (4 Programmers $40K +$10K integration to Mainframe + retesting $30K) No data conversion costs	Complete code **$4.08M** (2 years * 34 person LOE *60K) Six Months to convert code **$980K** ($440K Consultants + $120K DIS +$240K MSI interfaces + $180K retesting) Data conversion costs included in code conversion costs	Complete code **$4.08M** (2 years * 34 person LOE *60K) 15 Months to convert code **$1.45M** ($760K Zortec Conversion +$180K DIS + $240K systems interface +$270K testing) Data conversion costs included in code conversion costs	No code to complete 2 Years to convert code **$6.64M** ($4M Systems Integrator + $2.4M DIS staff + $240K systems interfaces) Data conversion **$245K** ($150K systems integrator + $45K DIS staff + $30K verify data +$20K software utility)

Modeling	No data modeling costs No modeling software	No data modeling costs No modeling software	No data modeling costs No modeling software	No data modeling costs No modeling software	Modeling labor **$840K** ($360K systems integrator + $480K DSS functional staff) VAW CASE Tool license **$16K**
Training	Training new users **$1.9M** ($1.4 initial training + $500K refresher training) No additional training	Training new users **$1.9M** ($1.4 initial training + $500K refresher training) Unix and Parallel Mapper Training **$50K**	Training new users **$1.9M** ($1.4 initial training + $500K refresher training) Unix and Parallel Mapper Training **$50K**	Training new users **$1.9M** ($1.4 initial training + $500K refresher training) Technical staff training in Unix and relational databases **$640K**	Training new users **$2.0M** new training, new materials Technical staff and support staff training in Unix, relational databases, distributed processing **$1.0M**
Operations and Maintenance (O & M) 5 Years	10 Technical and functional staff **$3M** (DSS staff @ $60K/year loaded) Communications based upon original APD **$3M** Operating costs **$33.8M** (Based on DSS workload performance and DIT capacity planning) Maintenance included in DIT operating charges	10 Technical and functional staff **$3M** (DSS staff @ $60K/year loaded) Communications based upon original APD **$3M** Operating Costs **$29.2M** (Based on DSS workload performance and DIT capacity planning) Maintenance and Server upgrades **$500K**	10 Technical and functional staff **$3M** (DSS staff @ $60K/year loaded) Communications based upon original APD **$3M** Operating Costs **$8.9M** ($2.4M Operations support + $2.6M Supplies/Material + $1.9M DIT charges) +2M for PC support System Maintenance **$2M**	10 Technical and functional staff **$3M** (DSS staff @ $60K/year loaded) Communications based upon original APD **$3M** Operating Costs **$6.9M** ($2.4M Operations support + $2.6M Supplies/Material + $1.9M DIT charges) System Maintenance **$2.5M**	8 Technical and functional staff **$2.4M** (DSS staff @ $60K/year) Communications based upon original APD **$3M** (Cost could be lower due to regional processing) Operating Costs **$8.9M** ($2.4M Operations support + $2.6M Supplies/Material + $1.9M DIT charges) +2M for PC support System Maintenance **$3M**
Delta DIT Costs to DSS -- 5 Years	Increased load on 2200 reduces per unit costs reduces non-ADAPT DSS Unisys systems costs by **$18.9M**	Increased load on 2200 reduces per unit costs reduces non-ADAPT DSS Unisys systems costs by **$18.3M**	ADAPT removed from 2200 increases per unit costs for non-ADAPT Unisys systems by **$6.6M**	ADAPT removed from 2200 increases per unit costs for non-ADAPT Unisys systems by **$6.6M**	ADAPT removed from 2200 increases per unit costs for non-ADAPT Unisys systems by **$6.6M**

Appendix D

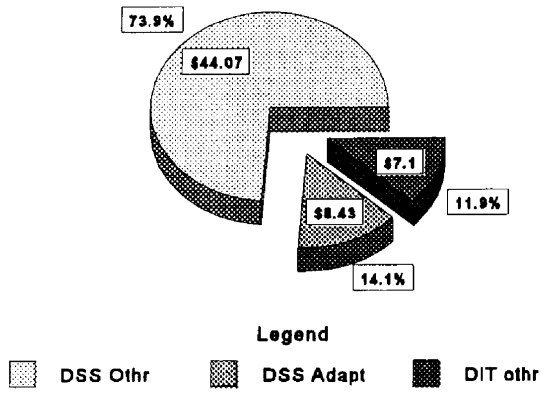
Workload Measurement and Cost Study

The Department of Social Services, Division of Information Systems staff and the Department of Information Technology staff jointly conducted a Workload Measurement and Performance Study. This study consisted of 14 process steps:

- Identification of the workload to be measured;
- Identification and documentation of all information and assumptions regarding current workload and future ADAPT workload;
- Development of a pseudo-ADAPT worker training schedule based on the original training schedule;
- Development of caseload projections based on current caseloads and anticipated growth;
- Development of a pseudo-ADAPT conversion scheduled based on the original training and conversion schedule;
- Measurement of AFDC and Food Stamp activity using the existing ADAPT Newport News agency as the *"model"* baseline;
- Medicaid projections were based on the implementation of 171,000 new cases and affect 195,00 existing cases.
- Measurement of specific agency activities (new case intake, ongoing case process and EDBC) in a controlled time period and controlled computing environment to extrapolate statewide impacts;
- Determination of average number of cases per workers;
- Determination of Peak Hours processing needs and Batch processing needs;
- Review of the Disk requirements analyzed in February, 1996;
- Identification of the other DSS applications that would experience a decrease in activity as ADAPT was implemented;
- Projected CPU SUPS seconds for ADAPT;
- Projected DIT Billing information for ADAPT and Non-ADAPT activities;
- Identification of the ADAPT costs for DSS and the costs to the Commonwealth.

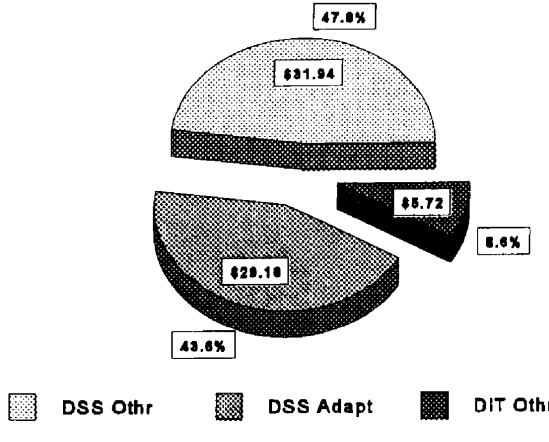
The result of the Workload Measurement and Performance Study was provided to the Task Force for review and acceptance and to the vendor, BAH, for inclusion in their final technical strategies analysis and report. The information from this study is the basis for the delta cost to the Department as identified in the final recommendation.

DIT 5 YR COST-CURRENT ENVIR.



Total $59.6 million

DIT 5 YR COSTS-PROJECTED ENVIR.



Total $66.82 million

DIT 5 YR COST - CURRENT ENVIRONMENT	*DIT 5 YR COSTS-PROJECTED ENVIRONMENT*
♦ *All dollars expressed in millions*	♦ All dollars expressed in millions
♦ *Based on rates in effect 7/1/96*	♦ Based on new rates
♦ *Based on ADAPT as it currently exists with no increase in number of agencies & no increase in functionality*	♦ Based on ADAPT statewide
	♦ Based on Option 1a - Mainframe with Companion UNIX Server

Appendix D

Comparison of Alternative ADAPT Approaches

CATEGORY	Alternative 1 Mainframe	Alternative 1a Mainframe with Companion Unix Server	Alternative 2 Unix Server with MAPPER	Alternative 3 Unix Server- convert MAPPER to SQL	Alternative 4 Distributive Client/ Server
Hardware					
Upgrade Mainframe	In Usage Rate	In Usage Rate			
Servers		$2,000,000	$2,000,000	$2,600,000	$2,600,000
Upgrade PCS				$1,540,000	$1,540,000
Replace PCS					$5,168,000
Software					
Development Environ				$200,000	$30,000
DBMS	In Usage Rate	$450,000	$450,000	$7,500,000	$6,000,000
Client Software					
System Management				$1,129,000	$1,129,000
Application					
Complete the Code	$4,080,000	$4,080,000	$4,080,000	$4,080,000	
Code Conversion/Development		$80,000	$980,000	$1,450,000	$6,640,000
Data Conversion					$245,000
Modeling					
Labor					$840,000
Software					$16,656
Training	$1,900,000	$1,950,000	$1,950,000	$2,540,000	$3,000,000
Implementation Total	**$5,980,000**	**$8,560,000**	**$9,460,000**	**$21,039,000**	**$22,040,656**
O&M (5 years)					
Personnel (maintain code)	$3,000,000	$3,000,000	$3,000,000	$3,000,000	$2,400,000
Communications	$3,000,000	$3,000,000	$3,000,000	$3,000,000	$3,000,000

Computer Usage/Operations	$33,815,000	$29,200,000	$6,938,000	$8,938,000	$8,938,000
System Maintenance	In Usage Rate	$500,000	$2,000,000	$2,500,000	$3,000,000
O&M Total	**$39,815,000**	**$35,700,000**	**$14,938,000**	**$17,438,000**	**$17,338,000**
Total ADAPT Cost	**$45,795,000**	**$44,260,000**	**$24,398,000**	**$38,477,000**	**$39,378,656**
Delta DIT Costs to DSS	($18,921,000)	($18,377,000)	$6,581,000	$6,581,000	$6,581,000
GRAND TOTAL	**$26,874,000**	**$25,883,000**	**$30,979,000**	**$45,058,000**	**$45,959,656***

*Upgrade PCS

$49,587,656 replace PCs

Actual Expenditures for the ADAPT project include the following categories of costs:

- Rule-Based System Costs
- MSI-MSU Costs
- Operational Costs
- Long Term Plan
- VACIS Enhancements
- Production Costs
- Telecommunications Costs

ADAPT Project	Expenditures to Date 1992 - 1996	Projected Expenditures - Eight Year Life Cycle
1992-2000	20,111,931.00	55,157,374.00

The 1993 Original APD for the Rule-Based System was approved as follows:

APD - Nonrecurring - Rule Based Development Costs	APD - Recurring - Rule Based System	Total Approved APD - Eight Year Life Cycle Costs
19,260,009.00	35,482,985.00	54,742,994.00

The difference between the approved APD for the Rule-Based system and the projected costs for the rule-based system are as follows:

Approved APD - Eight Year Life Cycle	Projected Costs - Eight Year Life Cycle	Difference
54,742,994.00	45,683,000.00	(9,059,994.00)

Projected costs include hardware, software, application code, training, computer usage, operations and maintenance costs.

The projected costs for the Rule-Based Component of ADAPT are as follows:

Rule-Based Component of ADAPT	
Category	Projected Eight Year Life Cycle Cost
Hardware	2,000,000.00
Software	450,000.00
Application	4,160,000.00
Training	1,950,000.00
Operation and Maintenance	37,123,003.00
Total	45,683,003.00

Appendix E

ADAPT Current System Status Analysis

This appendix contains two charts that describe the current status of ADAPT and how the ADAPT Task Force evaluated this information and, in some instances, came to conclusions different from other recent evaluations.

The first chart shows the completion status of all ADAPT components and the large amount of work already accomplished.

The second chart describes areas where the ADAPT Task Force differed from other recent conclusions and why this is so.

ADAPT IMPLEMENTATION STATUS																				
Subsystem	Non-Program Specific					Food Stamp					Medicaid F & C					Medicaid A B D				
	R	% Completed				R	% Completed				R	% Completed				R	% Completed			
		S	D	T	P		S	D	T	P		S	D	T	P		S	D	T	P
Application Registration	25	100	100	100	100	5	100	100	100	100	5	100	100	60	0	5	100	100	60	0
Application Screening	1	100	100	100	100	15	100	100	93	93	13	100	100	85	0	16	100	100	88	0
Application Data Entry	0					160	100	99	99	99	171	99	89	45	0	162	99	89	47	0
Initiation	0					19	100	100	100	100	18	100	100	22	0	18	100	100	22	0
Non-Financial	0					36	100	97	97	97	39	100	100	49	0	30	100	100	60	0
Income	0					39	100	100	100	100	40	100	98	30	0	40	100	98	30	0
Resources	0					42	100	100	100	100	46	100	96	91	0	46	100	96	91	0
Wrap-Up	0					24	100	100	100	100	29	97	48	3	0	29	97	48	3	0
Eligibility Determination/ Benefit Calculation	0					89	100	100	100	100	85	98	66	38	0	80	98	63	18	0
Non-Financial	0					22	100	100	100	100	18	100	78	78	0	18	100	78	78	0
Income	0					27	100	100	100	100	22	100	18	0	0	25	100	24	0	0
Resources	0					21	100	100	100	100	27	100	82	67	0	20	100	75	0	0
Driver	0					19	100	100	100	100	18	89	89	0	0	17	88	88	0	0
Benefit Issuance	0					19	100	100	100	100	0					0				
Benefit Adjustment	0					46	98	92	92	92	0					0				
Check Handling	0					0					0					0				
Case Utilities	0					10	100	100	100	100	9	100	67	22	0	9	100	67	22	0
Case Data Inquiry	5	100	100	100	100	17	100	94	94	94	14	64	57	0	0	16	56	44	0	0

ADAPT IMPLEMENTATION STATUS																				
NOA Generation	0					19	84	84	84	84	19	63	63	0	0	19	63	63	0	0
Caseload Management	19	95	95	95	95	0					0					0				
Interfaces and Reporting	0					89	99	99	99	99	39	92	92	92	0	39	92	92	92	0
Personnel Registration & Security	11	91	91	91	91	0					0					0				
System Support	45	100	100	100	100	0					0					0				
R = No. Of Requirements, S = Specified, D = Developed/Coded, T = Testing Completed, P = In Production																				

ADAPT IMPLEMENTATION STATUS										
Subsystem	AFDC					AFDC-FC				
	R	% Completed				R	% Completed			
		S	D	T	P		S	D	T	P
Application Registration	5	100	100	60	0	5	100	100	60	0
Application Screening	13	100	100	85	0	8	100	100	75	0
Application Data Entry	169	100	98	82	0	140	99	94	27	0
Initiation	18	100	100	61	0	18	100	100	22	0
Non-Financial	43	100	95	65	0	22	100	100	18	0
Income	36	100	97	97	0	36	100	97	28	0
Resources	45	100	96	91	0	41	100	100	3	0
Wrap-Up	28	100	93	82	0	23	96	65	4	0
Eligibility Determination/ Benefit Calculation	87	99	92	74	0	59	97	80	10	0
Non-Financial	25	100	88	84	0	7	100	86	86	0
Income	23	100	96	83	0	15	100	53	0	0
Resources	21	100	91	91	0	21	100	91	0	0
Driver	18	94	94	28	0	16	88	88	0	0
Benefit Issuance	8	75	75	0	0	0				
Benefit Adjustment	52	90	56	6	0	0				
Check Handling	8	100	100	0	0	0				
Case Utilities	9	100	78	67	0	3	100	67	67	0
Case Data Inquiry	18	100	94	39	0	11	91	82	0	0
NOA Generation	19	84	74	53	0	19	74	74	0	0
Caseload Management	0					0				
Interfaces and Reporting	100	88	88	81	0	100	88	88	81	0
Personnel Registration & Security	0					0				
System Support	0					0				
R = No. Of Requirements, S = Specified, D = Developed/Coded, T = Testing Completed, P = In Productio										

ADAPT EVALUATION GRID			
Evaluation Criteria	*Current Perception*	*Task Force Evaluation*	*Difference*
Application Design & Performance	• Inadequate design • Works for Food Stamps but cannot handle more complex programs of AFDC and Medicaid • ADAPT will never deliver functionality that is needed.	• Application is functioning well in 10 agencies and existing design is sound enough to handle AFDC and Medicaid • Application can deliver functionality that is needed	• ADAPT was only in development during earlier consultant reviews • Earlier consultant reviews were based on substantially less information than is currently available • JLARC's thorough review concluded that the system is workable • The more complex program, AFDC, has been substantially implemented in the development database and workers have even been trained on simple AFDC cases as part of ADAPT training • Similar system is functioning with approximately 300,000 cases in California, including the complex AFDC and Med-Cal • User satisfaction is high - JLARC states that; *"In short the current ADAPT system does what local agencies expected it to do, and they have found it easy to use"* • DSS and DIT have conducted repeated experiments, since the original consultant reports, measuring the performance and systems impact of 100 concurrent EDBCS. The system was able to handle the load Option 1a has added a dedicated Unix server to execute the Eligibility Determination module. Similar efforts in California have resulted in 12,000 EDBCs/day averaging 18 seconds response time

ADAPT EVALUATION GRID			
Evaluation Criteria	*Current Perception*	*Task Force Evaluation*	*Difference*
Capacity and Costs	• Will require substantial upgrades at costs well beyond original projections	• Costs are within original projections even though substantial mainframe upgrades will be needed	• Prior vendor cost projections used a "straight-line" extrapolation to calculate potential DIT costs • DIS/DIT has subsequently conducted a capacity/workload measurement study, which was then translated into a projected billing structure by the DIT billing analysts • Analysis by DIT showed that Alt. 1a. reduces DIT mainframe processing costs for other agencies by about $2.5 million annually. However, other alternatives increase DIT costs for other agencies by about $1.7 million annually. • The outcome represents a substantially more sophisticated study than performed by BSI or Acting Chief of Staff for DSS and includes diminishing returns formulas representing economies of scale that will result in decreases in the DIT rate structure • Substantial reductions in costs to DSS' other applications will be realized • The DSS/DIT study was performed after improvements had been implemented, including performance tuning by DIT & installation of TURBO Mapper

ADAPT EVALUATION GRID			
Evaluation Criteria	***Current Perception***	***Task Force Evaluation***	***Difference***
Maintainability	• System presents a maintenance problem • System in-house programing and utilities required • No "off the shelf" products used	• System performs well • System demonstrated it can be maintained • "off the shelf" products are not available to perform eligibility determinations	• Earlier consultant analysis was derived from theoretical comparison of ADAPT as a mainframe system versus perceived benefits inherent to client-server systems • Earlier consultants' technical evaluation of ADAPT was cursory in nature • JLARC conducted a thorough evaluation of ADAPT, including review of database design, program flow and examination of program code • Additionally, JLARC conducted a random rule change experiment with project team members. Their conclusion was "....the demonstration clearly showed that the EDBC component is easy to maintain, well designed and flexible". • JLARC praised the in-house utilities as enhancements to systems maintainability
Technology	• Outmoded Technology • Not client server	• Large technological leap to client server is not warranted at this time. • The current system delivers functionality desired • Client server technology has never been tested in operation in eligibility rule-based environment • Jumping into an untested arena is not warranted at this time	• Statement from Federal government that no state has eligibility on client server at this time • Gartner Group reports and other INTERNET research indicates potential pitfalls of client-server in large, complex, mission-critical applications dealing with money & requiring high level transaction integrity & database recovery • Federal government indicated that a client server solution at this time would require thorough substantiation as they are currently skeptical as to its viability in this application • JLARC report adds that; "Historically, mainframes have had better scalability than other computers architecture since multiple processors, I/O channels and storage devices can be readily added.

ADAPT EVALUATION GRID			
Evaluation Criteria	***Current Perception***	***Task Force Evaluation***	***Difference***
MAPPER and UNISYS	• **Not prevalent, niche product, inadequate to handle tasks** • **Not open in its communication potential with other languages** • **Current industry trends are away from UNISYS**	• **This environment has been chosen as the best option for continuing a project already well under way**	• **Research by Task Force shows:** • **UNISYS has 10% of the mainframe market** • **Mapper has a customer base of 7,000 sites** • **Mapper has been used at DSS for 13 years** • **Mapper runs on UNISYS mainframes, Unix servers, and on windows PC Mapper, and is adequately handling the task in California against approximately 300,000 cases** • **UNISYS has high-profile customers such as NASDAQ, Carnival Cruise Lines and Subaru of America - Substantial Federal Government installations** • **JLARC report considers consensus on technology as critical to high level support of the ADAPT project - "...given the ambiguity that existed regarding future executive branch support of this computing environment"**

This is a risk assessment summary prepared by the DSS vendor. "X" shows areas where significant risks occur.

The risks are not weighted or prioritized.

	Risks	Alternatives				
		1	1a	2	3	4
1	UNISYS business strategy emphasizes client/server systems and services; not competing for new 2200 accounts but maintaining the installed 2200 base.	X	X			
2	DIS technical staff ability to learn and effectively apply Mapper for Unix and Unix OS within 4 months		X			
3	OPUS applies new technology (parallel processing) and it is a new UNISYS product line			X		
4	Mapper's compatibility with other vendor's products is declining	X	X	X		
5	Z System is a niche product sold and supported by a small company				X	
6	The selected vendor is able to convert ADAPT within the given time-frame			X	X	X
7	Network 2000 can provide the required connectivity in accordance with ADAPT's implementation schedule				X	X
8	The vendor selected to convert ADAPT also has the capability to finish developing the system or DIS technical staff is able to learn and effectively apply the new language within the time frame to complete development		X	X		
9	Few client/server systems of the scope of ADAPT in terms of concurrent users and database size have been successfully implemented				X	X
10	Success of a client/server system hinges on a good systems management plan and availability of system management resources				X	X
11	A limited number of system integrators experienced in developing large-scale client/server systems				X	X
12	Client/server systems do provide expected equivalent mainframe response time				X	X
13	A limited number of vendors experienced in converting mainframe Mapper systems to a new computing environment		X	X	X	
14	Ability to acquire the trained staff to maintain the components of the systems		X	X	X	X

Appendix F

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