

[Editor's Note: This chapter provides an example of the part of an Implementation APD that addresses cost/benefit analysis. This example illustrates the summary or key information that ACF considers important. Among the most important factors are detailed descriptions of benefits and clear establishment of a baseline for later cost/benefit measurement and reporting. This guide does not mandate a format. It does illustrate a sufficient level of detail for ACF's purposes since this section (and the other chapters) underwent review in ACF's program offices.]

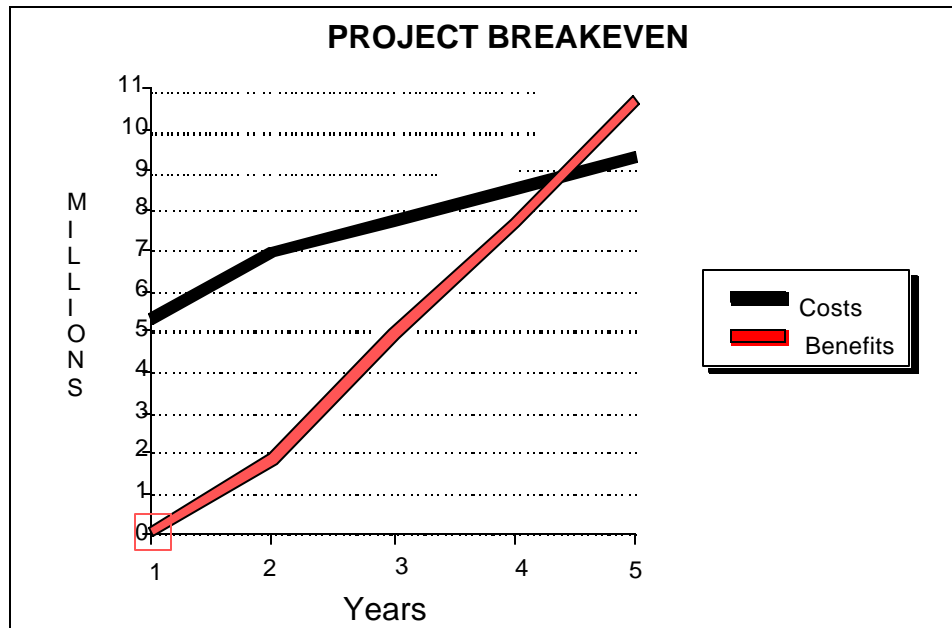
Implementation Advance Planning Document (Section IV) **Cost/Benefit Analysis**

Overview:

The State has evaluated the feasibility of and alternatives for modernizing the information technology and processing procedures supporting its benefits programs. As detailed in the feasibility study, this systems project has the following primary objectives:

- Reduce system operational costs, primarily in the area of clerical and caseworker salaries,
- Eliminate delays caused by obsolete technology and system bottlenecks, and
- Provide more timely services to the public.

During the alternatives analysis, the State selected (and justified the selection of) two alternatives for evaluation of costs and benefits in comparison to the status quo. Both alternatives are considered viable solutions, serving to distribute some degree of processing and to achieve the system objectives with equivalent quantitative benefits. Alternative 1 is the State's selected approach for implementation because it is cost-beneficial and will breakeven in the fifth year of the systems life. See the chart on the next page and table on page 3-34.



[The status quo (central data processing center and dumb terminals) is not a viable alternative, but is costed out as required by ACF instructions.]

Costs:

The costs evaluated in this analysis are those that directly relate to the systems design, development, conversion, implementation, and operation. For the status quo, recurring costs include site and facility, equipment and software lease and maintenance, travel, training, supplies, security, and personnel salaries (including benefits) and support services *directly* supporting systems development and operation. The same categories are evaluated for the alternatives.

Nonrecurring costs for the status quo include a systems upgrade planned and budgeted for the third year of the systems life. Nonrecurring costs for the alternatives include costs for new site and facilities, equipment, system testing, conversion, studies, procurement, database preparation, and overhead. Details are provided in the requirements analysis.

Cost spreadsheets are attached beginning on page 3-37.

[As provided in ACF's cost/benefit guide, total project costs are analyzed regardless of funding source (State and Federal) and regardless of cost allowability for purposes of Federal Financial Participation, both of which are addressed by other documents.]

Benefits:

The status quo is not considered a viable alternative: no benefits are evaluated.

Both alternatives are expected to generate the same specific quantitative benefits:

- Reduction in clerical staff,
- Reduction in caseworkers' overtime pay,
- Controlled staff expenditures in meeting caseload growth,
- Reduction in service bureau's processing costs,
- Reduction in courier service costs, and
- System upgrade cost savings.

Note that three benefits address the effect of the new system on clerical and caseworker staff costs. Specifically, they project the effect of the new system on:

- Current clerical staff,
- Caseworker overtime expenses, and
- Future caseworker staffing requirements.

By establishing three distinct benefits for the effect of the system on staffing, the State has established three discrete, meaningful, quantitative performance goals and measures as well. In addition, the effect of caseworker productivity improvements without an immediate budgetary effect — the State will not decrease current staff — will be measured as a

qualitative benefit. The State values staff productivity as both a system goal and performance measurement goal.

The program cost avoidances and cost savings offset the systems development cost, thereby achieving net benefits for the project. Benefit spreadsheets are attached beginning on page 3-41.

In addition, qualitative benefits are anticipated to accrue by:

- Eliminating processing delays caused by obsolete technology,
- Providing more timely services to the public,
- Providing strategic support of agency program goals,
- Implementing systems architecture compatible with long-range strategies,
- Ensuring system flexibility, and
- Implementing proven technology with access to off-the-shelf software.
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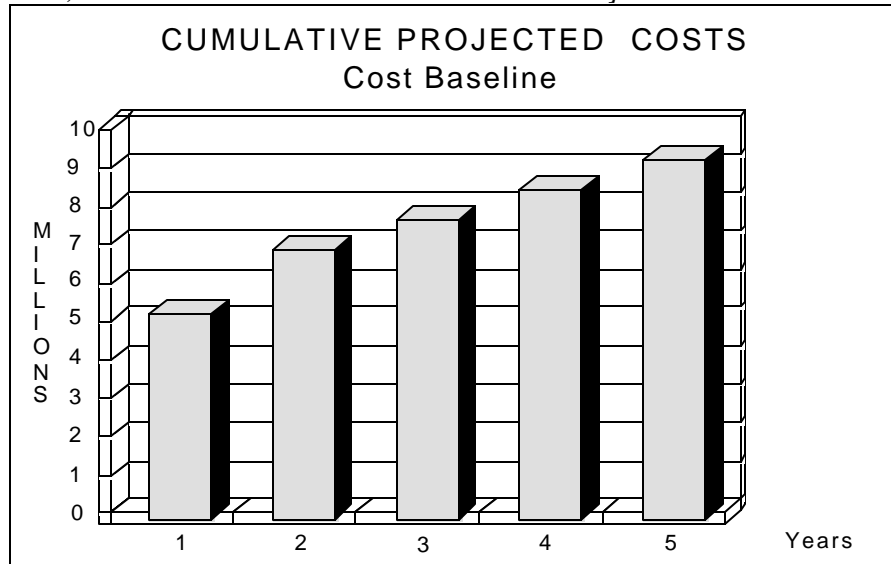
Although these qualitative benefits cannot be measured in dollars for offsetting systems development costs, several provide performance measurement goals and will be measured by the State.

**Cost/Benefit
Measurement
Plan:**

Actual costs will be measured against the selected alternative's projected costs by the finance office, subject to review and approval by the program office. Costs will be measured by category, but reported in the aggregate annually to ACF. Variances of over 10% will be explained by supporting documentation which addresses expenditures by category. The chart and table below depict the cumulative and annual baselines against which actual project costs will be measured.

See pages 3-37 through 3-40 for cost spreadsheets for the selected alternative over the systems life.

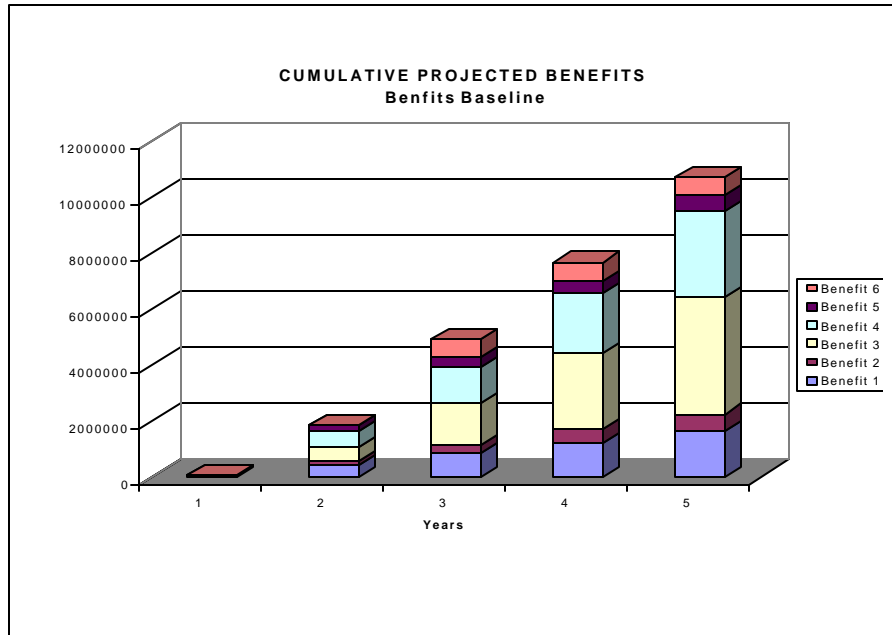
[Editor's Note: As a reminder, the costs measured against are the projected costs for the selected alternative from the cost/benefit analysis. Status quo costs are not used, present value discounted costs are not used, nor are measurement dollars discounted.]



SYSTEM LIFE ANNUAL COST BASELINE						
Description	Year 1	Year 2	Year 3	Year 4	Year 5	Total
Projected Costs: Alternative 1	5,321,868	1,621,868	796,145	796,145	796,145	9,332,171

Benefits will be measured in accordance with the measurement plan listed at the end of each narrative benefit description in the following pages.

The following chart and table depict the cumulative and annual baselines against which actual project benefits will be measured.



ANNUAL AND SYSTEM LIFE BENEFITS BASELINE						
Description	Year 1	Year 2	Year 3	Year 4	Year 5	Total
Benefit 1	0	409,507	409,507	409,507	409,507	1,638,028
Benefit 2	0	150,000	150,000	150,000	150,000	600,000
Benefit 3	0	481,920	1,034,120	1,257,510	1,420,660	4,194,210
Benefit 4	0	610,995	702,644	808,041	929,247	3,050,927
Benefit 5	65,000	130,000	130,000	130,000	130,000	585,000
Benefit 6	0	0	655,000	0	0	655,000
Total	65,000	1,782,422	3,081,271	2,755,058	3,039,414	10,723,165

The State also plans to measure whether qualitative improvements are achieved. Specifically, the State has established project goals to improve productivity, eliminate processing delays, and provide more timely services to the public.

Currently, the State experiences processing delays in three categories: input processing, internal control checks, and report transmission. Input processing is the time taken from receipt of information from the client until the data has been entered into the central database. Internal control checks involve the steps taken to verify client identity and eligibility and cross-check for duplicative entry. Report transmission begins after system processing is complete and continues until receipt of the information by the requesting party.

Regarding more timely provision of services to the public, two measures are critical: the time elapsed from initial client contact until (1) notification of acceptance of client data and (2) delay until provision of benefits.

The table below shows the current operational performance and the target performance for the new system. Current data was developed based on management records on file in the State.

PERFORMANCE BASELINE AND TARGET		
Category	Baseline Average	Target Average
Administrative overhead	8 hours per week	4 hours per week
Input processing	7 days	Same day
Internal control checks	3 days	1 day
Report transmission	4 days	Same day
Delay to notification	3 weeks	1 week
Delay to benefits	3 months	1 month

In summary, this cost/benefit measurement plan provides that the State will measure performance against both program and system goals — and against cost and benefit values. This information will serve as the baseline for reporting "actuals" in future APD Updates. See the table on page 3-36.

**Response to
ACF's Criteria:**

We thoroughly evaluated the performance of and described the systems life costs of the status quo in the feasibility study, alternatives analysis, and cost/benefit analysis.

During the alternatives analysis, we considered a broad range of alternatives. We addressed six alternatives, varying in terms of technology and source. Those alternatives included systems modification and transfer. The reasons for selection of the two alternatives for cost/benefit analysis are documented in the alternatives analysis.

We applied cost/benefit analysis to the status quo and two viable alternatives. We evaluated all on a systems life basis, using present value discounting at 7%. Constant dollars were used.

We consider the evaluation and documentation of costs and benefits to be thorough, detailed, and well documented. Back-up documentation and studies will be maintained in the State throughout the systems life of the project. The cost and benefit projections are well documented and provide a sound basis for cost/benefit measurement.

Net benefits (costs), benefit/cost ratios, and breakeven points were calculated for the two alternatives. (See page 3-35) We consider the selected alternative reasonable and fully capable of meeting our systems objectives.

We have set forth a clear set of projected costs and benefits against which actuals can be measured. We have also set forth qualitative measures, linked to program objectives, which can be measured.

A narrative description of benefits (with benefit measurement plans), a cost/benefit profile for the selected alternative, and a comparison of alternatives follow.

[Editor's Note: This section is based on the criteria set forth in ACF's "Feasibility, Alternatives, and Cost/Benefit Analysis Guide" on pages 1-5 and 1-6.]

Benefit 1:
Reduction in Clerical Staff
[Effect of New System on Current Staff]

Scenario: Under the current system, clerical staff support caseworkers in routine clerical functions, such as filing, typing letters, and copying. The new system will reduce the need for these services through capabilities such as centralized electronic files, automatic notice generation, and on-demand, on-site printing.

These improvements will result in a clerical staff reduction of 13 positions. [Clerical staff will be reassigned from the benefits program to the State's consumer services program.]

Basis for Numbers: Clerical workload distribution was documented using automated work measurement techniques and time and motion analysis conducted over two week intervals at four separate review periods during the last fiscal year. Management records and observation were used to verify that the performance of duties did not vary significantly from the norm during this time period.

Once the distribution of work by category and time was known, the effect of elimination of certain functions through automation was assessed. With automated filing, notice, and printing, the State has planned to transfer thirteen clerical staff outside the benefits program.

The analysis and findings are documented in the State's study, *Time Distribution of Clerical Duties*. A copy of this study will be retained in the State's files as an aid to future cost and benefit measurement.

Assumptions: No major changes will take place in the duties assigned to clerical staff over the systems life.

Initial Calculations of Benefit's Value: The current average clerical salary of \$25,100, times the State's average fringe rate of 25.5%, times 13 clerical positions, yields an annual cost savings of \$409,507.

[Data on average salary, current fringe rate, and average weeks worked were provided by the State's personnel office.]

This information is shown in the cost/benefit analysis for both alternatives, as indicated by the following excerpt. There is no corresponding benefit for the status quo. [Note that constant dollars are used, since State personnel salary increases over the time period have not been approved by the legislature and budgeted.]

SYSTEM LIFE BENEFITS PROFILE: ALTERNATIVES						
Description	Year 1	Year 2	Year 3	Year 4	Year 5	Total
Benefit 1	-	409,507	409,507	409,507	409,507	1,638,028

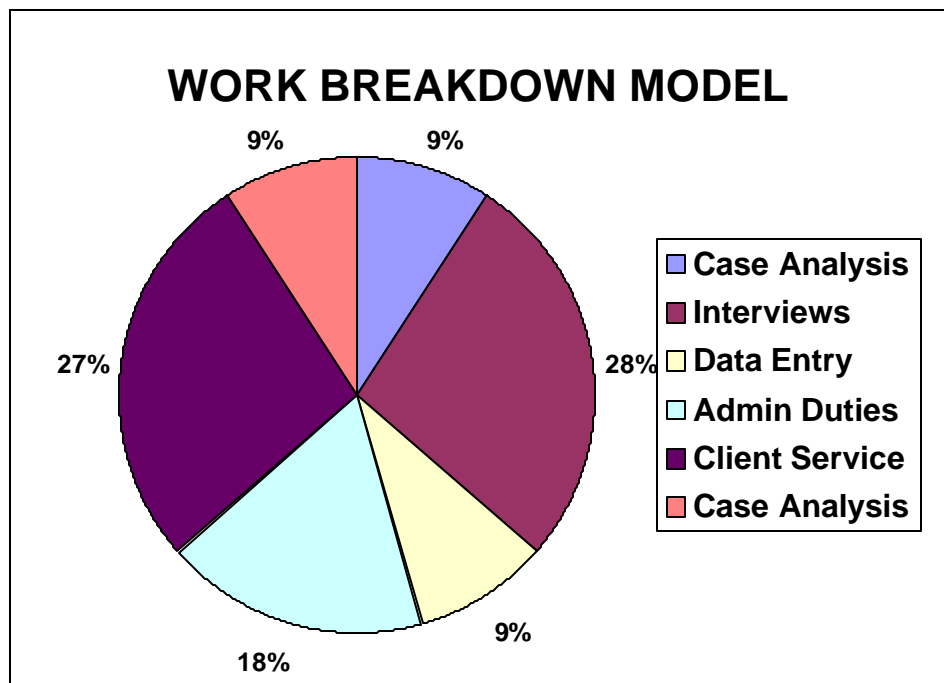
Measurement Plan: Once the new system is operational, clerical staff workers will be reassigned and the benefits claimed as program cost savings.

Quantified Benefits Worksheet: Systems Life

BENEFIT CATEGORY / DESCRIPTION								
Benefit Number: 1								
Description: Reduce Clerical staff								
STATUS QUO BENEFIT VALUE								
Assumptions: None. No benefit is claimed for the status quo								
Numbers			Basis			Source		
Current Measure/Volume:								
Projected Increase/Decrease Over Time:								
Current Value:								
System Life Benefits Profile: Status Quo								
Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Total
0	0	0	0	0	0	0	0	0
ALTERNATIVE 1 BENEFIT VALUE								
Assumptions: No major change will take place in the duties assigned to clerical staff over the systems life								
Numbers			Basis			Source		
Measure/Volume at implementation: 13 clerical staff transferred			Staff reduction projected as result of automated system support improvements			"Time distribution of Clerical duties" (program office)		
Projected Increase/Decrease Over Time: Stable			No change anticipated			Time distribution of Clerical duties" (program office)		
Initial Value at Implementation			\$25,100 average annual salary X 1.255 to calculate loaded rate X 13 staff = \$409,507			Loaded hourly rate from personnel office		
System Life Benefits Profile: Alternative 1								
Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Total
-	409,507	409,507	409,507	409,507	-	-	-	1,638,028

Benefit 2:
Reduction in Caseworkers' Overtime Pay
[Effect of New System on Overtime Expenses]

Scenario: Under the current system, caseworkers spend 20% of their time performing routine administrative functions, including tickler file maintenance, routine work scheduling, and manual tracking of cases. (See graph below.)



The new system will automate these functions, reducing caseworker administrative overhead 50%, to 10% of their time, enabling more time to be spent on case analysis. The most immediate effect of productivity improvement will be the reduction in caseworkers' overtime pay.

Under the current system, the State budgets \$150,000 annually for overtime pay to caseworkers. The State projects that overtime pay for caseload processing will not be required after

system implementation, due to reductions in administrative duties.

Basis for Numbers: The workload distribution information was documented using automated work measurement techniques and time and motion analysis conducted over two week intervals at four separate review periods during the last fiscal year. Management records and observation were used to verify that the performance of duties did not vary significantly from the norm during this time period. The analysis and findings are documented in the State's study, *Time Distribution of Casework*. A copy of this study will be retained in the State's files as an aid to future cost and benefit measurement.

Components of the administrative duties category include maintaining tickler files, performing work scheduling, manually tracking cases, and reporting to management. The time distribution of administrative duties, by caseworker per week, is shown in the table below. Expected improvements are reflected in the column to the right. (These improvements will be monitored and measured as qualitative benefits under the State's Cost/Benefit Measurement Plan.)

Average Weekly Distribution of Administrative Duties in Hours by Caseworker		
Description	Current	Proposed
Maintaining Tickler Files	1	0
Work Scheduling	2	1
Manual Tracking	2	1
Internal Reporting	3	2
TOTAL	8	4

Projected overtime is based on the State's most recent five-year budget (1994 - 1999), except that figures are expressed here in constant dollars. Copies of budgetary materials remain archived in the State.

Assumptions:

No major changes will take place in the duties assigned to caseworkers over the systems life.

[This assumption is supported by a prior assessment of caseworkers' duties, conducted in 1987 as part of a personnel audit. The study, *Performance Audit of Caseworkers*, is attached to the time and motion study and will be retained in State files.]

Workload growth will remain within the projections stated in Benefit 3 and there will be no new program mandates requiring overtime.

**Initial Calculations
of Benefit's Values:**

The current average caseworkers' salary of \$42,000, divided by 2080 hours (working hours in year), yields an average salary rate per hour of \$20.19. With the addition of the State's average fringe rate of 25.5%, the average loaded pay rate per hour of caseworkers' time is \$25.34.

Given an average of 46 weeks worked per year, times 4 hours saved per week, each worker can be projected to have 184 hours freed from routine administrative duties. Multiplying 184 hours times 120 caseworkers yields 22,080 hours times the loaded hourly rate of \$25.34 equals annual savings of \$559,507, more than enough to eliminate budgeted overtime expenditures of \$150,000. No claim is made for the additional "savings" since current staff will not be reassigned or laid off. Instead, the effect of productivity improvement on future staffing is set forth in Benefit 3.

[Data on average salary, current fringe rate, and average weeks worked were provided by the State's personnel office.]

This benefit has an annual program cost savings value of \$150,000. There are no benefit values for the status quo.

SYSTEM LIFE BENEFIT PROFILE: ALTERNATIVES						
Description	Year 1	Year 2	Year 3	Year 4	Year 5	Total
Benefit 2	0	150,000	150,000	150,000	150,000	600,000

Measurement Plan: The State is preparing to adopt a new procedure for approving overtime work which will track overtime against a set of standard work categories. Under the new procedure, overtime requests which specify the purpose of "caseload processing" will require explanation and special management approvals. Since the new system is intended to reduce overtime caseload processing, management controls can ensure that other measures, such as reallocating workload, are taken before overtime is approved. Records will be kept and evaluated annually to determine whether this benefit has been achieved.

Productivity improvements will be measured as qualitative benefits under the Cost/Benefit Measurement Plan. Once the new system is operational, the caseworkers' workload distribution will be reassessed annually, using the same measuring tools and methodology used for projecting these benefits.

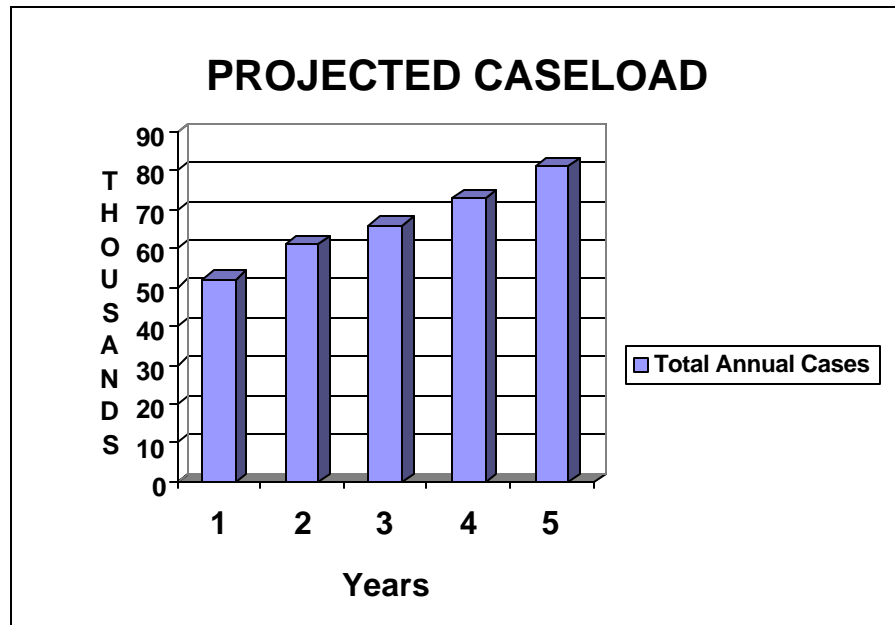
Quantified Benefits Worksheet: Systems Life

BENEFIT CATEGORY / DESCRIPTION								
Benefit Number: 2								
Description: Reduction in Caseworker's Overtime Pay								
STATUS QUO BENEFIT VALUE								
Assumptions: None. No benefit is claimed for the status quo. Figures below on current performance were used to determine cost savings for the alternative								
Numbers			Basis			Source		
Current Measure/Volume: \$150,000 annually			State Budget (1994-1999)			Budget office		
Projected Increase/Decrease Over Time: Stable			State Budget (1994-1999)			Budget office		
Current Value: \$150,000 annually			State Budget (1994-1999)			Budget office		
System Life Benefits Profile: Status Quo								
Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Total
0	0	0	0	0	0	0	0	0
ALTERNATIVE 1 BENEFIT VALUE								
Assumptions: Workload growth will remain within the projections stated in Benefit 3 and there will be no new program mandates requiring overtime								
Numbers			Basis			Source		
Measure/Volume at implementation: \$150,000			State Budget (1994-1999)			Budget office		
Projected Increase/Decrease Over Time: Stable			State Budget (1994-1999)			Budget office		
Initial Value at Implementation: \$150,000			State Budget (1994-1999)			Budget office		
System Life Benefits Profile: Alternative 1								
Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Total
-	150,0000	150,0000	150,0000	150,0000	-	-	-	600,000

Benefit 3:
Controlled Staff Expenditures in Meeting Caseload Growth
[Effect of New System on Future Staff Requirements]

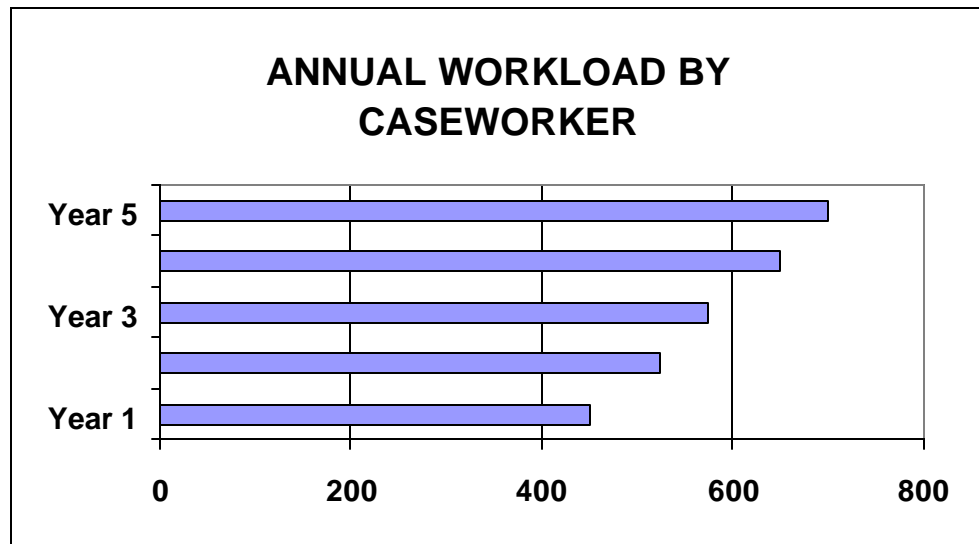
Scenario Under the current system, caseload processing is only marginally within system capabilities. The workload is achieved at the expense of significant delays for clients, support from outside processing services to meet system overloads, and caseworker overtime. (The latter was described in Benefit 2.)

Unfortunately, the current workload is not expected to remain level. It will increase, from 55,200 to an estimated 80,800 cases annually. See the graph below.



If management were to take no action, the caseworker burden would increase approximately 10% annually, from 460 to 673 cases per year. See the chart on the following page for the annual projected burden by caseworker, if no action is taken.

This situation is considered untenable by State management. The problem was analyzed and addressed in an internal State staffing plan. This plan addresses the number and timing of additional required staff and the manner in which they would be recruited and trained.

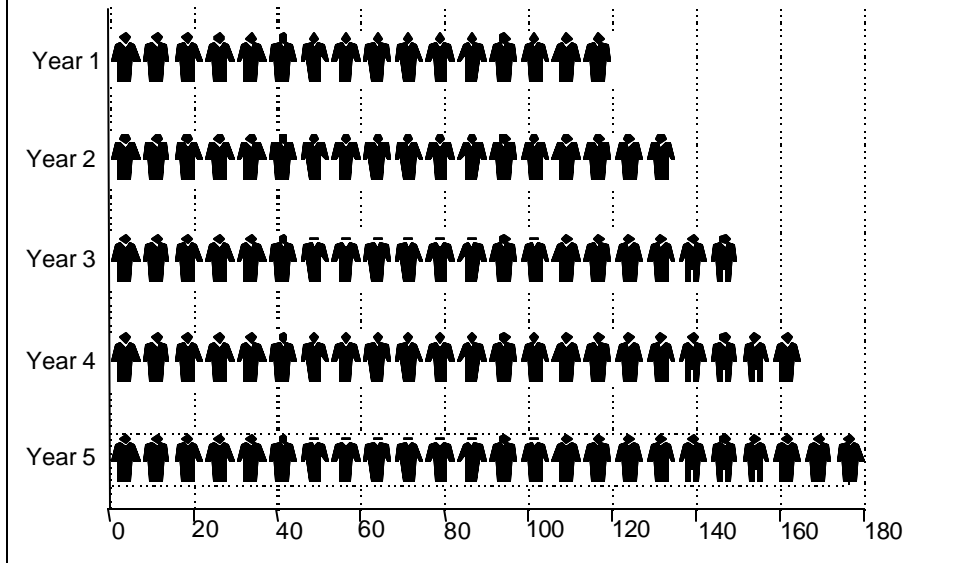


The results of this plan, showing the projected staff increase for the status quo, is depicted in the top chart on the next page. In order to maintain a ratio of about 460 cases annually per caseworker, staffing would increase from 120 caseworkers to 176 over five years.

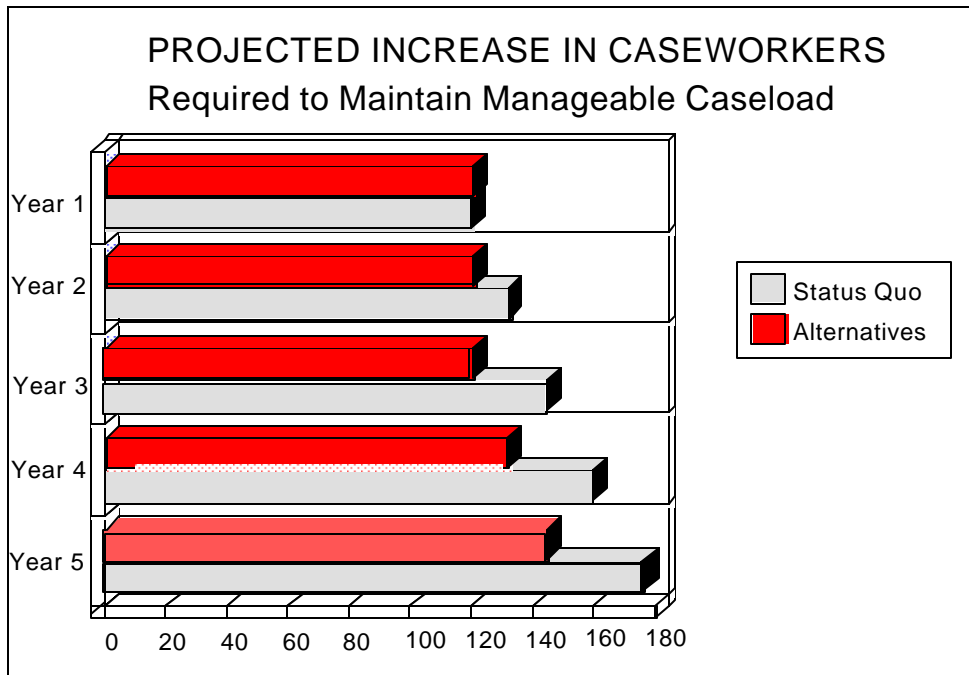
However, with the new system, reductions in administrative duties (described in Benefit 2) would enable staff to handle more cases per year — from 460 cases annually per year to 560 cases per year. This would reduce the overall staff requirements projected as necessary — down from 176 in the fifth year to 144 — and delay recruitment of additional personnel until the fourth year of the system life. See the bottom chart on the following page for a comparison of projected staffing between the status quo and the alternatives. [Both alternatives would support the same staffing pattern.]

PROJECTED INCREASE IN CASEWORKERS

Required to Maintain Manageable Caseload



PROJECTED INCREASE IN CASEWORKERS
Required to Maintain Manageable Caseload



Basis for Numbers: Projected caseloads are documented in a study conducted this year with contractor assistance, *Historical and Demographical Trends in Casework: Effect on the Future*. Next the State examined the effect of the projected caseload increase on current staff and devised a strategic staffing plan. The *State Caseworker Staffing Master Plan* was developed by a team represented by State management, personnel specialists, caseworker professional organization representatives, and contractor specialists. These studies will remain on file in the State throughout the development, implementation, and operation of this project.

Average case processing time is currently just over three hours, based on program management records on file in the State. Under the current system, caseworkers working 46 weeks per year at 32 hours per week on casework would have 1,472 hours, allowing them to process about 460 cases. Given the weekly gain of four hours for case processing that will accrue from the elimination of administrative duties (see Benefit 2), current staff working 46 weeks per year, 36 hours per week, with an average case processing time of under 3 hours, will be able to process management's projected goal of 560 cases per year. These figures are considered conservative based on the fact that other system improvements have not been factored in — and based on other States' records of processing similar cases in 2.5 hours, once modern technology was employed.

Assumptions: No major changes will take place in the duties assigned to caseworkers over the systems life. Workload growth will remain within the projections cited herein. There will be no new program mandates.

Initial Calculations of Benefit's Values If no action is taken, the State's caseworker staff will increase from 120 to 176 over five years. The average annual salary for the current staff is \$42,000. According to the State's staffing plan, new caseworkers would be hired under the State's three-year training program with annual salaries of \$32,000, \$34,000, and \$36,000, for the first, second, and third years respectively. All dollars are constant dollars. No cost-of-living adjustments or other salary increases are currently approved and, therefore,

have not been factored into these calculations. See the top table on page 3-22.

If the new system is adopted, the State's caseworker staff will remain stable for three years, then increase by 11 in year 4 and 13 in year 5 to a total of 144 caseworkers. See the bottom table on the following page.

The difference between the total loaded salary projections establishes the estimated program cost avoidance reported as a benefit for the alternatives. See below. There is no corresponding benefit for the status quo.

SYSTEM LIFE BENEFITS PROFILE: ALTERNATIVES						
Description	Year 1	Year 2	Year 3	Year 4	Year 5	Total
Status Quo Salaries	6,325,200	6,807,120	7,359,320	8,024,470	8,737,310	37,253,420
Alternatives' Salaries	6,325,200	6,325,200	6,325,200	6,766,960	7,316,650	33,059,210
Benefit 3	0	481,920	1,034,120	1,257,510	1,420,660	4,194,210

[Note that caseworker costs are not included on the cost side of the cost/benefit analysis, since those costs do not directly support the systems project. The program cost differential effected by the systems project is claimed as a cost avoidance of the alternatives.]

Measurement Plan: The State will measure actual staffing salaries at the loaded rate and deduct the actuals from the projected status quo salaries, to determine whether the projected cost avoidance benefit has been achieved.

Projected Caseworker Expenses: Status Quo							
Year	Staff	Salary	Total	Annual Salary	Total Staff	Fringe Rate	Loaded Salary
1	120	42,000	5,040,000	5,040,000	120	0.255	6,325,200
2	120	42,000	5,040,000	5,424,000	132	0.255	6,807,120
	12	32,000	384,000				
3	120	42,000	5,040,000	5,864,000	145	0.255	7,359,320
	12	34,000	408,000				
	13	32,000	416,000				
4	120	42,000	5,040,000	6,394,000	160	0.255	8,024,470
	12	36,000	432,000				
	13	34,000	442,000				
	15	32,000	480,000				
5	120	42,000	5,040,000	6,962,000	176	0.255	8,737,310
	25	36,000	900,000				
	15	34,000	510,000				
	16	32,000	512,000				

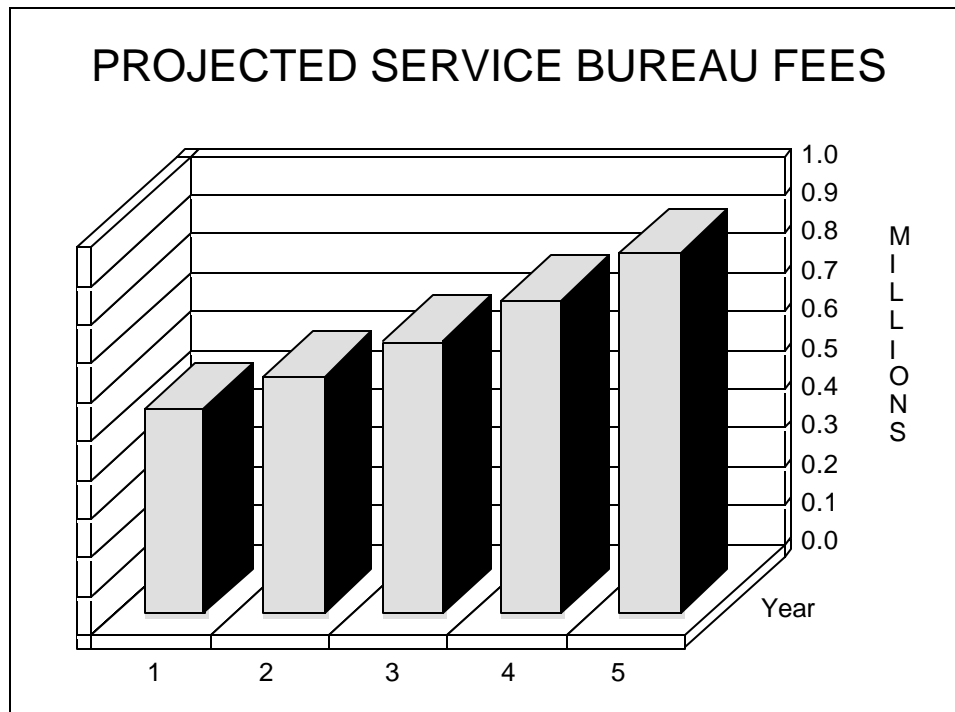
Projected Caseworker Expenses: Alternatives							
Year	Staff	Salary	Total	Annual Salary	Total Staff	Fringe Rate	Loaded Salary
1	120	42,000	5,040,000	5,040,000	120	0.255	6,325,200
2	120	42,000	5,040,000	5,040,000	120	0.255	6,325,200
3	120	42,000	5,040,000	5,040,000	120	0.255	6,325,200
4	120	42,000	5,040,000	5,392,000	131	0.255	6,766,960
	11	32,000	352,000				
5	120	42,000	5,040,000	5,830,000	144	0.255	7,316,650
	11	34,000	374,000				
	13	32,000	416,000				

Quantified Benefits Worksheet: Systems Life

BENEFIT CATEGORY / DESCRIPTION								
Benefit Number: 3								
Description: Controlled Staff Expenditures in Meeting Caseload Growth (see narrative for further detail on calculation)								
STATUS QUO BENEFIT VALUE								
Assumptions: None. No benefit is claimed for the status quo. Figures below on projected staffing costs for the status quo were used to determine cost avoidance for the alternatives.								
Numbers		Basis				Source		
Current Measure/Volume: 120 caseworkers		State Staffing Plan				State Caseworker Staffing Master Plan		
Projected Increase/Decrease Over Time: 10% to 176		State Staffing Plan				State Caseworker Staffing Master Plan		
Current Value: \$6,325,200 with variable cost increase		State Staffing Plan				State Caseworker Staffing Master Plan		
System Life Caseworker Costs: Status Quo								
Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Total
6,325,200	6,807,120	7,359,320	8,024,470	8,737,310	-	-	-	37,253,420
ALTERNATIVE 1 BENEFIT VALUE								
Assumptions: Workload growth will remain within the projections stated in Benefit 3 and there will be no new program mandates requiring overtime								
Numbers		Basis				Source		
Measure/Volume at implementation: 120		State Staffing Plan				State Caseworker Staffing Master Plan		
Projected Increase/Decrease Over Time: Stable til year 4		State Staffing Plan				State Caseworker Staffing Master Plan		
Initial Value at Implementation: \$6,325,200		State Staffing Plan				State Caseworker Staffing Master Plan		
System Life Projected Caseworker Costs: Alternatives								
Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Total
6,325,200	6,325,200	6,325,200	6,766,960	7,316,650	-	-	-	33,059,210
System Life Benefits Profile: Alternative 1								
Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Total
0	481,920	1,034,120	1,257,510	1,420,660	-	-	-	4,194,210

Benefit 4:
Reduction in Service Bureau's Processing Costs

Scenario: Under the current system, backlogs in caseload processing are transferred to an outside service bureau. This is required since current processing resources are unable to handle peak processing loads at certain times of the year. See the chart below.



The new system will have sufficient capacity and capability to process all workload.

Basis for Numbers: The information in the chart was provided by the State's procurement office, based on the State's current five-year service bureau contract. (This contract is used for other purposes, so eliminating service for caseload processing will not result in contract termination charges.) Between program workload and service bureau fixed-fee contract rates, the fixed

price costs for service bureau processing will increase at about 15% per year. The contracts are maintained in the State's procurement office.

Assumptions:

No major changes will take place in the duties assigned to caseworkers over the systems life. Workload growth will remain within the projections cited in Benefit 3. There will be no new program mandates.

Initial Calculation of Benefit's Value:

Figures are from the State's five-year, fixed-price contract, and are in the State's current budget. (Dollars stated reflect fixed price contract rates and have not been adjusted by the State for inflation.) Since these figures are budgeted and approved systems-related costs, they are shown as costs for the status quo and first year of the alternatives and as system cost savings benefits for years 2 - 5 of the alternatives.

SYSTEM LIFE COST PROFILE: STATUS QUO						
Description	Year 1	Year 2	Year 3	Year 4	Year 5	Total
Support Services: Service Bureau Fees	531,300	610,995	702,644	808,041	929,247	3,582,227

SYSTEM LIFE COST PROFILE: ALTERNATIVES						
Description	Year 1	Year 2	Year 3	Year 4	Year 5	Total
Support Services: Service Bureau Fees	531,300	0	0	0	0	531,300

SYSTEM LIFE BENEFIT PROFILE: ALTERNATIVES						
Description	Year 1	Year 2	Year 3	Year 4	Year 5	Total
Benefit 4	0	610,995	702,644	808,041	929,247	3,050,927

Measurement Plan: Service bureau charges in support of program operations are projected to be eliminated by the second year. The finance department maintains records by expenditure category and program office and will be able to confirm elimination of these costs.

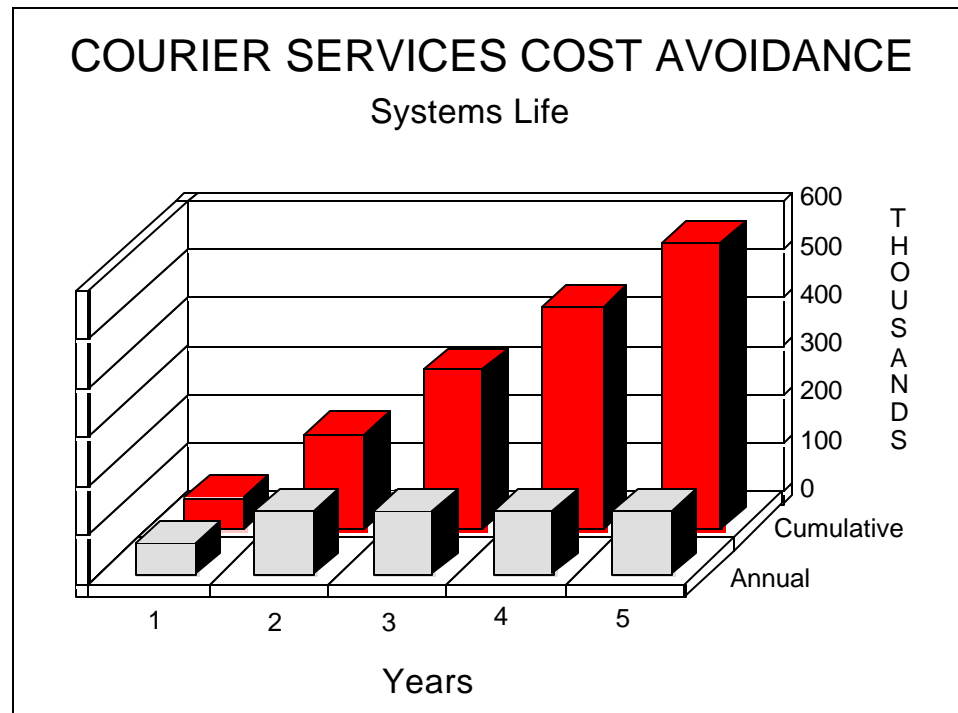
Quantified Benefits Worksheet: Systems Life

BENEFIT CATEGORY / DESCRIPTION								
Benefit Number: 4								
Description: Reduction in Service Bureau's Processing Costs								
STATUS QUO BENEFIT VALUE								
Assumptions: None. No benefit is claimed for the status quo. Figures below on current and future service bureau processing fees were used to determine cost savings for the alternatives.								
Numbers			Basis			Source		
Current Measure/Volume: \$531,000 annually			State Budget (1994-1999) & Service Contract			Budget and Procurement offices		
Projected Increase/Decrease Over Time: 15% annually to \$929,247			State Budget (1994-1999) & Service Contract			Budget and Procurement offices		
Current Value: \$531,000 annually			State Budget (1994-1999) & Service Contract			Budget and Procurement offices		
System Life Cost Profile: Status Quo								
Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Total
531,000	610,995	702,644	808,041	929,247	-	-	-	3,581,927
ALTERNATIVE 1 BENEFIT VALUE								
Assumptions: No major changes will take place in caseworker's duties. Workload growth will remain within the projections stated in Benefit 3. No new program mandates.								
Numbers			Basis			Source		
Measure/Volume at implementation: \$531,300			State Budget (1994-1999) & Service Contract			Budget and Procurement offices		
Projected Increase/Decrease Over Time: Eliminated in second year			State Budget (1994-1999) & Service Contract			Budget and Procurement offices		
Initial Value at Implementation: -\$531,000			State Budget (1994-1999) & Service Contract			Budget and Procurement offices		
System Life Cost Profile: Alternatives								
Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Total
531,500	-	-	-	-	-	-	-	531,500
System Life Benefits Profile: Alternative 1								
Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Total
0	610,995	702,644	808,041	929,247	-	-	-	3,050,927

Benefit 5:
Reduction in Courier Service Costs

Scenario: Since the current system lacks statewide telecommunications support, the program relied on courier services last year to deliver time-sensitive material to meet new mandates for information timeliness. Since these costs were not anticipated nor budgeted, the expenses could only be met by reprogramming funds from a State emergency operating expense account.

To meet this expense in current or future years, funds would have to be reprogrammed from the program accounts. However, with the new system, electronic transmission will be used, eliminating the need to budget for this expense — resulting in a system cost avoidance.



Basis for Numbers: Projected courier service costs are based on the State's most recent expenditures. Figures are expressed in constant dollars. Spending records are archived in the State. (A management study conducted at the time that courier services were adopted indicated that there were no more economical alternatives to meet this requirement, given the State's current technological limitations.)

Assumptions: Commercial network services will be installed by mid-year in the first year, cutting courier service costs in half.

Initial Calculations of Benefit's Value: The benefit has an average yearly value of \$130,000, based on past expenditures. There are no benefit values for the status quo; however, costs are reflected since they are direct systems operational costs requiring funding. See the following excerpts.

SYSTEM LIFE COST PROFILE: STATUS QUO						
Description	Year 1	Year 2	Year 3	Year 4	Year 5	Total
Courier Service Fees	130,000	130,000	130,000	130,000	130,000	650,000

SYSTEM LIFE COST PROFILE: ALTERNATIVES						
Description	Year 1	Year 2	Year 3	Year 4	Year 5	Total
Courier Service Fees	65,000	0	0	0	0	65,000

SYSTEM LIFE BENEFIT PROFILE: ALTERNATIVES						
Description	Year 1	Year 2	Year 3	Year 4	Year 5	Total
Benefit 5	65,000	130,000	130,000	130,000	130,000	585,000

Measurement Plan: Courier service charges in support of program operations are projected to be eliminated by mid-year in the first year. The finance department maintains records by expenditure category and program office and will be able to confirm elimination of these costs.

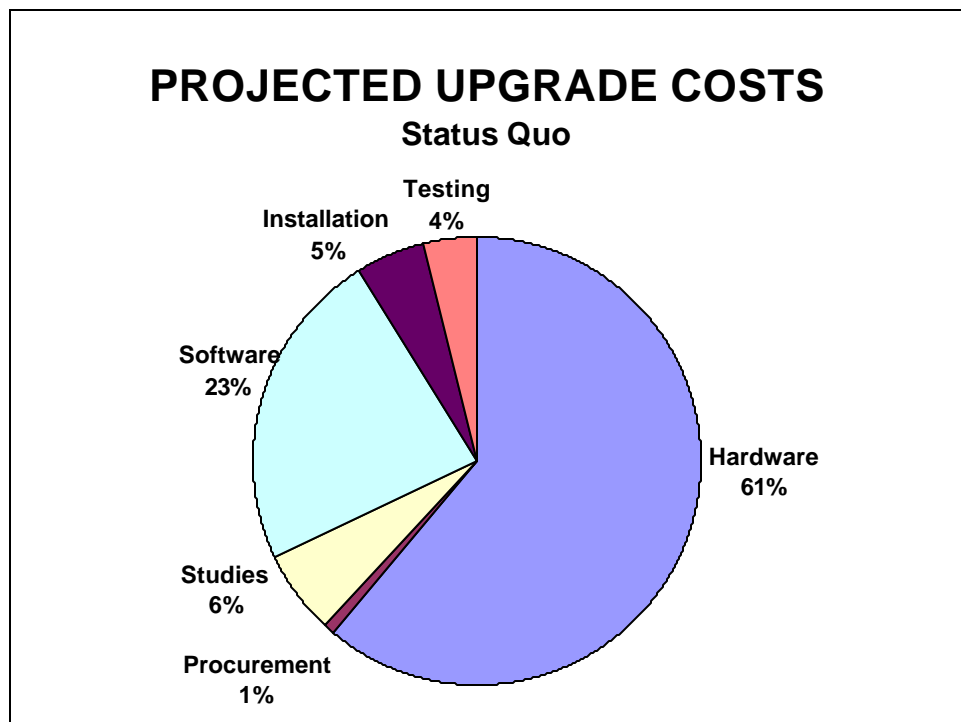
Quantified Benefits Worksheet: Systems Life

BENEFIT CATEGORY / DESCRIPTION								
Benefit Number: 5								
Description: Reduction in Courier Service Costs								
STATUS QUO BENEFIT VALUE								
Assumptions: None. No benefit is claimed for the status quo. Figures below on current and future courier service fees were used to determine cost savings for the alternative								
Numbers			Basis			Source		
Current Measure/Volume: \$130,000			State Budget (1994-1999)			Budget office		
Projected Increase/Decrease Over Time: Stable			State Budget (1994-1999)			Budget office		
Current Value: \$130,000 annually			State Budget (1994-1999)			Budget office		
System Life Benefits Profile: Status Quo								
Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Total
130,000	130,000	130,000	130,000	130,000	-	-	-	650,000
ALTERNATIVE 1 BENEFIT VALUE								
Assumptions: Commercial network services will be installed by mid-year in the first year, cutting courier service costs in half.								
Numbers			Basis			Source		
Measure/Volume at implementation: \$150,000			State Budget (1994-1999)			Budget office		
Projected Increase/Decrease Over Time: Stable			State Budget (1994-1999)			Budget office		
Initial Value at Implementation: \$150,000			State Budget (1994-1999)			Budget office		
System Life Benefits Profile: Alternative 1								
Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Total
65,000	130,000	130,000	130,000	130,000	-	-	-	5,265,000

Benefit 6:
System Engineering Upgrade Cost Savings

Scenario: Under the current systems plans and budgets, the status quo computer system is scheduled for a hardware and software engineering upgrade in the third year. This upgrade is required by the manufacturer, in order to continue hardware and software maintenance services beyond year 3. This upgrade does not affect the capacity or capability of the system's processing power. It simply makes the equipment eligible for continued maintenance support.

The upgrade is budgeted at \$655,000, with expenditures for equipment and software purchase and fees, installation, system testing, studies, and procurement. See the graph below.



By implementing the alternative, the upgrade will not be made — resulting in a system cost savings.

Basis for Numbers: The figures were taken from the latest approved State budget. A copy will be maintained in the State.

Assumptions: None.

Initial Calculation of Benefit's Value: The benefit has a value of \$655,000, as a system cost savings from the status quo.

SYSTEM LIFE COST PROFILE: STATUS QUO						
Description	Year 1	Year 2	Year 3	Year 4	Year 5	Total
System upgrade	0	0	655,000	0	0	655,000

SYSTEM LIFE BENEFIT PROFILE: ALTERNATIVES						
Description	Year 1	Year 2	Year 3	Year 4	Year 5	Total
Benefit 6	0	0	655,000	0	0	655,000

Measurement Plan: None required. Budgeted funds will be de-allocated and cost savings claimed in the third year.

Quantified Benefits Worksheet: Systems Life

BENEFIT CATEGORY / DESCRIPTION								
Benefit Number: 6								
Description: System Upgrade Cost Savings								
STATUS QUO BENEFIT VALUE								
Assumptions: No benefit is claimed for the status quo. Figures below reflect costs budgeted for the status quo and used to determine cost savings for the alternative								
Numbers			Basis			Source		
Current Measure/Volume: \$655,000 (third year)			State Budget (1994-1999)			Budget office		
Projected Increase/Decrease Over Time: Non-recurring			State Budget (1994-1999)			Budget office		
Current Value: \$655,000 annually			State Budget (1994-1999)			Budget office		
System Life Benefits Profile: Status Quo								
Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Total
0	0	655,000	0	0	0	0	0	655,000
ALTERNATIVE 1 BENEFIT VALUE								
Assumptions: None								
Numbers			Basis			Source		
Measure/Volume at implementation: None			State Budget (1994-1999)			Budget office		
Projected Increase/Decrease Over Time: Non-recurring (third year)			State Budget (1994-1999)			Budget office		
Initial Value at Implementation: None - \$655,000 (third year)			State Budget (1994-1999)			Budget office		
System Life Benefits Profile: Alternative 1								
Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Total
-		655,000			-	-	-	655,000

Cost / Benefit Profile

Alternative 1

Constant Dollars

SYSTEM LIFE COST PROFILE						
Description	Year 1	Year 2	Year 3	Year 4	Year 5	Total
Non-Recurring Costs	3,700,000	0	0	0	0	3,700,000
Recurring Costs	1,621,868	1,621,868	796,145	796,145	796,145	5,632,171
Total Projected Costs	5,321,868	1,621,868	796,145	796,145	796,145	9,332,171
Total Present Value Costs	5,144,650	1,465,358	672,265	628,238	587,157	8,497,668
SYSTEM LIFE BENEFITS PROFILE						
Description	Year 1	Year 2	Year 3	Year 4	Year 5	Total
Total Projected Benefits	65,000	1,782,422	3,081,271	2,755,058	3,039,414	10,723,165
Total Present Value Benefits	62,836	1,610,418	2,601,825	2,174,016	2,241,568	8,690,663
CUMULATIVE BENEFIT / COST PROFILE						
Description	Year 1	Year 2	Year 3	Year 4	Year 5	Total
Cumulative Total Projected Benefits	65,000	1,847,422	4,928,693	7,683,751	10,723,165	N/A
Cumulative Total Projected Costs	5,321,868	6,943,736	7,739,881	8,536,026	9,332,171	N/A

QUALITATIVE BENEFITS					
Benefits	Related System Objectives	Measure of Effectiveness			
		Very Effective	Effective	Minimally Effective	Not Effective
Enhanced use of technology to speed up input, processing, and transmission	Eliminate processing delays	√			
	Provide more timely services	√			
Support program goals and long range strategies		√			
Ensure flexibility and proven technology		√			

COMPARISON OF ALTERNATIVES

Constant Dollars

QUANTITATIVE FACTORS			
Description	Status Quo	Alternative 1	Alternative 2
Total Present Value Benefits	0	8,690,663	8,690,663
Less Total Present Value Costs	7,658,159	8,497,668	10,652,110
Net Benefit (Cost)	-7,658,159	192,995	-1,961,447
Benefit/Cost Ratio	0.00	1.02	0.82
Breakeven (Months)	N/A	52	N/A

QUALITATIVE FACTORS			
Description: Enhanced use of technology to speed up input, processing, and transmission in order to: <ul style="list-style-type: none"> • Eliminate processing delays, and • Provide more timely services. 	N/A	Highly Effective	Highly Effective
Support program goals and long range strategies		Highly Effective	Highly Effective
Ensure flexibility and proven technology		Highly Effective	Highly Effective

Cost Measurement Baseline

SYSTEM LIFE COST BASELINE						
Description	Year 1	Year 2	Year 3	Year 4	Year 5	Total
Non-Recurring Costs	3,700,000	0	0	0	0	3,700,000
Recurring Costs	1,621,868	1,621,868	796,145	796,145	796,145	5,632,171
Total Projected Costs	5,321,868	1,621,868	796,145	796,145	796,145	9,332,171
SYSTEM LIFE BENEFITS BASELINE						
Description	Year 1	Year 2	Year 3	Year 4	Year 5	Total
Total Projected Benefits	65,000	1,782,422	3,081,271	2,755,058	3,039,414	10,723,165
CUMULATIVE BENEFIT / COST BASELINE						
Description	Year 1	Year 2	Year 3	Year 4	Year 5	Total
Cumulative Total Projected Benefits	1	3	6	10	15	N/A
Cumulative Total Projected Costs	3,700,000	3,700,000	3,700,000	3,700,000	3,700,000	N/A