[Editor's Note: This chapter provides an example of the part of an Implementation APD that addresses cost/benefit analysis for a child welfare system. 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 C)
Cost/Benefit Analysis for Child Welfare System

Introduction:

Congress and the Department have recognized in law and regulation that more information is essential for "better understanding of the foster care program and causes and other factors contributing to its expansion and other changes; and eventually, to make suggestions and proposals for change to improve the child welfare system." Congress requires that the Department collect this information from the States: the States ultimately rely on the caseworkers.

Caseworkers are currently hampered in their program efforts by unwieldy and burdensome systems and procedures. The process must be re-engineered to reduce administrative overhead, redesign inefficient paper-based processes, and eliminate manual interfaces. In place, caseworkers must redirect their attention to client support and to community outreach programs that will affect child welfare over the short and long term.

This systems effort is the beginning of the State's program to modernize its methods and leave legacy processes behind. Just as Congress and the Department recognize that fundamental reform is needed, so do we.

With this submission, the State requests approval and Federal participatory funding. As a summary of our justification, this systems project is projected to:

- Meet Federal mandates at the least cost alternative,
- Breakeven in nine months, and
- Achieve measurable benefits that reflect important program outcome improvements.

Overview: The State has evaluated the feasibility of and alternatives for modernizing the information technology and processing procedures supporting its child welfare programs. As detailed in the feasibility study, this Statewide Automated Child Welfare Information System (SACWIS) project has the following *primary* objectives as required by Federal regulations:

- Meet Adoption and Foster Care Analysis and Reporting System (AFCARS) reporting requirements,
- Interface with State child abuse and neglect information systems,
- Interface with State systems that determine IV-A eligibility and manage IV-D child support collections, and
- Support efficient, economical, and effective program administration.

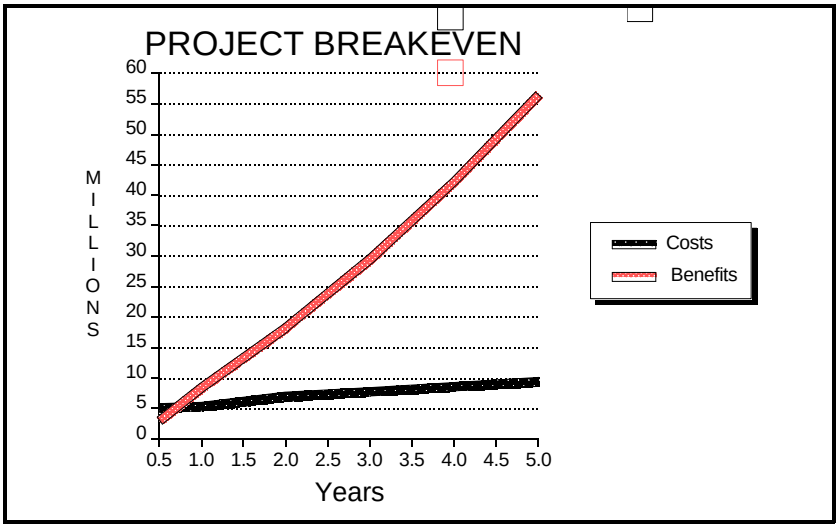
This project also has *program* objectives to:

- Support families to prevent the unnecessary separation of children from parents by emphasizing prevention services,
- Speed the placement of at-risk children in foster care, and
- Reduce the time children spend in long-term care, by fostering return to parents or adoption.

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.

Although Alternative 2 is the more technologically complete solution, Alternative 1 is the State's selected approach for implementation, primarily because it is less costly and, consequently, will breakeven sooner. See the following breakeven chart and comparison of alternatives table.

We made this decision because our sensitivity analysis indicates that factors outside the control of the child welfare program could affect the ultimate realization of benefits. The less costly the solution, the more likely the system will prove cost-beneficial under post-implementation analysis. Even under the most negative assumptions, our projections indicate that this project will breakeven.



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

COMPARISON OF ALTERNATIVES			
Description	**Status Quo**	**Alternative 1**	**Alternative 2**
Total Present Value Benefits	0	47,064,143	47,064,143
Less Total Present Value Costs	7,658,159	8,497,668	25,651,811
Net Benefit (Cost)	(7,658,159)	38,566,475	21,412,332
Benefit/Cost Ratio	0	5.54	1.83

Quantitative Benefits:

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

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

- Improve the efficiency and effectiveness of caseworkers and reduce program costs,
- Use productivity gains to increase the foster home pool and decrease group and residential home placements,

- Reduce the duration of stay for children who can safely be returned home,
- Consolidate databases to reduce the interval until adoption,
- Increase child support collections, and
- Reduce AFDC overpayments.

Note that the first two benefits are based on cost changes from *shifts in placement.* Specifically, they project how productivity improvements will allow caseworkers to change the nature of their work, which should result in measurable program improvements and cost reductions. The next two benefits address changes in the *duration of placement,* first for children who can safely be returned home and second for children who can be adopted. The last two benefits are based on improvements resulting from *systems interfaces* with the child support and AFDC programs. Details on these benefits follow, beginning on page 2-15.

These benefits result in program cost avoidances and cost savings that offset the systems development cost, thereby achieving net benefits for the project. The project will breakeven. See page 2-14 for the cost/benefit profile of the selected alternative.

Related to these six benefits are several important measures. They are quantitative, but are measured by factors other than dollars. These outcomes are also part of the measurement plan. They are to:

- Reduce the amount of time caseworkers spend on data entry and administrative duties,
- Increase the amount of time caseworkers devote to prevention services, and

- Devote more time to prevention services, resulting in a shift in placement from more to less expensive care.

Qualitative Benefits

In addition, qualitative benefits are anticipated to accrue by:

- Providing more time for caseworkers' program evaluation, including cause and effect analysis and development of a correlation model with predictive risk factors,
- Reducing burden on and inconvenience to foster care providers, and
- Providing strategic support of agency program goals.

Although these qualitative benefits have value, at this time they cannot be measured in dollars for offsetting systems development costs.

Costs:

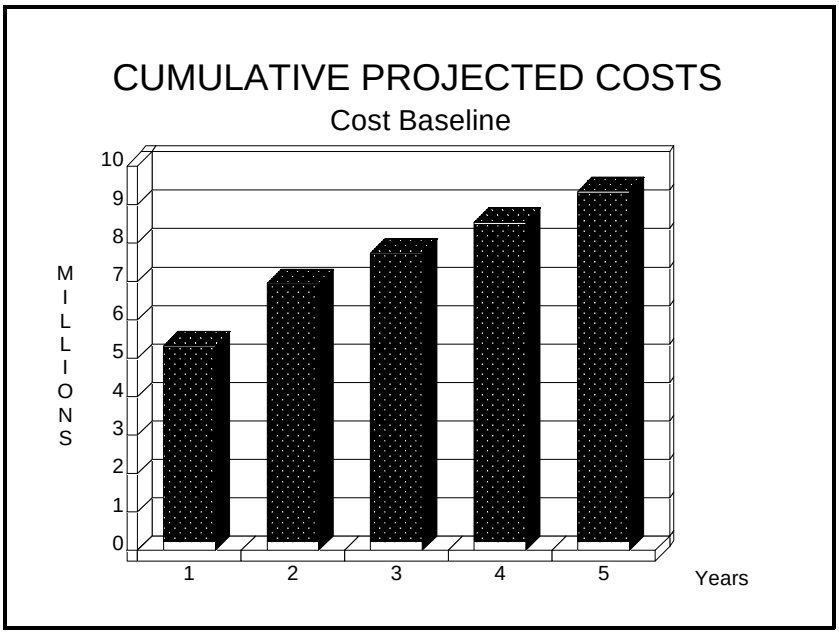
The costs evaluated in this analysis are those that directly relate to the systems design, development, conversion, implementation, and operation. For the status quo, recurring costs include site and facility, equipment and software lease and maintenance, travel, training, supplies, security, and personnel 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 and the cost/benefit analysis. Annual costs are provided in the cost/benefit profile on page 2-14.

[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.]

Cost/Benefit Measurement Plan:

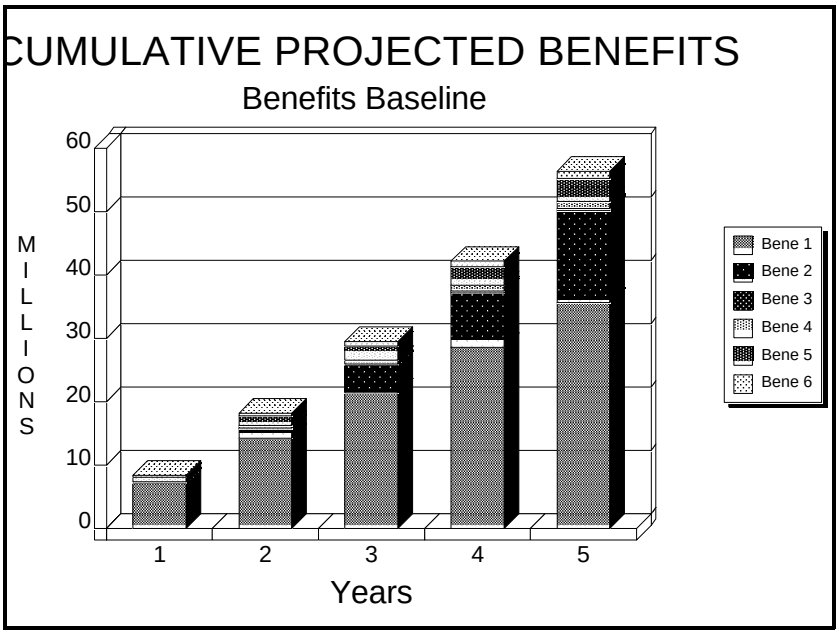
Costs. Actual costs will be measured against the selected alternative's projected costs by the finance office, subject to review and approval by the program office. Costs will be measured by category, but reported in the aggregate annually to ACF. Variances of over 10% will be explained by supporting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



[Editor's Note: As a reminder, the costs that States will measure against during implementation 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.]

ANNUAL AND SYSTEM LIFE 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

Dollar-Quantifiable Benefits. The following chart and table depict the cumulative and annual baselines against which actual project benefits will be measured. Benefits will be measured in accordance with the measurement plan listed at the end of each narrative benefit description beginning on page 2-15.



ANNUAL AND SYSTEM LIFE BENEFITS BASELINE						
Benefit	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Total**
Benefit 1	7,136,796	7,136,796	7,136,796	7,136,796	7,136,796	35,683,980
Benefit 2	0	1,452,841	2,899,945	4,347,049	5,794,153	14,493,988
Benefit 3	67,500	67,500	67,500	67,500	67,500	337,500
Benefit 4	220,800	220,800	220,800	220,800	220,800	1,104,000
Benefit 5	735,000	735,000	735,000	735,000	735,000	3,675,000
Benefit 6	233,600	233,600	233,600	233,600	233,600	1,168,000
Total	8,393,696	9,846,537	11,293,641	12,740,745	14,187,849	56,462,468

Other Measurable Benefits. The State also plans to determine whether related measurable improvements are achieved. For example, the dollar-quantifiable benefits in Benefit 1 are based on reductions in caseworker administrative duties, an increase in caseworker prevention services, and a corresponding shift in the population from out-of-home to less expensive in-home care. We will use two measures to assess this outcome.

Performance Baseline and Target: Weekly Average		
Description	**Current**	**Proposed**
Maintaining Tickler Files	1	0
Work Scheduling	2	1
Manual Tracking	2	1
Internal Reporting	3	2
Data Entry	4	2
Client Services	12	16
Program Analysis	0	2

First, we plan to measure whether the projected decrease in the amount of time caseworkers must devote to data entry and administrative processing is realized. The current and projected measures (per caseworker) are in the performance table above.

Second, we plan to measure the population distribution (in terms of percentages) to determine whether increasing caseworker prevention services had the projected effect on the population. The current and projected measures are shown in the population distribution table below.

Population Distribution		
Category	**Current**	**Projected**
Family Preservation	66%	73%
Foster Homes	22%	17%
Group Homes	1%	1%
Residential Homes	11%	8%

The dollar-quantified benefits in Benefit 2 are based on the development of a community outreach program that increases the foster home pool. We will separately evaluate whether the new program has the desired effect of adding fifty homes annually to the foster home pool. The value of this benefit is expressed by a shift in placement from the more expensive group and residential home care to foster home care. We have projected the effects over five years as indicated in the following chart.

Note that the analysis associated with these two benefits will not be a pure cause-effect analysis. We cannot isolate a portion of the foster care population to a laboratory environment and eliminate other external influences. These other factors, like

Population Distribution					
Category	Yr 1	Yr 2	Yr 3	Yr 4	Yr 5
Family Preservation	73%	73%	73%	73%	73%
Foster Homes	17%	18%	18%	19%	19%
Group Homes	1%	1%	1%	1%	1%
Residential Homes	9%	8%	8%	7%	7%

the availability of other support groups (church, extended family, school services) to the families and the size of the foster home pool, will affect the population and its distribution as well. Nevertheless, we will measure the actual population distribution and assess on a case-by-case basis the extent to which prevention services affected placement.

Note also that our sensitivity analysis (and reason) convince us that this benefit, although promising very high dollar returns, is the benefit most affected by factors outside of our control; it is, consequently, the most at risk of being unrealized. If drug usage escalates — especially drugs with side effects of violent behavior — no amount of family preservation services will protect the children.

Because of our uncertainty about achieving this benefit, we developed alternatives that would minimize expense and selected the least costly alternative to develop. Even if these benefits do not develop as projected, we still expect the system to breakeven.

In summary, this cost/benefit measurement plan provides that the State will measure system implementation against cost and benefit values — and against program performance goals. This

information will serve as the baseline for reporting "actuals" in future APD Updates.

COST/BENEFIT 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 Benefit Baseline						
Description	Year 1	Year 2	Year 3	Year 4	Year 5	Total
Total Projected Benefits	8,393,696	9,846,537	11,293,641	12,740,745	14,187,849	56,462,468
Cumulative Benefit / Cost Baseline						
Description	Year 1	Year 2	Year 3	Year 4	Year 5	Total
Cumulative Total Projected Benefits	8,393,696	18,240,233	29,533,874	42,274,619	56,462,468	N/A
Cumulative Total Projected Costs	5,321,868	6,943,736	7,739,881	8,536,026	9,332,171	N/A

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. 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 cost/benefit profile for the selected alternative and a narrative description of benefits (with benefit measurement plans) 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.]

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	8,393,696	9,846,537	11,293,641	12,740,745	14,187,849	56,462,468
Total Present Value Benefits	8,114,186	8,896,346	9,536,350	10,053,722	10,463,539	47,064,143

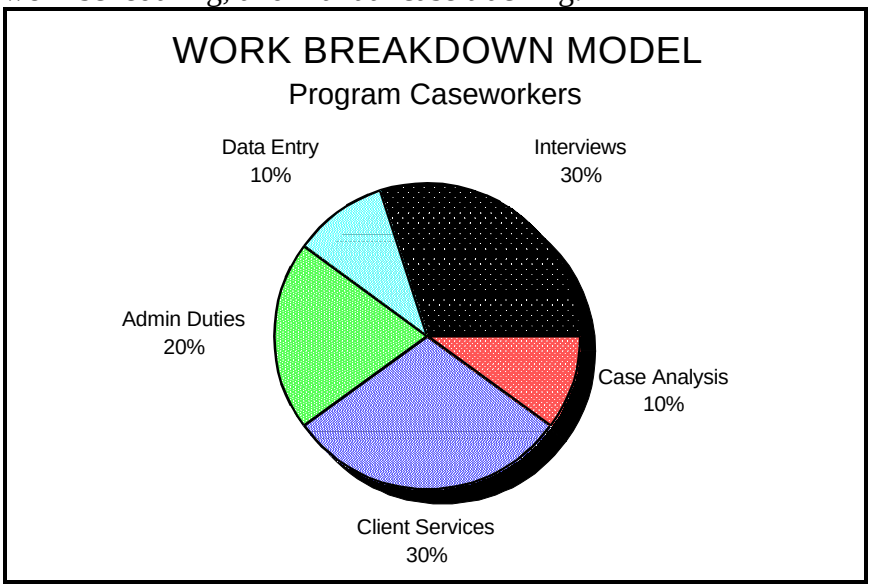
CUMULATIVE BENEFIT / COST PROFILE						
Description	Year 1	Year 2	Year 3	Year 4	Year 5	Total
Cumulative Total Projected Benefits	8,393,696	18,240,233	29,533,874	42,274,619	56,462,468	N/A
Cumulative Total Projected Costs	5,321,868	6,943,736	7,739,881	8,536,026	9,332,171	N/A

QUALITATIVE BENEFITS					
Benefits	Related System Objectives	Measure of Effectiveness			
		Very Effective	Effective	Minimally Effective	Not Effective
Provide more time for program evaluation	Automate to reduce administrative burden	√			
Reduce burden and inconvenience to foster care providers	Provide more timely payments and services	√			
Provide strategic support of agency program goals	Automate program analysis information	√			

[Editor's Note: A common error in developing benefits is claiming productivity improvements without indicating the effect of the improvement. For example, staff productivity will increase 50%, so I'll claim half the payroll as a benefit. This leaves critical questions unanswered. Will payroll costs be cut in half? Will staff be released, reassigned, or idle half the day? Will the work change? Will overtime be reduced? In short, what is the effect? In the Companion Guide, improved productivity is the basis for specific benefits: reduced clerical staff, reduced overtime pay, and reduction in future hires. The example below tackles the more difficult task of valuing the change in the type of work done. "Studies" cited throughout the guide are fictional.]

Benefit 1:
Improve Efficiency and Effectiveness of Caseworkers and Reduce Program Costs

Scenario: Currently caseworkers spend 30% of their time entering data and performing routine administrative functions, including tickler file maintenance, entry and updating of client information, routine work scheduling, and manual case tracking.



The new system will dramatically change the mix in time spent on these functions. Specifically, it will reduce the need for these functions through capabilities such as centralized electronic files and automated notice and report generation. Automation of these functions will reduce caseworkers' data entry and administrative overhead 50%, to 15% of their time.

In place of these clerical duties, caseworkers will be able to devote more time to prevention services, reducing the percentage of children in out-of-home care (this benefit) and the duration of placement (Benefit 3).

Basis for Numbers:

Productivity Improvement. Caseworker 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.

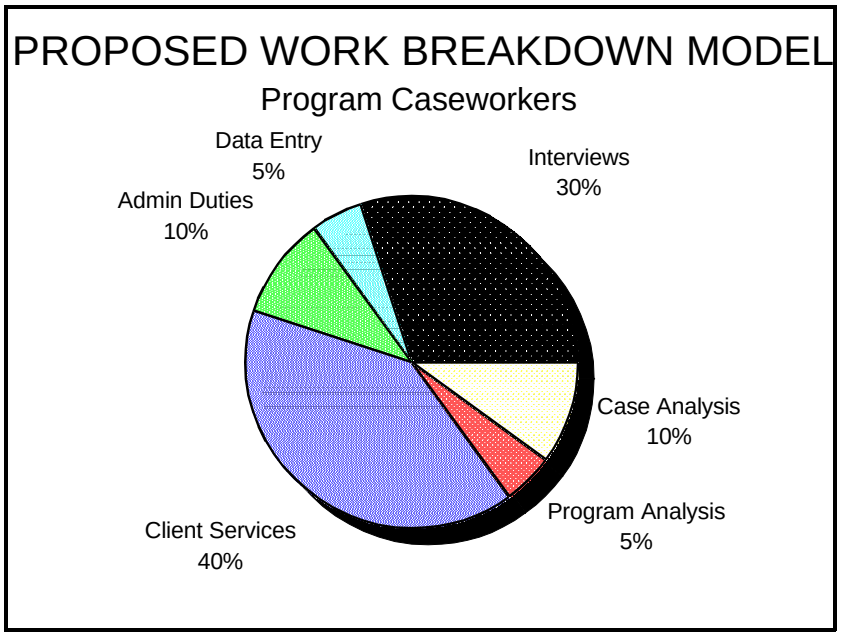
Average Weekly Distribution in Hours by Caseworker

Description	Current	Proposed
Maintaining Tickler Files	1	0
Work Scheduling	2	1
Manual Tracking	2	1
Internal Reporting	3	2
Data Entry	4	2
TOTAL	12	6

Components of the administrative duties category include maintaining tickler files, performing work scheduling, manually tracking cases, and reporting to management. Current system inefficiencies require redundant data entry — a problem that will be corrected with the new system. The time distribution of data entry and administrative duties, by caseworker per week, is shown in the preceding table. Expected improvements are reflected in the column to the right.

(These productivity improvements will be monitored and measured under the State's Cost/Benefit Measurement Plan.)

Given the projected productivity improvement, management plans a redistribution of workload under the new system. With automated functions, caseworkers will be able to devote more time to client services (this benefit) and program analysis (a qualitative benefit). Once the new system is in place, caseworkers' performance plans will be revised to increase the standard for time devoted to family preservation services. The proposed work breakdown model follows.



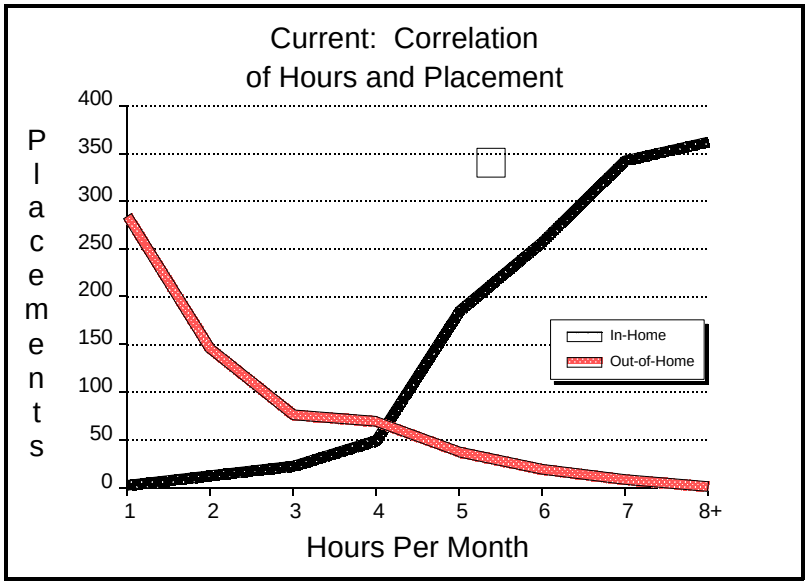
The analysis and findings are documented in the State's study, *Time Distribution of Caseworkers' Duties.* A copy of this study will be retained in the State's files as an aid to future cost and benefit measurement.

Prevention Services. It costs less to support children in the home than in out-of-home care. The most recent statistics indicate that the 34% of the population in out-of-home care require over 60% of the costs.

The following table indicates the average daily distribution of children with costs per month each and total costs per month. The out-of-home care categories (foster homes, group homes, and residential homes) are all notably higher than in-home care (family preservation).

1994	Family Preservation	Foster Homes	Group Homes	Residential Homes
Population	6,100	2,000	135	975
Cost (Mo.)	$ 451	$ 546	$ 3,250	$ 2,918
Total Cost	2,751,100	1,092,000	438,750	2,845,050

A review and reconstruction of case files indicates a positive correlation between the amount of time spent in direct contact with the family and the preservation of the child in the home. At each level of time invested, the ratio between in-home and out-of-home changes. See the chart on the next page.



To develop this data, we assembled a task force of caseworkers to review approximately 20% (chosen at random) of 1994's case records. Based on records, experience, and estimates, we correlated hours spent on cases with placement decisions. The data support what experience tells us; that is, positive support from caseworkers can affect outcomes.

Against this correlation model, we next analyzed the effect of investing additional time on each case — first one then two additional hours per case per month. The model projects a significant shift between the ratio of the in-home and out-of-home population. See the table below for a summary and the following page for details.

Model	In-Home	Out-of-Home
Current	66%	34%
+ One Hour	73%	27%
+ Two Hours	80%	20%

Recognizing that caseworker time is one of many factors that affect the ultimate placement of children, we used the more conservative model as a basis for projecting the effect (benefit) of increased caseworker time on the distribution of children under care.

1994	Family Preserv.	Foster Homes	Group Homes	Res. Homes	Total
Population	6,100	2,000	135	975	9,210
% of All	66%	22%	1%	11%	100%
% Out-of-Home		64.31%	4.34%	31.35%	3,110
Cost per Month	451	546	3250	2918	
Monthly Cost	2,751,100	1,092,000	438,750	2,845,050	7,126,900
Annual Cost	33,013,200	13,104,000	5,265,000	34,140,600	85,522,800
Sys. Life** Cost	165,066,00	65,520,000	26,325,000	170,703,000	427,614,000
+ One Hour	**Family Preserv.**	**Foster Homes***	**Group Homes***	**Res. Homes***	**Total**
Population	6,723	1,599	108	780	9,210
Percentage	73%	17%	1%	8%	100%
Cost per Month	451	546	3250	2918	
Monthly Cost	3,032,073	873,054	351,000	2,276,040	6,532,167
Annual Cost	36,384,876	10,476,648	4,212,000	27,312,480	78,386,004
Sys. Life** Cost	181,924,380	52,383,240	21,060,000	136,562,400	391,930,020

Benefit					**35,683,980**
+ Two Hours	**Family Preserv.**	**Foster Homes***	**Group Homes***	**Res. Homes***	**Total**
Population	7,368	1,185	80	577	9,210
Percentage	80%	13%	1%	6%	100%
Cost per Month	451	546	3250	2918	
Monthly Cost	3,322,968	647,010	260,000	1,683,686	5,913,664
Annual Cost	39,875,616	7,764,120	3,120,000	20,204,232	70,963,968
Sys. Life** Cost	199,378,080	38,820,600	15,600,000	101,021,160	354,819,840
Benefit					**72,794,160**

* Percentage ratio maintained to current population in out-of-home care.
** Five years.

The detailed correlation table on the prior page shows the effect of shifts in the placement of children on costs. Given the State's commitment to preserve children in the home where safe and possible, increasing caseworkers' time in prevention activities creates a measurable goal.

Population and cost statistics and the results of the ad hoc case file 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 staff over the systems life.

Initial Calculations of Benefit's Value: Recognizing that caseworker support is one of many factors that affect the ultimate placement of children, we have chosen to use the more conservative (one-hour) model.

As detailed on the previous pages, our correlation analysis predicts that investing one more hour per month per case in prevention activities such as family preservation should affect the placement ratio favorably. The estimated value of this benefit exceeds $35,000,000 (based on the current population) over the five year systems life.

The table below reflects current program costs based on the most recent complete year's data. It also shows projected new costs based on a change in ratio of placement as described previously. The difference is claimed as a benefit. Constant dollars are used throughout.

SYSTEM LIFE BENEFITS PROFILE: ALTERNATIVES

Description	Year 1	Year 2	Year 3	Year 4	Year 5	Total
Program costs	85,522,800	85,522,800	85,522,800	85,522,800	85,522,800	427,614,000
Projected costs	78,386,004	78,386,004	78,386,004	78,386,004	78,386,004	391,930,020
Benefit 1	7,136,796	7,136,796	7,136,796	7,136,796	7,136,796	35,683,980

[Editor's Note: Please note especially that the value of this benefit is based on the value of decreased program costs of care, not caseworker time. Valuing the benefit based on caseworkers' time would be reasonable if payroll costs were reduced.]

Measurement Plan:

Once the system is operational, the State will establish new standards for workload distribution for caseworkers, shifting the emphasis from administrative duties to family preservation. Detailed records will be maintained regarding hours invested and services delivered, so that we can measure the actual workload distribution achieved and verify the increase in time devoted to prevention activities. This is a measurable outcome and, as such, can be referred to as a quantitative benefit, measured in hours (rather than dollars).

Because factors (such as recessions, poor job markets, communicable disease, and teen pregnancy) outside of the control of the child welfare program affect the number of children under care, *the State plans to measure this benefit on the basis of percentage and not absolute population numbers.*

Our goal is to manage caseworkers' time and tasks so that we meet or exceed 73% of the population in safe, supported, at-home care. Using the status quo's 66% rate as a baseline, we will be able to evaluate the dynamic effects of the new system on program costs.

Note that these are management's confidential program evaluation goals. The State does not plan to require caseworkers to meet a quota nor will the State evaluate caseworkers on placement ratios. The effect of such a policy could place children at risk. Instead, this model serves as the basis for:

- Increasing the time caseworkers devote to family support, and
- Evaluating the effect and effectiveness of the change on the program.

There are two qualitative benefits related to this dollar-quantitative benefit.

The first is the qualitative benefit of the additional time that caseworkers will have for program evaluation. Congress and the Department have emphasized in law and regulation that more information is essential for "better understanding of the foster care program and the causes and other factors contributing to its expansion and other changes; and eventually, to make suggestions and proposals for change to improve the child welfare system." Congress requires that the Department collect this information from the States; the States ultimately rely on the caseworkers.

Under the new system, the State will commit additional resources to program evaluation. For example, we plan to refine and expand the correlation model by developing predictive risk factors. We also plan to analyze cause and effect in the child welfare system to support continuing program improvement. Although currently incalculable, such program evaluation could reap large benefits in the future.

The second qualitative benefit is the reduction of the burden on and inconvenience to clients. Workers will have client data more readily available and will therefore reduce the intake burden on clients.

Quantified Benefits Worksheet: Systems Life

BENEFIT CATEGORY / DESCRIPTION

Benefit Number: 1
Description: Improve Efficiency and Effectiveness of Caseworkers and Reduce Program Costs

STATUS QUO BENEFIT VALUE

Assumptions: None. No benefit is claimed for the status quo.

Numbers	Basis	Source
Current Measure/Volume: 30% of caseworkers' time is devoted to client services	Study using automated work measurement techniques and time and motion analysis.	"Time Distribution of Caseworkers' Duties" (program office)
Projected Increase/Decrease Over Time: Stable	No change anticipated.	
Current Value: 30%	Cited study.	

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

ALTERNATIVES BENEFIT VALUE

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

Numbers	Basis	Source
Measure/Volume at Implementation: 40% of caseworkers' time is devoted to client services	Decreased program costs resulting from increased caseworker support on the ratio of the in-home versus out-of-home population.	"Time Distribution of Caseworkers' Duties" (program office)
Projected Increase/Decrease Over Time: Stable	No change anticipated	Correlation Analysis and Model on Time and Placement Data (program office)
Initial Value at Implementation: $7,136,796	See preceding table in this benefit description.	

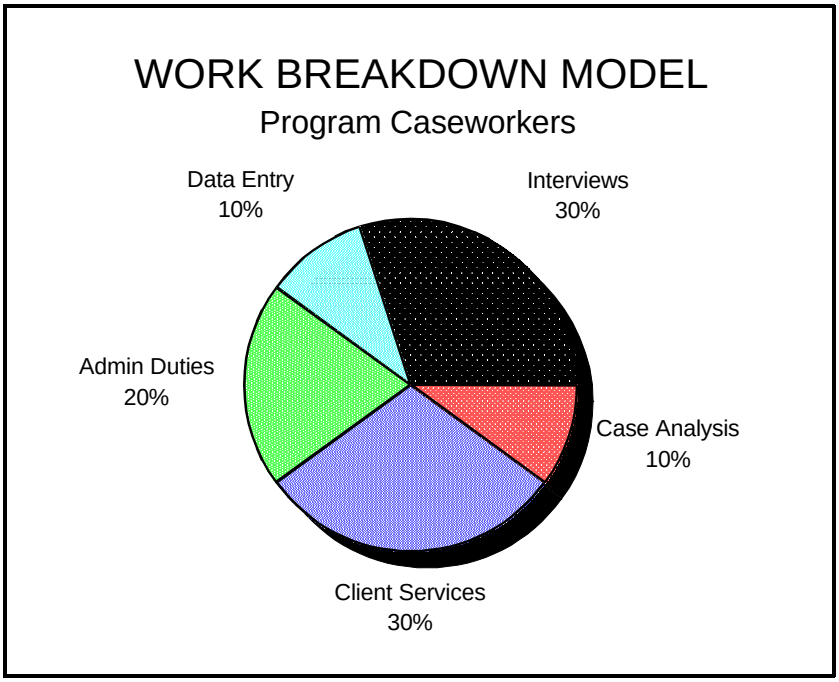
Systems Life Benefits Profile: Alternatives

Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Total
7,136,796	7,136,796	7,136,796	7,136,796	7,136,796	-	-	-	35,683,980

[Editor's Note: This is another example of developing a benefit resulting from productivity improvement by valuing the type of work done. In this case, caseworker productivity improvement is used to "free up" a caseworker for reassignment to a community outreach program. The projected effect is to increase the foster home pool, resulting in a shift in placement from more expensive means of care. Note that States could develop other benefits related to the foster home pool, such as improved provider retention supported by timely payments and issuance of medical assistance cards.]

Benefit 2:
Use Productivity Gains to Increase the Foster Home Pool and Decrease Group and Residential Home Placements

Scenario: Currently, caseworkers spend 30% of their time interviewing clients and prospective foster care providers. (See graph below.)



These interviews are hampered by an unwieldy and inefficient paper-based system, adding unnecessary time to the interview process. By improving access to information, these interviews can be completed more expeditiously. The productivity improvement will enable reassignment of a caseworker to a new community outreach program with the goal of increasing the number of homes in the foster care program. With more homes available, the percentage of placements in group and residential homes will decrease.

Basis for Numbers:

Based on the requirements for the new system, we simulated the caseworker interview process to determine the effect of readily available on-line information.

Currently caseworkers spend an average of twelve hours a week conducting interviews, which average one hour and ten minutes each. With information readily available, our simulations indicate that interview time can be decreased to one hour (approximately a 15% reduction.)

(These productivity improvements will be monitored and measured as qualitative benefits under the State's Cost/Benefit Measurement Plan.)

In our headquarters office, we have 60 caseworkers, devoting 720 hours per week to interviews. With a 15% reduction, interview hours would drop 108 hours per week to 612 hours. This is more than enough time to select one caseworker for full-time assignment to community outreach services.

Our experience has been that for every two hundred homes contacted, we recruit one additional family as foster care providers. We estimate that a person assigned full-time to community outreach should be able to contact (primarily in groups) two hundred people per week. These would include groups such as churches, PTAs, and youth sports organizations. In addition, the caseworker could employ mass media (using television spots and news articles) to reach a larger audience. We conservatively

estimate that fifty homes could be added to the foster home pool each year.

With more families in the foster care pool, we can reduce the percentage of the population in group and residential homes.

It costs less to support children in foster care than in group or residential homes. The table in Benefit 1 on page 2-18 indicates the average daily distribution of children with costs per month each and total costs per month. The costs for group homes and residential homes are notably higher than foster home care. If we can increase the pool of foster homes by fifty a year, we can reduce program costs.

To analyze the effect of a larger pool, we calculated system life costs, each year increasing the foster home pool while retaining the current ratio between group and residential home placement. Note several points. First, we increased the foster home pool beginning with year two to account for outreach start-up and placement. Second, for consistency throughout our analysis (and to avoid double-counting), we have based our projections on the correlation model (+one hour) developed in Benefit 1. Note also that we have held our population numbers constant for two reasons: growth of population is unpredictable and we plan to measure on the basis of percentage of population (as explained in Benefit 1).

The model projects that shifting the ratio of the out-of-home population will result in a sizable benefit. See the table on the next page for the effect on costs of shifts in the placement of children.

Population and cost statistics and the results of the ad hoc case file study will be retained in the State's files as an aid to future cost and benefit measurement. Other findings are documented in the State's white paper entitled *Projected Effect of Increased Community Outreach Activities.*

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

Initial Calculations of Benefit's Values:

As detailed in the previous pages, our analysis predicts that investing caseworker time in community outreach will affect the foster home pool, shifting the placement ratio in out-of-home care favorably. The estimated value of this benefit exceeds $14,000,000 over the five year systems life.

Larger Pool	Family Pres.	Foster Homes	Group Homes	Res. Homes	Total
Population Yr 1	6,723	1,599	108	780	9,210
Population Yr 2	6,723	1,649	101	737	9,210
Population Yr 3	6,723	1,699	95	693	9,210
Population Yr 4	6,723	1,749	89	649	9,210
Population Yr 5	6,723	1,799	83	605	9,210
Cost per Month	451	546	3250	2918	
Year 1 Costs	36,384,876	10,476,648	4,212,000	27,312,480	78,386,004
Year 2 Costs	36,384,876	10,804,248	3,921,840	25,822,199	76,933,163
Year 3 Costs	36,384,876	11,131,848	3,687,840	24,281,495	75,486,059
Year 4 Costs	36,384,876	11,459,448	3,453,840	22,740,791	74,038,955
Year 5 Costs	36,384,876	11,787,048	3,219,840	21,200,087	72,591,851
Sys. Life Cost	181,924,380	55,659,240	18,495,360	121,357,052	377,436,032
Benefit					**14,493,988**

The table below reflects projected program costs based on the correlation model and shows projected decreases in costs based on a further change in ratio of placement as described previously. The difference is claimed as a benefit. Constant dollars are used throughout.

SYSTEM LIFE BENEFITS PROFILE: ALTERNATIVES						
Description	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Total**
Correlation costs	78,386,004	78,386,004	78,386,004	78,386,004	78,386,004	391,930,020
Further reductions	78,386,004	76,933,163	75,486,059	74,038,955	72,591,851	377,436,032

Benefit 2	0	1,452,841	2,899,945	4,347,049	5,794,153	14,493,988

Measurement Plan:

Once the system is operational, the State will measure caseworkers' interview time and monitor the effectiveness of the outreach program. If the program is successful, it will be expanded to multiple locations throughout the State, enabling further system benefits. Detailed records will be maintained regarding hours invested, groups, and increases in the foster home pool.

Because factors (such as recessions, poor job markets, communicable disease, and teen pregnancy) outside of the control of the child welfare program affect the number of children under care, the State plans to measure this benefit on the basis of percentage and not absolute population numbers.

Larger Pool	Family Pres.	Foster Homes	Group Homes	Res. Homes	Total
Population Yr 1	6,723	1,599	108	780	9,210
Population Yr 2	6,723	1,649	101	737	9,210
Population Yr 3	6,723	1,699	95	693	9,210
Population Yr 4	6,723	1,749	89	649	9,210
Population Yr 5	6,723	1,799	83	605	9,210
Population % Yr 1	.73	.17	.01	.09	100%
Population % Yr 2	.73	.18	.01	.08	100%
Population % Yr 3	.73	.18	.01	.08	100%
Population % Yr 4	.73	.19	.01	.07	100%
Population % Yr 5	.73	.19	.01	.07	100%

Quantified Benefits Worksheet: Systems Life

BENEFIT CATEGORY / DESCRIPTION

Benefit Number: 2
Description: Use Productivity Gains to Increase the Foster Home Pool and Decrease Group and Residential Home Placements

STATUS QUO BENEFIT VALUE

Assumptions: None. No benefit is claimed for the status quo.

Numbers	Basis	Source
Current Measure/Volume: Interviews average 70 minutes	Study using automated work measurement techniques and time and motion analysis.	"Time Distribution of Caseworkers' Duties" (program office)
Projected Increase/Decrease Over Time: Stable	No change anticipated.	
Current Value: 70 minutes	Cited study.	

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

ALTERNATIVES BENEFIT VALUE

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

Numbers	Basis	Source
Measure/Volume at Implementation: 60 minutes per interview / one caseworker diverted to community outreach	Community outreach increases pool of foster homes, affecting the ratio of the in-home versus out-of-home population.	"Time Distribution of Caseworkers' Duties" "Projected Effect of Increased Community Outreach Activities" (program office)
Projected Increase/Decrease Over Time: Stable	Increases by 50 foster homes per year beginning in year two.	
Initial Value at Implementation: 0	See preceding table in this benefit description.	

Systems Life Benefits Profile: Alternatives

Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Total
0	1,452,841	2,899,945	4,347,049	5,794,153	-	-	-	14,493,988

[Editor's Note: The preceding two benefits were based on cost changes from shifts in placement. The next two benefits are based on cost changes from duration of placement.]

Benefit 3: Reduce the Duration of Stay for Children Who Can Safely be Returned Home

Scenario

As indicated in Benefit 1, caseworkers currently spend 30% of their time entering data and performing routine administrative functions. The new system will dramatically reduce the need for these functions through capabilities such as centralized electronic files and automated notice and report generation. Automation of these functions will reduce caseworkers' data entry and administrative overhead 50%, to 15% of their time.

In place of these clerical duties, caseworkers will be able to devote more time to client services, reducing the percentage of children in out-of-home care (Benefit 1) and the duration of placement (this benefit).

Basis for Numbers:

If children can safely be returned home, costs will decrease because it costs less to support children in the home than in foster care. The most recent statistics indicate that family preservation services cost $451 per child, compared to foster care costs of $546 per child. Multiplied by the population, these costs run in the millions. See below.

1994	Family Preservation	Foster Homes
Population	6,100	2,000
Cost per Month	$ 451	$ 546

There are many reasons that children are in foster care, the foremost of these being safety. However, for a small percentage of the foster care population (approximately 15%), placement is temporary, caused not by concerns of safety, but by conditions such as temporary lack of housing, lack of day care, or parental illness. Although such children should be returned to their homes quickly, delays caused by administrative processing backlogs and lack of caseworker time are all too common.

With the new system, caseworkers will have more time for client services and administrative processing will be more highly automated. By also changing intake procedures to track the temporary-needs children, the average duration of foster care placement for these children should drop from 120 days to 45 days, without additional risk to the children.

Assumptions: No major changes will take place in the duties assigned to caseworkers over the systems life. The number of temporary-needs children will remain relatively constant.

Initial Calculations of Benefit's Values: Typically, about 300 children in the foster home population are children in temporary care. Daily costs for supporting these children is about $18 in foster care and $15 in family preservation, a $3 difference per child. If the average duration of stay can be reduced from 120 days to 45 days, meaningful savings will accrue. [120 days less 45 days equals 75 days times $3 less cost per day equals $225 less cost per child: $225 times 300 children equals $67,500 (in constant dollars) per year times five years for a systems life cost difference of $337,500.]

SYSTEM LIFE BENEFITS PROFILE: ALTERNATIVES						
Description	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Total**
Benefit 3	67,500	67,500	67,500	67,500	67,500	337,500

Measurement Plan:	The State will measure the average duration of placement of children placed in temporary-needs foster care and calculate a cost avoidance against the current 120 day average. Actual numbers will be used for average duration of placement and the number of children placed.

Quantified Benefits Worksheet: Systems Life

BENEFIT CATEGORY / DESCRIPTION	
Benefit Number:	3
Description:	Reduce the Duration of Stay for Children Who Can Safely be Returned Home

STATUS QUO BENEFIT VALUE		
Assumptions:	None. No benefit is claimed for the status quo.	
Numbers	**Basis**	**Source**
Current Measure/Volume: 120 days average duration * 300 children in temporary care	State management records	State program office
Projected Increase/Decrease Over Time: Stable	No change anticipated	
Current Value: $18 dollars foster care costs per day	State budget and accounting records	State Finance Department

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

ALTERNATIVES BENEFIT VALUE		
Assumptions:	No major changes in duties, and temporary-needs population will remain relatively constant.	
Numbers	**Basis**	**Source**
Measure/Volume at Implementation: 45 days average duration	State study of effect on costs by changing duration of placement.	"Duration of Care and Costs" (program office)
Projected Increase/Decrease Over Time: Stable	No changes anticipated	State program office.
Initial Value at Implementation: $3 less for 75 days * 300 children = $67,500	State budget and accounting records	State Finance department.

Systems Life Benefits Profile: Alternatives

Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Total
67,500	67,500	67,500	67,500	67,500	-	-	-	337,500

[The following benefit is based on the comparative costs between children in foster care and adopted children. If the time until adoption can be reduced from ten months to two months by the system's consolidated database, measurable benefits will result,

because it costs approximately 50% less in continued care costs for adopted children.]

Benefit 4:
Consolidate Databases to Reduce the Interval Until Adoption

Scenario: Under the current system, there is no centralized database from which children in foster care who are eligible for adoption can be matched with adoptive parents. This would be corrected with the new system, enabling matching of children and parents, not just in the community, but within the State and among other States.

Last year, the State Department of Social Services completed a laborious study that involved a statewide sampling of records from the numerous listings (automated and non-automated) that are the State's records of children and potential adoptive parents. The findings were grim. Of the 2,000 children in foster care, approximately 10% (200) were eligible for adoption. Of the 200, approximately half (100) could be matched with potential adoptive parents. Despite the fact that these children could be placed with screened adoptive parents, the average time until placement was approximately ten months. This delay is attributable to the lack of centralized information and inefficient procedures and scheduling information. The study, "From Foster Care to Adoption: The Long Road," estimated that the ten month interval could be reduced to two months with centralized information.

Assumptions: The number of children in foster care who are eligible for adoption and the number of adoptive homes will remain relatively constant.

Initial Calculation of Benefit's Value: If 100 children a year move from foster care to adoptive parents with a two month rather than ten month delay, the savings are significant. Foster care averages $546 per month. Although the State provides some financial support to adoptive parents ($270),

the support is considerably less than foster care. The reduction in expense is $276 less per child per month. The benefit is based on $276 less per month times eight months or $2208 for each child, times 100 children a year equals $220,800 (in constant dollars) annually.

SYSTEM LIFE BENEFIT PROFILE: ALTERNATIVES						
Description	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Total**
Benefit 4	220,800	220,800	220,800	220,800	220,800	1,104,000

Measurement Plan: The delay to adoption for children with a match on file will be measured and benefits calculated.

Quantified Benefits Worksheet: Systems Life

BENEFIT CATEGORY / DESCRIPTION								
Benefit Number: 4 **Description:** Consolidate Databases to Reduce the Interval Until Adoption								
STATUS QUO BENEFIT VALUE								
Assumptions: None. No benefit claimed for the status quo.								
Numbers			**Basis**			**Source**		
Current Measure/Volume: 10 months to placement for 5% of population (100)			State study			"From Foster Care to Adoption: The Long Road" (program office)		
Projected Increase/Decrease Over Time: Stable			No change anticipated					
Current Value: $5460 per child for 10 months			Cited study					
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
ALTERNATIVES BENEFIT VALUE								
Assumptions: The number of children in foster care who are eligible for adoption and the number of adoptive homes will remain relatively constant.								
Numbers			**Basis**			**Source**		
Measure/Volume at Implementation: 2 months to placement for 5%			State study			"From Foster Care to Adoption: The Long Road" (program office)		
Projected Increase/Decrease Over Time: Stable			No change anticipated					
Initial Value at Implementation: $276 less per month per child for 8 months			Cited study					
Systems Life Benefits Profile: Alternatives								
Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Total
220,800	220,800	220,800	220,800	220,800	-	-	-	1,104,000

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[Editor's Note: This benefit is based on savings derived from automated interfaces. Note that savings from automated interfaces can only be claimed by one system. For example, savings in child support collections cannot be claimed for child welfare systems, if they have already been claimed for child support systems.]

Benefit 5:
Increase Child Support Collections

Scenario:	Based on a sampling of the 1994 foster care population of 3,110 (in foster homes, group homes, and residential homes), approximately 75% (2,333) are under court order for child support payments. However, under the current system, only 10% of the cases in the foster care population are referred to IV-D for follow-up and collection of child support payments. The new system will feature an automated interface with the IV-D child support system. Through this mechanism, foster care cases will be automatically referred to IV-D for follow-up and collection of child support payments. These collections will offset foster care payments, reducing program costs considerably.
Basis for Numbers:	The current collection rate for the IV-A program (which has an automated interface with IV-D) is 15% with an average monthly collection per case of $250. Similar results should be achieved to offset foster care program costs.
Assumptions:	The foster care collection rate and amount will be comparable to that achieved by the IV-A program.
Initial Calculations of Benefit's Value:	We estimate that 75% of the 1994 foster care population had a parent under court order for child support payments. All will be automatically referred under the new system. Using the current collection rate (15%) and average monthly collection ($250) achieved by the IV-A program's automated interface, we should collect annual offsetting costs of well over a half million dollars. The table on the following page details estimated collections for the current and projected populations (see Benefit 1). The difference

is claimed as a benefit for the new system. Constant dollars are used.

Current Population		Population owed child support (75%) / cases referred (10%)		Cases Collected (15%)	Average Monthly Payments ($250 each)	Average Annual Collections
Foster Homes Group Homes Res. Homes	2000 135 975	2333	233	35	8,750	105,000
TOTAL	3110					
Projected Population		**Population owed child support (75%) / cases referred (100%)**		**Cases Collected (15%)**	**Average Monthly Payments ($250 each)**	**Average Annual Collections**
Foster Homes Group Homes Res. Homes	1599 108 780	1,865	1,865	280	70,000	840,000
TOTAL	2487					
DIFFERENCE (BENEFIT)					61,250	735,000

SYSTEM LIFE BENEFITS PROFILE: ALTERNATIVES						
Description	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Total**
Benefit 5	735,000	735,000	735,000	735,000	735,000	3,675,000

Measurement Plan: Actual collections will be measured.

Quantified Benefits Worksheet: Systems Life

BENEFIT CATEGORY / DESCRIPTION								
Benefit Number: 5 **Description:** Increase Child Support Collections								
STATUS QUO BENEFIT VALUE								
Assumptions: None. No benefit claimed for the status quo.								
Numbers			**Basis**			**Source**		
Current Measure/Volume: 10% of cases referred			State management records			State program office		
Projected Increase/Decrease Over Time: Stable			No change anticipated					
Current Value: $105,000 (based on 15% collection rate and $250 average collection)			State finance records			State IV-A program 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
ALTERNATIVES BENEFIT VALUE								
Assumptions: The foster care collection rate and amount will be comparable to that achieved by the IV-A program.								
Numbers			**Basis**			**Source**		
Measure/Volume at Implementation: 100% of cases referred			State strategic plan			"A Strategy for the Future" (program office)		
Projected Increase/Decrease Over Time: Stable			State strategic plan					
Initial Value at Implementation: $840,000 - 105,000 = $735,000 annually			See tables on prior page.			State finance office		
System Life Benefits Profile: Alternatives								
Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Total
735,000	735,000	735,000	735,000	735,000	-	-	-	3,675,000

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[Editor's Note: This benefit is based on savings derived from automated interfaces.]

Benefit 6:
Reduce AFDC Overpayments

Scenario: Based on a State inspector general review, 400 children who entered foster care in 1994 had come from homes that had received Aid to Families with Dependent Children (AFDC). Yet when the children entered foster care, AFDC payments to their families continued on average about five months. These payments were rarely recouped.

The new system will feature an automated interface with the State AFDC system. Through this mechanism, foster care admissions records will automatically update AFDC eligibility records, cancelling AFDC overpayments.

Basis for Numbers: The automated interface will reduce AFDC overpayments to families whose children have entered foster care.

Assumptions: The number of children entering foster care whose families receive AFDC will remain relatively constant.

Initial Calculations of Benefit's Value: With an automated interface, AFDC overpayments to families whose children have entered foster care will be reduced from an average of five months to one month. Based on an average monthly payment of $146, over $200,000 in overpayments will be saved each year. [$146 times four months fewer payments equals $584 per child, times 400 children equals $233,600 a year in constant dollars]

SYSTEM LIFE BENEFITS PROFILE: ALTERNATIVES						
Description	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Total**
Benefit 6	233,600	233,600	233,600	233,600	233,600	1,168,000

Measurement Plan:	The average number of months that AFDC overpayments are made will be calculated for families whose children have entered foster care. The benefit will be based on the variance from five months, using the most recent year's average AFDC payment.

Quantified Benefits Worksheet: Systems Life

BENEFIT CATEGORY / DESCRIPTION								
Benefit Number: 6 **Description:** Reduce AFDC Overpayments								
STATUS QUO BENEFIT VALUE								
Assumptions: None. No benefit claimed for the status quo.								
Numbers			**Basis**			**Source**		
Current Measure/Volume: Five months average overpayment			Inspector General report			"Audit of the AFDC Payment Program" (IG office)		
Projected Increase/Decrease Over Time: Stable			No change anticipated					
Current Value: $146 per month times 400 families			State finance records			State IV-A program 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
ALTERNATIVES BENEFIT VALUE								
Assumptions: The number of children entering foster care whose families receive AFDC will remain relatively constant.								
Numbers			**Basis**			**Source**		
Measure/Volume at Implementation: One month average overpayment			State strategic plan			"A Strategy for the Future" (program office)		
Projected Increase/Decrease Over Time: Stable			State strategic plan					
Initial Value at Implementation: $146 times 4 months avoided overpayment			State finance records			Budget and Procurement offices		
System Life Benefits Profile: Alternatives								
Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Total
233,600	233,600	233,600	233,600	233,600	-	-	-	1,168,000

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