



**INSLAW
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**Analysis of
Costs and Benefits**

PROMIS

PROSECUTOR'S MANAGEMENT
INFORMATION SYSTEM
An Exemplary Project of LEAA

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PROMIS (Prosecutor's Management Information System) is a management information system (computerized or manual) for public prosecution agencies and the courts. Developed under a grant from the United States Department of Justice, Law Enforcement Assistance Administration (LEAA), PROMIS has been in operation in Washington, D.C., since January 1971 and is in various implementation stages in more than 30 other jurisdictions.

LEAA has designated PROMIS an Exemplary Project. Such designation is reserved for criminal justice programs judged outstanding, worthy of national attention, and suitable for adoption by other communities.

The Institute for Law and Social Research (INSLAW) has prepared a series of 21 briefing papers to explain to nontechnical audiences of prosecutors, court administrators, criminal justice planners, and members of the bar the underlying concepts of management and organization inherent in PROMIS. It is expected that these briefings will assist other jurisdictions to evaluate and when appropriate, implement PROMIS in part or in its entirety. The implementation can range from adoption of the concepts of management and organization, to the use of PROMIS forms and paperwork procedures, to the application of the manual or semiautomated version of PROMIS, and, finally, to the installation of the computer software.

Other PROMIS documentation produced by INSLAW under grants from LEAA includes a handbook on *PROMIS For The Nonautomated or Semiautomated Office*, research designs for using PROMIS data bases in statistical studies of criminal justice policies, a six-volume set of computer software documentation, and a 20-minute color documentary of PROMIS (16mm film or video cassette) for nontechnical audiences. The 21 briefings are as follows:

1. Management Overview of PROMIS
2. Case Screening
3. Uniform Case Evaluation and Rating
4. Special Litigation (Major Violators) Unit
5. Witness Notification Unit
6. Paralegals
7. Comprehensive Training
8. Reasons for Discretionary and Other Actions
9. Counting by Crime, Case and Defendant
10. Research Uses of PROMIS Data
11. Uniform Crime Charging Manual
12. Police Prosecution Report
13. Crime Analysis Worksheet
14. Processing and Trial Preparation Worksheet
15. Police Intake Worksheet
16. Standardized Case Jacket
17. Interface with Other CJIS
18. Privacy and Security
19. Analysis of Costs and Benefits
20. Transferability
21. Optional On-Line Inquiry and Data Input Capability

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PROMIS
BRIEFING SERIES***ACQUISITIONS****19. Analysis of
Costs and
Benefits****I. WHY A COST/BENEFIT ANALYSIS?**

The landscape of municipal government is littered with the remains of deceased information systems. Some of them died at birth, because too little money was made available for their development. Many died as adolescents, because funding authorities could not be persuaded to nourish young systems until their full potential was reached and they could stand alone. Others died as a result of accidents, in the form of unexpected clerical or data processing costs after they reached maturity. Still others died lingering deaths, gradually falling into disuse because their services were of no value to their intended users.

In view of this casualty list, a criminal justice agency[†] considering PROMIS is understandably cautious. Particularly during today's fiscal crises in metropolitan areas of the size for which automated PROMIS was designed, a responsible public official must ponder carefully the decision to install a computerized information system, even with the help of federal funds.

Among the questions to be considered are the following:

- . Once the PROMIS development grant has expired, what will the system cost each year to operate?

[†]Although PROMIS was originally developed for prosecutors, other criminal justice agencies, particularly courts and public defender services, are finding it advantageous to share the system in many jurisdictions. The cost/benefit analysis emphasizes the PROMIS impact on prosecutors; however, future modifications are expected to address costs and benefits to other agencies more fully.

*One of a series of 21 Briefing Papers for PROMIS (Prosecutor's Management Information System), this publication was prepared by the Institute for Law and Social Research (INSLAW), Washington, D.C., under a grant from the Law Enforcement Assistance Administration (LEAA), which has designated PROMIS as an Exemplary Project. Such a designation is reserved for criminal justice programs judged outstanding, worthy of national attention, and suitable for adoption by other communities. Presenting a bird's-eye view of PROMIS capabilities, the Briefing Papers are one facet of INSLAW's LEAA-funded program designed to assist local prosecutors evaluate and, when appropriate, implement PROMIS. In January 1971, the computerized information system was initiated in Washington, D.C., where prosecutors continue to rely upon PROMIS to help them manage more effectively an annual work load involving allegations of 8,500 serious misdemeanors and 7,500 felonies. (A manual version of PROMIS is also available and parallels the capabilities of the computerized system.)



- . Is this continuing expense justifiable, not only to the prosecutor, but also to his funding authority?
- . Will PROMIS have a financial impact on the police, courts, and other criminal justice agencies in the jurisdiction?
- . Assuming a decision is made to go ahead with PROMIS, how large a grant will be required, covering how many months?
- . A number of systems options are available for PROMIS users, including on-line processing, docketing, and automated subpoena generation. Which of these options will be most cost-effective for a given office?
- . PROMIS development and operation often require the services of a systems contractor, a terminal vendor, and a data processing/telecommunications service bureau. What are reasonable charges for their services?
- . Once PROMIS is operational, is there any benchmark for evaluating its success and efficiency?

In providing technical assistance for the transfer of PROMIS, the Institute for Law and Social Research (INSLAW) has been asked these questions many times. Based on a growing body of experience in many jurisdictions, it has been possible to respond with fairly accurate judgments about some of them: size of grant needed for development, charges to be expected from contractors, and reasonable prices for terminals and data processing, for example. But these judgments could frequently not be made with sufficient rigor and precision to convince skeptical local funding authorities. Moreover, since other answers--the fiscal impact on other criminal justice agencies, or the most cost-effective PROMIS options--depend so heavily on the local environment, INSLAW's estimates were not always enough to convince criminal justice planners.

The economic tool for dealing with these questions is known as "cost/benefit analysis" or "cost-effectiveness analysis." At least two PROMIS users have performed such analyses, using either in-house personnel or an independent contractor. An in-house cost/benefit analysis need not be expensive. However, unless the district attorney employs a person experienced in the technique, the results may be incomplete or misleading; in any event, funding agencies may doubt a favorable result from an in-house study. An independent contractor should lend rigor and credibility to a cost/benefit analysis, but usually at a substantial price.



The automated model described in this briefing paper enables INSLAW to provide any jurisdiction a PROMIS cost/benefit analysis with the advantages of a contractor's study, but costing the user only a few hours to gather the necessary data. Once prepared, the analysis can help a jurisdiction weigh the economic pros and cons of PROMIS. Then, if needed, it can serve as a means of communication with local funding authorities. It also provides a benchmark against which to judge charges quoted by contractors, vendors, and data processing service bureaus. Finally, it can be reestimated under alternative assumptions, enabling the jurisdiction to evaluate potential modifications to the basic PROMIS system and procedures. Thus, while a cost/benefit analysis doesn't guarantee a successful PROMIS transfer, it can help a jurisdiction guard against many of the hazards that threaten any new computerized information system.

II. HOW DOES THE COST/BENEFIT ANALYSIS WORK?

Once a prosecutor asks for a PROMIS cost/benefit analysis, he can expect a four-stage process: data collection, cost and benefit estimation, discussion of results, and special studies. These stages occur in the following manner.

Data Collection

The first step in a PROMIS cost/benefit analysis is often a visit to the jurisdiction by a representative of INSLAW. During the visit, the representative meets with such people as records supervisors, screening (or papering) assistants, representatives of the data processing and telecommunications system that will host PROMIS, representatives of other criminal justice agencies, as well as someone who can provide an overview of case processing and the criminal justice environment in the jurisdiction.

The representative collects about 250 items of information, covering everything from staff salaries and case processing volumes to the value of witness fees and characteristics of the host computer. For information that is unavailable, INSLAW will be able to suggest "default values," based on previous experience among similar PROMIS jurisdictions.

The user can collect much of the data without assistance, and is encouraged to do so in advance of the visit, using a form supplied by INSLAW. However, the on-site visit serves two purposes: to ensure the appropriateness of any defaults that are needed, and to help identify potential uses of PROMIS that might not be apparent to the prospective user.



Cost and Benefit Estimation

Following the on-site visit, the data collected is entered into an automated cost/benefit model, which operates on INSLAW's computer. The model produces three outputs:

- . A summary table containing estimates of 30 categories of PROMIS costs and benefits, for the system development period and for a one-year operating period. A sample summary table is shown in Figure 1.
- . A detailed breakdown of more than 100 intermediate results, computed in the course of estimating PROMIS costs and benefits. These results, such as computer cost per PROMIS inquiry, may be of intrinsic interest to the user, but serve primarily as a check on the reasonableness of assumptions and defaults used for the estimation. A sample of the detailed results related to data storage and computer processing is shown in Figure 2. The model produces similar breakdowns for each of the other line items in the summary.
- . A listing of the values of all variables used in the analysis. A sample of the values related to data storage and computer processing is shown in Figure 3. Similar lists are produced by the model for all other components of cost and benefits.

Besides the computerized output, a Technical Appendix is prepared for each jurisdiction, explaining how its estimates were derived.

Discussion of Results

The cost/benefit analysis results are then presented to the jurisdiction and discussed with its representatives. The discussion focuses especially closely on intermediate and summary estimates that seem surprising in light of either local conditions or results in other jurisdictions. Frequently the discussion uncovers unrealistic implicit assumptions, misunderstandings during data collection, or other problems that necessitate reestimation using the automated model. In such cases, the estimation and discussion steps are repeated until both the jurisdiction and INSLAW agree to accept the results as a benchmark.

Special Studies

Each jurisdiction's completed cost/benefit analysis input and output files are maintained on INSLAW's computer.



FIGURE 1

SAMPLE SUMMARY OF PROMIS COSTS AND BENEFITS

JURISDICTION: ANYTOWN, USA
 DATA FILE 1

	DEVELOPMENT	ANNUAL OPERATION
PROSECUTOR VARIABLE COST		
CLERKS	\$.	\$.
CLERK SUPERVISOR	\$.	\$.
ATTORNEY	\$.	\$.
PARALEGALS	\$.	\$.
FORMS AND DOCUMENTS	\$.	\$.
DATA STORAGE	\$.	\$.
COMPUTER PROCESSING	\$.	\$.
PROSECUTOR FIXED COST		
ADMINISTRATION	\$.	\$.
CONTRACT COST	\$.	\$.
TRAINING TIME	\$.	\$.
TRAVEL	\$.	\$.
OFFICE EQUIPMENT AND SUPPLIES	\$.	\$.
TERMINALS	\$.	\$.
LINES	\$.	\$.
TOTAL PROSECUTOR COST	\$.	\$.
PROSECUTOR BENEFITS		
MANUAL OPERATIONS	\$.	\$.
WITNESS NOTICES	\$.	\$.
SCREENING FORMS	\$.	\$.
PLEAS IN PENDING CASES	\$.	\$.
STATISTICAL REPORTS	\$.	\$.
CASE INQUIRIES	\$.	\$.
OBTS/CCH DISPOSITIONS	\$.	\$.
TOTAL PROSECUTOR BENEFITS	\$.	\$.
NET PROSECUTOR COST	\$.	\$.
CJS COST AND BENEFITS		
DATA STORAGE	\$.	\$.
COMPUTER PROCESSING	\$.	\$.
POLICE REPORTING TIME	\$.	\$.
POLICE REPORTING FORMS	\$.	\$.
REDUCED POLICE OVERTIME	\$.	\$.
PLEAS IN PENDING CASES	\$.	\$.
REDUCED WITNESS FEES	\$.	\$.
BOND REVENUE INCREASE	\$.	\$.
COURT CALENDAR PREPARATION	\$.	\$.
NET COST--OTHER CJAS	\$.	\$.
OVERALL NET COST	\$.	\$.



FIGURE 2

SAMPLE DETAILED BREAKDOWN OF PROMIS DATA STORAGE
AND COMPUTER PROCESSING COSTS

DATA STORAGE

AVERAGE LIFE OF EACH RECORD (DAYS)	X.XX
DAILY CASE LOAD	X.XX
ON LINE DATA BASE SIZE (KILOBYTES)	X.XX
ANNUAL DATA BASE STORAGE COST	X.XX

COMPUTER PROCESSING

COMPUTER COST PER CPU SECOND	X.XX
CPU COST PER ON LINE INQUIRY	X.XX
CPU COST PER STATISTICAL REPORT	X.XX
ANNUAL VOLUME OF STATISTICAL REPORT	X.XX
ANNUAL INQUIRY VOLUME - PLANNED AND UNPLANNED	X.XX
ANNUAL COST OF PROMIS INQUIRIES	X.XX
ANNUAL COST OF STATISTICAL REPORTS	X.XX
ANNUAL COST OF DAILY BATCH UPDATE	X.XX
ANNUAL COST OF BATCH PROCESSING	X.XX
ANNUAL COMPUTER COST BEFORE PERFORMANCE ADJUSTMENT	X.XX
ANNUAL COMPUTER COST AFTER PERFORMANCE ADJUSTMENT	X.XX



FIGURE 3

SAMPLE DATA INPUT FOR ESTIMATION OF PROMIS DATA STORAGE
AND COMPUTER PROCESSING COSTS

306	DN LINE DATA STORAGE	
	ANNUAL NUMBER OF DAYS ON WHICH CASES ARE SCREENED	X.XX
	NUMBER OF DAYS A CLOSED CASE WILL REMAIN ON FILE	X.XX
	NUMBER OF DAYS BETWEEN SCREENING AND DISPOSITION	X.XX
307	COMPUTER PROCESSING	
	HOURS PER YEAR COMPUTER IS OPERATIONAL	X.XX
	HOURS PER YEAR COMPUTER IS DOWN	X.XX
	TOTAL NUMBER OF OFFICE WORKING DAYS	X.XX
	TOTAL OPERATIONS COST WITHOUT PROMIS	X.XX
	NUMBER OF MISDEMEANOR CASES REFERRED PER DAY	X.XX
	NUMBER OF FELONY CASES REFERRED PER DAY	X.XX
	NUMBER OF UNPLANNED CASE INQUIRIES PER YEAR	X.XX
	NUMBER OF PLANNED INQUIRIES PER MISDEMEANOR	X.XX
	NUMBER OF PLANNED INQUIRIES PER FELONY	X.XX
	TOTAL NUMBER OF STAT. REPORTS & CALENDARS PER YEAR	X.XX
	ANNUAL VOLUME OF ADDITIONAL INQUIRIES REJECTED	X.XX
	ANNUAL VOLUME OF ADDITIONAL REPORTS DESIRED	X.XX
	CLERK TIME TO ANSWER A STATUS INQUIRY (MIN.)	X.XX
	CLERK TIME TO TABULATE FOR STATISTICAL REPORT (HRS.)	X.XX
	COMPUTER COST/PERFORMANCE FACTOR	X.XX
	COMPUTER UTILIZATION, IF AVERAGE COST DESIRED	X.XX



These records permit reestimation of the model under alternative assumptions about case processing, the hardware configuration, or modifications to the basic PROMIS for the particular jurisdiction. In this way, a jurisdiction can estimate the economic impact of various alterations it considers as its system design proceeds.

III. WHAT DOES THE COST/BENEFIT ANALYSIS MEAN?

The term "cost/benefit analysis" has a variety of meanings, and such an analysis is usually described in terms of economists' jargon. Therefore, additional explanation of Figure 1 may enlighten the reader.

Cost and benefit items in Figure 1 are estimated for two time periods, development and operation. Normally, all development costs are incurred before PROMIS becomes operational in the jurisdiction. "Operation" items are estimated costs and benefits incurred during one year's operation of the mature PROMIS, assuming no change in case load. Thus, the "Operation" entry for "Net Prosecutor Cost" is an estimate of the overall recurring annual financial impact of PROMIS on the prosecutor's office.

Prosecutor Cost

The items of PROMIS prosecutor cost are estimates of the value of resources needed to develop the system and to operate it for a year. Depending on local conditions, these costs may involve cash purchase of new goods and services, or they may be absorbed by existing resources.

For example, the "clerks" component of annual operating cost is the estimated total value of clerical services needed for PROMIS data collection, entry, and so forth. An office that employed no clerks before installing PROMIS could expect to pay that amount in salaries for clerks to support the system--a cash outflow. However, in most offices at least part of the PROMIS clerical burden can be absorbed by clerks already employed. In fact, the "Manual Operations" benefit is an estimate of the value of clerical time freed from other tasks (maintaining indices and docket cards, for example) by PROMIS. The people now performing those tasks can absorb part of the PROMIS clerical cost by taking over the clerical work connected with PROMIS--a resource cost.

Cost components are classified as either variable or fixed. Variable items, such as clerks and forms, fluctuate approximately as the jurisdiction's case load varies. In contrast, fixed items, like system administration or leased



telecommunication lines, change only in response to such events as new salary schedules, new rental charges, or major overhauls of office procedures.

Prosecutor Benefits

The benefits of PROMIS to the prosecutor are of three types: direct cost reduction, improved resource utilization, and intangible benefits. Of these, only the first two are considered by the PROMIS cost/benefit model.

Direct cost reduction, often called displacement, occurs when PROMIS performs some task at lower cost than was previously required. For example, PROMIS may print out witness notices (subpoenas), as part of its daily report cycle, at less cost than a clerk could type them. The savings per notice is the difference between the value of clerk time per notice and computer time per notice. Since the annual cost of daily report cycles, including subpoena generation, has been added as part of computer processing cost, the annual value of clerk time dedicated to subpoena preparation is subtracted as the "Witness Notice" benefit in the summary of PROMIS costs and benefits.

Improved resource utilization benefits occur when information from PROMIS makes possible more efficient use of existing personnel or equipment. For example, PROMIS informs an assistant district attorney of all pending cases against each defendant he is prosecuting. In many jurisdictions this information, which was unavailable before PROMIS was installed, strengthens the prosecutor's position in plea bargaining. Therefore, the assistant avoids some trials, making himself or herself free to handle other cases. This time saved, which can be used to reduce the office backlog, devote more time to pending cases, or prosecute additional defendants without adding staff, is evaluated at the rate of an attorney's salary and displayed as the "Pleas in Pending Cases" prosecutor benefit.

Some of the prosecutor benefits listed in the summary contain elements of both cost reduction and improved resource utilization. For example, it is usually less expensive to produce quarterly statistical reports with PROMIS than to have a clerk collect and tally the outcomes of each quarter's cases, an example of direct cost reduction. In addition, the lower cost may encourage managing attorneys to increase the reporting frequency from quarterly to monthly. The additional information presumably helps the manager run his office more efficiently, an example of improved resource utilization. This information, evaluated at the cost the office willingly incurs to obtain it, is included with the cost reduction in the Statistical Reports prosecutor benefit. Methodological



details about all benefits computed for each jurisdiction are contained in its Technical Appendix.

Besides the tangible benefits evaluated in the analysis, PROMIS provides a number of intangible benefits. While these are often of utmost importance to the prospective user evaluating the system, they could not be evaluated economically without highly unrealistic assumptions. Therefore, instead of including them in the cost/benefit analysis, they have been described in other PROMIS documentation. Some of the major ones have been summarized as follows:

- . Monitoring and enforcing effectiveness and consistency in the use of prosecutive resources.
- . Enhancing the certainty and swiftness of justice.
- . Providing a rich source of data for criminal justice research.
- . Promoting citizen confidence in criminal justice agencies.
- . Revealing deficiencies in interagency coordination.

Criminal Justice System Cost and Benefits

Installation of PROMIS by a prosecutor usually imposes costs and confers benefits on other criminal justice agencies in the jurisdiction. These are also estimated by the model and displayed in the summary of PROMIS costs and benefits. The detailed methodology is explained in each jurisdiction's Technical Appendix.

Some costs or benefits may accrue to the agency maintaining the data processing center which will host PROMIS. Occasionally, to reduce billing costs or to encourage utilization, a center will charge each user a flat annual fee for computer processing or data storage that does not cover its actual resource cost. In this case, the data processing agency incurs a cost equal to the difference between the true cost and the flat fee. A benefit may accrue for analogous reasons. These costs (+) or benefits (-) are displayed in the summary output.

Other costs or benefits may accrue to other agencies because of what economists call externalities. For example, PROMIS may increase the amount of information to be collected from the arresting police officer at screening (papering). This additional burden, evaluated at the officer's salary rate, would be a PROMIS cost to the police department. On



the other hand, the screening process is often streamlined as a result of PROMIS installation, thereby reducing officer time at screening. The value of this time is a PROMIS benefit to the police department. External costs or benefits of this type are also estimated and displayed in the summary.

A third category of benefits accrue to other agencies because at virtually no cost they can easily use PROMIS information to reduce costs, improve resource utilization, or even recover lost revenue. For example, some courts lose bond revenue to which they are entitled, because they fail to notify a bondsman within a statutory time limit. Flags can be set in PROMIS to monitor forfeitures approaching such limits, so that this unnecessary revenue loss can be virtually eliminated. The newly recovered bond revenue is, of course, a benefit to the collecting agency.

What does it all mean? Clearly, the various people involved in PROMIS implementation will have their own areas of interests in the cost/benefit analysis. The grantsman will no doubt focus on Fixed Prosecutor Cost during development. The prosecutor's budget officer may be more concerned with Total Prosecutor Cost for annual operation. The prosecutor himself may be most interested in Net Prosecutor Cost, which is the remainder after subtracting Prosecutor Benefits from Prosecutor Cost; but he will frequently encourage his local funding authority to look at Overall Net Cost, which highlights the economic impact of PROMIS on other criminal justice agencies.

Yet because everyone involved has subjective goals, only hinted at in the discussion of intangible benefits, the analysis cannot answer all, or even most, of the important questions. However, by addressing the issues raised in this paper's introduction with reason instead of emotion, it can improve the chances of a successful PROMIS transfer wherever the system is economically viable.

IV. OTHER QUESTIONS ABOUT THE PROMIS COST/BENEFIT ANALYSIS

Since the PROMIS cost/benefit analysis was developed, certain questions have come up frequently in discussions with users. Here are five of the most common ones, together with INSLAW's answers.

Q: "Don't most of the benefits assume that people can be fired at will when PROMIS takes over their jobs?"

A: Not really.



When any information system is automated, there is a transition period of "parallel operation," while the new and old systems operate side by side. During this period, clerical needs normally increase temporarily. More importantly, retraining, attrition, and case load growth usually occur during transition, causing a permanent increase in the number of clerks needed. Thus, the clerical benefits of PROMIS accrue not through firing, but because fewer clerks are needed permanently to maintain PROMIS or to cope with larger case loads.

Where PROMIS benefits are attributed to savings in attorney time, it means that lawyers are able to reduce office backlog, devote more time to cases they already have, or cope with increasing case loads. The analysis simply evaluates these goals at the cost of achieving them by adding legal staff.

- Q: "Since the cost/benefit analysis doesn't distinguish between 'dollar' costs and benefits, and 'resource' costs and benefits, is it of any use to budget planners?"
- A: We believe the cost/benefit analysis can help a budget planner ask the right questions about PROMIS.

For example, the analysis shows the planner that PROMIS will require some administrative attention as long as it operates in the office, and it estimates the annual value of that attention at current salary levels. Whether that attention becomes a resource cost or a dollar cost depends on whether an existing administrator can be freed from other obligations, or whether a new person must be hired to manage PROMIS, perhaps along with other duties.

Since the cost/benefit model cannot conjecture how a particular office will meet such needs, no breakdown is attempted between "dollar" items and "resource" items. However, the budget officer is alerted to a number of issues worth raising and decisions that must be made.

- Q: "The analysis for my jurisdiction shows a rather high operating cost continuing after the development grant is gone. Won't that sour my county commissioners on the idea of PROMIS?"
- A: PROMIS was never intended to be a profit-maker for prosecutors. Therefore, especially in smaller or more efficient offices, the analysis is likely to predict a positive continuing net cost, even after the economic benefits are subtracted from gross cost. In fact, it



may even show a higher cost than some other system under consideration.

The appropriate question is whether the cost of PROMIS, positive or negative, is justified by its intangible benefits, which are explained in other PROMIS documentation and mentioned in Section III above. A realistic negative net operating cost estimate no doubt strengthens the PROMIS case, but it should not be the prospective user's overriding concern.

Q: "By estimating only one-time development cost and annual operating cost, doesn't the analysis 'cheat' by ignoring the costs of transition from manual records to PROMIS?"

A: Frequently, the term "transition cost" is applied to two different categories of cost items: those occurring as part of PROMIS implementation, and those occurring because of parallel operation of PROMIS and its predecessor system during transition.

The PROMIS cost/benefit analysis attempts to include all components of the first category as development costs. Normally, development is assumed to take place within one year, ending when PROMIS becomes operational. But suppose, for example, a jurisdiction planned to automate historical records of closed cases after the system became operational. The expense of doing so, which many would call transitional, would be estimated by the model and displayed as a development cost.

The second category of so-called transitional costs, which arises during parallel operation, is treated as an uncaptured PROMIS benefit. For example, the benefit from discontinuing manual operations can obviously not be captured before the end of parallel operation. Since the rate at which parallel operations are phased out (and benefits are phased in) is so subject to vagaries of the local criminal justice environment, the cost/benefit analysis does not impose assumptions about it.

Instead, its estimates can be used in simple calculations by a planner interested in the transition period. For example, if one believed that PROMIS would be operational after one year of development and that parallel prosecutor operations would be phased out over the following two years, he might project costs according to the following scenario: Total Prosecutor Cost (Development) in Year 1, Total Prosecutor Cost (Operating) in Year 2, Year 2 cost minus 50 percent of Total Prosecutor Benefits in Year 3, and Net Prosecutor Cost in Year 4 and thereafter. PROMIS



costs to other criminal justice agencies would probably be incurred in Year 2 and thereafter, with benefits accruing to other agencies as PROMIS gains acceptance throughout the criminal justice system, at a rate the planner can estimate.

In this way, transitional costs can be projected under the assumptions of those most knowledgeable about the jurisdiction.

Q: "Why doesn't the PROMIS cost/benefit analysis display present values of costs and benefits, as well as a benefit-cost ratio?"

A: To facilitate comparisons among alternative investments, economists often compute the "discounted present value" of a future stream of costs or benefits. It represents the amount of money that would have to be invested today (at an assumed interest rate) to yield that stream of costs or benefits in the future. Then, the discounted present benefit is divided by the discounted present cost. The quotient, called the "benefit-cost" ratio, may be used as a guide to policy: make the investment if the ratio exceeds unity, turn it down otherwise.

Calculation of this ratio requires arbitrary assumptions not only about the length of the transition period, but about such items as the appropriate interest rate, future case loads, future salary increases, future trends in data processing and telecommunications costs, and the useful life of PROMIS in the jurisdiction. Ordinarily, these assumptions become the focal point of intense, drawn-out debates when a project is evaluated.

Moreover, the apparent rigor and precision of a benefit-cost ratio tends to draw attention away from the less tractable but extremely important intangible benefits of PROMIS.

For both these reasons, INSLAW has chosen not to compute and display this ratio. However, we will be happy to assist any jurisdiction in computing one, based on the results of its PROMIS cost/benefit analysis.

