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Rev. 1

NATIONAL IMPACT PROGRAM EVALUATION

EVALUATOR'S MANUAL FOR ANTI-CRIME IMPACT PROJECTS

U. S. DEPARTMENT OF JUSTICE
w Enforcement Assistance Administration
nstitute of Law Enforcement and Criminal Justice

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BY

ELLEN ALBRIGHT

THE MITRE CORPORATION

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L. L. Holmes
Project Leader

ABSTRACT

The High Impact Anti-Crime Program announced by former Attorney General of the United States, John N. Mitchell, on January 13, 1972, provides for a major funding effort in certain target cities for the purpose of realizing the swift reduction in stranger-to-stranger crimes and burglary.

The Law Enforcement Assistance Administration has been designated as the responsible agency for the High Impact Anti-Crime Program. Crime Analysis Teams, responsible for program planning, management, and evaluation, have been established for each Impact city.

To aid the Impact cities in the planning and implementation of the city level evaluation, the National Institute/MITRE have prepared three documents as follows:

(1) Manager's Evaluation Guide - provides guidelines to the persons involved in the Impact program management (e.g., Crime Analysis Team director and program managers as well as city level administrators and other public officials involved with the Impact program).

(2) Evaluator's Manual - provides to all those involved in the evaluation of the individual projects and programs, a reference manual for use in evaluation planning, monitoring and analysis. This document is intended to be of direct assistance to those responsible for the preparation of the Evaluation Component of the Grant Application.

(3) Example Evaluation Components - provides examples for persons involved in the preparation of the Evaluation Components for the Grant

Applications. These examples contain a brief description of the specific project or program and amplify the ideas presented in the Evaluator's Manual.

From the evaluator's point of view, both the Evaluator's Manual and the example evaluation components should be used together as a single resource in drawing up the evaluation components. As indicated above, the manual provides the overall guidelines while the example components detail the particulars of project and program evaluation.

Although these documents are designed for use within the Impact programs, the ideas presented should be of use in evaluating social projects and programs of all types, including those under consideration here in the criminal justice community.

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LIST OF ILLUSTRATIONS

1.0 INTRODUCTION

The purpose of the Evaluator's Manual is to provide a manual for use in evaluation planning, monitoring, and analysis and in the preparation of the Evaluation Component for project or program[1] Grant Applications. This document is directed towards those members of the Crime Analysis Team and agencies involved in the performance of the evaluation. The document should also be useful to any outside contractors or consultants hired to perform the evaluation. Some examples of how the information in this document can be used to assist the Impact program evaluators are: (1) to plan for the evaluation of the projects and programs, (2) to monitor on-going projects and programs, and (3) to determine the degree of success of projects in meeting their objectives (or for programs, their goals).

The emphasis in this Evaluator's Manual is on the evaluation of the projects and programs for which the objectives and goals have been quantified. There will be many cases, however, where quantification is only partially possible, thus requiring the use of qualitative judgments in assessing project/program success. In either case

[1] Project and program are used within the context of the Impact program. Project is the lowest level of activity which can be evaluated relative to its objectives as a single entity. A program is a group of projects that will be evaluated together because of their common purpose or goal. For example, several anti-burglary projects, including street lighting, property identification, and special foot patrol teams may be evaluated together in their achievement of the program goal of reducing the burglary rate 24% within a particular district.

the need for rigorous,,tightly structured evaluation analyses is paramount and to this end the Evaluator's Manual should be of direct assistance.

LEAA has requested that each Grant Application be accompanied by a detailed description of the proposed project or program evaluation (the Evaluation Component). Therefore, the material in this document is presented within the context of the Evaluation Component of a Grant Applications. Within each section of this document, the requirements for the Evaluation Component will be given. Methods that will be helpful in the development of these requirements will also be presented.

Figure 1 presents an overview of the evaluation in the context of the Evaluation Component. The evaluation has been divided into three phases: evaluation planning, evaluation monitoring and evaluation analysis. The evaluation steps have been allocated to these three phases in a manner in which it is convenient to present them within the Evaluation Component. It is recognized, however, that there is overlap among the phases. For instance, planning involves both monitoring and analysis.

The succeeding sections of this document will describe the ingredients of program and project evaluation planning (Section 2.2 through 2.5), identifying the factors which should be considered in implementing the evaluation plan (Section 3.0), and discuss the uses of evaluation analysis (Section 4.0).

EVALUATION COMPONENT

PHASE	STEPS	EVALUATOR'S MANUAL
EVALUATION PLANNING	QUANTIFY GOALS AND OBJECTIVES	(Section 2.1)
	ESTABLISH GOAL/ OBJECTIVE RELATIONSHIP	(Section 2.2)
	IDENTIFY EVALUATION MEASURES	(Section 2.3)
	DETERMINE DATA NEEDS	(Section 2.4)
	DETERMINE METHODS OF ANALYSIS	(Section 2.5)
EVALUATION MONITORING	MONITOR EVALUATION AND PROJECT OR PROGRAM	(Section 3.0)
EVALUATION ANALYSIS	PERFORM ANALYSIS	(Section 4.0)

FIGURE 1

2.0 EVALUATION PLANNING

The first phase, evaluation planning, is to determine the success of projects and programs. The following five steps are included in this section:

(1) quantify goals and objectives,

(2) establish goal/objective relationship,

(3) develop evaluation measures,

(4) determine data needs, and

(5) determine methods of analysis.

As a matter of convenience, evaluation planning is presented as a set of sequential steps. Evaluation is in actuality a process. The steps are developed both simultaneously and iteratively. For example, if adequate evaluation measures cannot be developed, the evaluator may consider modifying the project objectives or program goals. Also, many of the steps refer to crime specific planning. It is assumed that the crime specific planning and the analysis of alternatives have preceded the evaluation planning.

2.1 Goals and Objectives

The first section of the Evaluation Component is the list of objectives or goals. These goals or objectives should be stated as levels of achievement and quantified wherever possible. The time period during which they will be achieved should also be specified.

To quantify an objective or goal is to state it as a number, a percentage or an index. Suppose one of the objectives of a methadone

maintenance project is to divert offenders that are drug addicts from juvenile court. To quantify this objective it is necessary to specify a number or percentage of these offenders that the project will attempt to enroll. This number or percentage is the level of achievement that is expected for the project. In order to arrive at this figure, the evaluator must analyze the target population, the environment, and the resources available to the project. He should refer to the LEAA questionnaire and any other statistics and reports available. He must take into consideration the scope of the project or program, including the personnel and funding.

An example of the quantification of the goal of one program area and the objectives of one of the projects within the area is as follows:

Program Area: Narcotic Addiction Treatment Program

Program Goal: Reduce the number of drug addicts committing crimes that are a target of the Impact program.

Quantification: Reduce the number of drug addicts arrested for burglary and/or stranger-to-stranger crime by 50% during the two years implementation period.

Project 1: Methadone Maintenance Project

Project Objectives:

(1) Enroll persons arrested in above categories in the project.

(2) Reduce the re-arrest rate for persons enrolled.

Quantification:

(1) Acquire and treat, on an on-going basis during the next two years, an average of 200 heroin addicts

that have been arrested for burglary and/or stranger-to-stranger crime.

(2) Reduce their re-arrest rate to 10%.

The Evaluation Component should contain the quantified objectives or goals as well as the analysis that resulted in their choice, including the crime specific data on which the objectives or goals were based and the constraints of the particular project or program area.

2.1.1 Establishment of Baseline Data Values

Values must be developed for the data elements defined that are required for a reference or starting point for the evaluation. For example, if one objective of a methadone maintenance project is to enroll 40% of the addicts that are arrested and charged with crimes that are a target of the Impact program, then the number of addicts currently arrested for stranger-to-stranger crime and burglary is necessary for a reference point.

The evaluator must determine which data values are required and what the time frame should be. For example, if the other objective in the previous example is to decrease the rate of recidivism[2] for addicts enrolled in the project, the evaluator will need to know what the present rate of recidivism is. If this has not already been determined, he may decide to use as a baseline value the data from the year prior to project implementation (e.g., the rate of recidivism was 60% for addicts arrested and charged with Impact crimes during

[2]Recidivism would need to be defined as part of the evaluation component.

the previous year). If these data are not available, he may decide to use control grouping to indicate project success. He will select a portion of the addicts that are not participating in the project, and track their history (re-arrest, employment, etc.) as well as track the addicts that are participating in the project.

Most of these data values will be available from the LEAA questionnaire or from local sources such as the police department, courts, etc. In fact, many of these data values should be included in the grant applications as part of the project justification. If the data are not already available and are required for the evaluation, their collection can be part of the project or program implementation. For example, if the delays between various court appearances are not currently recorded, the first three months of a court delay program could involve the recording and tabulating of these delays to establish a reference point for reducing court delay. If the baseline does not already exist, the evaluation component should contain an outline of the method to be used to collect it.

2.2 Goal/Objective Relationship

The purpose of establishing goal/objective relationships is to demonstrate that individual projects will contribute to the achievement of the Impact goals of reducing stranger-to-stranger crime and burglary. In some cases, this relationship can be shown directly. In other cases the project/program structure can be used to show the

relationship. In still other cases, commonly held assumptions will need to be employed. The following three examples illustrate these situations:

(1) Direct Relationship: The objective of a Special Crime Attack Team (SCAT) is to reduce burglary by a certain percentage in several precincts. This objective can be directly related to the reduction of burglary city-wide.

The SCAT project may be evaluated as part of an anti-burglary program; however, the benefit of this project to the overall Impact program can be established independently of its incorporation into a program for the convenience of evaluation.

(2) Relationship through Project/Program Structure: The goal of a Youth Services Program (YSP) is to reduce the number of Impact crime offenses committed by persons under 25 (this goal would need to be quantified depending on the present arrest rates within the city). The objective of the "Neighborhood Team Program," one of the projects within the YSP, is to enroll students into the other projects that are a part of the YSP. Although this objective cannot be directly related to the Impact goals, its relationship can be established through the program goal of reducing Impact crime offenses for youth.

If analysis of the crime picture in the city has revealed that a large percentage of burglaries are committed by school age youth during school hours, and that there is a high percentage of non-attendance at the schools, a program planner could assume that truancy

is contributing to the youth crime problem in the city. He would, therefore, want to include projects dealing with truants as part of the Impact program. As part of the "Youth Services Program," therefore, a special effort should be made to identify and enroll truants from the area schools. The "Neighborhood Teams Program" could offer presentations and workshops to inform the students of the services available -- work-study, counseling, remedial education, and skill training projects. Although an objective of "enrolling 500 truants within the two year implementation period in one or more of the projects of the YSP" does not directly relate to the reduction of crime, the achievement of the objective will contribute to a program goal of "reducing the number of Impact crime offenses committed by youth (8-25) in Precincts 2 and 3 by 35% during the two year implementation period."

(3) Commonly Held Assumptions: The objective of an automated court calendaring system is to reduce court delays. It is a commonly held assumption within the criminal justice community that a reduction in court delays will cause a decrease in crime. This assumption can simply be cited within the Evaluation Component. The measures for the project should document this decrease as far as it is possible. The deterrent effect of court delays obviously cannot be measured; however, the number of offenses committed by persons on release and the conviction rate can be used as surrogate measures.

2.2.1 Measuring Contribution of Projects to Program Goals

For projects that are being evaluated together as parts of a program, the evaluation should attempt to determine the relative contributions of the various projects. This determination will differ depending on the type of program. The following discussion is patterned after the LEAA Guidelines for the Impact program which discuss projects and programs in the following four main areas:

(1) Prevention and Post-Adjudication,

(2) Deterrence, Detection, and Apprehension - Community Action,

(3) Deterrence, Detection, and Apprehension - Police Action, and

(4) Adjudication Process.

The second and third areas will be combined.

(1) Prevention and Post-Adjudication Programs: For programs within the area of "Prevention and Post-Adjudication," the goals will be related to target groups of offenders or potential offenders for the purpose of decreasing the number of crimes that they commit or of preventing them from committing crimes. The best way to determine how much each of the projects contribute to the program goals is to separate the influences of the various projects, i.e., aim each project at a different part of the target population. For example, in a Correctional Service Program, a part of the inmate-population at an institution could be enrolled in a skills training project, another

part in a job placement project (upon release), and another part could receive special counseling. Another example would be a Narcotic Addiction Treatment Program in which one project would involve court diversion, another would assist "walk-in" patients (on an "out-patient" basis), and a third would be a therapeutic community.

For some programs, this approach may be politically infeasible or even undesirable from the point of view of results. For example, a "Truant and School Drop-Outs" program may offer a variety of services through several projects. For the purposes of reducing crime, it may be undesirable to restrict persons to participation in one project only. In this case, the detailed evaluation of the results on the target population, supplemented by attitudinal indicators, may help determine the relative contribution of each project.

When it is possible to separate the target populations of the projects, a common measure of the rate of recidivism (which of course would need to be defined) or the rate of first offenses (arrests) can be used to indicate the contributions of the projects to program success.

(2) Deterrence, Detection and Apprehension Programs: For programs within the area of "Deterrence, Detection, and Apprehension," goal achievement will be related to the numbers of crimes committed in target areas, i.e., geographic areas such as precincts and districts. Therefore, the best way to measure the effect of various projects is to implement them in different geographic areas. For example, in an

anti-burglary program, Improved Street Lighting could be used in one precinct, hardening of potential targets in another, and Project Ident in still another. This, of course, may be politically impossible as well as undesirable from the point of view of crime reduction. In the highest crime areas, several projects may be necessary to have a substantial impact on the crime rate. Wherever possible, however, projects should be implemented in different areas so the common measure of crime rate can be used to determine their relative contribution to program success. If this is not possible, an analysis of the efficiency of the various projects should aid in the determination of how much each of them contributed to program success.

(3) Adjudication Process: For programs within the area of "Adjudication Process," the greatest concern will probably be to estimate the expected contributions of various projects to the reduction of court delay time. Whether this is possible or not will depend on the nature of the projects and the data available to describe the baseline condition of court processing, i.e., what are the average delay time (both mean and median could be used) between the various steps of court processing and what is the size of the caseload at each step. If these data are not available, the program planner should include its collection in one of the projects. The data will then be available to modify the projects selected if they are not solving the most pressing problems of the court system.

If the data are available on the delays at the various steps of court processing, they can be used to estimate the effect of most court projects. Projects such as additional judges (and related court personnel) and court diversion projects will "take over" an estimated number of cases from the present system. Projects such as the use of consolidated motions and the implementation of an individual calendar with time guidelines for processing steps will reduce the delay time between specific steps of processing. The following example illustrates this situation.

The mean delay between arrest and sentencing for felony cases is currently eight months. The goal of the "Court Delay Program" is to reduce this time by 20%. The mean delay between arraignment for non-jury trials (slightly longer for jury trials) is currently three months. Detailed analysis of the cases has revealed that a large part of this delay of three months is attributable to the filing of multiple motions. One of the projects, therefore, will be the use of consolidated motions. Along with the temporary additional judges, etc., to relieve the backlog, this delay should be reduced to two months. Therefore, this project will reduce court delays by 12% (one month is 12% of eight months). Another way to state the relationship is that this project contributes 60% (one month is 60% of 1.6 months, the reduction of delay desired) towards the Court Delay Program. Similarly, analysis could establish the contribution of the other projects.

2.3 Evaluation Measures

The third step in the preparation of the Evaluation Component is to identify the evaluation measures for the project or program under consideration. One or more evaluation measures will be used to determine the level of achievement for each objective.

Most of the measures chosen will probably be quantitative (can be stated as numbers, percentages, or indices). However, some will be qualitative, in which judgment or expertise is used to "measure" the level of success of certain aspects of a project or program.

The evaluation measures should be divided into three types:

(1) Effectiveness Measures - Effectiveness measures are used to indicate the degree of success of a project or program in dealing with the target problems. These measures are "end" oriented.

(2) Efficiency Measures - Efficiency measures are used to indicate how well the project or program has been implemented (according to its plan). These measures are "means" oriented.

(3) Attitudinal measures - Attitudinal measures may be helpful in interpreting the degree of project success.

The Evaluation Component should contain a list of these measures.

Examples of evaluation measures are given below. The measures are for a community-based rehabilitation project that assists in the rehabilitation of offenders in jail by providing them with community volunteers on a one-to-one basis. The volunteer acts as a friend to the offender and renders whatever assistance possible to him and his

family. The objectives of the project are also given to show how the measures relate to project objectives. The example follows:

Project: Community-Based Rehabilitation Project

Objectives:

(1) Enroll 50% of the offenders that are in the jail for at least a month and who have been convicted of crimes that are a target of the Impact program.

(2) Reduce the rate of re-arrest for the offenders enrolled in the project to 10%.

Effectiveness Evaluation Measure:

(1) The number of re-arrests among the offenders that are released and enrolled in the project.

Efficiency Evaluation Measures:

(1) The number of offenders in the jail enrolled in the project.

(2) The number of volunteers enrolled in the project.

(3) The number of offenders that continue their education after release.

(4) The number of offenders that become employed after release.

Attitudinal Measures:

(1) The attitude of the volunteers.

(2) The attitude of the offenders.

A list of factors outside of the project or program scope that may affect success should also be included in the evaluation measures section. Those factors may be critical in the determination of the reasons for the achievement of project objectives or program goals. Examples of factors that could influence the achievement of the project objectives in the previous example are:

(1) A substantial increase in the number of persons entering the jail system that have been convicted of Impact crimes.

(2) The attitude of the correctional officers towards the project.

2.4 Data Needs

The fourth step in the preparation of the Evaluation Component is to develop the data needed to perform an evaluation. This data collection process will require extensive planning, therefore, it has been divided into several steps under Project/Program Data (Section 2.4.1).

Data that are necessary for an evaluation of the outside influences on project success are equally important but the planning for their collection is less structured. This is briefly discussed under Data External to Project/Program (Section 2.4.2).

In many cases, the data required for evaluation will be the same as the data required for adequate Program Management. The data should also meet the needs of the National Level Evaluation of the Impact program to be performed by the National Institute/MITRE.

2.4.1 Project/Program Data

The steps involved in the planning for and development of project/program data for evaluation and program management are:

(1) define the data requirements,

(2) determine the data constraints,

(3) develop a data collection system,

(4) determine the data management requirements, and

(5) establish a process for data validation.

Each step that must be developed for the Evaluation Component will be discussed as a section.

2.4.1.1 Data Requirements. The first step in the development of the project/program data is to identify the data that will be required to perform the evaluation. Key data terms should be defined. The data elements should also be rated according to their importance to the project or program evaluation.

Thus, the steps involved in defining the data requirements are:

(1) List the data elements required.

(2) Define key terms. (Note: Refer to LEAA Planning Guidelines and Programs to Reduce Crime and contact the National Institute/MITRE with any questions.)

(3) Give the data elements a priority rating. The following rating may be useful:

(a) Primary (P) - necessary to measure effectiveness.

(b) Secondary (S) - necessary to measure efficiency.

(c) Tertiary (T) - would be helpful for complete evaluation of project or program.

2.4.1.2 Data Constraints. The second step in the development of project/program data is to determine the constraints for obtaining the identified data elements. Such constraints fall into four categories:

- the existence of the data,
- the availability of the data to the evaluator,
- the reliability of the data, and
- the cost of collecting the data.

Each category will be discussed separately; then some considerations that should be taken into account when making the decision of which data elements to collect will be given.

(1) The existence of the data. For each data element, determine the:

(a) source of the data (police, jail, etc.)

(b) form of the data (coded, narrative, etc.)

If data elements do not currently exist, how important they are to the evaluation should be considered. If the data are considered essential, an attempt should be made to collect the data as part of the normal collection procedures.

(2) The availability of the data to the evaluator. Some data elements may not be available to the evaluator because of their

sensitivity (e.g., data regarding defendants processed in Juvenile Court may not be available).

(3) The reliability of the data. The evaluator should attempt to ascertain how reliable are the reports from which the data elements will be extracted. If the evaluation is to be based on this data, the data must be reported consistently and accurately. Some suggested approaches would be to study present reports and to discuss these reports with the people who receive them. For data to be collected for the first time, the reporting structure through which it will be collected should be considered.

(4) Cost of collecting data. If the data exists but are not in a usable format or if the amount of data that must be collected is large, the cost to collect it should be estimated. Thus, the factors that cause a cost estimate to be necessary are:

(a) the format of the data (e.g., hand-written police incident reports from which the data elements must be extracted), and

(b) the amount of data (e.g., there are 3000 incident reports per month).

The factors that must be considered in estimating the cost in the above example are:

(c) The length of time required to extract the data (e.g., decode reports). This would involve personnel costs.

(d) The number of reports that should be included (e.g., statistical sample).

Other factors that may enter into a cost estimation would be the cost of designing and printing new forms.

After the existence, availability, reliability and cost of collecting the data are determined, the evaluator must decide which of the data elements will be collected for the evaluation. The main consideration will probably be, which data are essential to determine if the project objectives or program goals have been met. Thus, in making the decision of which data elements to collect, the evaluator should consider:

- Has the data been established as necessary to measure the success in achieving the project objectives or program goals?
- Is the data reliable?
- Is the cost justified? (The answer will be a subjective determination of the evaluator and will depend on the total funds available and the other costs that will be involved in the evaluation.)

2.4.1.3 Data Collection System. The third step in the development of project/program data is to establish the reporting system through which the data is collected. The questions that must be answered in the development of the data collection system are:

- Who will collect the data?
- How often will the data be collected?
- In what format will the data be collected?

A discussion of the considerations involved in answering each of these questions follows:

(1) Who will collect the data? The agency(s) as well as the particular persons or section of the agency that will collect the data should be identified. For a project, the person(s) who will forward the data to the CAT should be identified.

If the data collection involves several agencies and/or people or sections, a flowchart depicting the information flow would be helpful. Figure 2 gives an example of such a flowchart for a Truants and School Dropouts Program.

(2) How often will the data be collected? The frequency with which the data is to be collected will be determined by: (1) the requirements of the agency(s) as to when the data are needed for project or program implementation, and (2) the requirements of the agency(s) or CAT for evaluation (i.e., when the evaluations occur).

The frequency of data collection should be noted on an Information Flow diagram as illustrated in Figure 2.

(3) In what format will the data be collected? All forms or reports that will be used for data collection should be identified in the Evaluation Component and an example of each should be included.

Whenever possible, standardized, simplified forms should be designed. The forms and/or reports that will be used should also be included in the Information Flow diagram (Figure 2).

2.4.1.4 Data Management. The fourth step in the development of project/program data for evaluation is to determine how the data will be stored and what the processing requirements will be. In addition,

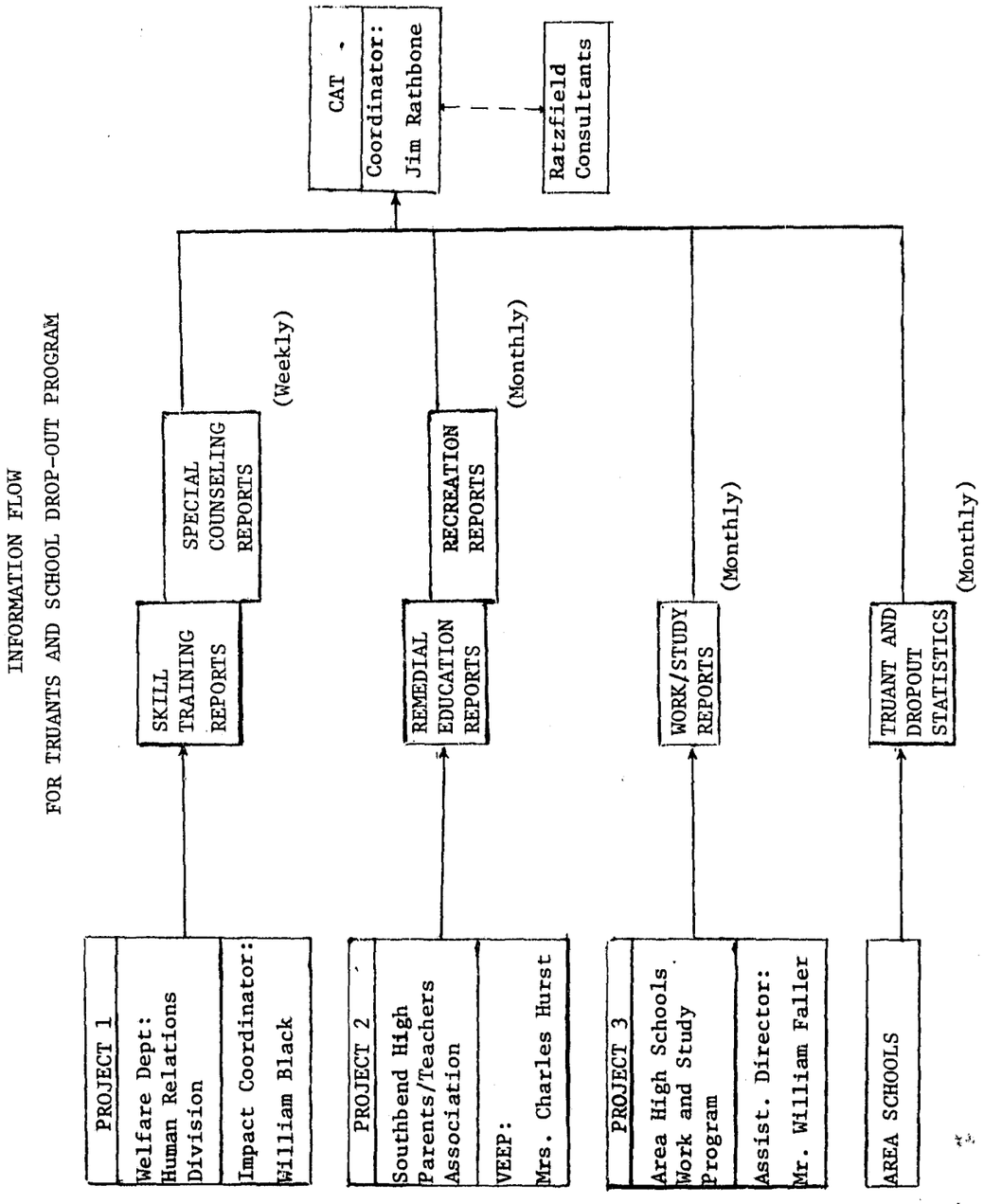

FIGURE 2

the management and evaluation reports that will be used to show the project or program results must be designed.

(1) Data storage. The decisions that must be made regarding data storage are:

(a) Should the data be aggregated for storage?

(b) Should the data be computerized?

The evaluator must consider the amount of data involved and how the data will be used.

For a non-automated data system for a program area, it may be advantageous to immediately aggregate the data (before it is filed). For example, in the Truants and School Dropouts Program the evaluator may decide to immediately consolidate the attendance reports for several school systems. If there are a great many reports involved, however, the evaluator may decide to computerize the data, so that the data aggregation can be part of the computer processing.

The plan for how the data will be stored should include a filing system. For example, in a community-based rehabilitation project, reports may be filed for offenders, by offender ID, and for volunteers, by volunteer ID, with a cross reference file that gives complete identification of the persons involved.

(2) Data processing requirements. The processing of the data will depend on the needs for success level evaluation. Data may need to be aggregated, if it has not already been aggregated, as part of

the data storage procedure. Data from various sources may be combined into summary reports. Statistics may be calculated.

The processing of data will partially depend on the reports required that are outlined in the next section. Both the processing requirements and the means to perform the processing (e.g., computer program or hand calculation) should be included.

(3) How will the data be reported? The management and evaluation reports that will be generated as part of the evaluation should be listed and described in the Evaluation Component. The frequency and purpose of each should be included. Other person(s), in addition to the evaluator, that will receive such reports should be identified. It would also be helpful to include the layout or format of each report in an appendix to the Evaluation Component.

2.4.1.5 Data Validation. The last step in the planning for project/program data is to develop a means of checking the accuracy and the validity of the data. The purpose is to ensure that the evaluation is based on a firm and valid foundation. Many of the projects and programs will involve the reporting of large amounts of data. A means for checking that the data are being reported in the prescribed format and that the data are being reported accurately should be developed. For example, if police incident reports include a new geographic locator such as block face, the evaluator may wish to check both that the block face is being used and that it is being used accurately.

The questions that need to be answered to determine which data needs to be checked are:

- Which data will affect project or program results the most if it is in error?
- Which data reports are most likely to contain errors?
- Which of the above reports are feasible to check?

The evaluator should consider primarily data that are used to measure objectives or goals. If this data is an integral part of an on-going system and critical to the project or program itself, it will be more likely to be reported accurately than if it is new and/or required for the evaluation only. The evaluator must also determine if it is possible to check the data. For example, a jail may not allow project personnel to check the accuracy of their records.

After determining which data should be checked, the evaluator must develop the procedure to do so. The following questions need to be addressed:

(1) How frequently should the data be checked?

(2) How much of the data should be checked?

(3) Who is responsible?

(4) How should the results be reported?

If there is a large amount of data to be checked, sampling techniques may be used.

In developing sampling techniques, the evaluator must consider sample size and sample selection criteria. He must designate a person responsible and outline a method for reporting the results to him. For example, the assistant director of a youth project may randomly

pull five reports on persons participating in the project each month and check their accuracy by contacting the persons themselves as well as checking with project personnel that work with them and the police department. He should consider whether the reports adequately reflect the "real-world" situation. For instance, he may wish to include part-time employment in measuring employment success. He may also check the summary report every three months by comparing the totals given to the records on file. It may be sufficient to have the assistant director give the evaluator a hand-written report, listing the reports that he has checked and any errors he has found.

The Evaluation Component should contain a description of the data that will be validated and the procedure that will be used.

2.4.2 Data External to Project/Program

In planning the data needs for project or program evaluation, data that are outside of the scope of the project or program, but which may influence results, must be considered. A description of the types of information that should be collected and a means of collecting this information should be established. A chronological log with the date and a description of the event may suffice. One person should be designated to maintain this log.

The types of information that might be included are:

(1) changes in policy (e.g., police department, metropolitan, regional);

(2) changes in administration (e.g., police chief, mayor, project director);

(3) changes in economic conditions (e.g., unemployment rate, new industries in area);

(4) developments in other urban programs (e.g., model cities);

(5) urban developments (e.g., urban renewal projects);

(6) changes in criminal justice system or law (e.g., court reorganization, preventive detention); or

(7) changes in project or program environment (e.g., the price of heroin).

2.5 Selection of Methods of Analysis

The fifth step in the preparation of the Evaluation Component is to designate the analysis methods and procedures that will be used. Selection of analysis methods for the evaluation will depend upon the analysis use (as described in Section 4.3), project or program design, type of evaluation measures (i.e., quantitative, qualitative), and the expected reliability, accuracy, and completeness of the evaluation measure data. The effect of analysis use on the method chosen can be illustrated by a court delay project in which "the objective is to reduce the court delay by 10%." The success level determination could be accomplished in a strictly quantitative way by calculating the average days delay/case for all cases during the evaluation period and the average days delay/case for a similar period before the evaluation period, forming a percentage change in the average days delay/case and comparing this percentage to the project objective of a 10% decrease.

However, a diagnostic analysis of the same project would require an investigation of other factors (e.g., police project to increase the interception and arrest of burglaries, change in court management, change in criminal status or procedures) which appear to have an affect on the percentage delay change. This analysis would involve the integration of quantitative and qualitative results.

Project and program design can affect the methods of analysis through control grouping. For example, a rehabilitation project for incarcerated juveniles could be set up such that a portion of the target group uses one rehabilitative technique, while a second group uses another, and a third group follows the present procedures. In this case, statistical experimental design techniques might be applied. If control grouping is not built into the design of the project or program, then it is highly unlikely that such statistical techniques could be used in a rigorous manner.

Standard basic statistical methods, such as mean, mode, median, and variance, can be used when evaluation measures are quantitative. Comparison of quantitative measures is also a useful analysis technique. Qualitative measures, on the other hand, are not as easily compared. Expert judgment is an often-applied analysis method for qualitative measures. This judgment can be used directly or indirectly, as in quantifying qualitative data, e.g., establishing the relative weights for a crime serious index.

Data reliability, accuracy, and completeness could affect analysis methods and procedures chosen. Suppose it was known that the days delay data for the time period prior to the court delay project were incomplete and inaccurately collected. Calculating average days delay for the period would be insufficient analysis without considering some estimate of the accuracy.

Questions that should be addressed when selecting analysis methods and procedures are:

(1) How will each of the evaluation measures be calculated (including what information the measures will be based on)?

(2) How will the measures be combined (if they are) for project or program evaluation?

In answering question (1), the first step would be to list how each of the evaluation measures will be calculated, i.e., from what data and using which method. For example, in a Vocational Rehabilitation Project, the drop-out rate will be determined as the ratio of persons that have left the project after two weeks to the number of persons that have stayed in the project at least two weeks, since project inception.

In most cases, the statement of how the measure will be calculated is very straightforward. This is an essential step, however, to ensure that the measures are accurately defined and that the required data are being collected.

For qualitative measures, the factors that will be included should be listed as well as how these factors will be combined. For example, in many projects the attitude of the participants will be a key ingredient of success. The evaluator must decide how to measure this attitude. A questionnaire could be designed for this purpose. Judgments of the project director and other key people may also be included in the evaluation analysis. The evaluator, as well as the project director, needs to thoroughly analyze how qualitative factors influence project or program results and to establish the relative influence of each factor. The qualitative measures of project or program results will often be critical in determining why certain levels of success were achieved and should be an integral part of the evaluation.

3.0 EVALUATION MONITORING

The second phase of evaluation is evaluation monitoring. Evaluation monitoring involves both the monitoring of the project or program and the monitoring of the implementation of the evaluation plan. A process should be established to ensure that the project or program is being implemented as it has been described in the grant application and that the evaluation plan is being carried out as it has been specified within the Evaluation Component. In addition, the scope of the project or program and of the evaluation plan should be re-evaluated. A procedure should also be specified for deciding if any corrective action needs to be taken as a result of the monitoring. For example, the project director(s), evaluator(s), and other key personnel may need to meet to decide what action to take.

The questions that need to be addressed in evaluation monitoring should include:

- Has the project or program, including the evaluation component, been implemented, as described?
- Are the objectives or goals being met?
- Should the project/program, or evaluation plan, be modified?
- Should the success levels be changed?
- Have any unexpected problems arisen?

The evaluation component should include an outline of the procedure that will be followed to answer these questions during project or program implementation. The procedure should include:

(1) Who will perform the monitor function?

(2) How frequently will specific checks involved in monitoring be made?

(3) How will the information be obtained?

In addition, it would be helpful to include a description of the aspects of the project or program that will be monitored. For the purposes of clarity, the monitoring function will be described under the following sections within this document:

(1) Project or program implementation,

(2) Evaluation component implementation,

(3) Project or program scope, and

(4) Evaluation component scope.

3.1 Project or Program Implementation

The main consideration for project or program implementation monitoring is to ensure that the project or program is being carried out as planned. The types of questions that should be considered here are:

(1) Are the specified resources being used?

(2) Are the specified operating techniques being applied?

(3) Have the personnel (staff) requirements been met?

(4) Are the project objectives or program goals being met?

(5) Have any problems arisen?

The project or program description within the Grant Application should be adequate for this purpose. Any changes during implementation should be documented.

For a project, the evaluator will need to observe the project's operations and talk to the people involved. For example, to check the implementation of a Halfway House, the evaluator may visit the house and talk with both the staff, including the director, and the residents. He may also wish to talk to community members as well as to the administrator at the Welfare Department that is responsible for the Halfway House. The evaluator should establish a schedule for conducting these interviews and list the types of questions that he needs to ask.

For a program, the evaluator should develop a procedure to monitor each of the projects within the program. It may be sufficient to check with each of the evaluators and/or project directors on a periodic basis. If this is not sufficient, the evaluator may either request written reports or visit the projects himself. The frequency of these activities should be determined. An example follows:

> For a Multi-Modal Drug Program, the evaluator may request that the director of the methadone treatment center, the detoxification center, the diagnostic/treatment center, and the Halfway House send him a narrative report every three months on what has occurred during that particular time period. These reports would be in addition to the regular management and evaluation reports received. Since the reports are narrative, a description of variations to the original implementation plans would be included. The evaluator may wish to specify some of the types of information that should be included in this report. The evaluator may require a fairly complete description of the entire project implementation in the first report and thereafter only require a brief discussion of the project development, with a description of any changes.

For example, for the report from the diagnostic/ treatment center, the first report should contain a complete description of the operation, including the staff and facilities and the tests and treatments used. Succeeding reports would contain descriptions of additional staff and facilities, new tests and treatments, and any changes in approach or operation of present treatment facilities.

Project or program monitoring will be an extensive process and entail a detailed review of the entire project or program implementation. For the purposes of the Evaluation Component, however, the evaluator need only outline the procedure (the who, when, and how listed in Section 3.0 EVALUATION MONITORING) that will be used for monitoring, the procedure that will be used to determine if corrective action needs to be taken, and perhaps indicate some of the aspects of the project or program that will be included.

3.2 Evaluation Component Implementation

The purpose of monitoring of the implementation of the Evaluation Component is to ensure that the plans for evaluation are being carried out as they have been specified. The questions to consider in this area are:

(1) Are the evaluation data being collected according to the prescribed format and time schedule?

(2) Are accurate records being kept for evaluation?

(3) Is the analysis being performed in the manner outlined?

(4) Are the specified management and evaluation reports being generated?

The evaluator should establish a procedure to monitor the implementation of the evaluation plan on a regular basis. The steps involved would be the same as those required for monitoring a project or program. The procedure should include the identification of who will check the evaluation implementation, how frequently the checking will be done (there may be both announced and unannounced visits), and how the information will be obtained. The aspects that will be checked should also be specified.

For the Halfway House discussed in the previous section, the evaluator may choose to visit the Halfway House every month until the project gets underway and less frequently thereafter to review the data collected and records maintained. He may also decide to review the management and statistical reports sent to the Welfare Department, checking them against the specifications in the Evaluation Component. The evaluator should be receiving the management reports as part of the evaluation process. He will probably need to visit the site of the project to check the data collection and records maintained. If there are a large number of projects involved, however, he may request that the project directors submit several data records to him periodically. It will expedite the implementation of the monitoring function to specify the procedure that will be used within the Evaluation Component.

3.3 Project or Prdgram Scope

The purpose of monitoring the scope of a project or program is to ensure that the implementation and the expected success levels are reasonable and r...listic in view of the changing environmental conditions. For example, if the objective of a Community-Based Rehabilitation Project has been established to enroll 50% of the offenders in the jail, it may not be possible to meet this objective if there is a substantial increase in the number of offenders that enter the jail. Or, as another example, if the above project relied on extensive visits of volunteers to the jail and a new head correctional officer imposed the restriction of allowing volunteers to visit the jail only once every other week for 15 minutes, the project could be changed to put a greater emphasis on working with offenders after they have been released. The project objectives and evaluation measures would also probably need to be changed to correspond to the change in scope.

In summary, the monitoring of the scope of a project or program involves the analysis of the project or program implementation in relationship to its success in meeting the stated goals or objectives and in relationship to the environment of the project or program. The questions that need to be addressed within this section are:

(1) If the goals or objectives are not being met, what are the reasons?

(2) If the project or program is not being implemented as planned, how is it different?

(3) Has the environment of the project or program changed?

The evaluator obviously cannot foresee problems that will arise during implementation or what the success of the project or program will be. In the Evaluation Component, therefore, he need only outline a procedure for reevaluating the project or program plans. This reevaluation may be performed by him in conjunction with the project director(s). The procedure should also specify when the reevaluation will occur and should include a thorough analysis of the entire project or program implementation, using the implementation plans as a guideline.

3.4 Evaluation Plan Scope

The purpose of monitoring the scope of the evaluation plan itself is to ensure that it is an effective tool in analyzing the success of a project or program. If a project or program is changed substantially, obviously the evaluation plan will also need to be changed. Even if a project or program is implemented as planned, the evaluator may determine that either the evaluation procedures are not feasible or that the evaluation results are not an adequate indication of project or program success. The following example illustrates a procedure that is not feasible.

For a police patrol project, if all incident reports are being processed, the number may become so great that it is not possible to ensure that the reports are being decoded and aggregated accurately. The evaluator may decide to sample the reports on some statistical basis in lieu of processing all of them.

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For a police patrol project, if all incident reports are being processed, the number may become so great that it is not possible to ensure that the reports are being decoded and aggregated accurately. The evaluator may decide to sample the reports on some statistical basis in lieu of processing all of them.

Another example involves a change in the project objectives. For a Community-Based Rehabilitation Project, the objectives have been established to enroll a certain percentage of the offenders in the jail and to reduce recidivism among those offenders. During project implementation, however, it may be determined that a more significant measure of success would be the number of offenders enrolled in the project that have either obtained employment or have entered education programs after their release from jail. Therefore, the project objectives and the evaluation measures could be changed to more accurately reflect the success of the project.

Monitoring the implementation of the evaluation plan will involve reviewing the evaluation procedures. The determination that the procedures have been implemented as planned is considered with Section 3.2, Evaluation Component Implementation. Here the question is: Are they the correct procedures?

Monitoring the implementation of the evaluation plan also involves reviewing the evaluation measures. The question of whether the goals or objectives are being met is considered in Section 3.1, Project or Program Implementation. The determination of how realistic the goals or objectives are is considered in Section 3.3, Project or Program Scope. Here the question is: Do the evaluation measures adequately reflect project or program success?

In addition, the following questions need to be addressed within this area:

(1) Should any additional data be collected?

(2) Should the procedures for the collection and processing of the data be modified?

(3) Should the analysis methods be modified?

(4) Are the results of the project or program being interpreted accurately?

(5) Should the expected success levels for the project or program be changed?

As for the previous areas of monitoring, it is impossible for the evaluator to foresee all the problems that will arise. In the Evaluation Component, therefore, he need only outline the procedure that will be used to analyze the evaluation plan itself. The person(s) responsible should be designated as well as when the analysis will occur. The analysis should include the entire evaluation plan.

4.0 EVALUATION ANALYSIS

The third phase of evaluation is evaluation analysis. The purpose of evaluation analysis is to ascertain the degree of success of projects and programs and to determine the reasons for this success. The Evaluation Component should contain a description of the analysis, how the analysis will be implemented, and how the results of the analysis will be used.

The description of the evaluation analysis procedure involves answering the following questions:

(1) Who will perform the analysis?

(2) When will the analysis be performed?

(3) How is the analysis to be used?

(4) How will the analysis be performed?

The remaining sections of this document are organized to answer the above questions.

4.1 Responsibilities

The section on responsibilities is primarily a description of who will perform the analysis. The persons who will perform the analysis of the projects and programs should be designated as part of the Evaluation Component.

For a program, the persons that are responsible for forwarding the analysis reports and/or raw data for each project that is part of this program should also be designated.

4.2 Timing and Extent of Analysis

The analysis will be performed throughout the project or program evaluation period. How frequently will be determined by management requirements for monitoring and direction, evaluation needs, and critical events that may occur during implementation. Thus, evaluation analysis should be implemented:

(1) At periodic intervals;

(2) When specific milestones are achieved;

(3) When critical events occur; and

(4) When a project or program is completed.

The determination of a schedule for analysis will depend on the nature and the phasing of the particular project or program. Since a project or program is not expected to achieve its objectives or goals until the end of the implementation period, interim success levels must be established. These interim success levels must be stated in terms of the project objectives or program goals (i.e., direct evaluation measures). These levels indicate the extent to which a project is expected to reach its objectives (or for a program, its goals) at that particular time. Moreover, for some projects and programs, there will be a very slow start-up time, therefore a major evaluation would be of little use for six months or longer. Some of the evaluation measures, however, may be checked earlier.

The following example illustrates both interim success levels and slow start-up time. A Post-Release Halfway House is being set

up with the objectives of (1) enrolling 40% of those released from the prison system and (2) reducing re-arrests among those enrolled to 10%. It will probably be close to a year before both objectives can be meaningfully used to measure project success. Interim levels of achievement for the first objective could be established, however, and used to evaluate project success during the first year. For example, if it will be three months before the Halfway House is fully staffed and operable, then interim levels of achievement of enrolling 5% at the end of six months and 15% at the end of nine months could be established.

An example of the use of a specific milestone for project evaluation follows. The success of a Juvenile Recreation Project may partially depend on the number of juveniles participating. An assumption has been made that a minimal number of participants, which will allow a greater variety of activities to be offered, will affect project success. Based on this assumption, the first interim evaluation will be held one month after there are 50 juveniles participating in the recreation project.

Critical events which will require an additional interim evaluation are events that may cause a change in the baseline data or in the environment in which the project or program is being implemented. For example, a Labor Department Project to train and find employment for a large number of delinquent youth (that will sponsor projects for the school system) may affect a Truant and School Drop-Out Program.

The Evaluation Component should contain the schedule for project or program evaluations and the degree of success expected at those particular points in project or program implementation. In most cases, it is not possible to foresee critical events that may affect implementation. If these events are known, however, they should be included. The extent of the evaluation at the various intervals should also be indicated.

The timing of the evaluations will, of course, need to meet the needs of program management and planning. It would not be unreasonable to schedule an evaluation three or four months prior to the beginning of the fiscal year for the specific purpose of justifying the continuation of the project with LEAA or other funding.

4.3 Uses of Analysis

The next step in the preparation of the analysis section of the Evaluation Component is to define how the analysis will be used during project or program implementation.

The analysis is used for four purposes:

(1) Success level determination;

(2) Management needs for monitoring and direction;

(3) Assessment of contribution to the next level of evaluation; and

(4) Diagnostic.

How the analysis should be used for each of these purposes will now be explained.

4.3.1 Success Level Determination

The use of analysis for success level determination involves ascertaining the degree of success of a project in achieving its objectives (or for a program, in achieving its goals). This level of success is indicated by the direct evaluation measures. Since a project or program is not expected to achieve its objectives or goals until the end of the implementation period, interim success levels must be established (as explained in Section 4.2, Timing and Extent of Analysis). These levels will be used during the interim analysis to determine if the project is meeting its objective (i.e., is the project likely to meet its objective by the end of the implementation period).

Because of project or program "start-up" time or the difficulties that may occur during implementation, the evaluator may wish to use interim success levels as guidelines, allowing some leeway in their achievement. This flexibility can be obtained by affixing tolerance limits to the interim success levels (i.e., to the achievement of the direct evaluation measures). Thus, if the project is within a certain percentage of meeting these levels, it is considered successful.

The establishment of interim success levels along with how they will be interpreted is an important part of the evaluation planning. The established interim success levels, with graphs or other descriptive interpretation, should be included in the Evaluation Component.

4.3.2 Management Needs for Monitoring and Direction

The director should look to the evaluator for assistance in developing plans for monitoring and directing the project.

The questions to ask when determining how the results of the analysis will be used for management needs for monitoring and direction are:

(1) How should problems in implementation be identified and resolved?

(2) When and how should a project or program be modified or redirected?

(3) When should the question of project or program continuation by considered?

Considerations that should be included in answering each of the above questions are as follows:

(1) Implementation Problems. The difficulty of foreseeing problems that may occur during implementation does not preclude the necessity of planning for their resolution. The types of problems that may occur should be indicated and the possible courses of action to resolve these problems should be outlined. Attitudes of participants will often fall into this category. An example follows:

An Automated Court Calendar System may require acceptance of the individuals involved for success. Plans can be made to measure this acceptance. If the desired level of acceptance has not been

achieved, the implementation of the Calendaring System could be postponed for a month, while additional efforts are made to "sell" the system.

The Evaluation Component should ideally contain a list of problems that may develop during implementation and the method that is planned for their resolutions.

(2) Modification or Redirection. The circumstances under which a project or program may need to be modified or redirected should be outlined as part of the Evaluation Component. If the objectives or goals are not being met (or are not within the specified tolerance limits) such action must be considered. There may be other circumstances that will indicate a need for modification or redirection. For instance, even though project objectives are being met, the indirect evaluation measures may show that the project is not as successful as possible. The following example illustrates this situation.

For a Community-Based Rehabilitation Project, the project objectives have been established as (1) enrolling a certain number of offenders in the jail, and (2) reducing the rate of re-arrest among the offenders enrolled in the project that have been released. An interim success level has been established to enroll 50 offenders by the end of six months. This objective has been reached and there have been no re-arrests among those offenders in the project that have been released. Other evaluation measures, however, show that only nine of the 24 offenders released have become employed or have

entered education or training programs. Thus, although the project's objectives have been met for the six month evaluation, 16 offenders released that are unemployed and not in school is an indication that they are likely to eventually be re-arrested. The Project Director should consider modifying the project to put a greater emphasis on helping the released offenders to find employment or to enroll them in educational programs.

The possibility of modifying or redirecting a project or program may be essential to its success. It is impossible to foresee all the circumstances under which this should occur; however, the evaluation measures can be used as a guideline. A discussion of which evaluation measures will be used and how the project or program may be changed should be part of the Evaluation Component. A minimal requirement is to describe the possible courses of action that may be taken if project objectives or program goals are not being achieved.

(3) Project or Program Continuation. The Evaluation Component should contain a discussion of how the results of the analysis will be used to determine project or program continuation. If any of the following circumstances occur, the question of continuation should be considered: (1) the success levels achieved in meeting objectives or goals are not within the specified tolerance limits of the predetermined expected levels; (2) the evaluation measures indicate that the project or program will not achieve its objectives or goals at the end of the implementation period; or (3) the subjective evaluation

of the entire project or program indicates that the objectives or goals will not be met and/or that the crimes that are a target of the Impact program will not be reduced by this project or program.

In the Evaluation Component, these circumstances should be discussed within the context of the particular project or program. In addition, at what points during implementation the question of continuation will be considered should be given. For many, the question of continuation should not be considered for a significant period of time (e.g., for a year). There will be some circumstances in which the full implementation period (e.g., two years) will be required to be able to thoroughly evaluate success.

All of the above considerations are not only essential for adequate monitoring of the project or program, but are also part of the total project or program evaluation in determining why particular success levels were achieved.

4.3.3 Contribution to the Next Level of Evaluation

The third purpose of project or program analysis is to determine the contribution to higher goals. For a project, this is the assessment of the contribution of the project towards the achievement of program goals. For a program, this is the assessment of the contribution of the program towards the achievement of the goals of the Impact program, i.e., to reduce stranger-to-stranger crime and burglary 5% in two years and 20% in five years, within the city.

The expected contribution has been established in Section 2.2, Goal/Objective Relationship. The purpose here is to determine what the actual contribution has been. For example, for an Anti-Burglary Program, if a Street Lighting Project reduced the rate of burglaries in one district by 10%, the effect on the city wide burglary rate could easily by calculated.

4.3.4 Diagnostic

The fourth purpose of project or program analysis is to determine the reasons for the degree of success achieved. This will involve a qualitative analysis of the implementation of the project or program and its results. For a program, evaluating the relative contributions of each of the projects within it must be considered.

(1) Contribution of Projects to Program Success. The method for the determination of the contribution of the various projects to the program success will involve an analysis of the results of each of the projects within that program. This determination will depend on how well each of the projects achieved its objectives and the effect of this achievement on program success.

The expected contributions of the various projects to the program have been listed as part of Section 2.2, Goal/Objective Relationship. The analysis section of the Evaluation Component should contain some comments on the flexibility of these levels of contribution and how not achieving, or over-achieving, project objectives will influence program results.

(2) Analysis of Entire Implementation and Outside Factors.

The entire implementation as well as the environment must be analyzed to determine the major reasons for the degree of success achieved. Although each of the projects within a program has achieved its objectives, the program goals may not have been achieved. The evaluator must be able to determine the reasons for this.

Most of this analysis cannot be planned exactly or the interpretation of results projected. It is possible, however, to outline the types of considerations that will be useful in determining why a project or program was successful.

Such a list for a methadone maintenance project could include:

(1) Community acceptance;

(2) Price of heroin;

(3) Quality of medical assistance;

(4) Outside employment opportunities; and

(5) Other assistance efforts in the same area.

By including a list of factors that are expected to contribute to project or program success in the Evaluation Component, the participants should become more sensitive to developments that may impinge upon project or program success.

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