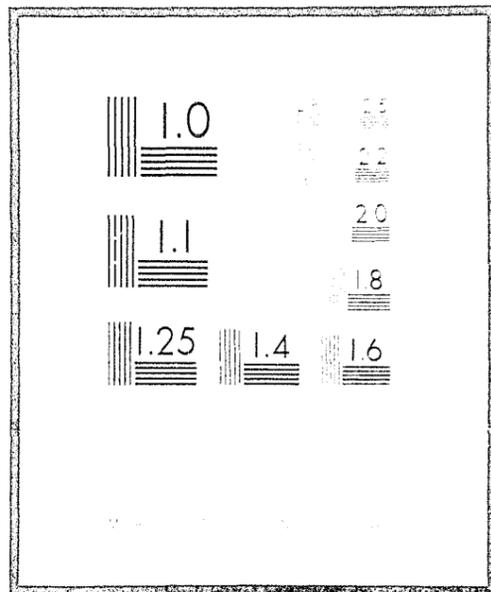


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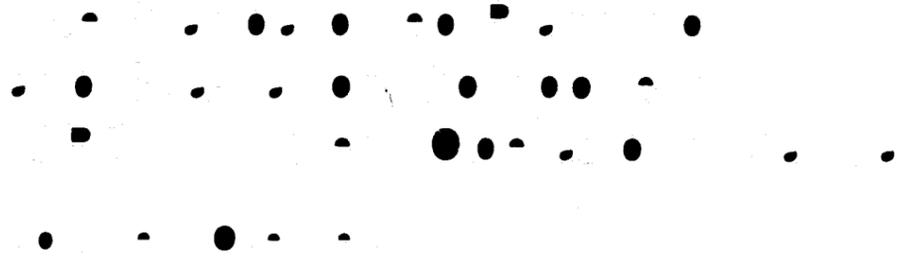
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**THE STANDARDIZED PLANNING  
AND EVALUATION COMPONENT  
(SPEC) SYSTEM OPERATIONS MANUAL**

Volume I: Overview

October 1, 1973

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## Preface

This document has been prepared by the Institute for Research in Public Safety of Indiana University's School of Public and Environmental Affairs under a contract with the Indiana Criminal Justice Planning Agency for the development of a Criminal Justice Evaluation System. The purpose of this document, Volume I of the Operations Manual, is to provide planners, managers, and other interested persons with an overview of the Standardized Planning and Evaluation Component (SPEC) system developed for the State of Indiana.

Volume II of the Operations Manual is a detailed procedures manual for implementing and operating the SPEC system. Companion documents include the *Evaluation Handbook*, *A Survey of Criminal Justice Evaluative Literature*, and *A Nationwide Review of Evaluation Procedures of State Planning Agencies*.

This volume is divided into two major sections. The first section identifies the basic principles of evaluation and relates these principles to Criminal Justice evaluation and planning. Section two provides an overview of major elements in the SPEC system as well as a conceptual framework of the technical and managerial approaches taken in the development of the system.

## 1.0 Introduction

Evaluation of public policies and programs is a fairly recent development. It is based on the simple and businesslike notion that only the best and most productive projects should be funded. Since there is a limit on the amount of public money available but seemingly none on the demand for it, policy makers must decide which projects should be supported and which should not. Increasingly, their decisions are being based on facts rather than on opinions.

Those who seek or are already receiving public funds tend understandably to put their programs in the best possible light. At the same time, they are often reluctant to do the detailed and unexciting work of collecting statistics and records to support their claims. The federal government is, for these reasons, requiring an increasing amount of evaluation based on objective data as a condition for receiving federal support.

Evaluation requirements often have the unfortunate effect of creating uneasiness and suspicion. Policy makers suspect project directors of supplying only the favorable figures or, worse, of fabricating the data to make themselves look good. Project directors suspect policy makers of being unrealistic in their demands, or worse, of being out to find some reason for cutting off support. While such suspicions are usually unfounded, a general air of mistrust tends to destroy cooperation and to cloud the benefits of evaluation.

Business, industry, and government have found evaluation beneficial, even invaluable, as a tool for

- organizing and managing project efforts
- determining the effectiveness of project efforts
- planning future project efforts.

Because evaluation requires both a clear statement of project objectives and a systematic collection of data and statistics regarding the accomplishment of objectives, it enables project managers to maintain the direction of a project as well as to gauge short and long-term consequences. Evaluation serves, therefore, as an organizing instrument and a basis upon which changes in project effort or emphasis can be made.

Every project has some sort of an objective; that is, each project is designed either consciously or unconsciously to make some change or changes in the world. A clear and conscious statement of project objectives combined with material measures of how and to what extent these objectives were met are sufficient information for determining the effectiveness of a project. Indeed, the primary goal of evaluation is to discover which projects effect the greatest desired change with the least time, money, and effort.

Finally, and in addition to determining the effectiveness of projects, evaluation provides a means of identifying specific problems and delays in projects. By emphasizing only those types of projects that have demonstrated their effectiveness and by resolving or at least anticipating problems that tend to occur, future projects may be planned with greater confidence.

Evaluation is, then, not merely a bureaucratic requirement or an academic exercise. It is a way of increasing efficiency by learning from past experience. It is an integral function of a well managed operation.

## 1.1 The Concept of Evaluation

The word "evaluation" is used commonly to describe a variety of judgmental activities. There is no single generally accepted method of evaluating. But because evaluation is a process of coming to a judgment, the quality and reliability of that final judgment depends in large measure on the caliber of the process used.

There are three general but distinct types of evaluation:

- personal evaluation
- clinical evaluation
- scientific evaluation.

Each type is useful depending upon the importance of the judgment to be made, the reliability required, and the circumstances in which the evaluation takes place. Each has advantages and disadvantages.

*Personal evaluation* is, as the label implies, a highly individualized process. It is not necessarily an inferior one. Any manager must make day-to-day decisions regarding the operations of his organization. Typically, he has neither the time nor the obligation to document in painful detail why he makes each decision. In making decisions, managers go through a process of weighing and balancing—of evaluating. The advantage of this type of evaluation is that it is rapid and, in good organizations, informed. Its disadvantage is that not every person would evaluate the situation in quite the same way, take the same matters into account, or, therefore, reach the same conclusion. Few people possess the ability to take all aspects of a problem into consideration without bias and to do this consistently in every decision. The more crucial the decisions and the greater their number, the more this disadvantage is magnified. Corporate executives, professionals, and high governmental officials have increasingly come to distrust their own "gut reactions" and prefer a more elaborate form of evaluation. This type of evaluation might be called "clinical."

*Clinical evaluation* does not preclude an element of personal judgment. It does, however, require more precise data and information than personal evaluation. Perhaps the best example of a clinical evaluator is the physician. Few physicians prescribe medicine or surgery without some form of examination of the patient, ranging from cursory (but informed) physical examinations, through complete and standardized physical examinations, to specialized scientific tests including X-rays and other technical or chemical tests. Still, the judgment of the physician on the basis of all this data is the deciding factor. It is he who must assimilate this information in order to prescribe a remedy.

The term "clinical" implies the field of medicine, but is not really restricted to it. Most major decisions are clinical decisions. For example, what competent executive would make a major decision regarding the production and sales of his product without first consulting production schedules, manpower and marketing information? Clinical evaluations are, then, personal evaluations based on some measure of objective data. The advantage of a clinical evaluation is that two independent professionals are more likely to reach the same conclusion. It is consequently more reliable than personal evaluation. The disadvantage of clinical evaluation is that it requires a greater amount of time and a greater amount of data collection and analysis.

*Scientific evaluation* removes most elements of personal judgment. Criteria for conclusions

are carefully defined in advance; all data to be considered are carefully defined in advance; and normally, all data are quantified. Control groups are established and every effort is made to account for the influence of any factors not considered a substantive part of the project.

The clear advantage of scientific evaluation is certainty in results. The hallmark of science is replicability; that is, given the same project or experiment performed in exactly the same way, any person would achieve approximately the same results. Although scientists frequently disagree, the disagreements usually concern the design of the experiment (methodology) or the interpretation of results.

The disadvantage of scientific evaluation is the time, money, and effort required. Moreover, the application of scientific procedures to the field of human behavior has proved difficult. The quantification of human behavior presents serious problems. More serious still is the difficulty of controlling for the myriad influences and changes in the social world that affect the outcome of social experiments. Control groups are not always possible, nor even ethical. Consequently, in addition to the time, money, and effort required for scientific evaluation, the lack of well developed methodologies is a considerable disadvantage to the scientific approach.

### Summary

Any type of evaluation—personal, clinical or scientific—may be appropriate, depending upon the importance of the decision, the number of decisions to be made, and the circumstances in which they must be made. The more elaborate the type of evaluation, the greater its advantages and its disadvantages.

The three types of evaluation may be viewed as a continuum. On one end of the continuum, personal evaluation employs few scientific principles. Clinical evaluation employs some scientific principles. Scientific evaluation is, of course, purely scientific in principles.

In the field of social programs, where many evaluations must be made in a short period of time in a relatively inexpensive manner, clinical evaluation is usually appropriate. The more scientific these clinical evaluations are, the more reliable and helpful they become. In designing reasonably scientific clinical evaluations, it is essential to utilize as many scientific principles as the situation allows. The following section examines some of these principles.

#### 1.1.1 Principles of Scientific Evaluation

The more closely clinical evaluation approaches truly scientific evaluation, the more reliable and useful the evaluation becomes. Therefore, in designing clinical evaluations, the general principles of scientific evaluation should be employed whenever and to the greatest extent possible.

In each project or program, certain of these principles will probably have to be compromised—control groups are seldom available, subjective data may have to substitute for objective quantified data, etc. Still, the principles remain the same and can in most circumstances be approximated if not fully realized.

The following items are not meant to be an exhaustive list of all principles involved in proper scientific investigation, but, with some oversimplifications, the principles of scientific enquiry most significant for social projects include:

- the statement of a hypothesis
- a statement and recording of means and methods

- objectivity in recording results
- quantification of data
- comparability of measures and results
- cost effectiveness.

Because these principles are important to the evaluation of social projects, each deserves a brief discussion. Again, these discussions are intended to be non-technical. The purpose of this section is not to provide a complete primer on scientific enquiry, but to transfer some of the advantages of scientific procedures into the social field.

*A statement of a hypothesis* is a statement of anticipated results. Doing X, Y should result. In social projects, this principle translates into a clear statement of the nature of the project and the expected objectives or results. Further, it includes a statement of how the results are to be measured. Any project, however simple, is expected to bring about some changes in the world. The expected change can usually be expressed as an increase or decrease in something. Unless the objectives of a project are clearly stated in advance along with how to measure these results, it will be impossible to tell whether the objectives are met. Frequently, project directors state the objectives of the *money* rather than the objectives of the *project*. The objective of the money is always to set up the project—to purchase equipment, provide training, hire personnel, or whatever. The objective of the project is not simply to do X, but rather to achieve Y result by doing X. The statement of project objectives is essential to any evaluation and, for the purpose of social projects, may be considered the statement of a hypothesis.

*A clear statement and recording of the means and methods used in the project* is of vital importance. If the results of a project are excellent, it is desirable to know how those results were achieved so that the project may be repeated with the same results. The more a project is repeated with the same results, the greater the confidence in the project. Very often, projects do not work out quite as they were designed. Accidents and difficulties occur that change the original plan. Therefore, it is important for any changes in design to be recorded so that project means (personnel, equipment, facilities, etc.) and project methods (training, treatment, equipment use, etc.) are well known in the end.

*Objectivity in recording project results* is one of the most simple but one of the most difficult principles of evaluation. Even the most dedicated scientists sometimes become so emotionally involved in their work that they inject their own hopes and beliefs into the results of their work. This problem is especially severe in social projects where it is easy to become emotionally involved and therefore tempting to report hoped for results rather than actual ones. In addition, there is a certain stigma attached to reporting failure in achieving objectives, even in the so-called hard sciences. A kind of success pressure prevails, with the consequence that reported results tend to be favorable even with little evidence to support such a conclusion. Special emphasis must be placed on objectivity and detailed reporting of actual results rather than of opinions and feelings.

*Quantification of data* is a principle that applies throughout the statement of the hypothesis (project objectives), the recording of project means and methods, and the reporting of project results. Numbers are useful because they can be easily compared, readily recorded, and conveniently stored. For these and other reasons, including statistical tests and measures, numbers are the language of science. An additional advantage to quantification is that it forces a measure of objectivity. There is a strong tendency in social projects

to report good results on the basis of one or two anecdotes or examples. To paraphrase an old proverb, an example is not proof. While numbers frequently do not tell the whole story—especially in the social field where quantification is sometimes difficult if not impossible—they tell an invaluable part of it.

*The comparability of measures and results* is essential to discovering which projects are most successful. If one project uses one measure of success while a similar project uses another measure, it is difficult to compare them. The greater the similarity of measures, the more comparable the results will be. The problem of different and incomparable data is acute in the social arena where there are so many things that might be measured to indicate project success. To resolve this problem, standard base line data and standard measures for success must be used in all similar projects. The exact kind of standard data and measures chosen depends on the type of project and the ease of data collection. Some projects lend themselves to sophisticated measures, including the use of control groups, public opinion surveys, or other specialized tests. When such measures are used, it is important to use the same techniques and instruments so the results are truly comparable. When sophisticated measures cannot be used (in the social field they frequently cannot) every effort should be made to collect similar types of data from similar projects.

*Cost effectiveness* is not often cited as a principle of scientific evaluation. Normally it is a principle of good management. However, the cost of evaluation should be proportionate to the importance and usefulness of the evaluation. The hard reality is that science is expensive and time-consuming. From this standpoint, clinical evaluation is especially appropriate to the social field since the degree of scientific activity can be adjusted according to the needs of the moment. Just as a physician does not always need a full set of X-rays and chemical tests to treat a sore throat properly, so a full battery of scientific tests is not always necessary for a reasonable evaluation of small projects. The thoroughness, and therefore, the cost of evaluation should be determined by the importance attached to the project.

### 1.1.2 Relationship of Evaluation to Planning

While these principles describe what evaluation is, it seems useful before applying these principles to criminal justice projects, to define what evaluation does. The following section relates evaluation to planning.

There are six steps necessary to planning social and particularly criminal justice projects. These steps are:

- defining the problem to be solved
- establishing goals and objectives
- defining the alternative approaches to reaching objectives
- selecting an approach from among the alternatives
- implementing the program or project
- evaluating the results of the program or project.

While evaluation is the last logical step in planning projects, it should not be merely an afterthought. Nor is evaluation simply performed and forgotten. Planning is a cyclical event. At each step the evaluation of past results and the development of future evaluation plays an integral role. Evaluation both affects and is affected by the planning process.

*Defining a social or criminal problem to be solved* does not at first glance seem to be a

difficult task. But there is an important difference between identifying a problem and defining it. To say there is a problem of juvenile delinquency, of burglary, or organized crime identifies the problem, but labeling the problem does not describe its nature. There are many types of juvenile delinquency or burglary, many contexts in which they can occur, and many places they can affect more seriously than others. In defining a problem, these issues must be considered. Furthermore, problems should be defined in numerical terms, so that from the outset the effect of any project on the problem can be easily detected.

*Establishing goals and objectives* of programs and projects is essential. Having defined the problem, it is necessary to determine precisely what should be done. In criminal justice planning, most program goals and objectives are a reduction in criminal behavior—whether by preventing it, detecting and apprehending the offender, reducing recidivism, or adjudicating it more swiftly. The goal of reducing some form of criminal behavior may be achieved by improving some aspect of the criminal justice system, by creating some new crime corrective program, or both. In any case, the goal should be stated in precise and where possible, numerical terms. It should include: the types of criminal behaviors to be reduced, the amount by which they are to be reduced, and the geographical location in which they are to be reduced. Such a goal then becomes the “ultimate objective” of one or more projects or programs.

*Defining the alternative approaches* to reaching the stated goal involves (1) identifying probable or contributory causes of the problem and (2) selecting or designing approaches that will effectively deal with some or all of these causes. Evaluation of past efforts plays a significant role in determining which approaches prove successful and which approaches have consistently failed. Detection and apprehension programs may, for example, prove effective in reducing some contributory causes but not in reducing others. On the whole, rehabilitation programs may prove more effective against the root causes than preventive efforts. Based on past evaluations, alternative approaches to reaching specified goals can be more clearly examined.

*The selection of one approach from among alternatives* may be based upon past evaluations or upon a desire to try a new approach. In either case, the approach selected has direct bearing on the future evaluation of the effort, for it determines the “immediate objectives” of the future project; that is, it defines which problem causes are to be affected in what way. As with goals, the immediate objectives of the approach selected should be clearly specified in numerical terms wherever possible. The immediate objectives should include statements of what causes of the problem are going to be affected, how and how much these causes are going to be affected, and in what geographical area they will be affected.

*The implementation of the project* must also be the beginning of evaluation data collection. Only when proper baseline data is collected can the effect of the project be measured. In addition, many problems in implementing projects—such as delays in receiving equipment or delays in staffing—can be anticipated on the basis of past evaluation of similar projects.

The final step in planning is the actual *evaluation of the project* to determine its means, methods, and accomplishments. This evaluation is performed on the basis of data collected throughout the project. The results may then be compared with other projects and serve as input to the next planning cycle.

## Summary

Planning and evaluation are closely intertwined. Evaluation provides input to planning, and planning provides input to evaluation. Figure 1.1 summarizes these relationships.

### 1.2 Evaluating Criminal Justice Projects

This section suggests how the principles of evaluation may be applied to the field of criminal justice and indicates some of the difficulties in application.

The principles of evaluation must be applied to criminal justice projects at the outset of the planning process. The first two principles,

- the statement of project objectives, and
- the statement and recording of project means and methods

are the core of any evaluation system. Without this information, no genuine or useful evaluation can take place.

The responsibility for reporting project objectives, means, methods, and results may fall upon individual project directors. But to guarantee consistency of information as well as conformity of project objectives with the state plan, the State Planning Agency must provide appropriate guidelines and formats. Similarly, in order to ensure the principles of

- objectivity in recording results
- quantification of data
- comparability of measures and results, and
- cost effectiveness

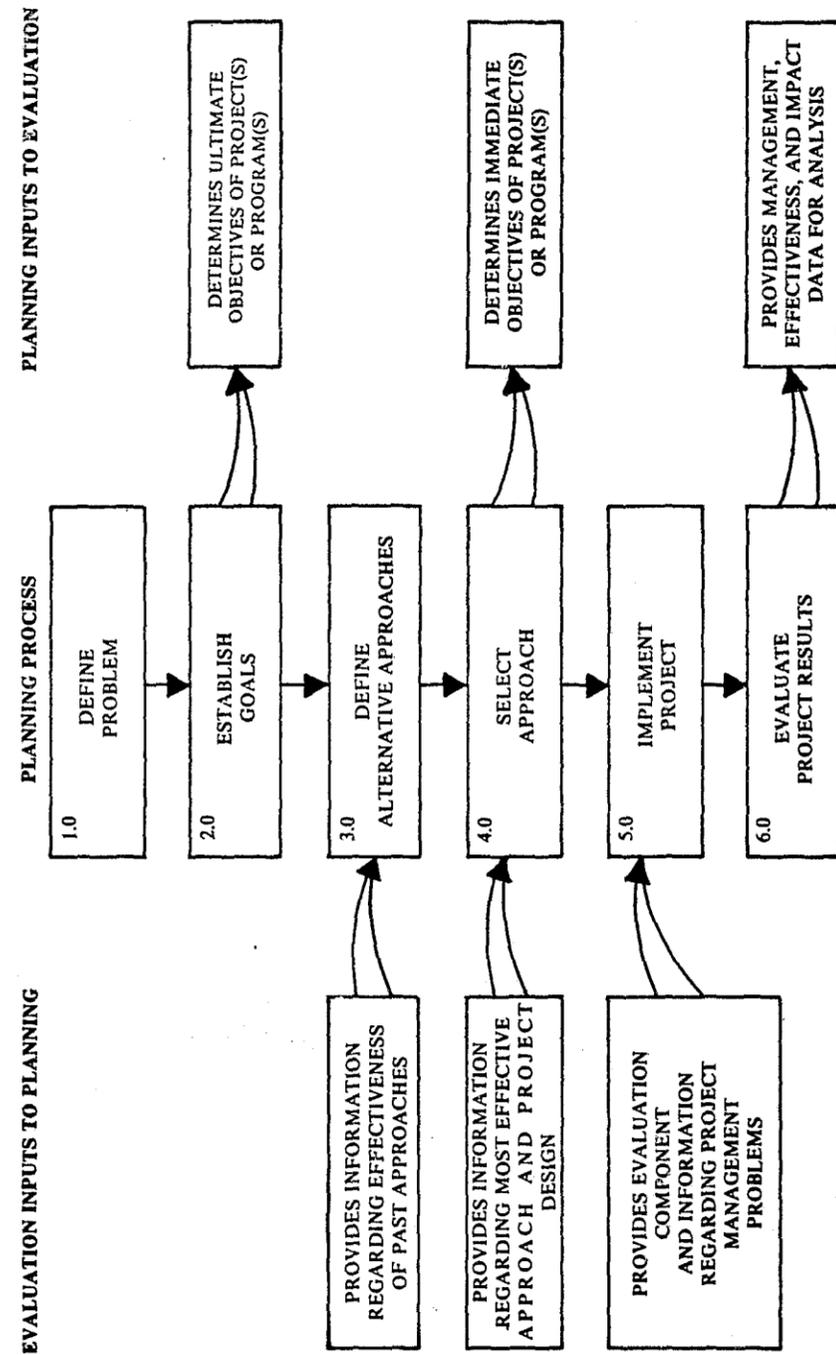
the State Planning Agency must, in some fashion, provide detailed data collection guidelines and exercise a measure of quality control.

The State Planning Agency might accomplish these ends in numerous ways: a single outside contractor might perform all desired project evaluations; specific projects may be funded for the purpose of hiring outside consultants to evaluate them in accordance with SPA guidelines; or the Planning Agency may elect to develop its own evaluation capabilities.

In view of the close relationship between evaluation and planning, and the importance of evaluation data to day-to-day planning and management decisions, it seems desirable for the SPA to develop its own evaluation capabilities. Moreover, many management devices (such as grant application forms, quarterly reporting forms, fiscal reports, and monitoring functions) supply, or can be made to supply, much of the information required for evaluating projects. Finally, while present Law Enforcement Assistance Administration (LEAA) guidelines for evaluation suggest

- 15% of the total number of subgrants
- 15% of the total dollar value of subgrants, or
- all subgrants in one program area,

Figure 1.1  
Relationship of Planning and Evaluation



these are clearly minimum requirements. The more comprehensive the evaluation effort, the more useful such data will be in future planning. It is desirable, therefore, to design a system capable of evaluating all projects funded through the SPA offices. Such an evaluation system should also be designed to merge with management, monitoring, and planning activities so as to minimize paperwork and costs while maintaining, insofar as practicable, the principles of scientific evaluation.

Before designing a comprehensive, integrated evaluation system, some of the peculiar difficulties of applying evaluation principles to criminal justice projects require special attention.

### 1.2.1 Problems in Evaluating Criminal Justice Projects

There are technical problems inherent in evaluating a large variety of criminal justice projects. It would be misleading to suggest that the principles of evaluation discussed above are easily applied in a criminal justice system often unaccustomed to maintaining standardized records and unfamiliar with scientific or systems methodologies. There are genuine problems in collecting objective data. Compromises must often be made. At times certain types of project data, however desirable, are impractical or impossible to collect. However, an evaluation system may itself have the desirable side-effect of encouraging a more rigorous, systematic, and comprehensive data collection effort within the law enforcement system.

In general an evaluation system should be designed to permit the improvement of its evaluation data requirements on an annual basis as circumstances, needs, and the availability of data in the law enforcement system permit. This may be accomplished by adopting a modular approach so that changes in one module would not require a change in the entire system. Program evaluation components might therefore contain two modules: evaluative data required of several or all programs, and evaluation data required only of the specific program. Changes in either module would not require a massive overhaul of the evaluation system.

### 1.2.2 Problems in Evaluation Management

Evaluation does not take place in a vacuum. It is one of several activities of a State-Planning Agency and is unique only in the amount and detail of information required from projects. This quantity and detail of data presents problems in

- collecting sufficient project data
- reporting the data.

It is impossible, without huge financial expenditures, for a single person or group of persons to collect all the data required for the evaluation of a large number of projects. For managerial reasons, as well as the above-mentioned scientific reasons, it is essential that evaluation data be collected at the project level on the basis of guidelines or minimum requirements established at the SPA. This may be accomplished either by project personnel or

by expert evaluation consultants hired by the project for that purpose. In either event, there is likely to be resistance by project directors to the idea of additional labor and expense for data collection. There is no major solution to this problem, except that collecting evaluation data should be seen as a precondition to the grant and a useful tool in managing the project. In addition, the evaluation data required from a project should be proportionate to the size and significance of the project.

Much of the data useful in evaluating projects is useful in other managerial activities. Project objectives, expenditures, and problems are as important in the grant award, fiscal, and coordinating activities as they are in the evaluation activity. In order to avoid a proliferation of forms and reports containing the same information, the reporting of evaluation data should be integrated with other required reports to the greatest extent possible. Such an integration, while requiring some report design or re-design efforts, is nevertheless essential to minimizing paperwork and the reporting burden placed on individual projects.

In addition to the difficulties in managing the collection and reporting of evaluation data, there is a potential problem in the centralization of the evaluation effort. To manage the flow and storage of evaluation information, ensure consistency in analysis, and provide for adequate evaluation inputs into the planning process, the evaluation system must be centralized in the SPA. Such centralization may create difficulties in funding as well as in organizational harmony.

Funding the evaluation staff may be accomplished from planning funds or from a sub-grant to the SPA itself for the purpose of developing an evaluation staff. (The data collection effort itself may be funded as a portion of the sub-grants to the individual projects.) Maintaining organizational harmony may not be so simple. The creation of a central evaluation staff with direct input to the planning process may be viewed with misgivings by project directors as well as regional and program coordinating staffs unaccustomed to sharing decision-making authority. In order to minimize conflicts, these personnel should be involved in the evaluation process and assured that the final evaluative decision is the result of dialogue and not of fiat. By maintaining communications among administrative units, not only may the burden of evaluation be shared, but also the utility of evaluative information and the quality of evaluation will increase.

### Summary

The interrelationships of planning, management, monitoring, and evaluation suggest the most efficient method of carrying out reasonably scientific and comparable project evaluations is through an evaluation system developed for an operation by the State Planning Agency.

There are difficulties that must be faced in the construction and operation of such a system. These difficulties include:

- technical problems in collecting adequate data
- managerial problems in organizing an evaluation system.

## 2.0 The Standardized Planning and Evaluation Component (SPEC) System

### 2.1 An Overview

The Standardized Planning and Evaluation Component (SPEC) system was developed to provide the State Planning Agency with a comprehensive, ongoing evaluation of criminal justice projects. The objectives of the SPEC system are to provide the necessary evaluation feedback to SPA and RPU planners and managers as well as to ensure SPA compliance with LEAA evaluation guidelines.

The SPEC system is essentially a comprehensive, integrated evaluative reporting and analysis system. It was designed for operation by a state planning agency organized along the lines shown in Figure 2.1.

The SPEC system involves:

- the design of program evaluative components
- the collection and reporting of required evaluation information
- the analysis of evaluation information
- the production of planning input reports
- the management of the SPEC system.

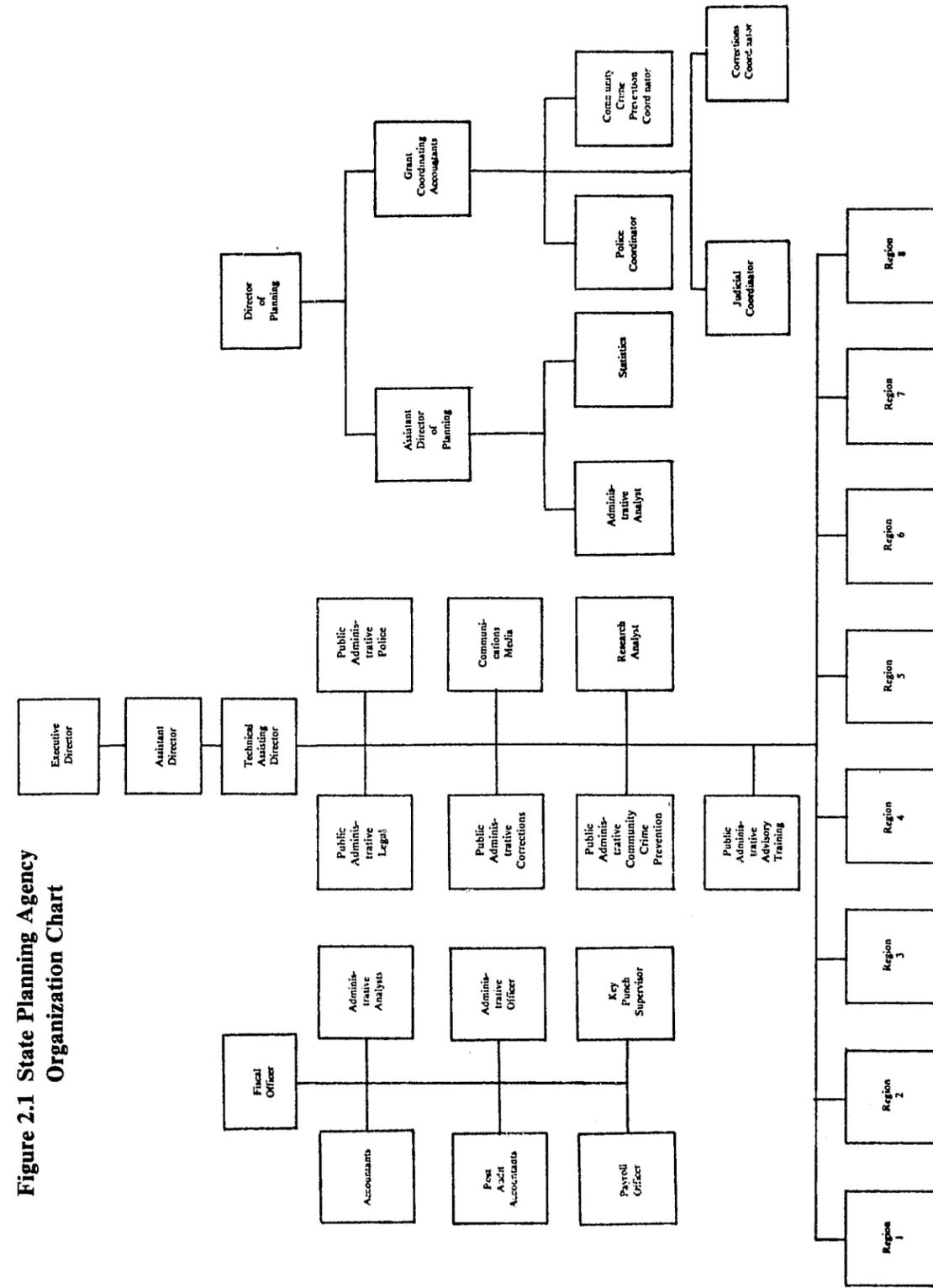
*The design of program evaluation components* is performed by the evaluation and planning staff of the SPA (with the assistance of any expert, specialized consultants required), during the annual planning phase. The program evaluation components specify minimum data requirements to be met by all projects funded under the program and appear in the annual Evaluation Handbook. These data requirements include both standardized and program specific items. Standardized items include those which several or all projects funded by the SPA are expected to produce. These include project personnel data, training information, equipment purchase information, and the like. Such standardized data is reported on a set of forms provided for that purpose. Program specific items are those unique to the particular program, yet expected from all projects within that program.

The kind of information required in the program evaluation component includes data regarding project means (personnel equipment, facilities, etc.), project methods (activity and organizations), and project accomplishments (the extent to which immediate objectives are met). The reporting of all this information constitutes the Effectiveness Report. In addition to the effectiveness data, a standardized impact report is required of some projects.

The total amount of information required of each project varies directly with the amount of federal funding granted to it. Thus, projects with less than \$5,000 of federal funding are required to submit only a simplified and fairly standard Effectiveness Report. Projects funded with \$5,000 to \$25,000 of federal monies are required to submit a complete Effectiveness Report of all data required plus the standard Impact Report. Projects funded in excess of \$25,000 of federal monies are required to submit all minimum Effectiveness and Impact Report data. In addition, more extensive data provided by expert consultants (designated either by the project or by the SPA) should be attached.

*The collection and reporting of required evaluation information* is the responsibility of the individual project director with assistance from the Regional Staff. It should be recalled that

**Figure 2.1 State Planning Agency Organization Chart**



the reporting system is an integrated one with one report serving possibly several administrative purposes. For the SPEC system, the following reports are required:

- Grant Application
- Quarterly Report
- Effectiveness Report
- Impact Report.

The Grant Application is the first report to be submitted. For evaluation, it must contain:

- detailed statement and description of problem with statistical evidence where possible
- outline of overall goals of project including how project relates to program objectives
- detailed statement and description of project's immediate objectives
- workplan of project whereby immediate objectives will be accomplished (including methods, organization, activities planned, dates, milestones, and deadlines)
- description of methods to collect evaluation information, including means by which success of project in meeting immediate objectives will be measured, what data will be collected (see evaluation components), and how data will be collected.

The path of the Grant Application through the evaluation process is indicated in Figure 2.2.

Upon award of the sub-grant, a reporting package is delivered to the project director. This reporting package contains the Quarterly Report, Effectiveness Report, and Impact Report according to the nature and duration of the project. The path of these reports through the evaluation process is indicated in Figure 2.3.

The Quarterly Report is submitted on fiscal quarters, and contains, for evaluation, the following information:

- a report on milestones and deadlines achieved, including explanations of any delays
- a report on methods, organization, and activities developed to date
- a discussion of problems encountered in implementing project activities
- a report of itemized expenditures to date
- an explanation of changes or deviations from the project workplan as submitted in the grant application form, including changes in immediate objectives or changes in methods, organization, or activities.

The Effectiveness Report is submitted toward the end of the grant period (normally with the third Quarterly Report), and contains the following information:

- a report on the extent to which the project succeeded in meeting its immediate objectives
- all information requested in the program information requirement with appropriate forms
- a report on influences outside the project that might account for the positive or negative results.

The Impact Report, when required, accompanies the Effectiveness Report and includes the following information:

- a report of notable consequences of the project on other agencies of the criminal justice system
- a report of difficulties with criminal justice or community administration

Figure 2.2 Grant Application Process Relevant to Evaluation

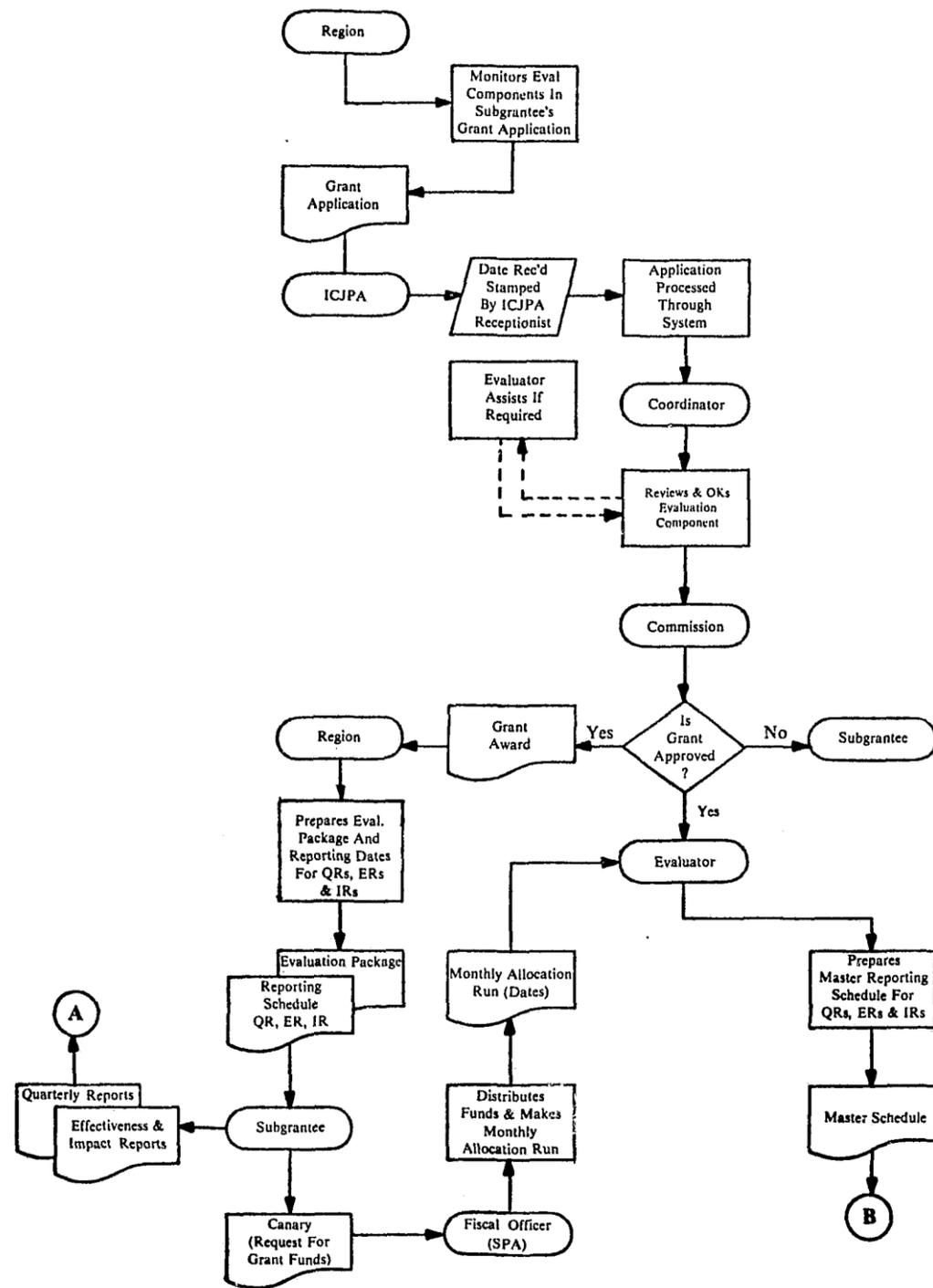
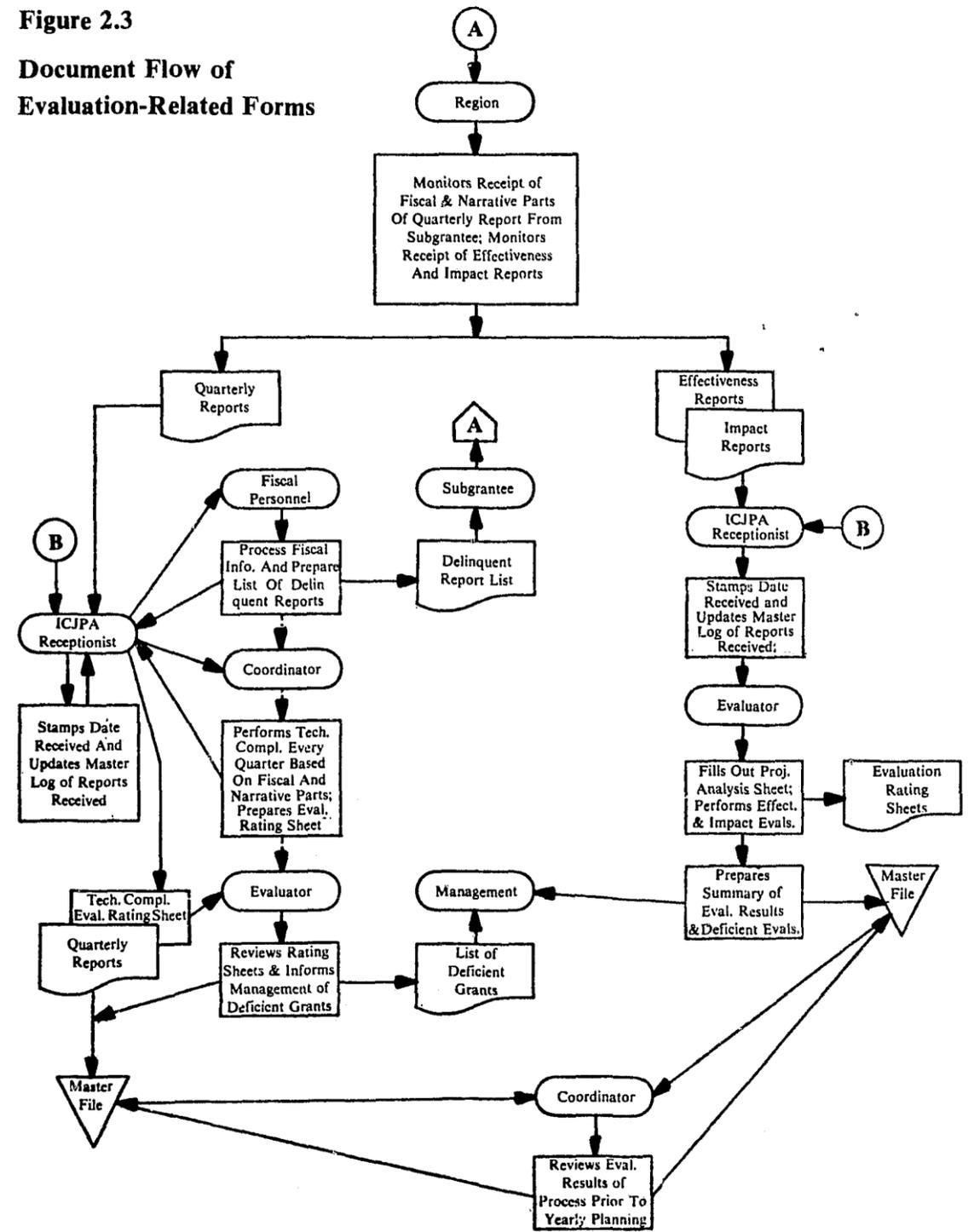


Figure 2.3 Document Flow of Evaluation-Related Forms



- a report of community reactions to the project [positive or negative]
- a report on the size of the project compared to the size of the problem in the target community
- a report on the willingness and ability of the community to support the project without Federal Assistance
- an indication of whether the project could be applied to other communities
- a report on whether the Project (A) developed new law enforcement resources or whether it (B) used existing resources (if A, the extent of new resources; if B, did the project reduce other activities).

The analysis of the evaluation data is performed by both program coordinators and the evaluative staff. On the basis of the Grant Application and Quarterly Reports, the program coordinator assigns each project in his domain a quarterly technical compliance rating.

Evaluators, on the basis of the Grant Application, Quarterly Reports, and the Effectiveness Report, perform a program specific evaluation to compare all projects within a program, and assign an Effectiveness Rating to compare whole programs or groups of unlike projects.

Finally, on the basis of required Impact Reports, evaluators assign an impact rating to compare programs and other groups of unlike projects.

The production of planning input reports is performed on the basis of the above-mentioned analyses. By examining the program specific analyses, coordinators may determine which projects within their program perform best. Evaluators may compare whole programs and program areas to determine the relative level of effectiveness and impact each achieved. Similarly, regional reports may be produced comparing the relative effectiveness and impact of regional projects. Finally, based upon project ratings, groups of projects may be compared according to the geographical or project type designator sought by planners.

The management of the SPEC system is generally the responsibility of the planning and evaluation staff, with support from other administrative units. Managing the SPEC system includes ensuring the complete and timely issue of all data requirements, as well as the complete and timely submission of all project reports. The advantages of computer facilities for the management and storage of such a volume of data are evident. A central file system for the filing and control of the raw data is essential.

### Summary

SPEC system is a comprehensive, integrated system designed to provide the necessary evaluative feedback to SPA and RPU planners and managers. It accomplishes this objective through specified data reported by projects using a comprehensive reporting system integrated with other managerial reporting requirements. The complete interfacing of evaluation activities with the Grant Application Phase, the Grant Management Phase, and the Planning Phase of SPA operations is indicated in Figures 2.4A, 2.4B, and 2.4C below.

#### 2.1.1 Systems Functions

The SPEC system is designed to collect relatively specified and standardized information from all criminal justice projects. This information is reduced and analyzed by the SPA

Figure 2.4A Grant Application Phase

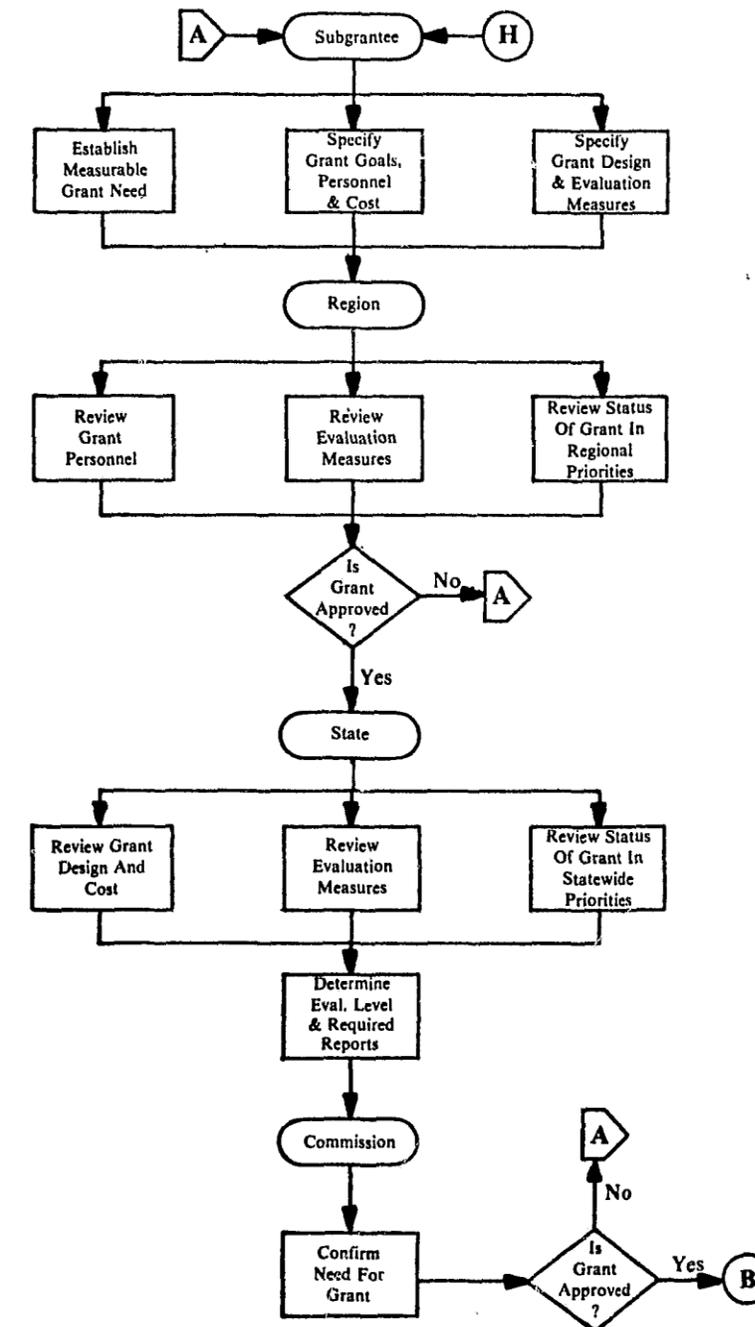


Figure 2.4B Grant Management Phase

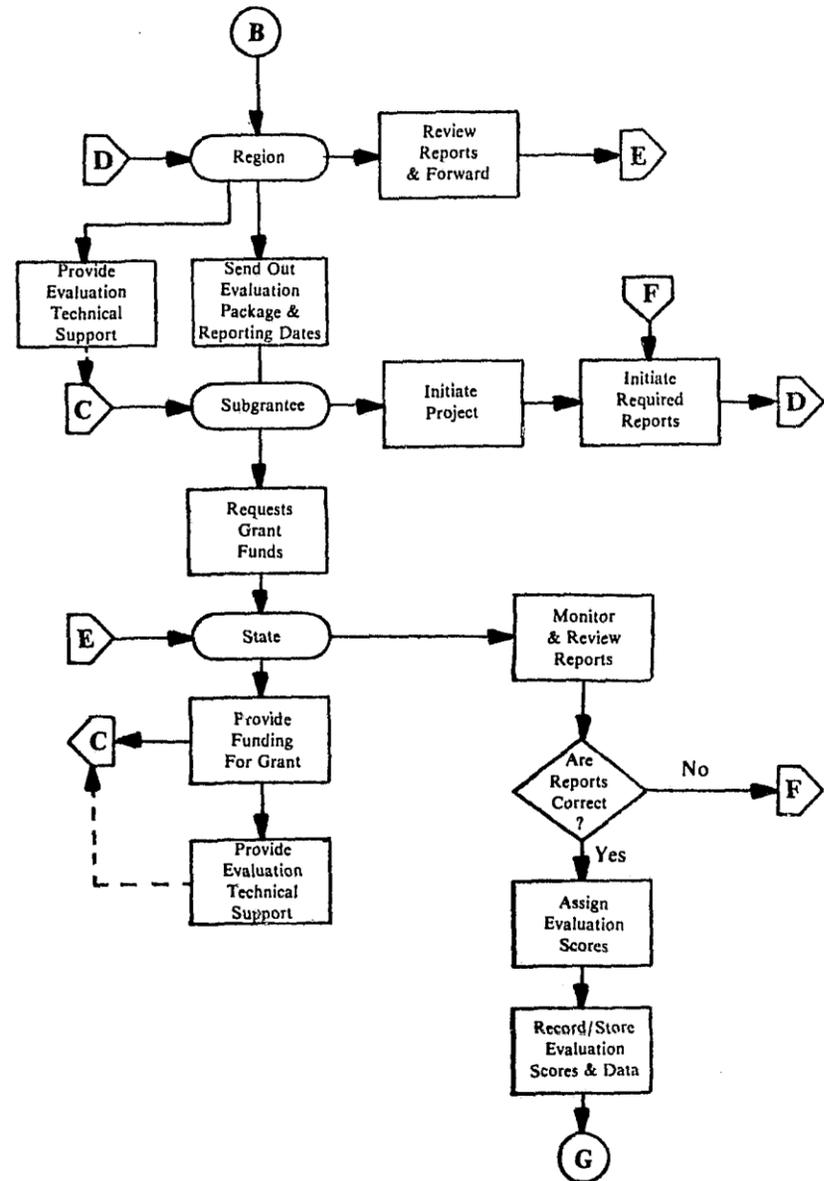
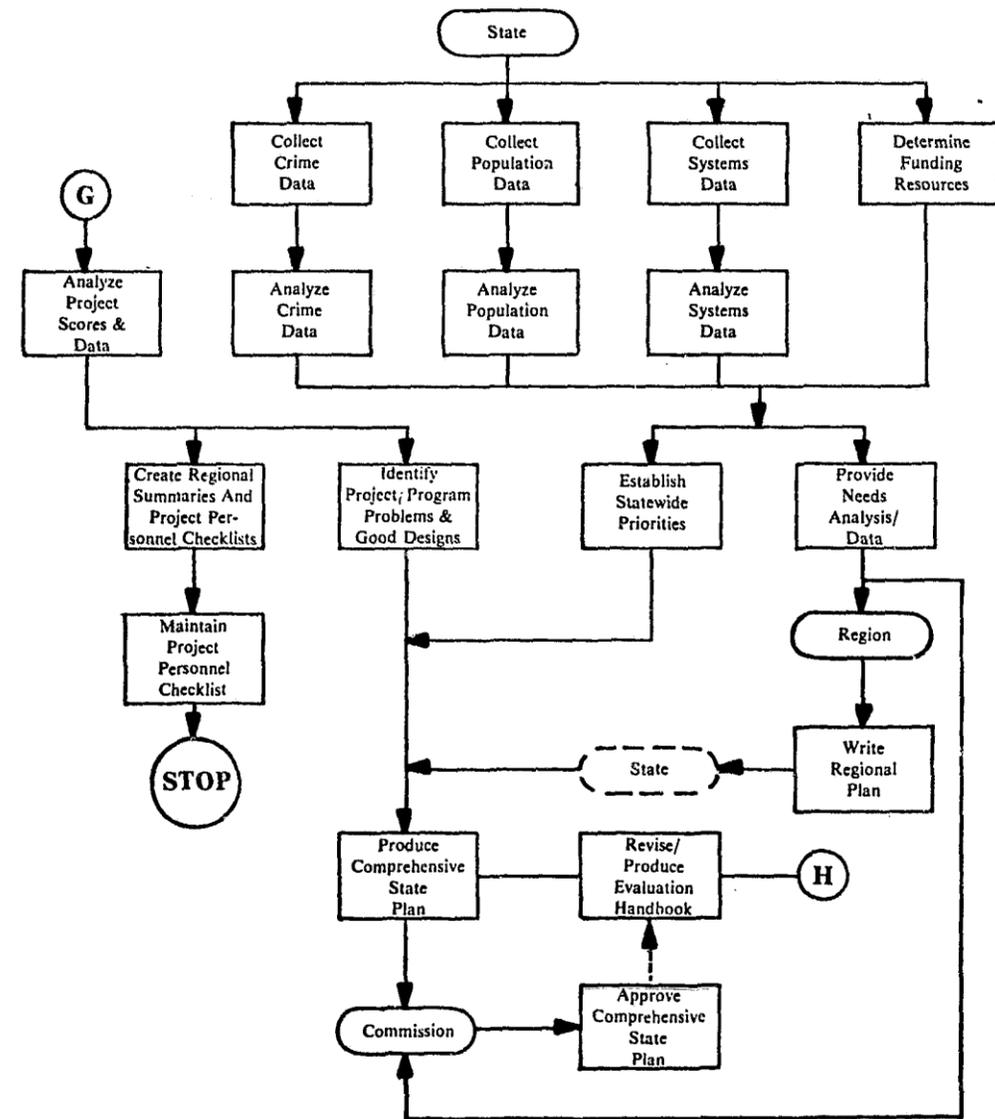


Figure 2.4C Planning Phase



evaluation staff, and filed in a growing bank of project and program evaluation data. This bank provides the basis for evaluation reports, which serve as planning and management inputs. The SPEC system involves three primary functions:

- collect data
- reduce and analyze data
- produce evaluation reports.

*The data collection function* is vital in the SPEC system. The extent of data analysis and the quality of resulting evaluation reports depends almost entirely upon the quantity and quality of project data inputs. To ensure the receipt of complete, adequate project data and the greatest feasible conformity with scientific principles of evaluation, the SPEC system provides minimum data requirements for all programs and projects. These data requirements contain both subjective and objective measures. In addition to being specified in advance, the requirements are standardized in content and format wherever possible. Such standardization reduces the forms required to operate the system, while increasing the ability to compare common features of similar and even dissimilar projects. In providing specific and standardized minimum evaluation data requirements, the SPEC system assumes that every project funded by the SPA conforms to an SPA objective stated in the Comprehensive State Plan. Each project may reasonably be expected to provide documented evidence of the extent to which it attained or moved toward attaining this objective.

*The data reduction and analysis function* of the SPEC system, similar to the data collection effort, is specified and standardized wherever possible. Since data collection from projects includes both subjective information from project and related personnel, and objective data regarding project activities and accomplishments, the data analysis function is two-fold. The first phase of data analysis is data based and program specific. That is, the first data analysis phase is a reduction and recording of program specific quantitative data. This analysis permits quantitative comparisons of the activities and accomplishments of similar projects. The second phase of data analysis involves a series of ratings for each project based upon both quantified and subjective data. This analysis permits comparison of the relative merits of unlike projects and programs. The results of both phases of analysis are designed for coding, keypunching, and storage in computer facilities.\* Such computer storage facilitates rapid data manipulations and comparisons across any number of geographic, programmatic, or crime specific designators. Moreover, computer facilities provide a permanent bank in which annual evaluation data may be stored for future specialized analysis.

*The evaluation report production function* of the SPEC system is tailored to the planning and management needs of the SPA. Three types of reports are envisioned: program reports, regional reports, and summary reports. Program reports may be prepared for each program of the state plan. These reports are intended to compare the activities and results of all projects within the program to identify the most successful and productive projects, as well as to determine the apparent reasons for success and possible improvement of future projects. Regional reports are intended to provide regional offices with evaluation ratings of all projects

\*While the SPEC system developed for the Indiana Criminal Justice Planning Agency does not include a computerized evaluation management information system, the SPEC system was designed for such capabilities. While SPEC can be operated manually, the advantages of computerization are evident.

in the region, as well as to identify noteworthy successes or problems with regional projects. Summary reports are intended to compare project ratings by program, so that relative program success may be determined by: (1) region, for relative regional success; and (2) other special geographic or crimes specific designation of interest to the planning and management staff.

In addition to these evaluation reports, other information regarding project performance or results may be generated for planners and managers by proper on-line computer operations.

### 2.1.2 System Operations

To perform the functions described above, the SPEC system requires five primary operations:

- design and revise data collection forms
- design and revise data analysis forms
- collect required project data
- monitor and log incoming project reports
- analyze project data.

In the event that SPEC system operation employs computer facilities, at least three additional operations will be required:

- coding of data
- keypunching of data
- programming for storage and manipulation of data.

*The design and revision of data collection forms* is an annual operation. As new programs are included in the annual state plan, it is necessary to create an appropriate and consistent list of data requirements for projects in that program.

As data collection efforts in the criminal justice system become more widespread and sophisticated, it may prove possible to increase the sophistication of program data requirements. This operation must be conducted in the annual planning phase so all evaluation requirements are identified prior to project funding.

*The design and revision of data analysis forms* must proceed simultaneous to the design or revision of data collection forms. As new program data requirements are developed, new analysis forms must also be developed to format and process the new information. This operation must occur in the annual planning phase.

*The collection of required project data* begins for each project with the statement of project design and objectives in the Grant Application Form. Changes in design or objectives, as well as project expenditures and noteworthy project problems, must be provided on Quarterly Reporting Forms submitted by project directors. Specific program data requirements regarding project effectiveness and impact must be supplied toward the completion of the project by project directors, with assistance from regional staff or special consultants.

*The monitoring and logging of all project reports* must occur at both the regional and SPA level to ensure the timely submission of complete and adequate reports from all projects. This operation is essential to control and account for the flow of forms and information.

*The analysis of project data* occurs on a quarterly basis and upon submission of effectiveness and impact reports. Three types of analysis are employed: technical compliance, effectiveness, and impact.

The technical compliance evaluation rating is issued quarterly on the basis of information submitted in the Quarterly Report. This analysis determines the extent to which the project complies with reporting requirements and the extent to which the project is managed in accordance with terms of the approved Grant Application.

An effectiveness analysis is performed on each project on the basis of the effectiveness report submitted by the project. Where appropriate, program specific data is recorded and reviewed. An effectiveness rating is then issued according to demonstrated results of the project. This analysis determines the extent to which the project was effective in meeting its stated objectives.

An impact analysis is performed on projects in excess of \$5,000 federal funding on the basis of the impact report submitted by the project. An impact rating is then issued according to type of impact the project had on its environment. This analysis determines the extent to which the project affected the problem, its community, and other facets of the criminal justice system.

*The drafting of evaluation reports* occurs according to the planning schedule. Projects included in the evaluation reports should be only fully evaluated projects. Projects not completely evaluated at the time of the evaluation report may be given status reviews. A report on their complete evaluation results should be included in the next annual evaluation report.

In the event that computer facilities are employed, programming operations must occur in the initial planning phase as soon as all data requirements and analyses are identified. Coding and keypunching operations occur after the analysis operation. Other programming for data manipulation may then be necessary to provide desired output for the drafting of evaluation reports. Computer facilities may be employed for the monitoring and logging of incoming project reports.

### 2.1.3 System Requirements

There are three general requirements for the operation of the SPEC system:

- personnel
- facilities
- equipment.

*Personnel:* In addition to Program Coordinators, Regional Staff, Management Staff, and Fiscal Staff, the SPEC system requires a Planning and Evaluation Staff of two to three persons provided with

clerical support. These persons should possess skills in social science methodology, experimental design, and criminal justice. It may be necessary from time to time for the SPA to seek expert, specialized consultants in programs or projects of particular complexity or significance. A full-time file clerk is required for filing and accessing project records. In the event computer facilities are employed, there is a requirement for one part-time programmer, one full-time coder, and one part-time keypuncher.

*Facilities:* In addition to standard office space, the SPEC system requires a central file library storage and control of all project data. A central file prevents loss of forms and records, and ensures ready access to and accountability for all project files.

*Equipment:* In addition to standard office equipment, the SPEC system requires a calculator to aid the data analysis operation. In the event computer facilities are employed, a keypunch is required.

## 2.2 Technical Approach

This section describes the technical features of the SPEC system with respect to:

- project coverage
- evaluation emphasis
- evaluation content
- data collection methods
- data analysis methods.

*Project Coverage:* The SPEC system encompasses all projects funded through the SPA. The advantages of this approach are two-fold: (1) it avoids problems in sampling; and (2) it exceeds present LEAA guidelines. There are difficulties inherent in selecting a sample of criminal justice projects. For any sample to be useful, it must be representative of the entire population. The difficulties in achieving an adequate sample are sizable. When combined with the problems of criminal justice projects — project delays, terminations, etc. — they become nearly insurmountable. To be of real utility, a sample also must be large enough to be divided into representative subsamples of regions, programs, crime specific types, funding levels, etc. The sample size required for such detailed examination is so large that the only meaningful sample is a total one. Finally, there is the difficulty of selecting some projects for evaluation and not others, a procedure which may create ill feelings on the part of project directors, and invite undesirable efforts by project personnel or administrators to spare certain projects from the evaluation process. For these reasons, the SPEC system is designed to evaluate all criminal justice projects, with the conviction that such an approach is less troublesome and more fruitful than representative or arbitrary sampling.

Total sampling exceeding LEAA minimum guidelines presents the advantage that if evaluation requirements increase, as well they may, the SPEC system would require no major alteration.

*Evaluation Emphasis:* The emphasis of the SPEC system is on immediate project objectives rather than long range objectives. While the long range objective of all criminal justice projects is to reduce crime, it is unrealistic, in the present state of social science and law enforcement data, to establish a direct causal relationship between each criminal justice project and the subsequent level of crime. Furthermore, criminal justice projects vary widely in size, scope, funding level, and nature. It would be unfeasible to take these variables and the social variables in the project environment into account. Therefore, the SPEC system is designed to measure the effectiveness of projects in meeting their immediate objectives — whether those objectives are systems maintenance or crime corrective.

*Evaluation Content:* The SPEC system is designed to adhere to the principles of scientific evaluation. Consequently, the content of the evaluation stresses objective, quantitative data wherever possible. In many cases, objective quantitative data is impracticable. Therefore, a controlled form of subjective data is sought.

With similar concern for scientific procedures, the content of SPEC program data requirements is standardized as much as possible. Such standardization, apart from simplifying problems of forms control, yields a considerable degree of comparability even among unlike programs.

In most program data requirements, specific baseline data is required against which project accomplishments may be measured. In a few programs, control groups are required to establish the effects of treatment.

Throughout the data requirements, every effort is made to approach scientific validity.

*Data Collection Methods:* The SPEC system relies largely upon project directors to provide required data to the SPA through the regional offices. There are four main advantages to this procedure. First, project directors are in the best and most cost effective position to collect baseline and on-going data throughout the life of the project. Second, project directors benefit directly from the data collection activity, as the kind of data required for evaluation is also extremely useful in managing and directing a project. Third, project directors, by becoming involved in the evaluation process, are likely to view evaluation with less alarm. Fourth, by reviewing project reports for quality and completeness, regional staffs gain a greater knowledge of project activities in their administrative area.

*Data Analysis Methods:* The SPEC system is designed to place all data analysis activities in the SPA. The advantage is that all information is analyzed in the same manner and all data is centrally stored. Because the analysis of project data is the point at which actual evaluation occurs, such a procedure enhances objectivity and comparability.

### **2.3 Managerial Approach**

This section describes the managerial features of the SPEC system with respect to:

- centralization of operations
- cost effectiveness.

*Centralization of Operations:* Apart from data collection and reporting, the SPEC system is designed to centralize all evaluation activities in the SPA offices. There are a number of advantages to this procedure. Since evaluation serves as an input to planning, and final planning occurs in the SPA, it is desirable to centralize evaluation in the same location.

Centralization lends itself to consistency in all evaluation procedures as well as to a single standard for quality control. Much of the data required for evaluation is reported on forms already required in the planning and management functions of the SPA. Centralizing evaluation thus reduces redundant paperflow. Finally, with the use of computer facilities, a central data processing unit would require a centralized evaluation effort.

*Cost Effectiveness:* Although the SPEC system is designed to emphasize scientific procedures and evaluation principles, it is also designed to be cost effective. Because a thorough and scientific analysis of all projects would be extremely costly and time-consuming, the SPEC system includes three levels of evaluation effort. Projects funded with \$5,000 or less of federal monies are required to submit, in addition to the Grant Application and Quarterly Reports, only a simplified Effectiveness Report. Projects funded in the range of \$5,000 to \$25,000 are required to submit the Grant Application, the Quarterly Reports, an Effectiveness Report (including program data requirements), and an Impact Report. Projects funded in excess of \$25,000 are required to submit the Grant Application, the Quarterly Reports, an Effectiveness Report (including minimum program data requirements and any other evaluation data supplied by expert consultants), and an Impact Report.

By distinguishing levels of evaluation effort according to the cost of the project, the SPEC system provides a cost effective, yet scientific and comparable means of evaluating all projects.