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ETIP?

# Evaluation System Proposal Preparation and Evaluation Procedure

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Charles W. N. Thompson

Office of Experimental Technology Incentives Program  
National Bureau of Standards  
Washington, D. C. 20234

Final Report  
February 1976

Prepared by  
Experimental Technology Incentives Program  
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## I. INTRODUCTION

The objective of the research which culminated in this set of documents was to develop a process for the procurement of two evaluation systems. Within the context of applicable procurement regulations and program plans, the set provides a complete and integrated framework for both the preparation of proposals by prospective bidders and the evaluation of proposals by the evaluation team.

The document entitled Proposal Preparation Procedure provides both an overall description of the process and specific guidance to prospective bidders. All of the salient or significant characteristics of the system to be procured, the program under which it will be developed, and supporting elements are included in a set of elements called sub-factors which are grouped, for convenience, into a set of factors. Each of the key documents--the Statement of Work, Schedule, Scope of Effort, and Evaluation Factors--follows a parallel organization of the set of sub-factors. It is this integration of all of the central documents which provides both proposer and evaluator with a single, common structure.

The initiation of the development of this process arose out of the recognition that the "evaluation systems" to be procured required the services of a systems contractor and that it appeared that neither ETIP nor the "evaluation industry" had any significant present capability to design or manage such a system. A review of available proposal preparation and evaluation procedures suggested that some further development was required.

The process described herein was used to procure the two systems, and, as of the initial getting started period under the two contracts, appears to have worked out reasonably well in terms of our confidence that we have chosen not only the best but also reasonably competent contractors.

While this set of documents was specifically designed for the procurement of these two evaluation systems, the process, with modifications in the set of sub-factors, is applicable to comparable systems problems involving complex or uncertain requirements. One of the purposes of this report is to make these documents available on the basis that others may be interested in further applications.



Introductory Notes

The purpose of these two proposed procurements is to obtain contractor assistance in planning, designing, and carrying out the evaluation of a series of procurement experiments which are being undertaken by ETIP in cooperation with several governmental procurement agencies.

The set of objectives of the evaluation program includes the following:

- a. an overall description of the experiments as well as selected detailed descriptions
- b. an overall assessment of both the immediate and the subsequent effects (impacts) of the experiments, as well as selected detailed assessments
- c. An evaluation system or process which can be used by the appropriate government agency(ies) to obtain evaluations on a continuing basis of these as well as future, similar experiments.

There are a number of choices which could be made in obtaining contractor assistance, ranging from a single overall contractor to individual contractors for each experiment, or combinations in between. The choice which has been made is to divide the overall evaluation program into two procurements, as follows:

- a. an evaluation of "agency impact" which will direct its attention to a description of the experiments, an assessment of the effects on the several government agencies, and the design of the related evaluation system. "Agency impact" includes both immediate and subsequent effects on the program administrative agency but also other affected or related government agencies
- b. an evaluation of "commercial impact" which will direct its attention to the immediate and subsequent effects upon the commercial (or industrial) sector, and, as appropriate, consumers or users of the products, and the design of the related evaluation system.

The set of "experiments" includes the following:

- a. specific procurement experiments - including "completed," on-going, and planned
- b. specific related or supportive experiments - including procedures for selecting experiments, training of agency personnel, processes for obtaining from or providing to the industrial sector information required for carrying out procurement experiments, and other administrative changes
- c. general "experimental" changes - related to or in support of the above.

The set of experiments may be conveniently grouped into broad categories according to these dimensions:

- a. by program administrative agency - (1) Federal Supply Services (FSS); (2) state and local procurement agencies (S&L); and (3) Veterans Administration (VA)
- b. by type of procurement experiment (1) life cycle costing (LCC); (2) value incentive contracting (VIC); (3) performance specifications; (4) multi-year awards; etc.
- c. by the kind of effect intended - (1) economic or performance advantage to the using government agency; (2) related or derivative improvement in procurement capabilities of the program administrative agency; (3) increased or improved technological innovation in the industrial sector; and (4) economic or performance advantage to civilian sector users.

To obtain the evaluation desired we propose to let two contracts, each for a three-year period, divided into three phases, as follows:

Phase One - to include, generally, three activities

- (a) preliminary systems analysis
- (b) evaluation of specific, selected procurement or other experiments
- (c) design and pilot test of the related evaluation system

Phase Two - to include, generally:

- (a) refinement of (a) above
- (b) evaluation of additional specific procurement or other experiments
- (c) refinement and prototype test of the related evaluation system

Phase Three - to include, generally, "turn key" implementation of the related evaluation system by the appropriate government agency

The complete procurement package has been designed to assure the fullest possible interchange of information between prospective bidders and those responsible for the evaluation of proposals. Because of this it will be necessary to examine the complete set; particular attention is directed to the fact that the Statement of Work and the Schedule must be read in conjunction with the accompanying documents.



Some Definitions

Note: In most cases, the context, or reference to other parts of the bid set and associated documents, should resolve ambiguities or otherwise clarify definitions of terms. These "definitions" are provided as a convenience in reference.

ETIP - Refers to the Experimental Technology Incentives Program. In context, the reference may be to the objectives or content of the program, to the office or organization itself (e.g., as contracting agency), or to individual staff members.

PAA - Refers to the Program Administrative Agency (or Agencies). There are, for these procurements (agency impact and commercial impact), three PAA, as follows: 1) Federal Supply Service (FSS); 2) state and local procurement agencies (S&L); 3) Veterans' Administration (VA). In context, the reference will usually be to the specific procurement office(s) and/or responsible personnel in the agency which have the direct authority and/or responsibility for the decision to introduce the specific experimental intervention and, usually, for the conduct of the program and/or function to which the experimental condition is applied. For FSS, this may include both central and regional procurement functions or offices. For S&L, this may include NASPO, NIGP, and/or specific state and local procurement agencies. For VA this may include both central and regional or local procurement agencies.

AGENCY IMPACT - Refers to effects or impacts on or in the PAA and, where applicable, closely related governmental agencies, and, particularly, agencies which are the users of the products procured. These impacts or effects include not only those which are the specific objectives of a specific or general experiment, but also significant other effects, such as changes in administrative policies and procedures.

COMMERCIAL IMPACT - Refers to effects upon the commercial sector and/or civilian sector users. These impacts or effects include not only those which are the specific objectives of a specific or general experiment, but also significant other effects, such as increased or earlier use of new technology.

EXPERIMENT - Refers, generically, to any combination of intervention and desired (or hypothesized) effect. In a complex of interventions and effects, there may be a number of "experiments," including experiments which are combinations of other experiments, and experiments where the effect of one is the intervention of another.

SPECIFIC EXPERIMENT - Refers, usually, to a specific, identified intervention and desired (or hypothesized) effect. The major, and most significant, cases are the specific procurement experiments (e.g., use of LCC to procure air conditioners). There may be other (related) specific experiments (e.g., the FSS training program).

VARIABLE - Refers, generically, to any object, event, state, value, function, etc. In the context of a specific experiment (or study), the independent variable is, usually, the intervention, and the dependent variable the desired (or hypothesized) effect.

PARAMETER - Refers to those variables which, whether controllable (directly or indirectly) or not, affect (or are hypothesized to affect) plausibly and/or significantly the interpretability and/or credibility of the observed (or hypothesized) relationship between the variables in a specific experiment.

A PRIORI PROPOSITION TESTING - Refers to those specific experiments for which one of, if not the primary, purposes is to establish, with a relatively high degree of credibility, the relationship between the intervention and the effect observed. In practice, this will be largely limited to relatively well defined interventions and proximal effects, and where reasonable control of parameters can be achieved.

EXPLORATORY (AND/OR DESCRIPTIVE) - Refers to experiments (and/or studies) where it is either not feasible or not required to meet the requirements of a priori proposition testing. In practice, this will apply to requirements to describe and/or measure sets of variables where either the description is sufficient itself or provides a basis for identifying hypotheses, variables, and/or parameters.

EVALUATION SYSTEM - Refers to the set of policies and procedures which provides the basis for evaluating the (agency and/or commercial) impacts of a set of specific procurement or related experiments. The form, detail and completeness of the system will progressively change. In Phase One, it may begin as a preliminary outline within which detailed "single thread" designs are developed for the early evaluation of specific procurement experiments; later, the results of the preliminary systems analysis and the "pilot test" will provide the basis for a preliminary evaluation systems design. In Phase Two, progressive refinement should result in a relatively complete evaluation system which can be tested as a prototype, in part, through the evaluation of specific experiments. In Phase Three, the evaluation system should be in the form of a stable and complete system.

BASIC (OR BASE-LINE) EVALUATION PROCESS - Refers to that part of the evaluation system which includes those evaluation activities which deal with key, predictable, identifiable, continuing, common objectives for which the process can be institutionalized.

SPECIAL EVALUATION PROCESS - Refers to those evaluation activities which do not meet the above requirements because of specialized, one-time or changing objectives.

FRAMEWORK OR MODEL - Refers to graphical or other conceptual representation of the set of interrelations among objectives, organizations, experiments, and/or programs, and the evaluation system.





## PROPOSAL PREPARATION PROCEDURE

### A. Purpose

The purpose of this document is to provide a guide for bidders in the preparation of their proposals.

### B. Basis for Preparation of This Document

#### B.1 Historical Note

A wide variety of methods have been used for the procurement of the services of evaluation contractors, including the following: 1) adding evaluation as an express or implied requirement to the basic contract for the program or experiment; 2) contracting separately with a contractor or consultant for the evaluation; 3) obtaining an evaluation, usually post hoc, as part of the study phase of a contract for a new or different program. The description of the services desired may take many forms, including the following: 1) a brief, general requirement "to perform an evaluation"; 2) statements or descriptions of various lengths and with various degrees of detail and completeness which outline the objectives of the program and/or the specific questions to be answered; 3) relatively detailed and complete "specifications" of the services required, including instruments to be used, sampling plans, and the form of the analysis required. In some cases, and for some purposes, these methods provide a satisfactory base for defining the services required, which, in turn, may provide a satisfactory basis for determining the qualifications of prospective contractors.

None of the above appear appropriate as a basis for determining the qualifications of prospective contractors on this procurement. For this reason this document was prepared, using a "parametric factor analytic approach" which was developed for and used on a number of subsystem procurements by another agency of the government.

## B.2 Basis for Evaluation (of Bidders)

Generally, evaluation (including proposals) requires three things: first, a standard or base for comparing; second, information to be compared against the standard; and, third, an effective method for doing the comparing. These are discussed in the three paragraphs below.

B.2.1 The first requirement of the evaluation of competitive proposals is a standard or base for comparing, and this is, obviously "who can do the job best." but this is a matter of predicting because it is a future matter, and there is uncertainty in specifying the job. The choice of standard for selection includes:

- a. The whole program, either as it is or as it should be stated to obtain the selection base.
- b. The "significant independent variable" - if one part will determine, either by its absence or presence, the one bidder who can do it, then this is the basis.
- c. Some sample of parameters (variables or "factors") which on a presence or absence basis, or qualitative scale, is the determinant.

The choice is between b) and c) because of the inability to precisely define the skills and content of the future completely; and because agreement on b) presumes considerable confidence in past experience, the basis must be c). The development of c) is summarized in the paragraph below in terms of a brief statement of the program.

The nature of the item to be procured determines the program. The evaluation here is not limited to fully designed evaluations of specific experiments, nor is the alternative of a broad, overall descriptive case study sufficient. It is proposed to obtain not only preliminary systems study which will include both of the above, but also both kinds of evaluations; in subsequent phases, it is proposed to develop and test an ongoing capability to carry out such evaluations in such form and detail as will allow the government to implement subsequent phases. Direct description of such a program must necessarily be accomplished by selecting and tabulating the significant parts of the program; and these parts may then be further defined and amplified by supporting data. These parts, identified as "factors," are the bases for the establishment of the standard; and, in turn, the information to be furnished and the evaluation procedures.

B.2.2 The information to be compared against the standard is that furnished by, or about, the bidders. This requires cooperation, varying from a little to a lot. Too little occurs when the bidder's data is absent or cannot be translated into a common dimension or is irrelevant. Too much occurs when the bidder essentially repeats back the guidelines furnished. The problem of "too much" has not been experienced in prior evaluations, and those few cases of "parroting" were obvious. The concern is to assure that the bidder has thorough guidance in preparing the necessary information, and by this means the bidder will be aided in directing his efforts more efficiently.

B.2.3 Because of the large number of factors to be evaluated, the large volume of data to be considered, and the size of the evaluation team, the process needs to be well organized and supported with efficient and clear procedures. Forms and instructions must be prepared, and arrangements for scheduling meetings and for carrying out the evaluation have to be thought out in advance. A corollary benefit is an increase in the assurance of impartiality through avoidance of the confusion of setting rules and judging at the same time.

### B.3 Preparation

This document, and the associated statement of work, was prepared upon the above basis. As source material, procedures similar to this, as well as a number of other evaluation procedures, were reviewed.

## C. General Comments on Proposal Evaluation Procedure

To provide bidders with a general background and perspective, a brief outline of the overall procedure is furnished below. (It should be noted that these comments are intended only as a general description, and some changes may be made.)

### C.1 Preparation for Proposal Evaluation

C.1.1 To assure continuity, personnel responsible for setting up and administering the program for which proposals are being solicited, will conduct the proposal evaluation, with the advice and assistance of others who are less directly concerned. Direct management responsibility is centered in ETIP in the Contracting Officer's Technical Representative (COTR). He, together with other members of the ETIP staff, will be working closely with key members of the staff of the program administrative agency in the type of close relationship which is characteristic of "administrative experimentation." As a minimum, it is intended that at least two members of the proposal evaluation team will be assigned primary responsibility for each subfactor, with backup assistance in review by other team members. These evaluation team members are responsible for preparing and/or reviewing the bases for the evaluation and for briefing the bidders.

C.1.2 The results of the preparation are incorporated, primarily, in the RFP. In addition to the Form 33 and accompanying provisions, the RFP includes a series of related documents prepared for the primary purpose of furnishing a base for the preparation of proposals. The necessary clarification and revision to provide a contractual basis will be accomplished by negotiation with the selected contractor. Briefly, these documents are grouped as follows:

Statement of Work - tabulates the significant parts of the program with clarification limited primarily to a brief summary. This will include those separately identifiable "deliverables" and a schedule.

Proposal Preparation Procedure (this document) - provides an explanation of the basis for proposal preparation.

Proposal Evaluation Factors - provides the basis for proposal preparation.

Scope of Effort - cost proposal requirements

Other Documents - development plans, reports, references etc., to assist the bidders in preparing their proposals.

C.1.2.1 To the extent possible, all of these documents follow the same order. The Statement of Work includes items of required work divided into three phases. The Proposal Preparation Procedure is designed to match the organization of the Statement of Work. It is intended to provide, where necessary, cross-reference to the other documents.

C.1.2.2 To assure that all bidders have complete sets of the related documents, and especially those included under "Others" which may be furnished at the briefing, a complete index of all documents will also be furnished during the briefings, as required.

C.1.3 It is planned to brief the bidders twice. At the initial briefing, a summary presentation on the program will be given, including a presentation by the program administrative agency on the administrative objectives for the program. (To assure the continuity specified above, representatives of the program administrative agency will participate in the evaluation.) Following the presentation, an extensive question period will be scheduled. The second briefing will follow a few weeks later after the bidders have had an opportunity to study the program; this is primarily to allow for further questioning by the bidders to correct oversights and resolve ambiguities. No information will be available during the proposal preparation period on an individual basis.

## C.2 Proposed Evaluation Procedure

C.2.1 After receipt of the written proposals, the proposal evaluation team will have a period of a few days to familiarize themselves generally with the proposals; and, specifically, the parts within their responsibility. This is primarily to furnish a basis for the next stage.

C.2.2 According to a schedule to be established at the second of the two briefings noted above, each bidder will be invited to make an oral presentation, approximately one hour in length, following which the evaluation team will have two to four hours for questioning. Purpose of the questioning is to assure that the evaluation team understands the proposals, and has an adequate basis for evaluation on each sub-factor. Both weak and strong points will be explored, and check lists will be recorded to assure that team members may have available to them both the written and oral presentations.

C.2.3 Following the above will come a further period of review, during which individual team members will complete their individual evaluations of sub-factors for which they are responsible or concerned. These individual evaluations will be noted with the assistance of a check list based on a value rating scale to avoid the confusion caused by numerical rating.

C.2.4 Members of the proposal evaluation team concerned with each factor will meet and perform a joint evaluation. They will follow an established procedure entitled, "Factor Team Guidelines," to assure an orderly and efficient process. Briefly, they will first compare notes informally to assure common standards and information; second, they will arrange the bidders in descending order; third, they will establish the relative spread among the bidders; and, finally, their result will be permanently recorded and signed by all team members present. This record becomes part of the permanent evaluation files. Generally, they will rate on each sub-factor, as applicable, three central points:

- a. Comprehension or understanding of the problem presented
- b. Proposed approach (or, in the alternative, the means for establishing the approach)
- c. Present or potential capability to accomplish this

Evaluation team members may use information obtained from the RFP and associated documents, the bidders' written and oral proposals and independent or prior information. However, in the latter case, any significant or critical information must be considered by all members of the factor team. Emphasis will be placed on the sub-factor being rated, but the impact of other factors will not be ignored. Comparative weighting of individual sub-factors and the weight of each factor team members' views will be within the responsibility of the factor team.

C.2.5 The results of the factor team evaluations will be summarized and reviewed.

C.2.5.1 The summary process will include the necessary combining of the individual factor ratings to achieve an overall rating, with consideration of the interaction of factors, their individual significance (acceptability), and the "summation" according to previously established weights.

C.2.5.2 In general, the range of weights among the factors will be no more than 2:1.

C.2.5.3 The review process will necessarily provide for latitude in reflecting the results of the review, such as reassessing of weights or reexamination of specific areas of the evaluation; and, such changes will be incorporated, with the supporting basis in the record of the evaluation.

### C.3 Comment on Factor and Sub-factor Structure

All of the factors in the evaluation are set out in the Proposal Evaluation Factors documents, and are largely self-explanatory. The rationale of this particular organization of the sample is based, primarily, on the sub-factors, the factors being administrative groupings for convenience in organization of the various documents and the evaluation. Generally, the factor/sub-factor organization is based on significant identifiable effort/capability areas. The intent is to select comprehensive exclusive/inclusive samples of the total program. In total, the factor/sub-factors are intended to include samples of all significant parts of the program. An effort has been made to minimize duplication; and, with a few intentional exceptions, no sub-factor samples an area covered by another factor. Similarly, with certain intentional exceptions, each sub-factor samples on the basis of understanding, approach, and capability; as a result, those aspects, which include "effective experience," are incorporated into specific substantive areas rather than amorphous generalized categories. It is important to understand that the distinction among the factors is primarily an administrative distinction to reflect the differences in perspective required in presentation and evaluation.

## D. Use of this Document

### D.1 General Considerations

D.1.1 As noted above, the Proposal Evaluation Factors document covers all of the factors to be considered in the evaluation and are intended to provide a substantially complete framework for the preparation of the proposal. Because the background and perspective against which they were prepared is set out in this part, the other related documents, and the briefings for the bidders, it is extremely important that this interpolation be understood and preserved during the preparation period by assuring that substantive contributors have sufficient access to the overall framework. As a general guide, cross reference should be made to the applicable points included in the document on Scope of Effort.

### D.2 Content Considerations

D.2.1 Because the evaluation is organized on a factor/sub-factor basis, it is important that the treatment of each factor be substantially complete as possible. The several factors are necessarily interrelated and interacting, but repetition is not required; however, where significant material considered necessary to assure understanding of a factor is contained in another factor, specific (and annotated) cross-references should be furnished. All members of the evaluation team will have access to the complete proposal, and it is expected that certain factors will be reviewed jointly.

D.2.2 Each factor and sub-factor is defined by a specific descriptive sentence setting out the standard against which each bidder will be measured. Because the factor statements reflect the fact that the factor is primarily an administrative convenience, no specific presentation with regard to the overall factor is required. Each sub-factor, however, will be the subject of a specific rating, and the proposal content should reflect the necessity for furnishing the evaluation team with sufficient information to establish a comparative position on each sub-factor. THE BASIC ORGANIZATION OF THE PROPOSAL MUST BE ON A SUB-FACTOR BASIS.



D.2.2.1 It should be specifically noted that the sub-paragraphs under each sub-factor are provided for the purpose of amplifying and defining the standard, that is, to present the types of questions which need to be answered to establish the rating on the sub-factor. It is not required to answer each and all of these subsidiary questions. Nor is it required that the presentation be limited to these particular subsidiary questions. In some cases, a subsidiary question will be a critical determinant; in other cases, an effective presentation may be accomplished by partial treatment. It was not intended to specify the proposal content through these subsidiary questions.

D.2.2.2 These subsidiary questions are presented in three forms. One form is that of a question, such as, "Do you consider the proposed schedule realistic? too tight? If not, what do you propose and why?" The second general form is that of a statement calling for comment or the furnishing of certain information, such as, "Testing facilities (floor space, equipment, personnel)." The third general form is that of a statement commenting on a problem area or outlining a proposed solution which furnishes a basis for comment, such as, "The Advisory Committee may raise a technical question which requires investigation in order to allow the committee to make a decision at the next meeting. The contractor will furnish the necessary personnel to develop each of the conflicting points of view independently."

D.2.2.3 As noted elsewhere, the relative weighting, or significance, of each sub-factor within a factor is within discretion of the factor team performing that part of the evaluation. In most cases, the sub-factors represent approximately equivalent areas of significance. The amount of subsidiary questions furnished does not necessarily reflect an unusually high or low weight.

D.2.3 Latitude is encouraged in the treatment of the content presented with respect to the sub-factors. Where alternate assumptions or conclusions to clarify ambiguities or fully establish the position is considered advisable, no arbitrary limitation is imposed. The substantive objective is to provide information as a basis for evaluation, and this procedure is intended only as a minimum framework to increase the efficiency and effectiveness of the proposing and evaluating process.

### D.3 Physical Considerations

D.3.1 Primary concern with regard to the physical format and organization should be to facilitate the work of the evaluation team, recognizing the circumstances and procedures which will be used.

D.3.2 It is suggested that the proposal use the same major numerical and subject headings of the Proposal Evaluation Factors document to avoid the confusion of an additional numbering system. This should be extended only to the factors and sub-factors, and no requirement to follow the numerical order of the subsidiary questions within a sub-factor is intended. Where it is considered desirable to include additional material within the framework of Sections I through VII, an expanded numbering sequence should be used, i.e., to include material after I.1, but before I.1.1, use a new number, I.1.0, with subsidiary numbers, I.1.0.1, I.1.0.2, etc.

D.3.3 To facilitate the physical handling of the proposal, certain physical divisions are requested.

D.3.3.1 Physically bulky material, such as extensive personnel or facility brochures, or supporting descriptive documents furnished in amplification, should be treated as physically separate appendices, with suitable identification. In this regard, where material which has been prepared in another connection is furnished, a suitable cover sheet noting limitations of application may be used to avoid extensive revision and republication.

D.3.4 Provision should be made for sufficient indexing and cross-reference summaries to facilitate reference to particular parts of the proposal. Unless considered desirable, pagination need not be accomplished. It is recommended that covers of separate documents contain clear reference to the numerical and subject heading.

REVISIONS TO PROPOSAL PREPARATION PROCEDURES

A. Page 5. . Delete C.2.2, and substitute the following:

C.2.2 Where factor team members require specific additional information for their evaluation, specific written questions will be directed to the specific proposer through the contracting officer.

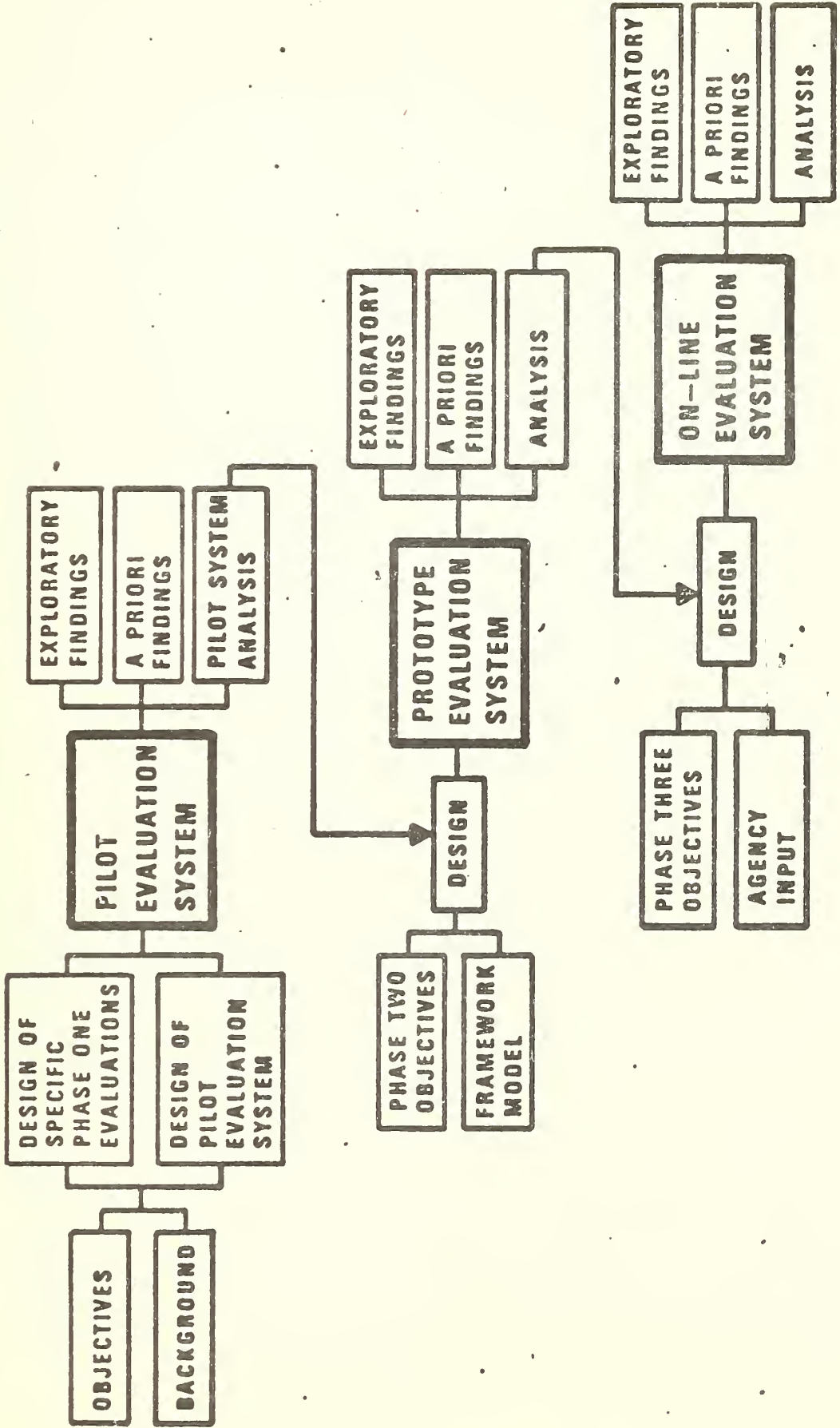
B. Page 6, C.2.3, lines 6 and 7. Place period (.) after "scales," and delete the remaining material.

C. Page 6, C.2.4, lines 24 to 27. Delete "Comparative weighting" and add "Comparisons," and delete "weight" and add "efforts."



# EVALUATION SYSTEM DESIGN PROCESS

(INCLUDING RELATION TO EVALUATIONS OF SPECIFIC EXPERIMENTS)





Statement of Work

Note: The items listed below provide a categorized summary of the services and materials required on this program.

Phase One: Planning and Design, and preliminary evaluation.

- Item 1. Plan, organize, staff, direct, and control, including both schedule and costs.
- Item 2. Provide reports, liaison, and services for purposes of review, coordination, and approvals and acceptances, including the following:
- a. Periodic and special formal and informal management progress reports, final report.
  - b. Periodic and final scheduling reports, including projected schedule for the next phase.
  - c. Periodic and final cost reports, including projected costs for the next phase.
  - d. Periodic and special formal and informal technical progress reports and final report, including proposed program for the next phase. (Note: the substantive work to be reported here is to be performed under items 3 through 7).
- Item 3. Review and structure the proposed objectives in terms of the experimental setting and related background, and establish an overall plan and set of priorities.
- Item 4. Review and structure the proposed set of experiments, and related background in terms of the proposed objectives, and provide a reference base.
- Item 5. Develop the detailed evaluation requirements (problem definition and experimental or study design), in relation to collection and analysis.
- Item 6. Develop the detailed data collection process, including instruments, identification of, and access to, sources, and managing the process; and collect the data.

Item 7: Develop the detailed data analysis process; carry out the analyses; present findings; present recommendations.

Phase Two: Prototype Evaluation Process Testing

Item 8. Same as Item 1.

Item 9. Same as Item 2, but change reference to Items 10 through 14.

Item 10. Refine and revise the work accomplished under Item 3, as related to the further objective of designing and testing a prototype of the complete evaluation process.

Item 11. Refine and revise the work accomplished under Item 4, as related to the further objective of preparing a formal framework within which the objectives, organizations, and programs may be related to the evaluation process.

Item 12. Refine and revise the work accomplished under Item 5, as related to the further objective to achieve a comprehensive, detailed design to meet both basic data (base line data) and special data requirements.

Item 13. Refine and revise the work accomplished under Item 6, as related to the further objective of collecting both basic and special data.

Item 14. Refine and revise the work accomplished under Item 7, as related to the analysis of both basic and special data; and provide findings and recommendations.

Phase Three: On-line/Turnkey Evaluation

Items 15

thru 21. Revision and refinement of respective prior items in relation to the additional objective of an on-line turnkey evaluation process.



STATEMENT OF WORK  
(with illustrative sub-items for Phase One)

Note: The items listed below provide a categorized summary of the services and materials required on this program.

Phase One Planning and Design, and Preliminary Evaluation

- Item 1. Plan, organize, staff, direct, and control, including both schedule and costs.
- a. Provide the necessary services and materials for management of the overall program, including a management plan.
  - b. Prepare a preliminary detailed schedule, and provide progressive analysis and rescheduling, including proposed schedule for Phase Two.
  - c. Prepare periodic cost analyses and projections, including proposed costs for Phase Two.

- Item 2. Provide reports, liaison, and services for purposes of review, coordination, and approvals and acceptances, including the following:

Provide services and materials necessary for liaison with ETIP, PAA, and relevant other individuals and organizations.

- a. Periodic and special formal and informal management progress reports, final report
  - a(1). Submit program management plan at or before completion of 3d month, and report modifications as required.
  - a(2). Submit final report at or before completion of 15th month.
- b. Periodic and final scheduling reports, including projected schedule for the next phase
  - b(1). Submit projected Phase One schedule at or before completion of 3rd month, and report modifications as required.
  - b(2). Submit projected Phase Two schedule at or before completion of 9th month.
  - b(3). Submit final report at or before completion of 15th month.
- c. Periodic and final cost reports, including projected costs for the next phase.
  - c(1). Submit projected Phase One costs at or before completion of 3rd month, and report modifications as required.
  - c(2). Submit final report at or before completion of 15th month.
- d. Periodic and special formal and informal technical progress reports, final report, including proposed program for the next phase. (Note: The substantive work to be reported here is to be performed under Items 3 through 7.)

Submit reports, including formal reports for the items in the following table on or before completion of the month(s) specified:

3a	3rd and 6th	6a	6th
b	3rd	b	-
c	6th	c	6th
d	9th	d	-
4a	3rd and 6th	7a	6th
b	6th and 12th	b	12th
5a	3rd and 6th	c	12th
b	6th	d	15th
c	6th	e	15th
d	12th		

- Item 3. Review and structure the proposed objectives in terms of the experimental setting and related background, and establish an overall plan and set of priorities.
- a. Review, through documents and interviews, the objectives of ETIP, PAA, and other relevant individuals and organizations, including professional standards of evaluation, and prepare a description and supporting analysis suitable for providing a basis for planning and setting of priorities for Phase One.
  - b. Based on the above, identify, and prepare preliminary recommendations and supporting detail requirements for, those specific evaluations which should be accomplished during Phase One, including both exploratory (and/or descriptive) evaluations and a priori proposition testing evaluations.
  - c. Based on the above, prepare preliminary statement of requirements for the pilot evaluation system in Phase One.
  - d. Based upon the above and the other activities in Phase One, prepare a preliminary statement of the requirements for the prototype evaluation system in Phase Two, together with supporting analysis.

Item 4. Review and structure the proposed set of experiments, and related background in terms of the proposed objectives, and provide a reference base.

- a. Review, through documents and interviews, the specific procurement experiments (past, present, and proposed), and the related programs and organizations\*, and prepare a description and supporting analysis suitable for planning the activities of Phase One in conjunction with the work in Item 3a.

\*(AGENCY IMPACT ONLY) With primary emphasis on PAA, and not on industry sector.

(COMMERCIAL IMPACT ONLY) With primary emphasis on industry sector, and not on PAA.

- b. Prepare a preliminary framework model which provides a base for synthesizing objectives, organization, programs, and the evaluation process (system), with supporting analysis.

- Item 5. Develop the detailed evaluation requirements (problem definition and experimental or study design), in relation to collection and analysis.
- a. Prepare a preliminary design of both exploratory (and/or descriptive) and a priori evaluations to be conducted during Phase One, including 1) statement of problem or hypothesis, 2) supporting theories, and 3) definitions of variables and parameters.
  - b. Based on the above, prepare a detailed design of each evaluation, with special emphasis on specific procurement experiments, including 1) choice of experimental design, 2) (where appropriate) sampling strategies, and 3) data collection and analysis methods.
  - c. Prepare a preliminary design of the pilot evaluation system in Phase One, including data collection and analysis.
  - d. Based on the above, prepare a preliminary design of the prototype evaluation system in Phase Two, including both basic and special processes.

- Item 6. Develop the detailed data collection process, including instruments, identification of, and access to, sources, and managing the process; and collect the data.
- a. Design and develop the data collection process required for the specific Phase One evaluations.
  - b. Based upon the work in Items 3, 4, and 5, collect additional data required for specific exploratory and/or descriptive) evaluations.
  - c. Design and pilot test the instruments necessary for specific a priori proposition testing evaluations.
  - d. Collect the data required for specific a priori proposition testing evaluations.

- Item 7. Develop the detailed data analysis process; carry out the analyses; present findings; present recommendations.
- a. Design and develop the data analysis process required for the specific Phase One evaluations.
  - b. Carry out the specific Phase One exploratory (and/or descriptive) evaluations, and present findings.
  - c. Carry out the specific Phase One a priori proposition testing evaluations, and present findings.
  - d. Analyse the activities of Phase One which affect the design of the evaluation system, and prepare recommendations.
  - e. Analyse the activities of Phase One, and prepare recommendations for Phase Two.



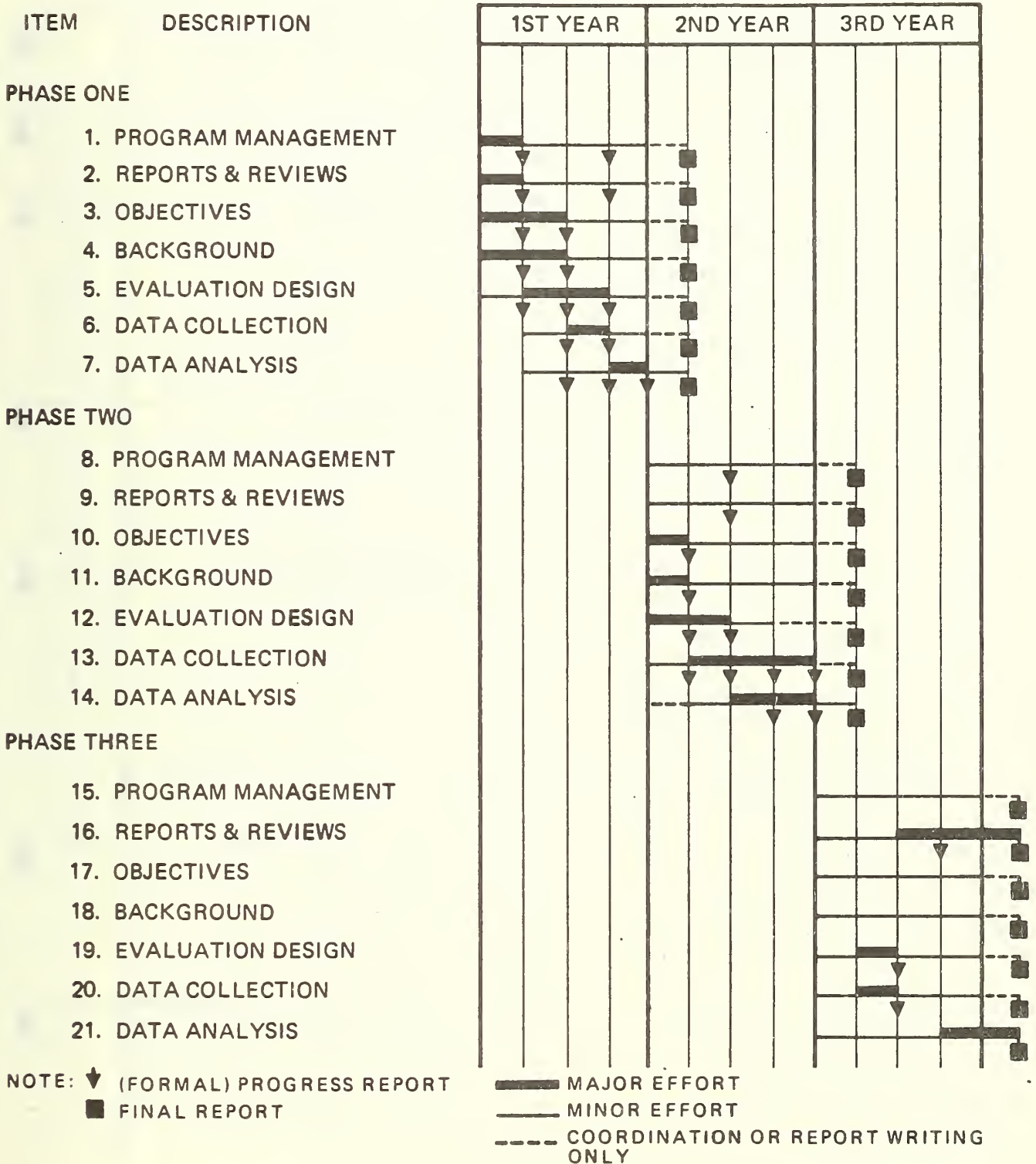
Phase Two: Prototype Evaluation Process Testing

- Item 8. Same as Item 1.
- Item 9. Same as Item 2, but change reference to Items 10 through 14.
- Item 10. Refine and revise the work accomplished under Item 3, as related to the further objective of designing and testing a prototype of the complete evaluation process.
- Item 11. Refine and revise the work accomplished under Item 4, related to the further objective of preparing a formal framework within which the objectives, organizations, and programs may be related to the evaluation process.
- Item 12. Refine and revise the work accomplished under Item 5, as related to the further objective to achieve a comprehensive detailed design to meet both basic data (base line data) and special data requirements.
- Item 13. Refine and revise the work accomplished under Item 6, as related to the further objective of collecting both basic and special data.
- Item 14. Refine and revise the work accomplished under Item 7, as related to the analysis of both basic and special data; and provide findings and recommendations.

Phase Three: On-Line/Turn-Key Evaluation

Items 15 through 21. Revision and refinement of respective prior items, in relation to the additional objective of an on-line/turn-key evaluation process.

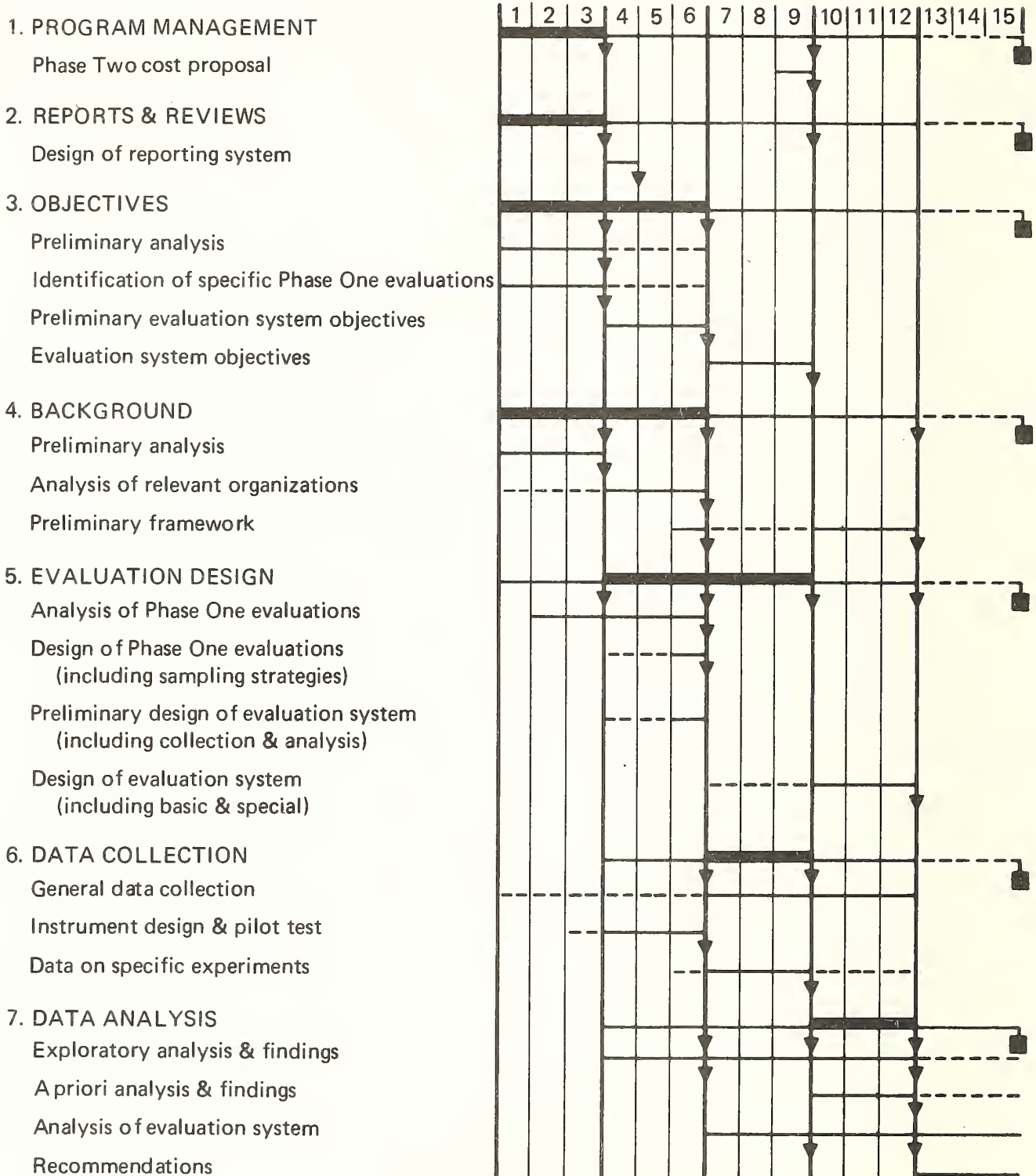
**PROPOSED SCHEDULE - OVERALL**  
(Agency Impact & Commercial Impact)



**PROPOSED SCHEDULE – PHASE ONE**  
(Agency impact & Commercial impact)

Tasks, plus  
selected  
sub-tasks

Months



## PROPOSAL EVALUATION FACTORS

## I. Management

This factor is a measure of the background and overall management capability of the bidder.

## I.1 Evaluation Management Experience

This sub-factor measures the bidder's experience and/or capability of the personnel he will use on this program.

## I.2 Importance of Program to the Bidder

This sub-factor is a measure of the degree to which the proposal represents the approval and direction of the company rather than the efforts of professional proposal writers, and also is a measure of the warranty offered by the company to back the program with the necessary resources.

## I.3 Program Management

This sub-factor is the measure of the bidder's own proposed method for planning, organizing, and controlling the program.

## I.4 Schedule and Cost Control

This factor measures the bidder's ability to predict the time and cost requirements of his efforts, to plan the interrelation of the several parts, and to exercise the necessary control.

## II. Reports and Reviews

This factor is the measure of the bidder's ability to assure that the government is able to effectively and progressively review a very large scale effort with a minimum of people, and of the bidder's ability to coordinate his activities with those of other related individuals and organizations.

### II.1 Reports and Liaison with the Experimental Technology Incentives Program (ETIP).

This sub-factor measures that part of the overall factor which relates to the Experimental Technology Incentives Program (ETIP).

### II.2 Reports and Liaison with the Program Administrative Agency (PAA)

This sub-factor measures that part of the overall factor which relates to the program administrative agency (and, where appropriate, its subelements or related organizations).

### II.3 Liaison with Others

This sub-factor measures that part of the overall factor which relates to individuals and organizations other than those described above.

### II.4 Approvals and Acceptances

This sub-factor measures the bidder's understanding and acceptance of the necessity for progressive and substantial approval and acceptance during each phase, as well as at the end of each phase.

### III. Objectives

This factor is a measure of the bidder's overall understanding of the objectives of this procurement (and related programs).

#### III.1 ETIP Evaluation Objectives

This sub-factor is a measure of the bidder's understanding of the specific objectives of this procurement.

#### III.2 Program Administrative Agency (PAA) Objectives

This sub-factor is a measure of the bidder's understanding of the specific objectives of the program(s) and/or experiment(s) that are to be evaluated.

#### III.3 Other Relevant Objectives

This sub-factor is a measure of the bidder's understanding of relevant and related objectives, goals, criteria, standards, and the like, including the state of the art in administrative experimentation (and/or evaluation).

#### III.4 Phase Two Objectives

This sub-factor is a measure of the bidder's ability to anticipate the incorporation of the results of Phase One in the restated objectives for Phase Two.

#### III.5 Phase Three Objectives

This sub-factor is a measure of the bidder's ability to anticipate the reformulation of objectives in Phase Three.

#### IV. Background Information

This factor is a measure of the bidder's overall understanding of the background and characteristics of this procurement.

##### IV.1 ETIP

This sub-factor is a measure of the bidder's understanding of ETIP and the specific program(s) and/or experiment(s), in terms of past history, present status and plans for the future.

##### IV.2 Program Administrative Agency (PAA)

This sub-factor is a measure of the bidder's understanding of the program administrative agency (and, where appropriate, its subelements or related organizations), its organization, policies and procedures.

##### IV.3 Other Relevant Background

This sub-factor is a measure of the bidder's understanding of the programs, organization, policies and procedures of other relevant organizations.

##### IV.4 Phase Two Background

This sub-factor is a measure of the bidder's capability to prepare a comprehensive framework or model of the program(s) and/or experiment(s) and the evaluation process.

##### IV.5 Phase Three Background

This sub-factor is a measure of the bidder's awareness of possible further refinements in the model necessary for the continuation of the evaluation process.



V. Evaluation Design

This factor is a measure of the bidder's capabilities to carry out the evaluation design requirements.

V.1 Exploratory (Descriptive) and A Priori Proposition Testing Hypotheses, Variables and Parameters

This sub-factor is a measure of the bidder's ability to define the detailed evaluation objectives.

V.2 Experimental and/or Study Designs

This sub-factor is a measure of the bidder's ability to define the overall experimental and/or study design.

V.3 Data Collection Design

This sub-factor is a measure of the bidder's ability to design the overall data collection process, including sources of information, sampling strategies, timing, etc.

V.4 Data Analysis Design

This sub-factor is a measure of the bidder's ability to design the overall data analysis process, including processing and analysis, and presenting results and recommendations.

V.5 Phase Two Evaluation Design

This sub-factor is a measure of the bidder's ability to redefine the detailed experimental and/or study design to reflect the results of Phase One, the several objectives, and model of the process in a comprehensive detailed design to meet both basic data (base line data) and special data requirements.

V.6 Phase Three Evaluation Design

This sub-factor is a measure of the bidder's ability to further redefine the above, to provide for a detailed design, and necessary supporting materials, which would allow an on-going evaluation process.

## VI. Data Collection Process

This factor is a measure of the bidder's capability to carry out all of the functions necessary to the acquisition of data on the variables and parameters of interest.

### VI.1 Instrument Design

This sub-factor is a measure of the bidder's ability to develop (and test) the various questionnaires, protocols, schedules, and the like required for data collection.

### VI.2 Information Sources

This sub-factor is a measure of the bidder's ability to identify the various information sources, and to gain access.

### VI.3 Data Collection

This sub-factor is measure of the bidder's capability to organize, staff, train, direct and control the personnel who obtain the data by survey, interview, observation, or use of records.

### VI.4 Phase Two Data Collection

This sub-factor is a measure of the bidder's ability to anticipate the requirements of the Phase Two collection of both basic (base line) and special data.

### VI.5 Phase Three Data Collection

This sub-factor is a measure of the bidder's ability to plan against the requirement to design an ongoing collection process.

## VII. Data Analysis Process

This factor is a measure of the bidder's capability to carry out all of the functions necessary to the analysis of the data and to present the results and recommendations.

### VII.1 Analysis

This sub-factor is the measure of the bidder's ability to identify and apply the appropriate analytical (including statistical) techniques to the data collected.

### VII.2 Exploratory (and/or Descriptive) Findings

This sub-factor is a measure of the bidder's capability to identify and present exploratory findings.

### VII.3 A Priori Proposition Testing Findings.

This sub-factor is a measure of the bidder's capability to identify and present a priori findings.

### VII.4 Recommendations

This sub-factor is a measure of the bidder's understanding of the relationship between the results of Phase One and the work in Phase Two, in terms of additional, revised, or deleted hypotheses, changes in objectives or background information, and the relative feasibility and/or usefulness of alternative designs for evaluation.



2/1/76

PROPOSAL EVALUATION FACTORS  
(With Illustrative Questions)

Note: These factors and sub-factors apply to both agency and commercial impact proposals. Where specific illustrative questions apply primarily to either agency or commercial impact only, they are so identified.

I. Management

This factor is a measure of the background and overall management capability of the bidder.

I.1 Evaluation Management Experience

This sub-factor measures the bidder's experience and/or capability of the personnel he will use on this program.

I.1.1 Discuss, with specific examples, recent experience in the management of field experiments, projects, and/or programs. Indicate size and complexity of program, extent of own responsibility for design of the program (or experiment) and the evaluation. Indicate by tabulation of cross-references other subsections of this proposal where you have referred to any program discussed here. Outline the original contracted-for schedules and costs and requirements, and explain changes. If you have had any "bad" experience here, discuss the reasons and, if appropriate, indicate how you would prevent them from occurring on this program. If appropriate, you should provide the names, addresses, and telephone numbers of cognizant COTR's.

I.1.2 If you do not have the kind of experience discussed above, discuss your basis for believing that you can meet the requirements of this program. Discuss in terms of the personnel you intend to use.

I.1.3 How will you combine and coordinate the efforts of staff members who are familiar with the procurement process, the program administrative agency, or the commercial sector with those staff members who have the technical skills in evaluation?

## I.2 Importance of Program to the Bidder

This sub-factor is a measure of the degree to which the proposal represents the approval and direction of the company rather than the efforts of professional proposal writers, and also is a measure of the warranty offered by the company to back the program with the necessary resources.

I.2.1 What is the relative size of this program with respect to the overall sales of the company? If your company has significant decentralization or there are other factors which should be presented for clarity, please furnish this background. If the proportionate size is relatively large, why do you think that the problems associated with the "single product" will not arise? If, on the other hand, the proportionate part is relatively small, what assurance is there that this program will not be downrated by others after the contract is signed?

I.2.2 Discuss, if appropriate, how this program fits in with the long range planning of your company. What is its significance to your future position? If you envisage an increase in programs of this type, what assurance is there that key personnel on this program will not be withdrawn for newer programs?

I.2.3 It should be noted that the extent and nature of your effort in proposing will be considered in the evaluation of this sub-factor.

### I.3 Program Management

This sub-factor is the measure of the bidder's own proposed method for planning, organizing, and controlling the program.

I.3.1 It is proposed that the planning and carrying out of the preparation of this proposal provides an opportunity for the bidder to demonstrate his capability in planning a complex effort. Please describe briefly your process and, particularly, the extent to which it is a "pilot" of the process you will use in managing this program.

I.3.2 Detail your proposed organization by time phases, including buildup, division of responsibility; generally describe its operation, how it is organized, and special features not self-explanatory. Can the effectiveness of your proposed organization be projected from its performance in putting together this proposal? If the organization you propose is essentially "new," either in form or in the persons assigned, comment on the extent to which you have been able to "test" it out in preparing this proposal.

#### I.4 Schedule and Cost Control

This factor measures the bidder's ability to predict the time and cost requirements of his efforts, to plan the interrelation of the several parts, and to exercise the necessary control.

I.4.1 A detailed, thorough schedule provides not only a comprehensive plan but also a powerful method of controlling and reviewing the progress of the program. The proposed schedule does not include a detailed breakdown of all of the interrelated areas but does furnish a broad guide for planning purposes. In general, do you think the schedule is realistic? Is it too tight? What additional assumptions are required? What conditions or events will affect the schedule?

I.4.2 Discuss the method of preparation of the schedule you will use, how you will update it, how you will use it.

I.4.3 Prepare a supporting analysis and summary of any areas which you believe reflect a significant relative cost advantage or disadvantage on your part. Indicate to what extent your in-house or subcontracting plans will take advantage of in-being capabilities and at what potential savings. To what extent have provisions for contingencies been made?

I.4.4 Discuss the form and timing of your detailed cost proposal for the major field data gathering activity in the second and third phases.

I.4.5 While the overall schedule reflects the requirement to design an on-going evaluation system, there is an important requirement to provide during Phase One (and each subsequent phase) specific outputs in the form of evaluations of selected specific experiments. How will you assure this?

I.4.6 The timing of the experiments varies across the several PAA's. What advantages or disadvantages do you see in this?

I.4.7 It is anticipated that another ("agency impact") contractor will be primarily responsible for evaluating the intervention and proximal impacts of the several experiments; it is also anticipated that some, if not all, commercial impacts will substantially lag the experiments. What advantages or disadvantages do you see in this? (COMMERCIAL IMPACT ONLY)



## II. Reports and Reviews

This factor is the measure of the bidder's ability to assure that the government is able to effectively and progressively review a very large scale effort with a minimum of people, and of the bidder's ability to coordinate his activities with those of other related individuals and organizations.

### II.1 Reports and Liaison with the Experimental Technology Incentives Program (ETIP)

This sub-factor measures that part of the overall factor which relates to the Experimental Technology Incentives Program (ETIP).

II.1.1 Discuss generally the extent and nature of liaison with both the Contracting Officer (CO) and the Contracting Officer's Technical Representative (COTR) that you envision in this program. Discuss generally the information needs of both government and contractor personnel; who will establish what the needs are and how they will be satisfied?

II.1.2 It would be useful if the reporting system were designed in a way that facilitated an ongoing process evaluation of a) the experiments conducted by the program administrative agency, and b) the evaluation effort of the contractor himself. The data provided by such a system could serve as the basis for a descriptive case history of the experiments and their evaluation. Discuss generally how feasible this proposal is, and how it might be accomplished. You may wish to relate it to your discussion in IV.1.2, and comparable discussions.

II.2 Reports and Liaison with the Program Administrative Agency (PAA)

This sub-factor measures that part of the overall factor which relates to the program administrative agency (and, where appropriate, its subelements or related organizations).

II.2.1 Discuss generally the extent and nature of liaison with both management personnel and technical or specialized staff. How will you reconcile the desirability of direct, informal communication with the necessity, in at least some cases, for observing formal clearance and approval "through channels"?

II.2.2 The evaluation effort may sometimes be perceived as threatening by various personnel in the program administrative agency. Discuss how the reporting and liaison arrangements can be developed to reduce the likelihood of this.

II.2.3 Discuss the differences, if any, in how you will relate to the several PAA. To what extent will these be separately identifiable efforts?

II.2.4 It is anticipated that another ("agency impact") contractor will be primarily responsible for coordination with the several PAA. What do you think of this, and how will you deal with it? (COMMERCIAL IMPACT ONLY)

### II.3 Liaison with Others

This sub-factor measures that part of the overall factor which relates to individuals and organizations other than those described above.

II.3.1 It is anticipated that there will be related programs and program evaluations being carried out by the government agencies either in-house or through the use of an outside consultant or contractor. Discuss the nature and form of the relationship you see with them. How will you ensure that the necessary coordination, avoidance of duplication, overlap, or gaps, etc., is accomplished?

II.3.2 To some extent, it is expected that individual companies (e.g., manufacturers of products which are the subject of program experiments), industry associations, and others may desire or require a liaison relationship. Comment.

II.3.3 Reporting and liaison relationships may arise with individuals and organizations with professional interests (e.g., professional societies, conferences, professional journals, consumer or public interest groups) in the program or program evaluation. Discuss.

II.3.4 It is anticipated that another ("commercial impact") contractor will be primarily responsible for coordination with individual companies, etc. Comment. (AGENCY IMPACT ONLY)

II.3.5 It is anticipated that the bidder will be primarily responsible for coordination with individual companies, etc. Comment. (COMMERCIAL IMPACT ONLY)

## II.4 Approvals and Acceptances

This sub-factor measures the bidder's understanding and acceptance of the necessity for progressive and substantial approval and acceptance during each phase, as well as at the end of each phase.

II.4.1 It is intended that the formal approval and acceptance of the work of the contractor for each phase will be based, primarily, upon the several reports submitted during and at the end of the phase, with final approval at the end of the phase. It is intended, however, that this final approval and acceptance will be largely a formal confirmation of already established acceptable performance and/or results. This is required not only to overcome the substantial delays of tandem or sequential review, but also to avoid rework, redesign and argument under pressure of time and after the fact. You should discuss your understanding of this, the advantages and disadvantages, and your willingness to accept the contractual and schedule implications, that is, that this means that the delivery dates are dates of delivery of approved items, not merely dates for submission of items with an open time term.

### III. Objectives

This factor is a measure of the bidder's overall understanding of the objectives of this procurement (and related programs).

#### III.1 ETIP Evaluation Objectives

This sub-factor is a measure of the bidder's understanding of the specific objectives of this procurement.

III.1.1 The specific objectives for this procurement, and related objectives, including the overall objectives of ETIP, appear in various forms in the several parts of this bid set, and in other sources, and reflect a variety of authors, circumstances and purposes. It is proposed that it is neither necessary nor desirable for ETIP to prepare a single, integrated, fully rationalized, and "authoritative" statement of the objectives for the guidance of the bidders (or the successful bidder). Comment on why you believe this is (or is not) justified?

III.1.2 It is expected that the various stated objectives may not appear (or be) consistent; how will you handle this? For example, a high credibility (a priori proposition testing) evaluation of a specific experiment is desired but it is not possible to achieve this (with reasonable time and money). For example, a complete and candid description of how a particular experiment was carried out may reflect gross incompetence or dereliction on the part of specific ETIP (or program administrative agency) personnel. For example, the results of a particular evaluation may disclose a systematic defect in the past performance of the agency (or a contractor).

III.1.3 It is anticipated that, for a particular experiment, there may be as many as four parallel objectives: a) to describe what happened, what went well, what went wrong; b) to determine whether the result was "caused" by the experimental manipulation; c) to demonstrate the ability to "evaluate" scientifically with credible results; d) to claim credit for the experiment and/or the results. How does one determine the relative importance of these several objectives for a specific experiment over the set of all comparable experiments?

III.1.4 It is anticipated that ETIP evaluation objectives or priorities may shift during the course of the evaluation effort. How does one ensure that he will be sensitive to such shifts and how does one deal with such shifts? How would you go about improving the clarity of ETIP's evaluation objectives?

### III.2 Program Administrative Agency (PAA) Objectives

This sub-factor is a measure of the bidder's understanding of the specific objectives of the program(s) and/or experiment(s) that are to be evaluated.

III.2.1 Questions comparable to those suggested under III.1 may appear here. Comment. What special problems, if any, do you anticipate because of the multiple PAA?

III.2.2 How will you reconcile conflicts between ETIP and the program administrative agency objectives for a particular experiment? PAA objectives for the experiment and other PAA objectives? What kinds of problems will come up? How do you plan to deal with them?

III.2.3 It is anticipated that, during the period that the work on this contract is accomplished, there may be changes in policy or procedures or of key personnel of the program administrative agency. How will you deal with this? For example, the "results" of a particular experiment may be sufficiently "obvious" to the agency to no longer make necessary any further evaluation. Will a continuation of the evaluation be undertaken under any circumstances? And, if so, how would you justify it and/or obtain agency cooperation?

III.2.4 Suppose the agency adds new objectives or objectives not presently contemplated are uncovered which represent potentially significant changes in the direction or scope of the present evaluation program? How will you react to this?

III.2.5 It is anticipated that another ("agency impact") contractor will be primarily responsible for examining the objectives of the PAA. Comment. (COMMERCIAL IMPACT ONLY)

### III.3 Other Relevant Objectives'

This sub-factor is a measure of the bidder's understanding of relevant and related objectives, goals, criteria, standards, and the like, including the state of the art in administrative experimentation (and/or evaluation).

III.3.1 It is proposed that the objectives of ETIP and PAA do not exist in isolation, that both specific and general objectives of a wide variety of other individuals, organizations, and larger communities will necessarily interact with the present program. For example, personal and career objectives of key individuals. For example, political, social, and legal objectives of the federal government. For example, objectives expressed or implied in the state-of-the-art and professional standards in experimental and evaluation research. Of what significance are these, and how do you expect to deal with them?

III.3.2 Your understanding of the state-of-the-art, particularly in administrative experimentation and/or evaluation, will be measured by your discussion of relevant questions raised elsewhere. If you consider it appropriate, you may discuss this here, and you may wish to cross-reference significant material which appears elsewhere.

III.3.3 Are there relevant professional standards in experimentation that you must observe that may conflict with ETIP or PAA objectives? How will you handle this? You may wish to relate your answer to II.3.

III.3.4 It is anticipated that another ("commercial impact") contractor will be primarily responsible for examining the objectives of individual companies and others in the commercial sector. Comment. (AGENCY IMPACT ONLY)

III.3.5 It is anticipated that the objectives of individual companies, associations, etc., may significantly affect not only the experiments and their evaluation but also the activities of the bidder. Comment. (COMMERCIAL IMPACT ONLY)

### III.4 Phase Two Objectives

This sub-factor is a measure of the bidder's ability to anticipate the incorporation of the results of Phase One in the restated objectives for Phase Two.

III.4.1 It is proposed that, as a result of the work in Phase One, a reasonable description and integration of the several objectives will have been realized, and that this will be used as a basis for the several other tasks but also as a basis for refinement, revision, and additions during Phase Two. In addition to this continuing interest in the objectives introduced in Phase One, it is proposed that a separate objective of Phase Two is to design and test a prototype of the complete evaluation process necessary to meet the several objectives. It is expected that this may include at least two separately identifiable parts, as follows: a basic evaluation process to include those evaluation activities which deal with key, predictable, identifiable, continuing, common objectives for which the process can be "institutionalized"; and a special evaluation process to include those evaluation activities which do not meet the above requirements because of specialized, one-time, or changing objectives. If you believe your discussion elsewhere does not adequately reflect your understanding of this, you may comment here.

III.4.2 What activities during Phase One will be expected to contribute to the refinement of Phase Two objectives? What other sources may be expected to provide input? You may wish to cross-reference your comments under IV.4, or elsewhere.



### III.5 Phase Three Objectives

This sub-factor is a measure of the bidder's ability to anticipate the reformulation of objectives in Phase Three.

III.5.1 In addition to a continuation of the concern with the objectives of the previous two phases, it is proposed that the objective of Phase Three will be to provide a firm basis for any further related evaluation efforts, including any of the following: a) a standby or "how to" capability to design and carry out evaluations for comparable future experiments; b) an on-line, turnkey data gathering and analysis process which might be implemented by the PAA; c) an assessment of the need (or lack of need) for other specific or general future evaluation efforts. How realistic do you think this is, and to what extent will the prior phases prepare you to successfully define and then meet these objectives?

#### IV. Background Information

This factor is a measure of the bidder's overall understanding of the background and characteristics of this procurement.

##### IV.1 ETIP

This sub-factor is a measure of the bidder's understanding of ETIP and the specific program(s) and/or experiment(s), in terms of past history, present status and plans for the future.

IV.1.1 Analogous to the comments in III.1.1, it is not proposed to provide a complete and comprehensive description of ETIP and the specific program(s) and/or experiment(s) for the guidance of the bidders (or the successful bidder). Discuss the adequacy of your present understanding of ETIP and the specific programs; if you believe it is not adequate, how do you propose to correct this consistent with the requirements of Phase One?

IV.1.2 It is assumed that a reasonably complete and current description of at least the specific program(s) and/or experiment(s) will be desirable, if not necessary, during Phase One (and, perhaps, on a continuing basis) for use not only by the bidder but also by ETIP. How can this be accomplished? What forms and procedures do you visualize will be used to provide for an up-to-date record? How will inputs (revisions) be made? How will outputs be available?

IV.1.3 The availability of such an information base (and system) would necessarily increase the opportunities to make corrections in ongoing activities (experiments) and may suggest other improvements and changes in the program. To what extent do you see it as your responsibility to facilitate this process? What effect would these additional changes have on your evaluation work?

IV.1.4 Discuss your understanding of the overall set of programs and/or experiments to be evaluated, including at least the following: the set of individual product procurements under life cycle costing (LCC) both planned and implemented; the FSS decision to adopt LCC as a procurement practice; the several workshops and the training program as planned and implemented in all FSS offices around the country, other planned or implemented procurement experiments, such as value incentive contracting. Can these be described or modeled in such a form as to disclose their interactions, or, conversely, can specific experiments or programs be defined in such a way as to allow separate treatment?

## IV.2 Program Administrative Agency (PAA)

This sub-factor is a measure of the bidder's understanding of the program administrative agency (and, where appropriate, its subelements or related organizations), its organization, policies and procedures.

IV.2.1 Questions comparable to those suggested under IV.1.1 may appear here. Comment. What special problems, if any, do you anticipate because of the multiple PAA?

IV.2.2 As a further restatement of the above, if you do not have a present acquaintance with the program administrative agency (and its constituent elements), how will you acquire the necessary background?

IV.2.3 At least some parts of the organization, policies, and procedures of the program administrative agency will be critically related to the present program. For example, those elements directly involved in the experiments, and procurement policies and procedure. Discuss your understanding of these areas. If you do not have prior experience, what effect will this have on your capability?

IV.2.4 It is anticipated that another ("agency impact") contractor will be primarily responsible for obtaining information about and access to the PAA. How will you deal with this? (COMMERCIAL IMPACT ONLY)

### IV.3 Other Relevant Background

This sub-factor is a measure of the bidder's understanding of the programs, organization, policies and procedures of other relevant organizations.

IV.3.1 It is anticipated that information about and access to organizations other than ETIP and PAA may be important to this program. For example: other government agencies which are the end users of the products procured; other government agencies with legal, financial, policy, or other responsibilities which interact with the program area; specific companies, industry segments, and industry associations; consumer organizations, safety, advertising, news media, and the like; other ETIP or PAA program or evaluation contractors. Discuss your understanding of the potential effects of these interactions and how you will deal with them.

IV.3.2 It is anticipated that another ("commercial impact") contractor will be primarily responsible for obtaining information about and access to individual companies and others in the commercial sector. Comment. (AGENCY IMPACT ONLY)

IV.3.3 It is anticipated that the bidder will be primarily responsible for obtaining information about and access to individual companies and others in the commercial sector. Comment. (COMMERCIAL IMPACT ONLY)

IV.4 Phase Two Background

This sub-factor is a measure of the bidder's capability to prepare a comprehensive framework or model of the program(s) and/or experiment(s) and the evaluation process.

IV.4.1 It is anticipated that, after Phase One, the bidder will be capable of preparing a formal framework within which the objectives, organizations, and programs may be related to the evaluation process. Such a framework would not only integrate the background from Phase One but provide a convenient and efficient capability for revision, additions, and modifications without having to start over again. Comment on the feasibility of this; if you can, suggest how this might be done or how one would determine whether it was successful or not? You may wish to cross-reference your comments on III.4.

IV.4.2 Will the distinction between agency impact and commercial impact require significantly different frameworks? If two separate frameworks are developed, to what extent will it be necessary and/or feasible and/or desirable to relate the frameworks?

IV.4.3 Discuss the same question with respect to the distinction among the several PAA.

## IV.5 Phase Three Background

This sub-factor is a measure of the bidder's awareness of possible further refinements in the model necessary for the continuation of the evaluation process.

IV.5.1 It is proposed that the model, and its supporting descriptive material would provide a sufficient basis for a turnkey operation so that PAA personnel could, with modest specialized assistance, carry out on-going evaluations for comparable programmatic extensions. Comment on this.

IV.5.2 It is anticipated that the specific PAA would be primarily interested in, and, be, logically, the appropriate organization to manage, the on-going "agency impact" evaluation system (or that part concerned with the specific agency). Comment. (AGENCY IMPACT ONLY)

IV.5.3 It is anticipated that significant parts of the "commercial impact" evaluation system may already be within the present capability (or future plans) of related organizations (e.g., Department of Commerce, industry associations, etc.). What advantages or disadvantages do you see in this possibility, and how will you react to it? (COMMERCIAL IMPACT ONLY)

V. Evaluation Design

This factor is a measure of the bidder's capabilities to carry out the evaluation design requirements.

V.1 Exploratory (Descriptive) and A Priori Proposition Testing Hypotheses, Variables and Parameters

This sub-factor is a measure of the bidder's ability to define the detailed evaluation objectives.

V1.1.1 It is proposed that the various evaluation design requirements will include problems ranging over several dimensions, and combinations of dimensions, including the following: a) from exploratory and/or descriptive evaluations (e.g., how did a specific experiment get started; what happened; what are the more significant secondary effects) to a priori proposition testing (e.g., did specific intervention X "cause" the observed result Y); b) from very specific, identifiable experiments (manipulations and/or effects) to general, diffuse, overall changes; c) from post hoc evaluations of completed experiments through evaluations of ongoing experiments, to planning and design of future experiments. Comment on your understanding of this.

V.1.2 At least initially, the bidder will be called upon to accomplish a preliminary systems design or study. If your evaluation experience has been primarily in response to detailed evaluation requirements provided in the RFP or RFQ, discuss the relevance of your experience or capability to the requirements of this program.

V.1.3 Discuss your approach to the detailed definition of a research (or experimental or evaluation) problem; comment on theory building, definition of variables and parameters, etc. If considered necessary, distinguish the approach to a priori proposition testing from that used in exploratory and/or descriptive evaluation.

## V.2 Experimental and/or Study Designs

This sub-factor is a measure of the bidder's ability to define the overall experimental and/or study design.

V.2.1 Discuss the problem(s) of and approaches to experimental and/or study design. Alternatively, you may wish to demonstrate your capability by reference to the relevant education and experience of your staff. It is suggested that you may wish to distinguish among the several kinds of designs which may be appropriate for meeting the several kinds of objectives which are the outcome of the process discussed in V.1.

V.2.2 Discuss the problem(s) of and approaches to identifying and controlling for the potential effects of parameters.

V.2.3 it is proposed that the bidder can design an overall evaluation system and, in parallel, carry out evaluations of specific selected experiments during Phase One. Discuss the advantages and disadvantages of this. Can you identify specific experiments which can be evaluated during Phase One? Can you identify base-line data which can, or should, be collected during Phase One? which can, or should, be collected during later phases?

V.2.4 To what extent do you see differences among the several PAA which will affect the design of the evaluation system? Will differences in the progress in initiating experiments among the several PAA be an advantage or disadvantage?

V.2.5 It is anticipated that some part or all of the bidder's activity in this area will be dependent upon the activities of another ("agency impact") contractor. How critical is this from a time point of view? from an interface point of view? Will segmentation (by industry, technology, market) provide advantages or disadvantages? to what extent will longitudinal designs be important, and will this be an advantage or disadvantage (COMMERCIAL IMPACT ONLY)



### V.3 Data Collection Design

This sub-factor is a measure of the bidder's ability to design the overall data collection process, including sources of information, sampling strategies, timing, etc.

V.3.1 Discuss the various kinds of sources or methods of collecting information (e.g., observations, questionnaires, interviews, records) in terms of your expectations for their use here, and their advantages and disadvantages.

V.3.2 The nature and extent of the information required will, at least in some cases, require the development of sampling strategies. Describe, by reference to relevant experience, if appropriate, your capability to develop sampling strategies for a priori proposition testing evaluations. You may wish to discuss the approaches used for exploratory evaluation. You may wish to comment on some of the sampling strategies provided as illustrations in the several reference documents.

V.3.3 Discuss any special considerations which may be introduced by the differences among the several PAA.

V.3.4 It is anticipated that the evaluation of agency impact and commercial impact will require the obtaining of, in some cases, not only the same data but also separate additional data from common sources. How can this be coordinated to minimize duplication and, particularly, the burdening of sources?

#### V.4 Data Analysis Design

This sub-factor is a measure of the bidder's ability to design the overall data analysis process, including processing and analysis, and presenting results and recommendations.

V.4.1 It is proposed that this part of the process should be developed concurrently with those discussed in V.2 and V.3 instead of waiting until the data is collected. Comment on the desirability, necessity, and/or feasibility of this.

V.4.2 Specific individual experiments and specific exploratory studies may have not only different, but also severable analytical requirements (and discussion of these may more appropriately appear in VII). It is expected, however, that there may be some degree of overlap or interrelation among the several experiments and studies. To what extent would an overview of the overall process improve the ability to perform the individual analyses?

V.4.3 It is proposed that the quantity and variety of the various data collected (and to be collected in the future) present an opportunity for careful planning with respect to formatting identification, quality control, standardization, etc. To what extent do you think this is necessary and/or feasible? To what extent can compatibility be achieved with related existing data banks?

## V.5 Phase Two Evaluation Design

This sub-factor is a measure of the bidder's ability to redefine the detailed experimental and/or study design to reflect the results of Phase One, the several objectives, and model of the process in a comprehensive detailed design to meet both basic data (base line data) and special data requirements.

V.5.1 Discuss, or, if appropriate, cross-reference discussions elsewhere of, your understanding of the problems outlined in V.1 through V.4 as applicable to Phase Two, and with reference to the requirements of Phase Two.

V.5.2 It is anticipated that the bidder will provide a comprehensive and detailed design of an evaluation system which will provide a capability for both basic and special evaluation. Discuss your present understanding of the form and/or extent of the evaluation system. Discuss the advantages and disadvantages of prototype testing the system by evaluating specific procurement or other experiments?

## V.6 Phase Three Evaluation Design

This sub-factor is a measure of the bidder's ability to further redefine the above, to provide for a detailed design, and necessary supporting materials, which would allow an on-going evaluation process.

V.6.1 Discuss or, if appropriate, cross-reference discussions elsewhere which demonstrate your ability.

V.6.2 Discuss your understanding of what will be necessary to meet turnkey requirements. What consideration of agency policies and procedures will be required? How will the necessary skills and experience be transferred? How will previously collected data be transferred? What conversion of instruments and software will be required? What will be the effect of on-going evaluations of specific experiments on the transition process? and vice versa?

VI. Data Collection Process

This factor is a measure of the bidder's capability to carry out all of the functions necessary to the acquisition of data on the variables and parameters of interest.

VI.1 Instrument Design

This sub-factor is a measure of the bidder's ability to develop (and test) the various questionnaires, protocols, schedules, and the like required for data collection.

VI.1.1 Discuss (you may use an example and/or reference to prior experience) the problems and solutions which you consider critical (and/or characteristic) in instrumentation for an a priori proposition testing type of evaluation.

VI.2 Discuss the differences, if any, in the approach to descriptive or exploratory evaluation.

VI.1.3 Under what circumstances, and for what purposes, will you conduct pilot tests? Validation tests?

VI.1.4 It is anticipated that some variables of interest will be of ongoing importance (as key variables or parameters common to a number of experiments, or as key exploratory or descriptive variables) in a sense comparable to "social indicators" and will become part of what will be known as "basic data" in future phases. To what extent can this be anticipated, and what difference will this make during this phase?

VI.1.5 Discuss your understanding of the special requirements, if any, which a government agency (or its contractor) must meet before use of instruments for data collection.

VI.1.6 What advantages or disadvantages are introduced by relevant or related existing data banks in terms of the instruments they use (e.g., various definitions of industry classifications, kinds of technology, etc.)?

## VI.2 Information Sources

This sub-factor is a measure of the bidder's ability to identify the various information sources, and to gain access.

VI.2.1 Discuss the important or critical problems you anticipate in this area and your capability to deal with them.

VI.2.2 Discuss the various strategies for identifying sources of information. Distinguish, if appropriate, between sources of information needed for evaluating a specific experiment with those to be used for a broad descriptive (case) study.

VI.2.3 Discuss the issues of confidentiality and privacy with respect to information obtained from individuals. Discuss the issues related to information, in general, with restrictions on dissemination, e.g., proprietary information, certain types of personnel and financial information.

VI.2.4 Discuss the issues involved in access to individuals and to records. A special issue of concern is the demands on the time of individuals in the program administrative agency, and others who may have a considerably less direct interest in the evaluation.

VI.2.5 Much background and parametric information may be available in some form, in existing records which have been collected for some other purpose; how will you identify these and what advantages or disadvantages do they present?

### VI.3 Data Collection

This sub-factor is measure of the bidder's capability to organize, staff, train, direct and control the personnel who obtain the data by survey, interview, observation, or use of records.

VI.3.1 It is anticipated that the several requirements for data collection may require different skills, different organization, and different methods of supervision and control. Discuss by example or reference to prior experience your capability in this regard.

VI.3.2 With reference to the question asked in VI.1.4, what difference in approach would be warranted with respect to "basic data"?

VI.3.3 Discuss or describe the process for handling data collection (e.g., flowcharting). Discuss problems of monitoring and evaluating data quality, of privacy and confidentiality, of machine acceptable versus non-machine acceptable data (e.g., unstructured interviews).

## VI.4 Phase Two Data Collection

This sub-factor is a measure of the bidder's ability to anticipate the requirements of the Phase Two collection of both basic (base line) and special data.

VI.4.1 It is proposed that the bidder will be able to institutionalize the collection of basic data (i.e., key variables and parameters common to a number of present or expected experiments, or key exploratory or descriptive variables) during this phase; from this, base line data can be obtained and a "test" of the process can be accomplished. Comment on this.

VI.4.2 It is proposed that there will remain other requirements not included within the above (e.g., specific one-time requirements, unusual or specialized requirements; added or revised requirements) which cannot or should not be commingled with the above. Discuss this.



VI.5 Phase Three Data Collection

This sub-factor is a measure of the bidder's ability to plan against the requirement to design an ongoing collection process.

VI.5.1 At least the basic data collection process should be sufficiently stabilized and described to allow an ongoing, turnkey implementation. Discuss the problems and prospects of this.

VI.5.2 To what extent can new or other specialized requirements be anticipated?

VI.5.3 Discuss any special problems with respect to access, privacy, confidentiality, etc., which may be introduced when an agency takes over management and operation of the evaluation system.

## VII. Data Analysis Process

This factor is a measure of the bidder's capability to carry out all of the functions necessary to the analysis of the data and to present the results and recommendations.

### VII.1 Analysis

This sub-factor is the measure of the bidder's ability to identify and apply the appropriate analytical (including statistical) techniques to the data collected.

VII.1.1 Discuss, by example or reference to prior experience, your ability to accomplish the various analytical tasks involved.

VII.1.2 For at least some experiments (and/or policy changes), a significant if not primary objective is economic. Discuss your capability in analysing "cost/benefits," including problems introduced by estimating, allocating, and forecasting costs and benefits, both direct and indirect.

VII.1.3 For at least some experiments (and/or policy changes), a significant if not primary objective is to bring about some change in the policies and procedures of either the program administrative agency or of segments of the industry. Discuss your capability in analysing administrative (behavioral) changes.

VII.1.4 For at least some experiments (and/or policy changes), a significant if not primary objective is to bring about some change in the use of technology - change in the rate, application, etc. Discuss your capability an analysing technological change.

## VII.2 Exploratory (and/or Descriptive) Findings

This sub-factor is a measure of the bidder's capability to identify and present exploratory findings.

VII.2.1 It is anticipated that in many areas of the evaluation, it will be neither required nor feasible to develop findings which meet the more stringent formal requirements of a priori proposition testing. To what extent do you consider it your responsibility to reexamine cases where there is no requirement, especially where it appears that a priori proposition testing is feasible?

VII.2.2 You may wish to comment on some of the requirements as presently described in the several reference documents.

VII.2.3 You may wish to discuss the various forms of presentation (i.e., case studies, informal reports, status reports, systems studies, etc.)

VII.2.4 In addition to exploratory (and/or descriptive) findings with respect to experiments (and their related parameters and background), it is proposed that the evaluation system design is, itself, an exploratory or descriptive "finding." What differences, if any, will be required in the presentation and related supporting documentation or justification of the evaluation system design?

VII.3 A Priori Proposition Testing Findings.

This sub-factor is a measure of the bidder's capability to identify and present a priori findings.

VII.3.1 It is anticipated that not only specific experiments (at least in terms of their proximal effects or impacts) but also other specific questions which may be subject to study or experiment will require (and it will be feasible to accomplish) a priori proposition testing evaluation. To what extent do you consider it your responsibility to re-examine cases where there is no requirement? Cases where there is a requirement, but it is not feasible?

VII.3.2 You may wish to comment on some of the requirements as presently described in the several reference documents.

VII.3.3 You may wish to discuss the various forms of presentation.

VII.3.4 Do you think it is desirable and/or feasible to develop a procedure or process which can be used to make preliminary assessments of the likelihood that a particular proposed experiment will be capable of a priori proposition testing?

#### VII.4 Recommendations

This sub-factor is a measure of the bidder's understanding of the relationship between the results of Phase One and the work in Phase Two, in terms of additional, revised, or deleted hypotheses, changes in objectives or background information, and the relative feasibility and/or usefulness of alternative designs for evaluation.

VII.4.1 In addition to the specific findings discussed in VII.2 and VII.3, it is anticipated that the work in each phase will provide a basis for the work in subsequent phases. It is anticipated that this input to the next phase may become available before the completion of all of the work in the current phase. Comment on the feasibility of an overlap, the advantages and disadvantages.

VII.4.2 It is anticipated that a "final report" will be prepared at, or after, the completion of each phase which will describe what the bidder sets out to do, what he did, including relevant activities of others, and the results (VII.2, VII.3, VII.4). Comment on the relation of the final report to the several other forms (and timings) of outputs.



## NUMERICAL WEIGHTS FOR PROPOSAL EVALUATION FACTORS

	<u>Factors</u>	<u>Weights</u>
I.	Management  This factor is a measure of the background and overall management capability of the bidder.	15
II.	Reports and Reviews  This factor is the measure of the bidder's ability to assure that the Government is able to effectively and progressively review a very large scale effort with a minimum of people, and of the bidder's ability to coordinate his activities with those of other related individuals and organizations.	15
III.	Objectives  This factor is a measure of the bidder's overall understanding of the objectives of this procurement (and related programs).	20
IV.	Background Information  This factor is a measure of the bidder's overall understanding of the background and characteristics of this procurement.	15
V.	Evaluation Design  This factor is a measure of the bidder's capabilities to carry out the evaluation design requirements.	15
VI.	Data Collection Process  This factor is a measure of the bidder's capability to carry out all of the functions necessary to the acquisition of data on the variables and parameters of interest.	10
VII.	Data Analysis Process  This factor is a measure of the bidder's capability to carry out all of the functions necessary to the analysis of the data and to present the results and recommendations.	10
	Seven Evaluation Factors	Total 100





## SCOPE OF EFFORT

## Introduction

A. Purpose

The purpose of this document is to provide a guide to the bidder in the preparation of supporting data on the scope of effort he proposes.

B. Basis for Preparation of This Document

This document is intended to be used in conjunction with the associated Proposal Preparation Procedure, Proposal Evaluation Factors, Schedule, and Statement of Work. The objective is to assist the bidder in presenting his supporting data on scope of effort in an orderly and usable form so that it may be evaluated concurrently with his written (and oral) proposal.

B.1 In order to achieve an orderly and usable form, the supporting data on scope of effort must be, at least substantially, related to the factor (and sub-factor) categories which are the basis for the evaluation. The detailed outline furnished in the next section is for this purpose.

B.2 In addition to the above, it is necessary to assure that the data furnished by the several bidders be on a reasonably comparable basis. To accomplish this the detailed guidance included in this Introductory Section is furnished. It should be understood that the guidance in this respect is necessarily arbitrary in the interests of meeting the specific objective.

B.3 The format requirements reflect the fact that evaluation team members need, and can use, only selected data, primarily in terms of man/months of effort in certain areas and certain materials costs. A summary analysis of the scope of effort against cost data will be accomplished.

### C. General Comments

To assist the bidder in understanding more fully the part which these data will have in the evaluation, these general comments are offered.

C.1 This type of program which establishes a broad objective but provides for planning and design to work out with more detail and precision the means for accomplishment cannot be costed with the closeness normally experienced on procurements of items with a stabilized design. For this reason the bidders' respective total cost estimates will not necessarily reflect the actual realized costs to the government, nor do they necessarily reflect the relative costs of the bidders in providing a comparable capability. Therefore, relative total cost, as such, cannot and will not be given any direct weight in the evaluation. Cost, in terms of scope of effort, however, will aid in establishing the kind and extent of effort, and this information will serve to further define the "word-pictures" included in the written (and oral) proposals. The formal evaluation of relative cost and associated areas is included as part of one of the major factors in the evaluation (I.4), and further reference should be directed there.

C.2 While the major impact of these data in the evaluation will be in providing additional perspective to the written (and oral) proposals, certain corollary information will be used.

C.2.1 A measure of how realistically and thoroughly the costing has been done will be established. A too high estimate indicates the obvious disadvantages of "gold plating" or a potentially loose operation. In contrast, however, a too low estimate presents, in the long run, even more serious disadvantages. First, it may indicate a serious misunderstanding of the scope and objective of the program. Second, it may raise a serious question as to the bidder's ability to plan and estimate costs, thus impairing his ability, and that of the government, to review, predict and control costs. Finally, it may indicate something less than complete candor in presenting the cost part of the proposal.

C.2.2 The data presented here will be used to supplement the data furnished with respect to cost as a factor in the overall evaluation.

C.2.3 The data presented here will be used in negotiation with the successful bidder both as a basis for further refining the contractual statement of work and in establishing the contract price.

#### D. Use of Format

D.1 It is of critical importance that all persons directly or indirectly preparing data on scope of effort be thoroughly familiar with the rules on use of the format. This is especially true because the figures to be included do not, in all cases, follow the accounting distinction between direct and indirect costs. Further, certain types of effort are to be tabulated as separate items. An effort has been made to use format and terminology as close to the general practice as possible. Where this has not been done, the basis has been to assume that useful data for the evaluation can be obtained. Certain distinctions, such as direct and indirect costs, have little significance for this purpose. Similarly, certain areas of effort can only be evaluated if separated from proportionately large associated areas of effort.

D.2 The next section specifies the scope of effort data on a factor by factor basis. To facilitate the evaluation, these data should be collated with the respective factors. Because the procedure for evaluation provides for each factor to be evaluated, substantially, without mandatory recourse to other parts of the proposal, it is critically important that the data on scope of effort and the written proposal on a specific factor, taken together, is complete and self-explanatory. Care must be exercised to assure that the evaluation team does not inadvertently penalize the written proposal because of an inadequate scope of effort.

D.2.1 Under each factor, the scope of effort should be set out separately for the first phase of the program. Where the bidder proposes to begin or complete items in another phase, note should be made to avoid misunderstanding.

D.3 It is expected that in many instances the scope of effort proposed will be, literally, the bidder's present estimate of the approximate level (or scope) of effort he expects will be required to accomplish what he proposes to do in his written (and oral) proposal. A certain latitude is expected, and these data on scope of effort will be used, as stated before, primarily to assist the evaluation team in understanding what the bidder is actually proposing. There are, however, certain areas which may prevent a clear understanding, and some of these are tabulated below.

D.3.1 The breakdown in the next section is a minimum guide in tabulating the scope of effort. Where a particular figure is considered unusually small or large, or for some other reason may be misleading, it should be footnoted with an explanation or further breakdown.

D.3.2 In some cases identification of particular types of effort with a proposed "associate" or subcontractor will be of assistance. This will be particularly true where part or all of an effort is proposed to be accomplished by some specialist group.

D.3.3 The analysis of comparative cost advantage will not be accomplished, as a separate factor, by the overall evaluation team. It is necessary, however, where a bidder is estimating costs which are, on a relative basis, low that the basis for this be included in the scope of effort data to assure that the evaluation team understands that the bidder does intend to accomplish what he has said in his written proposal.

D.3.4 Conversely, where a possible misunderstanding may occur due to a lack of appreciation by the evaluating team of the cost associated with accomplishing a particular part of the proposal, the bidder should make this clear.

D.3.5 Man/month estimates should be divided according to distinct classes to avoid confusion or ambiguity in two respects. First, the bidder's data should distinguish between direct and indirect. Second, the data should distinguish between senior professional personnel and supporting technicians, draftsmen, etc., and between various management personnel and clerical assistance, etc.

D.3.6 Any further analysis considered necessary to assure that the evaluation team properly assesses the relative scope of effort as related to the written proposal is encouraged. This may be particularly true in terms of level of training of personnel, availability of facilities, ability to control design, and the like.

E. Summary Data

E.1 The relationship of the individual scope of effort on the several factors to the bidder's overall cost estimate will be examined. For this purpose, certain summary data will be required. These summary data should be furnished as a separate document which should also include a complete reference set of the scope of effort data sheets.

E.2 Basic summary data will include presentation of sub-total and total cost estimates in standard format - direct costs, burden, materials, G&A, fee, etc.

E.2.1 These summary sheets should be accompanied with notes reconciling the scope of effort data sheets. Any unusual data should be explained.

E.3 If the proposal includes a substantial proposed sub-contracting (or "associate") cost figures, a summary analysis should be prepared and related to the basic summary data.

E.4 Supporting schedules should be prepared detailing the hourly wage rate of personnel and this related to the basic summary data.

E.5 Supporting schedules should be prepared for travel costs and related to the basic summary data. Schedules should include breakdown based on distance (or destination), duration, number of travelers, and number of trips. Similarly, supporting schedules on telephone (and teletype) by number of calls, and average cost per call.

## Phase One Scope of Effort

Note: The detailed organization parallels the organization of the Statement of Work, Schedule(s), and Proposal Evaluation Factors, reference to which should be made for clarification.

## I. Management

(Note that the scope of work here is limited to administrative or program management, and should be distinguished from effort properly reported under other factors.)

Program Director	M/M
Senior Management Advisors (Include general officers, or other senior corporate personnel, concerned with administrative management policy, if appropriate)	M/M
Other (specify) (Include comparable personnel of associates, subcontractors, consultants, if appropriate; include program director's personal staff, if any)	M/M
Scheduling (Include costs of analysis, preparation, monitoring, etc.)	M/M
Costing (Include costs of analysis, preparation, monitoring, etc.)	M/M
Telephone (Include telephone, teletype costs, etc., and breakdown by number of calls, etc., if appropriate)	\$
Travel (Include breakdown by destination, duration, breakdown by number of trips, if appropriate)	\$

## II. Reports and Reviews

(Note that you should distinguish efforts properly attributable to other factors.)

Liaison with ETIP (Include time spent in conferences or visits both at ETIP and contractor's plant, or elsewhere breakdown by number of trips, duration, number of travelers.)	M/M
Liaison with PAA (Include on same basis.)	M/M
Liaison with Others (Include on same basis.)	M/M

Reports and Services	M/M & \$
(Include time spent in direct preparation, technical writing, drafting, etc., and costs of reproduction. Breakdown by type of report, etc., if appropriate.)	

### III. Objectives

Review of objectives (Breakdown between documents and interviews, and among ETIP, PAA, industry, and others.)	M/M
Preparation of description and analysis (Breakdown among ETIP, PAA, industry, and others.)	M/M
Preparation of preliminary recommendations	M/M
Preliminary requirements for <u>pilot</u> evaluation system	M/M
Preliminary requirements for <u>prototype</u> evaluation system	M/M
Travel	\$

### IV. Background

Review of background (Breakdown between documents and interviews, and among experiments, programs and organizations.)	M/M
Preparation of framework model	M/M
Travel	\$

### V. Evaluation Design

Preliminary Design	M/M
Detailed Design	M/M
Preliminary design of <u>pilot</u> evaluation system	M/M
Preliminary design of <u>prototype</u> evaluation system	M/M

### VI. Data Collection Process

(Note that you should distinguish data collections which may have been included under prior factors)

Design and development of data collection process	M/M
Data collection for exploratory evaluations	M/M



Design and pilot test of instruments	M/M
Data collection for a priori proposition testing evaluations	M/M
Travel (Breakdown, as appropriate, between exploratory and a priori proposition testing evaluations; provide, as appropriate, basis for estimating in terms of trips, etc.)	\$
Telephone, postage, etc. (Breakdown, as above.)	\$

#### VII. Data Analysis Process

(Note that you should distinguish from effort included with Factor II.)

Design and development of data analysis process	M/M
Exploratory analysis and findings	M/M
A priori proposition testing analysis and findings	M/M
Analysis of evaluation system, and recommendations	M/M
Analysis of Phase One, and recommendations	M/M

## Phase Two and Three Scope of Effort

## Phase Two

It is not expected that the bidder will be able to provide a comparable level of detail for Phase Two. However, a rough estimate will be useful in assessing those references to Phase Two in the proposal, and in planning.

The minimum required breakdown is to distinguish between the following:

1. Those costs (labor, travel, etc.) directly a function of data collection and analysis for both basic and special data processes.
2. All of the remainder (management, design, etc.)

Additional information, consistent with these purposes, would be appreciated, but it is not required.

## Phase Three

A similar distinction should be observed in providing estimates for Phase Three. It is expected that these may be more speculative, but where there are identifiable assumptions which will largely determine the scope of effort, discussion would be helpful.

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4. TITLE AND SUBTITLE  EVALUATION SYSTEM PROPOSAL PREPARATION AND EVALUATION PROCEDURE		5. Publication Date  February 1976	6. Performing Organization Code
7. AUTHOR(S)  Charles W. N. Thompson		8. Performing Organ. Report No.	
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15. SUPPLEMENTARY NOTES This set of documents was prepared for, and was included in, RFP6-35756; the complete RFP contains, in addition, solicitation information and a number of reference documents.			
16. ABSTRACT (A 200-word or less factual summary of most significant information. If document includes a significant bibliography or literature survey, mention it here.)  As part of its program with respect to the conduct of procurement experiments, the Experimental Technology Incentives Program of the National Bureau of Standards developed an integrated set of documents to provide information for use by both bidders and the proposal evaluation team in the procurement of two evaluation systems. The set of documents includes the following: (1) Introductory Notes; (2) Some Definitions; (3) Proposal Preparation Procedure (with revisions); (4) Evaluation System Design Process; (5) Statement of Work; (6) Statement of Work (with illustrative sub-items for Phase One); (7) Proposed Schedule - Overall; (8) Proposed Schedule - Phase One; (9) Proposal Evaluation Factors; (10) Proposal Evaluation Factors (with Illustrative Questions); (11) Numerical Weights for Proposal Evaluation Factors; and (12) Scope of Effort. Except for introductory and descriptive material, all of the documents are organized on the basis of seven factors (and thirty-three sub-factors) to facilitate both preparation and evaluation of proposals. Each sub-factor measures the bidder's understanding, present or proposed approach, and present or potential capability to perform with respect to an important problem or characteristic of the program. While the procedure is considered limited to certain systems and related procurements, it is considered a significant departure from prior procedures.			
17. KEY WORDS (six to twelve entries; alphabetical order; capitalize only the first letter of the first key word unless a proper name; separated by semicolons) Evaluation systems; Experimental Technology Incentives Program; procurement experiments; procurement procedures; proposal evaluation procedures; proposal preparation procedures			
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