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Implementation of the Consultant's Recommendations for the Improvement of the ESV Information System

# LONG RANGE PLANNING PROCESS

May 12, 1981

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Certified Public Accountants

Peat, Marwick, Mitchell & Co.

1700 IDS Center Minneapolis, Minnesota 55402 (612) 341-2222 May 12, 1981

Mr. Charles Coskran Minnesota Department of Education Capitol Square Building 550 Cedar Street St. Paul, Minnesota 55101

Dear Mr. Coskran:

As a second major component of our project with the State Department of Education (SDE), this report presents our recommended ESV-IS long-range planning process. Peat, Marwick, Mitchell & Co. (PMM&Co.) is pleased to assist the SDE in implementing the MECC Study planning recommendations with this planning report and the ESV-IS Systems Architecture Plan, submitted and dated April 3, 1981. We believe the process described in this report will address the expressed needs of SDE and can be successfully implemented in the immediate future.

This document addresses two of the three plan deliverables identified in our October 6, 1980 proposal letter - (1) definition of a long-range planning process and (2) definition of operational procedures. The third deliverable component - detailed implementation plan - will be formally developed by SDE personnel with our assistance. Definitions of the elements of the detailed plan are included in this deliverable.

PMM&Co. appreciates this opportunity to assist the State of Minnesota, SDE, and the ESV Computer Council to fulfill their responsibilities for managing the ESV-IS resources.

Very truly yours,

Veat, Manurial Mitchell & Co.

#### I. INTRODUCTION

In 1980, the Minnesota Legislature created the ESV Computer Council, as an advisor to the State Board of Education, to provide direction and management control for the provision of administrative data processing services to school districts and affiliated organizations in Minnesota. As one of its several mandated duties and responsibilities, the Council must develop a long-range plan for the Elementary, Secondary and Vocational Information System (ESV-IS) and must define an ESV-IS system architecture. The longrange plan, which is the subject of this report, is intended to provide the means for achieving the objectives of the system architecture. To attain the desired system results and service levels, the Council should implement and maintain a planning process as an important, if not essential, component of it's management responsibilities. The contents of this report provide guidelines for use in undertaking the necessary long-range planning effort.

Planning, as a management process of setting goals and objectives and deciding on appropriate strategies and actions to attain them, should be considered from two perspectives:

- planning horizon, and
- focus.

The planning horizon refers to whether the planning is short-range (one to two years), medium-range (two to five years), or long-range (five years or more). Focus refers to the strategic, managerial, or operational nature of the planning. In describing the planning process, we will consider a twodimension planning horizon - long-range and short-range - resulting in a strategic plan and an operational plan, respectively. This long-range planning document describes a process and methodology for completing a long-range strategic plan. The charter, or mission and purpose, for ESV-IS is specified in legislation enacted by the Minnesota Legislature and studies and reports prepared in the early 1970s (referred to as the "State Computing Plan"). Relying on this charter, the long-range strategic plan should address current and future user needs, the services which must be provided to satisfy those needs, the organizational requirements, and the resources required. Plans which address these elements, together with the systems architecture, will provide the long-range perspective desired for managing the ESV-IS.

#### PLANNING PURPOSE

Public and private organizations undertake long-range strategic planning efforts to prepare the organization for the future as it is perceived to be evolving. Effective planning should enable the ESV-IS user community, including the ESV Computer Council, to establish a proactive, rather than reactive, approach to managing resources. A proactive management approach should permit system management (ESV Computer Council, SDE management, ESV Region management, and school district management) to focus attention and decisions on applying resources to those activities which will further the established objectives on a priority basis. This future-oriented process should encourage management, at all levels, to anticipate possible environmental and technological changes and to address probable organizational, financial, and other implications associated with achieving the objectives set for ESV-IS. Organized, continuous, disciplined efforts are needed to plan, direct, and control the application of resources in this area. Α formal planning process should be one of those efforts.

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The implementation of a planning process and the development of a longrange plan often includes several or all of the following results:

- Improved communications among the several participating parties (ESV Computer Council, SDE, ESV Regional Boards, districts, and the Legislature);
- Agreed upon organizational (ESV-IS) goals and objectives;
- Defined common course of action for achieving the established goals and objectives;
- Identified resource requirements and established priorities for the allocation of scarce resources;
- Agreed upon bases for measuring progress and results; and
- Planned reactions to anticipated environmental and technological changes as a result of selecting, from among alternative strategies, preferred, predefined responses to those changes.

Planning should provide a means to improve short-term decision making, to identify new and more favorable organizational directions and uses of resources, and to identify and redirect efforts and resources away from marginal and unfavorable efforts. Management of ESV-IS resources should be strengthened as a result of undertaking the planning effort.

#### MANAGING ESV-IS RESOURCES

Management of elementary, secondary, and vocational educational organizations must continue to carefully manage the financial and non-financial resources available to their organizations. Implementation of an effective planning process - specifically, a long-range strategic planning process will provide a means of assisting educational administrators in deciding on a future course of action and in determining the resources necessary to fulfill their plans.

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Resource management in government, such as with ESV-IS, includes those practices and procedures that:

- Assure that all possible resources, financial and nonfinancial, Federal, state, and local, have been considered for utilization;
- Enable the available resources to be directed toward satisfying the greatest (highest priority) educa-tional data processing needs;
- Enable the resources to be used most effectively in meeting the goals and objectives established for ESV-IS administrative data processing; and
- Enable the resources to be used as efficiently as possible to maximize the output of work per unit of expenditure.

A thorough process established to manage the ESV-IS resources should include the following components:

- Identification of user needs and establishment of priorities;
- Definition of goals and objectives for programs and services that are directed toward satisfying identified needs;
- Identification of desired service level patterns encompassing both quality and quantity of services to be offered;
- Development of specific work programs that lead to the accomplishment of stated objectives;
- Determination of resources, (money, people, materials, equipment, and the like) required to carry out the work programs;
- Allocation of available resources to those programs (or portions thereof) that, in combination, satisfy the greatest needs;
- Acquisition and/or development of the required resources in a timely manner and at least cost;
- Measurement and evaluation of individual and group performance with respect to the accomplishment of work programs and satisfaction of program goals/ objectives; and,

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• Analysis of work processes and activities and the identification and development of the means for improving effectiveness and efficiency.

#### PLANNING DEFINITIONS

The success or failure of any endeavor can often be attributed, at least in part, to the quality of participant understanding of the terminology involved. Since planning terminology tends to be somewhat vague, the following definitions have been developed to provide a common basis for their use within the context of ESV-IS long-range strategic planning.

These definitions are neither always consistent with those found in a dictionary, nor necessarily consistent with the use of the terms in other educational activities. Care must be taken by management to ensure that planning participants are using these terms in a commonly understood manner.

<u>Planning</u> - a process directed toward producing one or more future states which are desired and which are not expected to occur unless specific actions are taken.

<u>Process</u> - a continuous operation marked by gradual changes that lead toward a particular result.

<u>Strategic planning</u> - the process of defining the anticipated environment, establishing the desired basic direction of the organization within that environment (goals), defining achievable and measurable objectives, and formulating alternative strategies to satisfy the established organizational goals.

<u>Operational planning</u> - the process of determining the optimum allocation of resources to satisfy the strategic objectives for the shortest period worth considering.

<u>Plan</u> - an interim report on the status of the planning process which is prepared at predetermined intervals in the process.

<u>Goal</u> - a general statement indicating the desired basic direction of the organization. Goal statements are not normally quantifiable in terms of time or resource requirements. Goals are the governing statements from which objectives are derived. <u>1-5</u>

Ideal - a goal which can never be satisfied.

<u>Objective</u> - a specific statement of measurable results to be achieved in a predefined time period that will move the organization closer to its goals.

<u>Strategy</u> - a possible course of action to accomplish an objective.

<u>Charter</u> - a statement prepared by management to communicate the responsibilities and scope of activities of an organizational unit. This may be referred to as organizational mission or purpose.

Mission statement - a charter.

<u>Policy</u> - a management rule for selecting or deciding upon a course of action.

<u>Practice</u> - a course of action that is repeated under similar circumstances.

Standard - a documented practice.

<u>Procedure</u> - a defined and documented set of actions directed at a repetitive activity.

Systems Architecture - a conceptual framework that integrates hardware, communications, and applications software for the effective and efficient delivery of data processing services to users.

### **ESV-IS PLANNING PROCESS STRUCTURE**



#### **II. PLANNING PROCESS**

The value of planning to administrators and supervisors lies as much in their participation in the planning process as in their use of its end product. Participation stimulates a deeper understanding of educational administration and the educational environment, and forces a systematic evaluation of alternatives that might not otherwise be considered. An aggressive planning process usually releases large amounts of creativity that would otherwise be suppressed by routine and the constant need to respond to everyday matters.

Planning should be a continuous process and hence no plan is ever final; it is always subject to revision. A plan, therefore, is not the final product of the planning process - it is, rather, an interim report.

Successful planning is most frequently characterized by (1) top-down development, (2) bottom-up implementation, and (3) measurement and feedback to the process. Figure 1, on the facing page, illustrates this development and implementation relationship. The products of the process (plans) are interim reports on the process that provide a communications vehicle and a basis for measurement and control.

Long-range strategic planning for ESV-IS is the process of considering environmental factors, organization plans and needs, and the current data processing status to set goals, establish objectives, and determine priorities for the future direction of ESV-IS. The process should not be constrained by artificial planning periods such as biennial or five-year plans. The results of an objective may be achieved in two years, or it may take ten. Artificial time constraints may result in inadequate consideration being given to the longer term objectives. While there is no universal planning methodology and process, there is general agreement about the components of such a planning process. The following conceptual tasks should be included in a long-range strategic planning process:

- 1. Establish the mission or charter for ESV-IS.
- 2. Assess the current environment and the changes which may reasonably be expected to occur in that environment.
- 3. Develop the goals; that is, establish the desired basic direction for ESV-IS.
- 4. Establish objectives for ESV-IS which define the desired results to be achieved within a specified time.
- 5. Formulate alternative strategies which identify broad courses of action describing how the objectives are to be achieved.
- 6. Define policies which provide guidelines for use in implementing the strategies.
- 7. Establish priorities among the several strategies.
- 8. Develop short-term operational plans (and budgets) to implement and fund the prioritized strategies.
- 9. Provide a process for measuring progress against the objectives and strategies. Such performance measurement establishes an important feedback loop to the planning process.

Each of these steps are described and explained in greater detail in the remainder of this section.

#### ESTABLISH THE ESV-IS MISSION

The basic structure required for undertaking long-range strategic planning for an organization, or for the ESV-IS system in this instance, is dependent on the existence of a clear definition of the mission, or charter, for ESV-IS. While the ESV Computer Council should reassess the mission when preparing the initial plan, the several early reports and documents (previously referred to as the "State Computing Plan"), along with Minnesota statutes, provide the current, documented mission for ESV-IS and the consortium concept. Regardless of the approach taken, the State Board of Education, with the assistance of the ESV Computer Council, must establish a definitive statement of ESV-IS mission and should reassess this mission on a regular basis.

The current, documented mission for ESV-IS, as presented in the "State Computing Plan" is:

". . . to provide facilities to serve the computer needs defined by education available equally to all students in educational institutions Minnesota . . . on a least cost basis and at a standard cost." (Ad Hoc Joint Committee on Computers in Education - 1971-72.)

Further definition of the ESV-IS mission, or purpose, is found in the Minnesota statutes in the following section entitled "PURPOSES":

"The purposes of the statewide elementary, secondary and vocational education management information system shall be:

(a) To provide comparable and accurate educational information in a manner which is timely and economical;

(b) To provide a computerized research capability for analysis of education information; ~

(c) To provide school districts with an educational information system capability which will meet school district management needs; and

(d) To provide a capability for the collection and processing of educational information in order to meet the management needs of the state of Minnesota." (Minnesota Statutes 1980, Sec. 121.931, Subd. 2.)

While these represent an original and a recent expression of purpose, the ESV Computer Council should assess them for their validity and completeness as the long-range strategic planning purpose.

#### ASSESS THE ENVIRONMENTAL FACTORS

One of the essential components of long-range strategic planning is the identification and consideration of the environmental factors that are expected to influence the delivery of administrative data processing services.

There are two categories of environmental factors: internal and external. Internal environmental factors such as possible changes in organizational philosophy resulting from leadership changes, and anticipated significant changes in instruction methods and curriculum should be considered. External environmental factors including expected changes in technology, legal or regulatory requirements, economic or sociological influences, and other factors important to, but outside of, education in Minnesota should also be considered when planning for the future.

A necessary input in preparing the long-range plan should be provided by school districts, the major users of ESV-IS capabilities. While all school districts do not have long-range plans, they should be encouraged to develop a process for assessing current and anticipating future management information and reporting needs. These school district needs and districtrelated environmental factors should be provided to their affiliated regional service centers for input to their plans and in turn to the comprehensive ESV-IS long-range plan. Legislative-committees, handling educational matters, should also provide SDE with their reporting requirements and information needs, since legislative needs represent a significant factor in the development and operation of ESV-IS.

#### DEVELOP GOALS

Once the factors affecting the ESV-IS long-range strategic planning process have been defined and considered, goals should be developed to indicate a desired direction for educational administrative data processing. Goals are not normally quantifiable in terms of specific completion dates or resource requirements, as illustrated in the following examples:

- Minimize the incremental investment in hardware, applications software, and communications.
- Minimize the development cost for applications software.
- Promote effective use of the installed hardware, applications software, and communications.
- Improve the quality and flexibility of service to users.
- Provide school district control over resource allocation and service alternatives.
- Provide or enhance information systems to improve school district management capabilities.

ESV-IS goals should be developed by a planning task force, subordinate to the ESV Computer Council, representing major educational organizations and information users. Once the goals are established and agreed upon, they should rarely require change. They should, however, be subject to periodic review and evaluation to provide assurance that the stated goal accurately reflect the wishes of the education community.

The established goals should address the systems architecture developed for ESV-IS. Since the <u>ESV-IS Systems Architecture Plan</u> represents the adopted conceptual data processing framework, the long-range plan goals and objectives should provide the means for ultimately achieving the systems architecture.

#### ESTABLISH OBJECTIVES

Once the goals have been defined, specific and measurable objectives should be developed to support the goals. Unlike goals, objectives <u>always</u> have a time dimension and are always specific enough to be achievable and measurable. If we pursue our goals examples one step further, we might define the following supporting objectives:

- Select and implement cost-effective communications svstems between the regional service centers and all school district locations by January 15, 1985.
- Identify the management information needs for each of the school districts and determine, by June 30, 1984, the degree to which existing systems provide the necessary management information.
- Develop a payroll and personnel system capability by June 30, 1984, for use by Minnesota school districts which is more efficient and cost effective than current systems capabilities.

As in the case of goals, the objectives should be developed by a planning task force representing School Districts, ESV Regional Boards and regional service centers, SDE, and affiliated organizations.

Objectives can be used effectively as standards for measuring performance. Objectives are less stable than goals and should be reassessed on a more frequent basis - at least annually. They are subject to periodic change as the environment and user needs change.

The process of establishing objectives can be based on extensive analvsis or simply dictated by a policy group, can be based on past results or foreseen future opportunities, and may address any of several areas such as personnel, stability, productivity, management and worker performance, and the like.

For an objective to be operationally useful, it must possess the following characteristics:

- Results-oriented, focusing directly upon what is to be produced with only passing reference to what resources may be employed to accomplish the result.
- Specific, stating what will be achieved in very narrow terms.

- Measurable, including a quantifiable statement of the extent of the results to be attained, thus making it possible to determine whether the objective has been attained.
- *Time-oriented*, relating the intended achievements to a specific time frame, so that the results can be determined at a specific point.
- Achievable and feasible, providing a reasonable expectation that, with proper application of the given resources, the objective can be accomplished.
- Relevant and supportive, relating the objectives to the organization's mission and goals.
- User or clientele oriented, relating the program activity or service to the user or clientele.

#### FORMULATE ALTERNATIVE STRATEGIES

Once objectives have been established, the formulation of alternative strategies is the next logical event. Strategies are the specific courses of action describing how, rather than when, to achieve the objective.

This planning task, the "feasibility phase" of the total planning process, has two components:

- Identification of alternative strategies; and
- Evaluation of the identified strategies.

The planning process should be sufficiently formal to ensure consideration of all reasonable strategies for achieving the objectives while, at the same time, remaining sufficiently flexible to adjust to new requirements and changing circumstances.

An example which illustrates this step in the planning process is the following:

Goal

Minimize the incremental investment in hardware, applications software, and communications.

Objective

Select and implement cost-effective communications systems between the regional service centers and all school district locations by January 15, 1985. Strategies

- (1) Install intelligent data entry devices at all locations.
- (2) Install intelligent data entry devices at selected school district locations with other locations using regional service center data entry capabilities.

#### DEFINE POLICIES

As defined earlier, policies are the broad guides to action for use in carrying out the strategies. The ESV Computer Council has several potential policy setting areas to consider; for example, the:

- organization or organizational changes required for ESV-IS service delivery and development;
- allocation of scarce resources among the application systems for development and maintenance activities, and operations and administrative activities; and
- setting of maximum and minimum expenditure levels for the applications systems, regional service centers, and other components of ESV-IS.

For instance, policies impacting organization may include; (1) where the ESV-IS development function will reside, (2) how regional service centers, SDE Education Data Systems Division, and a central development group will interrelate with each other, (3) how major projects will be staffed and organized, and (4) what coordinating entities will be established. Policies affecting the allocation of scarce resources should provide guidelines for the means by which current and potential future projects will be funded and managed when being developed and later implemented. The policy (or policies) may state the desired attributes of any proposed projects. Finally, policies concerned with expenditure levels - the benefits or expected results at different levels of spending - should exist. The ESV Computer Council should consider issues of hardware capacity, staffing, operating costs, and overhead costs for different levels of operations and desired results.

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### SET PRIORITIES

The next step in the long-range strategic planning process is the setting of general priorities that reflect both the needs of education as a whole and the needs of each of the individual organizational units. Priorities should be determined by the same planning task force that defined the goals and objectives for recommendation to the ESV Computer Council. At this planning level, priorities should be considered general guidelines and not be subject to change based on the results of subsequent operational planning activities.

#### ASSEMBLE LONG-RANGE STRATEGIC PLAN

The final step in the process is the assembly of the plan components. The single document will include the systems architecture, the goals and objectives, the alternative strategies for the objectives, and estimates of the resources required. Section VI presents a suggested Table of Contents.

#### PREPARE OPERATIONAL PLANS AND BUDGETS

Operational planning is the process of identifying specific projects and allocating the resources needed to implement the strategies to achieve the objectives. Operational planning should address the shortest period worth considering, which is traditionally one year but may be more or less as the circumstances warrant and policy permits (such as a biennial budget).

### Identification and Allocation of Resources

When attempting to allocate resources to the implementation of the strategic plan, planning participants must give careful consideration to a wide variety of constraints including:

- hardware resources;
- personnel resources;

**STATE BOARD Develop and Adopt** Long-Range Approve an ESV-IS OF EDUCATION Strategic Plan **Operational Plan** Long-Range Plan ESV-IS **ESV COMPUTER** Prepare **Review ESV-IS Operational Plan** COUNCIL Long-Range Plan **Operational Plan** Annual/Biennial Assemble Annual & **Biennial Plans & Budgets** STATE DEPARTMENT **OF EDUCATION** Prepare Annual Plans and Budgets; Provide Input to the Biennial Budget Estimates **Project Requests** Long-Range Plan Prepare Annual Plans **ESV REGIONS** and Budgets; SCHOOL DISTRICTS **Biennial Budget Estimates** 

### LONG-RANGE AND OPERATIONAL PLANS RELATIONSHIPS AND RESPONSIBILITIES

- prior year and continuing commitments;
- short-term user needs for application maintenance and minor enhancements; and
- internal needs of regional service center, SDE, and the ESV Computer Council not otherwise addressed in the strategic planning process.

Operational planning translates the selected strategies into specific projects or actions and defines the specific hardware, software, personnel and other resources required to support the project. These resource requirements then provide the basis for budget preparation.

Operational planning should be performed at the project or service level, working closely with the respective users and internal management to establish realistic strategy implementation and resource plans. These plans then provide the bases for the activities of the several organizations over the next one or two years, which will coincide with both the annual plans and budget and the biennial budget.

Figure 2, on the facing page, illustrates the responsibilities and relationships among the various participants for the long-range and opera-tional planning efforts.

#### Biennal Budget

State government organizations, such as the State Department of Education, and affiliated agencies, are required to prepare and submit to the Governor, and subsequently the Legislature, program plans and budgets for two-year periods (bienniums). The State of Minnesota biennial budget process provides the important means and system for completing operational plans and an opportunity to reconfirm the long-range strategic plans.

#### Annual Plans and Budget

School districts, ESV Regions, SDE, and the ESV Computer Council should also develop annual plans and budgets. Each successive level in the ESV-IS hierarchy should be asked to contribute to the plans and budgets of the next ESV COMPUTER COUNCIL ESV-IS MEASUREMENT AND CONTROL INTERFACES



higher level. The contributions of all affiliated parties will provide the necessary inputs to produce an annual ESV-IS plan and budget.

As a means of exercising control over the ESV-IS resources and results, the ESV Computer Council should encourage the SDE Education Data Systems Section to assemble the annual plans and budget in two parts: (1) current operations and (2) proposed operations. The current operations component, prepared by each ESV Region, the Central Development Group, and SDE, should present the plans and budgets for activities and projects currently being performed. The proposed operations component, also prepared by each organization, should present plans and budgets for proposed new and additional activities and projects which are future-oriented and would provide new ESV-IS capabilities. This approach, which could also be used with the biennial budget, should enable the State Board to exercise control over the use of and concentration of resources to attain the desired results and to consider new opportunities.

#### MEASUREMENT AND CONTROL

The final process, measurement and control, is the responsibility of the ESV Computer Council. Using data provided by the project control system, project status reports, expense reports and resource trend data, the ESV Computer Council staff should periodically compare planned and actual results and suggest adjustments to the ESV Computer Council.

The recommended adjustments will be of two types: adjustments to the plan implementation and adjustments to the plan. Both are to be expected since the long-range plan is merely an interim report on a continuing process that is subject to periodic changes in circumstances and needs.

The measurement and control activities, and their relationship to planning and implementation, are graphically presented in Figure 3 on the facing page.

#### III. RESPONSIBILITIES OF PLANNING PARTICIPANTS

Effective planning requires a significant commitment by every organizational unit affected by the plan. The ESV Computer Council, as the principal architect, clearly has the greatest responsibility. However, all organizational units should be prepared to participate in the process to ensure plan viability and to properly represent their respective special interests.

#### STATE BOARD OF EDUCATION ("STATE BOARD")

The State Board has ultimate responsibility for the planning process, as described in the following statute:

> The state board, with the advice and assistance of the ESV Computer Council, shall develop a long-range plan for providing administrative data processing to elementary, secondary, and vocational school districts, the department of education, and the legislature. In developing the plan, the state board shall consider at least the following: desirable major enhancements to the ESV-IS and SDE-IS; new system development proposals; new or modified approaches to provide support services to districts; the responsibility of regional management information centers to provide reports to the department on behalf of affiliated districts; and related development and implementation time schedules. The long-range plan shall address the feasibility and practicability of utilizing microcomputers, minicomputers, and larger computer systems. . . . The plan shall be updated by September 15 of each even-numbered year. The longrange plan shall consist of one document and shall incorporate the systems architecture plan and all relevant portions of previous documents which have been referred to as the state computing plan. (Minnesota Statutes 1980, Sec. 121.931, Subd. 4)

As part of the long-range strategic plan, the State Board must include the ESV-IS systems architecture, as specified by the following statutory provision:

> The state board, with the advice and assistance of the ESV Computer Council, shall develop a systems

architecture plan for providing administrative data processing to school districts, the Department of Education, and the legislature. In developing the plan, the State Board shall consider at least the following: user needs; systems design factors; telecommunication requirements; computer hardware technology; and alternative hardware purchase and lease arrangements. . . (Minnesota Statutes 1980, Sec. 121.931, Subd. 3)

#### ESV COMPUTER COUNCIL

As an entity of the State Board, the ESV Computer Council has a major responsibility in the planning process, based on the State Board's statutory responsibilities, previously quoted, and the following statutory provision:

Pursuant to section 121.931, the ESV computer council shall advise and assist the state board in:

(1) the development of the long-range plan and the systems architecture plan;

(2) the development of applications software for ESV-IS and SDE-IS;

(3) the approval of the creation and alteration of regional management information centers;

(4) the approval of the use by districts of alternative management information systems;

(5) the statewide applicability of alternative management information systems proposed by districts; and

(6) the approval of annual and biennial plans and budgets of regional management information centers; and

(7) the monitoring and enforcement of compliance with data standards. (Minnesota Statutes 1980, Sec. 121.931, Subd. 7)

#### LONG-RANGE PLANNING TASK FORCE

Long-range strategic planning may be more effective, especially in preparing an initial plan, when selected representatives of the affiliated organizational groups form and participate in a planning task force. The task force is primarily responsible for assisting with development of the long-range strategic plan. This approach should bring to the process a global perspective of ESV-IS, the environment, and the needs of users, that will be conducive to formulating appropriate goals, objectives, and priorities consistent with the expected circumstances and situations.

The ESV Computer Council should appoint the planning task force, preferably consisting of not more than ten representatives of the affiliated organizational groups. Operating as a subordinate unit of the ESV Computer Council, the Long-Range Planning Task Force will need a concentrated sixmonth effort to produce the initial long-range plan.

#### STATE DEPARTMENT OF EDUCATION

Once the system direction has been established by the long-range strategic planning process, SDE Education Data Systems is responsible for developing operational plans for SDE. The operational plans should identify current and anticipated SDE projects, the reporting requirements of the Legislature, Federal government, and divisions of SDE, SDE-IS needs, and the resources associated with each SDE project or reporting task.

SDE has responsibilities associated with preparation of the operational plans and budgets. The SDE Education Data Systems Section, working with the ESV Computer Council staff, should specify the format for annual plans and budgets and assemble the individual ESV Region plans and budgets into a single document for submission to the State Board and the ESV Computer Council. In the preparation of the biennial budget estimates, SDE should assemble the data into a single document representing the ESV-IS related budget requests.

#### ESV REGIONAL BOARDS

The ESV Regional Boards, under which regional service centers operate, are responsible for developing operational plans, consistent with the ESV-IS long-range strategic plans, for implementation of the strategies as they relate to the ESV Regions, regional service centers, and affiliated districts. The ESV Regions, during implementation of the operational plan, should provide the Computer Council with measures of actual performance against plans and recommendations for plan adjustments.

#### SCHOOL DISTRICTS

Since all school districts in Minnesota are users of ESV-IS systems at least of the accounting system (ESV-FIN) - they should be encouraged to provide their respective ESV Regional Boards with their plans and budgets for data processing. These plans should include district-defined information requirements and service delivery options. These will be an important user contribution to the planning process.

#### CENTRAL DEVELOPMENT GROUP

The Central Development Group, proposed in the <u>Systems Architecture</u> <u>Plan</u>, should contribute to the planning process. Although some of their work efforts will be included in the plans and budgets of the ESV Regions, the Central Development Group will provide other services to the composite ESV-IS community which will not be dedicated to a single ESV Region or school district user. Input on expernal environmental factors (such as technology, automation opportunities, and cost saving options) should be provided by the Central Development Group.

#### LEGISLATIVE COMMITTEES

The several legislative committees responsible for educational matters - House Appropriations and Education Committees and Senate Finance and Education Committees - should be requested to maintain a current version of their information needs document which was initially developed in 1980.

Figure 4

### **ILLUSTRATIVE DOCUMENTATION**



#### IV. DOCUMENTATION

There are two basic products of the comprehensive planning process, although there will likely be more than two documents. The two products are:

- a long-range strategic plan; and
- an operational (annual and biennial) plan and budget.

A suggested table of contents for the long-range plan is presented in the last section of this document (Section VI).

Sample documents, illustrated in Figure 4 on the facing page are provided for use in developing the individual components of the long-range plan. Table I of the Appendix includes a sample set of documents. Although sample formats are presented, other formats may be used. The content is more important than the format.

### PLANNING METHODOLOGY



The planning process undertaken to produce the initial long-range strategic plan for ESV-IS will differ from subsequent efforts.

#### DEVELOP INITIAL LONG-RANGE PLAN

There are several approaches to consider when initiating a long-range planning process. Three principal approaches, although not mutually exclusive, to launching the planning effort are identified below.

- 1. activate a planning task force to draft an initial version of the plan.
- 2. prepare a staff written plan.
- 3. retain outside professionals to prepare the plan.

Because of the somewhat decentralized and diversified nature of the affiliated organizations, the utilization of a planning task force approach has merit. This approach, which should be used for both the initial process and subsequent efforts, should be a valuable assist to getting reliable, representative inputs from the several affiliated organizations.

#### MONITOR AND MAINTAIN THE LONG-RANGE PLAN

It is often assumed that long-range planning should be tied to an annual update process. However, since long-range plans address broad goals which should remain essentially unchanged in the short-term, a biennial review and update of the plans should be suitable as a regular monitoring practice. Major changes in the long-range goals stemming from changes in technology, environmental factors, ESV-IS purpose, and legislation will dictate changes in the plan.

#### Methodology

The long-range planning methodology which follows (and is illustrated in Figure 5 on the facing page), provides a sequentially phased process to develop the plan. The architecture plan is a critical component of the total long-range planning effort.

The seven-phased methodology is as follows:

- 1. Develop planning guidelines, assumptions, and timetable for distribution.
- 2. Complete inventory of present resources:
  - Equipment
  - Software
  - Personnel
  - Other assets
- 3. Identify and assess the environmental factors external and internal - which may influence the educational community and data processing service delivery.
- 4. Analyze (determine) future managerial requirements for information systems and identify user needs.
  - Information needs of management
  - User requirements analysis
  - Projected demand and/or services
- 5. Plan development
  - a. Define goals for ESV-IS which are consistent with the system purpose.
  - b. Establish objectives to satisfy the goals and purpose of ESV-IS.
  - c. Identify alternative strategies to achieve each objective.
  - d. Assess alternative strategies.
  - e. Assign each strategy to one or more organizational units.
  - f. If multiple assignments, designate primary organizational responsibility.
  - g. Categorize all current and planned tasks and activities into operational elements and review to assure consistency with strategies and objectives.
  - h. Prioritize operational elements and establish timing of expected results.

V-2

### LONG-RANGE (STRATEGIC) PLANNING (AN OVERVIEW)



- i. For each organizational unit involved, assign appropriate operational elements.
- j. Use operational elements as basis for generating organization unit and individual work plans.
- k. Determine resource requirements for each alternative strategy (and operational element).
- 1. Determine impact of alternative strategies (and operational elements) on other areas such as organization, personnel, procurement practices, and inter-organizational relationships.
- 6. Assemble the long-range plan.
- 7. Review and adopt the long-range plan.

Figure 6, on the facing page, provides an illustrative overview of the planning process.

This methodology will be useful for several reasons, including:

- 1. Ties strategies to goals and objectives.
- 2. Pinpoints organizational responsibility to support assigned strategies.
- 3. Creates a plan of action to support each strategy by performing operational elements during a given time interval, producing results which support the strategy and fully or partially achieve the objectives.
- 4. Integrates both functional and organizational responsibilities without redundancy of effort, resulting in efficient use of ESV-IS resources.
- 5. Ties out to organizational unit and individual work plans.
- 6. Ties to project management control systems.

### **PLANNING CYCLE**



### TIME SCHEDULE

The planning process is a continuous cycle with periodic increases in activity for purposes of report preparation. The cycle, graphically presented in Figure 7 on the facing page, coincides with the State's biennial and annual budget schedule.

The only critical dates in the planning cycle are those imposed by the annual budget preparation process, which occurs during the third fiscal quarter, and by the biennial budget process. Backing up from these dates, we find the strategic planning process and strategic plan development commencing in the first quarter, the strategy identification and evaluation and strategy assessment preparation taking place during the second and third quarters, with the operational planning process and plan preparation commencing at the end of the second quarter, in time to satisfy the budget deadlines.

V-4

### VI - SUGGESTED FORMAT AND CONTENTS OF LONG-RANGE PLAN

Management Summary

- 1. Introduction
  - A. Historical background
  - B. Objectives of Long-Range Plan
  - C. Description of approach
- II. Description of available Computer Hardware Configuration and Major Software Systems
- III. Data Processing Needs of the Users
  - A. Software
    - 1. Development
      - New administrative systems and programs
      - New educational systems and programs
      - New analytical modeling efforts
    - 2. Maintenance and modification of existing programs
    - 3. Conversion of programs
    - 4. Cost and manpower requirements estimates
  - B. Terminals
    - 1. Requirements for types, speeds, and numbers in various locations
    - 2. Estimated costs
  - C. Communications
    - 1. Network configuration (modems, multiplexers, and lines)
    - 2. Estimated costs

#### IV. Systems Architecture

- V. ESV-IS Goals and Objectives
  - A. Charter
  - B. Environmental Factors
  - C. Goals and Objectives
    - Goal(s)
    - Objectives for each goal
    - Alternative strategies for each objective
  - D. Policies

- VI. Implementation Schedule
  - A. Schedule and time phasing of projects
  - B. Deployment of teleprocessing network
  - C. Checkpoint milestones

VII. Estimation of Resource Requirements

- A. Personnel
- B. Equipment
- C. Facilities
- D. Education and training
- E. Services
- F. Other

VIII. Updates and Revisions of the Long-Range Plan

### APPENDIX

### TABLE I

### SAMPLE SET OF DOCUMENTS



GOAL I - Statement of	f the goal.	
OBJECTIVES	MEASURES	
I.A		
I.B		
I.C		
I.D		
I.E		
•		

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## **Objective I.A. - Statement of the objective**

# <u>STRATEGIES</u> I.A.1 I.A.2 I.A.3 I.A.4

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Organizational Units Involved

SB	СС	TF	SDE	REGS	CDG	LEG				
x	8	×								
		-	x	x	8					
x										
-										
		LEGE	END:	· • • • • • • • • • •	••••	•••••				
		SB	Stat	State Board of Education						
		cc	ESV	ESV-IS Comp. Council						
		TF	: Lon	Long-Range Planning Task Fr.						
		SD	E Stat	State Dept. of Education						
		RE	GS ESV	S ESV Regional Boards						
		CD	G Cent	Central Devel, Group						
		LE	G Legi	Legislative Commission						
	•••••••••••••••••••••••••••••••••••••••									
		×	Prim	nary Orga	nization					
		×	Invo	lved Orga	anization					
			No i	nvolveme	ent					

I.A.n

**OBJECTIVE (No.)** - Statement of the Objective

### STRATEGY (No.No.) - Statement of the Strategy

OPERATIONAL ELEMENT		Organizational Units Involved						<b></b>
		СС	TF	SDE	REGS	CDG	LEG	Liming
I.A.1.1 Define	x	x	×	x	×	_		
I.A.1.2 Establish	-	-	-	x	x		x	4Q82 or Date
I.A.1.3								
BUDGET	Year	0 `	Year 1	Year	2	lear 3	Year 4	4 Year 5
0 Personal Services								
1 Expense/Contractual Services								
2 Travel and Communications								
3 Supplies and Materials								
4 Equipment								
TOTAL								