

# STRATEGIC PLANNING

New Jersey's Vocational  
Education Strategic  
Planning System:  
An Overview

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### 1. Introduction

In September of 1970, the New Jersey Division of Vocational Education initiated a three-year project to design and install a strategic planning system for the use of the Division and those LEA's (local educational agencies) in the state that operate vocational-technical programs. Assisting the Division in this project are Edison Township School District, Somerset County Area Vocational Technical School, Linden Area Vocational Technical School, Lower Camden Regional Area Vocational Technical School, and the N.J. Vocational Technical Education Curriculum Laboratory located at Rutgers University. The systems development consultants to the project are staff members of Government Studies & Systems, Inc., a research and consulting firm in Philadelphia.

The goal of the project is to develop two related systems: first, a system to assist the Division in the selection and creation of new projects and levels of financial support for programs in the LEA'S; and, second, a system adaptable to each LEA, to assist it in analyzing what is needed — in curriculum, staff, facilities, money, etc. — to achieve the vocational education goals of the community. Through interactions between the Division's and the LEA's planning activities, it is believed that the resources available to vocational education will be invested in ways that best serve local and state objectives.

This paper is one immediate result of the development of this project. Special appreciation is given to the Government Studies and Systems, Inc. for making extensive contributions to the basic concepts and the figures used in this paper.

### 2. The Planning Process: A Systems Approach

Vocational education planners are concerned with predicting the future consequences of changes made now in the types and levels of vocational education programs that are offered, and, to the degree possible, finding ways to produce those future results that the policy makers want to achieve. Instead of waiting until after a decision is made to assess its effective-

ness, the planner attempts to evaluate alternatives before they are implemented, and to forecast the differing educational benefits and costs that are likely to occur in the future as a result of what is decided today. This is called "strategic planning."

Strategic planning differs somewhat from the kinds of educational program management that are most familiar. Strategic planners, for instance, try to think in terms of several years, rather than one or two years, and, most important, strategic planners are concerned with results and outcomes, not just expenditures. The strategic planner does not ask:

How many teachers will I need to meet my enrollment next year?

He is more likely to ask:

What is the most economical way to double the current number of graduating auto mechanics by 1976? And what staff, facilities, and equipment will we need (at what cost) to achieve that objective?

The "systems approach" is a way of thinking about the planning process. In systematic educational planning, the purposes and goals of vocational education are expressed as specific measurable events. Once the policy makers have agreed to these specific goals, the planners and program developers generate designs or proposals for different ways of achieving the goals; then, assisted by the electronic computer, various combinations of alternative designs are analyzed as to their probable costs and probable success in achieving the goals. Then, given the constraints of money and feasibility, the most economical alternative (i.e., the one which achieves the goals in the least expensive way) is recommended for implementation.

Strategic planning is not primarily a way of saving money, but, rather, a way of selecting that course of action which achieves the greatest proportion of the goals that is possible, for any given level of expenditure.

### 3. Setting Goals and Objectives

In the New Jersey Vocational Education Planning System, at both the state and local levels, goals are defined as general aims and purposes, while objectives are the specific results which the agency wishes to achieve. Objectives are stated in terms of indicators, or measures of the output of vocational education programs. Among possible vocational education indicators are:

- Numbers of graduates/career programs
- Percentage of graduates finding employment in expected occupations
- Proportion of certain special groups (e.g., disadvantaged, handicapped, etc.) receiving vocational instruction

- Proportion of vacant job positions being filled by vocational school graduates.

The actual indicators to be used by the Division and LEA's will vary as a function of unique areas of interest, or changes in the environment (new job categories, for instance).

Objectives are set at specific levels on the indicators. In order to do systematic planning, it is necessary to say specifically the desired results. For instance, an agency must do more than say it wishes to raise the number of electronics technicians it wishes to graduate, it must say how many and by when. Further, the various objectives must be arranged in a priority order.

#### 4. Developing A "Base Case" Plan

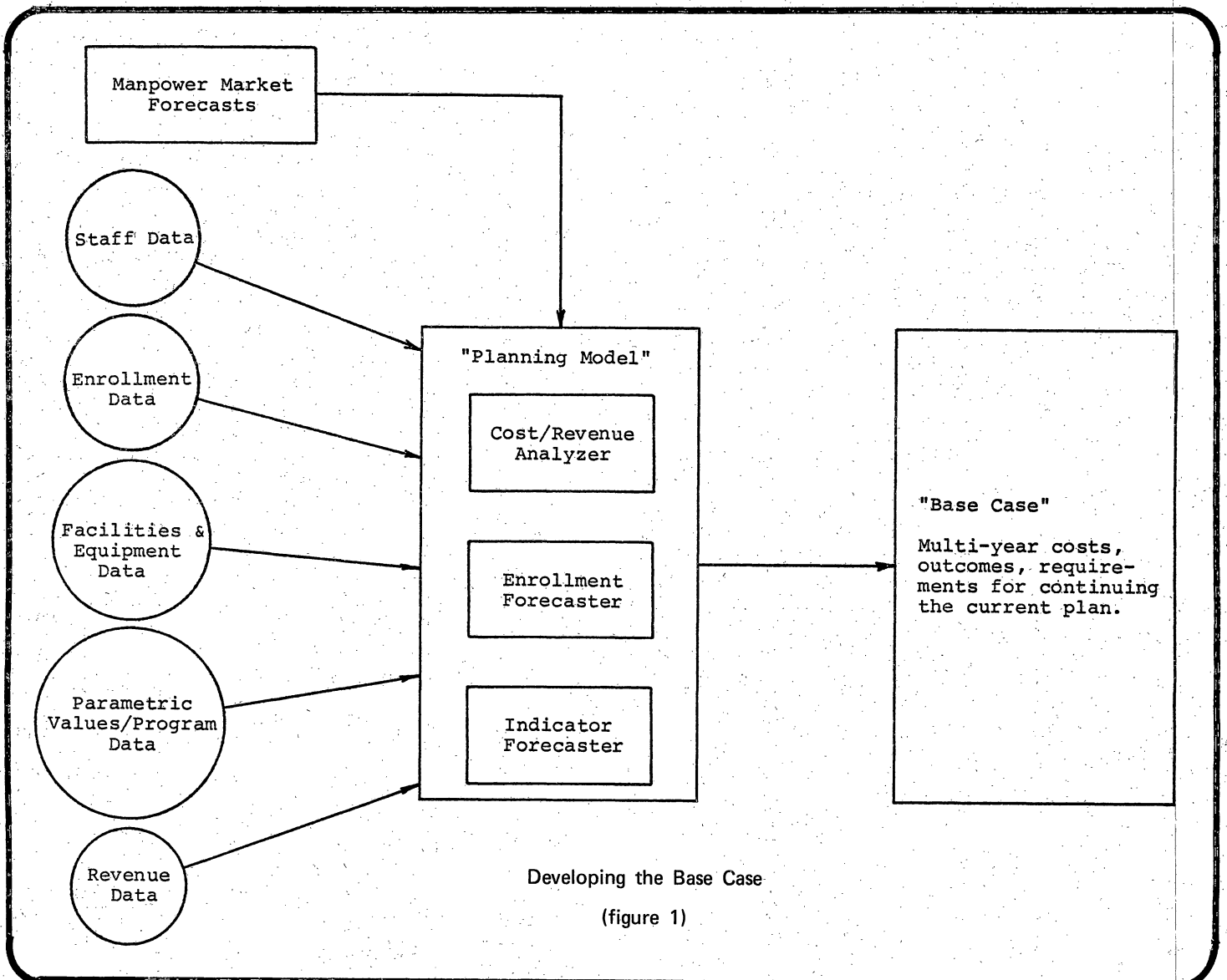
In theory, it is possible to set goals and objectives, and create completely new programs every year. In practice, however, it is impossible to ignore programs that are already in operation or approved. Thus, the first analysis in the planning process is a consideration of what is likely to happen in the future if currently approved plans and programs are allowed to continue without change. This is the first plan or "base case"

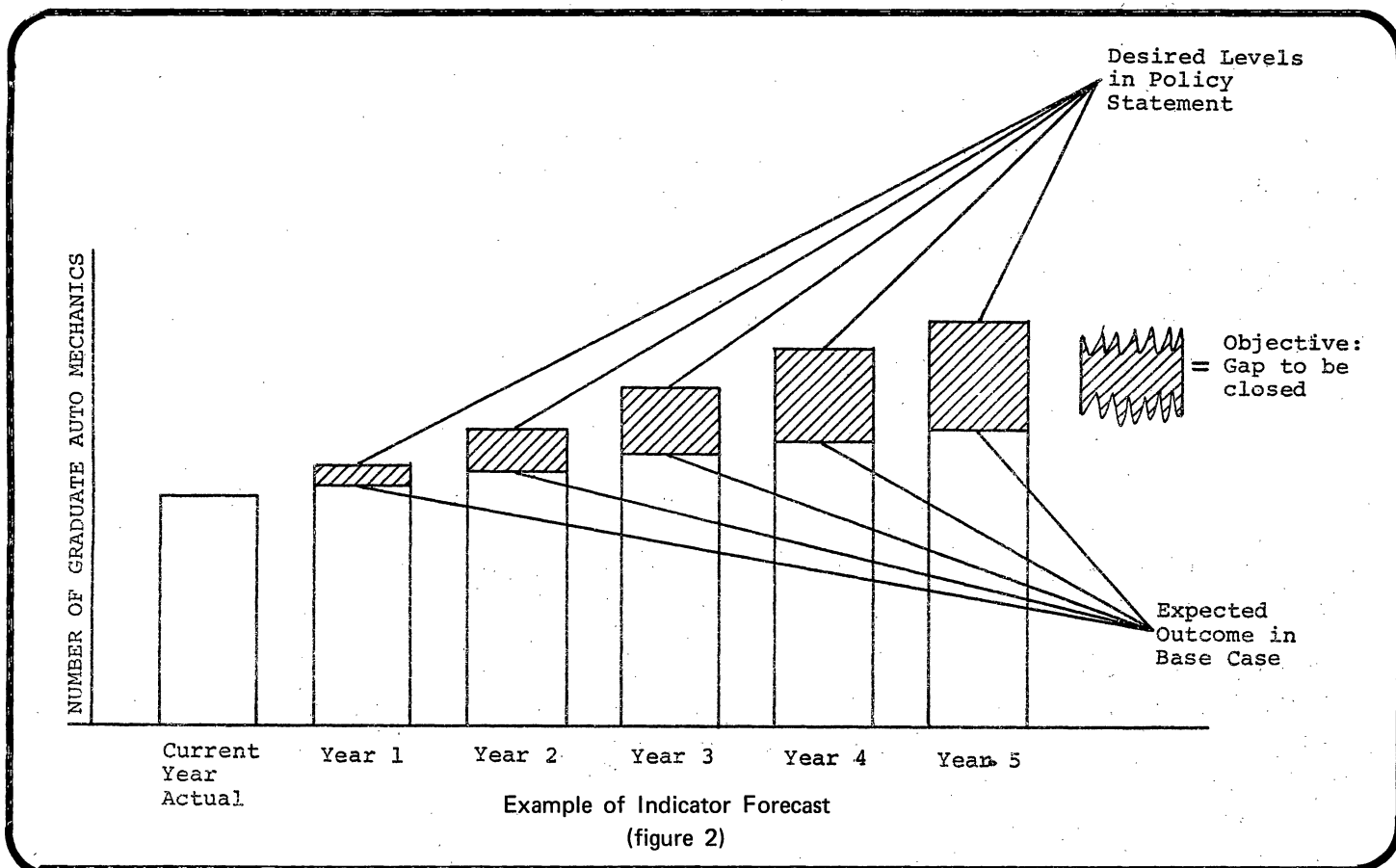
to be considered.

The base case is generated by collecting data from the current year operation. Included are enrollment data, cost disbursements by program, revenues by source and program, staff, facilities, equipment by program, parametric values by program (such as class size, courses and periods in each program, salary rates, etc.), and the current levels on the indicator scales. This input data is fed into the "planning model" as a set of computer programs which forecasts changing levels of cost and effectiveness resulting from enrollment changes and inflation rates.

The base case provides, in a compact form, several valuable kinds of data. It forecasts the teachers and facilities needed to accommodate changing enrollments, the costs of operating the current programs in the future (which will probably rise), the revenue deficits (if any) that will occur, and, the gaps between the expected levels of the indicators and the desired levels.

Included in the "base case" plan are predictions of the degree of student demand that can be met with the current level of programming, and also the percentage of the job opportunities (manpower forecasts) that will be filled by the graduates. (see figure 1)





The policy formation process is mainly an evaluation of the view of the future presented in the base case, determining whether that possible future is acceptable, and if not, what would be more desirable. The policy statement is either an approval of the prior plan (the base case), or a new set of objectives, priorities, and constraints.

Most important is an assessment of whether the current programs will result in indicator levels as high as desired. Any gap will require the addition of projects, or program changes to the existing plan. (see figure 2)

In addition, desired levels may be revised, or priorities among the existing objectives may be altered.

## 5. Evaluating Alternative Courses of Action

At this stage, planners and program developers collect or create proposals for changes in programs, or new programs and projects. Needed are estimates of cost (staff, facilities, etc.), number and type of students to be served, and predicted impact on the indicators. This data is added to the input that fed the base case. Various combinations of proposals are entered "as if" they were approved projects, and the planning model generates multi-year plans which include the new alternatives. These alternative plans have the same general format as the base case, but the data now shows what will probably happen to costs, staff, facilities, indicators, revenues, etc., if the proposed changes are accepted.

Thus the final output of the system is several alternative plans, each containing the data required to evaluate them in advance. The planners may then rank the alternatives according to their predicted effectiveness (in terms of closing "gaps") and select the most desirable course of action which is both economically and politically feasible.

The system allows the planner to answer his "What would happen if . . ." questions. It does not make decisions for him, but it gives him the information he requires to make good decisions. (see figure 3)

## 6. Assessing Past Decisions

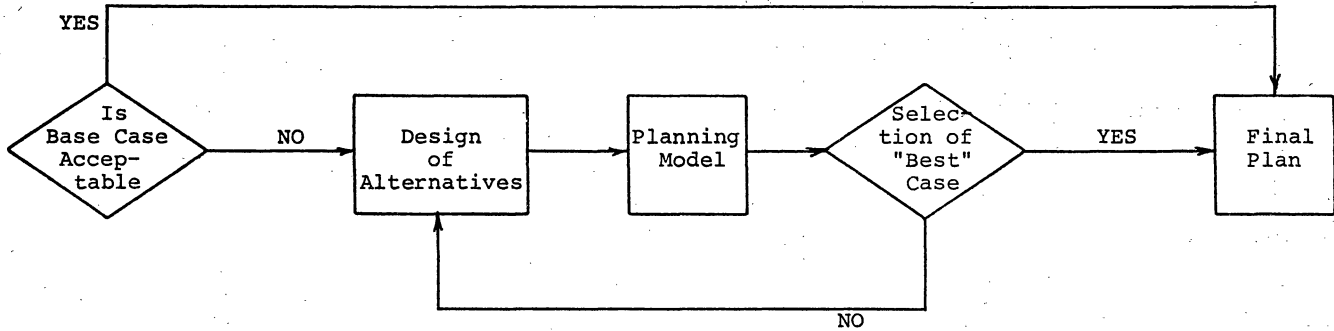
Strategic planning is multi-year, but the process is repeated each year. In this way errors of prediction and forecasting can be corrected, and, more important, planners can adapt to changes in the environment that affect the student. In the Vocational Education Planning System, all past decisions are evaluated. Expenditure is related to outcome, thus raising the accountability of decisionmakers. When changes need to be made, they can be made in an orderly, evolutionary way.

## 7. Accountability for the Future

At all levels, vocational education is attempting to maximize results, justify funding, and develop necessary legislation through long-range planning.

Realistically, the job of planning will not be easy or immediately popular. Definitions and interpretations will probably continue to frustrate the planning process from the technical side. The conservatism of some educators toward planning systems will hopefully be a diminishing factor from the human side.

The results of planning vocational education programs will have to be experienced in terms of benefits to students and to our society before many administrators or teachers can become enthused about planning systems. However, such planning systems offer a key tool for educators to be accountable for both material resources and human resources. It is the way to go.



Simplified View of the Planning Process  
(figure 3)

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