

CASE STUDIES: DIFFERENT APPROACHES FOR DEFINING PROGRAM GOALS

Darwin G. Stuart
Chicago Transit Authority

INTRODUCTION

More thorough and systematic approaches to capital/maintenance project programming in transportation proceed logically from a more careful consideration of the goals set for these projects. More explicit, quantitative treatment of transportation goals and objectives has, in fact, been pursued in recent years from several different perspectives: as a part of carrying forward the required management systems specified under ISTEA, to enable meaningful system performance monitoring, as a part of goals-directed strategic planning/management, to assist in formalizing the inputs of multiple public agencies and community groups in transportation planning and decision-making, as a basis for strengthening multimodal and intermodal planning, and in other ways.

Experience has shown, however, that, though formal consideration of goals/objectives represents a logical starting point for improved programming procedures, this can be accomplished with varying degrees of completeness.

- In some instances, goals/objectives are only implicitly employed, rather than explicitly treated.

- In many cases, precise quantitative measurement of goal-achievement is not possible; qualitative and judgmental estimates are necessary.

- Competition between goals quickly enters the process, with complex trade-offs of one against another required.

- The number of goals requiring consideration can grow quickly, leading to the development of hierarchies or networks, and associated complexities in defining relationships.

- While goals can clarify the different agendas which multiple participants in planning/programming bring to the table, they can also exacerbate tensions and conflicting points of view.

The purpose of this paper is, through the examination of several examples from highway planning, transit planning, and multimodal planning,¹ to explore the role of more systematic treatment of goals and objectives in improving transportation programming processes. Comparison of these examples quickly shows that there are many different approaches to the topic, and certainly no one can be singled out as "correct."

In fact, connecting to the broader planning/management structure of the agency or agencies involved, and meeting the informational needs of the political decision-making processes which ultimately implement plans and programs, are the major determining factors regarding the "fit" of systematic goals identification. A major theme in comparing the case studies is the extent to which they employ "process-oriented" goals vs "product-oriented" goals. The former mainly address the administrative side of implementing transportation projects, while the latter attempt to bring in the socio-economic/environmental functions, services, and impacts involved.

CONCLUSIONS

As a logical kick-off point for state, regional, and metropolitan transportation programming efforts, more effective and meaningful goal-setting is far from a trivial exercise. As the examples reviewed in this paper show, there are many dimensions by which goal-setting can vary, including number of participants, range of concerns and impacts addressed, complexity by which goals are interrelated, all of the technical and judgmental problems associated with criteria for measuring performance in achieving goals, the manner in which goals and objectives are themselves employed in designing alternatives, and, similarly, the role of goals/objectives/criteria (and associated analysis methodologies) in evaluating alternatives. Many procedural and methodological decisions must be made, explicitly or implicitly, in using a goal-setting process to inaugurate or recycle a transportation programming effort.

A suggested checklist for good goal-setting:

- Reflect the concerns of both *users and non-users* who may be significantly impacted by transportation facility construction/operation.

- As a result, offer as well the opportunity for *interagency and community group participation* in goal setting.

- Consider explicitly the *measures/criteria* which may or should apply in operationalizing goals assessment.

- Depending upon the complexity which emerges, utilize goals/objectives/criteria *hierarchies* as appropriate, to show interrelationships and priorities.

▪ In general, there is an ongoing need to step back from traditional supply-oriented performance measures to ask, "What difference do these measures make to system users?", and to explore supplemental measures and goals that relate more directly to user (and non-user) benefits and costs.

▪ Give particular attention to how *comparative mobility* delivered by alternate modes can/should be defined and measured.

▪ Where *qualitative measures* are indicated, give thought to how and by whom judgmental estimates of service quality/costs/indirect impacts will be made.

▪ At least begin to anticipate implications for the ensuing *process of analysis/forecasting* of the impacts of transportation alternatives.

-Travel demand forecasts

-Indirect impact analyses

-Life cycle cost analysis

-Travel time savings and value of time analyses

▪ Also begin to anticipate the data and judgment needs of the ensuing process of *evaluating transportation alternatives*.

-Assigning relative weights to goals/criteria

-Accommodating conflict and trade-offs among goals and objectives

-Deriving single summary scores, such as cost-effectiveness indices or other cost/performance measures, for alternatives

-Accommodating the substitution of alternative projects at the cost/effectiveness trade-off margin, given that a budget limit has been reached

▪ *There is no single best method for goal-setting*, particularly given the different scales of planning (regional, corridor, project, etc.) and levels of detail at which planning may be done.

▪ *Much discretion consequently remains* to state, regional, and local participants in goal-setting for transportation planning/programming — and effective interaction among participants in achieving this is its own additional benefit.

¹ Nine of the 16 case studies and/or research reviews dealt with multimodal planning examples, six involved transit planning examples, and one addressed highway planning/programming. Three multimodal reviews were drawn from recent TCRP/NCHRP research efforts, four examples involved site-specific regional or state planning, and two involved suggested conceptual approaches. Of transit planning examples, three were of a review nature, two cite a specific example, and one a conceptual approach. A site-specific highway planning example was also included.