Solving the Suburban Mobility Problem: Two Case Studies in the Application of Collaborative Problem-Solving Techniques

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In this paper are reviewed two transportation planning projects in which major stakeholders from both the public and the private sectors participated through a collaborative-planning or consensus-building process. Both projects took place in Santa Clara County, California, site of the burgeoning Silicon Valley. The first project, Transportation 2000, resulted in the adoption of a midrange transportation plan in a policy environment characterized by 15 separate municipal jurisdictions with a history of competition for the fiscal benefits of development and without a formal mechanism for coordination of transportation and land use policies. The second project, the Fremont-South Bay Alternatives Analysis, is taking place in a similarly complex environment. Its goal is to choose a locally preferred transportation alternative for the corridor by May 1988. The collaborative planning strategies that are assisting stakeholders in reaching agreement and making commitments to implementation are outlined. These strategies include identifying stakeholders, one-on-one interviews, information management, facilitated small-group sessions, working with the press, involving rank-and-file community members, and quantitative public opinion surveys. The paper includes a critique of both projects as a guide to others who may want to undertake such efforts.

Traffic congestion threatens the business climate and quality of life of most rapidly growing metropolitan areas in the United States and is likely to get worse. Expansion of roadway capacity cannot solve the problem. Because of topography, environmental concerns, and other factors, not enough additional lanes on freeways can be built to meet demand.

Other approaches to capacity expansion are needed: transitways and high-occupancy-vehicle lanes, rail systems, and bus system improvements. However, there are problems with transit underutilization and lack of public support for expensive transit-related capital investments.

Demand management is also required: major employers must share the responsibility for reducing solo automobile use. Parking policies must be reexamined. Yet many employers and key participants in land development resist these changes.

The congestion problem originates in the sheer pace of job creation and residential development. It stems from an attachment to "the suburban lifestyle," the nearly universal preference for the detached, single-family house located a substantial distance from the site of employment. The problem is evidenced by the absence of convenient alternatives to solo automobile use. It is compounded by the lack of intergovernmental coordination of transportation and land use policies at the regional level.

WHY THE PROBLEM PERSISTS

Local governments fail to solve transportation and other critical problems because

- Participation in the problem-solving process is not broad enough. Too many stakeholders—those with the ability to make or veto decisions—do not actively and directly involve themselves in the problem-solving process. Leaders from the private sector, user groups, and contiguous governmental jurisdictions must be part of the process. There is a need for increased public- and private-sector partnership, greater user involvement, and more effective intergovernmental coordination if these types of problems are to be solved.
- No mechanism exists for consensus building. There is no forum for communication and coordination among the many participants in the process. Yet broad support is critical if any solution is to work. Regional government or the creation of other new, formal institutions is not perceived to be the answer.
- True problem solving is not the explicit goal. Frequently, there is no problem orientation, no shared definition of the problem. Too often participants are content to merely issue lengthy planning documents instead of taking concrete steps to actually solve problems.

Ideologies get in the way, as do communication patterns and leadership styles. As a result, problems persist. The usual linear approach to problem solving is to sequentially separate planning from the processes of building support and implementing solutions. The major difficulty with this approach is that those who are left out of the process or who lose out can block or delay the implementation of any plan of action.

It is no secret that this conventional linear approach is not working. In transportation, toxic waste management,
education, and a variety of other public policy areas, the more planning is done, the worse things appear to get.

Don Michael (1), an influential critic of traditional planning and governance models, describes the problem as one of reconciling current trends toward decentralization, autonomy, deregulation, and community-based self-help with the recognition that problems are really systemic in nature.

According to Michael, public policy problems increasingly cannot be resolved within the usual frame of reference. To what single jurisdiction can responsibility for solving transportation problems be assigned? Obviously, what one jurisdiction does affects all of the other jurisdictions in the region. Allocating resources is increasingly complex because of the recognition that one generation's allocation affects the resources available to succeeding generations. Causes and effects of problems cannot easily be isolated. There is, in other words, an urgent need to review the problem holistically or systemically.

The best way to do this is to give up the modern world view in which everything is seen as separate. In its place, Michael believes that an appropriate systemic view needs to be adopted: Organizations and individuals must see themselves more as 'part of' rather than 'separate from,' especially with regard to their boundaries and their task focus—in other words, their 'turf.' Autonomy should be regarded as variable, changing according to the task at hand, and people and organizations should regard themselves as able to accept or relinquish leadership. Pliability is more the precondition for survival than boundary and functional rigidity; the ability to collaborate leads to more control of outcomes than does the ability to dominate.

The ability to control outcomes is, indeed, quite limited, but present norms define competence in terms of the ability to control outcomes. Most planning efforts "preserve the illusion of control by hiding uncertainty." If uncertainty is acknowledged, however, there is an opportunity to redefine the meaning of competence. The competent leader is less someone who knows what to do. Instead he or she is a learner who enables others to learn. This new norm, Michael (1) believes, "transforms long-range planning from an engineering activity into a process for learning our way into the future(s)." In politics, we need to lessen our obsession with the adversarial, either/or, win/lose norm...and acknowledge that a situation is both/and, that both choices could be right or both wrong; in such cases, the sensible approach is to preserve alternatives to be tried without prejudice at a later state—without the wasted time and effort of trying to hide 'failure' or appearing to be 'right,' or the usual wasteful and demoralizing buck-passing games. When one is operating from a learning stance, one must be able to let go of or transform a commitment if it is not accomplishing what inspired it in the first place.

Michael is also critical of dependence on technical and quantitative data to define problems and possible solutions. The unquenchable thirst for "more and better data" gives rise to the illusion that the data are objective, usable, and uncertainty reducing. Indeed, they are none of these things. In a systemic world, all information is partial. It is also value loaded. Most important, no validated predictive models of social change have ever been developed. For Michael, the proper roles for the expert or technician are those of learner, educator, and process manager.

This critique is relevant to transportation problem solving for a number of reasons:

- Congestion and other transportation problems are best viewed as systemic in nature. The transportation system does not exist in a vacuum; beyond its boundaries lies a broader economic, social, political, and psychological context.

- The system for addressing transportation problems is also highly decentralized with many autonomous actors. Not only are different levels of government involved, but numerous contiguous jurisdictions throughout any metropolitan region are also affected. In addition, numerous private-sector and user interests hold a stake in the process.

- In such an environment, collaboration and consensus building have many advantages over majority vote or other adversarial decision rules.

- There is considerable uncertainty about policy outcomes and much learning to be accomplished. In transportation, the political task is, as Michael says, "to determine value priorities and to revise them as learning makes the consequences of the set of premises more clear." When there is clarity about preferred values, technical data can be used to select courses of action consistent with those values.

COLLABORATIVE PROBLEM-SOLVING MODEL

Collaborative problem solving confronts the challenge of viewing problems systemically while honoring the values of decentralization, separation of powers, limited government, and private property rights. Interest in these techniques is growing. They are being applied within organizations that need to increase productivity and manage rapid change. A number of localities have embarked upon strategic planning projects that are consensus based and collaborative in nature.

Richard Bradley (unpublished material) has identified the following general principles that are common to most collaborative problem-solving approaches:

- They are consensus based. Because any party has the power to block a decision, these projects avoid majority voting in favor of consensus-based decision making.

- All of the stakeholders must be involved. If all of the parties with the power to influence the outcome are part of the process, it is more likely that implementation will proceed quickly. In transportation, these parties include local elected officials, public-sector managers, executives with major-employer organizations, developers and other actors in the land development process, and leaders of user and citizen groups.

- They are problem oriented. Most of these approaches to problem solving involve working with the parties to reach agreement on the definition of the problem before moving on to discuss solutions. "In general, if parties don't agree on the problem, they won't agree on a solution."

- These approaches are interest based as opposed to position based. Typically, leaders try to keep parties from becoming locked into hard positions by getting them to articulate general interests and concerns before advancing proposals. "If parties can legitimize each other's rights and interests, it is much easier to find win/win solutions."
• Involvement of neutral third parties. “Because it is difficult to be a stakeholder/participant and a disinterested convener/facilitator at the same time, most processes can be made more effective by the involvement of a neutral third party known as a mediator or facilitator. Neutral auspices help to guarantee that all parties’ interests will be heard and that no one is trying to manipulate the process.”

Experience in Santa Clara County suggests the following additional general principles:

• In addition to neutral facilitation, there is a need for expertise in overall process design. Who meets on whose turf to discuss what agenda must be carefully planned. The way in which the project is launched, positioned, and funded is critical to securing broad-scale participation. The process must be designed by those knowledgeable about the political environment and the substantive issues being dealt with.

• Collaborative planning projects are dynamic in nature and, hence, require active management. Careful monitoring and frequent reevaluation are needed to ensure the integrity of the process. Beginning with recruitment of participants and extending throughout the process, project leaders must inspire a high level of commitment to the principles of collaborative planning.

• The principle of peer participation is important. The process works best if all participants perceive themselves to be working in groups with their peers.

• Participants must assist in designing the process in order for it to work. If the process is dominated by staff or consultants, it is likely to break down.

• Participants must agree to respect the process and not advance solutions of their own before the group’s work is completed.

• Meetings must be carefully planned to build and maintain momentum. Participants need to be consulted on agendas. Issues need to be properly focused and sequenced for group attention.

• Highly skilled facilitation is required. Facilitators must be highly skilled in collaborative problem solving, committed to the process, and have no stake in the content of the solution.

• Careful management of technical information is important. Participants are typically sophisticated consumers of decision-making information. Staff must produce planning data and analyses that are at an appropriate level of detail, understandable to nontechnicians, and concise. The material should be pretested with a small sample of key participants to be sure that it is suitable.

• Although prime participants are usually a select group of opinion leaders, some program for involving the rank-and-file public will strengthen the process. Traditional “public hearings in the auditorium” formats do not provide a meaningful opportunity for participation and are best avoided.

• If real problem solving is to be accomplished, participants need to take the time to define a common mission, clarify what concrete results they want to produce, and set standards by which to assess performance. They also need to be willing to identify barriers to accomplishment as well as strategies for overcoming the barriers. When these issues are dealt with, participants can function as an effective team.

• Collaborative problem-solving projects work best if media personnel can be encouraged to work in a new way. On-the-spot, 20-sec coverage tends to contribute to a polarization of positions. However, in-depth reporting and analysis of issues can contribute to the consensus-building effort by raising public awareness of and support for constructive problem-solving actions.

The advantages of collaborative techniques are many, including faster implementation, better solutions due to the pooling of ideas, and increased enthusiasm for future problem-solving enterprises.


Description of Project

The Transportation 2000 project, completed in early 1987, is a midrange transportation planning project in Santa Clara County, California—the Silicon Valley area south of San Francisco. The area is one of the most rapidly growing in the United States and has a worsening congestion problem. Transportation has emerged as the most salient local issue. The policy environment is characterized by 15 separate municipal jurisdictions within the county with a history of competition for the fiscal benefits of development. Only recently have attempts been successful in establishing a mechanism for meaningful coordination of transportation and land use policies, and this effort is in an early stage.

The purpose of the project has been to reach consensus on a plan for dealing with the mobility problem among top-level decision makers from the public as well as the private sector. Work has progressed through two phases: The objective of the first phase (1984) was to identify priority corridors for rail improvements before a deadline of the regional planning agency, the Metropolitan Transportation Commission (MTC). The objective of the second phase (1985–1986) has been to fill out the rest of the plan (i.e., develop a comprehensive transportation plan integrating rail, roadway, bus, and transportation demand and supply management elements).

The formal decision structure for the effort consists of three groups:

• Policy committee. This group directs the project and is composed of nine members: two county supervisors, three San Jose City Council members, three members of other city councils (one from each of three different cities), and one member from the general public. An additional three positions on the committee are ex officio and are held by one person from the MTC, one from the Association of Bay Area Governments, and one from the California Department of Transportation (Caltrans). Policy committee members are accountable to the five-member County Board of Supervisors.

• Citizens’ advisory committee. Named before the collaborative planning process was launched, this committee consists of approximately 20 members: representatives of transportation issue advocacy groups (bicycle enthusiasts, rail transit adherents, highway advocates); business and labor organizations; good government groups (e.g., the League of Women Voters);
and transit-dependent groups (elderly, racial minorities, and handicapped).

- Technical advisory committee (TAC). This committee is composed of public works and planning staff members from the 15 cities and county governments.

Description of the Collaborative Process

- Identification of stakeholders. In addition to five elected county supervisors and policy, citizens’ advisory, and technical advisory committee members, approximately 12 individuals, representing local developers and major employers, were added to the process. The rationale for the expansion was that developer and major-employer actions would be critical to solving the problem. Participants totaled approximately 70.

- One-on-one interviews. Except for TAC members, collaborative planning consultants interviewed all 70 prospective participants to elicit views on the problem, perceived causes, barriers to problem solving, and possible strategies for overcoming the barriers. The interviews were designed to elicit information, but they also began to create a context for participation in the undertaking. Participants were told that the intention was to involve top-level decision makers in an effort to solve the problem not merely discuss and analyze it. Similar one-on-one sessions were also built into the process at later stages of the project.

- Facilitated small-group work sessions. All 70 participants were divided into three small working groups of approximately 25 each. Participants were assigned to small groups randomly, except that an effort was made to ensure that each group had roughly equal numbers of private-sector leaders, government representatives, and citizen activists. A different consulting team facilitator was assigned to each of the small groups. In addition to facilitating the sessions, the facilitator’s role was to serve as a liaison to nonattendees so that, as work progressed, everyone believed that he or she was part of the process. A professional recorder and technical resource person were also assigned to each small working group.

- Public involvement. Periodically throughout the process, public work sessions were held. More than 1,000 county opinion leaders were carefully identified and personally invited to attend these sessions. The list was a broad cross section of neighborhood, minority, church, and civic leaders, most of whom had never before participated in transportation planning work.

Small groups were incorporated into the design of the public work sessions. Participants spent approximately 1 hr in a large group at the beginning of the session to gain an overview of background material relevant to the items on the evening’s agenda. They were broken into small groups (of 10 to 15 members) for 90-min discussions of the substantive issues. Each public workshop discussion group had a facilitator and recorder assigned to it for the evening. In the early phase of the project, the facilitators were volunteers without formal training or experience. In the later phase, only professional facilitators were used.

At the end of the discussion group sessions, participants reassembled in a large group for a brief closing session to complete the evening. The major purpose of the closing session was to give the entire body of participants consistent feedback on the points of view and opinions expressed during the evening. Sessions began at 5:30 p.m. and included a free light supper.

Between public workshops, participants received periodic reports and a regularly published newsletter.

- Information management. Great care was taken to develop appropriate technical analyses for process participants. Planning staff worked closely with consultants to frame public policy questions, key trade-offs, and relevant background data. Every effort was made to develop concise, easy-to-digest information at an appropriate level of detail. The material was mailed in advance to all persons who indicated that they were planning to attend a session.

- Use of quantitative public opinion survey. At the beginning and conclusion of the project, probability sample surveys of county citizens were completed in order to provide further guidance to participants. The surveys focused on public attitudes toward current policy initiatives, agency performance, evaluation of proposed new facilities, financing, and land use planning issues. Survey results provided useful data for comparison with the “portrait” of opinion gained at the public workshops.

- Media relations strategy. An effort was made to use the general circulation daily newspaper as a forum for community discussion about the traffic congestion issue. Project leaders met periodically with newspaper editorial staff to inform them about the project and substantive issues. As a result, newspaper staff developed considerable sophistication about transportation issues, which contributed to extensive and balanced reporting and analysis.

- Implementation strategy. In order to guarantee that concrete steps would be taken to implement the plan, participants were asked to define an implementation strategy. The strategy consisted of forwarding the plan to the cities for formal consideration and creation of an ongoing monitoring and oversight group.

Results to Date

The Transportation 2000 project was an experiment incorporating innovative approaches to collaborative problem solving. The process itself was a learning experience, and significant results have been achieved, both in transportation planning and in the development of the collaborative planning model. The following are some of the most significant accomplishments of the project:

- Development and adoption of a comprehensive long-range transportation plan for Santa Clara County;
- Expanded awareness of the institutional and political barriers to effective problem solving in transportation (e.g., absence of a regional mechanism for policy coordination);
- Appreciation of the need for an integrated, multimodal transportation system that offers choice and maximizes convenience in order to attract users;
- Consensus among leaders on new rail, bus, and roadway facilities needed in the medium term (through the years 2000–2010);
- An increased commitment to take steps necessary to solve the problem, including a willingness to levy additional taxes;
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- Extensive public involvement in the planning process (more than 1,300 people attended 35 separate public work sessions);
- Increased media sophistication, coverage, and analysis of transportation and related issues; and
- Openness to future collaborative problem-solving processes including the recently established Golden Triangle Task Force, which is seeking to devise collaborative transportation demand management programs involving a number of municipalities.

CASE STUDY: FREMONT–SOUTH SAN FRANCISCO BAY ALTERNATIVES ANALYSIS AND ENVIRONMENTAL REVIEW

Description of Project

The Fremont–South Bay Alternatives Analysis, funded by the Urban Mass Transportation Administration (UMTA) and led by the MTC, the Bay Area’s transportation planning agency, is an attempt to determine the most viable transit solution to worsening congestion in the Fremont to Santa Clara County transportation corridor in the South San Francisco Bay area. Work trips are projected to double in this corridor from 78,000 per day in 1980 to 144,400 per day by the year 2000. Although planned roadway improvements are expected to provide some relief, planners have concluded that it is not feasible to construct enough additional freeway lanes to meet future demand. Some type of transit solution is needed.

Nine alternative solutions have been identified. Six involve rail facilities, including possible extension of Bay Area Rapid Transit (BART) to downtown San Jose at an estimated cost of approximately $1.2 billion. The others are an improved bus system, a transit supply management approach, and a “no action” alternative.

The corridor spans two counties and six high-impact cities. When the project began in the fall of 1986, there was no consensus on a preferred transit solution. Indeed, there was considerable disagreement about how to proceed. Elected officials from San Jose, the dominant city in Santa Clara County, had stated their interest in bringing BART to their downtown. The smaller communities of Mountain View and Sunnyvale, located northwest of San Jose, favored a light rail transit system that would link their major employment sites with residential areas to the east. These smaller communities feared that their needs would be ignored at the expense of San Jose’s interest in an expensive BART extension.

Given dwindling federal transit subsidies, area elected officials recognized that local consensus would be necessary if they were to be successful in winning federal support. They therefore decided to use the UMTA-mandated alternatives-analysis process as a mechanism for forging local consensus on a preferred transit strategy.

The formal decision-making body for the project is a policy committee comprised of representatives of MTC, BART, the Santa Clara County Transit District, and Caltrans. The policy committee is advised by a technical advisory committee comprised of analysts from the participating transit operators, the six high-impact cities, the Federal Highway Administration, UMTA, and Alameda/Contra Costa Transit.

Description of Collaborative Process

- Initial identification of stakeholders. In addition to elected county supervisors from each of the two affected counties, city council members from six high-impact cities were recruited to participate in the process. The cities are Fremont, in Alameda County; and Milpitas, San Jose, Santa Clara, Sunnyvale, and Mountain View, in Santa Clara County. A number of major-employer and industry organizations were also included. Citizen activists were included at public work sessions.
- Involving stakeholders in final process design. Based on the experience with Transportation 2000, an effort was made to more actively involve stakeholders in the design of the problem-solving process. One-on-one meetings were held with selected members of the policy committee and other stakeholders. As a result of these meetings, major revisions were made in the preliminary design proposed by collaborative-planning consultants. First, city managers were added to the list of stakeholders because of their key role in shaping the views of council members from their cities. Second, private-sector involvement was expanded to include all major employers as well as key “movers and shakers” within the business community.

Participants indicated in these early design conferences that the process would be strengthened if city managers could meet before the intercity council member work sessions and have a role in shaping agendas. Also, given the importance of peer participation, it was thought that business executives should meet separately from elected officials, at least in the initial stages of work. Ultimately, six city managers and the Santa Clara County Executive were identified as stakeholders, plus approximately 60 elected officials and 50 leaders from the private sector. Policy and technical advisory committee members also participated in work sessions during the course of the project.
- Facilitated small-group work sessions. The problem-solving process proceeded along three tracks: elected officials meeting as a group, private-sector leaders meeting separately as a group, and the city managers meeting on their own. City manager meetings have focused on framing agendas for work sessions of elected officials and on critiquing background analyses drafted by staff. At work sessions of elected officials and private-sector leaders, participants are divided into small working groups of approximately 12 people each. A consulting team facilitator is assigned to each of the small groups as are a professional recorder and a technical resource person. At the end of each work session, all participants reconvene in a large group for a brief report on the outcomes of the small-group work.
- Organizing the agenda. Given the substantive issues being dealt with, the process proceeded in two rounds. The first round of work sessions focused on determining what rail modes should be considered in each portion of the corridor. During this round, participants also grappled preliminarily with the staging issue: what parts of the corridor would be slated for rail service immediately and what parts would have to wait? To keep the discussion manageable, questions were posed in terms of what is best for each of three subcorridors into which the overall corridor has been divided.
The second round of sessions focused on alignment and station location issues. Using the results of these two rounds, the policy committee is to reduce the range of rail alternatives to be studied in detail. Transportation supply management and bus alternatives are automatically studied in detail, given federal rules.

- Public involvement. During each round, public work sessions were held. As was the case with the Transportation 2000 project, hundreds of opinion leaders were invited to participate. The public work sessions were configured much like those of the Transportation 2000 project.
- Information management. As was the case with the Transportation 2000 project, great care was taken to develop appropriate technical analyses for participants. The material was pretested with city managers and others and mailed in advance to participants.
- Press strategy. Consultants worked with the lead agencies on the project to develop a press strategy that encouraged in-depth reporting and an analytical approach—as opposed to focusing on the political personalities and political trade-offs of the policy process.

Results

The project has yielded the following significant results:

- The project has provided a rational process for dealing with a complex set of issues that local elected officials and citizens feel very strongly about. It has, for example, been useful to deal first with the issue of mode choice and then with alignments and station locations. The scope of discussion has been made manageable by focusing on subcorridors rather than on the corridor as a whole. City managers have played an appropriate role in the process. Affected cities have had a mechanism for dealing with a regional problem on a regional basis.
- The process has created a context of constructive communication, compromise, and accommodation that has affected the behavior of all stakeholders. Participants have attended meetings, articulated their interests, listened to the concerns of others, and attempted to deal with the problem in a cooperative way. No one has taken unilateral actions based on a narrow definition of self-interest. There has been little “posturing for negotiation’s sake.” One city council was recently criticized by a newspaper for having forthrightly stated a real preference for light rail transit over BART on the grounds that the council should have “held out for BART in order to strengthen their bargaining position later.”
- Participants have discovered that their interests are not as divergent as they appeared to be when the project began and when perceptions of interests were based on rumor as opposed to face-to-face exchange of opinion.
- Participants have seen that there is a shared vision of regional transportation, and differences of opinion are much more about staging than about modes and alignments.

- The project has led to increased community support for transportation facility development because of extensive citizen participation in the process.

Lessons Learned

- Actors who are critical to problem solving must participate extensively in the consensus-building process, particularly top-level public-sector decision makers from affected jurisdictions. City manager participation is critical.
- Participants need to focus on fundamental issues: what is the mission and how committed are participants to problem solving?
- Participants need to move beyond planning to a genuine commitment to implementation.
- Participants need to have a sense of ownership of the process and a timeline for action. Staff and consultants must act as facilitators. Stakeholders must take ultimate responsibility for project outcomes.
- Top-level leadership is needed. Midlevel staff cannot, by themselves, lead projects of this type. A top-level executive or elected official who shares in the project vision can more easily open doors, recruit participants, and deal with the inevitable communication problems that occur in undertakings of this type.
- In order to maintain momentum, considerable time must be devoted to one-on-one work with participants who may miss meetings. Participants who want to drop out must be encouraged to continue, and facilitators must assist them in resolving their barriers to participation.
- Formal project structure can easily get in the way. The Transportation 2000 Citizen Advisory Committee duplicated many other mechanisms for citizen participation in the process and this overlap may have been confusing to some participants.
- Increased stakeholder involvement in the design of the process leads to increased legitimacy of the process and forecloses nonparticipation as an option for reluctant stakeholders. If participants participate in project design, their objections are overcome and their “buy-in” is dramatically increased.
- More effective communication takes place when groups are effectively constituted as peers. Elected officials are often reluctant to speak candidly with staff present and vice versa. Top-level managers in both the public and the private sector are often reluctant to meet with groups or individuals whom they perceive as having less organizational “clout.”

REFERENCE