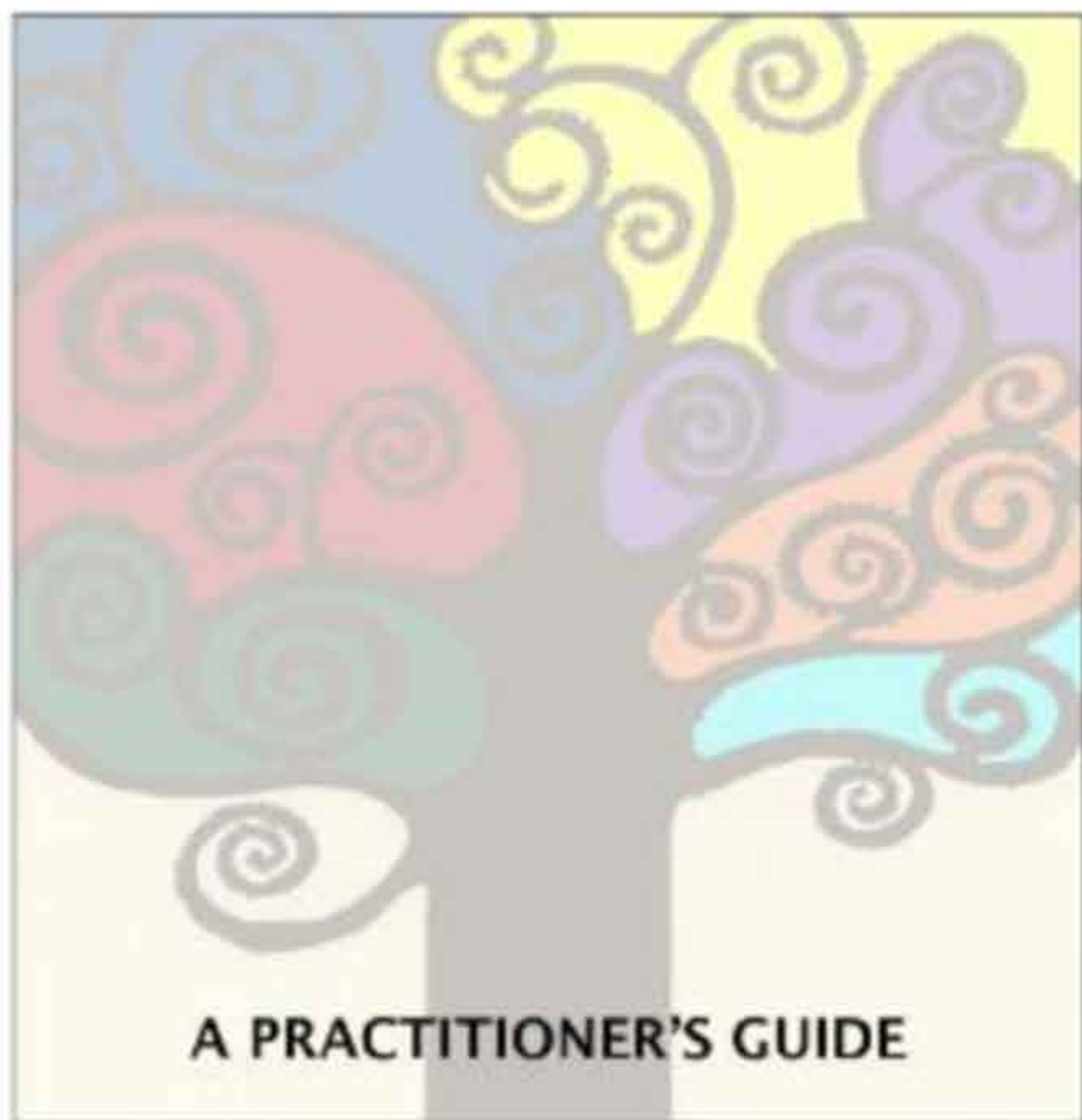


GOING THE DISTANCE TOGETHER
CONTEXT SENSITIVE SOLUTIONS FOR
BETTER TRANSPORTATION



A PRACTITIONER'S GUIDE

Going the Distance Together: Context Sensitive Solutions for Better Transportation - A Practitioner's Guide

September 2010

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Going the Distance Together: Context Sensitive Solutions for Better Transportation

A Practitioner's Guide

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[Continue to Contents...](#)

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Going the Distance Together: Context Sensitive Solutions for Better Transportation - A Practitioner's Guide

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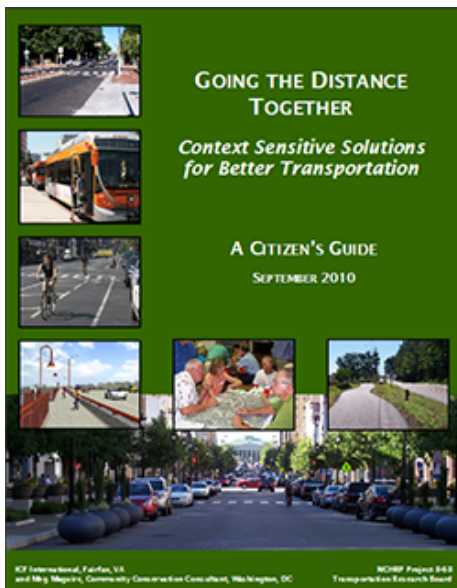
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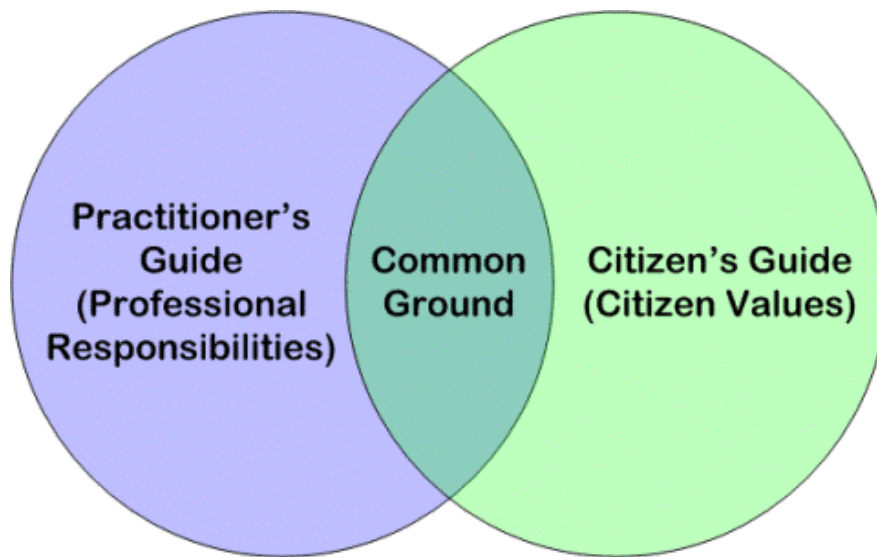
Click image to view Citizen's Guide

Introduction: A Reader's Guide

Transportation professionals comprise a very diverse group of individuals that not only represent multiple disciplines, but also expertise on multiple modes of transportation and phases of transportation decision-making (policy, planning, programming, environmental studies, design, construction, operations, and maintenance). In short, there are many professionals involved in the "[life of a transportation project](#)." This guide speaks to all these professionals as "[transportation practitioners](#)" charged with helping provide mobility options to all citizens to support a good quality of life.

The focus of this guide is to help the practitioner build collaborative relationships; understand citizen values, interests, and needs; and produce effective and efficient decisions. There are several reasons why this is important, as presented in [Section 1.1](#). The concept of "walking in another person's shoes" is an appropriate metaphor to explain the purpose of this guide. The overarching goal of this guide is to help practitioners find common ground with citizens by listening to them and understanding how transportation affects their quality of life. This guide is a companion to the [Citizen's Guide](#), which is focused on helping citizens understand the life of a transportation project, including their own roles in

the process and the professional expertise and responsibilities of practitioners. The key message being conveyed by both guides is that practitioners and citizens share responsibility for solving transportation problems. However, this also implies that each group must work hard to understand and embrace the other's perspective and co-create shared solutions.



A core focus of this guide is translating citizen and practitioner perspectives through the lens of [quality of life considerations](#). This is done within the guide by emphasizing the importance of using interdisciplinary team expertise and consensus building techniques to define context and shape transportation decisions. While this guide does not provide a prescription for every type of challenge that practitioners face, it does provide a framework for understanding transportation as an element of the quality of life within a community or region, and provides examples, resources, and tools to help deliver transportation projects that enhance a community's quality of life. Some of the benefits this approach can provide to practitioners include:

- Improved customer/stakeholder satisfaction
- Reduction in agency costs of delivering its projects, programs and services
- Delivery of projects on time and within budget
- Cultivation of relationships that lead to financial partnerships
- Assistance with prioritizing project needs and allocating limited funds
- Increased job satisfaction

This guide uses the concept of “Context Sensitive Solutions” (CSS) as its foundation.

“CSS is a collaborative, interdisciplinary approach that involves all stakeholders in providing a transportation facility that fits its setting.” – AASHTO and FHWA, CSS Strategic Planning Process Summary Report

The “[What is CSS?](#)” page provides additional information on the CSS process.

While it is best to review the entire guide, it is organized such that practitioners can browse to the sections of greatest interest to them. There are many hyperlinks to resources throughout the guide that lead the readers to a wealth of resources intended to help practitioners meet the expectations of the citizens they serve while being professionally and fiscally responsible.

Going the Distance Together: Context Sensitive Solutions for Better Transportation - A Practitioner's Guide

Chapter 4: Going the Distance Together - Partnership through Collaboration

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Summary

Collaboration in the transportation decision-making process can be an effective tool for building support among citizens, sharing information among stakeholders, and developing solutions that meet both transportation needs and support community quality of life.

- *Collaborative processes come in many forms, and can occur throughout the transportation decision-making process. However, collaboration is particularly effective during the Planning and Environmental Study phases, when the opportunities for citizens to influence project-level decisions are highest.*
- *Barriers to collaboration in transportation decision-making include differences in communication and decision-making styles, inflexible standards, failure to follow-through on agreements, and insufficient involvement from stakeholders; however, none of these barriers are insurmountable.*
- *Several collaborative methods and strategies are available for use in the transportation decision-making process, including strategic partnerships, facilitated discussion, interactive analysis, and social media.*
- *The success of collaborative transportation decision-making processes is measured in terms of how well it solves the transportation problem, respects the community context and values, enhances quality of life, effectively uses resources, and satisfies stakeholders.*

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Section 4.1 – What Can Communication, Collaboration, and Consensus Accomplish?

“There are 3.9 million miles of roads in this nation, 75% owned by local governments. So transportation is something we are deeply involved in. As a local official, I need to figure out how we engage people so that they are willing to invest in transportation and the future of this country.”

- Hon. Colleen Landkamer, President
National Association of Counties

In order for practitioners to understand the context, shape the best solutions possible, and improve quality of life, they must practice good communication skills that inspire collaboration and result in consensus. This communication may take many forms, ranging from informal discussions at a social function where practitioners and citizens see each other to more formal processes such as interviews, surveys or advisory committees. This chapter explores how practitioners and citizens can work collaboratively to co-create solutions that reflect community values as well as meet professional responsibilities. It will present examples that demonstrate the benefits of collaborative partnerships, including how to address challenges associated with collaboration and overcoming barriers to meaningful dialogue. Some effective methods and strategies for

collaboration are provided in this chapter, as well as ideas on how to go about measuring successful collaboration.

Collaboration is defined as “cooperating with others in a joint endeavor or area of mutual interest, in order to influence or affect the outcome.” Rather than simply transmitting information, collaboration aims for active cooperation to achieve consensus. With consensus as collaboration’s goal, there are several dynamics that occur:

- Sharing of information leads to mutual education; this in turn provides the basis for crafting workable and acceptable alternatives.
- Joint thinking among participants in a diverse group leads to creative solutions.
- Improved chance of successful implementation because everyone participates in the deliberations, understands the reasoning behind the chosen solution, and is willing to support it.

A number of essential principles underlie the practice of consensus and contribute to its success:

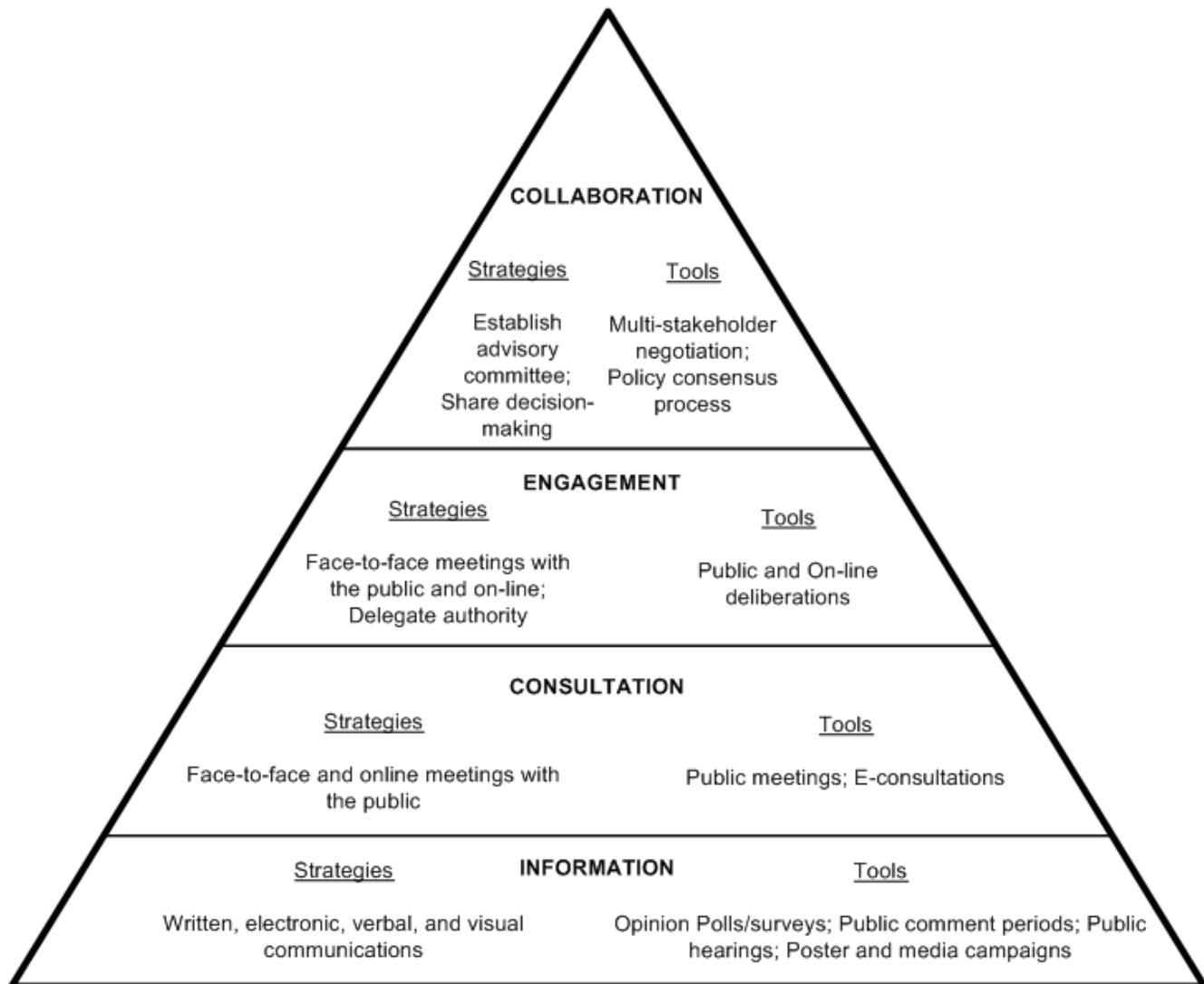
- To achieve consensus, everyone in the group must actively participate.
- To participate fully and freely, all group members must have a common base of information and keep up to date on the progress of the group.
- The group must create and maintain an atmosphere in which everyone feels free to state his or her views and to disagree.
- Disagreements must be respected; they can illuminate unrecognized problems and serve as a catalyst for improving the decision.
- When someone objects or disagrees, the goal of the group is to discover the unmet need that has produced the objection and to find a way to meet that need in a revised agreement, rather than to suppress the objection.

The emphasis on consensus, communication, and collaboration in CSS is not accidental – meaningful, sustained public engagement in transportation decision-making saves time, money and achieves a better product. For example, when DOT funding is insufficient, engaging in collaboration with external stakeholders to form partnerships can gain access to additional funding from other sources. Working with citizens can be as basic as sharing information, or as meaningful as inviting them to participate in the decision-making. Increasing levels of public involvement can be described as:

- *Information* – exchange of information raises awareness’s, generates, policy momentum, and collects public opinion.
- *Consultation* – processing information to educate the public, stimulate public debate, clarify values, and broaden the information base.
- *Engagement* – Basic or advanced shared decision making to involve citizens in problem solving and decision making, and building capacity for implementation.
- *Collaboration* – Build capacity for lasting cooperation among groups and policy implementation through the entire project’s lifespan through shared ownership.

In some cases, “information” can be an acceptable level of public involvement, for example when the goal is simply to enhance public awareness of an issue. In other cases, higher levels of engagement are more appropriate. The range of tools and techniques used to engage the public varies significantly depending on the level of engagement desired.

Levels of Public Involvement



In many cases, information, consultation, or even engagement may not be enough. The benefits to collaboration exceed these other levels of public involvement greatly, improving:

- **Project Delivery** – In many cases, information or engagement may not be able to meet the project delivery goals for a project, particularly those with controversial elements. Collaboration can help to create public support for a transportation initiative, and may even be the original basis for the project itself. It can also help to define the project’s scope to meet the transportation, community, environmental, and fiscal realities within that community.

Collaborative processes can reveal and solve different project priorities – for the transportation professionals it may be time-savings, but for the local community it may be pedestrian and child safety.

Adapted from “[Public Deliberation: A Manager’s Guide to Citizen Engagement](#).” Carolyn J. Lukensmeyer, Lars Hasselblad Torres, 2006.

- **Stakeholder/Public Trust** – When stakeholders and citizens have a significant role in project development, this can generate greater project ownership/identification. Stakeholders and citizens must not only

believe that they have significant project input, but also they must trust the final decisions and resulting actions of the transportation agency. When this occurs, stakeholder/public opinion about the transportation agency improves, creating a reservoir of goodwill and trust for future transportation projects.

- Maintenance and Operations – Proper consideration of the full life-cycle of a transportation project can greatly enhance the lifespan and success of a transportation project. Furthermore, in many cases, maintenance and operations staff are the main transportation point of contact for local communities. The planning staff may be there for the creation of a transportation facility, but the maintenance and operation staff are there for the next twenty, thirty, or forty years, serving that community.

Collaboration can contribute to greater stakeholder awareness of issues and the competing points of view that surround those issues, and citizen involvement through policy deliberation creates the opportunity to problem-solve and improve their own circumstances by impacting policies that affect them. Deliberation and collaboration thus builds public capacity for solving public problems within communities over time, reducing the community's dependence on outside resources.

Adapted from "Public Deliberation: A Manager's Guide to Citizen Engagement."

- Environmental, economic, and social equity impacts of transportation investments – Collaboration can help identify and include these considerations into the decision-making process. Furthermore, when stakeholders understand the tradeoffs involved in decisions, their informed perspective only improves their understanding of—and contribution to—decision-making.
- Cost-effectiveness – This can include direct cost-savings, such as right-sizing facilities and saving on materials, and indirect cost-savings, such as reduced avoidance actions, minimizing the need for mitigation.

Collaboration can re-engage citizens in the political life of the nation by giving them a real stake in outcomes and, as a result, reverse long-term declines in political and civic engagement. Such effects are not trivial, as they lie at the heart of a thriving nation.

Adapted from "Public Deliberation: A Manager's Guide to Citizen Engagement."

- Safety and mobility for all users – A project's primary purpose and need often includes improving safety. No solution would be acceptable that reduced safety for any users of the facility. Collaboration often results in the identification of new issues and opportunities, such as enhanced modal options to address safety and mobility of multiple types of users.
- Quality of life and economic development- Successful collaboration improves the overall quality of life for members of a community by decreasing delays, providing new mobility options, and/or improving safety for roadway users, pedestrians, residents and others.

The foundation of CSS collaboration is a robust and meaningful public involvement process. There are many excellent public involvement guides available that are consistent with the philosophy of collaboration that practitioners can draw from to support their CSS collaboration. A few of these include:

- Minnesota Department of Transportation, ["Hear Every Voice" Public and Stakeholder Participation Guidance](#)
- Michigan Department of Transportation, [Guidelines for Stakeholder Engagement](#)
- New York State Department of Transportation, [Public Involvement Manual](#)
- Florida Department of Transportation, [Public Involvement Handbook](#)
- FHWA, [Public Involvement Techniques for Transportation Decision-Making](#)

MaineDOT and Local Communities Engage to Retain Community Character

Source: Adapted from Transportation Research Board, NCHRP Project 8-36, Task 86 Final Report, [*Corridor Approaches to Integrated Transportation and Land Use*](#) . (June 2009).

Issue: Route 1, as a regional arterial and economic lifeline for the Midcoast Maine area, was reaching capacity as the population grew and development accelerated. While, originally, MaineDOT wanted to only address the transportation issue through traditional widening of the arterial, Midcoast residents wanted a more collaborative approach that would focus planning on the corridor as a whole.

Approach: In response, MaineDOT initiated the Gateway 1 process—a long-term strategic planning project for the Midcoast Route 1 region that sought to find a way to combine municipally-based land use and state-based transportation planning. MaineDOT worked with Midcoast Maine residents on a collaborative corridor planning entity that integrated community involvement with proactive land use and transportation planning. The goal of Gateway 1 is to “preserve mobility while enhancing safety, transportation choice, economic strength, and quality of life along the corridor.” In the first phase of the project, MaineDOT concentrated on establishing trust with the communities in the corridor so there would be support during the planning process. In the second phase, an action plan of scenarios and strategies was developed that MaineDOT and the communities could use to achieve the goals of Gateway 1. Currently underway is the implementation phase, helping communities adopt the Gateway 1 plan into local plans.

Result: The willingness of MaineDOT to dynamically change its approach for creating transportation solutions to one that was collaborative with the localities has created a multidisciplinary work environment that uses consensus building and negotiation skills to balance transportation, environment, and neighborhood development. MaineDOT’s patience and persistence to create trust with the communities and between the communities, as well as its resistance to rush the process to follow a schedule, was a process that all agreed was a wise investment in time and resources.

Section 4.2 – What Are the Opportunities for Collaboration? What Does a Collaborative Partnership Look Like?

The way a team plays together as a whole determines its success. You may have the greatest bunch of individual stars in the world, but if they don't play together, the club won't be worth a dime."

- Babe Ruth

Citizen perspectives are many and varied, and incorporating them into transportation decision-making processes can be a challenge. Practitioners' transportation expertise is essential in planning and designing transportation facilities, but this expertise must be balanced with the preservation or enhancement of the community context. Collaboration can play an important role in allowing citizens and practitioners to bring their unique skills and perspectives together to arrive at a shared solution to transportation problems.

As discussed in [Section 2.3](#), interdisciplinary teams are one way that practitioners, citizens, and other stakeholders can work together to resolve seemingly irreconcilable differences, needs and perspectives. However, interdisciplinary teams are not the only method for collaborating with stakeholders. [Section 4.4](#) provides more information on specific methods and strategies that can be used to encourage or facilitate collaboration.

Collaboration on the Chattanooga Riverfront Parkway Leads to Financial Partnership

Source: *SHRP II C08: Linking Community Visioning and Highway Capacity Planning* , The Louis Berger Group, 2009.



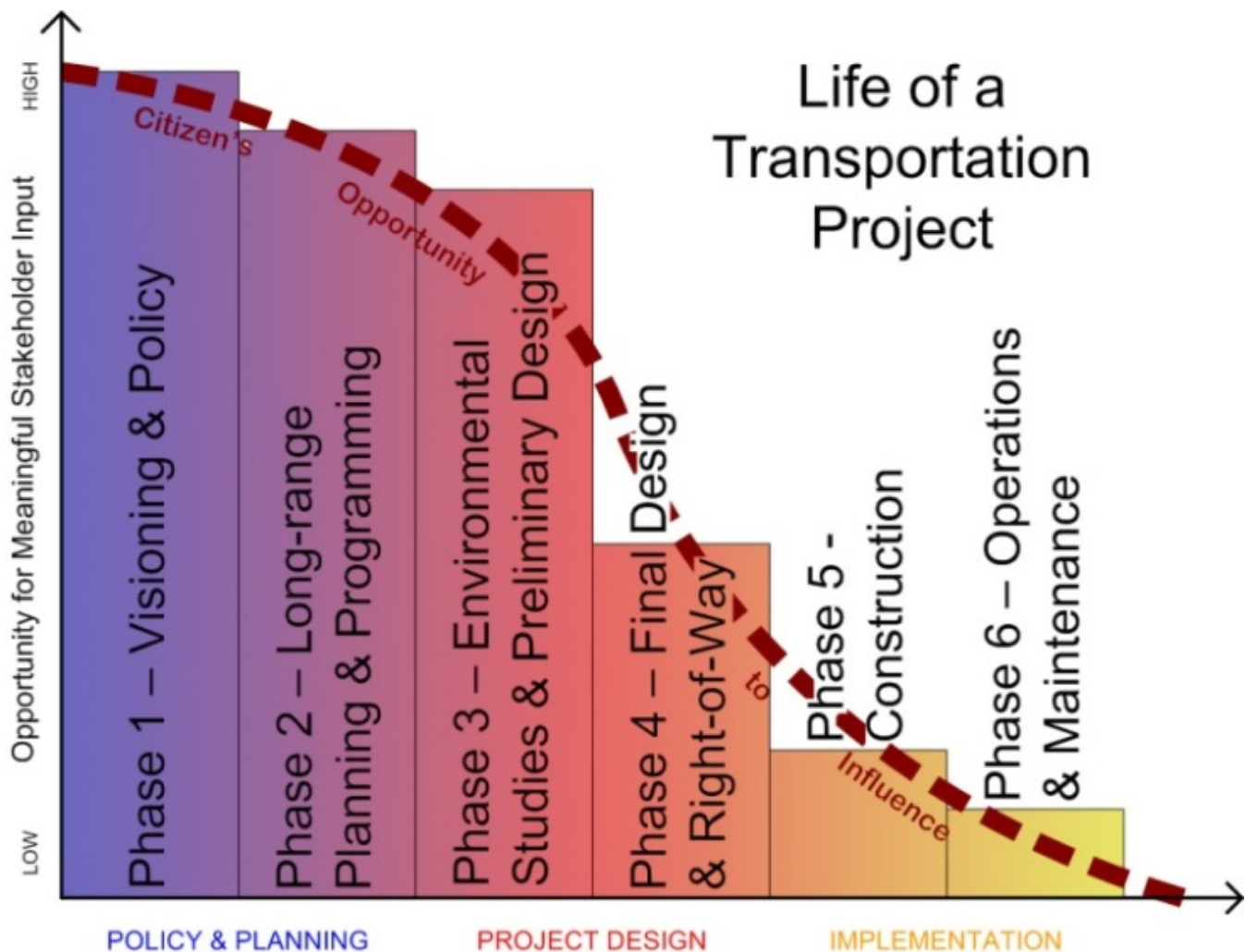
Collaboration is all about creating an opportunity and place for people to come together to address issues. Some ways to create this collaboration is to use clear, common-sense language to talk about possible solutions without predetermining the outcome, conduct public negotiations that integrate contending interests, and create agreements about what we're are willing to do and under what conditions and then take action. The City of Chattanooga's 2001 Riverfront Parkway Transportation and Urban Design Plan is one piece of a larger city-wide effort for revitalization that began in the 1980s through a comprehensive visioning process – based on these collaboration strategies.

The major points of the Plan were developed during an intensive three-day collaborative workshop. The sponsor, The RiverCity Company, a private not-for-profit organization focused on downtown Chattanooga revitalization, managed and financed the creation of the Riverfront Parkway Transportation and Urban Design Plan. RiverCity Company's board of directors includes the City and County mayors as well as other prominent public and private-sector representatives. The RiverCity Company invited a broad spectrum of public and private partners to participate in the development of this plan. Participants included the City of Chattanooga and Hamilton County, State and Federal agencies, area foundations, the Tennessee Department of Transportation, the University of Tennessee, the Chattanooga Fire Department, Siskin Hospital, Friends of the Festival, adjacent property owners and companies that use Riverfront Parkway to move freight.

The plan resulted in the redesign of Riverfront Parkway from a high-speed access-limited highway into a true waterfront street that brings value to downtown and provides local community access. With the expenditure of approximately \$68,000 in consultant fees, RiverCity's time, and volunteer time from the Mayor and stakeholders, the RiverCity Company and Mayor Bob Corker were able to leverage the consensus reached through the visioning process to secure \$60 million in private and foundation contributions (about half of the total funding needed) to finance the rerouting of Riverfront Parkway, developing new housing and creating new green spaces and public art along the waterfront. The remaining \$60 million was financed through debt backed by revenue anticipated over time through a new hotel/motel tax. These improvements in turn attracted hundreds of millions of dollars in new downtown and waterfront investment. In addition, the implementation of the Riverfront Parkway Transportation and Urban Design Plan led directly to the creation and implementation of the 21st Century Waterfront Plan, a \$120 million investment in further riverfront revitalization.

Because the planning process involved a full range of stakeholders in a fully collaborative partnership, the solution achieved addressed the entire context and many sources saw that solution as a tangible benefit to them. As a result, those sources were willing to "own" (literally and figuratively) the result, contributing substantially to the cost of implementing the plan. These types of collaborative financial partnerships are increasingly important in an era of underfunded state departments of transportation. The conversion of the Parkway has been regarded as one of the most notable success stories of a community-led effort of reclaiming an outdated highway infrastructure into one of the catalysts that led to the rebirth of a medium-sized city.

The graphic below shows the general relationship between the phases of the life of a transportation project and the opportunities available for meaningful stakeholder input. As shown, citizens and other stakeholders have opportunities to participate throughout the transportation decision-making process, but they have the greatest ability to influence outcomes when they are involved in the early phases.



Collaboration is possible at all phases of decision-making, as shown in [Chapter 3](#), starting from policy creation to daily operations and local maintenance. Phase #1 (Policy and Visioning) presents an opportunity for stakeholders to influence “big picture” decision-making, but decisions made at this phase do not generally get down to the level of discussing specific projects. The two phases that are particularly well-suited and are designed to engage the community and citizens on specific plans and projects are Phase #2 (Long-range Planning & Programming) and Phase #3 (Environmental Studies & Preliminary Design). These phases are the ripest time for collaboration to occur successfully within the transportation decision-making process. Within each of these phases, there are specific decisions that provide a significant opportunity for collaboration, as both practitioners and citizens bring different data and information to the partnership.

Collaboration Item	Phase #2: Long-range Planning & Programming	Phase #3: Environmental Studies & Preliminary Design
Decisions Made	- Determine transportation deficiencies - Determine financial assumptions for planning - Identify strategies to address deficiencies - Determine preferred planning scenario - Determine evaluation criteria and methodology for evaluating transportation projects - Identify funding sources for transportation projects	- FHWA and DOT determine which type of environmental study to pursue - Reach agreement on purpose and need for project - Selection of a range of feasible/reasonable alternatives - Selection of a preferred alternative - Agreement on avoidance, minimization, and/or mitigation options for preferred alternative

Opportunity for Collaboration	To integrate the community's perspectives on its context, vision, values, and goals into transportation plans and programs. This includes identification and consideration of a wider range of potential approaches to create transportation solutions that will both meet transportation needs and enhance the community's quality of life.	To involve citizens in the identification and consideration of alternatives and project design elements that will meet the transportation purpose and need while enhancing the community's quality of life.
Practitioner Contribution to Collaboration	Practitioners bring a diverse range of professional interdisciplinary expertise, as well as data and technical information needed to inform the decision-making partners.	
Citizen Contribution to Collaboration	Citizens bring their understanding of the community context, as well as their values and perspective on what they want their community to be, including perspective on how the transportation system should function and what it should look like.	

For more information read the attached document ["Decisions Made at Each Phase in the Life of a Transportation Project"](#) .

Who can practitioners collaborate with?

Ultimately, who practitioners can and should collaborate with depends on the context. One crucial element is the scope of the proposed improvement(s) and size of the geographic area it affects. Large scale planning efforts require a significant level of collaboration and large group of different stakeholders. Smaller initiatives may just need the local community representative. In general, stakeholders are those that have a direct or indirect interest in your decisions, including:

- People who are affected positively by the results of the project — **the beneficiaries**
- People who might be adversely affected by the proposed project — **the nearby property owners, residents, and businesses, including those affected by changes in traffic patterns**
- Agencies that share regulatory authority with DOT — **environmental and resource agencies, state, tribal, and local governments**
- People who care about the project from a policy perspective — **the advocates**

On particularly large or complex projects, a Public Involvement Specialist should help identify stakeholders as part of the development and implementation of a proactive public engagement plan.

Additional Case Study Resources:

[Border Crossing Study at Blue Water Bridge](#) – Michigan Department of Transportation

[Libby North Corridor Study](#) – Montana Department of Transportation

Section 4.3 – What are Some Challenges to Collaboration?

“In a high-trust society, there's more for everyone. We have more options and opportunities. We interact with less friction, resulting in greater speed and lower cost.”

- Stephen Covey

If collaboration were easy, then everyone would be doing it across all transportation projects. Just because it is not easy, that does not mean it is not worth pursuing. There are some common barriers to collaboration that may seem insurmountable at first, but really are solvable. Some of these are agency protocols that inhibit collaboration, while others are communication problems. Some of the recurring challenges to collaboration include:

- Different communication styles
- Different attitudes toward conflict
- Different approaches to completing tasks
- Different decision-making styles
- Different attitudes toward disclosure
- Different approaches to knowing

Resource Link: [Working on Common Cross-cultural Communication Challenges](#)

Regardless of the specific issue causing trouble, other practitioners have been there before and have overcome these barriers successfully.

Common Challenges to Collaboration	Strategies to Overcome these Challenges
Length and technical complexity of long-range transportation planning and NEPA processes	Educate the public during the stakeholder process about transportation project delivery.
Practitioners and/or citizens are basing their participation on their “positions” rather than their “interests”	Ensure that the DOT staff are using interest-based collaboration skills by communicating transportation and quality of life interests and being open to creative solutions that will meet those interests; use facilitation and listening skills to elicit citizen interests.
Insufficient stakeholder involvement	Engage in a clear and deliberate stakeholder identification and public involvement/collaboration process, using a public involvement professional if necessary.
Ineffective communication with the public	Develop a proactive approach to communication that is based on the principle of open, honest exchange of information and ideas; provide basic listening and communication training to all technical staff; select outreach tools and methods that are appropriate for the target audience.
Inconsistent or incomplete collaboration – commitments made during planning or environmental studies do not follow through into design, construction, or maintenance	Establish clear documentation standards for practitioners in planning and environmental studies; implement a commitment tracking process to ensure that this documentation is carried forward as a part of the project record.
Inflexible application of design standards inhibits development of creative solutions	Review design standards for flexibility and provide training and support to designers in using design flexibility to fit transportation improvements to the community context.
Effort perceived as “gold-plating” projects, adding expensive non-transportation features to a project	Implement clear and transparent policies for incorporating these features into projects, or encourage stakeholder partnership to maintain these features.

What Keeps Us Apart?

Source: Facilitating Conciliation, The Canadian Institute of Cultural Affairs, 2000

- **"I am an Island."** As social diversity and globalization impinge more deeply, individuals and groups struggle to assert their own selfhood and identity. To this end, they develop their own sets of principles, values, approaches and solutions which can easily become rigid. We define ourselves in a certain way and everything else is "something else."
- **"Them and Us."** Society is poor in processes that unite rather than divide. We have developed the tension between opposites into a high art-form. We see ourselves as right, and others simply wrong, or at best, inadequate. We are not trained in the mental agility that is able to see two, three or four sides of an argument at the same time.
- **"Let's Get Together and Fight."** Any interchange over any topic is traditionally approached as a debate. No wonder we experience an increasing inability to come to consensus. Trying to resolve a dispute with another dispute, even disguised as mediation, is not likely to create lasting solutions. Disharmony prevails and we scratch our heads in wonder.
- **"I Heard What I Said."** We report on many conversations by telling people what we said. Truly hearing a different perspective is not easy when the roar of our own thoughts drowns everything else out. Individuals and groups retreat to the bunker of their own perspective and spend the whole time pushing that and not listening to anything else. Ships pass in the night.
- **"Who's Got the Power?"** Our relationships and social systems are based, all too often, on power relationships. Resolving difficulties and making decisions has become a matter of gaining or manipulating enough power to have one's own way. People have not been educated to use power in a way that honors and pulls together the creativity of others into approaches that benefit all concerned.
- **"We Need to Find a Solution and I've Got It."** We tend to approach a lot of our conversations with our positions blazing. We arrive with answers rather than questions. It seems exceedingly difficult to dialogue deeply enough to take the conversation beyond the positions that individual parties bring to the table. If the door is closed; the door is closed.

The [Transportation for Communities: Advancing Projects through Partnerships \(TCAPP\)](#) website contains a "collaboration assessment" diagnostic tool to help practitioners understand ways to improve collaboration in their own transportation decision-making processes, and is a valuable resource.

Section 4.4 – What Are Successful Methods and Strategies for Collaboration and Consensus-Building?

"I can't change the direction of the wind. But I can adjust my sails."

- Unknown

Over the last twenty years, public agencies have increasingly invested in public involvement and engagement. There is a rich body of literature and guides available (see links at end of this section) that can help practitioners enhance their current public involvement process. Collaboration with citizens, however, goes beyond involvement or engagement. Fundamental to collaboration is the basic ability to use good communication skills. The Florida Department of Transportation

has developed a short guide that provides tips and strategies for good communication, whether the communication is with cooperative or difficult people.

Dealing with Difficult People

Source: Florida Department of Transportation

When dealing with diverse audiences and controversial topics, we often come across people that are difficult. During workshops, presentations and public hearings, a citizen's anger is usually situation-oriented, but it may feel as though it is directed at you personally. Becoming defensive, trying to cut the complaint short, or even arguing back are not productive responses and often prolong the uncomfortable atmosphere. Every contact provides an opportunity to improve your relationship with the public.

[This module](#) has been prepared to suggest ways to stay calm and be confident, thus being more responsive to citizens. Topics include: dealing with a hostile situation, effective communication, seven difficult personality types, roadblocks to communication, and nine ways to build trust and credibility.

In recent years, as public agencies have sought to become more skilled in collaborating with citizens, more innovative methods and strategies have been applied. Those described in this section have been employed successfully in transportation planning and project development/delivery, including:

- Strategic Partnerships
- Facilitated Discussion
- Charrettes
- Interactive Analysis
- Social Media

As with many elements in this guide, these techniques are context-specific – the key is finding the right strategy for your specific transportation, environmental, community and fiscal context.

Strategic Partnerships

Strategic partnerships are voluntary collaborations between agencies and other organizations or entities formed to achieve a common purpose. Typically these occur because each of the partners has capabilities or resources that the partner agency may not have – these may be fiscal, or institutional, or relationship-based. The key to a strategic partnership is the identification of a mutually-beneficial outcome and a commitment to the partnership needed to achieve it. The Maricopa Association of Governments (Phoenix, AZ) established a strategic partnership to support the development of its long-range plan.

Maricopa Regional Transportation Plan Consensus Driven Effort to Balance Regional Needs

Source: SHRP 2-C01: [A Framework for Collaborative Decision Making on Additions to Highway Capacity](#), ICF International, 2009.

With the most recent update of the Regional Transportation Plan, the Maricopa Association of Governments (MAG) established the Transportation Policy Committee (TPC) to guide its development. The TPC's 23 members include representatives from local governments, Indian tribes, ADOT, and the Citizen's Transportation Oversight Committee (CTOC). In addition, the TPC includes six representatives from the business community. These representatives were crucial to maintaining unity among the TPC as well as generating support from outside the TPC. The TPC was the main decision-making body for the development of the RTP. The TPC developed the RTP document in a process that included the establishment of goals, assessment of needs, selection of performance measures, development and analysis of alternatives, and the creation of an implementation plan with extensive public engagement. However, funding the RTP required the approval of both the state legislature and Maricopa County voters for its implementation. MAG's allies in the business community were instrumental in passing HB 2292 in 2003 and HB 2456 in 2004. These bills placed the TPC in state law, outlined certain parameters of the development of the plan, and authorized the county election for the sales tax. Governor Janet Napolitano also approved the RTP by signing both bills into law. The business community was again instrumental in passing Proposition 400 in the November 2004 election, which extended the half-cent sales tax through 2025.

Like many communities, transportation planning can be politicized and difficult in the Phoenix area. The involvement of the business community was essential to the success of the plan. Business leaders served as liaisons between MAG, lawmakers, and the public. They were the glue that held the collaborative framework together. MAG also took an integrated regional approach to planning projects and allocating funds. The agency prioritized the regional agenda over competing local agendas as much as possible. This attitude helped to build political consensus. MAG also strove to make the plan as functional as possible. Key elements of the plan were a robust policy framework, performance measures for monitoring of the plan, and strong fiscal management practices. These aspects of the plan particularly helped to win the support of lawmakers and the public. As a result of MAG's political and planning successes, the RTP dedicated a large proportion of funding for transit, against significant opposition.

Strategic partnerships must be initiated from the executive level of participating agencies. However, practitioners can play an essential role in the formation and support of strategic partnerships. They provide their agency executives with information about potential benefits of these partnerships, as well as providing the day-to-day implementation support needed to achieve success.

Facilitated Discussions

Facilitated discussions are those conversations and meetings that employ the use of formal facilitators. The term "facilitator" literally means a person who makes progress easier. Facilitators are trained to remain neutral, focus on working with the group to achieve consensus or progress discussions by building trust among the group members. Facilitators have been trained in a variety of methods that can be used to structure group discussion to reduce conflict and promote mutual understanding and respect. Using a facilitator is a particularly good strategy when individuals, groups, or agencies engaged in the collaboration process are "stuck" on discussing their positions (as opposed to communicating their interests). Facilitators use a variety of communication, listening, and consensus-building strategies. The focused conversation method highlighted below is just one of these strategies.

Focused Conversation Method

Source: Institute of Cultural Affairs

Using the Focused Conversation method creates authentic involvement in making decisions and taking action. Participants are invested in the outcome they helped generate and are more likely to follow through with the results. Focused conversation is a tool used to explore many facets of a question in order to design the most effective solution. A group of people work together to answer questions on four different levels. The conversation can be led by a facilitator or by a group member. The wisdom of each member of the group is accessed and together the group creates an answer to the question.

Following are the four levels of natural human process:

- **Objective** – Concrete things, actually observable by all. Questions in this stage focus on facts and external reality. They are designed to gather specific, observable information that pertains to the conversation. In our natural decision making process this would be manifested as observing a situation about which you will be making a decision. Example questions: What did you see? What did you notice about the project site?
- **Reflective** – Feelings, emotions, associations and memories. Questions in this stage focus on emotions and memories. Participants in the conversation are asked to reflect on the data they have just discussed during the objective level of the conversation. This piece of the process allows participants to acknowledge how they feel about a situation. Validation of personal feelings, moods, associations and memories is liberating and enables participants to move forward in the conversation. Without this opportunity, participants will feel frustrated and may vent their feelings outside the meeting, which is counterproductive. In our natural decision making process, the reflective level of questioning is the emotional response. Example questions: What concerns you? Where are you confused?
- **Interpretive** – Meaning and significance. Questions in this stage get at the meaning of the topic for the group. Higher-level thinking skills are used to define the implications of the data for the group. The questions are often “why” questions and include questions pertaining to the value of the conversation and how it affects the participants outside the conversation. In the human decision-making process thinking through immediate options would reflect this stage. Example questions: What is the importance of this? What appears to be the central issue or key problem area?
- **Decisional** – Implications for the future: actions, decisions, choices. Questions in this stage are designed to make the conversation relevant for the future. As its name suggests, in this level the group makes decisions regarding implications of the conversation for the future. Example questions: What have we just decided? What are the first steps we need to take?

Although we all go through the natural process, each person has his or her own patterns and pace for coming to conclusions. There are no right or wrong patterns. There are only learned behaviors based on each person’s life experience. When a conversation has no structure, there is often no way to ensure that each person’s thinking patterns and insights can be dealt with or be used productively by the group. Conflict, chaos and discouragement often result.

Charrettes

The [National Charrette Institute](#) (NCI) defines the term charrette as “...a holistic, collaborative planning process that harnesses the talents and energies of all interested parties to create and support a feasible plan.” In transportation planning, a charrette led by a professional designer trained in this method of group process can bring people together early in the project planning process to consider both constraints and a range of realistic options. ([See NCI Charrette System: Stories of Community Transformation DVD](#))

[The Charrette Center](#) describes a three-step timetable for urban planning charrettes in which small groups meet in intense multi-day meetings to define plans for their communities or to work on a design for a new facility in three steps, as outlined below.

- **Info Gathering:** The design team listens to the views of stakeholders and citizens while examining the project area and its context with the help of local experts. Issue identification workshops are held to discuss issues that the stakeholders feel are important to the project. There is often a kickoff presentation the first evening.
- **Design and Review:** The design team, armed with this information, proceeds to collaborate about the best approaches for the area. Starting with general large-scale issues such as important natural features

and development patterns, the debates and designs eventually evolve to fine-grained issues. At regular intervals, the public is invited to review the team's progress and then give comments on what they see. These intervals are usually complete design loops in which the cycle of info gathering, design & presentation repeat.

- **Presentation:** The charrette ends with a final presentation of designs and findings. The presentation is highly graphic with lots of drawings that communicate the team's recommendations. A final report or design manual that summarizes and illustrates the plan and design is then assembled and delivered to the community and the charrette sponsors. This document is used to help restate the goals identified during the charrette and to supply a guiding vision during implementation.

Interactive Analysis

Interactive analysis includes a whole suite of tools that allow practitioners and citizens to investigate different elements of their decision-making. If it is a larger planning effort, then this may be scenario planning or other public participation geographic information systems (GIS)-based efforts. If it is project, then this may entail visualization tools that make the project come to life through sketches, videos, or models – making more difficult concepts like lane width differences accessible to the public. Sometimes it can just be an approach that focuses on creating a vision for the future in a specific area.

For more information see [examples of project-level visualizations](#) developed by the Minnesota Department of Transportation.

Meeting in a Box: Community Vision for the Aspen Area

Source: [Aspen Community Vision](#)

In 2008, the City of Aspen and Pitkin County began work on an update to the community plan, and the creation of a 10-year community vision for the future, the Community Vision for the Aspen Area. The theme of this update is "Direct Democracy," and the goal is to involve as many people as possible - whether they live here, work here or enjoy the area on a part-time basis. The finished product will be the Community Vision for the Aspen Area: a foundational document for the Aspen City Council and Pitkin County Board of Commissioners – providing guidance for future decisions on issues ranging from Housing to Managing Growth to Transportation.

There is no standing committee to guide this process. A standing committee is no longer used to guide the process, as one was used in the past, because both City and County staff observed that it wasn't inviting or accessible enough for a wide cross-section of people to become directly involved, and to ultimately "buy-in" to the final product. Instead, this new process seeks to literally draft a document that comes from the community-at-large. For example, the process included three large public meetings and about 450 people attended these meetings. Also, 534 people responded to a randomly-mailed Community Survey.

This new public process began with the release of the State of the Aspen Area report in September 2008, which is packed with information on a range of key community issues. A white paper on The Aspen Economy, a 40-page document reviewing the history and evolution of the local economy, was released in October 2008. The idea is to encourage a well-informed citizenry as we begin to focus on the major issues of the day. The next steps were small group meetings – 174 people attended 20 meetings that focused on 10 topics. Almost 40 high school students took part in separate sessions as well. Participants were asked to voice their goals for the future of the Aspen Area. Those who were not able to participate in a small group meeting could express their opinion using our blog or a "Meeting in a Box."

"Meeting in a Box" is a self-guided and individually hosted workshop that can be presented by any club, service organization, neighborhood group or group of friends in the privacy of one's home. The materials in the box were developed by professional facilitators who ran a series of small group meetings earlier in the community visioning process. The "Meeting-in-a-Box" is more free-form and appeals to a wider range of the public than other public involvement efforts. Additionally, the attraction of holding an informal meeting in an environment where the participants would feel comfortable with friends, neighbors, and peers enabled an open dialogue that contributed valuable information.

What's in the box?

1. Instructions
2. A set of 10 colored cards identify 10 topics, and provide some background information on each topic. Your group can decide to focus on any topic you wish, or 3 or 5 or all 10.
3. A document titled "How To Build Your Vision," which includes prompting questions that ask you to envision the Aspen area 10 or more years from now.
4. Pens and Notepads
5. Popcorn for you and your group

The multimedia materials contained in the Meeting in a Box appeal to a wider range of the public than other public involvement efforts. Additionally, the attraction of holding an informal meeting in an environment where the participants felt comfortable with friends, neighbors and peers assisted in creating an open dialogue that does not often occur in a traditional public meeting format. The organizers, in turn, get valuable information they need to understand the context of the project and public opinion.

Social Media

Social media involves a whole host of evolving online communication tools that are accessible to the public. This may include such items for public involvement as:

- Information distribution – through general listserves, podcast/audiocasts, RSS feeds, etc.
- Consultation efforts – through online surveys, blog dialogues, Facebook/Twitter, etc.
- Engagement – wikis for project management, or public involvement exercises, such as photo contests, etc.

- Collaboration – creating an online community to complement and support the active and real-time traditional public involvement, such as public meetings, etc.

MySpace for transportation planning.

Source: NCDOT, Best Practices and Tools for Public Involvement in Comprehensive Transportation Planning and Merger Processes

When soliciting public input for Mobility 2035, the Metropolitan Transportation Plan update for San Antonio and Bexar County, Texas, a consultant working on behalf of the MPO created a Myspace profile for the project. Using the search engine provided by the service, the consultant actively searched for residents and added them as friends of the project. Residents could then approve or reject the friendship of the project. Those that accept friendship received comment updates with information about the public outreach effort.

Additional Resources for More Collaboration Methods and Strategies:

[LENS Method – Leadership Effectiveness/New Strategies](#) – Tips for open communication. *Source: Institute of Cultural Affairs*

External Web Links

Minnesota Department of Transportation, [“Hear Every Voice” Public and Stakeholder Participation Guidance](#)

Michigan Department of Transportation, [Guidelines for Stakeholder Engagement](#)

New York State Department of Transportation, [Public Involvement Manual](#)

Florida Department of Transportation, [Public Involvement Handbook](#)

FHWA, [Public Involvement Techniques for Transportation Decision-Making](#)

Environmental Protection Agency, [Tools for Public Involvement](#)

The Institute of Cultural Affairs, [Technology of Participation courses](#)

[International Association for Public Participation](#)

Section 4.5 – How Can We Measure Effectiveness of Process and Solutions?

Why measure the effectiveness of processes and solutions?

“Money is not real. It is a conscious agreement on measuring value.”
- John Ralston Saul

Transportation project development and delivery, in general, benefits greatly from assessing the effectiveness of previous work. Understanding what went wrong (and what went right) in the development and delivery process can lead to streamlining and retooling policies and procedures in the future, which cuts costs and gets jobs finished faster. Measuring how well a particular solution functions in real-world conditions, in terms of its safety and efficacy at moving traffic, can provide valuable insight to future designs. Measuring the process and the solution is not a new idea, many state DOTs have some sort of formal

performance measures.

Collaborative processes are no different – they should be measured in order to inform institutional practices for better results over time. The difference is the form that measurements take. Quantifying quality of life benefits to the community can be very difficult. Some proxy measurements are available, and qualitative evaluations are also helpful. This section will present several examples of ways to measure the effectiveness of collaborative processes and solutions, with links to additional resources and examples of state DOTs that have incorporated CSS into their performance measurement.

How can we measure effectiveness?

Performance measurement can come in many forms, from a relatively simple, generalized list of qualitative questions to a rather complex list of quantitative measurements. Following are some examples of qualitative assessments of CSS:

The ultimate test of CSS is whether it succeeds in producing a result that:

- Solves the transportation problem without creating new problems;
- Respects the physical context and community values;
- Enhances quality of life including public health, safety and welfare;
- Makes effective and efficient use of all resources including professional and citizen involvement; and
- Satisfies the majority of the stakeholders involved in the process.

Five Keys to a Context Sensitive Project:

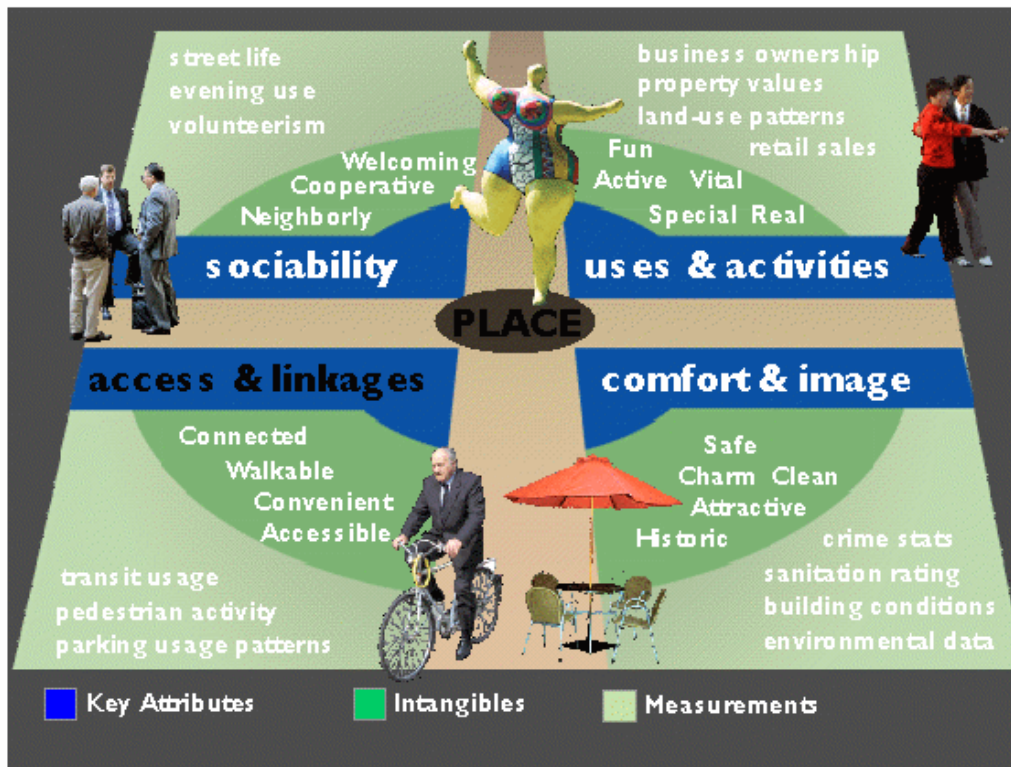
1. Does it reflect community values?
2. Is it environmentally sensitive?
3. Is it safe?
4. Is it feasible (constructible, financially)?
5. Have stakeholders been included in the decision process?

Source: Ahola, Adam. 2006. Context Sensitive Solutions. Western Federal Lands 2006 Contractor Conference, Spokane, WA. Slide 3.

These qualitative assessments, however, are challenging because their generality means that they can be answered differently by different people – for example, some community members may not agree with the DOT that the project “respects the physical context and community values.” Without numbers to back up the assertion, they may not be taken seriously by some people.

While it may seem difficult to quantify many of the quality of life benefits of CSS, there are measurements that can serve as proxies to quantify some of the aspects of CSS. The diagram from Project for Public Spaces below is an excellent example of how goals and intangible aspects of a community can be translated into measurements. While these measurements may not completely encapsulate the quality of life differences (some qualitative evaluation may still be needed), they can go a long way to back up assertions of CSS performance and show real effects to the community.

Quantifying the Power of Place (Project for Public Spaces)



Additional examples of these types of proxy measurements are included in Table 4.5.1 below.

Table 4.5.1 – Example Quantitative Measures

Traffic Measures • Peak hour LOS (intersection) • Screen line capacity (at "X" segments throughout the corridor) • Volume/capacity (at "X" segments throughout the corridor) • Corridor travel times between selected origins and destinations • Reduction in existing VMT • Multi-modal uses (bicycle and pedestrian infrastructure) • Desired travel speeds in defined areas	Safety Measures • Speed vs. probability of killing a pedestrian • Reduction in number of driveways • Reduction in unprotected left turns • Potential safety improvements at documented high-crash locations • Median that meets certain criteria • Shoulders that meet certain criteria
Cultural and Aesthetic Measures • Town streetscape • Visual preference surveys • Historic resources • Open space/parklands • Property values • Available cultural amenities	Economic Measures • Employment accessibility • Land use mix • Travel costs • Business revenues (tax revenue) • Economic equity • Diverse, locally-owned and operated businesses • Eco-tourism
Social Measures • Monetary giving • Civic engagement and volunteerism	Environmental Measures • Climate change/emissions • Habitat protection/fragmentation

• Trust • Government institutions • Levels of health and happiness (perceived) • Social interactions • Walkability • Well-designed open spaces	• Air pollution • Noise pollution • Water pollution • Resource efficiency • Land use impacts
Access and Mobility Measures • What percentage of existing car trips are converted to non-auto trips?	Health Measures • Rates of: hypertension, obesity, diabetes, asthma, heart disease, cancer, injury, depression, and infectious diseases

Table 4.5.2 below describes in detail four major research efforts that provide extensive description, examples and how-to for DOTs desiring to measure the performance of CSS.

Table 4.5.2: Research with Extensive Guidance on CSS Performance Measures

Quantifying the Benefits of Context Sensitive Solutions (NCHRP Report 642, Project 15-32, 2009)	
Link	Report: http://onlinepubs.trb.org/onlinepubs/nchrp/nchrp_rpt_642.pdf Appendices: http://www.trb.org/Publications/Blurbs/Quantifying_the_Benefits_of_Context_Sensitive_Solu_162_282.aspx
Summary	The primary outcome of this research effort is a practical set of recommended practices for transportation professionals to use for assessing benefits of a completed CSS project. To achieve this goal, a set of guidelines was developed that would clearly demonstrate the metrics to be used with each principle. It is also reasonable to assume that there may be some relative importance among the benefits gained from implementation of CSS principles for a variety of reasons, including ease of data collection, data availability, resources required, and level of commitment. The guidelines developed consider these issues and identify the benefits and their associated metrics in a manner that allows for prioritization. This approach provides an agency with the ability to do a basic or targeted evaluation.
Direct Applicability	Lists 22 benefits from implementing CSS and correlates them with the 15 CSS principles. Guidelines document (attached at end of PDF file) describes in detail how each of the 15 principles can be applied in specific phases of a transportation project, specific benefits to be realized from implementing the principle, indicators (measurements) that can quantify the benefits, and case studies of where DOTs have implemented the principle. The guidelines document also includes several case studies treated in detail, where the indicators were actually applied and calculated to quantify benefits, describing how that quantification process was completed. This report would be very useful to a DOT interested in enhancing its existing performance measures to better address CSS, as it provides very detailed information on how to go about implementing such measures.
Performance Measures for Context Sensitive Solutions – A Guidebook for State DOTs (NCHRP Document 69, 2004)	
Link	http://www.trb.org/Publications/Blurbs/155207.aspx
Summary	This guidebook is intended to help DOTs develop their own tailored and comprehensive CSS performance measurement programs. The approaches discussed in the guidebook are suitable both for agencies that are just beginning to pilot use of CSS on a handful of projects and those that are implementing CSS for all projects. No list of individual measures is provided in the guidebook – nor do most practitioners who participated in its preparation recommend such an approach. Rather a framework for organizing measures is described, and key focus areas for measurement are discussed. Agencies are expected to develop their own individual measures that are tailored to specific needs and are encouraged to pick and choose the components of the framework and measure focus areas that make sense for their state.
Direct Applicability	This guide is a more generalized discussion of performance measures, without directly applicable quantifiable measurements. It has useful discussions of general performance measurement

	program structure, and the distinction between project-level and organization-level measures. Includes sections on: • Guiding Concepts for CSS Performance Measurement Programs – This section offers DOTs a framework for organizing measures that addresses CSS-related processes and outcomes at the project-level and organization-wide, and provides an understanding of some basic principles for measurement of CSS performance; • Project-level Focus Areas – This section describes how agencies can assess performance of individual projects or groups of projects by targeting key focus areas, and gives pointers for potential performance measures in each focus area; • Organization-wide Focus Areas – This section describes focus areas that agencies should target as they assess overall organizational performance, and gives pointers for potential performance measures in each focus area; and • Tips for Getting Started – This section provides a few suggestions on creating and using a CSS performance measures framework.
Guidelines for Environmental Performance Measures (NCHRP Project 25-25, Task 23, 2008)	
Link	http://onlinepubs.trb.org/onlinepubs/archive/NotesDocs/25-25(23)_FR.pdf
Summary	Although DOTs have been addressing environmental considerations for many years, environmental concerns are taking on even greater importance; the scope of environmental issues considered relevant to transportation is increasing; and the environmental focus is expanding from project-based assessments to the consideration of environmental issues in operations, maintenance, planning, and policy-level decisions. This report examined this shift in conjunction with the expansion of performance-based strategic management within DOTs. Over the past decade, agencies have adopted a more systematic approach to identifying the vision, goals, and performance measures to guide agency planning and decision-making. As environmental issues gain momentum, so does the need to identify performance measures that can connect agency goals with outcomes. The product of this project is practice-oriented and includes a "library" of examples and possible environmental performance measures. Through an analysis and synthesis of current practices, the report provides an overall framework and guidance for the selection and implementation of environmental performance measures that can reflect different agency goals, organizational management structures, and data availability. The intent is to provide usable products for those interested in furthering the systematic consideration of environmental factors in agency planning, operations and management decision-making.
Direct Applicability	Since the report was focused specifically on environmental performance measures, the usefulness of the performance measures in the report will be most relevant to that phase of a transportation project, although there will also be limited applicability to other phases. The report details the environmental performance measures of thirteen agencies, spending several pages describing each. These include environmental benefit agreements; green or environmentally sensitive design, construction, maintenance, and operations practices; and environmental stewardship practices. These practices are immediately available for adoption or adaptation by other state DOTs and MPOs. The report also describes several emerging areas of interest that have the potential to impact future environmental performance measurement. The report would be useful for providing examples of performance measures specifically related to the environmental phase of project development, which DOTs could adopt or adapt for their own uses.
Non-traditional Performance Measures: AASHTO Peer Exchange Series (NCHRP Project 8-36 (53)(2), 2006)	
Link	http://apps.trb.org/cmsfeed/TRBNetProjectDisplay.asp?ProjectID=1267
Summary	On July 12 and July 13, 2005, the Non-Traditional Performance Measures Peer Exchange was the second in a peer exchange series held as part of National Cooperative Highway Research Program (NCHRP) Project 8-36, Task 53 – Peer Exchange of Best Practices on State and Metropolitan Transportation Planning Issues. The goal of the peer exchange was for individuals from various agencies to discuss how non-traditional performance measures are used in their transportation planning and decision-making processes. Non-traditional performance measures for the purposes of this discussion are defined as: "those measures or indicators of either transportation system performance or of phenomena external to the transportation system (but which are affected by transportation system operations) that are not commonly used in transportation planning." Non-traditional performance measures often relate to subjects not under the control of a transportation agency, but which might be considered important to monitor, for example ecosystem health or economic development.

Direct Applicability	Since the peer exchange discussion was focused specifically on transportation planning, the usefulness of the performance measures in the report will be limited to that phase of a transportation project. The peer exchange involved representatives of ten DOTs and transportation agencies and focused discussion on performance measures of: Customer Satisfaction, Economic Development, Energy and Resource Conservation, Environmental Justice, Environmental Quality, Freight Transportation, Quality of Life, Security, and Sustainability. The report includes responses from the ten participants on the specific performance measures they currently use related to each category, in addition to some general discussion about barriers to increased use of these types of measures by other DOTs. The report would be useful for providing examples of performance measures specifically related to transportation planning, which DOTs could adopt or adapt for their own uses.
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Additional examples of measuring the benefits and impacts of CSS:

- Washington State DOT Accountability and Performance Information: [Gray Notebook](#). Includes a variety of traditional and nontraditional performance measures.
- Florida DOT [Mobility Performance Measures](#) and [Evaluation of the Effectiveness of Public Involvement Programs](#) (from the Public Involvement Handbook).
- New Mexico DOT ["Guide to Context Sensitive Solutions."](#) 2006. Incorporates measures for each phase of project development including operations and maintenance.
- PennDOT and NJDOT ["Smart Transportation Guidebook."](#) 2008. Includes discussion of the quantifiable benefits of smart transportation.
- Washington State DOT [Performance Measurement Library](#).
- ["Demonstrating the Positive Impacts of Transportation Investments on Economic, Social, Environmental, Community, and Quality of Life Issues."](#) January 2002. NCHRP Project 8-36, Task 22.
- ["Taking the High Road: The Environmental and Social Contributions of America's Highway Programs."](#) 2003. AASHTO Center for Environmental Excellence.
- ["Above and Beyond: The Environmental and Social Contributions of America's Highway Programs."](#) January 2008. AASHTO Center for Environmental Excellence.
- ["Performance Measurement Framework for Highway Capacity Decision Making."](#) 2009. SHRP CO2 Capacity Project.
- ["Integrating Context Sensitive Solutions into Transportation Planning."](#) 2007. FHWA.

What should practitioners do with the results of performance measurement?

The purpose of taking the time to evaluate the effectiveness of CSS, whether qualitatively or quantitatively, is ultimately to use that information to make improvements to the CSS process and solutions for future projects. Without some information on the performance of past projects, it is difficult for practitioners or executives wishing to improve their CSS implementation to know precisely where improvements need to be made. The graphic below illustrates how the feedback cycle works:

CSS Process & Solution Evaluation



For example, performance measurement can aid in the improvement of institutional practices in the following ways:

- Trend analysis across projects – What problems are most common? What is going well?
- Sharing lessons learned – Staff learning from each other's mistakes
- Ideas for policy and procedure improvements to streamline or make the implementation of CSS easier

To be most effective, performance measurement needs to be established when a project begins—based on the context, community values, and project purpose—rather than attempting to do it after the fact. Collecting information during the project using pre-established criteria requires much less cost and effort than doing so after the fact. In addition, some information is simply impossible to collect after the project is complete unless it has been foreseen.

Because quantification of quality of life benefits is difficult, performance measures may not be a perfect reflection on the CSS process and solutions. However, the act of evaluating can be in itself useful as it will stimulate discussion among practitioners of lessons learned and ideas for improvement.

Going the Distance Together: Context Sensitive Solutions for Better Transportation - A Practitioner's Guide

Afterword

PDF files can be viewed with the [Acrobat® Reader®](#)

The end of this guidebook does not mark the end of your journey with CSS, but rather the beginning. This guide is intended to serve as an invaluable reference for practitioners as they wrestle with the challenging issues of transportation decision-making. But in the end, the guidebook is only as useful as *you* and other transportation practitioners make it. In addition to this guide, and its companion [Citizen's Guide](#), a wide variety of resources are available on Context Sensitive Solutions. Some key resources include:

- [Integration of Context Sensitive Solutions in the Transportation Planning Process](#)
- [AASHTO Center for Environmental Excellence, Context Sensitive Solutions site](#)
- [FHWA Context Sensitive Solutions site](#)

Take this guide and make it yours – the collaborative decision-making described here *cannot happen without you!*

Going the Distance Together: Context Sensitive Solutions for Better Transportation - A Practitioner's Guide

Appendix: Resource Links

PDF files can be viewed with the [Acrobat® Reader®](#)

Resource Links by Chapter

[Chapter 1](#)

[Chapter 2](#)

[Chapter 3](#)

[Chapter 4](#)

Chapter 1 Resources

[Above and Beyond – The Environmental and Social Contributions of America’s Highway Programs](#)

[America’s Top Five Transportation Headaches – and Their Remedies](#)

[Arizona Rt. 179 – Valuing a Unique “Sense of Place” \(Presentation given at the AASHTO/FHWA Peer Exchange: CSS at Baltimore, CD\)](#)

[Community and Social Benefits of Transportation Investment](#)

[Eco-Logical – An Ecosystem Approach to Developing Infrastructure Projects](#)

[Integrating Context Sensitive Solutions in Transportation Planning – Case Study: New Hampshire Transportation Business Plan](#)

[Long Range Strategic Issues Facing the Transportation Industry – Final Research Plan Framework \(NCHRP 20-80 Task 2\)](#)

[Moving Communities Forward: How Well-Design Transportation Projects Make Great Places](#)

[NCHRP Report 480 – A Guide to Best Practices for Achieving Context Sensitive Solutions](#)

[On Transportation & Shaping Landscapes, Cities, & Lives](#)

[Practitioner Disciplines Involved in Transportation Decision-making](#)

[Press Release – 50 Projects Vie for America’s Top Transportation Awards](#)

[Public Roads – Building Public Trust](#)

[Report Says Public Outreach, Done Right, Aids Policymaking](#)

[State DOT Context Sensitive Solutions Survey – Report to Members](#)

[Streets as Places – Using Streets to Rebuild Communities](#)

[The Fallacy of Freeways](#)

[Transportation – Are We There Yet?](#)

[Transportation – Invest in our Future – A New Vision for the 21st Century](#)

[Well Measured – Developing Indicators for Comprehensive and Sustainable Transportation Planning](#)

[You Told Us...What the new President and Congress should know about transportation](#)

Chapter 2 Resources

[Alternative Strategies and Measures](#)

[A Resident’s Guide for Creating Safe and Walkable Communities](#)

[Above and Beyond – The Environmental and Social Contributions of America’s Highway Programs](#)

[Audit Tool Analytic Version](#)

[Audit Tool Checklist Version](#)

[Audubon New York, American Kestrel Project](#)

[Beautiful Roads – A Handbook of Road Architecture](#)

[Bicycle and Pedestrian Program website](#)

[Building Projects that Build Communities – Recommended Best Practices](#)

[Community Assessment](#)

[Community Context Audit For Transportation Projects](#)

[Community Effects Considerations](#)

[Community Impact Assessment website](#)

[Compendium of Environmental Stewardship Practices in Construction and Maintenance](#)

[Context Definition Questions for Citizens](#)

[Context Definition Questions for Practitioners](#)

[Context Sensitive Solution – Western Federal Lands \(Presented at 2006 Contractor Conference in Spokane, WA\)](#)

[Context Sensitive Solution Guide](#)

[Context Sensitive Solutions in Designing Major Urban Thoroughfares for Walkable Communities](#)

[Context Tool Table](#)

[Eco-Logical – An Ecosystem Approach to Developing Infrastructure Projects](#)

[Efficient Transportation Decision Making Program, Florida](#)

[EPA, Tools for Public Involvement](#)

[FDOT, Public Involvement Handbook](#)

[FHWA, Public Involvement Techniques for Transportation Decision-making](#)

[Great Corridors, Great Communities: The Quiet Revolution in Transportation Planning](#)

[Institute of Cultural Affairs, Technology of Participation courses](#)

[International Association for Public Participation](#)

[Life of a Transportation Project](#)

[Making Your Community Walkable and Bikeable – A Guidebook for Change](#)

[MDOT Guidelines for Stakeholder Engagement](#)

[Measuring Urban Design Qualities – An Illustrated Field Manual](#)

[MnDOT, Hear Every Voice](#)

[Moving Communities Forward: How Well-Design Transportation Projects Make Great Places](#)

[NCHRP 25-25/Task 62](#)

[NCHRP Synthesis 373 – Multi-Disciplinary Teams in Context-Sensitive Solutions](#)

[NYSDOT, Public Involvement Manual](#)

[Peterborough Transportation Management – West Peterborough Road Audit](#)

[Place Game – Place Performance Evaluation](#)

[Placemaking through Transportation](#)

[Planning for Transportation in Rural Areas](#)

[Practitioner Disciplines Involved in Transportation Decision-making](#)

[Process Evaluation Questions for Practitioners](#)

[Public Health Workbook to Define, Locate and Reach Special, Vulnerable, and At-Risk Populations in an Emergency](#)

[Route 50 Corridor Coalition](#)

[Scenic Byways – A Design Guide for Roadside Improvements](#)

[Smart Growth Checklist – A Checklist for Municipal Land Use Planning and Management](#)

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[What is Safe or Unsafe?](#)
[What is the Merger Process?](#)
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[Washington State DOT Accountability and Performance Information](#)

[Welcome to the Public Involvement Toolbox](#)

[Working on Common Cross-cultural Communication Challenges](#)

Going the Distance Together: Context Sensitive Solutions for Better Transportation - A Practitioner's Guide

What is CSS?

PDF files can be viewed with the [Acrobat® Reader®](#)

Since the 1998 [Thinking Beyond the Pavement](#) conference, Context Sensitive Design (CSD) has evolved into Context Sensitive Solutions (CSS) [[link to milestones of CSS](#)]. Transportation agencies and their stakeholders have come to understand that the CSS process leads to [tangible benefits](#) that produce livable and sustainable outcomes. The process is founded upon collaborative decision-making strategies that engage a full range of stakeholders, including [interdisciplinary teams](#), to co-create solutions that solve transportation problems and support an improved [quality of life](#) for all citizens.

Following *Thinking Beyond the Pavement*, it became clear that CSS is about more than just design, and that collaboration among practitioners in different fields and between practitioners and citizens is a key element. A series of conferences, peer exchanges, reports, and guidance documents in subsequent years have allowed the national dialogue on CSS to continue. In 2007, AASHTO and FHWA released a joint CSS Strategic Planning Process Summary Report that contained a set of specific [principles, qualities, and outcomes](#) for CSS, which are presented in the graphics below.

CSS DEFINITION

Context sensitive solutions (CSS) is a collaborative, interdisciplinary approach that involves all stakeholders in providing a transportation facility that fits its setting. It is an approach that leads to preserving and enhancing scenic, aesthetic, historic, community, and environmental resources, while improving or maintaining safety, mobility, and infrastructure conditions.





"We must really think ahead-this isn't about what is needed this year, what is needed this decade. This is about what the nation needs for the next 20 to 40 years."

- Robert Darbelnet, President, AAA



Within the transportation industry, CSS has taken root as a business philosophy that reflects consensus-building strategies which lead to effective and efficient decisions and solutions. The report titled "[Quantification of the Benefits of CSS](#)" provides a framework for connecting CSS principles to indicators that can be measured by transportation agencies to evaluate their performance and demonstrate accountability to their customers. The overarching goal of CSS is to plan, develop, deliver, operate and maintain transportation infrastructure in a way that optimizes agency and stakeholder interests and needs. One of the key success factors for CSS implementation is finding common ground between citizens and practitioners, such that solutions are implementable and deliver on the promise of improved [quality of life](#) for all.

CSS PRINCIPLES <i>These core CSS principles apply to transportation processes, outcomes, and decision making.</i>	"The era of one-size-fits-all transportation projects must give way to one where preserving and enhancing unique community characteristics, be they rural or urban, is a primary mission of our work rather than an afterthought." <i>-Ray LaHood, Secretary, United States Department of Transportation. January 21, 2009.</i>	 Foster continuing communication and collaboration to achieve consensus.
	Demonstrate a comprehensive understanding of contexts. 	 Strive towards a shared stakeholder vision to provide a basis for decisions.
Exercise flexibility and creativity to shape effective transportation solutions, while preserving and enhancing community and natural environments.		

While the [American Association of State Highway and Transportation Officials \(AASHTO\)](#) and the [Federal Highway Administration \(FHWA\)](#) have agreed upon a definition, principles, qualities, and outcomes associated with CSS these apply differently depending on the circumstances of individual projects. In addition, CSS is often viewed as a means to many different ends, including obtaining sustainable and livable transportation outcomes. It is also important to note that the process is applicable to all modes of transportation. The national clearinghouse for CSS information can be found at <https://www.fhwa.dot.gov/planning/css/>.

CSS QUALITIES

Context sensitive solutions is guided by a process which:

Encourages agency and stakeholder participants to jointly monitor how well the agreed-upon process is working, to improve it as needed, and when completed, to identify any lessons learned.



Secures commitments to the process from local leaders.

Utilizes a clearly defined decision-making process.

Tracks and honors commitments through the life cycle of projects.

Involves a full range of stakeholders (including transportation officials) in all phases of a transportation program.



Encourages mutually supportive and coordinated multimodal transportation and land-use decisions.

*Transit plays an important placemaking role by spurring the kinds of people-friendly, business and community building activities that help rejuvenate places.
- Project for Public Spaces, Inc. 2008. Streets as Places, Using Streets to Rebuild Communities.*

Communicates early and continuously with all stakeholders in an open, honest, and respectful manner, and tailors public involvement to the context and phase.

Seeks to understand the landscape, the community, valued resources, and the role of all appropriate modes of transportation in each unique context before developing engineering solutions.



Draws upon a full range of communication and visualization tools to better inform stakeholders, encourage dialogue, and increase credibility of the process.

Establishes an interdisciplinary team early, including a full range of stakeholders, with skills based on the needs of the transportation activity.

Tailors the transportation development process to the circumstances and uses a process that examines multiple alternatives, including all appropriate modes of transportation, and results in consensus.

Clearly defines the purpose and seeks consensus on the shared stakeholder vision and scope of projects and activities, while incorporating transportation, community, and environmental elements.

What's in a Name: Other names related to CSS

While most states have implemented new policies, practices and/or procedures that are consistent with CSS, what they do is not always called CSS. This can cause confusion, but it is the philosophy of CSS that is important, not the name. The following is a partial list of program names that are sometimes linked with CSS, but are not entirely equivalent to CSS. When practitioners encounter these terms, they should be aware of this potential connection, but should not take it for granted. Some of these policies may contain only certain elements that are related to CSS – for example, some may emphasize design flexibility but not necessarily reflect other key CSS principles such as collaboration among citizens, practitioners, and other stakeholders.

- [Livable Communities Initiative](#) (USDOT, HUD, EPA)
- [Context Sensitive Sustainable Solutions](#) (Oregon)
- [Transportation Design for Livable Communities](#) (Florida)
- [Stewardship Initiatives](#) (North Carolina)
- [Practical Design and Right Sizing](#) (Kentucky and Missouri)
- [Place Making](#) (Project for Public Spaces)
- [Sustainable Transportation Strategies](#) (AASHTO)
- [Community Sensitive Design](#) (Wisconsin)
- [Integrated Design](#) (AIA)
- [Urban Transportation Initiative](#) (Texas)
- Linking Planning and NEPA (Arkansas)
- [Smart Transportation](#) (New Jersey and Pennsylvania)
- [Complete Streets Initiatives](#) (ITE)
- Common Sense Solutions
- [Streamlining Initiatives](#) (FHWA)
- Practical Solutions (Missouri, Kentucky, Oregon)
- [Sustainability](#)

CSS OUTCOMES *Context sensitive solutions leads to outcomes that:*



Demonstrate effective and efficient use of resources (people, time, budget,) among all parties.

Are in harmony with the community and preserve the environmental, scenic, aesthetic, historic, and natural resource values of the area.

Are safe for all users.

Meet or exceed the expectations of both designers and stakeholders, thereby adding lasting value to the community, the environment, and the transportation system.

Solve problems that are agreed upon by a full range of stakeholders.



The only way we are going to meet the transportation needs of our state is to be willing to change how we do business and to keep building and extending our partnerships. – *Connie Niva, Transportation Commissioner, Washington State DOT*

CSS is Not:

- Compromising safety or standards due to community pressure. CSS is a collaborative process among stakeholders, with the DOT ensuring safety and operational concerns are addressed.
- Spending considerably more money. Collaborating with parties interested in the project can also bring other sources of funding to the effort and produce a more comprehensive solution within shorter time frames and with fewer do-overs.
- Taking considerably more time. By using an effective outreach process, project issues can be identified and resolved early in a projects development. The alternative is a process where previously-ignored issues can derail a project late in the process.
- Creating winners or losers. With a successful outreach process, everyone is able to understand how the final solution was chosen.
- Listening to the loudest voices. A good process allows an opportunity for every voice to be heard.
- Doing what every stakeholder wants. A compromise for consensus is almost always required to reach a solution that best fits everyone's needs.

Source: AASHTO. 2007. [*Driving to Success with CSS*](#), p2.