

## **APPENDICES**

## APPENDIX A: Acronyms

AA	Assistant Administrator
AESF	American Electroplators and Surface Finishers
APA	Administrative Procedures Act
BATNA	Best Available Alternative to Negotiated Agreement
CAA	Clean Air Act
CSI	Common Sense Initiative
C&E	Computers and Electronics
CRT	Cathode Ray Tube
CWA	Clean Water Act
DFO	Designated Federal Officer
DEQ	Department of Environmental Quality
EGL	Effluent Guideline Limitations
EIA	Electronic Industries Association
EPA	U.S. Environmental Protection Agency
E4E	Enterprise for the Environment
FACA	Federal Advisory Committee Act
IPC	Institute for Interconnecting and Packaging Electronic Circuits
LCM	Life Cycle Management
NAPA	National Academy of Public Administration
NEPI	National Environmental Policy Institute
NGO	Non Governmental Organization
NIOSH	National Institute for Occupational Safety and Health
NRDC	Natural Resources Defense Council
NSC	National Safety Council
OPPT	Office of Pollution Prevention and Toxics
OSHA	Occupational Safety and Health Administration
PCSD	President's Council for Sustainable Development
POTW	Publicly Owned Treatment Works
PWB	Printed Wiring Board
RCRA	Resource Conservation and Recovery Act
RA	Regional Administrator
SGP	Strategic Goals Program
SPIDR	Society for Professionals in Dispute Resolution
TSCA	Toxic Substances Control Act
WOEJ	Washington Office of Environmental Justice

## **APPENDIX B: Research Design and Methodology**

### **A. Introduction**

The case study method was used in this qualitative research effort. The purpose of this study was to examine and describe the roles and responsibilities of the U.S. Environmental Protection Agency (EPA) Designated Federal Officer (DFO) in the Common Sense Initiative (CSI). EPA sponsored CSI as one of its principal reinvention initiatives. CSI was conducted from July 1994 to December 1998. EPA DFOs were studied in three of the six CSI Sector Subcommittees. A total of nineteen EPA officials participated in the three different DFO teams of the CSI Automobile Manufacturing Sector, the Computers and Electronics Sector, and the Metal Finishing Sector. This research study defines its cases in terms of people—the DFO teams. Within each of the three CSI Sector Subcommittees, the DFO teams were studied by comparing and contrasting them through two analytic frameworks—a consensus building model and mediation competency model.

### **B. Purpose and Process**

This research effort was conducted as a descriptive case study that sought to address three principal questions about the future role of EPA officials. Leedy (1997) argues that a case study is normally conducted to shed light on a phenomenon, be it a process, event, person, or object of interest to the researcher. He points out that “a case constitutes a single instance of the phenomenon” (p. 157). According to Gall, Borg, and Gall (1996), “researchers generally do cases studies for one of three purposes: to produce details descriptions of a phenomenon, to develop possible explanations of it, or to evaluate the phenomenon” (p. 549).

This is a descriptive case study. After defining a specific focus for a case study, Leedy recommends that researchers spend an extended period of time on-site with their research participants. “A substantial amount of data is gathered from a wide variety of sources to present a description of the phenomenon or experience from the perspective of the participants” (1997, p. 157). Kirk and Miller (cited in Gall et al, 1996) describe the case study process as “watching people in their own territory and interacting with them in their own language, on their own terms” (p. 547). Leedy cautions that case study researchers often assume an interactive role with their participants, becoming personally involved with the people and phenomena being studied. As an EPA official who was directly involved in the CSI process (as a member of the EPA Headquarters team, not a DFO, that supported the CSI Council for two years 1997-1998), I am sensitive to being potentially biased in this study, so I conducted an extensive data collection effort to thwart these influences.

CSI was considered a precursor to the next generation system of environmental protection because of its three defining elements—industry-by-industry approach, multistakeholder involvement, and a consensus decision-making process. Based on the future environmental

policy implications of CSI, three primary questions guided this research study about EPA officials:

1. What is an appropriate role orientation for EPA officials in the next generation system of environmental protection?
2. How can EPA officials contribute to a consensus-building process?
3. What specific skill sets are needed by EPA officials in collaborative public decision-making?

To address the primary question of “what is an appropriate role orientation for EPA officials in the next generation system of environmental protection,” two analytic frameworks were used—a consensus-building model proposed by Susskind (1999) and a mediation competency model suggested by Honeyman (1988, 1990). DFO actions were compared and contrasted against these models. Susskind’s model helps address the secondary question of how EPA officials can contribute to a consensus-building process. The Susskind model identifies five steps (convening, clarifying, deliberating, deciding, and implementing) that groups use to achieve consensus. This model builds on many aspects of group collaboration including mutual gains negotiations, “getting to yes” principles, and building social capital. Table B-1 outlines the interview questions that were raised with CSI participants about how the DFOs contributed to the consensus-building process.

**Table B-1. Consensus-Building Process**

1. **Convening.** How did the DFOs contribute in this start-up phase in selecting membership, understanding stakeholder interests, and preparing mutually acceptable meeting agendas?
2. **Clarifying roles and responsibilities.** How did the DFOs clarify their roles and responsibilities as stakeholders, facilitators, or negotiators? How did the DFOs clarify their roles relative to other EPA participants, such as EPA co-chairs, program and regional experts?
3. **Deliberating.** How did the DFOs contribute to the dialogue process in framing issues for discussion, providing technical assistance, etc.? How did their roles differ at the subcommittee and workgroups levels?
4. **Deciding.** How did DFOs contribute to group decision-making? What role did they play in reaching agreement about reports and recommendations?
5. **Implementing agreements.** What was the role of DFOs in implementing consensus recommendations? If the DFOs did not have a role, should that situation have been different?

The final remaining issue of what specific skill sets are needed by EPA officials in collaborative public decision-making required a finer level of analysis to decipher specific types of DFO behavior. Mediation was a specific task that all EPA DFOs had to perform in the CSI process. Honeyman (1988, 1990) identifies five skill competencies (investigation, empathy, inventiveness, persuasion and presentation, and interactive management) that measure the effectiveness of mediators. Raising questions about these skill competencies with CSI stakeholders evolved reactions about DFO roles that went beyond mediation. These reactions helped build the propositions about the other role orientations (resource manager, facilitator, and facilitative leader) EPA officials experienced in the CSI process. Table B-2 outlines the questions that were raised with CSI participants about DFO mediation skills.

### C. Data Collection

To address the three general questions that guided this research study, a combination of personal interviews, meeting observations, and document reviews was conducted.

Personal Interviews. Using the open-ended questions presented above in Tables B-1 and B-2, a series of interviews was conducted among the five CSI stakeholder groups (EPA, state, and local government officials; industry officials; environmentalists; environmental justice and community officials; and labor representatives). Within EPA, a mixture of CSI Council members, Sector Subcommittee co-chairs, DFOs from each of the Sector Subcommittees, and

<b>Table B-2. Mediation Skills</b>	
<b>1.</b>	<b>Investigation.</b> What investigative and analytical skills did the DFOs use in exploring stakeholder interests?
<b>2.</b>	<b>Empathy.</b> How did DFOs promote fairness and objectivity in dealing with stakeholders?
<b>3.</b>	<b>Inventiveness and problem solving.</b> How did the DFOs contribute to stakeholder negotiations?
<b>4.</b>	<b>Persuasion and presentation.</b> How skillful and persuasive were DFOs in handling controversial issues?
<b>5.</b>	<b>Managing the interaction.</b> How did the DFOs promote trust and cooperation among stakeholders?

senior Agency career managers and technical experts were interviewed. In addition, neutral facilitators for the CSI Council, Sector Subcommittees, and workgroups were interviewed. Over the course of an eight-month period (October 1999 to June 2000), fifty-two CSI participants were

interviewed. These interviews were conducted both face-to-face and by telephone. Table B-3 summarizes the various groups of interviewees.

Meeting Observations. Since September 1996, I have observed various CSI Council and Sector Subcommittee meetings both through direct observation and as a participant observer. As part of the FACA process, all CSI meetings are summarized so these public records supplemented my meeting notes. Since late February 1997, when I joined the EPA Office of Reinvention, I have been a participant observer in six CSI Council meetings, ten CSI Sector Subcommittee meetings, and nearly twenty Subcommittee workgroup meetings. In December 1998, the final meetings of the CSI Council and Sector Subcommittees were conducted, so this completed my CSI meeting observations.

**Table B-3. CSI Participant Interview Summary**

Organization	Function Roles	Number
U.S. EPA Officials	Sector Subcommittee co-chairs, DFOs, career managers, and technical experts	15
Industry Officials	Council/Sector Subcommittee members, workgroup co-chairs, stakeholders, and technical experts	12
Environmentalists	Sector Subcommittee/workgroup members, stakeholders, and technical experts	8
Environmental justice/ Community Officials	Workgroup co-chairs, stakeholders	5
State/local government Officials (including academic representatives)	Council/Sector Subcommittee members, workgroup co-chairs, stakeholders	5
Union Officials	Council/Sector Subcommittee member	2
Neutral Facilitators	Council/Subcommittee/ Workgroup facilitators	5
<b>TOTAL</b>		<b>52</b>

Document Reviews. In CSI's history, nearly thirty consensus recommendations (the highest form of CSI Council advice and direction to EPA) were submitted to the Agency for action. As part of these recommendations, numerous consensus reports also were generated by the CSI Council and Sector Subcommittees. All of these recommendations and reports will be examined closely as well as the four major evaluations of CSI (a 1997 General Accounting Office Study; the 1997 NAPA II Report; and two independent contractor evaluations in 1997 and 1999) were examined. In addition, all of the meeting summaries (forty-one) that were prepared for each of the three Sector Subcommittee meetings and all of the project work plans and reports (thirty-five) produced by the Subcommittee workgroups were reviewed.

#### **D. Data Analysis**

There are three approaches normally used to analyze case study data—interpretational, structural, and reflective analyses (Gall et al, 1996; Leedy, 1997). Interpretational analysis refers to examining the data for constructs, themes, and patterns that can be used to describe and explain the phenomena studies. Structural analysis refers to searching the data for patterns inherent in discourse, text, events, or other phenomena, with little or no inference made as to the meaning of the patterns. Reflective analysis refers to using primarily intuition and judgment to portray or evaluate the phenomena. For this study, an interpretational analytical approach was used.

A pattern-coding system was used to categorize and correlate data across interview summaries, meeting notes, and documents. This pattern-coding allowed themes, functions, and role orientations to emerge about the experiences of EPA officials as DFOs. It also provided some insights into the transitional and developmental nature of the DFO roles and how those roles related to the team and consensus-building aspects of the CSI process.

#### **E. Errors and Bias**

For the final two years of the CSI process (1997-1998), I was an EPA staff member in the CSI Program Office that principally supported the CSI Council. As a participant observer in the CSI experiment, I tried to reduce my bias by using a variety of data collection approaches—meeting observations, document reviews, and personal interviews—as well as triangulation among these approaches to validate my data analysis. Jerome Murphy (1980) warns that an analyst who does not acknowledge sources of bias and error in examining an issue is like a surgeon who ignores germs and infection while performing an operation—both will encounter complications that produce harmful effects. I was sensitive to my partiality as well as the potential advocacy I might share about some EPA interests. I tried to maintain a balanced perspective on key issues by examining a range of sources before drawing any conclusions.

## **APPENDIX C: CSI Participant Interview Letter**

**SUBJECT: CSI Designated Federal Officer Questionnaire**

**FROM: Gregory Ondich**

**TO: CSI Stakeholders**

I am contacting you about an interview I would like to conduct relative to my PhD Dissertation Research on the Common Sense Initiative Designated Federal Officers (CSI DFOs) for the Metal Finishing, Computers and Electronics, and Autos Sector Subcommittees. I am pursuing a PhD in Public Administration and Policy at the Virginia Polytechnic Institute and State University. The tentative title of my dissertation is “New Role Orientations for EPA Officials in the Next Generation System of Environmental Protection.” My primary research question is “How can the CSI DFO experience help shape new role orientations for EPA officials in the future?”

This is not an evaluation of the CSI DFOs; rather it is an attempt to describe and characterize DFO activities in a way that will be helpful for EPA managers as they seek better ways to be responsive to future environmental requirements. Basically, in this research study, the CSI DFO activities will be compared and contrasted against two frameworks described in the attached figures. The questions I would like to discuss with you also are attached and referenced to the steps or skills in these two frameworks.

The interview will take no longer than one hour. Could you let me know when it would be convenient for me to contact you about conducting this interview?

I would like to conduct these interviews in the next several weeks. I look forward to hearing from you.

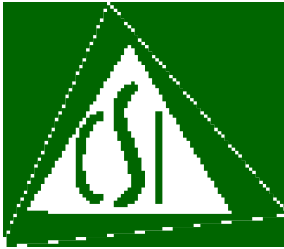
Attachments

## **Consensus-Building Process**

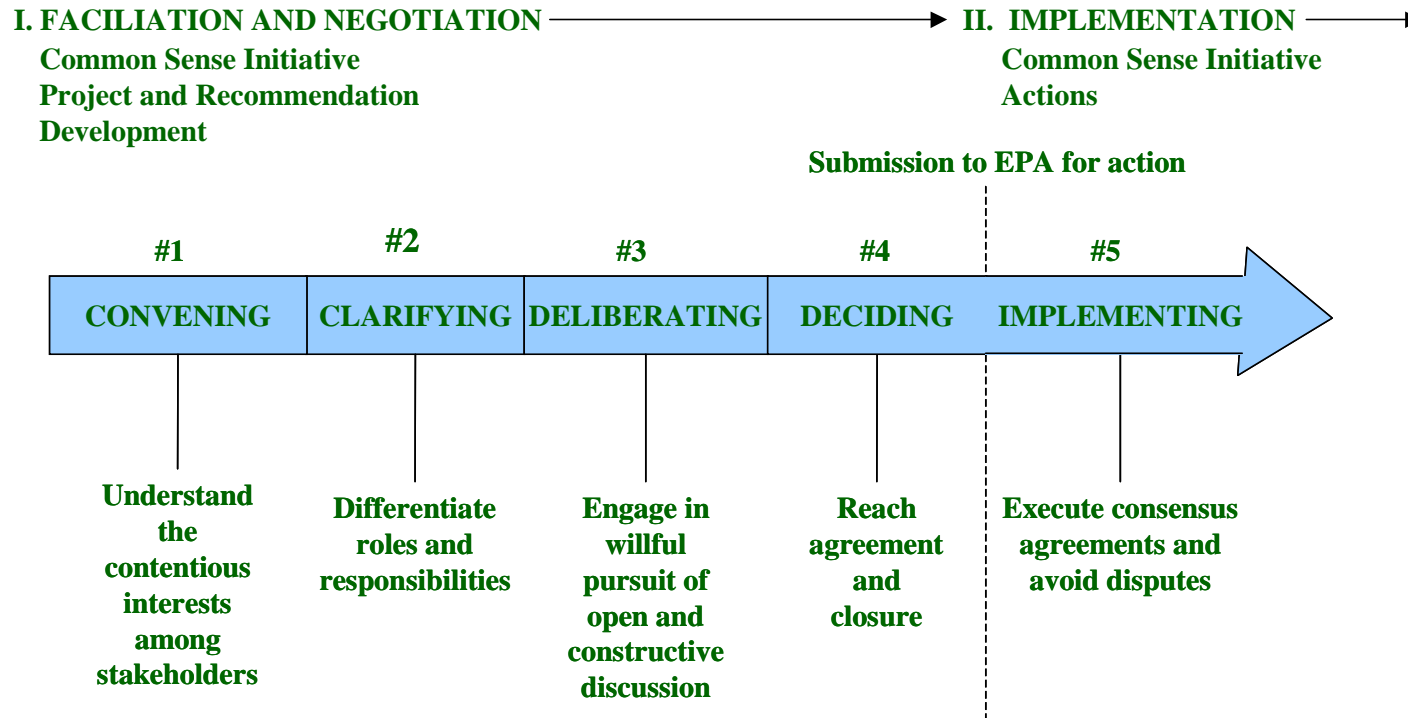
1. **Convening.**  
How did the DFOs contribute to this start-up phase in selecting parties for membership, identifying stakeholder interests, preparing meeting agendas, etc.?
2. **Clarifying responsibilities.**  
How did DFOs clarify their role and responsibilities as stakeholders, facilitators, negotiators, etc.? How did the DFOs clarify their roles relative to other EPA participants, such as the EPA co-chairs, Headquarters program and Regional experts?
3. **Deliberating.**  
How did DFOs contribute to the stakeholder dialogue relative to framing issues, providing technical assistance, etc.?
4. **Deciding.**  
How did DFOs contribute to the group decision making process? What role did the DFOs play in reaching agreement about recommendations/reports?
5. **Implementing agreements.**  
What was the role of the DFOs in implementing consensus recommendations? If the DFOs did not have a role, should they have had a role?

## **Mediation Skills**

1. **Investigation.**  
What investigative and analytical skills did the DFOs use in exploring stakeholder interests?
2. **Empathy.**  
How did the DFOs promote fairness and objectivity in dealing with stakeholders?
3. **Inventiveness and problem solving.**  
How did the DFOs contribute to stakeholder negotiations?
4. **Persuasion and presentation.**  
How skillful and persuasive were DFOs in handling controversial issues?
5. **Managing the interaction.**  
How did DFOs promote trust and cooperation among stakeholders?

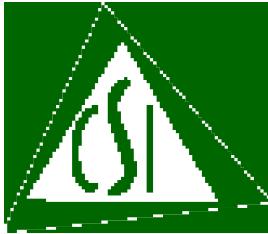


# Consensus Building Process

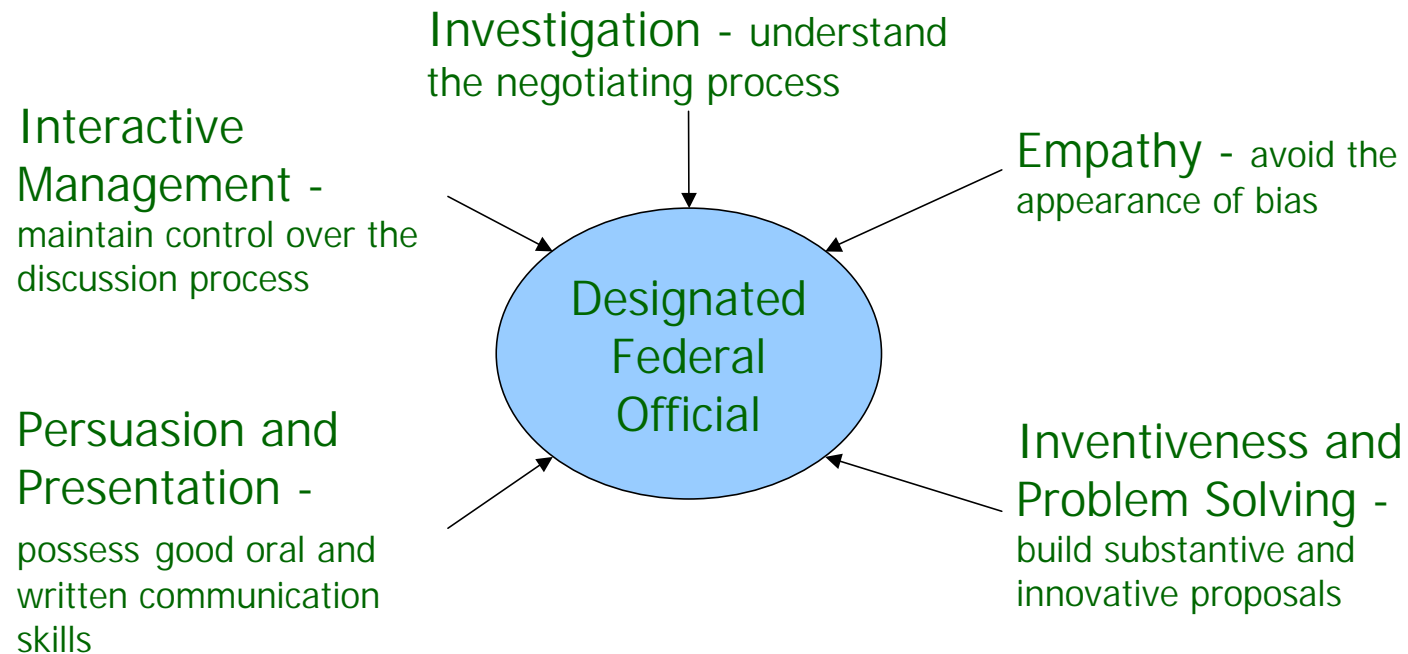


\*Source: Adapted from Lawrence Susskind et al, *The Consensus Building Handbook*, Thousand Oaks, CA: Sage Publications. 1999.

**Figure C-1. Consensus Building Process**



# Mediation Competency Skills



Source: Adapted from: Christopher Honeyman. "Five Elements of Mediation," *Negotiation Journal*, Vol. 4, No. 2. April 1988.

**Figure C-2. Mediation Competency Skills**

## **APPENDIX D: Facilitative Leadership and the Consensus Building Process**

### **A. Introduction**

Being a facilitative leader generally means working within a consensus building process. Most groups strive for consensus in their deliberations and having a facilitative leader raises the probability of getting to yes agreements. Yet, there is a gap in the scholarly literature concerning the role of facilitative leadership in consensus-building . Most scholars acknowledge the importance of facilitative leadership in collaborative dialogue but they fail to acknowledge its significance in consensus-building forums (Ray,1999; Conley and Goldman,1994; Schwarz,1994; Svara, 1994; Rees, 1991). Similarly, much of the scholarly literature about consensus-building , mutual gains negotiations, and “getting to yes” agreements has not recognized the dynamic and additive value of being a facilitative leader in the consensus process (Susskind and Field, 1996; Fisher, Ury, and Patton, 1991; Cormick, 1991; and Susskind and Cruikshank, 1987; and Raiffa, 1982).

Moore (1999) is the only contributing author in Susskind, McKearnan, and Larmer’s seminal *Consensus-building Handbook* to recognize the need for a new role for leaders and managers in consensus-building . Moore suggests that “leadership roles at *all* levels of organizations are changing, particularly as consensus-based procedures are implemented for decision making and dispute resolution” (p. 619). He argues that facilitative leaders function in a variety of capacities in consensus-building . He does not define facilitative leaders in static terms but envisions this as a new concept in management where “leading is no longer an exclusive function of those above, people also lead from below” (p. 619).

This chapter presents findings for scholars. It offers these findings in the form of five propositions. Each proposition is followed by a descriptive statement and evidence from this research study that scholars may consider as they review how facilitative leaders can help execute consensus-building processes.

### **B. Managing Tension and Dissent**

Facilitative leadership is primarily the creation and management of tensions, and consensus-building is the management of dissent. Tension exists in all organizations and collaborative endeavors, and successful leaders must be able to manage tension. Senge (1990) argues that people often have great difficulty talking about their visions, even when the visions are clear. Why? Because, he notes, “we are acutely aware of the gaps between our vision and reality” (p. 150). Senge admits that these gaps discourage people because their vision seems unrealistic and fanciful. But, he suggests, “the gap between vision and current reality is also a source of energy. Indeed, the gap is the source of creative energy” (p. 150). Senge calls this gap creative tension.

Conley and Goldman (1994) argue that tension created by facilitative leaders is dynamic tension or the “discrepancy model” (p. 14). They suggest that this type of tension creates a gap in perceptions of “what is” and “what can” or “should be.” Further, tension is creatively used to help support change by bringing people together who might not otherwise interact: “creating new leaders, infusing information into the system, focusing on vision, encouraging others to take the initiative” (p. 15). Conley and Goldman believe that facilitative leaders look for opportunities to challenge the status quo and disrupt the equilibrium that characterizes highly bureaucratic organizations.

Consensus-building, according to Charles Sabel (1999), is the management of dissent, and suggests that this characterization illustrates the tension in the consensus-building ideal (p. 707). He believes that although consensus-building can be a powerful problem-solving process that participants can use to address complex and challenging problems, consensus-building also can be viewed as a fixing or arbitration of conflict, which each party uses as a forum to publicize their original demands in the hope that this will justify their continued participation. Across the three CSI case studies, the most successful Sector Subcommittee in terms of stakeholder satisfaction and significance of consensus recommendations (i.e., Metal Finishing) was the group that adopted consensus-building as a problem-solving opportunity. Conversely, both the Autos and the Computers and Electronics Sectors used the CSI consensus process as a forum to arbitrate existing conflicts, and were resistant to putting aside their differences to allow an open, deliberative dialogue.

Straus (1999) builds on Sabel’s commentary noting that consensus-building should be viewed as a means to an end rather than an end in itself. This approach offers a way to reduce the tension in the consensus-building process. The Computers and Electronics Subcommittee, for example, eventually developed a series of intermediate agreements that allowed them to develop substantive consensus recommendations; the Auto Subcommittee, unfortunately, kept recycling past disagreements. Strauss notes that consensus-building can be a transforming experience if parties willingly build the process step-by-step. Even if consensus is not achieved, Strauss argues that the process of respectful, face-to-face exploration helps people to better understand another point of view and makes future attempts at consensus-building more likely to succeed.

### **C. Understanding Leadership and Negotiations**

Facilitative leadership is the opposite of positional leadership, just as mutual gains negotiations are the antithesis of positional bargaining. Two styles of leadership and organizations are posited in this research effort. One is an authoritarian style, with top-down communication. The organization that matches the control- or power-oriented style is hierarchical in nature. The counter style, according to Rees (1991), stresses the following skills: helping groups solve problems, listening, communicating, developing team capacity, coaching, motivating, and inspiring (pp. 14-15); and the roles of facilitative leaders are to “listen, ask questions, direct group process, coach, teach, build consensus, share in goal setting, share in

decision making, and empower others to get things done” (p. 21). This opposing view, according to Svava (1994), sees organizations as networks with fluid authority, ambiguous limits, and overlapping domains. Bryson and Crosby (1992) argue that these organizations are characterized by shared power. Leaders in these settings “inspire and motivate followers through persuasion, example, and empowerment, not through command and control. Such leaders foster dialogue with their followers and the situations in which they find themselves, and they encourage collective action to address real problems” (p. 13). Facilitative leaders cannot rely on formal authority or positional power to get things done (Svava, 1994).

Positional bargaining is the antithesis of mutual gains negotiations (Fisher, Ury, and Patton, 1991). To achieve “win-win” agreements, parties must forego “win-lose” mentalities. Mutual gains negotiation builds on integrative bargaining, an approach similar to what Mary Parker Follett called finding the “creative integration” among the needs of different parties. Too often in CSI, parties argued over positions rather than over the interests that created those positions. Susskind and Field (1992) argue that the mutual gains approach works only if parties acknowledge the concerns of the other side, encourage joint fact-finding, act responsibly and share power. CSI Auto Sector stakeholders, for example, pursued adversary science (i.e., using technical data and analysis supporting a particular side of an argument) rather than joint fact finding in their dialogue about alternative permitting procedures under Clean Air Act Title V. Similarly, the C&E Sector Subcommittee was deadlocked for nearly a year because an environmentalist refused to alter his position on the need for unanimous agreement among parties as the basis for consensus-building .

#### **D. Recognizing the Evolution of Role Orientations**

Facilitative leaders function in a variety of cumulative roles in consensus-building but these roles need to be clarified. Facilitative leaders evolve through the consensus building process and promote power sharing with participants. When people are not in charge, they are “primarily in the business of supporting other people in the accomplishment of their goals” (Bellman, 1992, p. 6), and consequently they must “lead from the middle” to be effective (p. 20). A strong advocate of viewing leadership in terms of service rather than power is Richard Greenleaf, whose concept of servant leadership is finding support in the business community (Kiechel, 1992). Leading from the middle and providing service rather than being served is not without form and structure. Bass (1990) offers a structural dimension to leadership suggesting that it is “an interaction between two or more members of a group that often involves a structuring or restructuring of the situation and the perceptions and expectations of the members” (p. 19). While consensus-building is not a scripted, rote process, there is a structure to its development. Susskind (1999) identifies five consensus-building steps from convening to implementing agreements.

The emphasis in facilitative leadership is on cooperation and a power-shared world. Being a facilitative leader covers all phases of consensus-building from convening stakeholders

to implementing agreements. However, differentiating roles and responsibilities among parties is an essential part of the consensus process.

Carpenter (1999) suggests that most consensus-building processes involve more role-playing responsibilities than conventional group meetings. In addition to interested outside stakeholders, she argues that an effective consensus-building process requires the participation of a convenor, sponsor, mediator or facilitator, chairperson, recorder, resource or technical advisor, and observers. Straus (1999) distills these roles to different meeting management responsibilities. The most useful framework for effective face-to-face meetings, Straus calls the “interaction method” (p. 298). This framework involves a set of four roles and functions: facilitator, recorder, leader (i.e., the chair or manager), and group members. Both Carpenter and Straus agree that all four of these functions need to be served in any meeting, even if one person has to play several roles simultaneously. This was the case for most DFO team members, even if they did not recognize the unique aspects of their participation. The interesting aspect of Carpenter and Straus’ insights into these various roles and functions is that their performance creates a series of implicit or explicit contracts to which active consensus participants agree. Carpenter and Straus suggest that these contracts create a “a self-correcting system,” in which participants share responsibilities for making sure everyone else stays in role (p. 299).

DFOs performed multiple tasks in the CSI consensus-building process. Many of these tasks caused DFO to assume different roles and responsibilities. Some of these roles were assigned (i.e., FACA responsibilities as convenor, sponsor, recorder, and resource advisor) while others were assumed, such as facilitator, workgroup leader, and mediator; still others were serendipitous (i.e., Regional DFOs assuming Subcommittee co-chair responsibilities).

During the history of the three CSI Sector Subcommittees surveyed in this study, DFO roles changed gradually. Resource manager responsibilities consumed a large portion of most DFOs time during the early phases of the Sector Subcommittees activities. Only the Metal Finishing Sector DFOs were able to minimize some of this administrative burden because of their earlier experience with stakeholders in the Sustainable Industry Program. For two of the three Sector Subcommittees (i.e., Autos and Metal Finishing), DFOs were Subcommittee facilitators for nearly 20 percent of the Sector’s history. These roles changed as stakeholder disputes escalated and the DFOs had to shift their attention to trust building and mediation. In some Subcommittees, the tedious nature of consensus-building provided an opportunity for DFOs to lead from the middle.

When EPA co-chair participation waned in the C&E Subcommittee and stakeholders agreed to deadline management, DFOs were able to seize the opportunity and assume a facilitative leadership role. Conversely, the Metal Finishing DFO achieved his facilitative leadership in a more progressive fashion. He successively built on his intermediate roles as resource manager, facilitator, and mediator to combine these skills into a facilitative leadership role. The difference between the Metal Finishing DFO and his counterparts was that he

recognized his different role orientations and was able to clarify these responsibilities more clearly with stakeholders. As one stakeholder observed in the Metal Finishing Sector:

*The DFO was a prime mover in the whole CSI process. He had a positive attitude and a unique combination of skills. He was neutral on outcomes, he was enthusiastic about the process. He was personally persuasive, optimistic, and sincere. You could trust him...he would talk with me and make me feel OK and he would do the same with a completely different stakeholder and they would feel the same too.*

## **E. Shared Meaning and Shared Values**

Facilitative leaders encourage the creation of shared values within groups and deliberating how those values will be realized is an essential part of the consensus-building process. Facilitative leaders operate on a unique set of core values. Schwartz (1994) argues that these core values are consistent with the concepts of “empowerment, commitment, collaboration learning, and partnership” (p. 251). Each of these concepts creates value in the consensus-building process. Blank (1995) points out that leaders create shared meaning with followers by performing actions that match the followers’ values. The better the match of values, the more effective the transfer of meaning and the greater likelihood the followers will support the leader. People process information through their core values and those values affect the creation of meaning. Value serves as a filter through which we translate information and evaluate its content (Blank, 1995, pp. 150-151).

Ozawa (1999) argues that “the heart of consensus-building is discussion, debate, and deliberation” (p. 410). He believes that willing, face-to-face interaction helps dispel fear and trepidation among wary stakeholders. However, he cautions that consensus-building can take an inordinate amount of time during which stakeholder fervor can wane. Some of the conditions that contribute to the time-consuming nature of consensus-building are the diverse values, perceptions, and interests that exist among stakeholders, and the difficulty in managing the technical complexity of the issues under discussion. An average of twenty-five stakeholders participated in each CSI Sector Subcommittee, with values and interests among the same stakeholder group often varying greatly. Fisher, Ury, and Patton (1991) note that values shape perceptions, and values run deeper than interests. In the three CSI case studies, the value of non-governmental organization representatives often eclipsed their interests. Forester (1999) describes the difference between values and interests in this way:

*When we give up one interest—getting something done quickly for example—we often try to make up for that by gaining on another interest—getting our results less expensively, perhaps. But when we give up something we value, we often feel we give up part of ourselves and that’s very difficult, very threatening, and hardly compensated by some gain somewhere else (p. 463).*

Although there is no magic solution to this dilemma, Forrester recommends that when values conflict, facilitators and mediators need to stress the need for all parties to learn—about each other, about the issues, and about the options (p. 478). In CSI, DFOs tried to actively promote the learning experience in the deliberation process because of the heavily value-laden stakeholder groups involved in the deliberations. Industry officials, for example, valued profitability and efficiency, whereas environmentalists valued a pristine environment and sustainable development. Community activists and environmental justice proponents valued fair representation and equal opportunities while labor representatives valued worker health and safety issues. EPA officials had values too but some of these values shifted during the CSI process. Initially, they valued due process and legislative rigor, neither of which is helpful in a consensus-building process. Fortunately, later some DFOs realized the value in creating a shared vision among parties and used this tool to help reach consensus decisions.

Susskind and Cruikshank (1987) suggest that the key factor that makes mutual gains negotiation and consensus-building work is the identification of items that disputing parties value differently. These items must be integrated into a decision-making package. Deciding is the consensus-building step where joint or mutual gains among stakeholders are realized. However, deciding when and how to reach an agreement is one of the most difficult tasks for participants in a consensus-building forum.

## **F. Expectations and Obligations**

Facilitative leaders generate and capitalize on consensus opportunities, but unless these opportunities are monitored and facilitated systemically, this can lead to disappointment among parties. Most institutions do not accept change very well or very quickly. Facilitative leaders often are viewed as visionaries, pioneers, or early adopters of innovation. Creating new expectations and obligations among parties sometimes stretches the collective energies and fragile relationships among parties.

Potapchuk and Crocker (1999) argue that implementing consensus-based agreements is difficult because intangible factors of trust, reciprocity, and mutual support are involved. They suggest that it is important to spread ownership among stakeholders in these agreements to make management of their implementation more feasible. Putnam's (1993) concept of establishing social capital among parties is a useful tool for facilitative leaders to ensure that stakeholders have joint-ownership in implementing agreements. Putnam argues that stocks of social capital (such as trust, norms, and networks), if successfully built tend to be self-reinforcing and cumulative (p. 37). Successful consensus-building can build connections and trust to ensure that agreements will be upheld.

The CSI consensus-building process sought to create social capital among stakeholders (building trust and cooperative relationships, as well as creating expectations and shaping obligations) that was manifest in consensus agreements. However, most CSI consensus-building efforts ended with agreement on consensus recommendations. One of the few exceptions to this

problem was the Metal Finishing Sector Strategic Goals recommendation. Many Metal Finishing stakeholders were puzzled that the CSI process was ending as their Strategic Goals Program was just beginning its implementation phase. One environmental justice representative said “we were walking away just as the rocket is leaving the launch pad, we need to keep this stakeholder team together until the mission is completed.” The Metal Finishing DFO team lobbied EPA management to create a mechanism allowing stakeholders to continue meeting. A generic Sector Subcommittee was created by EPA under an existing FACA committee. This new Subcommittee allowed metal finishers as well as other CSI stakeholders the opportunity to meet and complete unfinished projects. One of the unique implementation mechanisms that the Metal Finishing DFO team created for the Strategic Goals Program was an action plan that provided details on who needed to do what (by when) to ensure that the 2002 voluntary targets could be met.

Facilitative leaders need to be agents of reality about implementation issues. Potapchuk and Crocker (1999) caution that participants must carefully consider the context in which they are negotiating. “The best solution is of little value if no one can afford it” (p. 549). In each of the three Sector Subcommittees, DFOs were continually asked by stakeholders about the “the reasonableness of their proposals—would EPA buy this approach, was it doable, and how could the issue be framed so it will get done?” Any existing EPA rule modification, for example, that was suggested by CSI stakeholders required the direct involvement of the appropriate EPA media office.

The C&E Sector DFOs actively involved the EPA Office of Solid Waste staff in the negotiations to change EPA regulations dealing with glass-to-glass recycling for Cathode Ray Tubes. Conversely, DFOs were sometimes able to suggest more responsive non-EPA recipients of CSI consensus recommendations. For example, the Metal Finishing Sector DFO was successful in having the National Association of Metal Finishers, an industry trade association, publish a guidance manual for shop floor managers to ensure compliance with environmental requirements. EPA officials believed that metal finishers would be more willing to accept prospective guidance from their own association rather than from a regulatory agency. This guidance manual also was a means to help Tier 2b metal finishers improve their environmental performance to a Tier 2a or Tier 1 level of compliance.

Some CSI stakeholders questioned EPA’s intent in implementing CSI recommendations since they were not binding on the Agency. Unlike negotiated rulemakings or “reg-negs” that result in binding Agency agreements, the CSI recommendations did not carry any legal obligations. In a FACA policy dialogue like CSI, EPA can choose to disregard stakeholders recommendations. EPA officials responded to CSI critics that “each recommendation needs to have sufficient teeth so the Agency can respond accordingly” (EPA, 1998, p. 10). In addition, Browner repeatedly said that the Agency has a moral and ethical obligation to honor the integrity of each recommendation. EPA did create a tracking and monitoring system for all recommendations and publicly released the status of EPA actions on a quarterly basis.

Beyond direct response to recommendations, there were secondary benefits in other EPA sponsored reinvention efforts that were attributable to CSI. In the Computers and Electronics Sector, for example, Intel Corporation, an active corporate participant in the Subcommittee, used their CSI stakeholder alliances to establish one of the first XL projects with EPA. Key selection criteria for XL projects are enhanced stakeholder involvement and superior environmental performance. Intel demonstrated its willingness to involve all stakeholders at their Chandler, Arizona, semiconductor manufacturing plant by expanding public access to their environmental reporting process and creating a sophisticated water reuse program, while establishing an air emissions cap, which allowed the company to reduce their emissions while expanding their manufacturing capacity. Putnam (1993) argues that building up social assets among stakeholders can facilitate future collaboration in other related and unrelated tasks. One Intel official, acknowledged “that the CSI experience was very influential in our decision to pursue an XL project agreement.”

## **APPENDIX E: Future Research Needs**

### **A. Introduction**

If U.S. EPA officials were asked to pick the one thing that might bring about major environmental change, what would they pick? Most federal environmental statutes have not been revised by Congress in more than a decade, so some EPA officials might pick their favorite environmental media: the Clean Air Act was last revised in 1990, the Clean Air Act 13 years ago, and the Superfund law in 1986. Yes, we need modern, flexible laws to keep pace with scientific information and changing environmental conditions but these mandates will not change the interpersonal relationships that are so critical to collaborative decision-making. Few EPA officials would think of changing group dynamics, the way people treat each other when interacting with one another in a group or more specifically, the process used when making decisions as some of the most significant conditions that may improve environmental protection.

This section suggests four areas of future research that will complement and expand the analysis conducted in this study. This study concentrated primarily on interorganizational collaboration but more research is needed on the dynamic relations between inter- and intraorganizational collaboration. A second area of additional research is understanding the consensus process and the role of various institutional players in process. This study focused on the role of EPA officials from the bottom up, DFOs were consensus-building practitioners. More research is needed about the direct and indirect relationships played by other institutional players such as first and second career managers within EPA, as well as other stakeholder groups represented in collaborative negotiations. A third area for future research is evaluation. This study did not compare consensus-based outcomes with conventional regulatory results. A final area is applying the analytical lens of collaboration and unique EPA roles to other Agency-sponsored experiments. The EPA sponsored Project XL (eXcellence and Leadership) initiative offers a rich source of innovative projects at the facility, federal/state/local government, and community levels for investigating new Agency roles and responsibilities.

### **B. Interorganizational vs. Intraorganizational Collaboration**

EPA officials need to understand and appreciate the journey (the collaborative process), as well as the destination (environmental protection). If the Agency's goal is to protect public health and promote environmental protection then EPA officials need to accept collaboration both as an intraorganizational as well as interorganizational concept. This research effort has focused primarily on interorganizational collaboration. The behaviors (negotiation, teamwork, networking, and leadership) that are needed to bring parties together to build consensus. Unfortunately, collaboration among organizations is too often treated as something apart from teamwork within organizations and relationships with stakeholders are seldom compared with relationships among organizational members. Likewise, good facilitative team leaders are not often not viewed as good positional office managers. Mintzberg et al (1996) argue that the field of collaboration is fragmented and scholars and managers alike need to tackle the hard work of

crossing boundaries, and, in Mary Parker Follett's words, of inventing third ways to deal with stakeholder and staff differences.

The real barriers to horizontal collaboration and consensus-building may well be vertical hierarchy (Mintzberg et al, 1996). This research effort has demonstrated that interorganizational collaboration is a two-stage process involving first, cooperative negotiation, and second, back-home commitment building. The use of vertical power in the first stage is likely to impede the success of the second; yet, vertical power is needed in the second stage to ensure that consensus agreements will be ratified by the stakeholder organizations. This is what caused both the CSI Auto and Metal Finishing Sectors initial consensus recommendations not to be ratified by the CSI Council. Environmentalists were not able to convince their managers that these agreements satisfied their organizational requirements. Mintzberg et al (1996) points out that interorganizational collaboration generally takes place in a milieu in which traditional, hierarchical power is suspended. Success cannot be guaranteed by the exercise of such power, since the parties are not formally subject to the authority of each other; informally, in fact, they are likely to treat attempts at dominance with mistrust and suspicion. It was easier for small businesses, such as metal finishers who were used to dealing with parties and workers on a face-to-face basis, to deal with CSI consensus-building than it was for U.S. car company representatives who worked in structured hierarchical organizations.

Collaboration and consensus-building cannot be treated as a hardened structure, a done deal in theory or in practice (Susskind, 1999). Collaboration is a process not an event. The nature of a particular collaboration is conditional. It depends on the task and the goal, the parties involved, its evolution over time, and the ability of the participants to satisfactorily represent their organizational interests. More research needs to be conducted on the microdynamics of collaboration and consensus-building, and the macrodynamics of structured organizations.

### **C. Senior Management's Role in Consensus-Building and Facilitative Leadership**

Process is the key to revolutionary change. This is not a new message. Scholars have long recognized this point but it is a hard lesson to learn. The lack of an alternative process for decision-making and group interaction is one of the single biggest obstacles in the way of real change both in progressive organizations and for society at large. As this study has demonstrated, consensus decision-making and facilitative leadership represent an alternative and revolutionary process change. These approaches offer some of the most promising means for building trust among stakeholders and leading from the middle. However, this study looked at the process from the bottom up and more research needs to be conducted about how other levels of management impact this process. This study focused primarily on Designated Federal Officers (DFOs), who were first line supervisors or senior staff officials in EPA. Senior EPA managers, such as the EPA co-chairs within the Sector Subcommittees, played an equally important and challenging role in the CSI consensus-building process. Questions that this research did not address include: "what is the role of senior Agency management in collaborative negotiations; does an Agency manager's position, headquarters versus region, or single media versus multiple

responsibilities, affect their involvement in consensus-building; how does the facilitative leadership role differ between senior management and senior staff in consensus-building; and does senior management's role change, as the DFO roles changed, as the team building and consensus process matures?"

Clearly, some EPA Program Office (air, water, or solid waste) Assistant Administrators and Regional Administrators lost interest as the CSI consensus process evolved. Why did this occur? Was the EPA Assistant Administrator for Policy (e.g., one of the Metal Finishing Sector Subcommittee co-chairs) more attuned to multistakeholder interests than the EPA Assistant Administrator for Air (e.g., one of the Auto Sector Subcommittee co-chairs)? Or, as some CSI stakeholders claimed, was the EPA Policy Office head "less encumbered by routine regulatory requirements so he had more time to work with stakeholders?" Conversely, some CSI stakeholders believed that senior line managers in the Agency such as the Air Office Administrator were so imbued with the command and control culture that they could not fathom any other way of operating.

#### **D. Evaluating Collaboration**

Evaluation of collaborative efforts is needed. Evaluation of a collaboration should include both indicators of the process used and the substance of the agreement. Andranovich (1995) suggests that separating the process from the substance, at least for analytical purposes, and then linking them for evaluative purposes, can provide a richer understanding of the how the techniques of behavioral science can help transform different societal problem domains. Gray (1989) notes that this is a particularly important area for study because it can provide a "dynamic, context-inclusive view" of interorganizational relations at a time when globalization and interdependence are leading to more linkages between organizations—both governmental and nongovernmental.

This research study did not compare and contrast its negotiated outcomes with conventional regulatory outcomes. Comparing these outcomes might address the issue of what the appropriate EPA role orientation should be between these two different approaches. CSI generated nearly thirty different consensus recommendations, about 20 percent of these recommendations will result in permanent regulatory changes. Several questions that should be addressed relative to these issues include: how do these changes compare with those generated through the traditional regulatory process that is not consensus-based; are these rules and their implementation different in any way; particularly, after several years of existence; is there any difference in the legal challenges that these rules engendered; are there better environmental results, is the environment better off with a consensus process; and what is the cost-benefit ratio for EPA staff involvement?

## **E. Other EPA Innovative Approaches**

CSI was only one of several multistakeholder, collaborative initiatives undertaken by the Agency. Project XL (eXcellence and Leadership) is another high-priority EPA initiative that challenged regulators (including EPA, state, and local authorities) and the regulated community to find new ways to address environmental problems. Basically, Project XL made this challenge to its potential partners: “If you have an idea that offers better results than what would be achieved under current environmental requirements, then we will work with you and other interested parties to put those ideas to the test.” With this challenge, EPA sent an important message to large and small businesses, state and local governments, and communities that it valued innovation and wanted results. This opened the door for a promising set of regulatory experiments to be undertaken.

Project would be a rich source of empirical data about the nexus between facilitative leadership and collaboration. The EPA role orientations suggested in this research effort could be used as lens to more critically examine the site-specific rule makings that were generated for various XL projects. Like CSI, EPA set high XL goals: superior environmental performance, close public involvement in developing projects, and public accountability for results. Over 50 XL project agreements have been signed with facilities, states, communities, and other federal agencies. EPA teams of headquarters and regional officials led the development of XL projects with sponsors and interested stakeholders. Many of the CSI DFO roles of resource management, facilitation, mediation, and facilitative leadership are mimicked in Project XL. Applying these EPA role orientations to XL project negotiations may provide deeper insights into what the Agency’s position should be in the planning, design, and implementation of future innovations. Like most collaborative negotiations, XL project teams wrestle with questions such as what kind of flexibility should be allowed? How do we define “better results”; what can we do within the existing laws; and what stakeholders need to be involved in the discussions? By investigating these concerns, much could be learned about how to be more responsive to stakeholder needs and how environmental performance can be improved at a plant, regulatory, or community level.

This research study has benchmarked a new role orientation for EPA officials. It also has attempted to fill a gap between two distinct fields of literature—mutual gains negotiation and consensus-building processes and facilitative leadership. There is a natural alliance between these fields that has only recently been recognized. Hopefully, the findings and analysis from this research will encourage scholars to further examine the relationship between these fields and provide a broader foundation upon which the next generation system of environmental protection can be built.