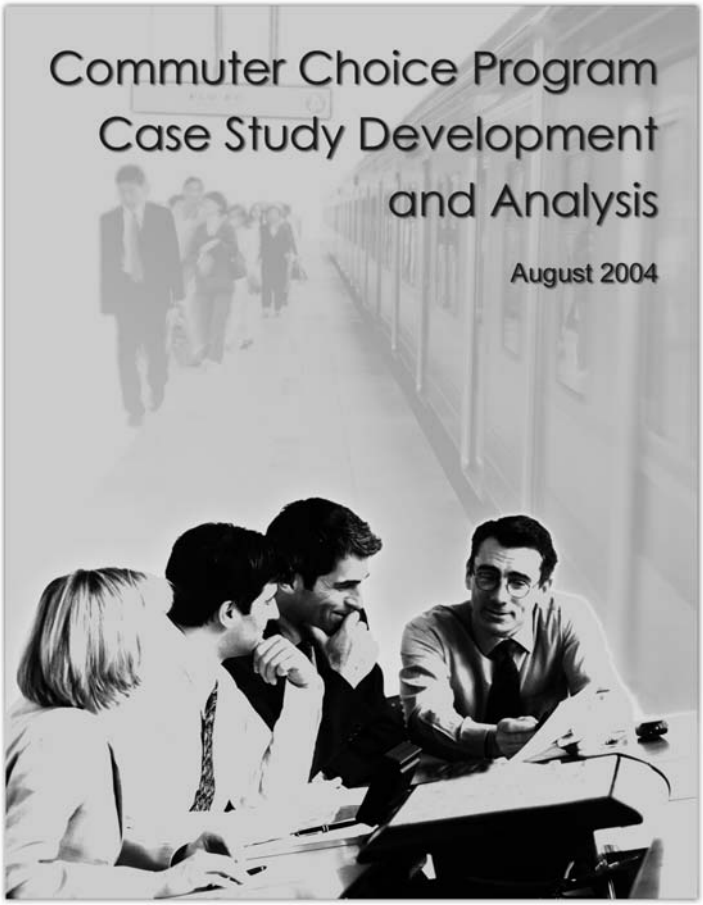
Commuter Choice Program Case Study Development and Analysis

August 2004



Commuter Choice Program
Case Study Development and Analysis

Final Report

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16.Abstract

This paper presents the results of a study in which the case study method was used to sort out the internal and external conditions that might affect the success of a work site trip reduction program. Investigators attempted to disprove a null hypothesis, stated as "The effectiveness of work site trip reduction programs does not depend on organizational culture." The research results appear to indicate that the null hypothesis is sometimes true. This study found evidence that management support and an effective employee transportation coordinator (ETC) are *not* necessary for a successful work site trip reduction program if the work site is located in an area with access to high quality public transportation and employs lower-income staff who must choose transportation cost savings over time savings and convenience. Management support and an effective ETC *are* necessary for a successful work site trip reduction program if the work site is not located in an area with access to high quality public transportation.

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Executive Summary

In the 2001 Association for Commuter Transportation (ACT) End-of-Year Survey, 59 percent of respondents requested that ACT "provide information on TDM-oriented statistics and case studies" as a means of improving the value of membership. This paper presents the results of a study in which the case study method, adapted from the social sciences, was used to sort out the internal and external conditions that might affect the success of a work site trip reduction program. This research study was conducted under a grant of the National Center for Transit Research with sponsorship from the Florida Department of Transportation. Investigators attempted to disprove a null hypothesis, stated as "The effectiveness of work site trip reduction programs does not depend on organizational culture." The research results appear to indicate that the answer to this is "The null hypothesis is true *sometimes*." The effectiveness of work site trip reduction programs sometimes depends on organizational culture based on various circumstances explored later in this paper. Briefly, this study found evidence that management support and an effective employee transportation coordinator (ETC):

- Are *not* necessary for a successful work site trip reduction program if the work site is located in an area with access to high quality public transportation and employs lower-income staff who must choose transportation cost savings over time savings and convenience.
- *Are* necessary for a successful work site trip reduction program if the work site is not located in an area with access to high quality public transportation.

This report contains conclusions derived from a research design that solicited the participation of thirteen work sites in the Puget Sound region of Washington State. These work sites must participate in trip reduction activities per state requirements. As a result, a rich database of trip reduction programs, developed by the Washington Department of Transportation, was used to select work sites with successful and less-than-successful trip reduction programs. Work site representatives completed a battery of feedback instruments that were carefully selected to measure work style attributes and elements of interpersonal relating, which are considered important manifestations of organizational culture that may influence the effectiveness of work site trip reduction programs. Participants also provided written samples of trip reduction program information and agreed to be interviewed. The conclusions of the study provide information that suggests the relative importance of the ETC in relation to other factors that may influence the outcome of a work site trip reduction program. The conclusions also suggest attributes of the ETC that appear to be associated with higher performing trip reduction programs. The report also contains a discussion of lessons learned in dealing with the challenge of low study participation rates. The report contains recommendations for action by employers interested in improving trip reduction programs and suggestions for ETCs who are uncomfortable with their duties as ETC. The report also contains suggested areas for TDM professionals to focus their marketing efforts toward organizations that may be more receptive to the message and benefits of work site transportation demand management strategies.

Introduction

In the 2001 Association for Commuter Transportation (ACT) End-of-Year Survey, 59 percent of respondents requested that ACT "provide information on TDM-oriented statistics and case studies" as a means of improving the value of membership. There are at least two meanings to the term "case study" as well as two very different expectations as to outcome. In the first meaning, as is commonly used in the TDM field, case studies are brief anecdotes of usually successful programs. They provide little to no context within which the determining characteristics occur. These anecdotal case studies do not provide a sense of change over time but rather a "snap shot" of existing conditions and activities. There is no before and after data. Additionally, TDM practitioners want to use case studies to be able to say that if organization A takes a particular action that yields a certain effect, then organization B can take the same action and expect the same effect. Typically what happens is that organization B will (rightly) claim that the experience of organization A does not apply because of various differences between organizations A and B. The utility of case studies is limited by this, with ever growing requests for more case studies that better mirror the conditions of organizations B. The mirrored conditions are often not close enough in similarity to create confidence that some action will yield the intended result.

The second meaning of case study is that adapted from the social sciences. The foundation for a sound case study approach was articulated by Robert K. Yin, Ph.D., of COSMOS Corporation in the early 1980s. This approach has been adopted by the United States General Accounting Office (GAO), Program Evaluation and Methodology Division. Properly conceived case studies are a research method for attempting valid inferences from events outside the laboratory. In a lab, researchers can control for other variables to pinpoint the effect of a particular condition upon the outcome. However, there are many study topics that cannot be duplicated in a lab. These include complex human situations like work site trip reduction programs. In response, the case study method is applied for the purpose of examining and sometimes explaining a relationship between circumstances and an outcome.

Case studies are used, as opposed to other research methods (experiments, surveys, archival histories), when three general conditions are met: when we want to learn *how* or *why* something is happening, when the investigator has little control over events, and when the focus is on contemporary events within circumstances that affect the outcome of those events (context).

Yin offers a definition of a case study as a research strategy. "A case study is an empirical inquiry that investigates a contemporary phenomenon within its real life context; when the boundaries between phenomenon and context are not clearly evident; and in which multiple sources of evidence are used."[1] The GAO uses a close variation of this definition. The purpose behind multiple sources of evidence is that a hypothesis supported by one source of evidence is consistently reinforced (or disputed) by other independent information sources.

This second meaning of case study also has its own separate expectation as to outcome. It recognizes that one cannot use even the best executed case study to generalize to another

[1] Yin, Robert K. "The Case Study Crisis: Some Answers." *Administrative Science Quarterly*, 26, March 1981, pp 58-65.

population, such as organizations A and B (we also cannot generalize to another population based upon one scientific experiment). However, we can generalize to a theoretical proposition. This is useful because attempting to apply the proposition will require one to acknowledge the influence of context upon the outcome. Important to the case study process is the identification of explanations that rival a specified hypothesis. This study attempted to use this more rigorous case study approach in anticipation that in the long term, the findings will be more robust, reliable and useful in application. In the development of a case study, there are clearly defined steps including the development of a research question, the articulation of a hypothesis, the selection of the best type of case study (there are several), development of the research design, data collection planning and implementation, analysis, and the reporting of findings. All of these steps were carefully developed during the project.

Background and Study Goal

Prior to this study, CUTR developed the Work Site Trip Reduction Model and Manual (WTRM) using a neural network, built with thousands of "before" and "after" plans from employers. The model quantifies the change in average vehicle ridership (AVR) of various combinations of commuter choice program elements. AVR is the number of people transported to a work site for every 100 vehicles. This method documents change over time as a result of the work site's commuter choice program. By using employee data aggregated to the employer level, this method also captures the many complex social and institutional influences that determine whether a commuter choice program is successful. However, this method does not separate out and make known what these influences are. As a matter of fact, the WTRM only explains about 18 percent of the variance in effectiveness between one program and another that is a direct result of the commuter choice program incentives themselves. What circumstances explain the other 82 percent?

Numerous conditions external to a work site affect the success of its trip reduction program, such as access to high quality transit service. This project sought to focus upon the internal conditions of the work site or "organizational culture". The beginning of such a pursuit must start with a definition of organizational culture. Researchers of organizational culture usually acknowledge that one definition of organizational culture is simply "that which cultural members share." However, this definition merely scratches the surface of the topic as Joanne Martin, a foremost researcher in the field, has written on the many theoretical perspectives that derive a host of different definitions.[2] For purposes of this study, the simple definition provides an adequate framework.

Specifically, this study looks at the organizational culture as manifested by the work of the "internal champion" of the trip reduction program, the designated employee transportation coordinator (ETC). A literature review showed that little research has been done to date on this topic. It is a hunch that successful programs have a supportive organizational culture and some lead person who effectively coordinates the trip reduction effort. What characterizes a supportive organizational culture? What does the internal champion do effectively? The goal of the study was to aid in:

- Providing guidance in selection of the ETC
- Helping the ETC identify and use more effective behaviors in implementing the trip reduction program
- Helping TDM professionals, such as TMA directors and commuter assistance program staff target limited marketing dollars to those work sites identified as being most likely to positively respond to TDM programs

[2] Martin, Joanne. "Organizational Culture: Mapping the Terrain." Sage Publications, Thousand Oaks, CA 2002.

Methodology

The study design was guided by concepts of the qualitative case study method, as articulated by Robert K. Yin, Ph.D. and adopted by the U.S. General Accounting Office, Program Evaluation and Monitoring Division. Input into the research design was provided by an expert panel.

Simply stated, the study question is "What is it that makes work site trip reduction programs effective?" and we attempted to disprove a null hypothesis, stated as ***"The effectiveness of work site trip reduction programs does not depend on organizational culture."*** To control for external factors and isolate the effects of management culture, an attempt was made to select a group of work sites located where there was comparability of population and employment densities, alternative transportation services and amenities, parking availability, local regulatory environment, North American Industry Classification System (NAICS) code of the work sites, number of work site employees and other factors. Work sites were selected from the Puget Sound region of Washington State due to the presence of a large number of work sites in the area conducting formal trip reduction programs in response to state requirements. Detailed quantitative data for the work site trip reduction programs were available from the Washington State Department of Transportation. Other data sources for this study included the written policies and marketing materials used by work sites, information from in-depth interviews of both ETCs and the supervisors to whom they directly report, the data collected by a battery of four feedback instruments and a survey of demographic information, described in detail later.

Ideally, organizational culture is characterized by studying the interactions of all persons in an organization. For this study, the scope had to be narrowed down. Instead of the entire organization, which may be headquartered internationally, a unit of study for identifying a single case was defined as a *work site* trip reduction program. While the ETC and his or her supervisor cannot represent the culture of a work site, their perceptions of how the trip reduction program is working would probably bear the most information. Researchers believed that the quality of interaction (or lack of interaction) between the ETC and his or her immediate supervisor in matters relating to the trip reduction program would give valuable clues relating to the nature of support for the trip reduction program by the work site as a whole.

Candidate work sites from the City of Seattle central business district were ordered in a list prioritizing all those with most similar characteristics. These most similar work sites were then divided into two categories according to those having the most successful trip reduction programs and those having the least successful trip reduction programs. The most successful trip reduction programs were determined as those in which the fewest vehicles per 100 employees were arriving at the work site as well as those indicating the most improvement through a decrease over time in the number of vehicles per 100 employees arriving to the work site. The opposite conditions defined those work sites having the least successful trip reduction programs. The sites at the tops of the two lists were those that were invited first to participate in the study. The goal was to have at least thirty work sites participating in the study, each site represented by an ETC and a supervisor for a total of at least 60 participants. The target of thirty was selected for the purpose of having a large enough sample to allow us to make inferences about the larger population with confidence that the sample was

representative of the population (Central Limit Theorem). These 60 participants would complete the battery of four feedback instruments and the demographic survey. From this group of 30 work sites, up to 12 would be chosen for conducting in-depth interviews. Six of these work sites would represent those having the most successful trip reduction programs and the other six work sites would represent those having the least successful trip reduction programs. The purpose of this arrangement was to control for as many variables as possible that might explain the reasons for the success of the trip reduction programs, except for the variable of organizational culture.

Contact and interview protocols and scripts were developed, as attached in Appendices A and D. The candidate work sites were recruited by telephone. All individuals agreeing to participate indicated so by returning an Informed Consent form, per federal requirements protecting human subjects of research. Work site ETCs and their immediate supervisors were each asked to independently complete a battery of four on-line feedback instruments. Appendix B provides the text of the introductions to the on-line feedback instruments. These instruments were carefully selected and administered by organizational development experts to ensure reliability, credibility and that they had been validated through testing on sample populations of sufficient size. The purpose was to measure attitudes, work style, and perceptions of management culture with respect to supporting trip reduction programs. Instrument administrators offered guidance and explanation of the instruments through toll-free telephone conferencing. The instruments could be taken by the participants at any time on any computer connected by modem. Each participant was assigned a pass code to protect their anonymity. After the participants completed the feedback instruments, the administrators analyzed the data and prepared a detailed report of findings. This information was used to tailor the interview scripts. Interviews were then conducted, the data of which was compared to the feedback instruments.

Description of Feedback Instruments

The following is a discussion of the nature of the four feedback instruments used and what information we anticipated getting from them. A discussion about the development of each instrument, validity testing and reliability are presented in Appendix C, which contains the complete report from Designs in Development, Inc. regarding the administration of the instruments and results interpretation.

DiSC™

The first instrument, the DiSC™ (Dominance, Influence, Steadiness, Compliance or Conscientiousness), by Inscape Publishing, measures four factors of an individual's on-the-job behavior. These are complex constructs and are not easily expressed in single words, but they can be generally characterized as assertiveness, communication style, degree of patience and approach to work structure. ETCs were instructed to complete the instrument with the focus of "doing my job as an ETC." Supervisors were instructed to complete the instrument with the focus of "The behaviors I think my ETC should exhibit to be successful." The result of taking the instrument is the identification of one of thirteen Classical Profile Patterns. No behavioral style is better than another. The information includes a description of the person's tendencies and what he or she needs others to do to be effective. The information also describes the person's desired environment and what he or she can do to be more effective in the defined situation. This immediate feedback was considered to be directly helpful to ETCs in their position as well as provide information for the study with respect to behavioral styles that correspond to more effective trip reduction programs. If this were true, supervisors could be better guided to select more effective future ETCs. Additionally, the DiSC recognizes that people are capable and adept at changing their behavior based upon their perceptions of what the situation requires. Knowledge of more effective behavioral patterns might help existing ETCs better tailor their work behavior.

FIRO-B

The second instrument, the FIRO-B (Fundamental Interpersonal Relations Orientation – Behavior) by Consulting Psychologist Press, describes interpersonal behavior in terms of three primary dimensions. These are the:

- Need for Inclusion, whether one wants to be "in" or "out" of a particular group
- Need for Control, whether one wants to be "up" or "down" (superior or subordinate)
- Need for Affection [openness], whether one wants to be "close" or "distant"

FIRO-B measures these three dimensions from two perspectives:

- Expressed behavior: behavior one feels most comfortable showing to others
- Wanted behavior: behavior one wants from others or to be received from others.

As applied to this study to assess characteristics that lead to effective or ineffective programs, there may be clues from contrasted scores of ETCs and their supervisors. There may also be some correlation between FIRO-B scores and work site trip reduction program effectiveness.

POC

The third instrument is the POC (Profile of Organizational Characteristics), which was based on the work of Dr. Rensis Likert in *The Human Organization,* and administered by High Performance Coaching for this study. Dr. Likert identified four prototype organizations, named Systems I, II, III, and IV. Each is defined by the degree to which the organization is open, participative and satisfying to work in. These organizational levels are:

System I	—	Authoritative
System II	—	Paternalistic
System III	—	Consultative
System IV	—	Participative

Dr. Likert further identified management style as the key variable. Dr. Likert was able to provide evidence that as organizations moved toward System IV on this scale, they had lower costs and higher output than those tending toward System I. For the initial phase of this study, using feedback from ETCs and their supervisors, comments from POC data will only describe the perceptions of management style from their singular perspective. This has value as long as resulting descriptions of these perspectives are contained within the scope of comparing program leadership perceptions and not confused with providing projections of existing organizational characteristics. The desire of this study is to discover POC data with sufficient correlation to program effectiveness data to act as a catalyst for increased dialogue, vis-à-vis understanding perceived organizational characteristics that enhance or support successful trip reduction programs. A set of ten demographic questions also were added to the POC to obtain some data not otherwise available.

CVAT

The fourth instrument, the CVAT (Culture and Values Analysis Tool) by Dr. Reid Nelson, consists of two interlocking instruments. These are the Personal Value Profile, which measures participants' perceptions of personal values (PV) and the Aggregate Value Profile, which uses the same dimensions and format but relates to participants' perceptions of work unit values or culture (UC). The CVAT identifies 16 dimensions that fall within four categories. These categories are identified below:

- WORK: Effort (A), Time (B), Finish Job (C), Quality (D);
- RELATIONS: Affect (E), Empathy (F), Sociability (G), Loyalty (H);
- CONTROL: Dominance (I), Status (J), Political (K), Leader (L);
- THOUGHT: Abstract (M), Plan/Organize (N), Exposition (O), Flexibility (P).

Within the scope of this study, the CVAT is an effective tool to assess core values of ETCs and their supervisors, to assess the level of similar and dissimilar values, and to obtain perceptions of their organizations' culture. It was anticipated that responses from incumbents from organizations with effective programs would be statistically similar to each other and different from responses from incumbents from organizations with ineffective programs. If this is true, there would be evidence that the values of ETCs and their supervisors may

predict successful programs, and a cultural perspective by these same incumbents may predict successful programs.

The DiSC and the FIRO-B focus more on the characteristics of the individual, while the POC and CVAT focus more on the characteristics of the organization for which the individual works. The combination of these four instruments was selected for this study to provide information that could be compared to develop an overall profile of the study participants and their perceptions of their work sites. Finding consistencies (or inconsistencies) among the instrument data uses the reinforcement concept of "multiple sources of evidence" in the development of cases studies.

Results from the Feedback Instruments

A complete discussion of the results of the feedback instruments is contained in Appendix C. The following is a summary of the main conclusions. Controlling for external factors through the pre-selection of candidate work sites proved difficult, primarily due to an insufficient number of work sites with similar characteristics. Ultimately what determined case inclusion in the study was willingness of the individuals to participate. Ideally, each work site would be represented by both its ETC and the direct supervisor of the ETC. In actuality, most invited supervisors declined participation. We succeeded in securing the participation of only five work sites represented by ETC/supervisor pairs. To allow more individuals into the study, other work sites represented by just the ETC were later accepted, bringing the total number of represented work sites to thirteen and the total number of individual participants to nineteen. While the results from the feedback instruments cannot be used to make statistically significant inferences, the results do show some interesting patterns that can be compared with one another and used as the bases for further investigation. The results of the feedback instruments were also sent to the participants for their personal use.

The positions of the ETCs reflected greatly varied locations within organizations. These include operations, executive assistant, customer service, health and safety, human resources, facilities, consulting, accounting and finance, quality control, administration, and purchasing and warehousing. While the data set is too small from which to draw definitive conclusions, there was no apparent pattern found between functional location of the ETC within the organizational structure of the work site and trip reduction program effectiveness.

DiSC™

The trip reduction program is all about influencing a change in the travel behaviors of people. An instrument that measures, in part, how people perceive the needs of the job and balance them against their own need-driven behaviors is the DiSC Personality Profile. One of the initial hypotheses of the study was that the behavioral work style of the ETC may be associated with the outcome of the TRP.

While the study sample for the DiSC™ is too small to draw conclusions, a possible pattern emerges from the available data. It is interesting to note that of the five pairs of study work sites for which there were data for both the ETCs and their supervisors, the site that had the highest performance as measured by vehicle trips reduced was also the only site in which both the ETC and the supervisor had a high “i” (Influence) work style as one of their primary needs-driven behaviors. A person with a high “i” personality is one who enjoys influencing others. They seek contact with all types of people, look for opportunities to generate enthusiasm and accomplish goals through others. They are adept at dealing with people and articulate ideas well. Of course, one example such as this cannot lead to any conclusions, but the recognition by both the supervisor and the ETC that active influencing is a key factor does support the idea that organizational culture as manifested by the attitudes and behaviors of the ETC and supervisor can influence the outcome of a trip reduction program.

Looking at the ETC data apart from the data for the supervisors, the predominant work style for all ETCs in higher performing programs (VTR≤30) was “i”.

- Two of the high performing programs for which the ETCs did not score a high "i" (as indicated in their Graphs III. For further explanation see pg. 5 and Table 17 of Appendix C) as a predominant needs-driven work style indicated that they believed a high "i" personality was needed to do the job of the ETC well (as indicated in their Graphs I. For further explanation, see Table 18 of Appendix C), meaning that they were attempting to change their natural needs-driven behaviors to meet the needs of the job.
- The predominant work style for ETCs in the lower performing programs (VTR>30) was "S" (Steadiness). A person with a high "S" personality is one who performs in a consistent, predictable manner. He or she prefers stable harmonious work environments with standard operating procedures and predictable routines. This ETC is task-oriented rather than people-oriented. He or she is uncomfortable with change and desires an environment in which the status quo is maintained.

Not fitting the above pattern of a high "i" ETC associated with higher performing programs are two lower performing organizations with ETCs with high "i" work styles. Obviously, a high "i" ETC work style might not predict TRP effectiveness *alone*.

- In the first case, this was an ETC who expressed the most frustration over lack of management support. In this case it might be proposed that no matter how effective the ETC, the ETC might not be able to overcome unsupportive management.
- In the second case, it was the lowest performing work site. Its ETC has a high "i" personality but it is not believed that this is evidence that there is no association between ETC work style and trip reduction program effectiveness. This is the case of the a work site located far away from the nearest central business district, which has limited transit service and free plentiful parking not controlled by the organization. It is suggested that this work site's TRP performance might actually rate well in comparison with other work sites in similar conditions.

Also not fitting the above pattern was one work site with among the highest performing trip reduction programs and an ETC with her primary needs-driven work style measured as a high "C" and her secondary work style as "i". The "C" style includes adherence to key directives, accuracy and attention to detail. In reference to the qualities needed in an effective ETC, her supervisor's opinion was that the most important activity of the ETC was to "…serve as a compendium of knowledge. We don't need a cheerleader."

- However, other incentives were at work: this work site has among the largest numbers of employees in the study, and they *all* receive a full transit subsidy. Top management actively advocates for the TRP, which may be unusual in some other organizations.
- While the persuasion of a large percentage of employees to use alternative transportation has already been accomplished in this organization, there are still employees who do not use alternative transportation but could.
- This ETC further said that she is most proud when she succeeds in convincing someone to try transit. Supervisory guidance appears to reward carrying out the program for employees who already want to participate in it. (For supervisory approval, the administration of the transit passes is what this ETC must do well.) So, in this case, her high "C" work style may be very effective. However, the ETC also recognizes that influencing more employees to try alternative transportation is her goal. One may easily conclude that the ETC work styles that best match the culture of the work site may enable an ETC to be comfortable in his or her position. This may represent an example of a

second type of organizational culture that is different from the typically successful one described above, yet is also effective in reducing work site trips.

In conclusion, while the study sample for the DiSC™ is too small to draw definitive conclusions, a pattern appears to emerge from the available data that a high "i" ETC work style wherein encouragement and enthusiasm is practiced is one of the keys to the most effective trip reduction programs.

FIRO-B

Unlike the DiSC™ that measures needs-driven behaviors of a person based upon one selected setting, the FIRO-B scores of a person reflect his or her interpersonal needs within a range of settings. The instrument measures a person's interpersonal style through the three dimensions of Inclusion, Affection and Control. While the study sample is too low to make statistical predictions about a population, indicated patterns appear to reinforce observations from the DiSC™ data. The FIRO-B scores for the set of study participants indicate that they appear to be more reserved or private than the population at large (low wanted and expressed Inclusion). The work sites with lower performing programs have ETCs with lower "wanted Inclusion" than those of ETCs of higher performing programs. While all participants generally indicate a low desire for Inclusion, the work sites with more effective trip reduction programs show ETCs able to adapt their behaviors to what is needed on the job (high "i" work style). Affection (warmth, openness, friendliness) is the dimension with the highest mean score across all study participants, suggesting that this need is of greatest importance to the group. When overlaid with the data from the DiSC™, the work sites with higher performing trip reduction programs score higher in the expressed Affection category. Overall, both expressed and wanted Control is the lowest scoring dimension of the study participants. However, the higher performing programs have ETCs that indicate both greater expressed Control and lower wanted Control than the lower performing programs. What this appears to indicate is the ETCs of the higher performing programs are accomplishing the work of influencing through Affection rather than attempting to Control others. In other words, ETCs of the higher performing programs appear to accomplish their work through warmth, openness and friendliness rather than attempting to control others.

POC

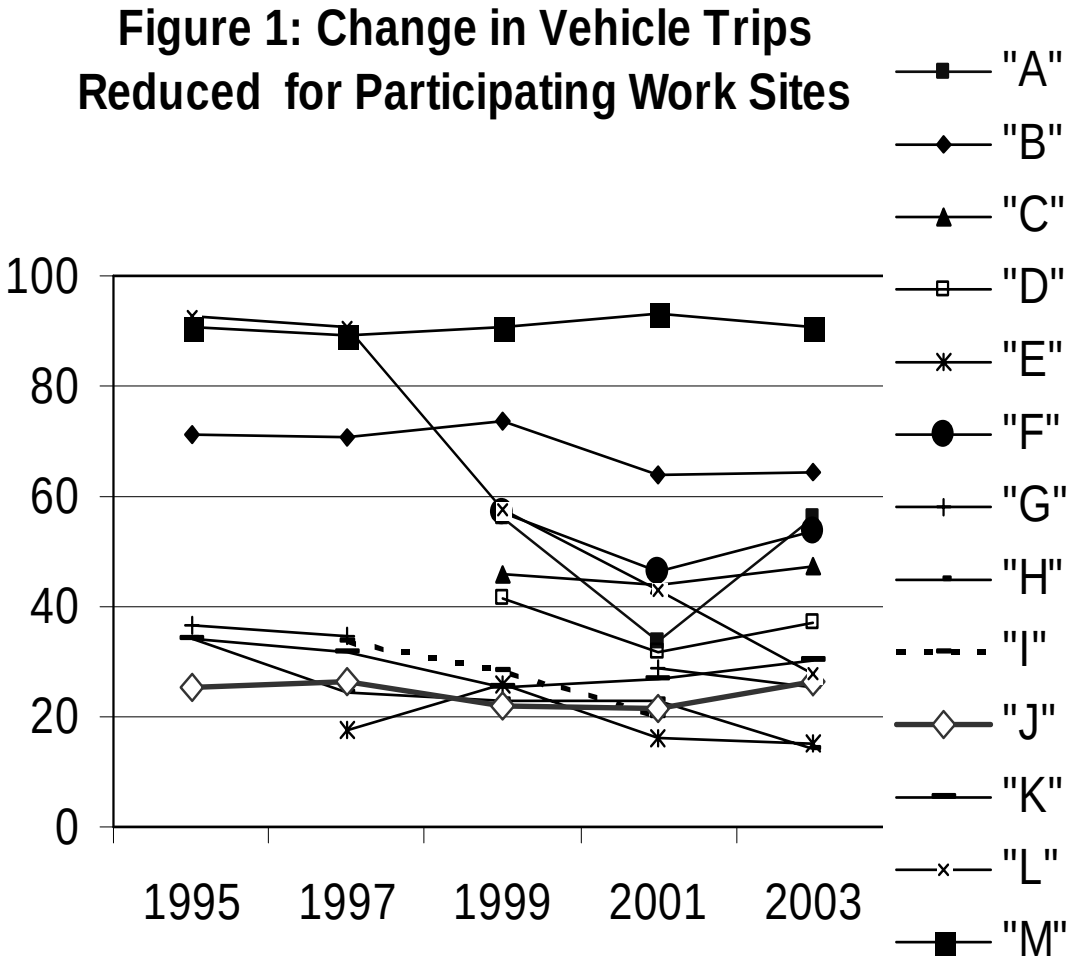
The POC provides a method to collect work site perceptions of how the organization looks to an individual, and how that individual believes it should appear. Scores from the POC were generally high, reflecting positive perceptions by the ETCs of their work environment and the predominant management style. This could mean that the ETCs are autonomous in their positions or it could mean that the ETCs have figured out a way to be adaptive to the organizational cultures of their work sites. A particular management style did not emerge from this instrument. The questions from the POC for which there was the greatest gap between how the ETCs perceived conditions now versus how the conditions should be were in the Communication category. These included the questions, "How is the communication of information from upper levels of the organization generally accepted by lower levels of the organization?" The mean score placed the response as "Often with suspicion" and "How well do superiors understand the problems faced by subordinates?" The means score placed the response as "Somewhat". Otherwise generally high scores reflected satisfaction with management.

CVAT

CVAT data is supported by DiSC and FIRO-B results to make a distinction between ETCs with higher performing programs from ETCs with lower performing programs. Personal values of ETCs with high performing programs favor Relations over Work. ETCs with lower performing programs favor Work over Relations. It is interesting to note that political savvy (K) within organizations is considered to be of greater importance to ETCs with high performing programs than to ETCs with lower performing programs. Flexibility (P) is also considered more important to ETCs with high performing programs than ETCs with lower performing programs. Political savvy and flexibility would help persons navigate cultures that value Work over Relations even when it is clear to the employees that relations are critical to the successful completion of the ETC job (as correlated by DiSC and FIRO-B Scores.) The results imply that ETCs with a better understanding and acceptance of political and control factors, with the skill and desire to influence, and with rewards that go with success will strive to reach goals that they believe are important.

Participant Interviews

In addition, telephone interviews were conducted. The 13 participating organizations are labeled A through M. The alphabetic labels were used for purposes of protecting the anonymity of the participants while encouraging participants to discuss openly the attributes and work cultures of their organizations. Interview and feedback instrument information was compared against the effectiveness of the work site trip reduction programs. Trip reduction program (TRP) performance was measured by calculating vehicle trips reduced (VTR). Figure 1 below shows the "Change in VTR for Participating Work Sites", the results of which suggest a ranking of work sites according to program success. VTR is the inverse of average vehicle ridership and is simply the number of cars driven to the work site per 100 people. This means that the lower the VTR, the fewer cars used per 100 commuting employees. Data from the WSDOT trip reduction database for the Puget Sound area enabled us to calculate VTR for the five consecutive odd-numbered years during which work sites provided survey data of their employees' commute characteristics. Data was available for the years 1995, 1997, 1999, 2001 and 2003.



Work sites with VTR of 30 and lower in 2003 are considered the high performing work sites and include organizations E, G, H, I, J and L. These work sites showed a consistent reduction over time in the number of vehicles per 100 employees arriving at the work site. These work sites also demonstrated their ability to maintain this program performance over time. Work sites with VTR greater than 30 and less than 60 are considered fair performing and include organizations A, C, D, F and K. Work sites with VTR of 60 and greater are considered lower performing and include organizations B and M. During the study period between 1995 and 2003, trip reduction program performance did not change dramatically for any of the work sites, with the exception of work site L. This was not due to programmatic changes but due to a change in the way employees were counted as those who must be included under the program. Generally, the top performing programs continued to show performance improvements over time. Between survey years 2001 and 2003, several work sites indicated an increase in VTR. For one work site this was due to the elimination of a transit subsidy but for the rest of them, it was likely due to a tightening of the eligibility standards for employee exemptions (such as sales people who need their cars to keep client appointments) from being counted among the "affected employees" of the TRP. Affected employees are the subset of total employees who are expected to participate in the TRP. They are the subset against which total participation at a work site is measured.

In Table 1, there are 20 attributes listed along the left column, which represent characteristics of organizational culture that were examined. The identification and measure of these attributes was based upon information derived from the Puget Sound trip reduction program database, the feedback instruments, written work site trip reduction program information, such as company brochures or written company transportation policies, and telephone interviews with ETCs and supervisors of ETCs. The expectation is that better trip reduction program effectiveness is likely when the attribute is present. The more "Ys" (representing yes) listed in the matrix for each work site, the greater the expectation of a more effective trip reduction program for that work site.

The following is a brief explanation of each attribute.

1. *Most of the affected employees remain in an office setting during the work day.* Generally, work sites in the study found that employees who work in an office setting find it a little easier to use transportation alternatives. There is more predictability to an office routine. Examples of non-office settings found in the sample of work sites that participated in the study are crews working out in the field, sales-oriented employees who meet with clients at other locations, and workers in skilled trades who are located in workshops. These employees may not know exactly when they will return. Workers in skilled trades sometimes prefer to use their own tools and transport them in their own pickup trucks. This is an example of an attribute that describes the nature of the business and not necessarily the degree of motivation by the organization to support trip reduction activities.

2. Most of the affected employees usually work routine predictable hours. Unpredictability of hours worked and longer than 40-hour work weeks tended to undermine use of public transit. Employees of some work site participants must be on-call and available to work late on a moment's notice. Other organizational cultures expect ambitious employees to work longer than 8 hours per day. Some employees conduct lab work and must wait until experiments are completed before leaving for the day.

Table 1: Summary of Work Site TRP Attributes

Attributes Indicating Supportive Organizational Culture	**High performing**						**Fair performing**					**Low performing**	
Organization	**E**	**G**	**H**	**I**	**J**	**L**	**A**	**C**	**D**	**F**	**K**	**B**	**M**
1.Most of the affected employees remain in an office setting during the work day	Y	N	--	Y	Y	N	Y	Y	N	Y	--	N	N
2.Most of the affected employees usually work routine predictable hours	Y	Y	--	Y	N	--	N	N	Y	N	--	--	N
3.Downtown location	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	N
4.ETC/Supervisor has access to budgetary decision maker	N	Y	--	Y	Y	--	N	Y	Y	Y	--	Y	Y
5.Management discourages upper levels from driving alone	Y	Y	--	Y	N	--	N	Y	N	N	--	N	N
6.ETC thinks top managers believe program is important	Y	Y	--	Y	N	--	N	Y	N	N	--	Y	Y
7.ETC believes there is adequate TRP funding	Y	Y	--	Y	Y	--	N	Y	N	Y	--	Y	Y
8.High i ETC	Y	Y	N	Y	N	Y	Y	N	N	N	N	N	Y
9.ETC volunteered for position	N	Y	--	Y	N	--	N	N	Y	Y	--	--	Y
10.ETC mid-level position	N	Y	--	N	N	--	N	Y	Y	Y	--	N	Y
11.ETC duties acknowledged as part of job	Y	Y	--	N	N	--	N	N	N	N	--	N	N
12.ETC served longer than 5 years	N	N	--	N	Y	--	N	Y	N	N	--	N	N
13.ETC reports to one person only	Y	Y	--	--	--	--	Y	Y	Y	N	--	--	Y
14.Motivation of company is not solely regulatory compliance	Y	Y	Y	Y	N	--	N	Y	N	N	--	N	N
15.ETC duties require coordination with others	N	Y	--	N	--	--	N	Y	Y	Y	--	--	Y
16.Presence of champions	Y	Y	--	Y	N	--	N	Y	Y	Y	--	--	Y
17.ETC cites no distinction by salary level	Y	Y	--	Y	N	--	N	N	N	N	--	--	N
18.Voluntary TRP compliance	N	N	Y	Y	N	N	N	N	N	N	N	N	N
19.Full transit subsidy offered	Y	N	N	N	N	N	N	N	N	Y	N	N	N
20.No parking subsidized	Y	Y	Y	Y	N	N	Y	Y	N	N	Y	N	N
Total number Ys	14	16	--	14	5	--	5	13	8	9	--	--	9

-- = not enough information

3. *Downtown location*. In general, a downtown location includes access to high quality transit service. In this study, an attempt initially was made to control for the effects of location on TRP performance by selecting one location from which all work sites are located. The central business district (CBD) was selected because it would provide the largest pool of candidate study participants. For the purpose of gaining confidence that feedback instrument data obtained from the sample work sites are representative of the population of work sites, based upon the Central Limit Theorem, the initial goal was to secure the participation of at least 30 CBD work sites. However, insufficient participation of Seattle CBD work sites was secured (10 work sites only), so work sites outside this area but from other CBDs within the region were sought. Because location could not be controlled for, it became a variable in the study.

Three additional work sites were secured. One work site (organization I) is located in downtown Tacoma, which for purposes of this study, is considered a CBD location with full access to high quality transit. The final two work sites, organizations L and M, are located

outside a CBD and have shown the highest VTRs for all the work sites. Organization M is the only organization in the study in which the primary alternative transportation mode is not transit. While there is a bus route that serves the area, the work site's trip reduction program results rest primarily on carpools. Organization M is located just under 10 miles from the nearest city and is surrounded by residential and wooded areas. Organization L is unique in that employees live directly on site, which explains a high performing trip reduction program despite a non-CBD location.

In response to inquiry, none of the participating ETCs or supervisors said that the work site was originally located in the downtown to make commuting easy for workers. Criteria that an organization uses to locate its facilities may have more to do with the cost of doing business, the desire for public visibility and accessibility by customers. It may have less to do with its relationship to employees (e.g., accessibility by employees). In one case, a work site had moved closer into the CBD because it was actually cheaper (due to the specifics of site leasing and loan arrangements) than other locations.

4. *ETC/Supervisor has access to budgetary decision maker*. One of the primary measures of support for the trip reduction program by the organization is its willingness to spend the resources necessary. This includes funding for subsidies, services, incentives and personnel time. In general, work sites in which the ETC and his/her supervisor have no access to the individuals who have control over the TRP budget decision making, tend to show less support for the program. In the study sample of work sites, the organization headquarters may be located in another region of the nation and decision makers have no interest or understanding of the issues regarding employee mobility. In other cases, the decision maker may be located in the same office but is still not accessible. Work sites in which the ETC has a rapport with the person who determines the budget has a better chance at convincing the decision maker to allocate the necessary resources for program effectiveness. In some but not all cases, the supervisor of the ETC is the person who makes budget decisions. None of the ETCs had the power to determine the budget.

5. *Management discourages upper levels from driving alone*. This attribute would be apparent in work sites that do not give greater parking subsidies to persons higher up in the organization. In the sample of work sites studied, several organizations provided paid parking as a perk to upper management individuals. These organizations are signaling to all their employees that driving alone is a privilege to strive for.

6. *ETC thinks top managers believe program is important*. If the ETC perceives support for the TRP at the highest levels, then there is greater motivation and enthusiasm to carry out the necessary tasks. Some work site ETCs said that top management did not care or did not consider it a priority. Some ETCs expressed frustration at being assigned the responsibility for their work sites' TRP performance—an assignment given to them by upper management—but receiving inadequate management support to achieve the assigned performance goals. ETCs who receive such mixed signals are less satisfied with their roles as ETCs. Do organizations reward employees for participating in their company's TRP? All supervisors interviewed except one said that participation in the TRP does not affect employee performance evaluations. The exception described TRP participation as one way that employees can demonstrate involvement in community service, which was a minor performance evaluation criterion.

7. *ETC believes there is adequate TRP funding*. Gaining access to the budget decision maker is the first step, receiving adequate funding for the TRP is the goal. Some ETCs reported insufficient funding.

8. *High "i" ETC*. One of the initial hypotheses of the study was that the behavioral work style of the ETC may be associated with the outcome of the TRP. The study was unable to make such a determination due to insufficient data. However, a pattern did emerge that the work sites with VTR<30 had ETCs who scored with a high i (Influence) personality on the DiSC™ instrument or who indicated that they believed a high "i" personality was needed to do the job of the ETC well. A high "i" personality is one who enjoys influencing others. They seek contact with all types of people, look for opportunities to generate enthusiasm and accomplish goals through others. They are adept at dealing with people and articulate ideas well.

9. *ETC volunteered for position*. It is believed that people are more likely to do the job well if they want to do the job. Some ETCs were "drafted" for the role of ETC while others clearly volunteered.

10. *ETC mid-level position*. This study suggests that management support influences the degree of TRP success. The placement of the ETC position in the organizational hierarchy may be indicative of the support and importance of the program to the organization. To the extent that authority wields the power to shape behavior, it is suggested that an ETC with a position of some managerial authority may be more influential in convincing employees to try commute alternatives. In this study, no ETCs were top managers, some were lower-to-mid level managers and the rest were not managers.

11. *ETC duties acknowledged as part of job*. As an indication of management support through allocating personnel resources to the task of the trip reduction program, this conveys that time spent doing the job of the ETC is sanctioned by the organization. Organizations with a full-time ETC might convey a higher importance to the TRP than organizations that do not. Other supportive organizations may include ETC duties in the written job description of the ETC or otherwise acknowledge the amount of time it takes for the ETC to perform the role. In the study sample, one work site had a full-time ETC. The ETCs of all other work sites had other primary duties unrelated to their roles as ETCs. The ETC of another work site described her ETC duties as taking approximately 10 percent of her time and that this was supported by her supervisor. Both these work sites had among the top performing TRPs. They are also the work sites with the highest numbers of employees in the study sample; therefore, the time allocation provided by the organizations may be recognition of the effort required. The remaining work sites did not include the duties of the ETC into the job descriptions. These ETCs must squeeze the duties of the ETC in somewhere unofficially. Most ETCs said they perform their duties within an hour per week and their time commitment varies depending upon promotional events or the administration of a periodic commuter survey required by the WSDOT. The numbers of employees for these work sites range from 80 to 800.

12. *ETC served longer than 5 years*. This might be a measure of the degree of satisfaction that the employee has performing the ETC role. It may also be a measure of the effectiveness of the ETC, who has had time to develop expertise and knowledge of the role. However, a long length of duty may also mean that the ETC is in a rut or may treat the duties as

insignificant. In the study sample, there were just two work sites that have ETCs who have held the position longer than five years. They have held the position for six and ten years and their TRPs indicated high performance and fair performance respectively. A third high performing program is represented by the ETC's supervisor who had previously been the ETC and so there is some continuity of knowledge. The other 10 sites have ETCs who have held this position for 5 years or less.

13. *ETC reports to one person only*. This criterion attempts to examine cases in which the person to whom the ETC directly reports in matters relating to the TRP is not the person the ETC reports for his or her other job duties. This has been known to happen and can create some degree of conflict if the ETC is reporting to more than one person.

14. *Motivation of company is not solely regulatory compliance*. Most organizations appear to be conducting the TRP only to comply with the state mandate. However, ETCs of several organizations indicated secondary reasons for participating, which may indicate an organizational culture more supportive of the TRP. These have included good public relations, such as developing the image of a "green" company. Some organizations are involved in activities that deal with environmentally hazardous materials and processes. These companies are particularly concerned about operating under public scrutiny: "Eyes are always on us." These organizations proactively search for ways to demonstrate their community responsibility. Other reasons cited are "It's the right thing to do," employee recruitment and retention of better employees, and taking a leadership role and setting the standard for others (government employers).

15. *ETC duties require coordination with others*. The ETCs of some organizations said that they conduct their ETC duties completely on their own while others said that accomplishing their role as ETC requires some coordination with other departments. In at least one case, the ETC acts less as one who encourages employees to try commute alternatives and more as one who handles program enrollment, paperwork and accounting of a transit subsidy. Her work is largely procedural and not requiring the "give-and-take" of coordination. Yet this is one of the most effective programs because the organizational culture has so completely embraced the idea of commute trip reduction that it has been institutionalized and implemented through defined procedures. This work site appears to be an exception to the rule. For most other work sites, the ETC must coordinate with the Human Resources or other departments. The various incentives and subsidies are considered benefits and how and to whom the benefits are offered still requires discretionary decision making. Human resources departments also tend to have control over small discretionary budgets, some portion of which can be used for promotional events and prizes. While it can be the case that programs requiring coordination may signal red tape and jumping over obstacles in other departmental turf, in general, the presence of coordinating activity appears to be a sign that the organization is supportive, involved, and willing to problem-solve. As the supervisor of one work site with a high performing TRP said, "Nothing gets done alone."

16. *Presence of champions*. Work site ETCs were asked if they knew of employees who successfully use commute alternatives and to whom they can point to as examples to others. It is believed that the presence of these "champions" is a sign that the organization is supportive and that employees can use transportation alternatives if they try. A lack of champions may signal the opposite. ETCs from two work sites in the study sample said they could think of no such persons they could point to as champions.

17. *ETC cites no distinction by salary level*. When ETCs were asked if they could see any patterns in the use of transportation alternatives by various subsets of employees, many in the study sample cited a distinction by salary level. Even when management does not actively provide transportation perks for employees higher up on the organizational ladder, ETCs still commonly see the distinction that employees earning lower salaries comprise the majority of those using alternative transportation. There are numerous exceptions. Many upper level employees ride bikes, transit, or motorized scooters. But there is a pattern that lower-level employees do the lion's share of TRP participation.

18. *Voluntary TRP compliance*. It is considered that work sites that participate voluntarily in the Commuter Trip Reduction program clearly do so for reasons beyond regulatory compliance. This signals an organizational culture that is more supportive of trip reduction activities. Two work sites in the sample have voluntary programs. One of the work sites did not consent to an interview so information is lacking regarding organization motivations. However, it is speculated that because this work site is a federal government office, it is likely that trip reduction activities have been institutionalized by top management. The second work site, whose number of employees recently fell below the threshold of 100 (above which point work sites are required to participate), still continues their trip reduction program because the company deals with sensitive environmental issues. It is in the company's best interest to be actively involved in programs that demonstrate their commitment to being good corporate citizens.

19. *Full transit subsidy offered*. One of the initial purposes of this study was to examine organizational culture as separate from the actual combinations of incentives offered by employers. This study finds that it is not possible to completely separate the two. Some key incentives provide strong clues about the nature of organizational support provided to trip reduction programs. While not looking at incentives in detail, two key actions by employers, the provision of a full transit subsidy and the elimination of a parking subsidy were elements that were commonly discussed by ETCs during interviews. Organizations that take the extra measure to fully subsidize transit, in some cases demonstrated through participation in the FlexPass program, are considered to indicate organizational support for the TRP. (FlexPass, offered through King County Metro, is a comprehensive commute benefits package that employers purchase for employees. It enables employers to provide a wider variety of benefits to a larger group of employees.) Most of the organizations in the study sample offer some degree of transit and ferry subsidy. This criterion sets out to distinguish organizations that "go the extra mile" to provide top benefits to employees that use alternative transportation. It is sensed that organizations carefully consider how much subsidy they provide. There may be a variety of reasons for setting the subsidy rates as they do. At one work site, the ETC explained that top management disapproved using FlexPass because being generous to the lower level staff would make the existing perk provided only to the higher level staff (free parking or $175/month in cash) look shabby. If the management of other organizations think this way, they may recognize that:

1. Many lower level employees will ride transit regardless. The employees have no choice due to cost constraints. Providing a good transportation benefit may not appreciably alter employee participation in the TRP, so let the employees pay the cost of their commute.

2. If the organization must participate in the mandated Commute Trip Reduction program, then it is convenient to have sufficient lower-level staff that ride transit to cover the participation requirement of the organization. Giving lower level staff large enough cash subsidies might enable them to drive in to work, reducing organization participation levels. There may even be a motivation on the part of some companies to be actively unhelpful in order to maintain an organizational hierarchy that achieves regulatory compliance while providing drive-alone privileges to higher level management.

Clearly, those companies that fully subsidize the cost of alternative transportation have motivations more closely aligned with providing mobility for all employees.

20. *No parking subsidized*. Companies that provide no subsidy for parking are considered those that have an organizational culture that supports commute alternatives. The organizations in the study represent the range, from no subsidy to full subsidy. An ETC from one work site said that the organization subsidizes parking 50 percent. Because this is considered a benefit, the Human Resources department does not want to take it away, causing the perception that benefits are being eliminated. Because the organization is reaching its mandated goal, management does not feel it has to do anything more.

There are several qualifications regarding the accuracy and interpretation of the results from Table 1. First, the attributes listed provide a basic definition for organizational culture as it relates to work site trip reduction programs. The definition depended upon the researcher's discretion regarding what attributes to include in the matrix, based on the amount of information available on a topic that allowed comparisons across work sites. These attributes were initially identified and included in the interview script. They directed the flow of interview conversation but they were also topics about which the ETCs offered the most information. Secondly, all attributes in the matrix are assumed of equal importance, which they may not necessarily be. For example, the attribute of a downtown location most often predicts accessibility to high quality transit service, which appears best to predict the likelihood of trip reduction program success. Thirdly, much of the information in the matrix depends on what one person, the ETC, told the researcher. We are viewing the organization largely through the filter of the ETC's personality. The ETC could have been having a lousy day at the time of the interview or could be a wrong fit for the ETC position. Fourth, the matrix assumes that there is only one kind of supportive organizational culture. As explained in an example provided in the discussion of the DiSC™ instrument results, we found at least two distinct organizational cultures that both supported highly effective trip reduction programs. The organizational culture that does not fit the mold of the 20 identified attributes has an ETC that holds a low-level position, does not coordinate with other departments and has no access to decision makers. This is a culture that can support a successful trip reduction program where there already is highly supportive top management and trip reduction has been incorporated into the culture as evidenced by an ETC that administers procedures rather than influences employees to use commute alternatives. Fifth, there is limited data. We were able to get data from only 13 work sites out of a target for 30. Of these, four work sites did not provide sufficient data to complete the matrix.

Interpretation of Results

If degree of organizational support has a strong influence on trip reduction program effectiveness, one would expect to find a pattern that looks like Table 2 below. Conversely, if the degree of organizational support has little or no influence on trip reduction (the null hypothesis), then the pattern of work sites will appear randomly and evenly plotted within all the cells of the table.

Table 2: Comparison of TRP Performance and Degree of Organizational Support of Work Sites X If Organizational Support Has Strong Positive Influence

	VTR<30	VTR 30-60	VTR>60
Very supportive organizational culture	X, X, X		
Somewhat supportive organizational culture		X, X, X, X	
Less supportive organizational culture			X, X

Based upon the actual work sites that have supplied sufficient information to make an assessment, the work sites are charted below in Table 3. As indicated in Figure 2 that summarizes supportive work site attributes, all work sites had between five and 16 "Y" answers out of a possible 20. Work sites indicating "Y" for eight or less of the attributes are considered to have an organizational culture that is less supportive of trip reduction activities. Work sites indicating "Y" for nine to 13 of the attributes are considered to have an organizational culture that is somewhat supportive of trip reduction activities. Work sites indicating "Y" for 14 or more of the attributes are considered to have an organizational culture that is very supportive of trip reduction activities. These cut off points were determined using the investigator's judgment based upon interview data.

Table 3 below appears to show that the degree of organizational support provides some indication of program effectiveness but it is clearly not the only determining factor. Do the results of this study disprove the null hypothesis, "The effectiveness of work site trip reduction programs does not depend on organizational culture"? The study does provide evidence that organizational culture influences the outcome of the trip reduction program but such influence may be overcome by other factors.

Based upon interview information, determinants that are most important to TRP effectiveness appear to be the following, from most important to least important:

1. Downtown location with good access to high quality transit
2. Large support staff for whom cost of travel is the most important determinant of travel behavior
3. Organizational culture, which includes key supporting incentives
4. Effective ETC

Table 3: Comparison of TRP Performance and Degree of Organizational Support of Actual Work Sites

	VTR<30	VTR 30-60	VTR>60
Very supportive organizational culture	E, G, I		
Somewhat supportive organizational culture		C,F	M
Less supportive organizational culture	J	A, D	

Except in the most outstanding cases of strongly supportive organizational cultures, a work site trip reduction program will find poor access to transit difficult to overcome. Low-income employees will choose the more economical mode of transportation out of necessity, regardless of convenience, and regardless of how well the ETC promotes it. Subsidies and other key incentives provided by organizations can convince some commuters with choices to use transit.

To what extent does the ETC influence the outcome of the trip reduction program? Hiring the right person for the job of ETC is one thing organizations can do to improve TRP effectiveness but the best ETC cannot overcome unsupportive management (A) or locational disadvantages (M). In the study sample, there was just one ETC who sounded genuinely disinterested in her duties as ETC. But it appears that this ETC with a doubtful attitude and who mirrors an unsupportive organizational culture (J) does not prevent good performance of the TRP. The information available from the interview and other data sources does not readily explain the high performance of Organization J, except that the work site is in a good location. This ETC had been in her position the longest of any of the other ETCs (10 years). While company literature boasted that over 60 percent of employees use commute alternatives, the ETC explained that employees' "hearts are just not in it". Is it burnout or is she not accepting credit for the influence she has on the program? Are there important elements of organizational culture that have been overlooked? Her organization is a professional consultant where employees work long hours. Is it possible that the organizational attitude is to just "buckle under" and get the TRP done? There may also be a large support staff whose travel behavior effortlessly covers the trip reduction requirements.

Employers interested enough in the program to give thoughtful consideration to selecting the best possible ETC will probably already have good trip reduction program elements. On the

other hand, an employer who does not care about the TRP outcome cannot hire a high “i” ETC and expect the ETC to single handedly make the organization achieve regulatory compliance without programmatic support. In companies where effective program elements are already in place, indicating top management support, a high “i” ETC would be a boon to the program.

Conclusions

The use of the case study methodology adapted from the social sciences provided useful results despite a major challenge of low participation rates. This study also provided lessons in developing the research design and what we now believe could have been done to enhance participation.

Do the results of the study disprove the null hypothesis that ***"The effectiveness of work site trip reduction programs does not depend on organizational culture"***? We cannot use terms relating to statistical confidence due to insufficient data; however, a few useful observations may serve as "rival explanations" of the hypothesis. For example, studying ETCs as a manifestation of work site culture, the available data show patterns that suggest high "Influencing" work styles of ETCs are associated with high performing trip reduction programs. A person with a high "i" needs-driven work style, according to DiSC™ is one who enjoys influencing others. They seek contact with all types of people, look for opportunities to generate enthusiasm and accomplish goals through others. They are adept at dealing with people and articulate ideas well. The findings of the DiSC™ appear consistent with the FIRO-B and the CVAT analysis.

Where there is the opportunity to select an ETC, one who fits the "Influencing" work style and behaviors (DiSC™), who expresses warmth, openness, and friendliness and has less of a need to control outcomes and others (FIRO-B), who values Relations over Work as well as Flexibility and Political Savvy (CVAT), is one who will be most comfortable and effective in the role of ETC.

If an existing ETC does not fit this profile, but instead has a needs-driven work style of high "Steadiness", as seems to be associated in this study with lower-performing trip reduction programs, there are some things he or she can do (listed in the Recommendations) to adapt behaviors to be more effective. The DiSC™ emphasizes people's ability to adapt their behaviors to meet the demands of a situation.

However, no matter how effective the ETC, he or she might not be able to overcome unsupportive management. A high "i" ETC work style will not predict TRP effectiveness alone. Even the best ETC will have difficulty overcoming work site locational disadvantages, unless there is exceptional support for the trip reduction program and motivation given to employees by top management.

In another case, a work site with a high performing trip reduction program has an ETC who is doubtful about the value of the program and who is not a high "i". This suggests that an unsupportive ETC may not necessarily have the power to undermine a trip reduction program if other supportive elements are in place. The role of the ETC appears to be an important influence but not as strong as other factors. These factors include, in order of apparent importance:

1. Work site location has access to good quality transit
2. Large support staff for whom cost of transportation is more important than time savings and convenience

3. Top management support and advocacy (often expressed in the form of a transit subsidy large enough to convince employees with choices to use transit)
4. Effective ETC

In summary, the results of this study appear to indicate that the null hypothesis is true *sometimes*. This study found evidence that management support and an effective ETC:

- Are *not* necessary for a successful work site trip reduction program if the work site is located in an area with access to high quality public transportation and employs lower-income staff who must choose transportation cost savings over time savings and convenience.
- *Are* necessary for a successful work site trip reduction program if the work site is not located in an area with access to high quality public transportation.

Finally, the results of this study provided some information regarding attributes of organizations that may be more receptive to TDM activities. These are based upon the feedback from organizations participating in this study.

Recommendations for Action

For organizations who want to take action to improve their trip reduction programs:

1. Locate the work site where there are high quality transportation alternatives and limited availability of parking.
2. Actively support the local transit agency.
3. Offer a transit subsidy and other incentives to employees.
4. Select an ETC by asking for a volunteer among those employees who fit the work style profile of a high "i". These employees should ideally be managerial level with direct communications access to top management decision makers and have influence upon decisions relating to the trip reduction program budget.
5. Arrange for the ETC to report directly to top management or to the same supervisor as for other duties.
6. Incorporate the activities of the trip reduction program into the job description of the selected ETC and allocate a realistic amount of time to their execution.
7. Make explicit in the guiding principles the role that the trip reduction program plays in the organization, so that trip reduction and promoting commute alternatives becomes part of the organizational culture.
8. Remove any parking subsidies or related perks to those higher in the organization or at least offer the same parking subsidy to everyone regardless of position in the organization.
9. Supervisors can lend support to ETCs with high "Steadiness" work styles by:
   - Lending support to promotional tasks
   - Helping the ETC prioritize work
   - Explaining how the ETC's personal effort contributes to the group effort
   - Encouraging the ETC's creativity

For current ETCs who are uncomfortable with their ETC duties:

Especially those with high "Steadiness" work styles, ETCs can try these actions, adapted from DiSC™ recommendations:

1. Seek out colleagues of similar competence and sincerity (ETC networks) because these ETCs naturally thrive in situations where the emphasis is on cooperating with others within existing circumstances to carry out a task.
2. Take the time to carefully devise a work plan, broken down into tasks

For TDM professionals who want to focus marketing efforts on more receptive organizations:

Target organizations that have some combination of the following attributes:

- Work site location has access to good quality transit
- Large support staff for whom cost of transportation is more important than time savings and convenience

- Most of the affected employees remain in an office setting during the work day
- Most of the affected employees usually work routine predictable hours
- There may be motivations to support trip reduction activities beyond regulatory compliance
    i. Organizations that deal with environmental hazards may search for ways to demonstrate to the public that they are good stewards of the environment
    ii. Organizations that want an image that they are "green," progressive, or that they are motivated by "doing what is right"
    iii. Organizations where transportation benefits would enhance employee recruitment and retention
    iv. Organizations (primarily government) that feel a responsibility to take a leadership role and set the standard for positive action

Lessons Learned Regarding Research Design

This study was challenged by many factors, the most important of which was insufficient participation. This was not for lack of effort in contacting candidate work sites, in which several hundred contacts were made by email and telephone. After contacting all work sites that fit the most basic description of "similar", effort was moved to other Puget Sound area central business districts, such as Tacoma, to recruit there. The contact information for ETCs was, in just two year's time, out-of-date. ETCs are highly mobile and generally do not stay in their positions longer than three years. Each work site required three to fourteen phone calls and numerous emails to reach the correct person and get a response. An initial decision to use the smaller Puget Sound database was based upon the existence of ETC contact information. In hindsight, it would have been better to start with the larger Los Angeles database of trip reduction programs, knowing that identification of current ETC contact information would be an unavoidable step. Spam filters impeded our ability to contact people by email. Letters were sent by email, providing detailed information about the study. In hindsight, the study would have been better served by introducing the study through the use of the informal ETC networking meetings held every few months, to familiarize ETCs with the study and help them anticipate receiving a phone call and letter. The utility of the ETC networks was not discovered until the interview phase of the study, after the feedback instruments were concluded.

Perhaps the biggest impediment to individual participation was lack of time on the part of the individuals, particularly the ETC supervisors. It was learned that the duties of the ETC are relegated by the supervisor to avoid having to do anything more relating to the work site trip reduction program. The time commitment of less than three hours to participate in the study was too great. In hindsight, feedback instruments would have been cut back to one or two, or combining elements of the DiSC™, FIRO-B and POC. Their administration would have been delivered in a streamlined form that would require one link and one pass code only. Another hurdle was the unusualness of the study approach. *"It sounds like you are asking me to take a personality test. I thought this was a transportation study."* Experience with the feedback instruments possibly dampened some participants' willingness to be interviewed. Individuals were generally more than glad to talk about the mechanics of their trip reduction programs but less comfortable to discuss feelings, attitudes, and group dynamics within the work site. In hindsight, these reservations could have been addressed with better marketing of the study. One way to do this could have been through the assistance of King County Metro and Kitsap Transit because it was learned through the interview process that ETCs had regular contact with these entities. Conducting the interviews prior to the feedback instruments might have been a better alternative.

Lastly, the goal was to secure a group of work sites with successful programs and another group with less successful programs, the purpose of which was to compare these otherwise similar groups to look for clues regarding differences in work site culture. Almost all the work sites who agreed to participate represented successful work sites. Only two were considered less successful. Naturally, ETCs with successful programs will feel more eager to highlight their programs. While the introductory information emphasized anonymity of participants and work site identities, this perhaps did not allay fears of those representing less successful work sites that their organizations might be publicly cast in a negative light. In addition, the inclusion of work site participation by supervisors may have caused some ETCs

to feel intimidated despite guaranteed anonymity. In hindsight, the study probably could have reaped more information by concentrating on ETCs alone, thereby getting greater participation.

Acknowledgements

The investigator gratefully acknowledges the assistance of several individuals who provided input and other assistance on this project, including Ed Hillsman of WSDOT; Nancy Brown of Designs in Development, Inc., Harold Welch, Ph.D. of High Performance Coaching, the nineteen work site ETCs and supervisors who graciously volunteered their time to participate in the study, and the individuals who participated on an expert panel and provided valuable input to the development of the focus and methodology of the program, including:

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Chris Hagelin, Center for Urban Transportation Research
Rita Hildebrand, Pima Association of Governments
Edward Hillsman, Washington State Dept. of Transportation
Brian Lagerberg, Washington Dept. of Transportation
Stephen Offut, Best Workplaces for Commuters®, U.S. EPA
Eric Schreffler, Chair, TRB Committee on TDM
Phil Winters, Center for Urban Transportation Research
Michael Wright, Florida Dept. of Transportation

Appendix A:

Letter of Invitation to Participate and Informed Consent Form

Center for Urban Transportation Research
University of South Florida
4202 East Fowler Avenue, CUT 100
Tampa Florida 33620-5375
(813) 974-3120
SunCom 574-3120
Fax (813) 974-5168
Web: http://www.cutr.usf.edu

Date: [add date]

To: [add name and affiliation]

From: Sara J. Hendricks, AICP, PI
Senior Research Associate
Center for Urban Transportation Research
University of South Florida
4202 East Fowler Avenue, CUT100
Tampa, FL 33612-5375

Brian Lagerberg
Manager
Washington State Department of Transportation
Public Transportation and Rail Division
P.O. Box 47387
Olympia, WA 98504-7387

RE: Invitation to Participate in Research Study
Study Title: "Commuter Choice Program Case Study Development and Analysis"
Institutional Review Board #100584

As the Employee Transportation Coordinator of your worksite, this is an invitation for you to participate in a research study about trip reduction programs.

Study Benefits

Through the results of this study we seek to **help employers** provide more effective trip reduction programs for their employees. Study results also aim to **benefit the public** by providing information to transportation professionals about how best to tailor assistance to employers who provide trip reduction programs. This research may also provide **benefits to study participants** through direct confidential and personal feedback resulting from study instruments.

Purpose of Study

This study aims to explore elements of management culture that influence the effectiveness of trip reduction programs. For the purpose of reducing traffic congestion and improving air quality, most previous studies to date have focused upon understanding the effectiveness of various incentives to encourage commuters to use transportation alternatives, such as transit and carpooling. However, previous modeling studies indicate that offering incentives, by

themselves, explain only a portion of the variance in effectiveness between one trip reduction program and another.

Study Funding and Sponsorship

The study is sponsored by the Florida Department of Transportation, staffed through the National Center for Transit Research (NCTR), and housed at the Center for Urban Transportation Research, College of Engineering at the University of South Florida (USF) in Tampa. Study funding is being provided through the Federal Transit Administration of the United States Department of Transportation. NCTR is one of ten competitively designated and federally funded university research centers in the United States. The University of South Florida recently was ranked by peers in the profession, among the top ten universities in the nation to do graduate level study in transportation planning.

Why Your Participation is Requested

We received contact information for your worksite through the database of trip reduction programs of the Washington State Department of Transportation. All worksites subject to trip reduction requirements in the Puget Sound Area are being contacted regarding this study. This study is focusing upon the Puget Sound Area because the database contains the richest source of relevant quantitative information we have found nationwide. Also we are focusing only on one geographic area to control for the effects that the regional economy may have upon trip reduction program effectiveness.

Guidelines for Participation

Your participation is completely voluntary. You are free to participate in this research study or to withdraw at any time. There are no anticipated risks of participating in this study. You will not be paid for your participation in this study and there will be no costs to participate in addition to your time.

If you agree to participate, the information you provide will be used to develop a report for NCTR. The report will be a public document. Your employment title and general department name may be used in the report, but your individual name and company name will not be used unless you and your organization give us permission to do so. Only authorized research personnel will have access to the data and all employees participating will receive “codes” to use to protect their privacy. The United States Department of Health and Human Services and the USF Institutional Review Board may inspect the records from this research project and the records will be housed at the Center for Urban Transportation Research.

Researchers who conduct data analysis and prepare the final report of findings have the responsibility to separate your personal identity from your responses. The intent is to provide ample personal confidentiality to all participants. For your protection, you will receive instructions for receiving personal feedback upon completion of all portions of the process,

which will include security options. This provision is being made to assure confidentiality because researchers have limited capacity to protect returned personal reports once they leave the control of the researchers. For example, you may direct the researchers to send you your personal feedback to either a home or office email, or have hard copies sent through the U.S. Mail, as you prefer.

Agenda for the Study

The study will take place during the months of April through May 2004. Study participants will be asked to complete four feedback instruments on-line, the DiSC, FIRO-B (Fundamental Interpersonal Relations Orientation—Behavior), CVAT (Culture and Values Analysis Tool) and POC (Profile of Organizational Characteristics). Completion of these instruments plus the time required to receive instructions via free optional phone conference will not exceed two hours. The process may be completed in segments from your worksite or at your home, or in a combination of both, so long as you have a computer with Internet capacity.

The Purpose of the Feedback Instruments You Will Take

Participants will complete four instruments that will take from 10 minutes to 30 minutes each to complete. The total estimated time is two hours. These tools are frequently used for teambuilding, career counseling, executive coaching, and organizational development. Feedback reports from these tools are often valued at over $300 combined. Upon completing the battery of four instruments, the DiSC and FIRO-B individualized reports will be sent to a confidential email address which you supply.

• The DiSC results characterize a participant's perceptions regarding those behaviors necessary to be successful in his/her job as an ETC.

• The FIRO-B explains how an individual's personal needs affect interpersonal work relationships.

• The CVAT and the POC will be used to collect perceptions of organizational culture and values as perceived by the ETC and the ETC supervisor. Personal demographic information about each participant will be a part of these feedback instruments. This information will be very important to make this study successful. All study participants will receive an *aggregate* report of study findings, including any indications of personal style, values or corporate culture that correlate highly with successful programs. Again, your individual participation is confidential.

In addition, up to twelve worksites will be selected from those whose ETCs and supervisors completed the feedback instruments listed above. A time will be scheduled for a more in-depth interview about the trip reduction program of the worksite, perceptions of employee attitudes toward the program and implementation challenges encountered by the staff. The interview is anticipated to last no longer than 45 minutes.

Contacts for Questions

If you have any questions about this research study, contact Sara J. Hendricks, Principal Investigator, at (813) 974-9801 or by email at Hendricks@cutr.usf.edu. If you have questions about your rights as a person who is taking part in a research study, you may contact the Division of Research Compliance of the University of South Florida at (813) 974-5638.

Sincerely,

Brian Lagerberg
Manager, WSDOT

Sara J. Hendricks
CUTR Principal Investigator

"Commuter Choice Program Case Study Development and Analysis"
Institutional Review Board #100584

Consent to Take Part in This Research Study

PLEASE COPY THE FOLLOWING STATEMENT AND FORWARD IT BACK BY EMAIL TO hendricks@cutr.usf.edu OR FAX IT TO THE ATTENTION OF SARA HENDRICKS AT (813) 974-5168.

Instructions for your participation, including a password and an anonymous participant identifier, will follow:

By emailing back this form expressing consent to participate, I agree that:

- I have fully read this informed consent form describing this research project.
- I have had the opportunity to question the person in charge of this research and have received satisfactory answers.
- I understand that I am being asked to participate in research. I understand the risks and benefits, and I freely give my consent to participate in the research project outlined in this form, under the conditions indicated in it.
- I have been given a copy of this informed consent form, which is mine to keep.
- I certify that responses to feedback instruments are mine alone and I have not used a proxy.
- I agree to complete the instruments described in the attached memo (DiSC, FIRO-B, POC, CVAT) within a two-week period from the date of my agreement to participate.

Investigator Statement:

I certify that participants have been provided with an informed consent form that has been approved by the University of South Florida's Institutional Review Board and that explains the nature, demands, risks, and benefits involved in participating in this study. I further certify that a phone number has been provided in the event of additional questions.

Sara J. Hendricks, AICP
Principal Investigator

Date:_____

Email address to send study instructions and access codes_____

To assure confidentiality, I want my personal results from the DiSC and FIRO-B instruments to be sent to the following email address: _____

OR

Mailing address at:_____

My phone number is: _____ext._____

Name_____

Title_____

Company_____

I am an (select one) ETC_____ ETC supervisor _____

Appendix B:

Copy of On-line Introductions to Feedback Instrument Battery

Dear Participant:

Thank you for agreeing to take part in the Commuter Choice Program Case Study conducted by the Center for Urban Transportation Research (CUTR) at the University of South Florida. Your participation is essential to the successful completion of this project and to help employers provide more effective trip reduction programs for their employees.

The four survey instruments on the next page, DiSC, FIRO-B, POC, and CVAT, have been selected as a method for collecting information about you and your organization. Researchers will utilize this data to provide generalized findings to CUTR with regard to distinctions and similarities of existing transportation programs. Please complete each instrument by responding to all questions and statements. The CUTR research team, including our subcontractor, Designs in Development, Inc., have the responsibility to provide confidentiality of the data and anonymity to every participant. Designs in Development, Inc., may contact you with instructions by email from designdev@aol.com.

When you have completed the four survey instruments your responses are sent to the researcher for analysis. At that time all names will be separated from acquired data. Within a week to 10 days from the time you have completed all components of the process, you will be sent an individualized and personally useful report of your DiSC and FIRO-B. These reports are frequently marketed at a combined value up to $300 combined and are often used for career coaching, performance enhancement and professional development. At a later date, you will also receive a generalized report based on the aggregate data from the POC and CVAT.

The next page contains links to each survey instrument. At the completion of each survey you will be brought back to the same page until all surveys have been completed. Attempt to provide yourself ample quiet and uninterrupted time to complete each instrument. It is not necessary to complete all surveys at a single sitting. If you need to end a survey without completing it you will be able to return to this page and proceed to the point where you broke contact.

If you have any questions, please contact Sara Hendricks, Senior Research Associate with CUTR, at hendricks@cutr.usf.edu or 813-974-9801.

Now proceed to the next page and begin by clicking on the first instrument.

< GO TO NEXT PAGE >

Survey Instruments

There are five links to 4 survey instruments on this page (one survey, the CVAT, is divided into two parts). Please read the instructions carefully. Set aside a quiet time of 15 to 20 minutes to complete each instrument. You do not need to take all the surveys at the same time. However, we need you to take all of them to successfully complete this project. We recommend that you take these feedback instruments in the order that they appear on this page. As you complete each feedback instrument you will be returned to this page. You can then select another survey right away, or choose to continue when you have uninterrupted time. When you complete Part 2 of the fourth survey (CVAT) you will, again, be returned to this page. At that time, simply exit the page to finish your part in this project. When the researchers have finished collecting the data, you will receive a report based on your DiSC responses, a separate report based on your FIRO-B responses, and a third report based on the collection of all participants from aggregate POC and CVAT responses.

DiSC™

This instrument measures four behavioral factors expressed as Dominance, Influence, Steadiness, and Conscientiousness from the participant's perception of his or her job requirements.

Note: This is a forced choice instrument and there are no right or wrong answers. The best interpretation will result from taking the instrument quickly and not dwelling on the meaning of the words. Rather, participants are encouraged to "go" with their instinctive response to the questions. It is of utmost importance that the individual taking this instrument use the focus of either "my job as an ETC" or for the ETC's supervisor, "The behaviors I think my ETC should exhibit to be successful." There are 28 questions in the instrument and participants are strongly encouraged to take no longer than ***10 minutes to complete*** *the instrument, not including the time it takes to access the website and sign in.*

Please be ready to use your code assigned by epic@inscapepublishing.com.

Click here to open the DiSC™
(You will be redirected to the Inscape Publishing website and prompted for your Access Code. This code was sent to you via email from epic@inscapepublishing.com)

FIRO-B™

This instrument provides feedback on your level of expressed and wanted Inclusion, Control, and Openness. There are 58 questions and the instrument will take approximately **12-15 minutes to complete** once you have accessed the website and signed in.

Note: As you respond to the following questions think in general terms of your behaviors with others from your work-life, home-life and recreation. Try not to dwell on any one thought. Most likely, your first response will be the most accurate response for you. Even though you find that many of the questions sound the same, your response to each question is important to achieve a report that can be useful to you and for this project.

To sign in to this site please enter the following information

Account Login:	CUTR
Account Password:	research
User ID:	Leave this blank. This is assigned by the web site if you need to return to the survey.

Click here to open the FIRO-B™

POC©

The POC helps organizations assess their management system by providing a simple means for employees to briefly describe the cultural system in use in their organization. The questions highlight organizational characteristics in the areas of leadership, motivation, communication, decision making, goals setting and controls. This survey contains 16 questions and will take approximately **15 minutes to complete,** after website access is completed.

Note: The first part of this instrument asks for personal information. This is important information that is needed to successfully complete this project. Please respond to all questions in both parts of this survey. Protection of participant identity and responses is an obligation that the researchers working on this project respect.

You will be asked for your last name and CUTR-assigned Name Code.
Example: CUTR 0216222

Click here to open the POC©

CVAT© - Part 1

The Culture and Values Analysis Tool© is made up of two questionnaires. Part 1 is the Personal Value Profile and is designed to generate a profile of personal priorities. Part 1 of the CVAT contains 20 Value Sets and will take approximately **15-18 minutes to complete** after access is achieved.

NOTE: The CVAT© is not a test and there are no "right" or "wrong" answers. The researchers have found that first impressions provide the most accurate information for this type of feedback. Read each statement carefully; then rank your choices and move on to the next Value Set.

You will be asked for your last name and CUTR-assigned Name Code.

Click here to open the CVAT© Part 1

CVAT© - Part 2

Part 2 of the CVAT is the Aggregate Value Profile and is designed to record your impressions of the values or "cultural norms" of your organization. Part 2 of the CVAT contains 20 Value Sets and will take approximately **15-18 minutes to complete**.

NOTE: For the purpose of this questionnaire, the term "organization" refers to all of the work groups and departments covered by the Employee Transportation Coordinator. Your responses should be based on your

personal impressions and will not be used in this study to represent or determine a statistical inference of actual corporate values. The researchers are interested in understanding your perceptions and not in defining the culture of your organization.

You will be asked for your last name and CUTR-assigned Name Code.

Click here to open the CVAT© Part 2

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Appendix C:

Final Report: "*Characteristics of Employee Transportation Coordinators*"

Characteristics of Employee Transportation Coordinators

Center for
Urban Transportation Research

July 2004

Prepared by
Nancy L. Brown, MBA, CAE
Designs in Development, Inc.

In collaboration with

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Report on Characteristics of Employee Transportation Coordinators

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Overview of Study

The goal of this study was to determine if differences in effectiveness of work site trip reduction programs (TRP) can be explained by the characteristics of Employee Transportation Coordinators (ETCs) and the relationships they have with their supervisors.

The process used for this investigation includes a study of the characteristics of organizations with the six most successful TRP participation metrics in comparison with the six organizations with the least successful TRP participation metrics. Also, by comparing personal characteristics of ETCs and their supervisors from the six most successful programs with personal characteristics of ETCs and their supervisors from the six least successful programs, we intend to indicate personal characteristics that may contribute to TRP effectiveness.

The study was undertaken to provide a statistical foundation to refute two null hypotheses:

1. There is no significant difference between selected characteristics of organizations with highly successful TRP metrics from organizations with low TRP metrics.
2. There is no significant difference between selected individual characteristics of ETCs from organizations with highly successful TRP metrics and ETCs from organizations with low TRP metrics.

Collection of data to study organizational or personal characteristics could have been accomplished by several approaches.

1. Referring to existing data-which documents culture change for organizations and performance appraisal feedback for individuals. This approach is cost effective and can be time effective with full cooperation from each participating organization, but comes with the problem of diverse expressions of collected information. Documentation regarding culture change will be tailored to each organization and some organizations will have no culture statement or internal evaluation. Performance appraisal criteria will normally be consistent within an organization but vary widely between organizations. Even if organizations share common descriptions the perception of standards of performance are not consistent between departments, let alone between companies.
2. The on-site observation by a researcher to gather organizational information and multiple feedback observations in the form of 360-degree tools used to assess characteristics of each participant. This approach provides optimum consistency of common, predetermined criteria, but is so expensive and time restrictive that it is only used for the most demanding or critical applications.
3. Collection of responses to common sets of questions by each participant. The use of self-assessment instruments is time efficient and provides effective data at a reasonable cost. Self-assessment tools rely on the candor and accuracy of participants and often depend on the assumption of confidentiality placed on individual feedback. Data from self-assessment instruments reflect opinions of participants and contain individual bias, baggage, and potential misperceptions of reality. For this reason, representation of an adequate sample of the defined population is needed.

Overview of Instruments

The self-assessment feedback approach was selected for this study. Instruments were selected that could be made available on-line, would be relatively easy to administer, would provide data suitable to build statistical evidence, and that would provoke interest on the part of survey participants. The instruments included:

- DiSC by Inscape Publishing
- FIRO-B (Fundamental Interpersonal Relations Orientation – Behavior) by Consulting Psychologist Press administered through SkillsOne
- POC (Profile of Organizational Characteristics) based on the work of Dr. Rensis Likert in *The Human Organization,* administered by High Performance Coaching
- CVAT (Culture and Values Analysis Tool) by Dr. Reid Nelson, administered by High Performance Coaching.

Participants were contacted by the Center for Urban Transportation Research (CUTR) with an overview of the research project, the approximate time to participate, access to website information, and a commitment of individual confidentiality. Seventy participants were sought; 19 actually participated in the study and 18 completed all or some of the instruments.

DiSC

At its most basic level, DiSC measures four factors of an individual's needs-driven behavior:

- **Dominance** (D) is the DiSC factor that relates to control, power and assertiveness.
- **Influence** (i) relates to an individual's approach to social situations, and an individual's desire to influence others.
- **Steadiness** (S) is the factor of patience, persistence and thoughtfulness.
- **Conscientiousness:** (C) describes a person's approach to structure and organization.

The instrument allows a person to project his or her perceived "needed" behavior in a situation and compares it with the instinctive response, to yield a composite view of the person in the position. The DiSC is typically used to help individuals determine their own needs-driven behaviors and learn to adapt their behaviors to the needs of others.

Upon completion of the DiSC instrument by an individual, the data is used to construct three graphs. A first graph (referred to as Graph I) charts perceived needed behavior in a given job environment, a second graph (referred to as Graph II) charts the instinctive response and a third graph (referred to as Graph III) develops a composite view, which is the information sent back to the person completing the instrument. In responding to the instrument, ETCs were asked to focus on "doing their jobs as an ETC." Supervisors were asked to focus on "supervising their ETC."

DiSC is one of several hundred needs-driven, behavior-based instruments available on the market. However, it is the only one of the instruments that has been validity- and reliability-tested successively through several stratified random samples of the US over its forty years of existence. The language in the instrument has also been adapted, as language utilization has changed over time. Its original creator, Dr. John Geier, a former professor at the University of Minnesota, found that Graph I tended to correlate with how people projected their jobs to be, because of a tendency to think more carefully about how a person "most" saw their job as opposed to how they functioned least in the position. He called Graph II "the instinctive response under pressure." Graph III is the combination of the two, representing how a person is probably functioning in the role at the point at which they complete the instrument.

With the advent of the use of the computer, and with the instrument being taken in an unsupervised environment, Inscape does not "officially" claim that the differing charts mean anything. Anecdotally, however, many long-term administrators like Ms. Brown agree with the original instrument developer, Dr. John Geier, that Graph I correlates most closely to behaviors people perceive that they need to emulate within the focus, They also find that Graph II is more closely aligned with the instinctive response to pressure (and much less likely to change dramatically over time), and that Graph III provides insight into how well the subject is actually merging the wanted (projected) behaviors with his or her own more instinctive responses. While no research proves this fact, the additional graphs provide rich insight into individual persons, which can be especially helpful with a resulting small sample size such as the one resulting from this initial study.

There are thirteen possible DiSC "Classical Profile Patterns" which may more closely describe an individual's behavior. Participants received a detailed report about their unique behavioral style. No style is better than another. The information sent included a description of the person's needs-driven behavioral tendencies. The information also describes the person's desired environment and - can help the participant discern what he or she can do to be more effective in the defined situation. For more information about the DiSC instrument refer to the section "Validity and Reliability Regarding Instruments."

FIRO-B (Fundamental Interpersonal Relations Orientation – Behavior)
The FIRO-B is specifically concerned with individual interpersonal needs and how these needs show up in one-to-one relationships, and in groups. The FIRO-B provides insights into issues of organizational culture and team dynamics. This makes the FIRO-B especially valuable for leaders and team members.

FIRO-B describes interpersonal behavior in terms of three primary dimensions:

- Need for **Inclusion,** whether one wants to be "in" or "out" of a particular group
- Need for **Control**, whether one wants to be "up" or "down" (superior or subordinate)
- Need for **Affection** [openness], whether one wants to be "close" or "distant"

FIRO-B measures these three dimensions from two perspectives:

- Expressed behavior: behavior one feels most comfortable showing to others
- Wanted behavior: behavior one wants from others or to be received from others.

The FIRO-B yields six basic scores, including an *expressed* score for each dimension: inclusion (Ie), control (Ce), and affection (Ae), and a *wanted* score for each dimension: inclusion (Iw), control (Cw), and affection (Aw). In addition, there are *total* scores for each of the three dimensions; total inclusion (It), total control (Ct) and total affection (At). *There is also a* total expressed behavior score (Te), a total wanted behavior score (Tw), and an overall total-total score combining both wanted and expressed scores (Tt).

FIRO-B explains how personal needs affect interpersonal relationships. It provides a useful focus for leadership development, teambuilding, mentoring programs and organizational change. As applied to this study to assess characteristics that lead to effective or ineffective programs, there may be clues from contrasted scores of ETCs and their supervisors. An investigation will be made to discover if there are statistically significant differences between FIRO-B data and the level of program effectiveness.

The following table is a common arrangement for FIRO-B scores and illustrates abbreviations used with the data:

	Inclusion	Control	Affection	Totals
Expressed	**Ie**	**Ce**	**Ae**	**Te**
Wanted	**Iw**	**Cw**	**Aw**	**Tw**
Totals	**It**	**Ct**	**At**	**Tt**

Abbreviated descriptions associated with FIRO-B scores:

Instrument Scores	Low	Medium	High
Individual cells (Ie, Iw, Ce, Cw, Ae, Aw)	Score = 0-3 Individual rarely displays the behaviors.	Score = 4-6 The behaviors will be a noticeable characteristic of the individual but only some of the time.	Score = 7-9 The behaviors are noticeably characteristic of the individual in most situations.
Total expressed (Te)	Score = 0-9 Not comfortable initiating social behavior.	Score = 10-18 Vary extent to which initiates action; depends on who it is and context.	Score = 19-27 Enjoy initiating behavior with others.
Total wanted (Tw)	Score = 0-9 Not comfortable relying on others for what you need. Do not expect much from others.	Score = 10-18 Vary in the extent to which you are comfortable being reactive and reliant on others.	Score = 19-27 Rely quite a bit on others and feel comfortable about accepting behaviors from others.
Total need (It, Ct, At)	Score = 0-6 Indicates that individual is indifferent to satisfying this need.	Score = 7-12 Suggests that individual will characteristically express or display the related social behavior to fulfill this need.	Score = 13-18 Indicates that individual will consistently pursue this need by expressing or eliciting the interpersonal behaviors related to these needs.
Overall need (Tt)	Score = 0-17 Involvement with others is not a reliable source of need satisfaction. Individual tends to need privacy to do best work. Considers self an introvert.	Score = 18-35 Involvement with others is sometimes a source of satisfaction, depending on individuals and context. May consider self to be introverted or extraverted, contingent on the situation.	Score = 36-54 Finds involvement with others enjoyable and satisfying. Works best in a group. Likes to work on teams and to solve problems through discussion. Considers self to be an extrovert.

Descriptions of scores based on narrative from "Introduction to the FIRO-B in Organizations" by E. Schnell and A. Hammer, 1993, Consulting Psychologist Press, Inc.

For more information about the FIRO-B, please refer to the section "Validity and Reliability Regarding Instruments."

POC (Profile of Organizational Characteristics)

In his 1961 book, *New Patterns of Management,* Rensis Likert identified four prototype organizations, named Systems I, II, III and IV defined by the degree to which they were open, participative, and satisfying to work in. These organizational levels are:

System I	—	Authoritative
System II	—	Paternalistic
System III	—	Consultative
System IV	—	Participative

Dr. Likert further identified management style as the key variable. Dr. Likert was able to provide evidence that as organizations moved toward System IV4 on this scale, they had lower costs and higher output than those tending toward System I~~4~~.

The POC provides an efficient method to collect workplace perceptions of how the organization looks to an individual, and how that individual believes it should appear. The processes used by Dr. Likert included control, influence, decision-making and goal setting. The POC incorporates six process characteristics that can be observed in an organization. These include Leadership, Motivation, Communication, Decisions, Goals, and Controls.

The POC collects feedback on the six characteristics in terms of the perspective of how the organization *is seen now* and the perspective of how the organization *should be*. An overall POC Index is calculated for each perspective and for each characteristic. The POC is most useful when there are sufficient responses to provide sample data for predictions of a general population. Is the Appendix B reference still current? Appendix B contains the questions used for this study and is a reference when investigating the data:

> Questions 1, 2, and 3 deal with the organizational characteristic of **Leadership**; questions 4, 5, and 6 deal with **Motivation**; questions 7 through 10 collect feedback of organizational **Communication**; questions 11 and 12 focus on **Decisions**; 13 and 14 on **Goals**; and questions 15 and 16 on **Controls**.

For the initial phase of this study, using feedback from ETCs and their supervisors, comments from POC data will only describe the perceptions of management style from their singular perspective. This will have value as long as resulting descriptions of these perspectives are contained within the scope of comparing program leadership perceptions and not confused with providing projections of existing organizational characteristics. The desire of this study is to discover POC data with sufficient correlation to program effectiveness data to act as a catalyst for increased dialogue, vis-à-vis understanding perceived organizational characteristics that enhance or support successful trip reduction programs.

For more information about the POC, please refer to the section, "Validity and Reliability Regarding Instruments."

CVAT (Culture and Values Analysis Tool)

Organizational culture is more complex than one survey instrument can hope to address, but the CVAT provides a solid foundation to begin to recognize important components of an organization's culture.

Assessing perceptions of what is rewarded and important within an organization provides insights that can be used to style communications in a way that compliments cultural characteristics. CVAT consists of two interlocking instruments supported by licensed software.

1) The **Personal Value Profile** (CVAT Part 1) measures participants' perceptions of personal values (PV).
2) The **Aggregate Value Profile** (CVAT Part 2) also uses the same dimensions and format but relates to participants' perceptions of work unit values or culture (UC). The CVAT identifies 16 dimensions that fall within four categories. These categories are identified below, with expanded descriptions in the attachments.

- WORK: Effort (A), Time (B), Finish Job (C), Quality (D);
- RELATIONS: Affect (E), Empathy (F), Sociability (G), Loyalty (H);
- CONTROL: Dominance (I), Status (J), Political (K), Leader (L);
- THOUGHT: Abstract (M), Plan/Organize (N), Exposition (O), Flexibility (P).

Data from the administration of Part 1 and Part 2 of the CVAT are used to consult with executives and others whose personal styles and assumptions of organizational culture may influence organizational effectiveness and change. Part 1 is focused on the individual and can be used to illustrate personal values (PV). Part 2 is focused on the individual's perceptions of their work environment and can be used to illustrate work unit culture (UC).

Within the scope of this study, the CVAT is an effective tool to assess core values of ETCs and their supervisors, to assess the level of similar and dissimilar values, and to obtain perceptions of organizational culture. The CVAT software facilitates comparisons of responses and will statistically match similar responses. We anticipated that responses from incumbents from organizations with effective programs might be statistically similar to each other and different from responses from incumbents from organizations with ineffective programs. Regrettably, not enough participants completed this portion of our battery to provide data to differentiate characteristics of successful programs from less effective programs.

For more information about the CVAT, please refer to the section "Validity and Reliability Regarding Instruments."

The DiSC and the FIRO-B focus more on the characteristics of the individual, while the POC and CVAT focus more on the characteristics of the organization for which the individual works. The combination of these four instruments was selected for this study to provide information that could be compared to develop an overall profile of the study participants and their perceptions of their work sites. Finding consistencies (or inconsistencies) among the instrument data uses the concept of "multiple sources of evidence" in the development of cases studies.

As a "trial," we determined that it would be best to utilize several different instruments to see which provided the greatest insight. It is common in studies of this nature to utilize several instruments. As stated elsewhere in this document, we found that the willingness of the participants to actually *complete* the instruments to be the most limiting factor. Supervisors, in particular, perhaps because of their many responsibilities, were often unwilling to commit the time required.

Application and Findings

Statistical protocols were set up in anticipation of a minimum of 30 responding work sites, paired to include a supervisor and an Employee Transportation Coordinator (ETC) for a total of 60 participants. A web site, hosted by the National Center for Transit Research (NCTR), was constructed which contained information about the purpose of the study and links to the four feedback instruments. Each link contained instructions for completing each feedback instrument. NCTR staff recruited the study participants with contact information for ETCs provided by the Washington State DOT trip reduction database of participating work sites.

Recruitment included initial phone calls with a follow-up letter that contained detailed information and an Informed Consent form. Participant recruiters relied upon the ETC to provide contact information for his or her immediate supervisor. Individuals interested in participating signed the Informed Consent form and emailed or faxed it back to the recruiter. Upon sending his or her informed consent, the participant received emails that provided individual pass codes and information for accessing the link to the feedback instruments. Toll-free telephone conferences were offered to all participants for providing verbal instructions for accessing and completing the instruments. Participants were provided contact information if they had any questions or problems.

The study attracted 18 usable responses for DiSC, 15 usable responses for the FIRO-B and 14 usable responses for the POC and CVAT.

The design of the study required each participant to commit two hours of time completing instruments. Ideally, a supervisor and his or her ETC from the same work site would participate; however, each would complete the instruments separately and independently of the other. Many of the ETC supervisors, who have many other responsibilities, did not choose to participate for a range of reasons given to study directors. Of the eight participating sites ranked as top performing (rated "A" by CUTR) for vehicular trip reduction, only 25% (2) of the supervisors participated. Due to the resulting small sample size, the researchers are not able to apply statistical protocols to predict individual or work unit characteristics of a larger population. However, inferences may be extracted from the feedback contained in the instrument responses collected. These inferences might support or direct future investigations relevant to this study.

It appears that the behavioral style represented by the "i" in the DiSC instrument (Influencing) correlates with the more successful programs. Additionally, although the sample size is extremely low, it appears that the lack of Expressed Affection (Ae) in FIRO-B scores may align with lower performing programs. This hypothesis could be tested in further studies.

Additionally, as indicated in the section entitled "Recommendations" in the demographics the Profile of Organization Characteristics, the (POC) could be restructured by eliminating some questions and adding others to help evaluate outside influences, such as how far a work site is from public transportation, or how supportive top management is perceived to be of the program.

DiSC Scores: Paired supervisors and their ETCs

The trip reduction program requires influencing a change in the travel behaviors of people. An instrument that measures, in part, how people perceive the needs of the job and balance them against their own need-driven behaviors is the DiSC Personality Profile. One of the initial hunches of the study was that the behavioral work style of the ETC may be associated with the outcome of the TRP.

D is associated with task-oriented behaviors such as dominating and delegating.
"i" is associated with people-related behaviors such as influencing and inducing.
S is associated with people-related behaviors such as steadiness and security.
C is associated with task-oriented behaviors such as conscientiousness and control.

While the study sample for the DiSC™ is too small to draw conclusions, a possible pattern emerges from the available data. It is interesting to note that of the five pairs of study work sites for which there were data for both the ETCs and their supervisors, the site that had the highest performance as measured by vehicle trips reduced was also the only site in which both the ETC and the supervisor had a high "i" (Influence) work style as one of their primary needs-driven behaviors. (A person with a high "i" personality is one who enjoys influencing others. They seek contact with all types of people, look for opportunities to generate enthusiasm and accomplish goals through others. They are adept at dealing with people and articulate ideas well.) Of course, one example such as this cannot lead to any conclusions, but the recognition of both the supervisor and the ETC that active *influencing* is a key factor *does* support our "hunch."

Pairs of ETCs and Supervisors

Program Rating	ETC	Supervisor
Highest performing organizations		
A	C, i	i, D
A	i, S	S, C
Lower performing organizations		
B or C	S, C	i, C
B or C	S, D	D, C
B or C	S, C	D, i

DiSC Scores: ETCs alone

DiSC scores for ETCs alone provided much greater insight into the behavioral mindset of the ETC. Although the sample size was too small to be considered other than anecdotal, the results were revealing in that the high 'i" (active Influencing) appeared consistently.

The study contained 13 ETCs who completed the DiSC instrument. In examining these scores it is important for the reader to remember that the Graph III score represents a combination of how the employee projects how he/she should *most* be, plus how he/she feels he/she is *least*, as defined by a specific job focus ("my job as an ETC"). Actual scores of ETCs as compared to the CUTR worksite rating based on vehicle trips reduced are explained in the graph on the following page.

The following graph illustrates the difference in DiSC scores between high and lower performing programs for ETCs alone:

	Trip Reduction Ranking	DiSC Scores Graph III
high performing		
E02	A	C, i (supervisor also has high i)
E17	A	i, S
E14	A	i, S
E04*	A	S, D (i graph I)
E10	A	i, S
E08	A	C, i
E15	A	S, C
E09*	A	C, D (i graph I)
low performing		
E22	B	S, C
E21	B	S, D
E11	B	S, C
E24	C	S, C
E25	F	i, S

Looking at the ETC data apart from the data for the supervisors, the predominant work style for all ETCs in higher performing programs (VTR $\leq$30) was "i".

- Two of the high performing programs for which the ETCs did not score a high "i" (as indicated in their Graphs III) as a predominant needs-driven work style indicated that they believed a high "i" personality was needed to do the job of the ETC well (as indicated in their Graphs I), meaning that they were attempting to change their natural needs-driven behaviors to meet the needs of the job.

- The predominant work style for ETCs in the lower performing programs VTR>30 was "S" (Steadiness). A person with a high "S" personality is one who performs in a consistent, predictable manner. He or she prefers stable harmonious work environments with standard operating procedures and predictable routines. This ETC is task-oriented rather than people-oriented. He or she is uncomfortable with change and desires an environment in which the status quo is maintained.

Not fitting the above pattern are two lower performing organizations with ETCs with high "i" work styles. Obviously, a high "i" ETC work style might not be the only predictor of TRP effectiveness. However, this finding can anecdotally provide insight into other factors that may impact TRP effectiveness.

- In the first case, the ETC reportedly expressed a lot of frustration over lack of management support Therefore, it might be proposed that no matter how effective the ETC, the ETC might not be able to overcome unsupportive management.
- In the second case, the exception concerned the lowest performing work site. Its ETC has a high "i" personality but it is not believed that this is evidence that the hunch is wrong. The work site is located far away from the nearest central business district, which has limited transit service and free plentiful parking not controlled by the organization. It is suggested that this work site's TRP performance might actually rate well in comparison with other work sites in similar conditions.

Also not inconsistent with our "hunch" was one work site that was among the highest performing trip reduction programs. This program has an ETC with her primary needs-driven work style measured as a high "C" and her secondary work style as "i". The "C" style includes adherence to key directives, accuracy and attention to detail. In reference to the qualities needed in an effective ETC, her supervisor's (perhaps unenlightened) reported opinion was that that the most important activity of the ETC was to "….serve as a compendium of knowledge. We don't need a cheerleader."

- Other incentives were known to be at work: this work site has among the largest numbers of employees in the study, and they *all* receive a full transit subsidy. Top management, reportedly, actively advocates for the TRP, which *may* be unusual in some other organizations.
- While the persuading of a large percentage of employees to use alternative transportation has already been accomplished in this organization, we have been advised that there are still employees who do not use alternative transportation but could.
- This ETC reportedly further said that she is most proud when she succeeds in convincing someone to participate in trip reduction programs. Reportedly, supervisory guidance appears to reward employees who already want to participate in such programs. (For supervisory approval, administration of the transit passes is apparently what this ETC must do well.) So, in this case, her high "C" work style may be very effective: the ETC recognizes that influencing more employees to use alternative transportation is her goal.

Based on the above examples, one may conclude that the ETC work styles that best match the culture of the work site may enable an ETC to be effective in his or her position.

In conclusion, while the study sample for the DiSC™ is too small to draw definitive conclusions, a pattern appears to emerge from the available data that high "i" ETC work style, wherein encouragement is practiced and found, is one of the keys to the most effective trip reduction programs.

Conclusions regarding DiSC Scores

While data is insufficient to draw actual conclusions, we can infer from both of the tables above that recognition of the ETC's role as one who actively manages processes in a persuasive way is essential to project success. This could perhaps be tested with a larger sample using only the DiSC instrument, or preferably the DiSC and the POC.

FIRO-B (Fundamental Interpersonal Relations Orientation - Behaviors) Scores

In general, respondents to the surveys appear to be more reserved, or private, than the population at large. This conclusion is inferred from the low overall FIRO-B when compared to other studies using FIRO-B data (Table 4). As a group, the participants are likely to be choosy about how, when, and where they associate with others. They may also be cautious about how they use or share authority.

It should be noted that the FIRO-B scores represent patterns of interpersonal behavior and expectations of those persons evaluated. It may appear at a quick glance that the DiSC and FIRO-B information are in conflict. Any difference is minimized as one considers that the FIRO-B scores reflect the unique interpersonal needs that strongly motivate each of us. Within a work setting is only one of a wide range of situations and environments.

The DiSC, however, utilizes a very specific task focus upon application ("my job as an ETC" or "my job supervising an ETC"). DiSC celebrates the fact that, although each individual may have a greater "comfort level" with one or more behaviors, *individuals can change and adapt behaviors* to adjust to varying situations. This, in fact, appears to be what is happening with the more successful ETCs. Although, as a group, ETCs tend to be more private according to their FIRO-B scores, they are willing to *ADJUST their behaviors* to improve program outcomes by influencing and showing affection (openness) to others in the process of recruitment, solicitation, and related ETC communications.

The following is a recap of the meaning of the FIRO-B score categories:

Inclusion

"Expressed inclusion" (Ie) is consistently greater than "wanted inclusion" (Iw) (Table 1), indicating a greater comfort with initiating contact with other people while wanting privacy for themselves. This score is amplified in Table 2 with the comparison of ETC responses from high performing programs to responses from lower performing programs. The mean for "wanted inclusion" (Iw) of ETCs from high performing organizations is 3.4, and the mean wanted inclusion (Iw) of ETCs from low performing organizations is 0.8. ETCs with both high performing programs and low performing programs are comfortable with including others (Ie). However, the ETCs with low performing programs are even more private, and may be perceived as insincere due to their preference to not be included by others.

Control

The combination of expressed control and wanted control is described as Control total (Ct) and is the lowest factor for the group of respondents (Table 1). Control is also a topic of interest in Table 2, in that Control total (Ct) for participants from the top ranked programs and lower ranked programs both have a mean response that can be considered placed in the lower-middle of the scale. However, the score is the lowest of the three dimensions for the ETCs with high performing programs and it is the highest of the three dimensions for the ETCs with the low performing programs. This finding implies that either inclusion or affection (openness) may be more of a success factor than expressing or wanting control over events or the ability to influence others.

Affection

Affection is the dimension with the highest mean score, implying that this need is of greatest importance to the group of respondents. In an organizational setting, affection is frequently referred to as openness, warmth, or friendliness. The expressed and wanted scores, (Ae) and (Aw), appear at a low-medium level compared to other data sub-sets. Persons with a desire to express affection usually want to appear to be open and warm to others.

When overlaid with the DiSC scores for the most successful ETC sites rated most highly for the most vehicular trips reduced, ETCs scored significantly higher in the expressed Affection category (Ae), and essentially the same in the expressed Inclusion category (Ie).

There is data from the FIRO-B that infers that some ETCs may lack commitment to their program. They may be seen as doing an assigned task because it is part of their job, not necessarily because they believe in it. This inference is based on low mean expressed control (Ce) of 2.4, and low mean wanted inclusion (Iw) of 2.4. They will tend not to be the people who have a strong need to be in control of events or outcomes and will often like their privacy. This might be summed up as, "Whatever; I'll be in my office."

This idea is reinforced by the relatively high scores in both the "Now" and "Should" of the POC. There is a consistent level of satisfaction with the existing management style. The ETCs may come from organizations that utilize highly effective participative processes and practices, or the ETC may have figured out how to meet their personal needs within the existing culture.

Conclusions regarding FIRO-B Scores

While the sample size is too small to make statistical predictions about a population, there does seem to be an indication that low expressed Affection (Ae) scores align with low performance of transportation programs, as compared with the mean of 4.3 expressed Affection for the more highly performing programs with the mean of 2.5 for those not performing as highly. The following is a more in-depth explanation of the FIRO-B scores and how they differ from, and measure different qualities, than the DiSC scores:

Comparison of DiSC and FIRO-B Scores

	TRP Ranking	DiSC Scores Graph III	FIRO-B Ie	Ce	Ae	Iw	Cw	Aw
high performing		**bolded #s higher than avg**						
E02	A	C, i	5	0	5	6	2	4
E17	A	i, S	4	3	3	8	1	7
E14	A	i, S	7	3	8	8	1	3
E04*	A	S, D (i graph I)	4	3	7	7	5	7
E10	A	i, S	6	1	4	0	2	4
E08	A	C, i	3	5	3	0	3	0
E15	A	S, C(supervisor has high i)	4	2	3	0	6	5
E09*	A	C, D (i graph I)	4	2	1	0	2	1
		Mean	**4.6**	**2.4**	**4.3**	**3.6**	**2.8**	**3.9**
low performing								
E22	B	S, C	6	1	5	2	4	6
E21	B	S, D	4	3	1	0	3	5
E11	B	S, C	5	0	3	4	8	3
E24	C	S, C	4	3	1	0	1	3
E25	F	i, S	n/a	n/a	n/a	n/a	n/a	n/a
		Mean	**4.8**	**1.8**	**2.5**	**1.5**	**4.0**	**4.3**

From the comparison above, one can see that in addition to a tendency to express "Affection" among the highly-performing program DiSC respondents, the FIRO-B respondents of lower performing programs tended to express less tendency toward expressing affection toward others. This is illustrated by "Affection expressed and wanted" scores which appear in the bolded boxes.

POC (Profile of Organization Characteristics) Scores

The POC provides an efficient method to collect workplace perceptions of how the organization looks to an individual, and how that individual believes it should appear. As stated previously, the processes used by Dr. Likert included Control, Influence, Decision-making and Goal-setting. The POC incorporates six process characteristics that can be observed in an organization. These include Leadership, Motivation, Communication, Decisions, Goals, and Controls.

Scores from the POC were generally high (Table 5), reflecting positive perceptions by the ETCs of their work environment and the predominant management style. Tables 6 through 9 summarize POC responses. (Add "POC" in the headings for these tables).

This high score can also be a reflection of sample bias, as those willing to participate in the survey might express a positive attitude toward the program and be more willing to participate in the study. Also, participants in this study were simply responding to a questionnaire with little

organizational context; whereas, participants in previous POC studies were taking part in a larger organizational change intervention and, therefore, more discriminate about responses to describe organizational behaviors.

Scores for "How should the organization be" are typically high because most people want to contribute to the work activity and want their work units to be participative. Scores for "How do you see the organization now" are often lower than the scores for the participants in this study. Since participants in this study responded with small valued difference between "now" and "should be," they may be working in positions that offer considerable autonomy, or they may have learned how to work within their system to obtain the autonomy they desire (referencing the FIRO-B responses). A particular management style did not emerge from this study.

Organizational Categories	This study	POC Study A	POC Study B	POC Study C	POC Study D	POC Study E	POC Study F
Leadership	5.7	4.5	4.1	4.0	2.8	5.0	4.7
Motivation	5.7	4.2	3.9	4.4	2.9	4.7	4.4
Communications	5.2	4.2	3.8	4.0	2.6	4.8	4.2
Decisions	5.	3.7	3.2	3.5	2.2	4.0	4.1
Goals	5.1	4.2	4.0	4.8	3.2	4.9	4.7
Controls	4.8	3.9	3.6	4.2	3.1	4.5	4.0
Overall	5.3	4.2	3.8	4.2	2.8	4.8	4.4

POC Study	n=	Description of sample	Study Year
CUTR	14	Participants in This study	2004
A	24	Managers & supervisors at power plant	1990
B	34	Technical professionals at nuclear plant	1994
C	12	Office/clerical at power plant	1990
D	16	Union employees at transmission site	1996
E	15	Nuclear engineers at nuclear plant	1994
F	9	American Red Cross managers	1999

Scores for questions 8 and 10 of this study have the greatest gap between "now" and "should." They both come from the Communication category. This group of survey participants thinks that the style and effectiveness of communications in their organization can be improved.

CVAT (Culture and Values Analysis Tool) Scores

General findings from the CVAT (Tables 13 and 14) are that supervisors tend to value "Control" and "Relations" more than non-supervisors and high performing programs have ETCs who value "Control" and "Relations" more than lower performing program ETCs (Tables 15 and 16). Overall, study participants value relations (CVAT Part 1; Table 11) greater than their work unit rewards relations-building behaviors (CVAT Part 2; Table 12). Also, study participants indicate that their work unit rewards control (CVAT Part 2) greater than they personally value control (CVAT Part 1).

The sum of categories from Table 11 indicates that Work is the highest valued category of behavior for the group of participants; followed by Relations, Control and Thought. In Table 12, we can see that Work is considered to be the highest rewarded category by work units, but Relations is last in perceived organizational culture importance. The dimensions with the greatest difference between personal values and work unit culture (PV-UC) are Loyalty (H), Leader (L), and Political (K). Loyalty is more important to the individual than it is perceived to be for the organization, Leadership and political savvy are both considered to be more important to the organization than to the individual.

CVAT data is supported by DiSC and FIRO-B results to make a distinction between ETCs with higher performing programs from ETCs with lower performing programs. Personal values of ETCs with high performing programs favor Relations over Work. ETCs with lower performing programs favor Work over Relations (Table 15). These results are supported by the FIRO-B (Table 2) by a distinction between mean wanted inclusion (Iw) of 3.4 for ETCs with high performing programs, and 0.8 for ETCs with lower performing programs. The lower level of needed inclusion reflects the relationship values by the CVAT score.

It is interesting to note that political savvy (K) within organizations is considered to be of greater importance to ETCs with high performing programs than to ETCs with lower performing programs (Table 16). Flexibility (P) is also considered more important to ETCs with high performing programs than ETCs with lower performing programs. Political savvy and flexibility would help persons navigate cultures that value Work over Relations even when it is clear to the employees that relations are critical to the successful completion of the ETC job (as correlated by DiSC and FIRO-B Scores.)

The category of Control as part of the organizational culture (Table 12) was exceeded only by the category of Work. Statements such as, "Respect for authority is important here," "Status is important in this organization," "It's important to know the ropes to get ahead," and "It is important to display leadership," received high scoring for being selected above other options.

The topic of Control is reinforced by the FIRO-B scores. Expressed Control (Ce) is the need to have control over events or people and is tied for the lowest mean score (Table 1). As a group, the surveyed ETCs as well as their supervisors appear to resist having control, and as a group they have little value for control.

Yet, ETCs with high performing programs see that their organization rewards the dimensions that identify the category of Control (Table 16). The study implies that ETCs with a better understanding and acceptance of political and control factors, with the skill and desire to influence, and the rewards that go with their success will not settle for "Whatever," but will strive to reach goals that they believe are important.

When the CVAT scores of ETC personal values are compared to the CVAT scores of supervisor personal values, we find that ETCs as a group appear to strongly value Relationships over Work, while ETC supervisors value the dimensions of Work and Thought over Relations (Table 13). This difference is reinforced by the FIRO-B scores that compare ETCs and supervisors (Table 3). The greatest difference of mean scores is in wanted Inclusion (Iw); mean ETC score is 2.9 and mean supervisor score is 0.3. Relationships and being included is more important to the ETC individual contributors than it is to the supervisors.

Summary of Conclusions

1) The data sample is too small to draw statistical conclusions, but large enough to make inferences that can be further evaluated through continued research.

2) It appears that there is a correlation between the DiSC behavior of Influencing (high "i") and with successful ETCs. Additionally, FIRO-B scores indicate that ETCs associated with transportation programs identified as less effective have lower need of expressed Affection (openness) than ETCs associated with effective transportation programs. An assumption can be inferred that ETCs with characteristics of low influence and little openness may negatively impact an ETC program.

3) The CVAT scores indicate that survey participants place low relative value on Control. The options of "I like to be respected," "I am somewhat status minded," "I know how to beat the system when necessary," and "I like to lead," were not selected by many respondents as part of their personal values. This was the lowest category selected by this entire sample of respondents including ETCs and supervisors. This is echoed by the FIRO-B mean score for expressed Control which, along with wanted Inclusion, was the lowest of all other interpersonal dimensions.

4) The study, as designed (2 hours for completion), was too long to gain the desired participation and needs to be shortened. Streamlining the use of the POC, DiSC, and FIRO-B, in that order, would be recommended and would result in reducing the time commitment by half. For instance, in a larger study the "should be" questions from the POC could be eliminated to help reduce the time required to complete the instrument.

5) In the CVAT, political savvy (K) within organizations is considered to be of greater importance to ETCs with high performing programs than to ETCs with lower performing programs (Table 16). Flexibility (P) is also considered more important to ETCs with high performing programs than ETCs with lower performing programs. Political savvy and flexibility would help persons navigate cultures that value Work over Relations even when it is clear to the employees that relations are critical to the successful completion of the ETC job (as correlated by DiSC and FIRO-B Scores.)

Recommendations

1) Evaluate a larger sample of ETCs, using the premise that "expressed Affection" (FIRO-B) and "understanding for the need for Inducement and influencing" (DiSC) are essential to our targeted participants, successful ETCs. Market participation by emphasizing the potential for recognition by their peers and positive acknowledgement from their supervisors.

2) Reduce the number of instruments to two or three. Drop the CVAT, cut down the POC, and don't make it a requirement for the supervisors to participate. The time it took to move through the process is believed to be problematic. Feedback to the participant recruiter indicated that the time commitment to participate (a minimum of 2 hours before reading the feedback results and optionally attending a telephone debriefing) was too much. Only two-thirds of the study sample participating completed all the instruments. Supervisors, in particular, were often too busy to participate. Since time is a factor, and since Supervisors are less likely to participate, the most insightful instruments are the POC, DiSC and FIRO-B, in that order. All three can be administered in less than one hour.

- The POC is the instrument that is most flexible and can be adjusted to provide the required demographics. It can be shortened by eliminating the questions about how the organization "should be," and retain the focus on how the organization is perceived "now." The POC would provide more valuable insight into variations of management style with a larger sample. In a larger sample in more diverse communities, the POC process can be further adapted to include demographic and geographic information needed to investigate how external factors such as the availability of mass transit can influence reduced vehicular trips.

- The DiSC gives powerful information about how the ETCs specifically interpret the behaviors needed on the job and whether they are attempting to adapt their natural behaviors, if need be, to achieve them. There was a high correlation with the "i" behavior in the highly performing groups.

- The FIRO-B is most powerful when used to compare the supervisor's psychological needs to those of the ETC in dimensions of Inclusion, Control and Affection. We had hoped to achieve some insight into how the relationship between the supervisor and the ETC impacted program success; however, the resulting pair sample was too small to find any statistical significance. In this study, we did find some strongly suggestive correlations for expressed Affection (openness) when comparing only ETC scores between work groups with highly effective programs and those with less effective programs. This illustrates how the FIRO-B can be useful to investigate fundamental differences between groups of participants.

- The CVAT is by far the longest and most complex instrument. While it would provide valuable information to future studies about the values of successful organizational cultures (whether Work, Relations, Control or Thought is valued most highly), we have concluded that it can't reasonably be administered over the Internet due to its length. Eliminating it would cut the time commitment significantly.

3) Overlay externally gathered information concerning community capacity for mass transit against future participants in a study. Even in the same geographic area, work with this limited sample could not account for variations that might have occurred because a surveyed plant was next door to a mass transit stop, for example. (See item #2 above for discussion of questions that might be added to POC to help differentiate such factors.)

4) Perhaps a more limited attempt could be made to evaluate supervisor/ETC pairs. Ideally this may need to be done in person. The overriding question is, "What relationship dynamics between the ETC and their supervisor leads to an effective program or interferes with obtaining an effective program?"

5) Participation in the study, whether through pairs or ETCs, could possibly be enhanced by working through local ride-share group networks. If there are any meetings where ETCs are physically grouped together, perhaps administering the instruments in person to a "captive" audience and then sending them the results, with offer of a telephone conference call recap, could be more effective from a time standpoint.

6) CUTR staff as well as our own staff noted that there has been password confusion between the automatically generated password required by DiSC and the password to get into the website assigned by CUTR. In consulting with DiSC, we learned that they have developed and twice beta-tested a new procedure, which could be used to circumvent these administrative problems. With this methodology, the University would be set up with a sub account, however, the data could still be controlled by the interpreting researcher. There is a $1,500 front-end cost to accomplish this and therefore the procedure would not have been cost-effective for a small sample. With several hundred people participating, it could be worthwhile to investigate.

Researcher Credentials

Harold T. Welch, Ph.D., SPHR
President, High Performance Coaching

Harold Welch has broad experience initiating organizational effectiveness processes for national and multi-national applications and for independent, private enterprises. Working as both an internal and an external consultant, Harold has over twenty years of experience providing coaching and consulting services for companies in oil and gas, health care, manufacturing, utility, transportation, government, construction, entertainment, and non-profit industries.

Dr. Welch has a degree in Management with a master's degree in Counseling and a doctorate in Adult Education. He is a Certified Career Management Practitioner (CMP) and Senior Professional in Human Resources (SPHR), and a professional member of the American Counseling Association (ACA).

Experience with FIRO-B
• Used with executive coaching, team building, and career development, Dr. Welch has applied his knowledge of the FIRO-B to overcome organizational performance obstacles and barriers to more healthy relations between people. The FIRO-B has proven to be a useful tool to demonstrate how conflicting interpersonal needs can interfere with authentic communications.

Experience with POC
• Dr. Welch has used the POC instrument for organizations with 3,000 survey participants. Data has been gathered to provide a reference for the senior management team to monitor the impact of existing management style and to initiate management changes for desired effect. One senior manager remarked, "This POC feedback gives me a map of the organization that helps see and understand how the management tools I use really changes the way people work."

Experience with CVAT
• The CVAT has given valuable feedback on an individual, team, and organizational level. When used with a small organization with 56 employees, data from the CVAT highlighted fundamental differences that had developed between departments and work groups. Employees had conflicting perceptions of what the senior staff considered to be the most important issues facing the organization. By using the CVAT the senior management team was able to draft a culture change process that incorporated the diverse values that was fragmenting the organization. The result was a cohesive and consistent message from senior management, acceptance of a unified purpose with common objectives, and movement toward a desired organizational culture.

Nancy L. Brown, MBA, CAE
President, Designs in Development, Inc.

Nancy L. Brown has 18 years of consulting experience ranging from team building to conflict resolution and from strategic planning to staff and volunteer training. She has worked with over 200 units of government, schools, professional and non-profit associations. Certifications include Certified Association Executive, preparing her to develop associations of industry professionals in fields ranging from accounting to tennis. Ms. Brown has special expertise in developing voluntary boards, whether advisory or governing, of the sort often approving community transportation initiatives. Clients have included County Planning Departments and Community Commuter Service advocacy organizations.

Ms. Brown speaks nationally, is the author of a text entitled *Increasing Board Effectiveness* which is used in the University of South Florida 's non-profit certificate program in conjunction with the DiSC instrument. She has also served as an adjunct professor for Indiana University and St. Petersburg College.

Experience with the DiSC
Ms. Brown has administered the DiSC instrument to several thousand persons over the last 18 years. She has used it for team building, and in counseling environments to compare an employee's perception of his/her job with that of an employer's. She has also used it as a basis for volunteer training and for sales training within organizations.

Ms. Brown is also certified to administer the Myers Briggs Personality Profile and also uses it in coaching and training environments in combination with the DiSC instrument.

Validity and Reliability of Instruments

***DiSC** (excerpted from Inscape Publishing, 2800 Series, Research Report)*

DiSC

Validity

There are many ways to measure validity. One approach is to determine the extent to which the association among scores represents the theory and model on which the instrument is based.

In the DiSC model, Scales D (Dominance) and S (Steadiness) are, to some degree, opposites. So, we would expect to find that those two scales will be somewhat inversely related (negatively correlated).

In the same way, Scales i (Influence) and C (Conscientiousness) are, to some degree, opposites. We would also expect them to be inversely related.

If each scale measures something different from other scales, the correlation among scales should be smaller than the reliability of the individual scale. This condition is met when the value of a reliability coefficient is significantly larger than any of the correlations in the same row and column as that number.

The reliability table below shows reliability coefficients along with inter-scale correlations, to reveal the relationships found for the sample. Note that the reliability coefficients have been adjusted using the Spearman-Brown Formula to compensate for any underestimation due to scale length.

DiSC

Table 3. Adjusted Validity Coefficients and Inter-Scale Correlations Among Total Scores (N=812)

	D-Most	i-Most	S-Most	C-Most	D-Least	i-Least	S-Least	C-Least
D-Most	**.92**							
i-Most	-.07	**.89**						
S-Most	-.73	-.21	**.88**					
C-Most	-.18	-.63	.11	**.84**				
D-Least	-.79	-.04	.73	.26	**.92**			
i-Least	.10	-.67	.13	.56	-.07	**.85**		
S-Least	.73	.18	-.74	-.20	-.78	-.15	**.88**	
C-Least	.33	.60	-.33	-.64	-.46	-.56	.33	**.86**

(Note: Adjusted reliability coefficients are shown in bold along the diagonal of the table. Inter-scale correlations are shown below the diagonal.)

Results Summary

The *2800 Series* of the *Personal Profile System*® used in this study is considerably more reliable than the 24-box *Personal Profile System* 6.1 instrument had been marketed previously. For comparison purposes with 24-box instruments, reliabilities of the 24-box DiSC® instrument are given below.

Comparing results in Table 4 with those shown in Table 3 above, you will note that reliabilities were significantly improved for i and C scales. Reliability of C-Most went from .36 to .72 and C-Least from .52 to .74. Similarly, i scale reliabilities increased to .79 for i-Most and .74 for i-Least.

Reliability of 24-Box DISC Instruments

Table 4. Reliabilities of 24-Box DISC Instruments

D-Most	.79	D-Least	.76
i-Most	.50	i-Least	.47
S-Most	.61	S-Least	.59
C-Most	.36	C-Least	.52

Reliability of *Personal Profile System*® 2800 Series (N=812)

As shown on Table 2, Graph III reliabilities range from .85 to .92. Commonly accepted standards require learning instruments to demonstrate reliabilities above .70. The results obtained on the *Personal Profile System 2800 Series* are considered to be very good.

FIRO-B (Fundamental Interpersonal Relations orientation - Behaviors)

Validity

- Content validity: determined by showing how well the content of the test samples the class of situations or the subject matter about which conclusions are to be drawn. Content validity is a property of all legitimate scales.

- Concurrent validity: showing how well test scores correspond to measures of concurrent criterion performances or status. Refers to studies that attempt to demonstrate differences, on the basis of the measuring instrument, between already existent groups or between people with already know attitudes. To demonstrate the FIRO-B ability to measure interpersonal relations, there should be evidence that parallel assumptions related to all situations in which the interpersonal element is significant. Studies are presented that include an investigation of FIRO-B and political attitudes, occupational choice, and conformity behavior. These studies represent several different areas where there was an opportunity to measure concurrent validity. Schutz, W. FIRO: A Three-Dimensional Theory of Interpersonal Behavior. Will Schutz Associates, Inc. 1958. Chapter 4, pp. 66-80.

- Predictive validity: showing how well predictions made from the test are confirmed by evidence gathered at some subsequent time.

- Construct validity: evaluated by investigating what psychological qualities a test measures, for example, by demonstrating that certain explanatory concepts account to some degree for performance on the test. Essentially, it is a validation of the theory underlying the test. "Since FIRO-B is designed to test a theory, virtually every study in this book is relevant to predictive [and construct] validity." (Schutz, p. 77.)

Reliability

- Coefficient of Internal Consistency: the measure based on internal analysis of data obtained on a single trial. Essentially, this measure indicates the degree to which the items are homogeneous, or measuring the same thing. The most usual test for internal consistency is the split-half method, the correlation between scores on two halves of the test.

The usual criterion for reproducibility is that 90 percent of all responses are predictable from knowledge of scale scores. The FIRO-B scales were developed on about one thousand subjects and the reproducibility computed for the remainder of the sample. The reproducibility for all scales is very high and consistent over all samples. These reproducibility scores are the coefficients of internal consistency.

Scale	Reproducibility	No. of Subjects
Ie	.94	1615
Iw	.94	1582
Ce	.93	1554
Cw	.94	1574
Ae	.94	1467
Aw	.94	1467
Mean	.94	1543

Guttman, L. "The basis for scalogram analysis." In S. Stouffer et al., Measurement and Prediction, Princeton, N.J.: Princeton Univ. Press, 1950.

Profile of Organizational Characteristics (POC)

Validity

Chapters 3 and 4 of The Human Organization: Its Management and Value contain information about validity, but not expressed as coefficients. For example, information about the Weldon Plant study shows the improvement in the profile with related performance improvements. Seashore and Bowers published additional data on the Weldon plant in a 1970 paper, "Durability of Organizational Change" (American Psychologist, 25-3, March 1979). Even more supporting data on linking management style to performance improvement is provided in New Ways of Managing Conflict, Likert and Likert, (New York: McGraw-Hill Book Co., 1976).

Concurrent validity requires a survey have empirical association with some criterion or "gold standard" (DeVellis, 1991). This requires identification of an established, generally accepted test (Litwin, 1995). A high correlation coefficient between the survey and the standard test suggests

good concurrent validity. To validate the Organizational Culture Assessment (OCA), the results were compared to the Likert POC. The correlation between the OCA data and the Likert POC data is .95. An analysis of variance produced a significant F-value of .000, indicating that the OCA and the Likert POC are related. Analysis of the residuals indicated the errors are normally distributed and that the order of the model is correct. The high correlation and the ANOVA indicate that the OCA and POC have high concurrent validity.

Reliability

A reliable survey is consistent in what it measures. The type of reliability used is internal consistency reliability. Internal consistency uses a single survey to determine the degree to which the questions in the survey are measuring the same thing. The methods used for measuring internal consistency are split-half reliability. The Human Organization: Its Management and Value, Likert, Rensis, (New York: McGraw-Hill Book Co., 1967), Chapter 7, gives reliability data or inter-correlations from which reliability can be computed or estimated. The 18-item Form S usually yields split-half reliability in the .90 to .96 range when applying the Spearman-Brown formula for estimating the reliability from the r between two halves of the form.

Culture and Values Analysis Tool (CVAT)

Rational and Accountability

The CVAT uses dimensions and sub-dimensions to describe individual priorities that determine a personal values map. Convergence of Iterated Correlations (CONCOR) statistical applications are then utilized to describe a culture model of a group of members based on the summary of individual value choices. The CVAT protocol is able to discern how organizations and people handle trade-offs as they are required to deal with organizational forces that require choices of action or response.

Universal cultural themes involve selections or the prioritization of choices between people orientation and production orientation at an individual level (Blake and Mouton 1964; Larson et al. 1976; Nystrom, 1978).

Three principal forces that exist in organizations create tension within the individual and in the organization. David McClelland (1961) identifies a need for achievement, need for affiliation, and need for power as the basic forces underlying human motivation. Alderfer (1969) also identifies three basic needs (existence, relatedness, and growth) which can be loosely related to power or security, relations, and task achievement.

The CVAT captures these forces in dimensions referred to as Work, Relations, and Control. An additional CVAT dimension is added to capture information about cognition or thought, a fundamental theme within organizational settings that frequently clashes with the other values categories (Nelson 1997). Each dimension is then identified by four sub-dimensions providing 16 themes that are usually contradictory but occasionally complementary. Responses to questions about these sub-dimensions provide a means to apply statistical analysis of clusters of similar responses to describe values and subsequent culture.

CONCOR is an algorithm developed by sociologists at Harvard and is commonly used in analyzing social networks and is applied in the CVAT to locate clusters of individuals with similar opinions. CONCOR works by comparing each respondent's scores on all 16 CVAT dimensions with every other person's scores. When CVAT responses are clustered into groups of individuals with statistically similar responses of value profiles the researcher will then determine from demographic information whether there is evidence of cultural disparity between the groupings.

Alderfer, Clayton L. 1969. An empirical test of new theory of human needs. *Organizational Behavior and Human Performance*, May: 142-175.

Blake, Robert R., and Jane W. Mouton, 1964. *The managerial grid*. Houston: Gulf.

Larson, Lars R., Jerry G. Hunt, and Richard H. Osborne. 1976. The great hi-hi leader behavior myth: A lesson from Occam's razor. *Academy of Management Journal*, December: 628-641.

McClelland, David C. 1961. *The achieving society*. Princeton, NJ: Von Nostrand Reinhold.

Nelson, Reed E., and K. Michael Mathews. 1991. The social networks of high performing organization. *Journal of Business Communications*, 28: 367-386.

Nystrom, Paul C. 1978. Managers and the great hi-hi leader myth. *Academy of Management Journal*, June: 325-331.

Attachment A:
Summary of Demographic Information Collected from POC

1. What is your age group?
    1. under 25 (0)
    2. 26-35 (4)
    3. 36-45 (4)
    4. 46-55 (3)
    5. over 55 (3)

2. Which response best describes your education level?
    1. No college. (0)
    2. Some college with no degree, or 2-year degree. (4)
    3. Bachelor-level degree (four year). (5)
    4. Master-level degree or above. (5)

3. Which response best describes the functional area of your education?
    1. Business/Economics (8)
    2. Education/History/Social Science (1)
    3. Engineering (2)
    4. General education (2)
    6. Political Science/Law (1)

4. How many total years work experience do you have?
    37, 35, 31, 30, 30, 30, 23, 22, 20, 17, 16, 15, 8, 4,

5. How many years have you worked for this organization?
    27, 20, 17, 12, 11, 10, 9, 7, 7, 5, 5, 4, 4, 2

6. How many years have you been designated ETC or supervised the ETC position?
    10, 10, 7, 6, 3, 3, 3, 3, 2.5, 2.5, 2.4, 2.4, 2, 1.5

7. Which response best describes your functional work area?
    Accounting, Finance, Bookkeeping, Payroll (1)
    Administration, Facilities, Health & Safety (3)
    Consulting (1)
    General staff role, Executive Assistant (3)
    Manufacturing (1)
    Procurement, Purchasing, Warehouse (3)
    Production/Operations, customer service (2)

8. The Employee Transportation Program at this location satisfies the intent of the program.
    Strongly Agree (6)
    Agree (7)
    Disagree (1)
    Strongly Disagree (0)

9. Local managers support this program in a way that contributes to its success.
   Strongly Agree (6)
   Agree (7)
   Disagree (1)
   Strongly Disagree (0)

10. It is clear that top managers believe this program is important.
   Strongly Agree (2)
   Agree (11)
   Disagree (1)
   Strongly Disagree (0)

11. There is adequate funding for the success of this program.
   Strongly Agree (4)
   Agree (8)
   Disagree (1)
   Strongly Disagree (1)

12. Employees consider the purpose of this program to be important.
   Strongly Agree (3)
   Agree (9)
   Disagree (1)
   Strongly Disagree (1)

13. Local managers and supervisors consider this program to be important.
   Strongly Agree (2)
   Agree (12)
   Disagree (0)
   Strongly Disagree (0)

14. My other work priorities are such that I have an appropriate amount of time for this program.
   Strongly Agree (3)
   Agree (10)
   Disagree (1)
   Strongly Disagree (0)

Attachment B: Profile of Organizational Characteristics (POC) Summary of Questions

Survey participant respond to the following questions with a Likert scale ranging from 0 to 8. Part "a" of each question asks how the respondent perceives the work unit now. Part "b" of each question asks how the respondent thinks it should be.

Topic: Leadership

1. a) How much confidence and trust is generally shown in subordinates?
   b) How much confidence and trust should be shown in subordinates?

2. a) How free do subordinates feel to talk to superiors about their work?
   b) How free should subordinates feel to talk to superiors about their work?

3. a) How often are the ideas of subordinates sought and used constructively?
   b) How often should the ideas of subordinates be sought and used constructively?

Topic: Motivation

4. a) In your organization, which of the following is the predominant form of motivation: fear, threats, punishment, rewards, or involvement?
   b) In your organization, which of the following should be the predominant form of motivation: fear, threats, punishment, rewards, or involvement?

5. a) Where is there a true sense of responsibility for the organization's level of performance?
   b) Where should there be a true sense of responsibility for the organization's level of performance?

6. a) How much cooperative teamwork exists in this organization?
   b) How much cooperative teamwork should exist in the organization?

Topic: Communication

7. a) What is the general direction of the flow of information needed for decisions about work processes and priorities?
   b) What should be the general direction of the flow of information needed for decisions about work processes and priorities?

8. a) How is the communication of information from upper levels of the organization generally received by lower levels of the organization?
   b) How should the communication of information from upper levels of the organization be generally received by lower levels of the organization?

9. a) How accurate is upward communication?
   b) How accurate should upward communication be?

10. a) How well do superiors understand the problems faced by subordinates?
    b) How well should superiors understand the problems faced by subordinates?

Topic: Decisions

11. a) At what levels are decisions made in your organization?
    b) At what levels should decisions be made in your organization?

12. a) How often are subordinates involved in decisions that determine the processes and procedures of their work?
    b) How often should subordinates be involved in decisions that determine the processes and procedures of their work?

Topic: Goals

13. a) How are performance goals usually set?
    b) How should performance goals usually be set?

14. a) How much do subordinates strive to achieve the organization's goals?
    b) How much should subordinates strive to achieve the organization's goals?

Topic: Controls

15. a) Where is responsibility for review and control functions found in the organization?
    b) Where should responsibility for review and control functions be found in the organization?

16. a) How are cost, productivity, and other reports containing control data used?
    b) How should cost, productivity, and other reports containing control data be used?

Attachment C: Overview of CVAT Terms

WORK	Task Orientation
A. Effort	Sweat of the brow, often greatest when time is at stake.
B. Time	Speed orientation; need to get things done now; the "executive trot".
C. Finish Job	Priority given to finish tasks; drive for closure; end justifies the means.
D. Quality	Emphasis on time or finish job robs from ability to achieve total quality.
RELATIONS	**Relates to Voluntary Connections With Others**
E. Affect	Getting warmth, intimacy. Brings one close to others to get nurturance.
F. Empathy	Desire to understand and care for. Brings closeness to give nurturance.
G. Sociability	Focuses on closeness to groups rather than individuals.
H. Loyalty	Emphasizes durable, long-lasting closeness to people or organizations.
CONTROL	**How You Attempt to Influence Your Environment**
I. Dominance	Imposing one's will openly and without contrivance.
J. Status	Create symbolic inequalities between individuals.
K. Political	Imposing one's will principally through manipulation or leverage.
L. Leader	Secures control through charisma or "referent" power.
THOUGHT	**Cognition, Thinking in Rational or Creative Terms**
M. Abstract	Deals with generalities and big picture concepts; vision.
N. Plan/Organize	Tends to focus on details and order; objectives.
O. Exposition	Deals with the transmission of produced ideas.
P. Flexibility	Individual creativity or organizational adaptability.

Attachment D: Table Addenda (Repeated)

Attachment D: Table Addenda detail, continued

Attachment D: Table Addenda detail, continued

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Table 1: Overview of FIRO-B Responses

Code	Ie	Ce	Ae	Iw	Cw	Aw	Te	Tw	Tt	It	Ct	At	Tt
E02	5	0	5	6	2	4	10	12	22	11	2	9	22
E04	4	3	7	7	5	7	14	19	33	11	8	14	33
E08	3	5	3	0	3	0	11	3	14	3	8	3	14
E09	4	2	1	0	2	1	7	3	10	4	4	2	10
E10	6	1	4	0	2	4	11	6	17	6	3	8	17
E11	5	0	3	4	8	3	8	15	23	9	8	6	23
E14	7	3	8	8	1	3	18	12	30	15	4	11	30
E15	4	2	3	0	6	5	9	11	20	4	8	8	20
E17	4	3	3	8	1	7	10	16	26	12	4	10	26
E21	4	3	1	0	3	5	8	8	16	4	6	6	16
E22	6	1	5	2	4	6	12	12	24	8	5	11	24
E24	4	3	1	0	1	3	8	4	12	4	4	4	12
S12	3	1	3	1	4	5	7	10	17	4	5	8	17
S20	6	1	3	0	2	5	10	7	17	6	3	8	17
S26	3	8	2	0	1	0	13	1	14	3	9	2	14
Mean	4.5	2.4	3.5	2.4	3.0	3.9	10.4	9.3	19.7	6.9	5.4	7.3	19.7
s.d.	1.2	2.1	2.1	3.2	2.1	2.2	3.0	5.3	6.6	3.8	2.3	3.5	6.6
d (e-w)	2.1	-0.6	-0.4										

Table 1 Footnotes:

Ie = expressed Inclusion
Ce = expressed Control
Ae = expressed Affection (openness)
Iw = wanted Inclusion
Cw = wanted Control
Aw = wanted Affection (openness)
It = total Inclusion
Ct = total Control
At = total Affection (openness)
Te = Total expressed need
Tw = Total wanted need
Tt = Overall Total score
Refer to narrative on FIRO-B instrument for further description of elements.

Mean: arithmetic mean is the sum of a set of measurements divided by the number of measurements in the set. For this study, arithmetic mean provides a better measure of central location to estimate a population parameter than other expressions of average, such as mode, median, or geometric mean.

s.d. = standard deviation. The square root of the mean of the sum of squared variances from mean. Used as a measure of dispersion that refers to the variability or spread in the data.

d (e-w) = delta, or difference, between mean "e" (expressed) scores and mean "w" (wanted) scores.

Table 2: Comparison of FIRO-B Responses by Program Performance

Top	Ie	Ce	Ae	Iw	Cw	Aw	Te	Tw	Tt	It	Ct	At	Tt
E08	3	5	3	0	3	0	11	3	14	3	8	3	14
E09	4	2	1	0	2	1	7	3	10	4	4	2	10
E14	7	3	8	8	1	3	18	12	30	15	4	11	30
E17	4	3	3	8	1	7	10	16	26	12	4	10	26
S12	3	1	3	1	4	5	7	10	17	4	5	8	17
Mean	4.2	2.8	3.6	3.4	2.2	3.2	10.6	8.8	19.4	7.6	5.0	6.8	19.4
d (e-w)	0.8	0.6	0.4										
Middle													
E02	5	0	5	6	2	4	10	12	22	11	2	9	22
E04	4	3	7	7	5	7	14	19	33	11	8	14	33
E10	6	1	4	0	2	4	11	6	17	6	3	8	17
E15	4	2	3	0	6	5	9	11	20	4	8	8	20
E22	6	1	5	2	4	6	12	12	24	8	5	11	24
Mean	5.0	1.4	4.8	3.0	3.8	5.2	11.2	12.0	23.2	8.0	5.2	10.0	23.2
d (e-w)	2.0	-2.4	-0.4										
Bottom													
E11	5	0	3	4	8	3	8	15	23	9	8	6	23
E21	4	3	1	0	3	5	8	8	16	4	6	6	16
E24	4	3	1	0	1	3	8	4	12	4	4	4	12
S20	6	1	3	0	2	5	10	7	17	6	3	8	17
S26	3	8	2	0	1	0	13	1	14	3	9	2	14
Mean	4.4	3.0	2.0	0.8	3.0	3.2	9.4	7.0	16.4	5.2	6.0	5.2	16.4
d (e-w)	3.6	0.0	-1.2										
Top-Bot	-0.2	-0.2	1.6	2.6	-0.8	0.0	1.2	1.8	3.0	2.4	-1.0	1.6	3.0

Table 2 Footnotes:

Ie = expressed Inclusion
Ce = expressed Control
Ae = expressed Affection (openness)
Iw = wanted Inclusion
Cw = wanted Control
Aw = wanted Affection (openness)
It = total Inclusion
Ct = total Control
At = total Affection (openness)
Te = Total expressed need
Tw = Total wanted need
Tt = Overall Total score
Refer to narrative on FIRO-B instrument for further description of elements.

Mean: arithmetic mean: the sum of a set of measurements divided by the number of measurements in the set. For this study, arithmetic mean provides a better measure of central location to estimate a population parameter than other expressions of average, such as mode, median, or geometric mean.

s.d. = standard deviation. The square root of the mean of the sum of squared variances from mean. Used as a measure of dispersion that refers to the variability or spread in the data.

d (e-w) = delta, or difference, between mean "e" (expressed) scores and mean "w" (wanted) scores.

Top-Bot = Mean scores of participants representing five organizations with highest ranking of transportation program effectiveness minus the mean score of participants representing five organizations with lowest ranking of transportation program effectiveness.

Table 3: Comparison of FIRO-B Responses by ETC-Supervisor Position

ETC	Ie	Ce	Ae	Iw	Cw	Aw	Te	Tw	Tt	It	Ct	At	Tt
E02	5	0	5	6	2	4	10	12	22	11	2	9	22
E04	4	3	7	7	5	7	14	19	33	11	8	14	33
E08	3	5	3	0	3	0	11	3	14	3	8	3	14
E09	4	2	1	0	2	1	7	3	10	4	4	2	10
E10	6	1	4	0	2	4	11	6	17	6	3	8	17
E11	5	0	3	4	8	3	8	15	23	9	8	6	23
E14	7	3	8	8	1	3	18	12	30	15	4	11	30
E15	4	2	3	0	6	5	9	11	20	4	8	8	20
E17	4	3	3	8	1	7	10	16	26	12	4	10	26
E21	4	3	1	0	3	5	8	8	16	4	6	6	16
E22	6	1	5	2	4	6	12	12	24	8	5	11	24
E24	4	3	1	0	1	3	8	4	12	4	4	4	12
Mean	4.7	2.2	3.7	2.9	3.2	4.0	10.5	10.1	20.6	7.6	5.3	7.7	20.6
d (e-w)	1.8	-1.0	-0.3										
Supv													
S12	3	1	3	1	4	5	7	10	17	4	5	8	17
S20	6	1	3	0	2	5	10	7	17	6	3	8	17
S26	3	8	2	0	1	0	13	1	14	3	9	2	14
Mean	4.0	3.3	2.7	0.3	2.3	3.3	10.0	6.0	16.0	4.3	5.7	6.0	16.0
d (e-w)	3.7	1.0	-0.7										
ETC-Sup	0.7	-1.2	1.0	2.6	0.8	0.7	0.5	4.1	4.6	3.3	-0.3	1.7	4.6

Table 3 Footnotes:

Ie = expressed Inclusion
Ce = expressed Control
Ae = expressed Affection (openness)
Iw = wanted Inclusion
Cw = wanted Control
Aw = wanted Affection (openness)
It = total Inclusion
Ct = total Control
At = total Affection (openness)
Te = Total expressed need
Tw = Total wanted need
Tt = Overall Total score

Refer to narrative on FIRO-B instrument for further description of elements.

Mean: arithmetic mean is the sum of a set of measurements divided by the number of measurements in the set. For this study, arithmetic mean provides a better measure of central location to estimate a population parameter than other expressions of average, such as mode, median, or geometric mean.

s.d. = standard deviation. The square root of the mean of the sum of squared variances from mean. Used as a measure of dispersion that refers to the variability or spread in the data.

d (e-w) = delta, or difference, between mean "e" (expressed) scores and mean "w" (wanted) scores.

ETC-Sup = Mean scores of participating ETCs minus the mean scores of Supervisors of ETCs.

Table 4: Comparison Trip Reduction Program (TRP) With Other Studies Using FIRO-B

	Ie	Ce	Ae	Iw	Cw	Aw	Te	Tw	Tt	It	Ct	At	Tt
TRP Study (n=14)	4.5	2.4	3.5	2.4	3.0	3.9	10.4	9.3	19.7	6.9	5.4	7.3	19.7
Ed. Administrators (n=104)	5.9	4.7	4.4	4.6	5.5	5.1	15.0	15.2	30.2	10.5	10.2	9.5	30.2
Teachers (n=677)	5.2	3.1	3.7	3.4	5.1	4.3	12.0	12.8	24.8	8.6	8.2	8.0	24.8
Traveling Salesmen (n=39)	6.4	5.6	6.1	7.0	4.4	6.9	18.1	18.3	36.4	13.4	10.0	13.0	36.4
Creative Architects (n=40)	2.7	5.4	2.6	1.7	3.1	4.4	10.7	9.2	19.9	4.4	8.5	7.0	19.9

Table 4 Footnotes:

Source: Will Schutz, Ph.D., "FIRO Awareness Scales Manual," Table 4: FIRO-B Scores for Occupational Groups, Consulting Psychologists Press, Inc., Palo Alto, CA, 1978, pg. 10

Descriptive groups were selected to provide comparison with similar, small and moderate size samples of workplace professionals.

Ie = expressed Inclusion
Ce = expressed Control
Ae = expressed Affection (openness)
Iw = wanted Inclusion
Cw = wanted Control
Aw = wanted Affection (openness)
It = total Inclusion
Ct = total Control
At = total Affection (openness)
Te = Total expressed need
Tw = Total wanted need
Tt = Overall Total score
Refer to narrative on FIRO-B instrument for further description of elements.

Table 5: Overview of POC Responses
(n=14)

Now All	1. a)	2. a)	3. a)	4. a)	5.a)	6.a)	7.a)	8.a)	9.a)	10.a)	11.a)	12.a)	13.a)	14.a)	15.a)	16.a)
E02	5	5	6	5	2	6	5	5	6	5	4	6	5	6	3	4
E04	5	7	6	7	7	7	7	6	5	3	5	5	5	5	3	7
E10	5	5	5	7	7	5	5	5	5	5	4	4	6	6	5	5
E11	5	6	6	6	5	4	4	5	5	4	5	5	3	5	4	4
E14	5	4	4	6	5	6	7	4	6	6	5	3	3	7	7	5
E17	7	4	3	7	6	6	3	3	6	1	2	2	7	7	7	5
E21	5	6	7	7	6	5	6	5	6	5	5	7	1	5	5	4
E22	8	8	8	7	5	5	3	5	5	5	7	5	7	5	5	3
E24	5	7	5	7	5	7	7	5	7	3	7	3	5	5	5	5
E25	4	5	6	3	7	5	7	4	7	6	5	5	5	5	3	5
S12	7	6	7	5	5	6	7	5	5	5	5	5	5	7	3	5
S20	7	7	5	7	7	6	7	6	7	7	6	7	7	7	7	6
S23	4	5	4	4	3	3	3	3	5	7	5	3	1	2	3	3
S26	7	7	7		7	7	5	3	7	7	7	7	5	5	7	5
mean	5.6	5.9	5.6	6.0	5.5	5.6	5.4	4.6	5.9	4.9	5.1	4.8	4.6	5.5	4.8	4.7

Should All	1. b)	2. b)	3. b)	4. b)	5.b)	6.b)	7.b)	8.b)	9.b)	10.b)	11.b)	12.b)	13.b)	14.b)	15.b)	16.b)
E02	7	7	7	7	5	7	7	7	7	7	7	8	7	7	7	7
E04	5	7	7	7	7	7	7	8	7	7	6	7	5	7	5	7
E10	5	5	5	7	7	5	7	5	7	5	5	5	6	6	6	5
E11	5	7	5	7	7	6	7	7	7	7	7	7	5	7	7	6
E14	6	5	5	6	5	6	7	6	6	6	7	5	5	7	7	5
E17	7	5	6	7	7	7	7	7	7	8	7	7	7	7	7	6
E21	5	6	7	7	7	6	7	5	7	7	5	7	5	7	6	5
E22	8	8	8	7	7	7	7	7	7	7	7	5	7	5	5	7
E24	3	5	5	7	5	7	3	5	7	3	7	5	5	5	7	5
E25	5	5	7	7	7	6	7	5	7	7	5	5	7	7	3	5
S12	7	7	7	5	7	7	7	5	7	6	6	5	5	7	3	5
S20	7	7	5	7	7	7	7	7	7	7	6	7	7	7	8	6
S23	5	7	5	5	5	5	6	7	7	7	5	5	5	5	7	7
S26	7	7	7		7	8	8	7	8	8	8	8	7	5	8	5
mean	5.9	6.3	6.1	6.6	6.4	6.5	6.7	6.3	7.0	6.6	6.3	6.1	5.9	6.4	6.1	5.8
Now-Should	-0.2	-0.4	-0.5	-0.6	-0.9	-0.9	-1.3	-1.7	-1.1	-1.6	-1.1	-1.4	-1.3	-0.9	-1.4	-1.1

Table 5 Footnotes:

Profile of Organizational Characteristics (see questions in Attachment B)

a) questions = How do you see your organization now?
b) questions = How do you think your organization should be?

Summary of question topics:

Leadership

1. confidence and trust
2. subordinates talk to superiors
3. ideas of subordinates sought

Motivation

4. predominant form of motivation
5. responsibility for performance
6. cooperative teamwork

Communication

7. direction of flow of information
8. communication received by lower levels
9. accurate upward communication
10. superiors understand problems of subordinates

Decisions

11. levels decisions made
12. subordinates involved in decisions

Goals

13. performance goals set
14. subordinates strive to achieve goals

Controls

15. review and control functions
16. cost, productivity, and other reports used

Mean: arithmetic mean is the sum of a set of measurements divided by the number of measurements in the set. For this study, arithmetic mean provides a better measure of central location to estimate a population parameter than other expressions of average, such as mode, median, or geometric mean.

Now-Should = mean of each "now" questions minus mean of each "should" question.

Table 6: POC -- Difference between high and low performing program in how the work unit is seen now.

Now high	1. a)	2. a)	3. a)	4. a)	5.a)	6.a)	7.a)	8.a)	9.a)	10.a)	11.a)	12.a)	13.a)	14.a)	15.a)	16.a)
E02	5	5	6	5	2	6	5	5	6	5	4	6	5	6	3	4
E04	5	7	6	7	7	7	7	6	5	3	5	5	5	5	3	7
E10	5	5	5	7	7	5	5	5	5	5	4	4	6	6	5	5
E14	5	4	4	6	5	6	7	4	6	6	5	3	3	7	7	5
E17	7	4	3	7	6	6	3	3	6	1	2	2	7	7	7	5
S12	7	6	7	5	5	6	7	5	5	5	5	5	5	7	3	5
S23	4	5	4	4	3	3	3	3	5	7	5	3	1	2	3	3
Mean high	5.4	5.1	5.0	5.9	5.0	5.6	5.3	4.4	5.4	4.6	4.3	4.0	4.6	5.7	4.4	4.9

Now low	1. a)	2. a)	3. a)	4. a)	5.a)	6.a)	7.a)	8.a)	9.a)	10.a)	11.a)	12.a)	13.a)	14.a)	15.a)	16.a)
E11	5	6	6	6	5	4	4	5	5	4	5	5	3	5	4	4
E21	5	6	7	7	6	5	6	5	6	5	5	7	1	5	5	4
E22	8	8	8	7	5	5	3	5	5	5	7	5	7	5	5	3
E24	5	7	5	7	5	7	7	5	7	3	7	3	5	5	5	5
E25	4	5	6	3	7	5	7	4	7	6	5	5	5	5	3	5
S20	7	7	5	7	7	6	7	6	7	7	6	7	7	7	7	6
S26	7	7	7		7	7	5	3	7	7	7	7	5	5	7	5
Mean low	5.9	6.6	6.3	6.2	6.0	5.6	5.6	4.7	6.3	5.3	6.0	5.6	4.7	5.3	5.1	4.6
high-low	-0.4	-1.4	-1.3	-0.3	-1.0	0.0	-0.3	-0.3	-0.9	-0.7	-1.7	-1.6	-0.1	0.4	-0.7	0.3

Table 6 Footnotes:

Profile of Organizational Characteristics (see questions in Attachment B)

a) questions = How do you see your organization now?

Summary of question topics

Leadership

1. confidence and trust
2. subordinates talk to superiors
3. ideas of subordinates sought

Motivation

4. predominant form of motivation
5. responsibility for performance
6. cooperative teamwork

Communication

7. direction of flow of information
8. communication received by lower levels
9. accurate upward communication

10. superiors understand problems of subordinates

Decisions

11. levels decisions made
12. subordinates involved in decisions

Goals

13. performance goals set
14. subordinates strive to achieve goals

Controls

15. review and control functions
16. cost, productivity, and other reports used

Mean: arithmetic mean is the sum of a set of measurements divided by the number of measurements in the set. For this study, arithmetic mean provides a better measure of central location to estimate a population parameter than other expressions of average, such as mode, median, or geometric mean.

Now mean high = mean of a) question scores of ETCs and supervisors from first seven organizations from a list of participating organizations ranked by transportation program effectiveness.

Now mean low = mean of a) question scores of ETCs and supervisors from last seven organizations from a list of participating organizations ranked by transportation program effectiveness.

high-low = mean of a)question scores of ETCs and supervisors from first seven organizations from a list of participating organizations ranked by transportation program effectiveness minus mean of a)question scores of ETCs and supervisors from last seven organizations from a list of participating organizations ranked by transportation program effectiveness.

Table 7: POC -- Difference between high and low performing program in how the work unit should be.

Should high	1. b)	2. b)	3. b)	4. b)	5.b)	6.b)	7.b)	8.b)	9.b)	10.b)	11.b)	12.b)	13.b)	14.b)	15.b)	16.b)
E02	7	7	7	7	5	7	7	7	7	7	7	8	7	7	7	7
E04	5	7	7	7	7	7	7	8	7	7	6	7	5	7	5	7
E10	5	5	5	7	7	5	7	5	7	5	5	5	6	6	6	5
E14	6	5	5	6	5	6	7	6	6	6	7	5	5	7	7	5
E17	7	5	6	7	7	7	7	7	7	8	7	7	7	7	7	6
S12	7	7	7	5	7	7	7	5	7	6	6	5	5	7	3	5
S23	5	7	5	5	5	5	6	7	7	7	5	5	5	5	7	7
Mean high	6.0	6.1	6.0	6.3	6.1	6.3	6.9	6.4	6.9	6.6	6.1	6.0	5.7	6.6	6.0	6.0

Should low	1. b)	2. b)	3. b)	4. b)	5.b)	6.b)	7.b)	8.b)	9.b)	10.b)	11.b)	12.b)	13.b)	14.b)	15.b)	16.b)
E11	5	7	5	7	7	6	7	7	7	7	7	7	5	7	7	6
E21	5	6	7	7	7	6	7	5	7	7	5	7	5	7	6	5
E22	8	8	8	7	7	7	7	7	7	7	7	5	7	5	5	7
E24	3	5	5	7	5	7	3	5	7	3	7	5	5	5	7	5
E25	5	5	7	7	7	6	7	5	7	7	5	5	7	7	3	5
S20	7	7	5	7	7	7	7	7	7	7	6	7	7	7	8	6
S26	7	7	7		7	8	8	7	8	8	8	8	7	5	8	5
Mean low	5.7	6.4	6.3	7.0	6.7	6.7	6.6	6.1	7.1	6.6	6.4	6.3	6.1	6.1	6.3	5.6
hi-lo	0.3	-0.3	-0.3	-0.7	-0.6	-0.4	0.3	0.3	-0.3	0.0	-0.3	-0.3	-0.4	0.4	-0.3	0.4

Table 7 Footnotes:

Profile of Organizational Characteristics (see questions in Attachment B)

b) questions = How do you think your organization should be?

Summary of question topics

Leadership

1. confidence and trust
2. subordinates talk to superiors
3. ideas of subordinates sought

Motivation

4. predominant form of motivation
5. responsibility for performance
6. cooperative teamwork

Communication

7. direction of flow of information
8. communication received by lower levels
9. accurate upward communication
10. superiors understand problems of subordinates

Decisions

11. levels decisions made
12. subordinates involved in decisions

Goals

13. performance goals set
14. subordinates strive to achieve goals

Controls

15. review and control functions
16. cost, productivity, and other reports used

Mean: arithmetic mean is the sum of a set of measurements divided by the number of measurements in the set. For this study, arithmetic mean provides a better measure of central location to estimate a population parameter than other expressions of average, such as mode, median, or geometric mean.

Now mean high = mean of b) question scores of ETCs and supervisors from first seven organizations from a list of participating organizations ranked by transportation program effectiveness.

Now mean low = mean of b) question scores of ETCs and supervisors from last seven organizations from a list of participating organizations ranked by transportation program effectiveness.

High-low = mean of b) question scores of ETCs and supervisors from first seven organizations from a list of participating organizations ranked by transportation program effectiveness minus mean of b) question scores of ETCs and supervisors from last seven organizations from a list of participating organizations ranked by transportation program effectiveness.

Table 8: POC -- Difference between how ETC's and their supervisors perceive their work unit to be now.

ETC Now	1. b)	2. b)	3. b)	4. b)	5.b)	6.b)	7.b)	8.b)	9.b)	10.b)	11.b)	12.b)	13.b)	14.b)	15.b)	16.b)
E02	5	5	6	5	2	6	5	5	6	5	4	6	5	6	3	4
E04	5	7	6	7	7	7	7	6	5	3	5	5	5	5	3	7
E10	5	5	5	7	7	5	5	5	5	5	4	4	6	6	5	5
E11	5	6	6	6	5	4	4	5	5	4	5	5	3	5	4	4
E14	5	4	4	6	5	6	7	4	6	6	5	3	3	7	7	5
E17	7	4	3	7	6	6	3	3	6	1	2	2	7	7	7	5
E21	5	6	7	7	6	5	6	5	6	5	5	7	1	5	5	4
E22	8	8	8	7	5	5	3	5	5	5	7	5	7	5	5	3
E24	5	7	5	7	5	7	7	5	7	3	7	3	5	5	5	5
E25	4	5	6	3	7	5	7	4	7	6	5	5	5	5	3	5
Mean ETC	5.4	5.7	5.6	6.2	5.5	5.6	5.4	4.7	5.8	4.3	4.9	4.5	4.7	5.6	4.7	4.7

Supv Now	1. b)	2. b)	3. b)	4. b)	5.b)	6.b)	7.b)	8.b)	9.b)	10.b)	11.b)	12.b)	13.b)	14.b)	15.b)	16.b)
S12	7	6	7	5	5	6	7	5	5	5	5	5	5	7	3	5
S20	7	7	5	7	7	6	7	6	7	7	6	7	7	7	7	6
S23	4	5	4	4	3	3	3	3	5	7	5	3	1	2	3	3
S26	7	7	7		7	7	5	3	7	7	7	7	5	5	7	5
Mean Supv	6.3	6.3	5.8	5.3	5.5	5.5	5.5	4.3	6.0	6.5	5.8	5.5	4.5	5.3	5.0	4.8
ETC-Supv	-0.9	-0.6	-0.2	0.9	0.0	0.1	-0.1	0.5	-0.2	-2.2	-0.9	-1.0	0.2	0.4	-0.3	0.0

Table 8 Footnotes:

Profile of Organizational Characteristics (see questions in Attachment B)

a) questions = How do you see your organization now?

Summary of question topics:

Leadership

1. confidence and trust
2. subordinates talk to superiors
3. ideas of subordinates sought

Motivation

4. predominant form of motivation
5. responsibility for performance
6. cooperative teamwork

Communication

7. direction of flow of information
8. communication received by lower levels
9. accurate upward communication
10. superiors understand problems of subordinates

Decisions
11. levels decisions made
12. subordinates involved in decisions

Goals
13. performance goals set
14. subordinates strive to achieve goals

Controls
15. review and control functions
16. cost, productivity, and other reports used

Mean: arithmetic mean is the sum of a set of measurements divided by the number of measurements in the set. For this study, arithmetic mean provides a better measure of central location to estimate a population parameter than other expressions of average, such as mode, median, or geometric mean.

ETC Now = mean of a) question scores of ETCs.

Supv Now = mean of a) question scores supervisors of ETCs.

ETC-Supv = mean of a) question scores of ETCs minus mean of a) question scores of supervisors of ETCs.

Table 9: POC -- Difference between how ETC's and their supervisors think their work unit should be.

ETC Should	1. b)	2. b)	3. b)	4. b)	5.b)	6.b)	7.b)	8.b)	9.b)	10.b)	11.b)	12.b)	13.b)	14.b)	15.b)	16.b)
E02	3	5	5	7	5	7	3	5	7	3	7	5	5	5	7	5
E04	5	7	5	7	7	6	7	7	7	7	7	7	5	7	7	6
E10	5	5	7	7	7	6	7	5	7	7	5	5	7	7	3	5
E11	5	7	7	7	7	7	7	8	7	7	6	7	5	7	5	7
E14	5	6	7	7	7	6	7	5	7	7	5	7	5	7	6	5
E17	8	8	8	7	7	7	7	7	7	7	7	5	7	5	5	7
E21	6	5	5	6	5	6	7	6	6	6	7	5	5	7	7	5
E22	7	5	6	7	7	7	7	7	7	8	7	7	7	7	7	6
E24	7	7	7	7	5	7	7	7	7	7	7	8	7	7	7	7
E25	5	5	5	7	7	5	7	5	7	5	5	5	6	6	6	5
Mean ETC	5.6	6.0	6.2	6.9	6.4	6.4	6.6	6.2	6.9	6.4	6.3	6.1	5.9	6.5	6.0	5.8

Supv. Should	1. b)	2. b)	3. b)	4. b)	5.b)	6.b)	7.b)	8.b)	9.b)	10.b)	11.b)	12.b)	13.b)	14.b)	15.b)	16.b)
S12	7	7	7	5	7	7	7	5	7	6	6	5	5	7	3	5
S20	7	7	5	7	7	7	7	7	7	7	6	7	7	7	8	6
S23	5	7	5	5	5	5	6	7	7	7	5	5	5	5	7	7
S26	7	7	7		7	8	8	7	8	8	8	8	7	5	8	5
Mean Supv.	6.5	7.0	6.0	5.7	6.5	6.8	7.0	6.5	7.3	7.0	6.3	6.3	6.0	6.0	6.5	5.8
ETC-Supv.	-0.9	-1.0	0.2	1.2	-0.1	-0.4	-0.4	-0.3	-0.4	-0.6	0.0	-0.2	-0.1	0.5	-0.5	0.0

Table 9 Footnotes:

Profile of Organizational Characteristics (see questions in Attachment B)

b) questions = How do you think your organization should be?

Summary of question topics

Leadership

1. confidence and trust
2. subordinates talk to superiors
3. ideas of subordinates sought

Motivation

4. predominant form of motivation
5. responsibility for performance
6. cooperative teamwork

Communication

7. direction of flow of information
8. communication received by lower levels
9. accurate upward communication
10. superiors understand problems of subordinates

Decisions

11. levels decisions made
12. subordinates involved in decisions

Goals

13. performance goals set
14. subordinates strive to achieve goals

Controls

15. review and control functions
16. cost, productivity, and other reports used

Mean: arithmetic mean is the sum of a set of measurements divided by the number of measurements in the set. For this study, arithmetic mean provides a better measure of central location to estimate a population parameter than other expressions of average, such as, mode, median, or geometric mean.

ETC Should = mean of b) question scores of ETCs.

Supv Should = mean of b) question scores supervisors of ETCs.

ETC-Supv = mean of b) question scores of ETCs minus mean of b) question scores of supervisors of ETCs.

Table 10: Overview of responses to demographic questions

Client Code	Age Range	Coll. Level	Educ. area	Work Exp.	Yrs. in org	Yrs. as ETC	Organizational Function	Question Numbers 8	9	10	11	12	13	14
E02	2	C	1	17	17	2.5	Operations	1	1	1	1	1	1	2
E04	3	C	1	16	10	10	Exec Asst	2	2	2	2	2	2	2
E10	4	M	2	35	5	3	Cust Svs	2	2	2	2	2	2	2
E11	2	B	3	4	4	3	Health & Saf	1	2	2	2	2	2	2
E14	2	C	1	15	4	2	Human Resc.	2	2	2	2	2	2	2
E17	2	B	1	8	2	1.5	Human Resc.	3	3	3	4	4	2	1
E21	4	M	1	30	7	7	Facilities	1	1	2	1	2	2	2
E22	3	M	1	22	7	3	Consulting	2	2	2	3	1	2	3
E24	4	C	4	30	11	2.5	Acct/Finance	2	1	2	2	2	2	2
E25	3	B	4	23	5	2.4	Quality	2	2	2	2	2	2	1
S12	3	B	1	20	20	6	Administration	1	1	2	1	2	2	2
S20	5	B	1	31	9	3	Operations	1	2	2	2	3	2	2
S23	5	M	6	37	27	2.4	Operations	1	1	1	1	1	1	1
S26	5	M	3	30	12	10	Pur./Warehse.	2	1	2	2	2	2	2

Responses to questions 8 - 14: 1 = Strongly Agree, 2 = Agree, 3 = Disagree, 4 = Strongly Disagree

8. The Employee Transportation Program at this location satisfies the intent of the program.

9. Local managers support this program in a way that contributes to its success.

10. It is clear that top managers believe this program is important.

11. There is adequate funding for the success of this program.

12. Employees consider the purpose of this program to be important.

13. Local managers and supervisors consider this program to be important.

14. My other work priorities are such that I have an appropriate amount of time for this program.

Table 10 Footnotes:

Profile of Organizational Characteristics (see questions in Attachment A)

Age Range:

1 = under 25	3 = 36–45	5 = over 55
2 = 26–35	4 = 46–55	

College Level:
N = No college
C = Some college with no degree, or 2-year degree
B = Bachelor-level degree (four year)
M = Master-level degree or above

Educ. Area
1 = Business/Economics
2 = Education/History/Social Science
3 = Engineering
4 = General Education
6 = Political Science/Law

Work Experience (stated in years)

Yrs. in org = Number of years experience in the organization

Yrs. as ETC = Number of years experience as an ETC or supervisor of ETC.

Table 11: Overview of CVAT Part 1 Responses on Personal Values (PC) (n=14)

	Work				Relations				Control				Thought				
PV	**As**	**Bs**	**Cs**	**Ds**	**Es**	**Fs**	**Gs**	**Hs**	**Is**	**Js**	**Ks**	**Ls**	**Ms**	**Ns**	**Os**	**Ps**	**s.d. PV**
E02	20	17	11	19	10	14	13	16	13	15	7	9	8	11	10	7	3.95
E04	12	13	10	15	19	17	14	20	12	10	6	12	5	17	10	8	4.23
E10	17	16	11	13	11	16	15	15	14	9	6	10	12	9	16	10	3.12
E11	13	15	11	17	18	17	9	16	10	16	5	8	18	11	8	8	4.12
S12	14	11	15	18	13	15	10	19	11	10	10	7	10	17	12	8	3.43
E14	16	17	9	11	14	17	14	20	12	9	6	9	7	14	16	9	3.97
E17	8	10	8	14	17	13	11	12	15	14	8	11	15	15	13	16	2.83
S20	15	17	13	17	8	16	10	16	11	6	6	18	10	15	13	9	3.87
E21	17	17	14	20	10	14	10	13	13	13	6	10	14	14	7	8	3.69
E22	13	11	6	11	14	16	14	15	14	8	8	16	16	11	14	13	2.98
S23	11	18	11	19	12	8	8	16	11	10	10	12	13	14	13	14	3.06
E24	18	16	16	17	14	13	12	20	12	11	6	11	7	11	9	7	4.00
E25	15	12	13	17	6	18	8	17	10	9	10	11	12	14	18	10	3.59
S26	15	10	17	16	6	8	8	9	13	9	10	20	14	16	15	14	3.86
Mean	14.6	14.3	11.8	16.0	12.3	14.4	11.1	16.0	12.2	10.6	7.4	11.7	11.5	13.5	12.4	10.1	
Sum				56.6				53.9				42.0				47.5	

Table 11 Footnotes:

CVAT = Culture and Values Analysis Tool
PV = Personal Values
See Attachment C for description of dimensions

WORK
As = Effort as a value for self
Bs = Time as a value for self
Cs = Finish Job as a value for self
Ds = Quality as a value for self

RELATIONS
Es = Affect as a value for self
Fs = Empathy as a value for self
Gs = Sociability as a value for self
Hs = Loyalty as a value for self

CONTROL
Is = Dominance as a value for self
Js = Status as a value for self
Ks = Political as a value for self
Ls = Leader as a value for self

THOUGHT
Ms = Abstract as a value for self
Ns = Plan/Organize as a value for self
Os = Exposition as a value for self
Ps = Flexibility as a value for self

s.d. PV = standard deviation of Personal Values. The square root of the mean of the sum of squared variances from mean. Used as a measure of dispersion that refers to the variability or spread in the data. A lower s.d. implies that the participant has a consistent perception of expressed values and does not elevate a particular value over another. A higher s.d. implies that the participant has a more marked opinion of particular values and can more easily express the importance of one value over another.

Mean: arithmetic mean is the sum of a set of measurements divided by the number of measurements in the set. For this study, arithmetic mean provides a better measure of central location to estimate a population parameter than other expressions of average, such as mode, median, or geometric mean.

Sum = the sum of the means for each set of four Personal Values dimensions that compose a Values category.

Table 12: Overview of CVAT Part 2 Responses on Work Unit Culture (UC) (n=14)

	Work				Relations				Control				Thought				
UC	**Au**	**Bu**	**Cu**	**Du**	**Eu**	**Fu**	**Gu**	**Hu**	**Iu**	**Ju**	**Ku**	**Lu**	**Mu**	**Nu**	**Ou**	**Pu**	**s.d. UC**
E02	19	12	12	19	11	10	7	11	13	7	8	15	13	16	12	15	3.55
E04	15	9	13	20	12	11	15	10	8	17	9	18	5	12	14	12	3.81
E11	18	9	16	19	11	13	12	14	9	9	10	15	16	8	7	14	3.57
S12	14	10	8	18	14	18	8	18	13	13	9	11	14	12	9	11	3.30
E14	12	14	15	14	9	14	16	9	13	15	19	15	11	9	6	9	3.30
E15	14	8	10	12	6	8	14	9	10	15	20	19	17	12	17	9	4.11
E17	17	9	13	15	18	19	19	14	13	11	6	11	7	9	11	8	4.09
S20	15	10	10	16	11	11	11	7	13	9	7	20	11	16	16	17	3.66
E21	13	9	10	18	13	20	14	9	10	8	8	13	16	15	10	14	3.48
E22	14	13	11	19	7	12	7	6	11	16	19	15	14	11	14	11	3.72
S23	15	11	9	16	5	6	7	10	15	15	19	20	14	17	13	8	4.49
E24	17	10	8	17	14	17	11	16	9	13	7	16	12	13	9	11	3.30
E25	18	16	11	19	7	9	12	8	11	11	8	17	14	11	13	15	3.59
S26	17	12	10	17	8	11	12	8	13	12	9	20	12	12	15	12	3.22
Mean	15.6	10.9	11.1	17.1	10.4	12.8	11.8	10.6	11.5	12.2	11.3	16.1	12.6	12.4	11.9	11.9	
Sum				54.6				45.6				51.1				48.6	
All	**Au**	**Bu**	**Cu**	**Du**	**Eu**	**Fu**	**Gu**	**Hu**	**Iu**	**Ju**	**Ku**	**Lu**	**Mu**	**Nu**	**Ou**	**Pu**	
PV-UC	-1.0	3.4	0.6	-1.1	1.9	1.6	-0.6	5.4	0.7	-1.6	-3.9	-4.4	-1.1	1.1	0.6	-1.8	

Table 12 Footnotes:

UC = Unit Culture
See Attachment C for description of dimensions

WORK
Au = Effort as rewarded in the work unit
Bu = Time as rewarded in the work unit
Cu = Finish Job as rewarded in the work unit
Du = Quality as rewarded in the work unit

RELATIONS
Eu = Affect as rewarded in the work unit
Fu = Empathy as rewarded in the work unit
Gu = Sociability as rewarded in the work unit
Hu = Loyalty as rewarded in the work unit

CONTROL

Iu = Dominance as rewarded in the work unit
Ju = Status as rewarded in the work unit
Ku = Political as rewarded in the work unit
Lu = Leader as rewarded in the work unit

THOUGHT

Mu = Abstract as rewarded in the work unit
Nu = Plan/Organize as rewarded in the work unit
Ou = Exposition as rewarded in the work unit
Pu = Flexibility as rewarded in the work unit

s.d. UC = standard deviation of Unit Culture. The square root of the mean of the sum of squared variances from mean. Used as a measure of dispersion that refers to the variability or spread in the data. A lower s.d. implies that the participant has a consistent perception of expressed rewards and does not perceive a particular reward over another. A higher s.d. implies that the participant has a more marked opinion of what is rewarded and can more easily express the perception that one form of reward has more value in the work place than another.

Mean: arithmetic mean is the sum of a set of measurements divided by the number of measurements in the set. For this study, arithmetic mean provides a better measure of central location to estimate a population parameter than other expressions of average, such as mode, median, or geometric mean.

Sum = the sum of the means for each set of four Unit Culture dimensions that compose a Culture category.

PV-UC = mean Personal Value minus mean Unit Culture

Table 13: CVAT -- Difference between ETC and Supervisor perception of personal values.

	Work				Relations				Control				Thought				
PV-E	**As**	**Bs**	**Cs**	**Ds**	**Es**	**Fs**	**Gs**	**Hs**	**Is**	**Js**	**Ks**	**Ls**	**Ms**	**Ns**	**Os**	**Ps**	**s.d. PV**
E02	20	17	11	19	10	14	13	16	13	15	7	9	8	11	10	7	3.95
E04	12	13	10	15	19	17	14	20	12	10	6	12	5	17	10	8	4.23
E10	17	16	11	13	11	16	15	15	14	9	6	10	12	9	16	10	3.12
E11	13	15	11	17	18	17	9	16	10	16	5	8	18	11	8	8	4.12
E14	16	17	9	11	14	17	14	20	12	9	6	9	7	14	16	9	3.97
E17	8	10	8	14	17	13	11	12	15	14	8	11	15	15	13	16	2.83
E21	17	17	14	20	10	14	10	13	13	13	6	10	14	14	7	8	3.69
E22	13	11	6	11	14	16	14	15	14	8	8	16	16	11	14	13	2.98
E24	18	16	16	17	14	13	12	20	12	11	6	11	7	11	9	7	4.00
E25	15	12	13	17	6	18	8	17	10	9	10	11	12	14	18	10	3.59
Mean	15	14	11	15	13	16	12	16	13	11	6.8	11	11	13	12	9.6	
Sum				56				57				41				46	
PV-S	**As**	**Bs**	**Cs**	**Ds**	**Es**	**Fs**	**Gs**	**Hs**	**Is**	**Js**	**Ks**	**Ls**	**Ms**	**Ns**	**Os**	**Ps**	**s.d. PV**
S12	14	11	15	18	13	15	10	19	11	10	10	7	10	17	12	8	3.43
S20	15	17	13	17	8	16	10	16	11	6	6	18	10	15	13	9	3.87
S23	11	18	11	19	12	8	8	16	11	10	10	12	13	14	13	14	3.06
S26	15	10	17	16	6	8	8	9	13	9	10	20	14	16	15	14	3.86
Mean	13.8	14.0	14.0	17.5	9.8	11.8	9.0	15.0	11.5	8.8	9.0	14.3	11.8	15.5	13.3	11.3	
Sum				59.3				45.5				43.5				51.8	
PV	**As**	**Bs**	**Cs**	**Ds**	**Es**	**Fs**	**Gs**	**Hs**	**Is**	**Js**	**Ks**	**Ls**	**Ms**	**Ns**	**Os**	**Ps**	
E-S	1.2	0.4	-3.1	-2.1	3.6	3.8	3.0	1.4	1.0	2.7	-2.2	-3.6	-0.4	-2.8	-1.2	-1.7	

Table 13 Footnotes:

CVAT = Culture and Values Analysis Tool
PV-E = Personal Values of ETCs
PV-S = Personal Values of Supervisors of ETCs
See Attachment C for description of dimensions

WORK
As = Effort as a value for self
Bs = Time as a value for self
Cs = Finish Job as a value for self
Ds = Quality as a value for self

RELATIONS
Es = Affect as a value for self
Fs = Empathy as a value for self
Gs = Sociability as a value for self
Hs = Loyalty as a value for self

CONTROL
Is = Dominance as a value for self
Js = Status as a value for self
Ks = Political as a value for self
Ls = Leader as a value for self

THOUGHT
Ms = Abstract as a value for self
Ns = Plan/Organize as a value for self
Os = Exposition as a value for self
Ps = Flexibility as a value for self

s.d. PV = standard deviation of Personal Values. The square root of the mean of the sum of squared variances from mean. Used as a measure of dispersion that refers to the variability or spread in the data. A lower s.d. implies that the participant has a consistent perception of expressed values and does not elevate a particular value over another. A higher s.d. implies that the participant has a more marked opinion of particular values and can more easily express the importance of one value over another.

Mean: arithmetic mean is the sum of a set of measurements divided by the number of measurements in the set. For this study, arithmetic mean provides a better measure of central location to estimate a population parameter than other expressions of average, such as mode, median, or geometric mean.

Sum = the sum of the means for each set of four Personal Values dimensions that compose a Values category.

PV E-S = the mean of Personal Values of ETCs minus the mean of Personal Values of Supervisors of ETCs.

Table 14: CVAT -- Difference between ETC and Supervisor perception of work unit culture.

	Work				Relations				Control				Thought				
UC-E	**Au**	**Bu**	**Cu**	**Du**	**Eu**	**Fu**	**Gu**	**Hu**	**Iu**	**Ju**	**Ku**	**Lu**	**Mu**	**Nu**	**Ou**	**Pu**	**s.d. UC**
E02	19	12	12	19	11	10	7	11	13	7	8	15	13	16	12	15	3.55
E04	15	9	13	20	12	11	15	10	8	17	9	18	5	12	14	12	3.81
E11	18	9	16	19	11	13	12	14	9	9	10	15	16	8	7	14	3.57
E14	12	14	15	14	9	14	16	9	13	15	19	15	11	9	6	9	3.30
E15	14	8	10	12	6	8	14	9	10	15	20	19	17	12	17	9	4.11
E17	17	9	13	15	18	19	19	14	13	11	6	11	7	9	11	8	4.09
E21	13	9	10	18	13	20	14	9	10	8	8	13	16	15	10	14	3.48
E22	14	13	11	19	7	12	7	6	11	16	19	15	14	11	14	11	3.72
E24	17	10	8	17	14	17	11	16	9	13	7	16	12	13	9	11	3.30
E25	18	16	11	19	7	9	12	8	11	11	8	17	14	11	13	15	3.59
Mean	16	11	12	17	11	13	13	11	11	12	11	15	13	12	11	12	
Sum				55.7				47.4				49.7				47.2	
UC-S	**Au**	**Bu**	**Cu**	**Du**	**Eu**	**Fu**	**Gu**	**Hu**	**Iu**	**Ju**	**Ku**	**Lu**	**Mu**	**Nu**	**Ou**	**Pu**	**s.d. UC**
S12	14	10	8	18	14	18	8	18	13	13	9	11	14	12	9	11	3.30
S20	15	10	10	16	11	11	11	7	13	9	7	20	11	16	16	17	3.66
S23	15	11	9	16	5	6	7	10	15	15	19	20	14	17	13	8	4.49
S26	17	12	10	17	8	11	12	8	13	12	9	20	12	12	15	12	3.22
Mean	15.3	10.8	9.3	16.8	9.5	11.5	9.5	10.8	13.5	12.3	11.0	17.8	12.8	14.3	13.3	12.0	
Sum				52.0				41.3				54.5				52.3	
UC	**Au**	**Bu**	**Cu**	**Du**	**Eu**	**Fu**	**Gu**	**Hu**	**Iu**	**Ju**	**Ku**	**Lu**	**Mu**	**Nu**	**Ou**	**Pu**	
E-S	0.4	0.2	2.7	0.4	1.3	1.8	3.2	-0.2	-2.8	-0.1	0.4	-2.4	-0.3	-2.7	-2.0	-0.2	

Table 14 Footnotes:

CVAT = Culture and Values Analysis Tool
UC-E = perception of Unit Culture of ETCs
UC-S = perception of Unit Culture of Supervisors of ETCs
See Attachment C for description of dimensions

WORK
Au = Effort as rewarded in the work unit
Bu = Time as rewarded in the work unit
Cu = Finish Job as rewarded in the work unit
Du = Quality as rewarded in the work unit

RELATIONS

Eu = Affect as rewarded in the work unit
Fu = Empathy as rewarded in the work unit
Gu = Sociability as rewarded in the work unit
Hu = Loyalty as rewarded in the work unit

CONTROL

Iu = Dominance as rewarded in the work unit
Ju = Status as rewarded in the work unit
Ku = Political as rewarded in the work unit
Lu = Leader as rewarded in the work unit

THOUGHT

Mu = Abstract as rewarded in the work unit
Nu = Plan/Organize as rewarded in the work unit
Ou = Exposition as rewarded in the work unit
Pu = Flexibility as rewarded in the work unit

s.d. UC = standard deviation of Unit Culture.

The square root of the mean of the sum of squared variances from mean. Used as a measure of dispersion that refers to the variability or spread in the data. A lower s.d. implies that the participant has a consistent perception of expressed rewards and does not perceive a particular reward over another. A higher s.d. implies that the participant has a more marked opinion of what is rewarded and can more easily express the perception that one form of reward has more value in the work place than another.

Mean: arithmetic mean is the sum of a set of measurements divided by the number of measurements in the set. For this study, arithmetic mean provides a better measure of central location to estimate a population parameter than other expressions of average, such as mode, median, or geometric mean.

Sum = the sum of the means for each set of four Unit Culture dimensions that compose a Culture category.

UC E-S = the mean of perceived Unit Culture of ETCs minus the mean of perceived Unit Culture of Supervisors of ETCs.

Table 15: CVAT -- Difference in perception of personal values between high and low performing programs.

	Work				Relations				Control				Thought				
PV-hi	**As**	**Bs**	**Cs**	**Ds**	**Es**	**Fs**	**Gs**	**Hs**	**Is**	**Js**	**Ks**	**Ls**	**Ms**	**Ns**	**Os**	**Ps**	**s.d. PV**
2	14	11	15	18	13	15	10	19	11	10	10	7	10	17	12	8	3.43
2	8	10	8	14	17	13	11	12	15	14	8	11	15	15	13	16	2.83
3	16	17	9	11	14	17	14	20	12	9	6	9	7	14	16	9	3.97
5	12	13	10	15	19	17	14	20	12	10	6	12	5	17	10	8	4.23
7	20	17	11	19	10	14	13	16	13	15	7	9	8	11	10	7	3.95
7	11	18	11	19	12	8	8	16	11	10	10	12	13	14	13	14	3.06
8	17	16	11	13	11	16	15	15	14	9	6	10	12	9	16	10	3.12
Mean	14	15	11	16	14	14	12	17	13	11	7.6	10	10	14	13	10	
Sum				54.9				57.0				41.1				47.0	
PV-lo	**As**	**Bs**	**Cs**	**Ds**	**Es**	**Fs**	**Gs**	**Hs**	**Is**	**Js**	**Ks**	**Ls**	**Ms**	**Ns**	**Os**	**Ps**	**s.d. PV**
9	13	11	6	11	14	16	14	15	14	8	8	16	16	11	14	13	2.98
10	17	17	14	20	10	14	10	13	13	13	6	10	14	14	7	8	3.69
10	15	10	17	16	6	8	8	9	13	9	10	20	14	16	15	14	3.86
11	13	15	11	17	18	17	9	16	10	16	5	8	18	11	8	8	4.12
12	15	17	13	17	8	16	10	16	11	6	6	18	10	15	13	9	3.87
12	18	16	16	17	14	13	12	20	12	11	6	11	7	11	9	7	4.00
13	15	12	13	17	6	18	8	17	10	9	10	11	12	14	18	10	3.59
Mean	15.1	14.0	12.9	16.4	10.9	14.6	10.1	15.1	11.9	10.3	7.3	13.4	13.0	13.1	12.0	9.9	
Sum				58.4				50.7				42.9				48.0	

PV	**As**	**Bs**	**Cs**	**Ds**	**Es**	**Fs**	**Gs**	**Hs**	**Is**	**Js**	**Ks**	**Ls**	**Ms**	**Ns**	**Os**	**Ps**
hi-lo	-1.1	0.6	-2.1	-0.9	2.9	-0.3	2.0	1.7	0.7	0.7	0.3	-3.4	-3.0	0.7	0.9	0.4

Table 15 Footnotes:

CVAT = Culture and Values Analysis Tool

PV-hi = Personal Value scores of ETCs and supervisors from first seven organizations from a list of participating organizations ranked by transportation program effectiveness.

PV-lo = Personal Value scores of ETCs and supervisors from last seven organizations from a list of participating organizations ranked by transportation program effectiveness.

See Attachment C for description of dimensions

WORK
As = Effort as a value for self
Bs = Time as a value for self
Cs = Finish Job as a value for self
Ds = Quality as a value for self

RELATIONS
Es = Affect as a value for self
Fs = Empathy as a value for self
Gs = Sociability as a value for self
Hs = Loyalty as a value for self

CONTROL
Is = Dominance as a value for self
Js = Status as a value for self
Ks = Political as a value for self
Ls = Leader as a value for self

THOUGHT
Ms = Abstract as a value for self
Ns = Plan/Organize as a value for self
Os = Exposition as a value for self
Ps = Flexibility as a value for self

s.d. PV = standard deviation of Personal Values. The square root of the mean of the sum of squared variances from mean. Used as a measure of dispersion that refers to the variability or spread in the data. A lower s.d. implies that the participant has a consistent perception of expressed values and does not elevate a particular value over another. A higher s.d. implies that the participant has a more marked opinion of particular values and can more easily express the importance of one value over another.

Mean: arithmetic mean is the sum of a set of measurements divided by the number of measurements in the set. For this study, arithmetic mean provides a better measure of central location to estimate a population parameter than other expressions of average, such as mode, median, or geometric mean.

Sum = the sum of the means for each set of four Personal Values dimensions that compose a Values category.

PV hi-lo = mean of Personal Value scores of ETCs and supervisors from first seven organizations from a list of participating organizations ranked by transportation program effectiveness minus mean of Personal Value scores of ETCs and supervisors from last seven organizations from a list of participating organizations ranked by transportation program effectiveness.

Table 16: CVAT -- Difference in perception of work unit culture between high and low performing programs.

	Work				Relations				Control				Thought				
UC-hi	**Au**	**Bu**	**Cu**	**Du**	**Eu**	**Fu**	**Gu**	**Hu**	**Iu**	**Ju**	**Ku**	**Lu**	**Mu**	**Nu**	**Ou**	**Pu**	**s.d. UC**
2	14	10	8	18	14	18	8	18	13	13	9	11	14	12	9	11	3.30
2	17	9	13	15	18	19	19	14	13	11	6	11	7	9	11	8	4.09
3	12	14	15	14	9	14	16	9	13	15	19	15	11	9	6	9	3.30
5	15	9	13	20	12	11	15	10	8	17	9	18	5	12	14	12	3.81
6	14	8	10	12	6	8	14	9	10	15	20	19	17	12	17	9	4.11
7	19	12	12	19	11	10	7	11	13	7	8	15	13	16	12	15	3.55
7	15	11	9	16	5	6	7	10	15	15	19	20	14	17	13	8	4.49
Mean	15	10	11	16	11	12	12	12	12	13	13	16	12	12	12	10	
Sum				53.3				46.9				53.9				46.0	

UC-lo	**Au**	**Bu**	**Cu**	**Du**	**Eu**	**Fu**	**Gu**	**Hu**	**Iu**	**Ju**	**Ku**	**Lu**	**Mu**	**Nu**	**Ou**	**Pu**	**s.d. UC**
9	14	13	11	19	7	12	7	6	11	16	19	15	14	11	14	11	3.72
10	13	9	10	18	13	20	14	9	10	8	8	13	16	15	10	14	3.48
10	17	12	10	17	8	11	12	8	13	12	9	20	12	12	15	12	3.22
11	18	9	16	19	11	13	12	14	9	9	10	15	16	8	7	14	3.57
12	15	10	10	16	11	11	11	7	13	9	7	20	11	16	16	17	3.66
12	17	10	8	17	14	17	11	16	9	13	7	16	12	13	9	11	3.30
13	18	16	11	19	7	9	12	8	11	11	8	17	14	11	13	15	3.59
Mean	16.0	11.3	10.9	17.9	10.1	13.3	11.3	9.7	10.9	11.1	9.7	16.6	13.6	12.3	12.0	13.4	
Sum				56.0				44.4				48.3				51.3	

UC	**Au**	**Bu**	**Cu**	**Du**	**Eu**	**Fu**	**Gu**	**Hu**	**Iu**	**Ju**	**Ku**	**Lu**	**Mu**	**Nu**	**Ou**	**Pu**
hi-lo	-0.9	-0.9	0.6	-1.6	0.6	-1.0	1.0	1.9	1.3	2.1	3.1	-1.0	-2.0	0.1	-0.3	-3.1

Table 16 Footnotes:

CVAT = Culture and Values Analysis Tool

UC-hi = perception of Unit Culture scores of ETCs and supervisors from first seven organizations from a list of participating organizations ranked by transportation program effectiveness.

UC-lo = perception of Unit Culture scores of ETCs and supervisors from last seven organizations from a list of participating organizations ranked by transportation program effectiveness.

See Attachment C for description of dimensions

WORK

Au = Effort as rewarded in the work unit
Bu = Time as rewarded in the work unit
Cu = Finish Job as rewarded in the work unit
Du = Quality as rewarded in the work unit

RELATIONS

Eu = Affect as rewarded in the work unit
Fu = Empathy as rewarded in the work unit
Gu = Sociability as rewarded in the work unit
Hu = Loyalty as rewarded in the work unit

CONTROL

Iu = Dominance as rewarded in the work unit
Ju = Status as rewarded in the work unit
Ku = Political as rewarded in the work unit
Lu = Leader as rewarded in the work unit

THOUGHT

Mu = Abstract as rewarded in the work unit
Nu = Plan/Organize as rewarded in the work unit
Ou = Exposition as rewarded in the work unit
Pu = Flexibility as rewarded in the work unit

s.d. UC = standard deviation of Unit Culture: the square root of the mean of the sum of squared variances from mean. Used as a measure of dispersion that refers to the variability or spread in the data. A lower s.d. implies that the participant has a consistent perception of expressed rewards and does not perceive a particular reward over another. A higher s.d. implies that the participant has a more marked opinion of what is rewarded and can more easily express the perception that one form of reward has more value in the work place than another.

Mean: arithmetic mean is the sum of a set of measurements divided by the number of measurements in the set. For this study, arithmetic mean provides a better measure of central location to estimate a population parameter than other expressions of average, such as mode, median, or geometric mean.

Sum = the sum of the means for each set of four Unit Culture dimensions that compose a Culture category.

UC hi-lo = mean perceived Unit Culture scores of ETCs and supervisors from first seven organizations from a list of participating organizations ranked by transportation program effectiveness minus mean of perceived Unit Culture scores of ETCs and supervisors from last seven organizations from a list of participating organizations ranked by transportation program effectiveness.

Table 17: Chart III from DiSC – the official report

Code	Rank	Segment Numbers from Graph III D	i	S	C	Pattern Name	Intensity Number from Graph III D	i	S	C
ETC Respondents										
E02	7	2	5	3	7	Appraiser	7	17	12	25
E04	5	6	5	5	1	Result-Oriented	21	17	20	2
E08	1	3	5	3	6	Appraiser	12	19	10	22
E09	4	4	4	3	5	Objective Thinker	16	14	10	19
E10	8	2	6	5	4	Counselor	7	21	20	14
E11	11	1	2	7	6	Perfectionist	2	8	27	22
E14	3	4	7	4	2	Promoter	14	27	15	5
E15	6	2	1	7	6	Perfectionist	8	2	27	23
E17	2	1	7	7	5	Practitioner	2	23	25	17
E21	10	5	1	6	4	Achiever	20	3	23	14
E22	5	3	2	6	5	Perfectionist	11	8	21	18
E24	12	5	2	5	5	Investigator	18	5	20	18
E25	13	3	6	5	2	Counselor	11	23	20	8
Supervisor Respondents										
S05	11	3	6	4	5	Practitioner	9	21	14	17
S12	2	3	4	5	4	Specialist	11	14	20	16
S20	12	5	5	3	3	Inspirational	18	17	12	11
S23	7	6	7	2	1	Inspirational	21	27	6	3
S26	10	7	2	1	5	Creative	27	5	2	18

Table 17 Footnotes:

Rank indicates the highest performing organizations (1) to the lowest (13) in the study.

Pattern name is one of the 13 classical profile patterns established by the DiSC researchers.

Most persons have only one or two behavioral traits at or above the midline, and these can be viewed in combination to interpret the greatest needs-driven behaviors of an individual, including Directing, Influencing, Steadiness and Conscientiousness. The number of respondents to this study was not such that any conclusions can be drawn from the Classical profile pattern.

Table 18: Chart I and II from DiSC -- anecdotal observations

Chart I: projected behaviors					Chart II: response under pressure				
Segment Numbers from Graph I Most (Intermediate)					Segment Numbers from Graph II Least (Intermediate)				
D	i	S	C	Pattern	D	i	S	C	Pattern
3	4	3	7	Objective Thinker	1	6	4	6	Practitioner
4	5	6	2	Agent	6	4	5	1	Achiever
3	6	3	6	Appraiser	3	4	3	5	Objective Thinker
4	5	3	5	Appraiser	4	3	3	6	Objective Thinker
2	6	6	4	Counselor	2	6	5	4	Counselor
2	2	7	4	Specialist	1	3	7	7	Perfectionist
3	7	5	2	Counselor	5	5	4	2	Inspirational
2	3	7	4	Specialist	3	1	7	7	Perfectionist
1	6	7	4	Agent	1	7	7	6	Practitioner
5	3	6	4	Achiever	6	1	7	4	Achiever
3	3	5	6	Perfectionist	3	3	7	4	Specialist
6	1	5	5	Investigator	3	3	6	5	Perfectionist
3	6	6	2	Counselor	3	6	4	3	Promoter
3	6	5	4	Counselor	2	6	3	6	Appraiser
3	4	5	6	Perfectionist	3	3	7	3	Specialist
5	4	5	3	Achiever	5	5	2	4	Inspirational
4	7	3	1	Promoter	6	6	2	1	Inspirational
7	1	2	6	Creative	7	3	1	4	Developer

Table 18 Footnotes:

As explained previously, long-term users of this instrument have found very strong anecdotal evidence that the Chart I, where respondents indicate how they are "Most" within a given job focus correspond most highly to the way people intend to project their behaviors. In this case, they were given the specific focus of "my job as an ETC" or "supervising my ETC." Similarly, the creator of the instrument found that Chart II, wherein respondents indicate how they are "Least" within the same focus, is often more closely aligned with the instinctive response to pressure. Only Chart III results have been validated and reliability tested, as explained in the section concerning validity and reliability of instruments (see Table 17). However, the insight provided by how people project their behavior MOST (Graph1) and LEAST (Graph II) lend insight in a small sample size such as this.

Appendix D:

Participant Interview Scripts

Employee Transportation Coordinator

Interview Guide:

Preparatory Phone Call

Date _____

Company Name _____

Contact Name _____

Title _____

Address:

_____
Street

_____
City State Zip code
Telephone (___)_____ Fax (___)_____

Part 1: Introduction, Study Explanation, and Informed Consent

Explain the following:

Hello, this is Sara J. Hendricks with the Center for Urban Transportation Research. May I please speak with the Employee Transportation Coordinator?

**

Hello, this is Sara J. Hendricks with the Center for Urban Transportation Research. I am calling regarding the research study, "Commuter Choice Program Case Study Development and Analysis. We spoke together at length earlier about this research study that we are conducting about trip reduction programs. Your worksite is one of 13 worksites in the Puget Sound area whose ETC and supervisor initially agreed to participate in the study and who have completed the battery of feedback instruments that will provide the study with information about how individual working styles affect what trip reduction programs can accomplish.

First, do you have any questions about the feedback instruments that you took? Did you receive your DiSC and FIRO-B instrument results?

__ yes (proceed to answer questions)
__ no

We just closed the feedback instrument portion of the study on May 21st. The consultant is now aggregating the results of the POC and CVAT instruments and will send that to you within the next two weeks. What was your impression about taking the instruments?

There is an opportunity to speak with the administrators of this study during two phone conferences in which other study participants will also be connected. The administrators, Nancy Brown of Designs in Development, Inc. and Dr. Harold Welch of High Performance Coaching, will lead the discussion and answer questions pertaining to the results of the study. These phone conferences are completely optional offered as a courtesy to study participants and will be scheduled within the next few weeks. Would you like to be contacted regarding participating in this phone conference?

___ yes
___ no

When are you generally more available?

Monday a.m._____
Monday p.m._____
Tuesday a.m._____
Tuesday p.m._____
Wednesday a.m.____
Wednesday p.m.____
Thursday a.m._____
Thursday p.m._____
Friday a.m._____
Friday p.m._____

Next, we are ready to go on to the last stage in this study, and that is to conduct interviews with personnel from worksites that participated in the online testing. The purpose of these interviews is to obtain more detailed information about the specific circumstances of the individual worksites as well as gain more insight into the opinions of those individuals who are most involved in administering the trip reduction program. The interview is estimated to take no longer than 45 minutes, possible shorter.

Would you like for me to again go over briefly, what this study is about?
___ no
___ yes

Part 2: Study Background

For the purpose of reducing traffic congestion and improving air quality, most previous studies to date have focused upon understanding the effectiveness of various incentives to encourage commuters to use transportation alternatives, such as transit and carpooling. However, modeling studies indicate that offering incentives, by themselves, explain only a

portion of the variance in effectiveness between one trip reduction program and another. In response, this study aims to explore some elements of management culture that influence the effectiveness of trip reduction programs.

Through the results of this study we seek to help employers provide more effective trip reduction programs for their employees. Study results also aim to benefit the public by providing information to transportation professionals about how best to tailor assistance to employers who provide trip reduction programs. The study results may also help organizations emulate models that tend to function more effectively and also assist ETCs to know if there are more effective approaches to presenting and implementing a TRP.

The study is being funded through the Federal Transit Administration of the United States Department of Transportation. The study is being staffed through the National Center for Transit Research (NCTR) at the University of South Florida (USF).

We received contact information for your worksite through the database of trip reduction programs of the Washington State Department of Transportation. This study is focusing upon the Puget Sound Area because the database contains the richest source of relevant quantitative information we have found. Also we are focusing only on one geographic area to control for the effects that the regional economy may have upon trip reduction program effectiveness.

Your worksite was selected based on our desire to get a sample of worksites that represent a cross section of all worksites.

Interview Description

Your participation is completely voluntary. You are free to participate in this research study or to withdraw at any time. There are no anticipated risks of participating in this study. You will not be paid for your participation in this study and there will be no costs to participate in addition to the time you volunteer to be interviewed.

If you agree to participate in the interview, the information you provide will be used to develop a report for NCTR. The report will be a public document. Your employment title and general department name may be used in the report, but your individual name and company name will not be used unless you and your organization give us permission to do so. Authorized research personnel only will have access to the data. The Department of Health and Human Services and the USF Institutional Review Board may inspect the records from this research project. The records will be housed at the Center for Urban Transportation Research.

The interviews will take place during the month of June 2004. The ETCs and supervisors of the 13 participating work sites will be invited to be interviewed. A time will be scheduled for a more in-depth interview about the trip reduction program of the worksite, perceptions of employee attitudes toward the program and how implementation challenges were overcome. The interview is anticipated to last no longer than 45 minutes, possibly shorter.

Do you have any questions at this time? Also, if you have any later questions about this research, please contact me at (813) 974-9801 or by email, Hendricks@cutr.usf.edu. If you

have any questions about your rights as a person who is taking part in a research study, you may contact a member of the Division of Research Compliance of the University of South Florida at 813-974-5638.

Given what I've explained about how the information you provide will be used, the risks and benefits of participation, and who to contact if you have any questions, would you be willing to voluntarily participate in this interview process?

- ❑ Yes -- Thank you
- ❑ No – **Terminate**
- ❑ Need time to think about it or confirm with a supervisor
- ❑ When to call back _____

Would you like us to fax or e-mail a written request outlining what I've just explained and send you a final report?

- ❑ Yes – get address or e-mail
- ❑ No

Part 3: Next Steps

I'd like to make this process as easy as possible for you, and take up the least amount of your time. Would it be helpful if I provided you with the interview questions so that you can look through them first before going through them with me on the phone?

How would it be most convenient for us to send you the questions?

- ❑ By e-mail
- ❑ By Fax

What time would it be most convenient for you to be interviewed?

Date:_____
Time_____
Thank you for agreeing to participate in this research project.

Commuter Choice Program Case Study Development and Analysis
IRB 100584
Sara J. Hendricks, (813) 974-9801, hendricks@cutr.usf.edu

ETC Interview Guide

Here are some questions that I would like to ask during our interview but we do not necessarily have to follow this guide if you prefer to describe other elements of your work site's trip reduction program (TRP).

1. Is the trip reduction program centrally managed or does each work site within your organization manage the program itself?

2. What type of facility is your worksite located within? For example:

___Low-density office park
___Office within a large building downtown
___Other

3. How would you describe your worksite's dress code?

4. Was the job of ETC something you volunteered for or did someone assign you to it?

5. What motivates you to promote transportation alternatives?
___Regulatory compliance
___Solve a business problem
___Be a good corporate citizen in the community
Other_____

6. Please generally describe the organizational hierarchy of your work place and where the positions of ETC and your supervisor are located in that hierarchy.

7. Is the work of the ETC your primary duty or do you serve this role less than full time?

8. Do you report to different people for the various functions you perform?

9. Would you describe your duties as an ETC as something that you can satisfactorily do independent of others at your worksite or does your work require coordination with others?

10. What are your feelings about performing ETC duties?

11. What is your most/least favorite aspect of your work as an ETC?

12. How bad do you perceive the traffic congestion problem to be?

13. Do you believe the state requirements for trip reduction plans are necessary?

14. What have been the main challenges with implementing the TRP and how has your worksite been dealing with them?

15. What are you most proud of regarding any aspect of the TRP for your worksite?

16. Please describe the organizational support given to implementing the TRP?

20. How do “employees of the month” get rewarded at your work site?

21. What happens when the TRP annual survey is administered?

22. Can you describe any “champions” at your worksite who are enthusiastic about their commute alternative and who speak well as an ambassador for trip reduction?

23. Are there distinctions among different groups within your work site that you have found to parallel their receptivity about using trip reduction alternatives?

24. Has the state or local government provided ETC training?

25. Can we get a copy of your trip reduction plan? Are there any other written worksite policies regarding the TRP? Brochures or other materials made in-house?

Thank you!

Commuter Choice Program Case Study Development and Analysis
IRB 100584
Sara J. Hendricks, (813) 974-9801, hendricks@cutr.usf.edu

ETC's Supervisor Interview Guide

Here are some questions that I would like to ask during our interview but we do not necessarily have to follow this guide if you prefer to describe other elements of your work site's trip reduction program (TRP).

1. How long has your worksite been at this location? Why did your worksite move to this location?

2. What makes your worksite unique or stand out from other organizations, in general, and in particular compared to other organizations that do similar work?

3. Where is your position located within the worksite hierarchy?

4. Are you in a position to determine funding to implement the work site trip reduction program or is this decided by someone else?

5. Do you believe the state requirements for trip reduction plans are necessary?

6. How do you perceive people at your worksite think about the traffic congestion problem?

7. If the state trip reduction program requirements went away, what do you think would happen to mode split of your work site?

8. How long have you been a supervisor to the ETC?

9. What elements of your work site's trip reduction program have worked best?

10. What circumstances do you think have influenced the effectiveness of your trip reduction program?

11. Are there distinctions among different groups within your work site that you have found that parallels their receptivity about using alternative transportation modes?

12. What does your organization want to be known for?

13. Do employee performance evaluations include their participation in the trip reduction program?

14. What is the most important activity of the ETC?

15. What support does the ETC need from you in order to accomplish his/her job satisfactorily? Specifically, what do you do to support the work of the ETC?

16. What is your main motivation for supporting the trip reduction program at your worksite?
___ Regulatory compliance
___ Solving a business problem
___ Being a good corporate citizen
___ Other (specify)_____

17. What level of involvement, support and motivation do you get from top management/CEO to help the ETC carry out the TRP?

Appendix E:

Participant Interview Summaries

Interview with Organization A, ETC

Organization A is an independent securities firm that raises and invests capital. The investment bank is over 100 years old. It was acquired by a parent company in 1998, then regained its independence as a public company in 2003, in part due to "organizational culture" incompatibilities with the parent company. It is headquartered in another state. The ETC said that each work site manages its own program; however, it is the remote corporate headquarters that determines the budget for the trip reduction program. The ETC said that insufficient resources have been given to the program. The work site is an office within a large building downtown where alternative transportation is accessible. Parking is downstairs but it is not paid for by the company. The dress code is business dress. The ETC had been assigned her duties as the ETC but said she thought that was great and that she is a proponent of alternative transportation. She said however, that the company supports the trip reduction program only to the extent that it achieves regulatory compliance. The trip reduction data indicate there was a large decrease in VTR between 1999 and 2001. The ETC explained that this was due to the offer of a transit subsidy. The ETC said that performance stayed on a plateau in 2003 and they did not reach their performance goal. She said that the performance was actually better than she had anticipated because prior to the performance survey, the company had withdrawn the subsidy. The ETC said that participation in the program is largely from the support staff and that the investment advisors are encouraged to drive in to work. She said she believes receptivity to using transportation alternatives is a function of salary. The investment advisors need their cars to attend appointments with clients; however, the ETC said that they do not need to drive in every day. She also said that the investment market opens at 6 a.m. in Seattle and so the investment bankers must be at work by 6 a.m. Buses do not run as frequently that early in the morning. The ETC said that the position of ETC was placed with her post because she is the administrative assistant of the regional manager who oversees many departments. In this way the burden of the ETC position would not be placed on any one department. The ETC reports to one supervisor for all duties and the ETC spends about 5 percent of her time on ETC duties. The ETC handles her ETC duties independently rather than it being a job that requires coordination with others. She believes that traffic congestion is bad but does not believe the state law mandating trip reduction programs does much good. She said that her belief is based upon its lack of influence upon her own company. She said that the people who take the bus do so because they have to. Downtown parking is too expensive. She believes that the performance plateau after the subsidy was removed was due to the notion that once people get into the habit of riding the bus, they will continue with it, especially if they cannot afford to drive in and park. The ETC said that while her immediate supervisor provides support where she can, it is the higher management that is not interested in the issue of trip reduction because they have differing priorities about how they compensate their employees. For example, the ETC and her supervisor would like to do a drawing each month, but top management will not allocate the budget for it. The ETC said that if the work site itself were in charge, they might reinstitute the subsidy. The ETC said, "I would enjoy [being an ETC] more if I had more to offer. It's difficult to push a program that is not supported by the corporation…It's a little bit of an uphill battle." The ETC said that convincing people to try transportation alternatives is difficult. There is complacency and a lack of interest. She would like to be able to offer more incentives. She said the ETC training by the municipality that she attended was great and she came out of it "all fired up" but said the company does not provide a budget. She has been an ETC for 2 years. The ETC said that she can think of no examples of someone she would call a "champion" of transportation alternatives at her work site. She is the only

"champion" but it is her job to be so. She described the rewards at her work site for exemplary performance as being taken out to a nice lunch or getting half a day off. She said that the main challenge of implementing the trip reduction program at her work site is influencing attitudes. Also, there are two ride sharing events each year that she attempts to participate in on behalf of her organization; however, one of the scheduled events often occurs during a "crazy time of year" for the company, and so she cannot participate because her ETC duties are the low priority. The supervisor of Organization A did not respond to requests to be interviewed.

Organization	**A, ETC**
Type of company	Investment banking
ETC's position title	Administrative assistant
ETC for how long	2 years
Management of TRP, central or local?	Each work site manages its own program but subsidy is decided elsewhere. If work site were in charge we might institute a subsidy
Type of work site facility	Office within large building downtown
Dress code	Business
Volunteered for ETC position?	Assigned to ETC position, she "thought it was great"
Motivation for promoting transportation alternatives	Solely regulatory compliance, investment advisors are encouraged to drive in
Hierarchy of work place	Her supervisor is a regional mgr., ETC is placed under regional mgr so that it is not put upon any one dept.
ETC your primary duty?	About 5 percent
How many people do you report to?	One supervisor for everything
Are ETC duties done independently or in coordination?	Independently
Feelings about ETC duties	"It's a little bit of an uphill battle. I would enjoy it more if I had more [incentives] to offer. It's difficult to push a program that is not supported by the corporation. Companies have priorities regarding how they compensate their employees"
Favorite aspect about ETC duties	"I am a proponent of commute alternatives."
Worst aspect of ETC duties	Convincing people is difficult, complacency, lack of interest. "Frankly, investment bankers do not need to drive in everyday
How bad is traffic congestion	Traffic congestion is bad
Necessity of state law	I don't think so. It could be because I have not seen it work in my office. "Companies who want to participate will do so regardless of the requirement."
Challenges of implementing TRP	Influencing attitudes, crazy time of year coincides with rideshare event. ETC duties my lowest priority
Element of TRP most proud of	Brochures I created were fun to do, drawings
Organizational support provided to ETC	I and my supervisor want to do a drawing each month, mgmt. does not want to allocate budget to it. Upper mgmt not interested, immediate supervisor does support her
How exemplary performance is rewarded	Nice lunch, half day off
Survey administration	Bi-annual, fairly easy, offer candy, track them down, a few stragglers, departmental contests
Champions	Not really, just myself because it is my job
Distinctions among groups	Mostly the support staff uses alternative transportation. Distinction a function of salary
ETC training	Emails, bi-monthly meetings, for central CBD, training was great. "I came out of ETC training all fired up, but the company does not provide a budget."
Written information	Promised but never sent
Comments	Transportation alternatives are realistically available. Performance plateaued after removal of subsidy because people who take the bus do so because they have to and parking is expensive. Once someone uses bus, they stick with it. ETC was pleased that latest survey was not worse than it was due to elimination of subsidy.

Interview with Organization B, Supervisor

Organization B is a utility distributor. This office has been located in its present downtown location for over 60 years for the purpose of being in close proximity to banks. The ETC's supervisor agreed to be interviewed. He described his organization as smaller than other comparable companies and "family-oriented rather than a conglomerate. Everyone knows the CEO." He explained that family-oriented culture was where employees felt more a part of the organization while in a conglomerate, everybody is a number and a function. The supervisor is a procurement and supply chain administrator. His position is located three levels below the CEO. Regarding the power to implement the work site trip reduction program, the supervisor said that he does have some power to influence the process. The CEO gets involved as funds to implement the program are budgeted. The supervisor said that there never has been any conflict. When asked whether he thought the state trip reduction requirements were necessary, he said that "All good corporate citizens do their best as part of the work day." He described the work force as sales oriented. When asked what the employee response would be if the state law were repealed, the supervisor said that the company would stick to what they were doing. He said that congestion is bad and makes getting to the office difficult. He has been the supervisor to the ETC for nine years. He described the best elements of the work site trip reduction plan as free bus and train passes and a subsidized ferry ride. He believes that the circumstances influencing the TRP effectiveness is the dedication of the ETC. He said that the work distinction that influences employee receptivity to using transportation alternatives is that administrative and support staff does not require travel on the job and they have flexibility of start time. The supervisor said he thinks the organization wants to be known for being a good corporate citizen and one of the ten best places to work in Washington State. Employee participation in the trip reduction program is not considered in employee performance evaluations. The supervisor said that the most important ETC activities were attending regional meetings, providing new ideas and implementing the program. When asked how he provides support to the ETC, the supervisor said that he provides funding. The supervisor said that his main motivation to support the TRP is to be a good corporate citizen. He said that the organization participates in many volunteer activities. When asked about the level of corporate support for the work site's trip reduction program, the supervisor said that top management is very supportive.

The ETC declined to be interviewed but said she would answer any questions by email. Written questions were emailed but there was no response. She also said that her supervisor would not be available for an interview unless he had written me advising otherwise.

Org.	**B, Supervisor**
Type of company	Utility distributor, sales-oriented work force
Worksite location and type	Downtown Seattle
Motivation to locate company in its site	Proximity to banking industry
What makes work site unique	Small, family oriented rather than comglomerate. Everyone knows the CEO
Supervisor position	Three levels below the CEO
Supervisor's power to implement TRP	Shared with CEO, upper mgmt gets involved in budget decisions, there has never been a problem
Necessity of state law	"All good corporate citizens do their best as part of the work day."
Employee response if law repealed	We would stick to what we are doing
Perception of employee response to traffic congestion	It's an issue, getting to the office is difficult, roads narrow from 4 to 2 lanes
How long supervisor to ETC	9 years
Best TRP elements	Free bus and train passes, subsidized ferry
Circumstances influencing TRP effectiveness	Dedication of ETC
Employee distinctions that influence receptivity	Administrative and support staff do not require travel, they have flexibility of start time
Organization wants to be known for	To be a good company, one of the ten best places to work in Seattle
Does participation affect employee performance evaluation?	No
Most important ETC activity	Attends regional meetings of local government, provides new ideas, implements program
Supervisor support for ETC	To provide funding
Supervisor's main motivation to support TRP	Being a good corporate citizen, we volunteer, Special Olympics, marathons
Level of corporate support	Very supportive
Comments	

Interviews with Organization C, ETC and Supervisor

Organization C is an international company that manufactures precision electronic equipment. "We are driven by a vision of removing …boundaries. We provide best-in-class technologies…as well as comprehensive support services, to help you achieve breakthroughs…" This is an example of a private company that started providing commuter subsidies for alternative transportation before the state requirements were established. The company was providing bus transit subsidies as a means to attract and retain high quality employees. As a result, regulatory compliance was not the initial reason for its trip reduction program but rather because the company anticipated business benefits resulting from their subsidies. The ETC also described the organization as a green company.

The ETC suggested a question that she thought I should ask of ETCs for this study. What is your organization's policies regarding quality? She felt that something particularly relevant to the discussion of workplace culture was that the company initially adopted a Quality Policy: "We design and produce every device as if the life of someone we love depends on it." Later a complementary policy was added. This is the Environmental Management Policy: "We design and produce every device with respect and consideration to its impact on our shared environment." The ETC felt that due to its corporate headquarters located in the Netherlands, corporate heads are more aware of environmental issues and more likely to be supportive of the necessity of work sites to offer alternative transportation options. The work site is located in downtown Seattle in what would be considered the central business district. However, the work site is an 8-block walk to where several transit routes can be accessed and a ½-hour walk from the ferry. The work site is located within a low-rise office building.

The ETC said that each of the three physical work sites of the organization located in Washington State has its own management. The supervisor said that the Netherlands headquarters believes in empowering the local work sites to make their own decisions and that this gives them the flexibility to be responsive to local conditions. The ETC said that there is a business casual dress code that is not really enforced because the people at the firm have no public contact. These are engineers, designers and production people. The marketing people are out in the field. The ETC is the facilities manager and the ETC duties came with the job. The site houses 170 employees. The ETC's supervisor is in the manufacturing unit and above the supervisor is the operations management who is the top person at the work site. The ETC spends about one hour per month on her ETC duties. The benefit is primarily the transit and ferry subsidy. She works mostly on her own but because the subsidy is a benefit, the payroll people in human resources are also involved. The ETC says that her role is rewarding because most people are grateful to receive the subsidy. Her least favorite aspect of the position is when transit and ferry rates increase and the employees expect a raise of the subsidy also. The ETC believes that the state mandates are necessary. Her biggest challenge is that there are people for whom no amount of money will change their commuting habits. She has offered day passes for parking for employees to use on days they know they must drive in. This is so that employees can otherwise avoid signing up for expensive monthly parking. The work site has no free parking. The ETC said that the on-line annual survey was a breeze and had no complaints about it. Survey participation increased when the survey became available on-line. At the work site, there is a fitness center and lockers and showers on the first floor and bicycles can be brought into the garage. The people who are highest in the organizational hierarchy, including the operations manager and the head engineer take the ferry and walk ½ hour to the work site. There are also a few

engineers who ride their bicycles to work. When asked about whether there are distinctions between some groups regarding their receptivity to taking commuter alternatives, the ETC said that while the people with lower salaries have more motivation to take transit, there are also examples of highly paid engineers riding their bicycles and so she said no generalizations could be made. She has been the ETC for 5-6 years and initially took the ETC training but does not have the time to go to the local networking meetings.

The Supervisor agreed to be interviewed. He said that the company moved to its present location due to outgrowing its former work site. The organization relocated to a custom built site downtown because the facilities costs happened to be lower in the downtown than on the outskirts of town during the time that relocation became necessary. He said that a downtown is an unusual location for the type of industry they are but said the location decision was purely a business one. He said that the corporate headquarters of the company approves of implementing work site trip reduction programs as long as it does not affect the cost of doing business. The supervisor believes that the state requirements for trip reduction are necessary but insufficient to effect a change. The organization has to want to accomplish it. He said that if the state trip requirements went away, he believes that there would be little change in the commute habits of employees. He said that the company has been cooperative and proactive regarding commute alternatives but that this is in part because they are able to be profitable and have the resources to lend some assistance to the effort. The supervisor has been the ETC's supervisor for the last ten years. He said that the best elements of his worksite's trip reduction program have been bike to work efforts and efforts to change bus schedules to make it easier for people to take transit. The supervisor believes that the main circumstance that has contributed to the effectiveness of the organization's trip reduction program has been the nature of the people hired. He said that employees think that it is the right thing to do. The nature of the organization is that employees believe in and are passionate about what they do.

This is the only organization that did not say "no" when asked whether employee performance evaluations include their participation in the trip reduction program. However, the answer was "Not directly. We look at their community activities" which seems to imply that participation in the trip reduction program can have some bearing. The supervisor said that the ETC's most important activity is as facilitator, to make using trip reduction activities easy to do. The supervisor said that he supports the ETC's work in that he believes in what she is doing. Top management has also provided support in that they have delegated the ability to respond to the local offices. The main motivation for supporting the trip reduction program has been "doing the right thing."

Organization	**C, ETC**
Type of company	Precision electronic equipment manufacturer
ETC's position title	Facilities Manager
ETC for how long	5-6 years
Management of TRP, central or local?	Local, Netherlands headquarters empowers local work sites
Type of work site facility	Low-rise office building, ½-hour walk from ferry, headquarters elsewhere
Dress code	Casual, not enforced
Volunteered for ETC position?	No, ETC duties came with job
Motivation for promoting transportation alternatives	Business benefit to attract and retain the best. Also, a "green" company
Hierarchy of work place	ETC, supervisor, operations manager
ETC your primary duty?	No, she spends 1 hour/mo as ETC
How many people do you report to?	One
Are ETC duties done independently or in coordination?	Mostly on own, but subsidy is considered a benefit; she must coordinate with payroll people in human resources
Feelings about ETC duties	Rewarding, employees grateful for subsidy
Favorite aspect about ETC duties	
Worst aspect of ETC duties	When transit costs increase, employees expect a subsidy increase also
How bad is traffic congestion	Bad
Necessity of state law	Necessary
Challenges of implementing TRP	Some employees for whom no amount of subsidy will change commuting habits
Element of TRP most proud of	Day passes for parking
Organizational support provided to ETC	High
How exemplary performance is rewarded	Salary increases based on annual performance appraisal
Survey administration	On-line survey a breeze
Champions	Head honchos walk and take ferry, engineers bike to work
Distinctions among groups	Lower-salaried employees take transit
ETC training	Took training initially, no complaints
Written information	Provided
Comments	The company has had several organization changes in the past few years. "…a vision of removing boundaries…" Org. culture includes element of passion and urgency of mission: "We design and produce every device as if the life of someone we love depends on it."

Org.	**C, Supervisor**
Type of company	See above
Worksite location and type	See above
Motivation to locate company in its site	Outgrew former site, lower-cost custom built downtown site, purely business decision
What makes work site unique	Downtown location unusual for this type of industry
Supervisor position	Supply chain site manager
Supervisor's power to implement TRP	Corporate hdqtrs approves as long as it does not affect cost of doing business. Dutch understand the issue. Corporate cooperation has depended on high profitability and having spare resources
Necessity of state law	Necessary but insufficient to effect change. Work site has to want to accomplish it
Employee response if law repealed	Little change in commute habits of employees
Perception of employee response to traffic congestion	4th worst in nation, no new freeways since the 1970s.
How long supervisor to ETC	10 years
Best TRP elements	Bike to work, efforts to change bus schedules
Circumstances influencing TRP effectiveness	Nature of people hired. Employees think it is the right thing to do.
Employee distinctions that influence receptivity	None mentioned
Organization wants to be known for	Saving lives
Does participation affect employee performance evaluation?	Not directly. It counts as community activities.
Most important ETC activity	Facilitator to make commute alternatives easy
Supervisor support for ETC	He believes in what she is doing.
Supervisor's main motivation to support TRP	Doing the right thing
Level of corporate support	Corporate headquarters delegates power to local work sites
Comments	

Interview with Organization D, ETC

Organization D is an insurance and risk management company headquartered in New York City. The ETC said that the company has one pre-tax subsidy program nationally, then each local office has the independence to develop additional programs in response to local conditions and what the laws require. The work site office is located within a large building downtown. The ETC said that there are many people at the vice president level of the company that have the option of free parking or $175 cash per month.

The ETC took the job of another who was the previous ETC and so the current ETC inherited the position. However, the ETC said that he wanted to do the job of the ETC. The concept appealed to him. He enjoys the feedback he gets from others. The ETC said his motivations are primarily to be a good citizen rather than helping his company achieve regulatory compliance. He explained that it is the right thing to do. There is an office manager who oversees funding commute alternatives for the work site and she is the person to whom the ETC reports, although his ETC duties are not part of his formal work position description. He reports to this same person for all his official work duties. He fits ETC duties in as he can. If he does not have time, he does not participate in ETC duties. It's the ETC duties that fall away first. He would like to have someone to pass duties along to when he does not have the time. He said he felt gung ho about being an ETC last year but this year he does not.

The ETC describes his ETC job as attending meetings and passing information along. To be effective, he must get people to listen to what he has to say. His favorite part of the ETC job is when someone approaches him and says, "Hey, you did a great job." His least favorite part of the ETC job is the lack of understanding by management of what the options are and how the company can be more creative. He said there is a lack of creative energy. Sometimes he has a great idea and management has no interest in it whatsoever and so it is hard to generate excitement about the program.

He enjoys some of the ETC duties but does not like to survey the entire office. Overall he gets a good feeling about doing the job of ETC because it is worthwhile but sometimes he feels like he is "hitting my head against a brick wall." He said that their trip reduction program is not particularly creative. Efforts relating to commute trip reduction are not on the "radar screen" of his colleagues.

Typically he would go to the Human Resources director because she must understand how a strategy works so that they can promote the benefit. He said that unfortunately the people who are in a position to make decisions are least affected by the whole program. Decision makers have paid parking and car allowances so it is "An extra five bucks for bus fare? What are you talking about?" But for the people who use transit everyday, it is important. The ETC said that "At the VP level, and there are a whole bunch of them. VP status is given away fairly freely." Those persons used to have the option of getting free parking or a free bus pass. The ETC was proud to say that through his efforts, the option is now either free parking or $175/month in cash. And because of that some people gave up their parking. They now take the bus and get the cash. He said, "Now the next group down is everybody else and they get $15-$30/month in their paycheck and they can do whatever they want with it. And that's all we do. We no longer give discounted bus passes. We just give people cash up front. Another option is to enroll in the WageWorks® pre-tax program but if they do that

they lose their $30. Generally a person is better off taking the $30. A typical bus pass is $50-70/month.

The ETC thinks that traffic congestion is bad but not that bad. He has lived in other cities where it is worse and he thinks the lack of a congestion problem and the lack of recognition by others of the problem is part of the difficulty of promoting commute alternatives.

The ETC believes that the state mandate is necessary, otherwise most businesses would not participate. The ETC believes the biggest part of the challenge of implementing commute alternatives is getting management support. The ETC said that part of his "crusade" has been to introduce the Flexpass program. It includes a bus pass at reduced price. The ETC suspects that management dislikes it because not only may there be additional paperwork and administrative steps required but also that being generous to the lower level staff would make the existing perk for the higher level staff look shabby. "If you are giving away free bus passes to everyone—but that's part of the perk for the higher-ups. Why would you give it away now? That's backward thinking."

When asked what the ETC is most proud of with respect to his work site's trip reduction program, he said he is most proud of the fact that they actually have one and that management has given its support to it. With the change from offering a free bus pass to offering $175 cash to higher level employees, that required management to provide more money for the program and the ETC succeeded in securing that support.

The ETC said that administering the surveys is a tedious and time consuming part of his duties. The on-line survey was just recently instituted and he has not yet experienced it. Prior to that there were surveys in which the employee had to fill in the bubbles with a #2 pencil lead. The ETC had to count them and keep track of who did not return one (he acknowledged that he is not supposed to do that because anonymity is supposed to be protected. He said that keeping track is the only way he can think of to be able to go back and personally encourage those who have not yet completed theirs). Some surveys are returned incomplete and so he must give them back to the employee and ask them to complete all questions. He said that generally, employees have been very good about completing and returning the surveys. The ETC has only administered them twice and it takes a few weeks to do. For work sites who are achieving their trip reduction goals, they have to do a survey only every two years. If a work site does not achieve its trip reduction goals, then the survey must be conducted yearly.

The ETC said that the company has gone through various changes. The previous company used to be large. Then another company bought them and they became much smaller. The newer company did things differently. Previously, the old company had no paid parking, most people used the bus and there were discounted bus passes offered and many people participated in the program. Then the newer company came in and many of the new people had paid parking and company cars, which changed the norm for participation in commute trip reduction activities. The ETC managed to get some exemptions for 230 of the employees, saying they were salespeople who needed their cars. These employees received paid parking. If an employee is exempted from participation due to the nature of his work that requires him to drive alone, then that employee is not counted among the number of affected employees who must collectively participate in commute alternatives and reach a target goal. Last year, the municipality changed the rules such that many of these employees

were no longer eligible to be exempted from the trip reduction requirements. Now they analyze more carefully why individual employees need their cars and whether they should have an exemption. No one can get an exemption as a salesperson because generally salespeople make their appointments with clients in advance and know which days they need their cars and which days they do not. Elimination of the exemptions made the company's trip reduction record worse. That is why the company had to do something. The ETC was pleased because they were forced to do something. A lot of people were cheating the system and the ETC suggested that maybe they were too. Partners in law firms do the same thing; they don't really need their car. That is when the company instituted the cashed out parking.

There are different entities that represent the trip reduction program to the work sites. The ETC said that he lives in the complicated world of insurance but the TRP is crazy. He said that he gets letters from the Mayor's office of the City of Seattle, King County, the Regional Transit Authority and the State of Washington.

The ETC credits the Employer Transportation Representatives because they are trying to enforce a law that he feels has zero teeth in it.

The ETC said that the way he handles the development of a trip reduction program is that it starts with a meeting with the ETC people. The ETC has a colleague who helps him and they develop ideas and a proposal for what more can be done. The ETC arranges a meeting between the Employer Transportation Representatives of King County and the company management so it is not just the ETC saying things. The ETC feels he needs some backup to add credibility and impact to the message and means of the trip reduction program.

Regarding "champions" of the work site, the ETC cites some people on the human resources committee who made a switch and they use the bus and the train. To encourage upper management people to use alternative transportation, the ETC tries to find examples of their peers who use commute alternatives. The ETC does not see any distinctions, departmentally or by job description, regarding employee receptivity to trying commute alternatives. There are some people who are outside sales people who will not consider it and some of the senior management who will not. The ETC perceives that the deciding factor is not necessarily being older, but having "old-school thinking." The ETC said that some employees have moved to Seattle from cities that were more congested and where taking transit was the way of life but then when they located to Seattle, they felt that they could suddenly drive. The ETC feels the difference in receptivity is more by salary than anything else, but there are exceptions.

The ETC said that ETC training requires a "horrendous amount of time (four hours) at some weird location and I would have to drive to work to get there." However, there is flexibility in formats for training. For example, there is a web site and there are network meetings of other downtown ETCs where this ETC got his training. He said an ETC can also just pick up the phone and talk to the Employer Transportation Representatives. If an ETC were brand new, he would recommend the training but since he has served as ETC for four to five years, he does not feel the need.

There are no brochures or other written information except a brief transportation policy. The Human Resources people will put together the employee information about commute alternatives, then the ETC proofs it.

In the ETC's circumstances, he interacts with his supervisor once a month on the elevator. They work on different floors. The ETC gets management support for events but not necessarily for Flexpass or other strategies that require a more involved commitment.

The ETC thought that work location and access would be the main reason for receptivity toward transportation alternatives. In London, gas is $6/gallon and they still drive. All they do is change the efficiency of their cars. People adapt when necessary. You have to pay them a ton of cash or put enough obstacles in front of them like, "You can't work here unless you use commute alternatives" or parking expense. Culturally, when you start to move up in the business ranks, the ETC does not believe that people necessarily go from riding transit to using their cars. But it is people who are already in those positions who will not give it up.

Organization	**D, ETC**
Type of company	Insurance, risk management
ETC's position title	Assistant VP
ETC for how long	4-5 years
Management of TRP, central or local?	One pre-tax subsidy program nationally, then each work site manages locally
Type of work site facility	Large building downtown
Dress code	Business casual and it is enforced
Volunteered for ETC position?	He replaced another. The new job included ETC duties. However, he said he wanted to do the work of the ETC
Motivation for promoting transportation alternatives	ETC's personal motivation is to be a good citizen. The company motivation is compliance.
Hierarchy of work place	Many VPs, then all the rest under them
ETC your primary duty?	ETC duties not part of formal position. He fits it in as he can. The ETC duties are the first to go, if he runs out of time.
How many people do you report to?	One person, a senior VP
Are ETC duties done independently or in coordination?	He must coordinate with the HR director because the subsidy is a benefit and she must know how the subsidy works in order to promote it.
Feelings about ETC duties	He enjoys the feedback he gets from others
Favorite aspect about ETC duties	Feedback, "Hey you did a great job."
Worst aspect of ETC duties	Lack of understanding by management of what options are and how company can be more creative. Management unresponsive to his ideas
How bad is traffic congestion	Not that bad. He has lived in cities with worse congestion
Necessity of state law	Yes, because no business would do it otherwise
Challenges of implementing TRP	TRP is not creative. He is hitting his head against a wall when he tries to discuss trip reduction with colleagues and management
Element of TRP most proud of	Used to be free parking or free bus pass. Now it is free parking or $175 cash.
Organizational support provided to ETC	ETC sees his supervisor in elevator sometimes. Mgmt. support for events but not for Flexpass.
How exemplary performance is rewarded	Employee recognition at meetings
Survey administration	Change in rules regarding exemptions for sales persons caused company to not meet its target
Champions	A few support staff and VPs
Distinctions among groups	By salary. VPs get paid parking. Support staff get $15/month. However, some VPs use alternatives. He believes deciding factor is old school thinking
ETC training	Takes too much time. Too many government entities contacting him gets confusing
Written information	Brief Transportation Policy paragraph supplied
Comments	At VP level, they get free parking or $175/month. The people who are in a position to make decisions about the TRP are the least affected by the whole program. Management unwilling to offer Flexpass because it would make current perk for VPs look not as good. With change in company ownership, VPs got paid parking and company cars

Interviews with Organization E, ETC and Supervisor

Organization E is a department of the federal government. There are over 1,000 employees at this worksite located in a downtown high rise building. There is no free parking. The ETC explained that prior to April 2003, the USDOT distributed Commuter Bonus Vouchers worth $300 to employees every three months. These vouchers could be redeemed at transit outlets for bus passes. This was the program for five or six years and this began in response to the state trip reduction mandate. Then in April 2003, the USDOT met with work site management and the transit agencies to arrange for providing the Flexpass to all employees. The ETC explained that federal government offices do not have to provide Flexpass to employees but most do.

The primary value of this organization that it wants to convey to customers is fairness, according to the supervisor, while the ETC said that the primary value is customer service. The supervisor of the ETC spoke with me. This government department has been located in its present downtown office for the past thirty years. The supervisor is not in a position to determine funding for the work site trip reduction program of her work site; this is determined at much higher levels within the organization. The supervisor believes that the state requirements mandating work site participation in trip reduction are necessary because, "It puts attention where attention needs to be put." The supervisor perceives that work site employees consider traffic congestion to be a problem. If the state trip reduction requirements suddenly were removed, she believes that transit ridership from her work site would <u>not</u> decrease. She said that twenty to thirty percent of their work force takes the ferry. This person has been a supervisor to her ETC for the past three years and prior to that was the ETC herself since the program began in the early 1990s. She believes that the element of her worksite trip reduction program that has worked best is the Flexpass, a year's pass that gives a traveler free ferry and bus service 24 hours per day, seven days a week.

The supervisor said that some work units are mandated to have their cars because they are needed for on-the-job appointments and field calls. The employer pays for parking for some personnel. Employee performance evaluations do not include employee participation in the trip reduction program. The most important activity of the ETC, according to the supervisor, is to serve as a compendium of knowledge regarding commute alternatives. She said "We don't need a cheerleader." The supervisor said that her support role is primarily to help the ETC with problems that may arise. The main motivation for supporting the trip reduction program is regulatory compliance and "It is the right thing to do." The supervisor said that there is no top management involvement in the day-to-day running of the program, nor does there need to be. The executive officer drafts pro forma memoranda that authorize maintenance of the budgetary support for transit vouchers in the amount of up $105 per month per employee in cities located within a five-state region. The ETC said that the USDOT makes the decisions for the work site but that the input from the ETC has been valued by the USDOT in making program improvements.

The ETC had to reschedule her interview four times, suggesting that she may not be in charge of her own time management, but that the nature of her job requires instant availability to demands as they arise. The ETC explained that the Flexpass arrangement provided for close to a 50 percent discount on the transit and ferry passes provided to the organization. The ETC described the work of the employees as encompassing a variety of professions. Dress code is business casual. The ETC duties were assigned to the ETC and

these duties are a part of her official job description. The ETC said that she reports to one person and that she executes her duties as ETC largely on her own. She said that her ETC duties take about 10 percent of her time. When asked about her feelings regarding her ETC duties, she said that she liked it, the program is excellent and considered a great benefit by the employees. Her favorite part of the ETC job is working with the employee; "They are glad to see me." The ETC perceives the traffic congestion problem to be bad. The ETC said she believes that the state requirements are necessary; "That's what made us do [the trip reduction program]." When asked what the main challenges of implementing the trip reduction program were, she said there were none. The biggest problem is people losing their Flexpasses. She said that she is most proud of when she succeeds in getting someone to try transit who had not done so before, and who found that he liked it and continues with it. The ETC described her supervisor as someone who backs her up, sends information out about the program, advocates for the program and makes sure that employees know about it. The ETC said that the manner in which employees are rewarded for exemplary performance is largely monetary rewards. The ETC said that she could think of no distinctions among various groups of employees that would make them more or less receptive to taking commute alternatives. "Even folks higher up…people don't live in the city. Most people are commuting a long way." The ETC said that at first she did not go to the ETC training because there were already two people at the work site who know how to conduct the business of the ETC and helped her teach her the job. Later she took some ETC training and says that the networking meetings are good. The ETC said that the cost savings of the subsidy is the biggest benefit of the trip reduction program, "Like a bonus in your paycheck." She knows of at least one person who applied for a job (and was hired) at this organization because she was aware of the good transportation benefits of the work site. This organization is benefiting in the recruitment of employees. The ETC said that her motivation for promoting transportation alternatives is to be a good citizen of the community.

Organization	**E, ETC**
Type of company	Federal government department
ETC's position title	Facilities Management Assistant
ETC for how long	3 years
Management of TRP, central or local?	Central, determined off-site
Type of work site facility	Large downtown office building one block from ferry
Dress code	Business casual
Volunteered for ETC position?	No, The ETC duties were assigned to her
Motivation for promoting transportation alternatives	Highest echelon of organization actively requires and supports trip reduction activities
Hierarchy of work place	There are a few levels above her represented at the work place, but another federal dept. works out the details of the commute subsidy
ETC your primary duty?	No, ETC duties take about 10% of her time
How many people do you report to?	One person
Are ETC duties done independently or in coordination?	The administration of the Flexpass is done by the ETC independently, but the advocacy is shared with her supervisor.
Feelings about ETC duties	The employees went from happy to happier over the years. Previously, employees received $300/qtr for transportation, now they get the Flexpass, which is a better deal for most.
Favorite aspect about ETC duties	"The employees are glad to see me."
Worst aspect of ETC duties	None provided
How bad is traffic congestion	Bad
Necessity of state law	"That's what made us do the TRP."
Challenges of implementing TRP	People misplacing their Flexpass
Element of TRP most proud of	When she succeeds in getting someone to try transit
Organizational support provided to ETC	The supervisor is her backup, sends info. out and actively advocates for the program
How exemplary performance is rewarded	Monetary rewards
Survey administration	Straight forward, tedious
Champions	Ferry people, even those high up
Distinctions among groups	No distinctions "Even folks higher up use transit. 20-30% take the ferry" ETC said that people live far away from downtown and it makes better sense to use transit for that reason.
ETC training	At first, she did not have to because there were people at the office who taught her the job.
Written information	None provided
Comments	Because transportation subsidies are institutionalized, and because the work force depends on public transit, there is not much of a sell job required. The ETC is largely an administrator rather than an influencer.

Org.	**E, Supervisor**
Type of company	See above
Worksite location and type	See above
Motivation to locate company in its site	Has been at its present office for 30 years
What makes work site unique	The serve a unique function in federal government
Supervisor position	Chief, Logistics Management Section
Supervisor's power to implement TRP	Has only the power to provide input and recommendations to those higher up
Necessity of state law	Yes, it puts attention where attention needs to be put
Employee response if law repealed	Transit ridership would not decrease
Perception of employee response to traffic congestion	Yes, supervisor perceives that employees believe traffic congestion is a problem
How long supervisor to ETC	3 years, was formerly the ETC
Best TRP elements	Flexpass
Circumstances influencing TRP effectiveness	
Employee distinctions that influence receptivity	Some work units are required to have cars because they do field work
Organization wants to be known for	Fairness, although the ETC said customer service
Does participation affect employee performance evaluation?	No
Most important ETC activity	Serve as compendium of knowledge. "We don't need a cheerleader."
Supervisor support for ETC	High support
Supervisor's main motivation to support TRP	Regulatory compliance, solving a business problem, it's the right thing to do. It is noted that employees have been recruited to work at this office because of the transportation benefits offered.
Level of corporate support	Support at highest levels
Comments	Employees use transit out of true necessity. Driving is too expensive and would not save much time.

Interview with Organization F, ETC

Organization F is a biotechnology company that has three offices in Western states, with its headquarters in Seattle. The ETC agreed to be interviewed. He said the work site occupies half of a building. The work site is considered "downtown" according to CTR standards but the site is actually "up the hill." The company is soon moving to a new location farther toward the downtown. The motivation to move is that their lease will expire soon and the property owner wanted to raise the rent. The new work site office is a new facility from where it will be much easier to take the bus near the bus tunnel. In the long run it will be less expensive to move farther downtown because it would have been necessary for expensive renovations of the current facility and the organization was also able to secure a low-interest government loan. He described the current location as close to some hospitals and offices where there are many bus routes and there is considerable traffic congestion. According to company literature, Organization F is a company that relies on team work and values employees who have creativity and drive. He said that he concentrates his ETC efforts primarily on Seattle, while offices in other state have a voucher program and a vanpooling program. He explained his job function as in the area of environmental health and safety in which there are procedures to be developed and followed for monitoring conditions and protecting the employees from occupational hazards. He said that the ETC job "just happened upon me." He said that the organization has no dress code. There are some marketing people who wear nice slacks but the people in the lab can wear shorts or sweat pants. It is relaxed. There are 170 people at the work site. The ETC said that his position was run through the human resources office as a benefit. The ETC (before he was designated as one) started to help them out just because he was interested. He was just trying to get people out of their cars. Then it became his job. Initially, the duties of the ETC were not part of his job description and now he is not sure if it is or not but the person in HR who had the job found it to be burdensome and because the present ETC wanted to do this, the responsibilities were turned over to him. The ETC explained that his reason for wanting to get people out of cars is because when he first moved to Seattle, he did not have a car for two years and used the bus system. He thinks the Seattle bus system is easy to use. He said that driving to work would not have saved him much time and he would have had to pay for the car. The ETC tries to help others realize the benefits of commute alternatives. His personal experience has helped make him interested in it. From the company side, he believes the motivation is regulatory compliance. But he has never had any issues regarding management support. He can always get money for prizes during promotions. Regarding his position in the organizational hierarchy, the ETC said the health and safety department that he works in "gets shuffled around." The department used to be within the human resources department but now it is within property management so now they fall under the facilities side of things. They are a subgroup of property management. Their role involves risk mitigation. The ETC spends an hour per week on ETC duties and it varies depending. During promotional weeks, he spends more time. He reports to just one person. Regarding ETC duties, he is on his own, but he may require approval for use of funds for prizes, which comes from the HR budget, which means he must get approval from HR. Bus passes come from HR. It has traditionally set up this way because these things are considered benefits. The ETC says he has worked lately by himself but has in the past brainstormed with HR on ideas for promotions. He does not talk much with his supervisor regarding ETC activities. The ETC said that there is no set work schedule. People are running experiments. There are times when people must work late so they want the flexibility of driving. What he likes best about the ETC job is when people come up to him and thank him for putting the trip reduction program in place. For

example there is a parking checkout program in which they can check out the space in the event of a personal appointment. The ETC's goal is for the other employees to make more use of that checkout space. Getting feedback and compliments is what he likes. He least likes the challenge of convincing people to try commuter alternatives. He feels like he is doing the work for nothing. The organization leases parking spaces. The organization subsidizes parking 50 percent. HR does not want to see anything decrease. People do not like it when it is perceived that a benefit is being taken away. Which is why HR does not want to take it away. The organization meets its trip reduction goals so they do not feel the need to remove the parking availability. There are a few lots. In one location, a close by covered parking space is $150 per month. The employee pays $75 and the organization pays $75. In another parking lot that is farther and uncovered, a parking space costs $70, so the employee is paying $35 per month. In the new building, all the leased spaces will be $150 per month and so some employees may not want to pay $75 per month when formerly they were paying $35.

The ETC believes that the state requirements for trip reduction are necessary because he says that except for a very few companies, most companies would not do anything. Employees have fully subsidized bus passes. If state requirements were repealed, he thinks you would see companies drop pieces of their program, then employees would start weighing the convenience versus cost, so there would be a rise in SOV rates. The ETC said he is proud of the flexible parking option. Before this program, employees could either have subsidized parking or a flexible bus pass. So you had to commit to one or the other. Then they started using a Flexpass through Metro and Sound Transit. You paid a flat rate per every employee whether they used it or not. Then you would administer a usage survey every year and based upon survey results, the organization would pay a certain fee. You would basically pay for those trips taken on transit and you would get a discounted rate. It offered people flexibility because people could get the Flexpass and still buy a parking space if they wanted to. The key is providing flexibility to employees. The only problem is that it possibly increases SOV rate. But ideally, you get people to get rid of their parking space by giving some kind of incentive and the freedom to have a parking space to check out on occasion. For the last CTR survey, we did not meet our goal, and that is when the company decided to support our idea of the parking check out program. This is the first year that they did the survey on-line. Other people at the work site who are "champions" of alternative commuting include two bicyclists who are hierarchically in the middle, who commute 17 miles round trip and others who are long-time transit users. Some people live close enough to walk. Some people have 11/2 hour bus trips one-way. He suspects saving money is the main motivation and not have to pay attention to traffic. Support staff are more likely to take transit. Many employees in upper management drive by themselves. Two upper management people use motorized scooters to get to work. It lets them come and go by themselves. The ETC said that the King County Metro training was very relevant. They provide assistance on how to administer the survey and then there is promotional guidance. At meetings, there are speakers who update them on special projects. He would like to hear more about what other people are doing. He said that there were some promotions that he does not think other companies have done. He thinks there is an opportunity to share more. Metro has a good website with promotional materials.

Organization	**F, ETC**
Type of company	Biotechnology manufacturer
ETC's position title	EHS Associate II (Environmental Health and Safety)
ETC for how long	
Mnmt of TRP, central or local?	Local, this work site is the company headquarters
Type of work site facility	Work site occupies half of a building. Considered downtown but is really "up the hill." The work site will soon move closer to true downtown. New site is new facility and actually less expensive due to government loan. Incidentally they will be closer to a bus hub.
Dress code	No dress code. Sweat pants, shorts
Volunteered for ETC position?	"The job just happened upon me." However, he said he started helping out the HR person who was the previous ETC and who did not want to do the job.
Motivation for promoting transportation alternatives	When he first moved to Seattle he did not have a car for two years. He believes driving is expensive and does not save time. ETC said the company motivation is regulatory compliance.
Hierarchy of work place	ETC's Supervisor is the Director of EHS/RSO (Radiation Safety Office). His department "gets shuffled around" suggesting it is a dept. of lower status. ETC said he gets sufficient management support.
ETC your primary duty?	No, ETC spends 1 hour/wk.
How many people do you report to?	One person, his supervisor in property management, but he does not talk to him regarding ETC duties.
Are ETC duties done independently or in coordination?	He operates on his own but must get approval for the use of funds from HR for events prizes. Bus passes come from HR. They are considered a benefit. He brainstorms with HR people for promotions.
Feelings about ETC duties	He believes in it
Favorite aspect about ETC duties	When people thank him for putting the program in place
Worst aspect of ETC duties	Trying to convince the unconvincable.
How bad is traffic congestion	
Necessity of state law	Yes, otherwise companies would do nothing. If law were repealed, companies would start dropping pieces of their programs, then employees would reweigh convenience versus cost
Challenges of implementing TRP	HR subsidizes parking 50%. Because this is a benefit, HR does not want to take it away, causing perception that benefits are being eliminated. Because the organization is reaching its mandated goal, it does not feel that it has to do anything more.
Element of TRP most proud of	Parking checkout program for occasional car use coupled with Flexpass, done in response to not meeting TRP target. Prior to this, employees had to commit to either subsidized parking or a bus pass.
Organizational support provided to ETC	Only enough to achieve regulatory compliance
How exemplary performance is rewarded	No info given
Survey administration	Done easily on-line
Champions	A few long distance cyclists,
Distinctions among groups	Generally support staff take transit, but there are many people higher in hierarchy who use commute options. Two upper mgmt, people use motorized scooters.
ETC training	Very relevant. He wants to hear what other companies do for promotions.
Written information	Yes.
Comments	Company literature emphasizes team work and employees with creativity and drive

Interviews with Organization G, ETC and Supervisor

Organization G has over half its employees coming to the downtown using a mode other than single occupant vehicles. This is the only organization in the study that has a full-time ETC. The ETC position was something the ETC applied for because he wanted a full-time job as an ETC. As a result, the characteristics and attributes of this individual may point to a profile of the kind of person who is truly interested and motivated to do the work.

The ETC position in Organization G could have been housed in a number of different departments but was purposely located within a division and a department that is closely aligned with the concept of trip reduction in the ways it aims to serve its customers. Key elements of their mission include efficiency, safety, reliability, community improvement, preserving the environment and enhancing the economy. The organization as a whole does not share the same mission but has nonetheless provided institutional support to the trip reduction program. Within his own department, the ETC gets good support but there are departments within the organization that may have no inherent interest in trip reduction. There is a general lack of awareness and recognition for trip reduction activities. Sometimes the ETC senses resistance, "Uh oh, here comes the ETC. What does he want now?" The ETC serves several thousand employees who are located in numerous large and small offices and workshops. The ETC is directly assisted by seven site coordinators located at different work sites. As a result, there is a greater level of organizational structure in support of trip reduction than most work sites. This structure serves a highly decentralized work force.

The primary work of the seven site coordinators has nothing to do with trip reduction but they assist where they can as time allows. The site coordinators are not ETCs but they act in a capacity similar to that of ETCs of other organizations, in the sense that trip reduction activities are not part of formal duties.

Each work site represents different work duties and professions. The primary offices of this organization have always been located in the downtown. The offices are housed in five contiguous buildings. The downtown location is symbolic in its centrality to customers as well as practical for purposes of access. The budget that covers the salary and activities of the ETC is spread across numerous departments. The ETC works directly and only for one supervisor. The supervisor is under a division director, who reports to a department director, who reports to the head. As a result, neither the ETC nor his supervisor is in a key position to decide matters relating to subsidies, but the approval must come from higher up in the hierarchy. Generally that support from higher levels is forthcoming. The ETC maintains contact with key people in various departments, who have the organizational knowledge and know-how to get things done and secure departmental cooperation. This includes the manager of another divisions as well as the executive assistant of a department director.

Dress code depends upon the type of work done and the level of the person in the hierarchy. Managers and supervisors wear suits or business casual. The ETC wears slacks and sport shirts and a tie to important meetings or presentations. Dress code differentiates between management and lower level employees as well as the type of work performed.

The ETC wanted the job of ETC and applied for it. He said he understands transportation and in the past drove a taxi. He has a degree in education and enjoys work that involves marketing and public information, visiting different sites, pitching elements of the trip

reduction program and planning special events. He perceives that the traffic congestion problem is not that bad, in comparison to New York, San Francisco and Los Angeles. Nonetheless, his motivation for promoting transportation alternatives stems from growing up in the 1960's and 1970's during which the concept of conservation was a major focus.

He said the worst part about his job was administering the biennial survey, which involves a great deal of paper distributing and collecting, for those work sites that do not work on computers. His favorite work activity is putting on events. When asked if the state requirements for trip reduction plans were necessary, he said, "Adam Smith's invisible hand will not guide people to make the best choices." He said that in recent years there has been far less social pressure to behave responsibly. The main challenge of his position as an ETC is working within a large bureaucratic hierarchy, in which processes take longer, people stay in their jobs for long periods of time and are reluctant to change. Change is perceived by many as stepping on toes and violating turf.

He is most proud of his success in achieving small refinements that benefit particular constituencies, such as carpoolers and bicyclists. For bicyclists, the refinements include securing new bike racks, showers and permanent lockers. For carpoolers, the ETC notes that these persons tend to be at remote work sites that are underserved by transit. Twice yearly the ETC gets people to register their carpools (so he can count them) through a Commuter Transit Voucher and a Bonus Voucher that is good at sporting goods stores or gas stations.

The ETC's primary support he gets from his supervisor is guidance on how to work through the organizational channels to get things done and identifying the core of an issue, which helps point to solutions.

The ETC gave praise to the county program that provides ETC training. There is initial ETC training that is offered in a 1- or 2-day session. Also there are meetings every few months in which ETCs can run scenarios of a work site's unique situation and the group offers ideas and brainstorming. The ETC said that not enough people make use of this opportunity.

The supervisor of the ETC also agreed to be interviewed. He has supervised the ETC for more than 5 years. He was a more knowledgeable person than the supervisors of most work sites by virtue of his work. The supervisor said that the ETC's effectiveness relies upon efficiency and team work. He described the work site as very large and the ETC is just one person who is positioned in the "lower middle of the food chain". He said that one's place in the hierarchy is important to getting things done. If the ETC is going to get much done, he must rely on the institutional resources of many departments. The power to control and fund the work of the ETC is partly outside the power of the supervisor. The supervisor said that Organization G meets the trip reduction requirements of the state but that the organization could do more especially in terms of providing a transit subsidy. He also said transit is such a good deal comparable to walking. He believes that even without a subsidy, people would ride transit anyway. He said that the subsidy does motivate some people to ride the bus. Parking is available to employees. Employees must pay for it and it is expensive. The supervisor believes that the state requirements are necessary but not sufficient to implement effective trip reduction. For example, ridematching services, preferential parking for vanpools and carpools, parking management, and subsidies are all needed and these elements work together. The supervisor said that he perceives traffic congestion in Seattle as not a big problem but that congestion in Seattle rates among the highest in the nation because of the

manner in which it is measured. He said that highway congestion is measured on certain regional freeways during peak times; however, bus riders, bicyclists and walkers do not perceive traffic congestion to the same degree.

The supervisor believes that in order for the trip reduction program to be effective, the ETC must be on site meeting people one-on-one. That requires that each department cooperate too because when the ETC gets into a work site it requires time. There needs to be management support coming from the department director to allow the needed time. The institutional support must be genuine, serious, and consistent because there are always conflicting tensions to participate in training and at same time get work done.

The supervisor believes that overall, the institutional support of Organization G to reduce employee SOV trips is adequate but that a greater response depends on changes that would be politically unpopular, such as parking becoming less available and more expensive and exclusive bus lanes. If buses were more reliable, people would take them more.

When asked whether any distinctions could be made among groups of employees relative to their willingness to use alternative transportation, the supervisor said there are distinctions among groups within the work sites for two reasons. The first reason is practical, based upon job location and size. If there are only a small number of people located within a remote work site, there may be poor bus service and it becomes more difficult to develop vanpools. Some jobs require odd shifts and overtime, when bus service is not available. The supervisor said that the second reason was cultural based upon profession. For example, employees located at shops in the downtown will not take alternative transportation. The mentality of working in a shop is that you come in your pick-up truck. A practical side to this is the need to bring tools. Emergency response personnel also will not take alternative transportation. “That’s not how we get around”.

The supervisor admitted to the risk of some stereotyping but perceived that in general, planners and designers live in the city and walk or take transit, while engineers have a more conservative lifestyle, live in the suburban fringe and drive alone. Within the larger Organization G, we are a department run by managers who live in the suburbs.

The supervisor said that the major focus of Organization G changes every few years as the people in top positions change. Presently, due to the economy, it is a focus of “back-to-basics”, taking less risk on big new ideas, and maintenance and efficiency. An employee’s participation in trip reduction is not part of their job performance evaluation. The supervisor said that the most important activities of the ETC are small group presentations, one-on-one meetings with employees, administering the biennial survey, setting goals and monitoring progress.

The supervisor believes that his main support to the ETC comes in the form of good communication. There are weekly staff meetings with a round table discussion. “Nothing gets done alone.” While the nature of the ETC’s job means that he works alone more than most, he has administrative support within the department (such as from public relations and GIS offices) as well as cooperation from other departments to be allowed to speak during staff meetings. The organization supports the ETC’s participation in outside events, such as Bike-To-Work Day and through participation in a committee of the public and private sector.

The organization has shared literature with other organizations and has placed cross links on its web site.

The supervisor said that the main motivation for the organization to promote the trip reduction program was the State requirements. But given the level of institutional support, he said that there is interest above and beyond the state mandate.

Organization	**G, ETC**
Type of company	Local government department
ETC's position title	ETC
ETC for how long	5 years
Management of TRP, central or local?	Central
Type of work site facility	Downtown, five contiguous office buildings
Dress code	Varies greatly by job duties, suits to jeans
Volunteered for ETC position?	He applied for this full-time ETC position
Motivation for promoting transportation alternatives	He believes in conservation. He understands transportation and he likes marketing and promoting
Hierarchy of work place	ETC position housed within an organization department that provides support, but other departments may have no interest at all
ETC your primary duty?	Yes
How many people do you report to?	One supervisor only. Above him is division director, department director, then head. Matter relating to subsidies are decided above the supervisor. Generally that support is forthcoming.
Are ETC duties done independently or in coordination?	ETC has seven site coordinators who voluntarily assist him but who also do other jobs themselves. ETC maintains contact with key people in other depts. who have organizational knowledge. This is necessary in a bureaucracy.
Feelings about ETC duties	The job is a good fit for him
Favorite aspect about ETC duties	Putting on events
Worst aspect of ETC duties	"Uh, oh, here comes the ETC. What does he want from us now?"
How bad is traffic congestion	Not as bad as some cities
Necessity of state law	Yes. "Adam Smith's invisible hand will not guide people to make the best choices."
Challenges of implementing TRP	General lack of awareness and recognition of trip reduction activities, working within large bureaucracy
Element of TRP most proud of	Achieving program refinements to benefit particular constituencies.
Organizational support provided to ETC	Guidance on how to navigate bureaucracy, define the nut of the problem and point to solutions
How exemplary performance is rewarded	Service awards, each department handles it differently
Survey administration	Every two years on-line
Champions	Bus riders most consistent, good carpool examples, not many vanpools, group of bicyclists
Distinctions among groups	Not departmental, but by types of work sites. "Pick-up truck culture" By the end of the day, "They are outta there."
ETC training	Gave praise. ETC said not enough others make use of the available resources
Written information	Yes
Comments	Greater level of organizational support, in terms of personnel to do the work, there is institutionalized explicit support, yet many organization departments are indifferent to it. Different departments represent different professions and work duties. In a bureaucracy, people stay in their jobs for a long period of time and are reluctant to change. Bureaucrats have turf and are mindful of others' turf.

Org.	**G, Supervisor**
Type of company	See above
Worksite location and type	See above
Motivation to locate company in its site	Organization primary offices have always been located downtown for centralized presence to aid access
What makes work site unique	Large size and institutional mission to achieve efficiency
Supervisor position	Supervisor, Bicycle and Pedestrian Program
Supervisor's power to implement TRP	Budget that covers the ETC is spread over numerous departments and budgets so that no one office bears the whole brunt. Power partly out of supervisor's control. "We are a department run by managers who live in the suburbs."
Necessity of state law	Necessary but insufficient to implement effective trip reduction. Need services, subsidies, parking management
Employee response if law repealed	Even without a subsidy people would ride transit anyway. But subsidy does motivate some people to ride the bus
Perception of employee response to traffic congestion	Employees see congestion as a problem. The supervisor believes it is not a bad problem. TTI rates Seattle as one of the worst because they measure it during peak times on regional freeway. Walkers, bicyclists, transit riders do not perceive congestion in the same way
How long supervisor to ETC	5 years
Best TRP elements	
Circumstances influencing TRP effectiveness	The work site meets the state required target but the organization could do more, such as a better transit subsidy. Requires departmental cooperation to allow ETC to visit and make presentations
Employee distinctions that influence receptivity	Site location and site size. Remote small sites have more trouble with using alternative transportation. Jobs requiring odd shifts and overtime use alternative transportation less. "Pick-up truck mentality" of those in emergency response and in trades working in shops downtown, "That's not how we get around." Also, there may be a distinction by professions, in general, and depends on level of conservative thinking.
Organization wants to be known for	Main focus changes every few years based on changes in top leadership. Current focus is "back-to-basics" with an emphasis on maintenance and efficiency and less emphasis on big new ideas
Does participation affect employee performance evaluation?	No
Most important ETC activity	ETC effectiveness relies on efficiency and team work. Work site is very large, ETC is in the "lower middle of the food chain" one's place in the hierarchy is important to getting things done. ETC must be on site, meeting with people
Supervisor support for ETC	Weekly round table meetings. "Nothing gets done alone."
Supervisor's main motivation to support TRP	Goes beyond meeting state mandate
Level of corporate support	Actions that would make trip reduction more effective, such as making parking unavailable and creating exclusive bus lanes, are politically unpopular
Comments	Supervisor is a more knowledgeable person with more greatly aligned values toward trip reduction than other supervisors.

Organization H

The ETC did not respond to repeated emails and phone messages to schedule an interview.

Interview with Organization I, ETC

Organization I is a family-owned company that is over 100 years old and one of the largest private companies in the state of Washington. The industry produces raw materials and runs a manufacturing operation. The company is a member of the EPA Performance Track Program, in which a facility must have a proven record of regulatory compliance, go beyond legal requirements in its environmental efforts, and make a public commitment to reducing pollution.

The company employs over 2,200 people and has been located for the last eight years in Seattle but has recently moved its principle operation to Tacoma. The corporate office is still in Seattle but will also soon move to Tacoma. Each work site within the organization is in charge of its own trip reduction activities. Presently, there are just 90 people at the corporate headquarters in the downtown Seattle location, which means this work site no longer must participate in the trip reduction program mandated by the state. The downtown work site has been located within a large office building. Many people ride the ferry and it is a 10- to 12-block walk up hill from the ferry to the work site. The ETC says that rainy weather does not thwart people from walking; people are always prepared for rain.

Regarding work site culture, the web site for the organization has an entire section on environmental stewardship. Key phrases include "fostering a beyond compliance philosophy" regarding how business is conducted and in "taking a long term view" regarding how decision making is focused on achieving long term gains. However, when speaking with the ETC about it, an additional element emerges. She said "People's eyes are always on us." The organization is aware that for good public relations, the organization must conduct business with care. The motivation may be less the desire to "do the right thing" and more "do the smart thing for long term business profitability."

The ETC is a receptionist and her position falls within the accounting department. She says the organizational hierarchy is relatively flat. The CEO is present and very accessible to talk to. The CEO "…is huge into [trip reduction activities]…" and will personally encourage people to use alternative transportation. When asked if there were any champions at the work site—commuters she can point to as exemplary examples, she said that the best champion is the CEO who is always speaking out about it. While the organization has not come under the trip reduction mandate for the past two years, the organization has continued to provide 75 percent of the cost of a bus or ferry trip. That is $105 per quarter maximum per employee. The organization also provides free bus coupons for new employees. The ETC is glad not to have to administer the annual surveys because it was difficult to get enough of the surveys back. Falling outside the mandate has eliminated paperwork and reduced what needs to be done. The duties of an ETC are not part of her formal position description. She is expected to fit those activities in with her regular duties. The position of ETC was assigned to her but she was initially asked if she would do it. The ETC describes her ETC duties as keeping her own shop. She covers the responsibilities independently of others except that she needs help finding someone to cover the desk while she meets with someone. The ETC believes that her own commute travel using the ferry and bus is important because she can use herself as testimony to the personal benefits of alternative transportation. The ETC also said that her most favorite element of being an ETC is helping people cut their costs and "It is always a joy to encourage people" and she is proud that she can provide employees with the information they need. She believes her role is as a middle man. Her least favorite task had

been administering the required surveys. Her perception of mobility in the downtown is that the traffic congestion is very bad, as evidenced by difficulties crossing streets and making turns. Tourists get confused by the one-way streets. The ETC believes that the state requirements for trip reduction are necessary and justified because anything that helps is good. The ETC could identify no particular group or groups at the work site that are particularly receptive to commute alternatives. She observes that the employees at her work site are a homogeneous group. Regarding written materials provided, her company has no examples. The ETC says there is nothing written but people stop by her desk to find out what they need to know.

Organization	**I, ETC**
Type of company	Raw material producer and manufacturer
ETC's position title	Receptionist within accounting department
ETC for how long	
Management of TRP, central or local?	Local
Type of work site facility	Recently moved to Tacoma from Seattle, within a large office building downtown
Dress code	Business casual, enforced
Volunteered for ETC position?	She was asked if she would do it.
Motivation for promoting transportation alternatives	Personally, she benefits from cost reduction. Organizationally, the work site has fallen under the 100 minimum for falling under mandate, but company has continued to provide $105 per quarter per employee for transit "Eyes are always on us."
Hierarchy of work place	Flat
ETC your primary duty?	No, she must fit it in somewhere into her regular duties, not part of formal job description
How many people do you report to?	
Are ETC duties done independently or in coordination?	She describes her duties as "keeping her own shop". She must find someone to cover the desk while she meets with someone
Feelings about ETC duties	She uses ferry and bus herself so she is a good representative. She believes her role is as a "middle man"
Favorite aspect about ETC duties	Helping people cut costs. "It is always a joy to encourage people" She is proud to provide information that employees need
Worst aspect of ETC duties	Administering the surveys
How bad is traffic congestion	Very bad
Necessity of state law	Necessary and justified. Anything that helps is good
Challenges of implementing TRP	None cited, "We have been lucky."
Element of TRP most proud of	She is proud to provide information that employees need
Organizational support provided to ETC	CEO is present and very accessible to talk to. He is "…huge into trip reduction activities…"
How exemplary performance is rewarded	Raises, reviews, bonuses
Survey administration	Glad to no longer have to do it
Champions	The CEO is always speaking out about it. Many ride the ferry, 12-block uphill walk from ferry. People always prepared for rain.
Distinctions among groups	None, they are a homogeneous group
ETC training	
Written information	None, people come to her for verbal information
Comments	Family-owned company over 100 years. One of the largest in the state. A member of the EPA Performance Track Program. Web site has entire web page on environmental stewardship, which reads, "…fostering a beyond-compliance philosophy…" and "…taking a long term view…" But the ETC says "People's eyes are always on us."

Interview with Organization J, ETC

Organization J is an architectural firm that located in Seattle and designs retail centers, shopping malls, hospitality, healthcare, corporate and mixed use destinations. The work site employs over 400 employees. The ETC agreed to be interviewed but she seemed under time pressure and talked very fast. The ETC said the entire company is housed within one work site. She described the facility as located within a large building downtown. She described the work site dress code as casual professional. She had been asked to do the job of the ETC but she said that she personally believes in it "My heart's in it." The ETC described her job as clerical and she works as the assistant to the board of directors. She describes her ETC work as something she can do independently of others and the amount of time is usually two to three hours per month but it depends on what is happening at the time. The ETC seemed uncomfortable with some of the questions the interviewer asked, such as "What are our feelings about performing ETC duties?" The response was "What are my *feelings*??" like she did not want to talk about feelings. The ETC did say that she liked communicating things.

"It's critical to have someone in a large corporation helping coordinate that. You're communicating to your employees not only the importance of it, which I think just any normal person who keeps their eyes open to what's around them is going to know that but I mean in terms of a large organization, communicating different things that are available to them for commuting alternatives is really an important thing to do. And although there are times when I think there are 8000 other things to and sometimes I think that way but I do always make time for these duties because I do personally feel they are important and I want to stress that importance to others. Who might not.., it's easier just to like, I'm not going to think about it so I'm not going to do something about it, kind of forcing the issue to remind people about what's going on this or this is what we can do or this is what our city can do.…"

She also did not offer a least and most favored aspect of her ETC duties; "It's all the same. It's very positive, I'm glad that I'm doing it and I'm glad that it is not taking up more of my time. I know that I could get more into it and spend a lot more time doing it but that's just not feasible at this point. The ETC said that traffic congestion was bad. "Oh my gosh, it's horrible." That's the reason why this is so important, to let people know,…we cannot obviously make people have a heart for what they don't have a heart for but I believe that the traffic congestion problem is horrible and it's getting worse."

Necessity of State Law?
"I think it's really the challenge is how do you force those requirements? We have a Commute Trip Reduction Law that was started in 1990. If you are a company larger than 100 employees, you are required to do this that and another thing. I believe that that's great and I also think it's hard to enforce that. They've got the whole commuter trip reduction…there are a million people hired by the city to implement this stuff. And I think that's all great.…I would be interested to know, what have we really seen as improvements since we have started this commute trip reduction law? I mean it's been over 10 years now. I'd like to see maybe some tangible results."

Do you think there might be a different way other than a state law?
"I don't know but what? You can't I mean frankly, here we have, we are communicating how important. One of the big benefits of being hired by a company like this is that when

you get high enough you get company paid parking, well that encouraging you to drive your car by yourself, so that's sending a little bit of a mixed message and yet that's what people want. Yeah, I'm not for big government. I'm not for the state requiring a zillion things of us as citizens and companies, but I'm not quite sure what other ways to go about stressing the importance of this other than the pendulum swinging so far to the other end where we become another Southern California, and people have to move because commuting is getting to them so bad. I mean and then you realize, oh yeah that's important, but years and years ago the city planners didn't plan this out very well, we have so few alternatives and they just spend so much money on these focus groups and all these things to figure what our problems are but let's see something be done about it. We've had these studies going on for the last twenty years. It's like, just do it."

What have been the main challenges for implementing the TRP for your particular work site?
"I don't know of challenges. The only challenges are, how many people live in a very close proximity to downtown to work near alternative modes. Because the congestion is so bad, people are force to move out to the suburbs, then they are forced to drive in because the bus service isn't that great in their areas, but the challenge for me is seeing that there are so many people that could be using alternative forms of transportation but they aren't but the company does a great job but you can offer somebody a benefit but they don't have to take it. You can offer somebody a lot of elements in this commute trip reduction, but people will say, oh no it is easier for me to drive. It's almost a convenience thing."

"Employees don't like congestion of the city, not from a commuting perspective but they want to separate their job from the rest of their life. And the simple fact that it is so much cheaper to live in the outskirts and they like living far out from the city because they like the aesthetics of it."

Proud of?
"Oh gosh, well you know I think it's funny because, when I hear about what other companies are doing in their Commuter Trip Reduction programs, and don't get me wrong, I am proud to work for this company and I'm proud to support their CTR, I think this company does a great job but I think there are other companies that do a lot better too, I mean I am definitely proud that we have some pretty serious program elements and I think we can always do better. I cannot think of anything specific that I am proud of, except that we care about this."

The most effective element?
"A lot of people use the pass. Most people use the bus. I'm so glad that the company subsidizes bus passes. That's the bread and butter and we have many people who commute by ferry and we subsidize those as well."

Employees of the month?
"We are so large it runs the gamut. A studio or department meeting, a pat on the back, a team lunch, verbal. No one program, at the discretion of the department head. The culture of that particular work group. We do a lot to reward our employees but it is not a structured system. We get so busy it is hard to remember to say thank you."

The ETC works for the Board of Directors. She sees emails that go around reminding others to praise those who have performed well. "That's a huge reward because it is in front of the

board and it is such a crazy busy office that taking time out just to say thank you is significant."

During survey time, it is not computerized, it is hand done. ETC does an email then follow up with memo and put hard copy in their folder. "I must brief all the new employees. I cannot follow up folks individually, I do continue to remind people to follow up. We must get 70 percent response rate. We have been borderline. And if not, this is so peripheral, they are only required to do their job, and if they do not do this, I'll follow up with an email. It's up to me to help them care. Speaking of my time commitment, that is a huge time commitment."

Champions?
"Yes, we do. I know a couple of folks who ride their bikes, being the position that I am in, I pretty much know everything. I have access to everybody. Who is into what."

Distinctions among groups?
"The younger people are more into it. And this is just a generalization but it is our partners who get their $280/month free parking in the building who are the ones who drive themselves to work by themselves every day. It's seniority and that is just a generalization. Location of where people live makes a huge difference. The farther out you live, it requires more working out the details and everyone wants convenience. In architecture and design it's not like you are coming in at 7:59 to start work at 8 a.m., then leaving at 5:01 every evening, we've got people, working around the clock here, so that makes it hard too because they do not know when they are going to be leaving work, that's not the norm though, I think that is the exception."

ETC training?
"I would have to say that I'm not that great about attending. I would have to say that I could do better. I did attend in the beginning. I have been the ETC here for almost 10 years. I haven't gone to a training session in years and it would probably behoove me to go to one to get some new ideas, but I find that keeping things as simple as possible here works the best. Here in our company of such a large size and in our industry, there are so many different programs going on at the same time, that I think it's important to have things stable. We are not changing things and not trying to make things better all the time but people like a little bit of predictability. But the importance of the ETC training is down a notch relative to all my other job duties."

They have a one-page information sheet. She will email it to me.

Organization	**J, ETC**
Type of company	Professional services
ETC's position title	Executive assistant to Board of Directors
ETC for how long	
Management of TRP, central or local?	Local
Type of work site facility	Office building downtown
Dress code	Casual professional
Volunteered for ETC position?	She was asked to do it. But "My heart's in it."
Motivation for promoting transportation alternatives	
Hierarchy of work place	Being in the position that I am in, I have access to everybody. I pretty much know everything. Who is into what.
ETC your primary duty?	No, 2-3 hours per month
How many people do you report to?	
Are ETC duties done independently or in coordination?	
Feelings about ETC duties	"What are my *feelings*?" It's critical to have someone in a large company coordinate the effort. She has 8000 other things to do.
Favorite aspect about ETC duties	"It's all the same."
Worst aspect of ETC duties	"It's all the same."
How bad is traffic congestion	Horrible
Necessity of state law	Yes, but how do you force these requirements? ETC wants to see some tangible results. I'm not for big government. The planners didn't plan this out very well and they are spending too much on focus groups. Company paid parking sends a mixed message.
Challenges of implementing TRP	The company does a great job but you can't force people to use the benefits. Because the congestion is so bad, people are forced to move to the suburbs because it is cheaper and they like the aesthetics of it. The farther out you live, the more it requires working out the details of using alternative transportation.
Element of TRP most proud of	I'm proud to work for this company. We care about this. I can't think of anything specific that I am proud of. The most effective program element is the subsidized bus pass.
Organizational support provided to ETC	
How exemplary performance is rewarded	Differs according to discretion of department head. We are so busy it is hard to remember to say thank you.
Survey administration	Huge time commitment to follow up to get people to fill out survey
Champions	People don't have a heart for trip reduction.
Distinctions among groups	Seniority. "One of the big benefits of being hired by a company like this is that when you get high enough you get company paid parking." Partners gets $280/month free parking
ETC training	Keep things simple and predictable. There are so many programs going on it is important to have things stable. Training is down a notch relative to my other duties.
Written information	Yes
Comments	This person talked very fast.

Organization K

The ETC was willing to be interviewed but could not be available until beyond the time frame of the study.

Organization L

ETC did not respond to repeated emails and phone messages

Interview with Organization M, ETC

The mission of Organization M is "To continually exceed customers' increasing expectations." There is a photograph of the interior of a family van and there is a television attached to the ceiling above the rearview mirror. The organization has a creed as part of its ethics policy. The first sentence of its creed is "We believe in the free enterprise system." The web site features pages of illustrative examples of efforts to conduct its business in an environmentally sustainable manner and its participation in community service. The web site also emphasizes its policies promoting a diverse and safe work place. The business handles various hazardous materials. The company is over 100 years and has successfully acquired twelve other companies since 1968.

The work site of Organization M manages facilities, utilities and equipment on a submarine base. They do preventive and corrective maintenance. Part of the work force is unionized. Primary customers are automakers and facilities managers. The company is headquartered outside Washington State and has offices located throughout the nation and in several other countries. The primary customer of the work site selected for this study is a naval installation.

The ETC agreed to be interviewed. He said that the trip reduction program is centrally managed but in the local area there are three different work sites and each work site is responsible for managing its own trip reduction program. The private company is located in a rural area on a military base and the base is surrounded by residential and wooded areas. He said that there are two cities that are 25 and less than 10 miles from the base. The worksite is along a bus route. There is one bus route that stops at 10-15 places within the base itself. The ETC describes the bus service as feasible to use to get around. He said the dress code depends on where you are located in the company by profession. General managers and staff are in suits and ties. The work force is predominantly in security, so they are dressed in security uniforms. The other half is workmen and craftsmen who are dressed in overalls and jeans. The ETC has been employed with the organization for six years and has served as ETC for about 2 and 1/2 years. He was asked to take over the duties of the ETC. The position was given to him after another had the job but went to a temporary position. The ETC explained that he is a salaried worker so he can be abused, but he said he volunteered for it. The ETC spends between 0 and 10 hours per week carrying out the duties of the ETC. The ETC is motivated to promote transportation alternatives through protecting the vested interests of his company by complying with state regulations. Secondly, he believes it is the right thing to do. He said that building more highways just generates more traffic. He said that the Seattle area is the first area of the country that he would consider pristine. He has lived all over the nation and several others. He wants to protect the pristine country. The ETC said that the only way to keep it pristine is to convince people that commute trip reduction alternatives are the way to go. He believes the state trip reduction mandates are necessary. He said that his company must deal with vendors who must traverse areas of congestion and he knows that some companies are already moving out because of the transportation difficulties. He believes there must be laws at the state level to deal with the problem. If the state requirements all of a sudden went away, the ETC believes that the travel behavior of the employees would not change. He has been in this position for 2 ½ years now, talking to the crews about why they do or do not use commuter alternatives and he knows that those who already do, do so for personal benefit reasons and not because it is a state requirement. However, the state requirements influence behavior of companies and the

repeal of the law would cause "huge changes" in what companies do, said the ETC. He said his position as ETC would be abolished within the company unless it were a state requirement to have one. Along with every other ETC in Kitsap County. Kitsap Transit is the organization's major sponsor. The ETC currently reports to Kitsap Transit. Kitsap Transit might step in and provide ETCs. The hierarchy at the work site, from top to bottom starts with the general manager, then divisional managers, then divisional supervisors, then workers. The ETC is a supervisor who reports to a divisional manager, but usually says he wants to go talk to the general manager about a program and the divisional manager says okay. And so it appears that the ETC talks directly to the head person of the work site with regard to commute alternatives. The decision making authority for budgets are with the general manager. When there are reports to sign, the signatures are his and the general manager's. The divisional manager just wants to stay informed as to what the ETC wants to talk to the GM about. The divisional manager also handles certain crews. If the ETC wants to implement programs relating to those crews he goes directly to the divisional manager, otherwise for overall program issues, he reports directly to the general manager. Nothing ever goes beyond the work site level. The person the ETC directly reports to in matters relating to the trip reduction program is the division manager of several divisions of people, one of which is the transportation department. The division manager has always been the ETC's point of contact. However, the ETC reports to someone else for his other job duties. The ETC said there is no conflict between his ETC duties and his other work duties. He said he is a salaried employee and works far longer than 40 hours per week. If he has to do some research, he takes it home. The ETC says he can conduct the duties of ETC on his own but to make it happen, it requires a lot of coordination. He must go talk to the crews to do certain things. He said he must get Kitsap Transit out to talk during brown bag lunches. He says he feels satisfied with what he does when he knows he is continuing to improve. He said that with his ETC duties, he does not see improvement and feels dissatisfied with that. In the development of the annual plan, he is working to figure out how to improve the performance of their trip reduction program. They are not getting better. So he has established a panel so it is not just him working alone. He is talking to the crews to find out more what they can do. His short answer is he needs help. The challenge is not in the hours the ETC job requires but the creativity and the options about what they can do. How much money he asks of the GM will determine if the GM approves it but the ETC said that so far he has never had the GM disapprove a request for financial resources. There is a welfare and recreation committee that puts on parties for morale. The committee gives him $400 worth of prizes for a promotion. Now if he asked the GM for more time to conduct ETC business, he thinks that would be a different story, because time equates to personnel dollars, which is more expensive. The ETC's favorite aspect of his job as an ETC is the interaction with the people, the crews and with Kitsap Transit. His least favorite aspect is that he already has full time duties and the duties of the ETC are above and beyond it. If something is a lateral duty it becomes a lesser priority. This is a problem in general with other ETCs. The state does not require a work site to have a full time ETC. It just requires that there is an ETC position. If the organization were to offer the ETC a position as a full time ETC, he said he would turn it down because he said that what is in fashion one month is not the next and he would fear that he would lose his position if ever having an ETC on staff did not become a necessity. He needs a secure position. If he thought that the position would be permanent and he received the pay he is currently getting, then yes he would do it. When asked about traffic congestion, he confirmed that it is a big problem. He said the problem is featured on the news often. Areas are referred to as parking lots. There is going to have to be a culture shift to accomplish a change in commute habits, he says. He describes our current culture as one of independence

and that it is All-American to have your own car. Until we change that mindset, not much will change. In the area of the work site, there is one large bottleneck in the evening. In the morning, it is not a problem because worker start times are spread out. When asked about the main challenges of implementing the trip reduction program, the ETC said that implementation is not a problem, it is improving performance that is the challenge. The challenge is to get people to see that you are not removing their independence. "I want to come and go as I please." "The old man is watching me from above." "Get out of my face." "The mindset of people who live on big ranches in Wyoming who do not want to pay taxes. I have run into people like that." How do we change the perception that commute alternatives do not remove independence but is actually helping them? The most used commute alternative is carpooling. His proudest achievement regarding the work site trip reduction plan is that they actually have one and that it is supported by the general manager. That the guy at the top is interested and that he pays attention to what we are trying to do. Exemplary employee performance is rewarded by monetary rewards. There is a performance evaluation board run by the government, individuals are rewarded $5 coins to use at the Treasure Trove. There is a monthly "Crews Call" a project magazine in which employees are recognized. There is a corporate level award system also. There are two surveys. The annual survey is one between the ETC, Kitsap Transit and the organization. This is an annual plan that we submit to them so that there is no employee involved. That's where we are discussing our program and evaluating each year how we can improve. What are we going to do to show that we are trying to improve? The biannual survey is a "#2 pencil" survey, and that is the busiest time as ETC. There are over 800 people on the work site. That process becomes a primary duty. When the annual survey is done, the ETC remarked that the Kitsap Transit people have been very helpful and the ETC says he probably does not seek their guidance enough. Regarding the training provided by Kitsap Transit, the ETC says, "These guys are here to help me and they can provide me with the tools I need to do my job. They say, 'Here is where you can go to look. Here is your justification. This is why you should be asking for this.' He found the ETC training very useful and relevant. He went to a week-long class initially. Because the work site is on a military base that is governed by a variety of regulations, there are certain things that the ETC simply cannot do. The ETC's organization has no control of the parking or the equipment. It is all owned by the government and the parking is free. The amount of parking is controlled by the government and the ETC cannot do anything about that. The ideas espoused in ETC training relating to limiting the supply of parking and raising the pricing of parking just does not apply and would not fly when the union got a hold of it. There are union issues too. There are several unions. He said that incentives such as subsidies are tricky because if they are named within a union contract as a benefit that increases overhead costs, then that raises the cost of their bid to a client, making them less competitive as a contractor. The organization is currently operating under a 10-year contract. The ETC suggested that there be some provision in the region that all federal government contactors must offer certain things. That way all bidders would be offering contract bid prices on a level playing field. Until something like that is in place, there is a strong incentive to keep elements of the program outside the purview of the union contract by not providing them at all. The ETC said that they have bike commuters and several employees he can point to as examples of how commute alternatives work well. Between salaries and hourly employees. As a salaried employee, you could be called in at 2 a.m. in the morning to fix something or you could end up staying until 7 p.m. when you had planned on leaving at 4 pm. The uncertainties of the job as salaried employees make it less flexible to carpool. The uncertainties are a regular occurrence. But the hourly workers have a set schedule. If there is any change in that, there is a back up in the guaranteed ride home.

Telecommuting is a possibly. The ETC accesses a network connection at home, he asked for it but management approved it because they think they can get more work out of the ETC. They have employed it in some cases temporarily for administrative assistants who share work space. One thing the ETC is trying to push but has not been very successful is that you do not have to telecommute every day. He is trying to push this on behalf of managers. The employees would like to telecommute but the ETC needs to get the support of the general manager. He must describe the background problem and how it is solved by telecommuting, using a point paper to drive the issue home. The ETC is a pilot for telecommuting and many other ways of doing business differently. Many people are doing 5/4/9s and 4/10. But the ETC wrestles with upper management perception that they would be doing the employee a favor. We still have some old guys with old ideas and philosophies that you can't be doing anyone a favor. While employee might be getting a day off that is not the main reason for doing it. What's so bad about that? Then I try to get on the morale side of the house. The work site does not have a cafeteria. Most employees bring their own lunch and keep it in a refrigerator and small seating area. On base there are some fast food places and restaurants just off base. The ETC does not generate his own written materials. He uses information generated by Kitsap Transit called Smart Commuter pamphlets. Now he can give the employee a web site to do ridematching online. Most carpools are internal. Some commutes are 25-65 miles.

Organization	**M , ETC**
Type of company	Facility manager
ETC's position title	HVAC/R Supervisor
ETC for how long	Over 2 years
Management of TRP, central or local?	Central, although each site runs its own TRP
Type of work site facility	High security, location on a submarine base surrounded by residential and wooded areas, two-lane road 10 miles from nearest city
Dress code	Suits for management, coveralls and jeans for workmen/craftsmen, uniforms for security personnel. Depends on profession
Volunteered for ETC position?	He was asked to do it after earlier ETC went to a temporary position. He volunteered to take it over.
Motivation for promoting transportation alternatives	Protect company through compliance and he believes it is the right thing to do because he wants to protect pristine nature of the area
Hierarchy of work place	GM at top, division mgrs, divisional supervisor, then workers. Workers are unionized. ETC is a supervisor. Company does not own the parking.
ETC your primary duty?	No. 0-10 hours/week doing ETC duties
How many people do you report to?	ETC keeps division mgr in communication loop and goes to her in matters relating to involving certain divisions of people, but the ETC reports to GM with requests. ETC reports to someone else for other job duties. He sees no conflict between ETC duties and other duties.
Are ETC duties done independently or in coordination?	GM makes budget decisions
Feelings about ETC duties	Those who use alternative transportation do so for personal benefit only.
Favorite aspect about ETC duties	Interaction with job
Worst aspect of ETC duties	Not seeing improvement. ETC duties a lateral duty of least priority and he does not have much time to devote to it
How bad is traffic congestion	One large bottleneck in evening
Necessity of state law	Yes. Some vendors moving away due to cost of transportation. If law went away he said commute behavior of employees would not change but would cause big changes in what companies do. His position would be abolished
Challenges of implementing TRP	Changing mindset that TRP does not remove independence but it is helpful to them. Upper management does not like idea of doing employees a favor by letting them telecommute
Element of TRP most proud of	That the work site actually has a TRP. That the GM is paying attention. Established a panel with crew participation to find out what can be done to improve participation rates
Organizational support provided to ETC	Never a problem to get $400 for promotional prizes but it is a problem to ask for time to spend on ETC duties
How exemplary performance is rewarded	Monetary rewards
Survey administration	Becomes his primary duty for a week
Champions	Some carpoolers and bikers
Distinctions among groups	Hourly employees with set schedule better able to carpool or take bus. Salaried employees on call all the time
ETC training	Useful and relevant
Written information	no
Comments	Company Mission: "To continually exceed customers' increasing expectations." First sentence of company creed: "We believe in the free enterprise system." Part of the company concerns automotive interiors, another part of the company concerns facility management (environmental controls). Web site emphasizes environmental sustainability, community service, diverse and safe work place. Company is over 100 years old. Acquired 12 other companies since 1968.

Appendix F:

Notes On Reasons Given Why ETCs/Supervisors Declined Participation

Commuter Choice Study
Notes

Issues relating to agreeing to participate

The process of lining up worksite ETCs and their supervisors to participate in the study is difficult for a number of reasons.

The most frequently cited reason not to participate is lack of time. ETCs cannot justify taking two hours on company time or on personal time. ETCs often do not have the time to talk to me on the phone and opt for having me send the electronic letter of invitation. ETCs will mention various deadlines that their company is working under. One ETC said she would be available to participate in the study at the end of March.

With many ETCs, access to communications with their supervisors is occasional at best. They must wait a week or two before they have a scheduled meeting with their supervisors, at which time they feel it is appropriate to broach the subject of the study. These ETCs cannot just email a question to their supervisors.

At least one ETC said he has virtually no supervisory interaction, so there is no supervisor to contact.

Supervisors often have delegated the ETC duties so that they would not have to be bothered by it, and participating in a study regarding trip reduction defeats the purpose of their desire to avoid spending time on trip reduction activities in the first place.

Several ETCs did not even bother to contact their supervisors regarding the study. Many laughed and said they already knew their supervisor would not want to participate.

One of the challenges of the study design is that we started with just one contact, the ETC. This contact information was 3 years old. At least 50 percent of ETC contacts in the WSDOT trip reduction database were out of date by then, indicating that there is rapid turnover of ETCs within a worksite. ETCs are often administrative assistants or clerks, many of whom rove throughout the office and are not often at their desks to receive a phone call.

In smaller worksites, the ETC often reports to the top person, a CEO who is often not located in the office, or in one case, the mayor of a municipality. In some cases, the ETC was hard pressed to identify who he or she reports to regarding the trip reduction plan, because it was set up for that person to run it and there is no internal reporting regarding the outcome of the program.

ETCs of many federal worksites explain that they do only what is mandated for federal worksites, by participating in the purchase of discount transit (flex) passes in bulk, as a reason why they believe their worksite should be disqualified from study participation.

Many worksites automatically assumed that the researchers were looking for worksites with successful programs or at least active programs and the ETC would then discount their participation by saying their program is not active or successful.

Many felt uncomfortable with the notion that we were administering "personality tests" and felt that such information was private.

In some cases, supervisors delegated the task of their own participation to someone else. This study has some vulnerability based on our dependence upon the ETC and the supervisor to correctly identify themselves.

Study participants will most likely be those who are proud of their CTR programs.
The worksites that agree to participate may be the ones that have the most progressive culture, so the results may be biased in that direction.

Often, the ETC will respond to the request to participate by saying that their company management style does not fit what we are looking for in the study. For example, one ETC said that they have had a program for 20 years, and they consistently exceed their CTR goals without her really expending any effort to encourage alternative transportation. The employees do not really even know that there is such a thing as an ETC; they just use alternative transportation on their own. And so the ETC takes a very passive approach to the whole thing and said that if they were not meeting their CTR goals, she would take a different approach and get more involved but at this time, it is not necessary for her to do anything. This suggests that for some worksites, program success may have nothing to do with having an ETC or providing incentives? It is not clear here. The distinction here is separating out worksites with low VTR regardless of a CTR program, from those worksites who have seen a decrease in VTR as a result of their CTR program. Participation rates for this study are not high enough to allow us to control for this. I told the ETC that her work site still does fit the purposes of the study, but then she said her boss would never agree to participate (she did not want to bother to ask) but that she alone would participate.

It is a challenge to convince worksites that they are perfectly acceptable candidates for the study. Even though in the introductory script, I assure ETCs that study eligibility has nothing to do with current employee participation in trip reduction programs, ETCs will try to convince me that their site is not eligible for the study due to low participation rates or because their worksite has poor access to transit or because of their worksite organizational set up or because the ETC takes a totally passive approach to the CTR program because they exceed their CTR goals to begin with.

Some will not agree to do the study because they cannot relate the information asked of them to the outcome of the study. All this "personality testing stuff" (their words, not mine) does not fit in with their expectations of someone doing a "transportation research study." "This is a transportation study and yet you are asking me to fill out these feedback instruments about my interpersonal relationship tendencies?" Even though confidentiality and anonymity is assured, they still feel at risk in a study that puts their attitudes and perceptions under a microscope. Do they feel, on some level, that we will share the information with the authorities that regulate them? However, they are more than happy to discuss what their CTR program does.

The way the supervisor reacts to the CTR program and the manner in which the supervisor works with the ETC depends partly upon whether the work site meets their CTR goals. I sense that a different work relationship kicks in to play at a point where the worksite must do something extra to meet their CTR goals. Many worksites do not have to do anything more

than they are already doing, and so the presence of the CTR program is invisible to many employees. Many employees do not even know an ETC and a CTR program exist.

Several military installations have been contacted. They have declined with the reason they do not have the time. Questions during the introductory phone call give me the sense that they are cautious due to security concerns. One ETC said, "WSDOT doesn't understand that we ETCs cannot do what they tell us to do during ETC training because our employers don't allow it." "We just don't do that here."

Some worksites decline participation because the ETC recently left and there is no ETC currently identified and they do not anticipate designating a new one soon. At least two ETCs were on extended leaves of absence. One ETC declined due to organizational restructuring and his supervisor was not identifiable. Some ETCs declined participation because their supervisors were very new to their jobs and didn't think they knew enough about the program nor did they yet have an established working relationship with their new supervisor. High turnover of both the ETCs and/or the supervisor is problematic if we are attempting to correlate VTR and change in VTR to the workstyles of the staff who implement the programs. Nor will turnover of staff coincide with the reporting year for the programs.

There were 70 worksites contacted, which represented several hundred phone calls because it was almost never the case to reach a person on the first try. Twenty-four work sites declined participation, seven work site pairs agreed to participate, 14 work sites were represented by ETCs willing to participate without the participation of their supervisors. The remaining 25 work sites never provided a final answer. These work sites in limbo seemed to be ones in which the ETC would agree to participate if the supervisor expressed interest. However, the supervisor would not give an answer, which served as a de facto decline.

Appendix G:

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