

Building Implementation Networks: Building Multi-organizational, Multi-sector Structures for Policy Implementation

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(ABSTRACT)

The purpose of this dissertation is the delineation of a new approach, or, more precisely, a new “role” and “methodological system,” for those persons engaged in building and managing multi-actor structures, or “networks,” for the purpose of policy implementation. As policy formulation and implementation can be viewed increasingly as taking place inter-organizationally, and consisting of individuals, special-interest groups, public organizations, private organizations, non-profits, etc., none of whom have the individual power to autonomously determine the strategies and actions of all the other actors, policy processes can no longer be viewed as the implementation of *ex ante* formulated goals, but instead must be seen as an interaction process in which actors exchange information about problems, preferences and means, and trade-off goals and resources. That is, the context of “getting things done” in the public sector is changing from a singular organizational context to a multiple-organization network context. Managerially, we must respond accordingly.

While there has been an increasing recognition in the literatures of at least three distinct fields of enquiry [political science, organization theory, and policy science] that such networks are becoming the “reality” of daily operation, much less has been written attempting to aid the acting administrator to function successfully within this new setting.

Even less has been written concerning how to actually build and use a network setting to one's advantage in an implementation endeavor.

We are left in need of a new way to successfully approach implementation through complex multi-actor settings. As it becomes increasingly difficult to administer policy implementation through a single, public organization, the need for new tools and understanding that will enable us to achieve public ends in such complex settings becomes apparent. Such an approach must work to successfully accommodate the increased role of extra-organizational actors, a new role of the administrator as 'network facilitator,' and still afford the ability to plan for and carry out project implementation.

Because the invention of such an approach will require the accommodation of a different view of the administrative world (i.e. a more dynamic context, ephemeral definitions, new roles and responsibilities, and a new method to approaching work life), its development cannot constitute a straightforward reshuffling of the boxes of the administrative process, or the simple adoption of some new buzzwords. It demands, instead, that we begin by asking some fundamental ontological (what is reality) and epistemological (how can we know it) questions. It is after addressing these fundamental concerns that this volume will work to build a new approach to functioning proactively in a network setting.

Following a discussion on what the role of "network facilitator" means in relation to current understanding of public management, this treatise will describe a new methodological system for use by the administrator playing such a role. The 'methodological system' for building implementation networks that is advocated here is composed of three overlapping methodologies: 1) "Contextual Assessment" - Mapping a Network's Political-Economy; 2) "Stakeholder Analysis & Management" – Understanding

Who Should be at the Table and Furthering the Conditions for Cooperation; and, 3) “Joint Visioning” – The Facilitation of Project Planning in a Network Setting.

In the chapter on “contextual assessment,” the reader will be introduced to a method that uses the political economy framework of Wamsley and Zald to derive an interview instrument for use by a recently appointed network facilitator (somebody appointed the responsibility of ‘getting something done’ cross-organizationally). Combining the political economic framework with other standard qualitative methods, including gaining entrance, selecting interview type, snowballing, and quota sampling, one should be able to assess the existing political and economic environment surrounding a potential implementation network and, further, begin to select from that environment a first set of stakeholders in the budding implementation network. This method will result in a “conceptual mapping” of the environment from which one may begin to select potential resources to build an implementation network.

Following that, the reader will be introduced to two methods, that when used together, will allow for the analysis, categorization, and selection of network stakeholders. Taken together, these methods can be referred to as “stakeholder analysis.” It is the successful selection and management of these stakeholders that will result in the formation of a young implementation network.

Finally, the reader will be introduced to a method of “joint-visioning,” a process for working with a set of stakeholders to create a shared understanding of the social/organizational and technical/functional systems required for a new implementation network to function. While the theoretical conception here of joint-visioning is new, the techniques suggested to support this method are probably the least original of the

techniques associated with the three methods introduced in this volume (in that they are based on recognized methods of group facilitation). The joint-visioning method proposed here is probably most remarkable for what it is not, corporate strategic planning. A discussion about the problems of adopting corporate strategic planning in the public sector will begin this section, followed by a discussion of why something else, like joint visioning, is probably more appropriate.

Each methodology has been constructed from the ground up by appropriating parts of different methodologies that have been advocated in different areas of application. Specifically, methods, approaches, and understandings have been appropriated from the literatures of corporate management, stakeholder analysis, action research, political economy, community facilitation, knowledge engineering and management, and strategic planning. These methods have been combined and modified to better serve as tools for network establishment and management.

This methodological system has been developed as much from experience as from scholarly analysis. Accordingly, a case study, one that has directly led to the development of many concepts in this system, will be discussed and used for 'real-world' elaboration of the concepts described. Specifically, each of these methods will be accompanied by an in-depth discussion on how it was applied in the "Travel Shenandoah" case study. Benefits, as well as problems with the proposed methods will be highlighted. Where appropriate, possible modifications to a method will be suggested.

CHAPTER I – A “NETWORKED” CONTEXT NECESSITATES A NEW APPROACH

The Old Models No Longer Apply – The Changing Context of “Public Sector Implementation”

The reality of public sector program implementation today is simply this: any implementation that is attempted in the name of “enhancing the public good” will necessarily involve stakeholders from the community, the private sector, and other quasi-public entities. This being the case, any concept of a program’s implementation following a linear, top-down, centralized within the agency approach will, most likely, be untenable. In an environment comprised of conflicting and semi-overlapping concerns, differing motivations for involvement, and no single authority with a span encompassing all stakeholder parties, traditional ideas, associated with organization management and implementation, of unity of purpose, line of authority, and span of control are quite difficult to apply.

The importance of context in policy or program implementation cannot be overemphasized. To be sure, while many in the field of public administration have documented a shift from positivistic frames of reference to more relativistic stances¹, it may be forcefully argued that such a shift is in *direct response* to the changing context faced by practicing government administrators and how this has changed their ideas concerning the functioning of government agencies over the past three decades (Mosher, 1982; Salamon, 1981; Kettl, 1993). That is, what we believe to be the context of “getting things done” in the public sector has changed. Specifically, the context of action has steadily moved from a unified organizational setting to a setting more appropriately described as a “network.”

¹ By positivistic, I mean derived from the positive or post-positive paradigm in which reality is assumed to be a ‘real’ tangible object that is discoverable through the use of empirical, analytical methodologies. By relativistic, I mean derived from the critical or constructivist/interpretivist paradigms in which reality is assumed to be “constructed” situationally by the members involved in the discussion.

In their book *Managing Complex Networks*, Kickert, et. al. (1997) provide a detailed analysis of public administration's maturation beyond a traditional "rational central rule" model to a multi-actor model to a network concept of governance. There has also been much discourse in the American literature of the late 1970's and 1980's concerning the related concepts of "top-down" vs. "bottom-up" models of governance. The central thesis of all this work is that these different approaches to governance provide a lens through which the administrator views and acts upon the world. One may even refer to them as "theories in use" (Argyris and Schön, 1978). By assessing the shortcomings of trying to apply a centralized top-down or multi-actor bottom-up approach in the current environment of public-sector driven implementation, we can discern the necessity of another, more complex, approach directed specifically at the situation of today's public administrators.

From a Top-Down, to a Bottom-Up, to a Network Model

What has been referred to as the "rational central rule" or "top-down" model of governance is characterized by processes of public policy making and governance in which participants assume a distinction between politics and administration. One which portrays politics as the reaching of policy consensus by interested political entities, while administration involves the application of scientific knowledge to design policy measures and a program of implementation; a process of governance where decision making is authoritative, and implementation is non-political, technical, and potentially programmable (Landau, 1979; Sabatier, 1986; Wamsley & Schroeder, 1996; Kickert, et. al., 1997, 7).

This model has also been referred to as the "conventional" model of administrative management as it focuses explicitly on the relation between the agent and the objects to be "steered" or "controlled." The policy process, thus, is one in which the actors attempt to maintain a stark division between politics and administration – between those who make the rules and those who enforce the rules. The implementation phase is treated as a non-political, technical and potentially programmable activity.

Efforts to distinguish politics from administration are, of course, not new. In fact, Sun Tzu, author of the military and later management classic The Art of Warfare, written in approximately 400B.C., states that “enlightened rulers deliberate plans while capable generals execute them” (Wee, et. al., 1991, 149). In Public Administration literature, we often attribute such a conceptual divide to early 20th century scholarship written in praise of the wonders of the industrial revolution. This is, of course, ridiculous. Such a conceptual divide has probably existed since the first tribal/clan leader told somebody else to do something he did not want to do himself. To be fair, however, it may certainly be argued that what such a conceptual divide *means* in terms of the *roles* played by those *doing the telling* and those *doing the doing* has changed significantly following the industrial revolution. What had changed, in Sun Tzu’s terms, is the concept of what constituted a “capable” general. To Sun Tzu, the political leader gives an order something akin to “go and defeat my enemy.” The general in this case is left with a very high level of discretion to determine the appropriate sub-goals to be achieved and the strategies and behaviors necessary to achieve those goals. In this sense, “capable,” has a very rich and wide-ranging meaning. In the writings of early 20th century scholars, usually typified in Public Administration lore by the writings of Woodrow Wilson and Frederick Taylor, the “capable” general, or in this case administrator, is one whose only discretion is in applying rigorous scientific management techniques, derived of industrial capitalism, to achieve maximum efficiency. He or she does not decide, at any stage, what should be produced or why. The “capable” administrator, thus, has a very limited and narrowly drawn role. The inherent assumption in this case is: that which is left over from the earlier meaning of Sun Tzu’s “capable general” (i.e. what’s left if we subtract the modern meaning from Sun Tzu’s meaning) is somehow handled by the modern day political actor giving the administrator an order. If we now consider that such orders are being handed down from within a constitutional democracy of shared power, where directives are seldom, if ever, any more specific than the order of Sun Tzu’s political leader (e.g. go and defeat my enemy, or, better, go and fix the problem with teenage pregnancy), then the inadequacy of such a limited and narrowly drawn role should become evident.

In terms of implementation research, borrowing from the classic “top-down” implementation model of Mazmanian and Sabatier, causes of implementation failure can

be discerned by starting with the policy decision (from the “top”) and asking 4 questions that increase the detail of understanding (digging “down”). These questions are:

- Were the actions of officials and target groups consistent with the objectives and procedures of the decision?
- To what extent were the objectives attained?
- What were the principal factors affecting outputs and inputs?
- How was policy reformulated over time on the basis of experience (Sabatier, 1986, 22).

To ensure a successful implementation, according to this model, 6 conditions should be met:

1. Clear and consistent objectives;
2. An adequate causal theory of the problem being addressed;
3. A legally structured implementation process to enhance official and target group compliance
4. Committed and skillful implementing officials
5. Support of interest groups and sovereigns
6. Changes in socio-economic conditions that don't undermine political support or the causal theory (23).

The many disadvantages of using such a model when approaching ‘democratic governance’ have been well documented (Elmore, 1979; Landau, 1979; Barrett & Fudge, 1981; Hanf, 1982; Hjern & Hull, 1982; Wamsley, et. al., 1996). For our purposes, however, the most obvious disadvantages when applied to democratic governance are that the model presupposes that there is one central top level agent(s), the policy maker(s), that has been able to reach a final consensus among all stakeholders, and that such an actor has access to all necessary information regarding a situation, as well as all information pertaining to potential solutions. That is, the key actor is the policy maker(s) at the top. All other actors are considered potential impediments on which compliance needs to be enforced. There is little regard for the attitudes, values, and interests of the actors that will be responsible for implementation; at least there is little regard that they may be valid and in need of addressing. Another obvious flaw, certainly for the purposes of working in a multi-actor, multi-sector environment, is that such a model can't be used where there is no dominant policy (statute) or agency, but instead,

a number of stakeholders (both active and latent) with none playing a preeminent role (Sabatier, 29). A third problem with this model is that it presumes a clear distinction between formulation and implementation of a policy. Unfortunately, when no preeminent authority is dictating clear objectives of a policy, those objectives tend to be renegotiated many times during the implementation process itself. *That is, while the formulation stage may set some overall boundaries for the endeavor, what the result is going to look like in the end is simply not clearly foreseeable.*

In general, this model neglects the inherently political nature of the most critical aspect of governance known as administration or policy implementation. Additionally, others have argued that efforts to achieve central coordination and control leads generally to increased bureaucratization and diminished effectiveness and efficiency (Landau, ;Van Gunsteren, 1976; Hanf and Toonen, 1985). Martin Landau and Russel Stout probably summarize it best when they write,

[w]e began with a vision: If a domain of tasks can be mapped to a formal logic, and if that logic orders the behavior of a large and complex organization, then that organization becomes a decision machine whose operations are entirely unambiguous and whose output occasions no surprise. To create such an organization is a monumental feat, requiring an intelligence of the order of Laplace's demon; or, as Madison might have put it, "So perfect a system is not for men" (148).

To be fair, however, it must be noted that little has been written about the 'non-effectiveness' of a top-down approach when the goals of an implementation effort are clear and sufficient statutory and fiscal authority does exist. Therefore, Landau and Russel's comments may be taken as being a bit unfair as they seem to indicate that the top-down model of governance was formulated to apply in all situations. That is, in some circumstances, such a "decision machine" may be perfectly suited (especially in a stable and clear environment of application). The point that is made here, however, is that "so perfect a system" is probably not very applicable in an environment comprised of little agreement on goals, no center of statutory authority, and no clear line of funding for the initiative.

The “multi-actor” or “bottom-up” model, in direct reaction to the perceived problems of hegemony of the “top-down” model, represents a “radical plea for decentralization, self-governance, and privatization,” while at the same time calling for a central government to “give more attention to the problems of local actors to provide them with more resources. Governance is seen as an essentially political process in which local entities barter according to their personal interests and purposes” (Kickert, 8). This phase is clearly seen in the 1960s and 1970s in both the United States and Europe. In the United States, this model can be seen being employed in both the Great Society and New Federalism approaches of the Johnson and Nixon administrations. In Europe, a decentralizing theme can be clearly seen in many a country’s reaction to the over-burdening of public resources by the centrally administered socialist welfare state.

Such an approach is often referred to as a “bottom-up” approach because the perspective used is that of the implementing bodies and target groups, as opposed to a central agent. The interests of these local actors are the point of departure for evaluations of public policy and its administration. Quite unlike the centralized top-down approach, this approach asserts that policy making and administration are, in their essence, *political* processes.

In terms of research, a general bottom-up model of analysis was developed by Benny Hjern and his colleagues Porter, Hanf and Hull in their works of the late 70’s and early 80’s. This model was developed in direct reaction to the perceived shortcomings of the top-down approach. Generally, this model is driven by a need to operate in policy areas with multiple public and private actors. The model dictates 4 general steps to be taken by an analyst.:

- Identify the network of actors involved in service delivery in 1 or more locals;
- Ask about goals, strategies, activities and contacts of each actor;
- Use these contacts to develop a network technique to identify local, regional, and national actors involved in planning, financing, and execution of relevant governmental and non-governmental programs; and,
- Map, from the bottom up, the network of relevant actors to implementation, all the way to the top policy makers (Sabatier, 1986, 22).

This model, while attempting to address the short-comings of its predecessor, unfortunately is disappointing in that, like its predecessor, it is rather inconsistent and one-sided. Like the top-down model it tends to over-emphasize the ability of one side to dictate the actions of the other; in this case, the periphery (or bottom), as opposed to the center (or top). This approach can also be charged with being both a-historical and a-theoretical. That is, it takes the existing members of an implementation structure as a given without analyzing why they are there or who else could or should be expected to be there given the history of the structure. It also doesn't start from an explicit theory of the factors affecting its subject of interest. It's views of the policy implementation process are shaped by the perceptions and activities of the participants. At best, one may say that this approach "offers little more than a plea for the radical retreat of government ... or an argument for central rule for the benefit of local actors" (Kickert, 9). Generally, we may state that it represents a direct reaction to the top-down model, as opposed to a complete theoretical approach to understanding policy implementation. Or, as Sabatier puts it,

Their networking methodology is a useful starting point for identifying many of the actors involved in a policy area, but it needs to be related via an explicit theory to social, economic, and legal factors which structure the perceptions, resources, and participation of those actors (35).

Regardless the logic of the argument, though, the consequences have been clear. Policy implementation, most certainly in the United States, would need from this point forward to include actors from a 'central' authority—the government (for fiscal reasons at a minimum) - as well as actors from the private sector, non-profit, and citizen arenas who are directly impacted by the policy decision making process.

It needs to be pointed out, as well, that the top-down and bottom-up approaches, because they have been motivated by different concerns, do not directly address the need to actually 'work' in such a situation. The top-down approach is primarily interested in the effectiveness of specific government programs and the ability of elected officials to guide and constrain the behavior of civil servants and target groups. The bottom-up approach is primarily concerned with accurately mapping the strategies of actors in certain problem/issue areas. The bottom-up approach has *not* been primarily concerned

with efficient implementation of a policy (that is, 'getting it done'). The top-down approach sees public administrators as impediments to the will of political actors. The bottom-up approach is not concerned with getting the policy implemented in any timely fashion (just so long as more peripheral actors are involved).

Additionally, and probably more importantly, because these are both *academic* approaches to *researching* implementation processes from the 'outside' of that process, they are, by definition, *not* approaches to effectively implementing from 'inside' an implementation scenario.

Both these approaches are meant to serve as guides to individuals *studying* implementation and its successes and/or failures. That is, neither is concerned with helping the *program-level public administrator* successfully implement a policy on the ground. This is not to say that study of these approaches is a waste of time. On the contrary, it would seem that in reality, what the public administrator of the future will need to know is what the bottom-uppers purport to find (e.g. who all needs to be involved) in order to do what the top-downers want to achieve (an efficiently implemented policy).

Sabatier, for his part, proposed a synthesis and created his well known Advocacy Coalition Framework – a very useful analytical tool for analyzing, over a 10-15 year period, policy change. This approach combines the need to understand stakeholder belief systems with an understanding of a systems political, economic, and legal constraints, within which these actors (working collectively in coalitions) must operate.

As a tool for the theoretical Political Scientist/Policy Analyst to understand the policy process, it is an approach of the first order. As a tool for the public administrator who finds his/herself facing a messy implementation scenario (that must be dealt with in a matter of months, not years), it is not very directive (nor was it supposed to be).

We are left, therefore, in need of an approach that (1) does for the practitioner what Sabatier's approach has done for the theorist - create a synthesized approach that takes into consideration the concerns of both the top-down and bottom-up approaches; and (2)

translates that synthesized approach into a useable tool(s)/method(s) that the program-level public administrator can use.

Another way to state this is that while good “network tools” have been derived to analyze what is happening “outside” the “black box” of implementation, we are still in need of good “network tools” for working “inside” the “black box.”

Luckily, the first part of this expressed need has been met, at least partially, in the recent move in the policy sciences, political science and organizational theory to consideration of policy making taking place in *policy networks* consisting of various actors. These networks are seen as being comprised of individuals, special-interest groups, public organizations, private organizations, non-profits, etc., none of whom have the individual power to autonomously determine the strategies of all the other actors. Policy processes are today being viewed not as the implementation of *ex ante* formulated goals, but as an interaction process in which actors exchange information about problems, preferences and means, and trade-off goals and resources.

Such an approach builds on the bottom-up criticisms, but attempts to be more realistic in its understanding of the role of a ‘central’ actor. In this model, while the government is no longer envisioned as holding a superior, hegemonic position, it is, nonetheless, viewed as being on, at least, an equal footing with other interested entities. Additionally, failure of policies in this model are considered to be the result of the existence of blockages to collective action and a lack of incentives to cooperate (Kickert, 9). Such an assessment of contributing factors introduces a new role for a public administration as “network facilitator” – an entity that is not only an agent of an executive with responsibility for implementing a program, but also, a catalyst responsible for creating incentives for and evoking cooperation between interested parties, and for identification of potential blockages that these parties, working collectively, will have to overcome.

The “Network” View, its Implications, and What is Left to be Done

Table 1 – Theoretical Streams from Different Fields Leading to Networks

School	Political Science	Organization Theory	Policy Science
Focus	The Political “Process” of Governance	The Functional “Structure” of the Organization	The “Individual” or “Group” Decision-Maker(s)
Traditions (Chronologically)	<u>Interest-Group Liberalism</u> <ul style="list-style-type: none"> • Bentley • Merriam • Truman ↓ <u>Political “Systems”</u> <ul style="list-style-type: none"> • Easton • Almond & Coleman • Griffith ↓ <u>Sub-Systems</u> <ul style="list-style-type: none"> • Freeman • Cater • Wamsley & Zald ↓ <u>Policy Communities/ Networks/ Coalitions</u> <ul style="list-style-type: none"> • Heclo • Rhodes • Jordan • Sabatier ↓	<u>Scientific Management</u> <ul style="list-style-type: none"> • Taylor • Fayol ↓ <u>Principles of Administration</u> <ul style="list-style-type: none"> • Willoughby • Gulick & Urwick ↓ <u>Contingency Theory</u> <ul style="list-style-type: none"> • Burns & Stalker • Mintzberg ↓ <u>Inter-Organizational Theory</u> <ul style="list-style-type: none"> • Levine & White • Pfeffer • Bensen • Crozier ↓	<u>Rational Actor</u> <ul style="list-style-type: none"> • Lasswell ↓ <u>Bounded Rationality</u> <ul style="list-style-type: none"> • Simon & March • Dror Yehezkel ↓ <u>Process Model</u> <ul style="list-style-type: none"> • Kingdon • Cyert & March • March & Olsen ↓
	POLICY NETWORKS		
Characterization of the Policy Process	Policy is derived in semi-closed communities	Policy is derived through organizational resource exchange	Policy is derived through mutual-adjustment of multiple rational actors

Table 1 delineates a concise treatment of the theoretical roots of the network orientation in the social sciences of the United States and Britain. This table is adapted from a similar graphic produced by E.H. Klijn in his “Policy Networks: An Overview,” but combined with the more “American” understanding of the political and policy sciences produced by Ward (1997) and Wamsley (1998) As seen in the table, the roots of a

network orientation can be found in the policy sciences, organization theory/science, and political science. What each area of inquiry has contributed to the concept of policy networks is summarized in italics under each school in the category “*Characterization of the Policy Process.*” The resource dependency focus of much of organization science (Burns and Stalker; Lawrence and Lorsch; Mintzberg), and its central idea that organizational networks can be analyzed in terms of organizational problems or resources (Levine and White; Aldrich; Pfeffer; Benson; Crozier), has had a strong influence on the concept of policy networks. The concept of policy processes being comprised of complex interactions involving many actors is derived from the policy sciences (Lasswell; Cohen; March & Olsen; Kingdon). The concept that policy making takes place in relatively closed communities, coming from political science (Freeman, 1955; Ripley & Franklin, 1976; Wamsley & Zald, 1973; Jordan, 1990, 1992; Rhodes, 1980, 1990, 1992) has also had significant influence on the concept of policy networks.

What we then end up with, after theoretically synthesizing these approaches, is a concept of:

the policy network as a multi-actor, multi-sector, semi-closed environment operating on an interwoven calculi of maximizing influence and resources.

What a Networked Context Means for the Implementation Process

If we start with the premise that the efforts of government are to solve or at least create conditions conducive to the amelioration or resolution of problems in the “public interest,” and that the “public” referred to encompasses a vast network of actors, many of whom are not readily subject to the influence (in terms of resources or jurisdiction) of any particular government agency. And, that for successful implementation to occur, a concerted effort combining the disparate resources (both economic and political) of these actors is required. Then, we must quickly abandon the hope of applying a simple mechanistic or even loosely conceived ‘organic’ model of implementation (Scharpf et. al., 1978; Hanf and Scharpf, 1978; Hanf and O’Toole, 1992). For it is precisely these circumstances, where no single actor can solve a problem alone nor compel others to do their bidding, that the need for conceptualizing “networks” arises. As O’Toole aptly puts it,

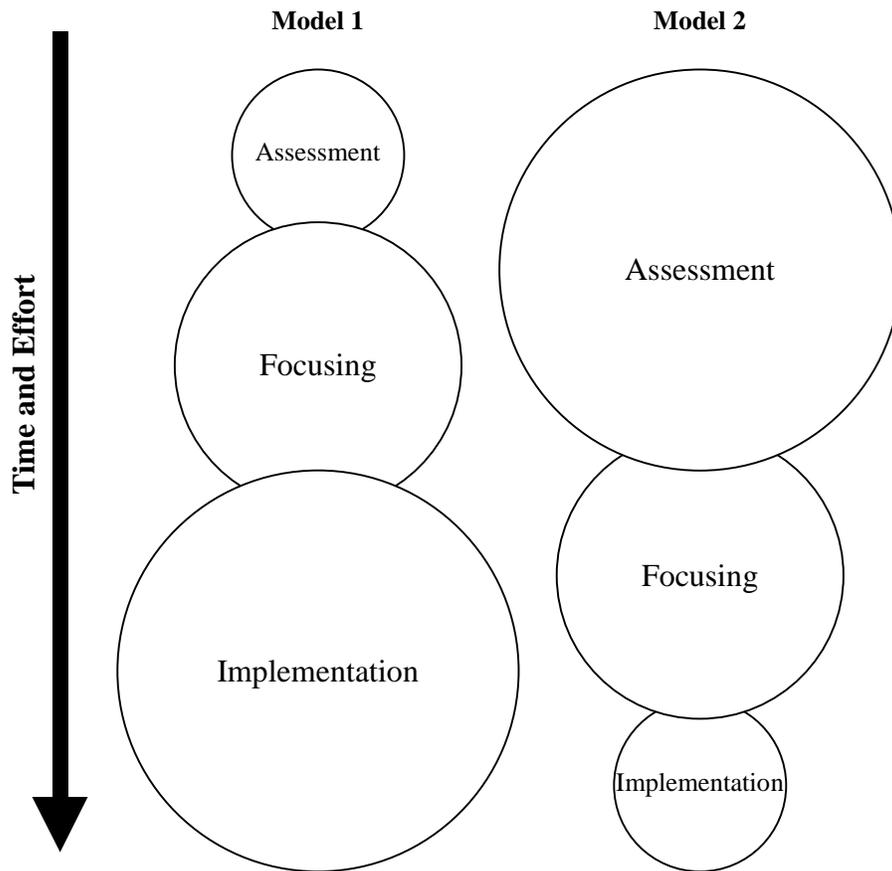
“With complex network arrangements now standard features of contemporary policy settings, conventional public problem-solving approaches – visible, for instance, in the typical injunctions of public management – are of little practical help in understanding and dealing with situations where the challenge is one of managing across boundaries of single organizations (O’Toole, et. al., 1997).”

Our Efforts at Assessment Must Increase

Figure 1 illustrates, in a broad conceptual manner, what this shift means for our purposes with respect to various implementation strategies and approaches to public policy. Within this figure, contextual *assessment* simply means a contextual understanding of the problem at hand. This does not entail rote problem definition typical of systems analysis perspectives, but instead making an effort to understand the various interests involved and the ways these interests interact, cooperate or compete. *Focusing* entails gaining an understanding of the resources needed for effective implementation.

Model I in Figure 2, which places an emphasis on the implementation phase of a program, generally represents the top-down model of implementation. However, such an approach is not suitable to the changes currently taking place in contemporary public policy. Given the shift towards a multi-sector and multi-organizational network setting and the changing role of administrators as facilitators, a similar shift in methodological approaches to implementation must also take place. Model II, which places a premium upon the assessment stage as the primary arena for effective implementation, is a more suitable approach considering what contemporary public administrators face in their working environments. And without adequate *assessment*, implementation, as Pressman and Wildavsky found nearly twenty years ago, ultimately fails.

Figure 1 – Models of the Implementation Effort



What comes into question then is our ability to carry out the tasks required in such an environment. How can we better assess a larger and more complex implementation environment? How can we focus the energies of multiple agencies and sectors upon a unified objective? How can we manage the final implementation stage using resources not directly under our control?

The Next Step – The Purpose of this Dissertation

As discussed earlier, there are two conditions that need to be met: a synthesized approach must be devised (in this case network theory) AND a translation of that theory to practice must occur. That is the next step. A definition of a 'policy network' that details the environment in which a public administrator must operate is fine, but without a method to work in and achieve within that environment, it is incomplete.

A short story can illustrate the point.

In his classic work “Musashi,” a biographical novel of the great Japanese swordsman and philosopher Miyamoto Musashi, Eiji Yoshikawa tells of the time Musashi went to the mountains to live by himself for more than a year. Musashi needed to go to the mountains, he states, because

he needed to develop harmony, to make sure
his ideas did not outpace his ability to act (925).

Musashi had been developing in his mind a philosophy of swordsmanship, war, and life. He had been working this philosophy out, however, while he was fully engaged in life. He had had no chance to figure out if any of his thoughts had merit outside the world of thought. He needed to go to the mountains and, being alone and without interference or distraction, determine the validity of his theories.

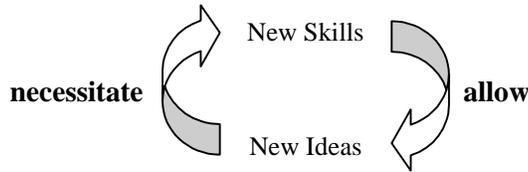
If we were to express Yoshikawa’s statement above simply and formulaicly, it might be:

$$H : I \approx A$$

That is, for the function Harmony to occur, Ideas (I) and the Ability to Act on those ideas (A) must be relatively equivalent. The first corollary of this theorem might be:

$$\Delta A \Rightarrow \Delta I$$

That is, if you increase (or decrease) your ability to act, you increase (or decrease) the potential scope and magnitude of your ideas, without becoming ‘unharmonious.’ Of course, when you increase the scope and magnitude of your ideas, you may need to go back and again increase your ability to act on those ideas. That is, a feedback loop is created:



The purpose of this brief discussion is to make a point about the current state of 'Network Theory' in public administration and to highlight what it is this dissertation hopes to accomplish. The argument I would make is that network theory today is at the same stage that Myamoto Musashi was at after he had developed his philosophy of swordsmanship, war, and life. It is still in our heads. It is 'idea' without the 'skills' necessary to implement. That is, current network theory is 'disharmonious.'

This would not seem a very contentious position to take, as most new theory without translation into action, regardless of academic field or discipline, can be accused of the same thing. The point is *not* to condemn network theory for being disharmonious. Furthermore, the point is not to claim that network theory ideas are ill founded or wrong. The fact is, we do not know. For the most part, they have not been tested in application. And, we cannot yet test without the skills/abilities to do so.² Rather, the point is simply that there remains more steps to be taken before network theory in public administration can stand on its own as a proven body of work from which public administration scholars and practitioners may both draw. In a time of shifting purposes and roles in the life of the public administrator, it appears that network theory might provide some salvation and direction. To find out if that is the case, however, we must take the next step. This treatise is meant as a next step, a step toward answering the second part of the problem statement – translation into action. We are left, therefore, in need of an approach, a methodological system if you will, for successfully building and maintaining sets of relationships that will ultimately lead to policy implementation. We must endeavor to create 'ability' to complement what seem to be very promising 'ideas.' In Public Administration terminology, we must attempt to achieve 'Praxis.'

² I say "skill/ability" because we could be talking about a discrete skill (e.g. time-series analysis or conducting a focus group) or an ability to carry something through. This could mean having the 'ability' to apply a number of skills together in a certain situation, or even having the 'ability' to achieve something without using discrete skills (e.g. getting the Senator to attend the party because you happen to know him/her).

More specifically, the purpose of this dissertation is:

to delineate a new approach, or, more precisely, a methodological system, for building and maintaining a multi-organizational, multi-sector structure for the purpose of policy implementation – an “implementation network”

Put another way, the purpose is:

to delineate a methodological system for building a “political economy.”

What do you mean, Political Economy?

The definition of political economy here is drawn from Wamsley and Zald’s definition in their Political Economy of Public Organizations. The phrase “political economy” has a long history and several meanings. The term was first used in the seventeenth century and referred to inquiry into how princely states could raise revenue (Goodsell, 288). Later, in the economic circles of Adam Smith, David Ricardo, John Stuart Mill, and others, it meant the relationship of government to the economy which promoted a competitive marketplace and thereby produced efficient allocation of resources. In more modern academic discussions, there are at least four distinct, and often contradictory, meanings that can be identified. Neo-marxists use the term to refer to the total sublimation of politics to economics. Public Choice scholars refer to the term to identify their orientation in applying competitive market principles to the analysis of collective action. In political science, the term carries a methodological connotation referencing the sub-discipline of econometrics. Lastly, organization theorists have used the term to refer to an approach that attempts not to reduce the social world to a few equations, but instead tries to reflect its complexity. To organization theorists,

‘the political economy of organizations’ constitutes an analytical framework for understanding the multiple exchanges and authority relationships that permeate both the internal operation of the organization and its many relationships with the external context (Goodsell, 289).

It is this last definition that is used here. In the 1960's Wamsley and Zald wrote their Political Economy of Public Organizations which stands as the exemplar of this usage of the term Political Economy. This is the book from which this dissertation's understanding of the term is drawn. In their book, Wamsley and Zald refer to the "interrelationship between structure of rule (polity) and a system for producing and exchanging goods and services (economy)" (64). They used this definition specifically to define the interrelationships between political and economic forces 'within' an organization. In this dissertation, that same definition is being used to indicate the set of relationships, both political and economic, 'within' a 'virtual organization' or 'network.' The first part of Chapter 3 delineates Wamsley and Zald's theory more clearly and explains more precisely what is meant by 'building a political economy.'

One could also think of the stated purpose here as learning how to build "virtual organizations." No new buildings are constructed, no new agency is founded, no new authority is earmarked funding (usually) – but most of the functions of a new "real" organization must still be created in an attempt to get a policy implemented – and that organization must use a mix of existing organizations and individuals to accomplish its goals. An "organizational structure" that effectively links these disparate resources and focuses them on the issue at hand must be developed. While this structure is not, by itself, a traditional "organization," it is "organizational" in character. It is a "virtual organization."

Our Unit of Analysis Construction: What is a "Policy Implementation Network?"

As stated, the unit of analysis, or better, "construction," for this document is the "implementation network." An implementation network, in the understanding of this dissertation, is a 'type' of policy network in that it is composed of the linkages between interdependent organizational actors. Other types of policy network (issue networks, professional networks, etc.) have been described in the literature, but are not the focus of this treatise.

To find a definition of a "policy network," just crack a journal. Sometimes, there seems to be as many definitions as there are stars in the sky. This is to be expected at the

foundation of a new theoretical field. Everybody is jockeying for “first-namer” status with his/her new typology of networks. Exacerbating the situation is the fact that ‘network theory’ is being developed in more than one discipline. As noted above, three main disciplinary progenitors of network theories seem to be policy science, political science, and organization theory. These disciplines or fields do not regularly communicate across boundaries so you have a propagation of terminology just within a single field’s journals. This fact has led to articles like “Organizing Babylon – On the Different Conceptions of Policy Networks” that attempt solely to figure out who means what when they use the term (Borzel, 1998).

The fact that no single definition has been agreed to is not important for our purposes here. What is important to know is that almost all of the existing definitions involve a number of similar components, namely: multiple actors or agencies; multiple sectors (at times); multiple levels (at times) and, a recognition that everybody is participating for their own reasons. This being the case, it would seem that the definition given above already should suffice. That is, a policy network is

a multi-actor, multi-sector, semi-closed system operating on interwoven calculi of maximizing influence and resources.

This definition is general enough for us to proceed to answering the question that is important here, namely, what is a “policy implementation network?” Just like other policy networks, a ‘policy implementation network,’ or more simply an ‘implementation network’ is a socially constructed vehicle for purposive action. As O’Toole puts it, “[t]he image of the ‘policy implementation network’ can be used to convey the idea of a highly differentiated and complex array of public and private organizations that are involved in the translation of the policy intentions ... into appropriate measures or actions for the realization of these objectives at the ‘level of the consumer’ (139).”

While some might take issue with the usage of “consumer” in place of “citizen,” the definition is still clear. Implementation networks get things done at ground level, where the effect is direct. In the sense described here, an implementation network, so considered, provides the practitioner/researcher with a conceptual “virtual”

organizational infrastructure – the infrastructure that must be redesigned to ensure the delivery of said product.

As stated, how one sets about conceiving and effectuating such an infrastructure redesign when one does not have enough resources or statutory authority to carry it off oneself is the topic of this volume.

Requirements of a Network Building Approach

Continuing on, to satisfy the stated purpose of this dissertation, in terms of being able to create new implementation networks where none existed before, it would seem that, at a minimum, three conditions must first be met:

First, such an approach must work to successfully accommodate the increased role of extra-organizational (outside the local network) actors. That is,

the approach must allow the public administrator to better ‘assess’ the environment, or context, of the potential policy implementation.

Second, such an approach must enable the successful focusing of multiple parties toward the intended policy outcome of the implementation. That is,

the approach must enable the public administrator to understand and work with individuals that are discovered as a result of the environmental, or contextual, assessment.

Third, such an approach must also allow that administrator to affect action, that is, it must still afford the ability to plan, act upon and manage a set of resources that are not directly under any one person’s control, toward an implementation goal. That is,

the approach must enable the public administrator to plan for resource usage across organizational and sectorial boundaries.

The methods proposed below are a first attempt at fulfilling these three requirements.

Additional Requirements dictated by a Constructivist Stance

Because the invention of such an approach will require the accommodation of a different *world view* of the administrator (i.e. new context, new role and responsibilities, a new set of definitions concerning the approach to work life), simply satisfying the above mentioned requirements of a “network building” method is probably not sufficient. This is because a “networked” view of the work world calls for, almost by definition, a consideration of multiple interpretations of a situation. Philosophically speaking, what is called for is a consideration of multiple “realities.” And, as soon as we begin to speak of multiple versions of reality, we are no longer operating within the paradigm of “positivistic science.” The network facilitator, in order to discover multiple realities, it would seem, would need to use tools that require conversing with people interactively and over time to gather deep context-specific knowledge. Such a necessity goes beyond what can be supplied by an approach that elicits generalizable information (data) from a preset scheme (e.g. survey or demographic analysis). This being the case then, it would be irresponsible to not take into consideration the methodological requirements put upon any methodology by its realm of application or “paradigm.”

To figure out what paradigm of inquiry would be used by a network facilitator to build an implementation network, we must begin by asking some fundamental ontological (what is reality) and epistemological (how can we know it) questions. More specifically, the ontological question asks: *What is the form and nature of reality, and, therefore, what can be known about it?*; The epistemological question asks: *What is the nature of the relationship between the knower and what can be known? For example, if the answer to the first question is that reality has “real,” independently verifiable qualities that do not change, then the answer would be that the relationship is an objective, detached and value-neutral one.*

The question of methodological requirements, therefore, is crucially linked to an individual’s view of what knowledge is possibly known. For example, “a “solid and unchanging” reality pursued by an “objective” inquirer mandates control of possible confounding factors, whether the methods are qualitative (observational) or quantitative (e.g. analysis of covariance)” (Guba and Lincoln 1994, 108). If an objective reality were

assumed, then a straight-forward statistical analysis might be performed to determine which stakeholders have the highest (lowest, etc.) aggregate rating across a few chosen metrics. Unfortunately the dynamic, “networked” world within which today’s public administrator is being asked to operate will generally preclude the establishment of any such specific metrics. This is certainly not to say that statistical methods are not useful outside a view of an “objectively verified world.” On the contrary, statistical methods are quite prominent and usefully applied by those with a more “qualitative” view of reality (especially the quite advanced field of non-parametric statistics). All that is being claimed here is that the question of methodological inquiry cannot simply be addressed within a discussion about the “methods” to be used. Instead “methods must be fitted to a predetermined methodology” -- a methodology predetermined by the paradigm of inquiry chosen (108).

Accordingly, a case can be made that the ontological and epistemological viewpoints expressed in the past decade or two in public administration have been heading from one set (or paradigm) to another (or others). This shift brings with it certain responsibilities, not the least of which is the responsibility to design new methodologies that support the new set of ontological and epistemological assumptions. That is, while the modified experimental method using falsification of hypotheses and highly quantitative methods fit the positivist and post-positivist paradigms of enquiry, they do not necessarily fit the newer critical theoretic and/or interpretive/constructivist paradigms of enquiry (White, 1994; Balfour and Mesaros, 1994; Dryzek, 1982).

In the post-positivistic paradigm reality is assumed to exist, as in its predecessor, positivism, but we as human inquirers can only apprehend that reality imperfectly (unlike positivism) given our flawed human intellectual abilities. As stated by Guba and Lincoln, within this epistemological stance “objectivity remains a “regulatory ideal”; special interest is placed on “guardians” of objectivity such as critical traditions (Do the findings “fit” with pre-existing knowledge?) and the critical community (such as editors, referees, and professional peers). Replicated findings are *probably* true (but always subject to falsification)” (110).

The methodology of the critical theoretic paradigm of enquiry, however, has been described as “dialogic and dialectical” (110). That is, a dialogue must occur between the

subjects of the inquiry and the inquirer, and that dialogue must be dialectical in nature in order to transform ignorance and misapprehensions into a more informed consciousness so that the subjects of the inquiry may be liberated from false psychological boundaries.

Similarly, the methodology of the constructivist/interpretivist paradigm of enquiry is considered to be “hermeneutical and dialectical in nature” (111). That is, because in this paradigm reality is considered to be relativist – “multiple, intangible mental constructs, socially and experientially based, local and specific in nature ... and dependent for their form on the individual persons or groups holding the constructions” – it is believed that individual “constructions” can be elicited and understood only through interaction between and among investigator and respondents (111).

From these understanding of the paradigms of inquiry, it is safe to say that the methodological system derived in this volume has been developed as a set of tools to be used within the constructivist paradigm of inquiry. Given that the purpose is to attempt to build implementation networks (or political economies) comprised of autonomous individuals, each with their own set of political, economic, organizational, and other beliefs, a stance that sees “reality” as an amalgamation of individual “constructions” seems very appropriate. Given that the purpose of these methods is to enable the “building” of something new, the focus of the critical theoretic standpoint, a historical view with the purpose of liberating people from their psychological bounds, does not seem appropriate. Also, because the purpose of the methods proposed is not to analyze an existing system of relationships, but instead to help and create a new system of relationships, methods of the positivist and post-positivist stances would also not be appropriate.

Just stating that the methods within are created in the constructivist vein, however, is not enough. In creating a new methodology, it is also necessary that we are able to judge that method against a set of criteria so that some assessment can be made concerning its actual “usefulness.” For positivistic methodologies, these criteria are clear, well-stated, and accepted in many fields of enquiry. These are the criteria of internal validity, external validity, reliability, and objectivity. In the budding development of qualitative methods, however, there is yet to develop any such criteria that has widespread acceptance. This does not mean, however, that one can advocate a new methodological

system without considering its possible utility to others. This being the case, a set of criteria, in addition to those established above, is proposed here against which the methodologies to follow can be evaluated.

In their book Naturalistic Inquiry, Guba and Lincoln describe the aim of naturalistic inquiry (their term for methodologies of the constructivist bent) as focusing on the 'meaning in context' and requiring a data collection instrument that is sensitive to underlying meaning when gathering and interpreting data. Moreover, a "good" inquiry that would use such an instrument would take the form of successive *iterations* of four elements:

1. purposive sampling;

Purposive sampling refers to the deliberate attempt to include certain participants in the process. One may refer to this approach as being non-probabilistic. This is in contrast to traditional random "probabilistic" sampling. Purposive sampling helps to assure that a maximum range of specific information can be obtained from and about the specific context at hand (1985).

2. inductive analysis of the data obtained from the sample;

Induction analysis is the process of reasoning from the specific to the general - from particular facts or instances to arrive at general principles. Inductive conclusions are considered 'reliable' or 'unreliable,' not true or false because inductive thinking is, of necessity, based only on a sampling of the facts (hence the necessity for good purposive sampling). They can, however, support statements about the unknown on the basis of what is known so that the questioners may proceed. And, if the process is iterative, as indicated it should be above, the facts upon which the induction is based will be continuously re-evaluated – the inductive conclusion should become more 'reliable.'

3. development of grounded theory based on the inductive analysis;

That is, theories that 'emerge' via induction of the data that correctly discern the chief concerns of the people in the substantive area under study, and, further, delineate any sub-categories of these concerns. The researcher asks questions while constantly comparing incident to incident, coding and analyzing. (S)he uses the constant comparative method of analysis. Soon categories and their properties emerge which fit, work, and are of relevance to the processing of a problem.

4. and, projection of the next steps in a constantly emergent design (Lincoln and Guba, 1985).

These requirements of a good “constructivist” approach, therefore, stated as requirements for a good methodological system are:

1. the approach should be iterative;
2. the approach should use purposive sampling;
3. the approach should require inductive reasoning;
4. the approach should require the development of grounded theories; and,
5. the approach should enable a reasoned assessment of next steps to be taken.

Summary of Requirements

These requirements of a good approach to building implementation networks in the “constructivist” vein, therefore, are:

1. *allow for ‘assessment’ the environment of the potential policy implementation;*
2. *help the builder understand and work with individuals from that environment; and,*
3. *enable the builder to plan for resource usage across boundaries.*
4. *be iterative;*
5. *use purposive sampling;*
6. *require inductive reasoning;*
7. *require the development of grounded theories; and,*
8. *enable a reasoned assessment of next steps to be taken.*

This set of requirements will be used, following a discussion of the case study , to discern ‘usefulness’ of the proposed methods, as well as to delineate further needed refinements and/or modifications.

Travel Shenandoah - A Case Study for Continuity and Understanding

The approach advocated here will not be released unto the reader without reference to its applicability in a real-world implementation situation. Accordingly, a recent

implementation effort, one in which the author has been deeply involved, will be used to present real-world reference points that the reader may use to understand the concepts presented. The case study involves the implementation of an Advanced Traveler Information System being deployed in the Shenandoah Valley region of Virginia – Travel Shenandoah. While no single case study can be taken as “proof” of a methodology’s effectiveness, a case study can serve as an illustrative tool that can enable understanding of complex concepts. The Travel Shenandoah case study offered here serves that purpose at a minimum. Beyond the illustrative capabilities, however, the value of the case study as a tool of theory-building should not be discounted. Whereas some authors have claimed that case studies are simply unique, noncumulative events that cannot meet the requirements of scientific methodology (McCurdy and Cleary, 1984; Stallings, 1986), others have argued that critical case studies have advantages for theory-building purposes because “they avoid the ‘inductive fallacy’ which assumes that theories lie in the phenomena and can be derived through data processing” (Thomas, 1983, p.57). Others, like White (1986a) have concluded that “theory building is fundamentally a practical activity in explanatory, interpretive, and critical research,” for which the primary methodologies are the case study, descriptive histories, philosophical analysis, or social critique (p.21). This dissertation, focusing on the creation of a methodology from the interpretive/constructivist perspective, would seem to be the type of study White is referring to. Additionally, Yin argues that case studies are the preferred strategy “when a ‘how’ or ‘why’ question is being asked about a contemporary set of events, over which the investigator has little or no control (p.20). The analysis of the formation of an implementation network would certainly seem to fit that definition. So, while the case study may lack the external validity of the scientific method, in this dissertation, at a minimum, it is illustrative of the most common kind of network, the implementation network. Beyond this, the case study may also serve as a valid tool of theory building from practical experience.

In the spring of 1998, the Intelligent Transportation Systems (ITS) Division of the Virginia Department of Transportation asked the Virginia Tech Center for Transportation Research to help with a problem. A major interstate, I-81, that passes north-south through the entire western portion of the state was about to begin addition of a third lane to both the northbound and southbound lanes of traffic. In the best-case scenario, the project would probably take 10 years. The predicted traffic congestion was very high as

there are very few alternate routes to take on that side of the state, especially in the region where construction was to begin first, the Shenandoah Valley, one of Virginia's top tourist attractions. The problem, as they put it, was that information on all current road activities and conditions had to be quickly and effectively distributed to the travelling public. VDOT, however, did not have the in-house expertise to get such information out to the amount of people that needed to be informed. They had an active public relations department, but it focused mainly on print and television dissemination of information, both of which were of little use to the traveler on the roadway.

The ITS Division knew that there were many other methods for disseminating information in a more dynamic fashion: cell-phones, kiosks, the world-wide-web, variable message signs along the roadway, etc.. What VDOT did not want to get into, however, was actually designating and procuring these systems. They believed that VDOT's 2-5 year cycle of procurement would most likely leave them with outdated technology that they paid too much for and that would then need to be replaced by going through another procurement cycle.

Additionally, there was significant political pressure being brought to bear. A new conservative-leaning governor was pushing state agencies heavily to begin using the private sector as much as possible in service delivery. As the ITS Division did not want to get tangled up in the VDOT procurement system, they were quite in favor of reaching out to the private sector as well. They also saw private sector involvement as a way to possibly minimize the cost to them of distributing the information. The problem was that they had no idea who to reach out to or how to do the reaching.

After a number of discussions, the charge to the Center was specified: *help get the right people, organizations and companies together to create a Traveler Information System that would distribute current road conditions to as many people as possible, by as many modes as possible, and that costs VDOT as little as possible.*

The Center was being asked to build an implementation network – a network of public and private sector entities, working together within an interwoven calculus of personal interest, all working toward a common end – a Traveler Information System.

Excitement swelled our ranks as we had been touting the benefits of 'network thinking' to anybody who would listen. Sometimes you get what you ask for. We ran to our books and articles on policy networks. These articles had helped us in many ways in structuring our thinking about projects we had been involved in. The difference this time, however, was that we were not being asked to go in and help fix a malfunctioning system of some sort. Most policy network articles have been written from the viewpoint of the analyst looking at existing systems of relationships. I could find none written from the viewpoint I was currently forced to take. We were being asked to create something new from scratch. Our team quickly discovered that what we would have to do is put together some custom methods that would support us in working to create a brand new implementation network.

The methods discussed within the sections of this dissertation, "contextual analysis," "stakeholder analysis," and "joint-visioning" were developed specifically in response to the needs of this project. Accordingly, I believe the story of their application can provide a strong source of insight into our ability to not only work within existing network structures, but also to be proactive in creating and managing such structures. Additionally, their creation begins to close the theory-practice loop for network theory, a loop that is often never closed for many schools of theory.

Accordingly, accompanying each method described in this volume will be a detailed discussion of that method's application in the Travel Shenandoah project. Benefits, disadvantages, and , where appropriate, suggested further modifications to the method will all be discussed.

CHAPTER II - A NEW ROLE – THE “NETWORK FACILITATOR”

Before we continue on to a deliniation of the proposed methological system, it would seem prudent to first discuss an important precursor to successfully using the new tools. The prerequisite is the accepting of a new role for the public administrator. In a new “networked” context, old methods of administration can prove woefully inadequate. If a public administrator does not accept that a new role is justified, then this realization will most likely never occur. This prerequisite is arguably more important than the methodological system proposed within, for if it is satisfied, any tool that is selected will at least be used toward the correct end. Without an acceptance of this new role, using the methods proposed here will likely not lead to their intended end of successful policy implementation.

What a Shift to a “Networked” Context Means for the Role of the Public Administrator

If we look back at the “recommendation for governance” category in **Table 2**, the new role for the public administrator begins to emerge. No longer is the administrator responsible for coordination and centralization in the name of attaining implementation of ex ante formulated policy, nor is the role that of simply pushing all available resources and authority to the lowest possible level. The role of the public administrator in a networked environment is that of a network manager, or better – facilitator, who focuses on improving the conditions under which actors interact so that collective thought and action may be realized.

Table 2 – Three perspectives on public policy making and governance

Perspectives	The centralized top-down perspective	The multi-actor bottom-up perspective	The network perspective
Dimensions			
Object of analysis	Relation between central ruler and	Relation between central ruler and local	Network of actors

	target groups	actors	
Perspective	Central Ruler	Local Actors	Interaction between actors
Characterization of relations	Authoritative – hierarchical direction of peripheral actors	Centralized versus autonomous	Interdependent
Characterization of policy process	Neutral implementation of ex ante formulated policy	Political processes of interest representation and informal use of guidelines and resources	Interaction process in which information, goals and resources are exchanged
Criterion of success	Attainment of the goals of the formal policy	Local discretionary power and obtaining resources in favor of local actors	Realization of collective action
Causes of failure	Ambiguous goals; too many actors; lack of information and control	Rigid policies; lack of resources; non-participation of local actors	Lack of incentives for collective action or existing blockages
Recommendation for governance	Coordination and centralization	Retreat of central rule in favor of local actors	Management of policy networks; improving conditions under which actors interact

Adapted from Kickert, Klijn & Koppenjan, 1997, p. 10.

What this evolution probably means for the public administrator is that (s)he who goes through the painful ordeal of working with multiple stakeholder groups across different sectors, will soon come to the conclusion that the solution that works is preferable to the “optimal solution” (economically speaking) that one or more parties will never sign off on. That is, the public administrator must begin to play more the role of *facilitator and evoker* of processes of dialogue and consensus as well as cooperative implementation in a network of diffused power and knowledge.

Nutt and Backoff (1993) argue that managers in the public sector who take into consideration the constraints of political influence and authority networks are likely to be much more effective than those that don't. So, while education for "public" administration may be made more painstaking, the results should be positive. One hopeful effect would be to make public managers think twice about the actual applicability of ideas from both private and public sector administration theory that are based on the classical view of administration. **Table 3** summarizes the classical versus the network perspective in regards to management.

Table 3 – Two perspectives on management

Perspectives	Classical Perspective	Network Perspective
Dimensions		
Organizational Setting	Centralized Authority Structure	Diffuse Authority Structure
Goal Structure	Activities are guided by clear goals and well-defined problems	Various and changing definitions of problems and goals
Role of Manager	System Controller; Decision Maker	Mediator, process facilitator, network builder
Management Tasks	Planning and guiding organizational process	Facilitating and evoking interactions and providing opportunities
Management Activities	POSDCORB	Selecting actors and resources, influencing network conditions, facilitating authentic dialogue and handling strategic complexity

Modified from Kickert, Klijn & Koppenjan, 1997

From Classical Hierarchy Manager to Network Facilitator

The Classical/Traditional Managerial Mind-Set

Given that the public administrator in the networked environment must begin to move from a “classical” or “traditional” perspective to a “network” perspective, what does this actually mean in terms of what the public administrator must ‘give up’ and what the public facilitator must ‘acquire?’

Peter Senge, in his Fifth Discipline, summarizes well the “dominant mental model” of management in such a manner that it is easy to detail what the public administrator must ‘give up’ in order to work effectively in a networked environment. Senge’s model is comprised of seven distinct attributes³:

- Obsession with Command & Control
- Vision of a Stable Future
- Competitive Advantage Based on Economics of Scale and Expertise
- Specialization of Labor
- Hierarchical Structure
- Control by Technical Rationality
- Separation of Personal and Professional Life

These attributes are summarized here:

Obsession with Command and Control

This represents the most significant attribute. From human resource systems to production planning, the old mind-set makes the avoidance of surprise a number one priority. This, of course, makes complete sense from within the classical mind-set. As institutions of commerce and government emerged, thus resulting in a more stable world, those organizations that thrived on that stability invented systems to take advantage of it. A simple self-fulfilling prophecy, as it were. Of course, the more control that is garnered, the less an institution is willing to give up any of that control. Unfortunately, as is well documented, such an inability to relinquish control is generally accompanied by an inability to respond to changing contextual conditions.

³ As summarized in Bruner, et. al., 1998.

Vision of a Stable Future

Concern over predictability and the inability to envision anything but steady growth, and the absence of discontinuous change due to technology, regulation, demographics, or lifestyle attitudes, is part and parcel of the dominant mental model. Most fundamentally, this predilection can be witnessed in institutional planning processes that are oriented toward extrapolating the past and present into the future rather than toward questioning fundamental assumptions or exploring radically different alternatives.

Competitive Advantage Based on Economics of Scale and Expertise

In the private sector (which Senge is primarily interested in), the classic mind-set seeks profitability and competitive security through sheer size and domination of markets. This is reinforced through the commitment of massive investments in relatively fixed and inflexible plants, equipment, information systems, and organizations. The control of the public sector organization, as Wamsley and Zald put it, rests ultimately upon coercion and a monopoly of force, and ..., if legitimate, ... “symbolically speaks for the society as a whole, or purports to do so” (1973, p. 63). Thus, in very much the same manner, organizations across all sectors traditionally commit to a strategy of scale and inflexibility predicated on a relatively certain future.

Specialization of Labor: The Creation of Narrow and Repetitive Work

This push for control of a certain future is linked to the efforts to develop economies of scale which, in turn, is linked to a focus on specific repeatable tasks that may be performed by the employee to maximize efficiency of operation. The worker “becomes” part of the production or service provision machinery. Employee discretion is necessarily delimited. Manifestations of this process are the creation of performance maximizing protocols (e.g. AFDC aid regulation handbooks) and the output of standardized products (the aid plan for a family of four, single head-of-household, under the poverty line, living in a... etc.).

Hierarchical Structure: The Centralization of Power

This is, of course, the most commonly recognized representation of the traditional mind-set of management – a high and steeply sloped pyramid representing reporting relationships and career progression along the vertical dimension and functional differentiation across the horizontal dimension. Representations of institutional power (money, expertise, decision authority) are concentrated at the apex. Administrative control is conducted by “command.”

Control by Technical Rationality: The Rule by Rules

Very much analogous to the factory workers, the administrators of the traditional mind-set are a part of the ‘machinery’ of the bureaucracy. That is, the content of the administrator’s job is so well defined, that its prosecution may be carried out in almost machine-like fashion. Such an approach allows for that job to be technically rationalized and improved (in terms of efficiency) over time.

Separation of Personal and Professional Life

The individual surrenders a part of his/her life to work within defined parameters to advance within the hierarchy. This level of freedom is surrendered in order to achieve the resources needed to live the “other” personal life. Chester Barnard believe, in fact, that the executive who functioned well in the bureaucracy would have a public persona that differed from that of his or her private life. Stories such as *The Man in the Gray Flannel Suit* can be seen exploring the psychic pain of such a separation.

Adopting a New Set of Assumptions

So, what happens to traditional managerial assumptions about “leadership” when you must work to implement something in a network setting? Many things, of course, but a short list would have to include the following:

- hope for hierarchical control must be abandoned;
- there is little possibility of ‘command and control’ of a network;

- the future cannot be visualized as stable; and,
- control by technical rationality will likely fail.

If the classical leadership style is ultimately doomed to failure when applied to implementation efforts in a network setting, then to what type of leadership style can we turn? As indicated in **table 3**, a network perspective would seem suitable. That is, the role of the public administrator moves from that of a system controller to that of a facilitator, process manager, and network builder. More specifically, though, what does this mean in terms of a leadership approach?

Bruener, et. al., in their article “Leading from the Middle: A New Leadership Paradigm,” approach this question by first proclaiming that “[m]iddle management as we know it and as we teach it ... is bankrupt,” (primarily because of many of the reasons already discussed in this volume) and, therefore, “we must rethink the very idea of management as a hierarchical and directive activity concerned primarily with efficiency” – *this from a business school*. What we need to do, they claim, is replace our idea of leadership as a top management task directed downward with the idea that managers lead from the middle (251).

Current responses to this need, it is claimed, are only partial solutions, at best. Total Quality Management, Business Process Reengineering, Mass Customization, and Alliance and Partnership efforts fall short. While in the short term these approaches have been shown to produce incremental improvements (e.g. incremental improvements in manufacturing, R&D, and product design), from the long-term viewpoint of the organization, and its critical outside linkages for sustained operability, these approaches have been only partially successful. “Unfortunately, the partial successes of these programs have deflected attention from more fundamental questions about the challenges facing leaders. In reality, these programs rarely alter the core assumptions and mind-sets of the [organizations] within which they are introduced; therein lies the problem” (265).

What is called for instead is the concept of “leading from the middle.” In terms of network management, what this means is that the hierarchy of power and the pyramid of organizational control is replaced by a network of relationships (within the organization,

outside the organization, and some across the boundary). This vantage point does not, by definition, confer positional power, expert power, or even referent power. Rather, it offers what is referred to as “creative destruction: the marshalling of resources, people, and ideas to create value that others in the network find worthwhile. The manager becomes the facilitator and the catalyst for action and creative change” (267).

The elements of network management, or leading from the middle, that are proposed for replacing the elements of the traditional mind set are:

- Owning the whole process
- Boundarylessness
- Customer Orientation
- Dynamic Orientation
- Invention of the Future
- Role of Learning
- Integration of the personal with the professional

These attributes are discussed below:

Owning the whole process

The new managerial mind-set calls for every actor in the process to feel some degree of ownership of that process. To *own* is to feel some level of accountability for. It does not mean to simply participate. That is, responsibility must, to some degree, be delegated. A focus on the *whole* process is to challenge individual actors to conceive of their responsibilities as affecting all other actor’s responsibilities in the entire process. The entire outcome is what is most important, not the accomplishment of a discrete task.

Boundarylessness

Of course, to create a sense of ownership of the whole process, the manager must begin to think outside traditional boundaries of management. That is an openness to alliances, partnerships, and new ideas must begin to replace a focus on maintaining functional ‘stovepipes.’ This “new mind-set eliminates walls around functions and

encourages lateral interaction” thus increasing the importance of information and expertise (as in the ability to make critical judgements).

Combined with ownership of the whole process, we can now envision the manager as occupying a central position in a network of relationships. The boundary “between customer, supplier, employee, and traditional stakeholder roles is becoming hopelessly blurred” (268).

Customer Orientation

Coming from the business literature, the term ‘customer’ is used. While ‘customer’ and ‘citizen’ are certainly not synonymous given the directions in which responsibility flows, the comments here do apply. By customer orientation, what is meant is an attitude of caring and individualized relationship building as opposed to demographic analysis and group segmentation. The reason this view applies, I believe, is that the concept of relationship building is getting much closer to the concept of the responsibility of the public administrator toward the citizen stakeholder. Combined with the concept of ownership described above, we end up with a ‘customer’ that has a personal relationship with the central actor in the process and who has some level of responsibility to that process (some power has been delegated). This is getting very close to viewing the customer as citizen.

Dynamic Engagement

The point here, is that a network process must be *agile*. That is, given that preferred outcomes and the challenges to achieving them are constantly shifting in such a context, rigid organizational structures will more likely hamper progress than enhance it. What the term ‘dynamic engagement’ is getting at is that, if static relationships enforced by bureaucracy are no longer in effect, what is left to keep necessary processes of common resource exchange, etc., moving (especially when actors will turn-over more rapidly than in a traditional organization). The answer proposed is that “values” are critically important. If the network is value-driven, then what is most important, personnel-wise, is to dynamically engage all relevant stakeholders in defining what is important about the purpose of the network (creating values), why it is urgent (providing rationale for the values), and creating a role they

can play in helping to bring the values to bear upon actions in pursuit of the network's purposes (Collins and Pouras,).

Invention of the Future

A "fundamental assumption of the leading from the middle mind-set is that the future will vary significantly from the past" (270). That is, we cannot simply extrapolate, as we are taught in tradition quantitative methods of administration, the present into the future. Instead, the future must be actively and continually invented. The invention of this future is what the new mind-set manager is trying to catalyze amongst relevant stakeholders.

Role of Learning

A system of learning for the entire network of stakeholders becomes vital once we elect to work in such an environment. Learning must become an end in itself. Dimensions of learning include acquisition of new information, mastery of new techniques, and the growth in expertise and judgement. In this respect, learning is much more than job training and is vital to ensure that ownership and dynamic engagement occurs and that invention of the future is possible.

In his book, The Fifth Discipline, Senge makes a strong argument for such a stance when he sets forth what he calls the disciplines of learning: mental models, shared vision, team learning, personal mastery, and *the fifth discipline*, systems thinking. According to Senge, competitive advantage comes to the organization that can learn the best and that practices these disciplines as a routine matter of course.

Integration of the personal with the professional

In the old mind-set, employees were expected to show up for work with their hearts in tow. That is, workers were expected to trade some of their individuality for a promise from the organization to reward and take care of them. Such a situation is increasingly the exception in today's world. Continuous improvement and transformation processes work only if organizations embrace the individuality, the differences, of its employees. In fact, it is precisely such a diversity of experience and viewpoints from which the new organization obtains strategic knowledge.

“Employees today must make critical judgements in addition to performing what used to be normal, unthinking jobs. Thinking and doing, separated at birth in the old mind-set, are inextricably joined together in leading from the middle” (Bruner, et. al., 1998, 270).

The Special Position of Government Actors in a Network

While it is certainly true, as stated by Bruener, et. al., that the vantage point of a network manager does not, by definition, confer positional power, expert power, or even referent power, it must be recognized that in their writings, the authors are specifically referring to ‘their’ unit of analysis: the private sector business administrator. That is, they are not considering the special position that government actors are placed in, regardless their location in the network. If we refer to the research on the difference between the public and private sectors, it becomes obvious that a *special* quality will be accorded a public manager in the role of network facilitator by default, regardless our efforts to conceptualize otherwise.

As Kickert, Klijn, and Koppenjan state, “[t]he network approach by no means presumes that governments are *like* other actors. Governments have certain resources at their disposal and work to achieve goals, which means that they often occupy a unique position that cannot be filled by others” (177). Or, as Wamsley and Zald put it, a government is a system of rule that “speaks for society as a whole, or purports to do so,” and “ultimately rests upon coercion and a monopoly of force (PAR 1973, 63). That is, governments represent the “public interest.” In addition to a monopoly of force and democratic legitimization, other resources would include sizeable budgets and personnel, special regulatory powers, and access to the mass media. This panoply of attributes are simply *not* brought to the table by non-governmental actors in a network.

While access to these resources leaves a great deal of potential power at the government actor’s disposal, it does not necessarily follow that public actors hold a superior power position in the network. On the contrary, what is at issue is the definition of strategic direction in which to deploy these resources, a direction that cannot be determined by the public actor alone. That is, the reason a network approach is

advocated in the first place is that a problem or situation is too complex, heated, political, costly, etc., for the public agency to handle on its own. Cooperation is needed on all fronts to address the issues, and, therefore, the purpose of a network approach is to facilitate discovery of common understanding and a strategic direction in which *all* parties can apply their resources. What the public agency brings to the table is a certain set of resources, expectations and responsibilities, described above, that can be deployed in that direction and a responsibility to serve the public interest.

It is this responsibility to serve in the “public interest” that, to a great extent, limits the potential application of governmental power. Serving in the public interest entails a number of functions that are considered ‘inherently governmental’ (e.g. responsibility for the stability and security of the nation thus enabling smooth societal operations – see Dudley, RF2, 1995), but also includes being responsible for the authoritative embodiment of values, settling social conflicts, producing social goods and services, solving problems that nobody else wants to address, and acting as the guardian of a number of social and democratic values.

These responsibilities often mean that the public actor is provided much less strategic leeway than non-public actors. This situation makes the government actor, by definition, necessarily interdependent with other entities in implementation efforts. In fact, as Kickert, et. al. explain, in dealing with this interdependence, a democratic government encounters certain limitations as a function of its uniqueness:

- The tasks of government define to a great extent its interdependence and often condemn it to interactions with particular social and administrative partners which it is not at liberty to choose.
- In performing its duties, government is frequently not allowed to ‘goal bargain.’ In this respect, it does not have the option of carrying out tasks through negotiation.
- This effect is reinforced because governments are bound, by their institutional setting, to the norms and rules they wish to impose on others: principles of good management, consideration for minorities and adversaries, working within the guidelines of democratic regulations, etc.. Where other actors are able to operate with far less constraints upon strategic ingenuity, governments are expected to show exemplary behavior.

- Because of its public nature and the democratic monitoring to which governmental actions are subject, more demands are made on its strategic interactions. The actions of the public sector are scrutinized by the watchful eye of the media and other actors in the process.
- More generally, government is not only expected to operate effectively and efficiently, but its actions must also be legitimate: They must be 'backed' by politics, but there must also be social acceptance of public policy, if only to avoid the danger of political mobilization (178).

Such a uniquely powerful and yet uniquely constrained position leaves the public actor having to choose carefully among a number of strategic options. The first option would be to simply not participate in a network and attempt to impose the governments goals on other actors. This is, of course, what has come to be expected from the classical model of governance. This option is the most prevalent, most likely, because of the need to preserve legitimacy above all else. De Bruijn and Ringeling, in fact, argue that governments, if faced with the choice between effectiveness and legitimacy, would do well to choose legitimacy, since illegitimate actions are often at the cost of effectiveness (in Kickert, et.al., 158). The issue that we must wrestle with, however, is how realistic a position this is given the type of problem situation addressed in this volume and the strong interdependence between the public actor and other actors discussed above.

A second option, and one that is increasingly used in modern government, is the option of public-private partnerships. These types of relationships are often considered to be quite legitimate since they are seen as money saving efforts by the agency in performing its public interest duties. The problem that arises with this approach however, is the same problem that arises when we try to enforce a conceptual distinction between politics and administration. Many governmental responsibilities cannot be 'contracted out' because they involve the authoritative allocation of resources according to democratically derived processes. For example, contracting out trash collection is much different than contracting out police or social services.

A third approach is where the public actor chooses to act as a "mediator" of an existing network, mediating "interaction processes relating to certain problems or policy projects or, in the case of blockages and stagnation, get things going again through mediation and arbitration" (Kickert, et. al., 179). This option is, of course, attractive given that the

purpose of this volume is to discuss how to operate effectively as a network manager/facilitator, but it is only one way to envision this position. In this vision, the public actor is primarily a “mediator” and, therefore, is not participating as a representative of the public interest, or, better stated, it is the assumption of this approach that the public interest will be served by a government actor who effectively mediates between many private interests (government mediated auto worker strikes come to mind).

The fourth approach, and the one that this dissertation is primarily interested in facilitating is that of the government acting as the ‘network builder and facilitator,’ where the public actor, in exercising his/her responsibilities for addressing a certain societal problem, actively works to construct a network of actors whose ideas are potentially valuable for and whose resources can effectively be brought to bear on the problem at hand. In this role, the public actor is primarily interested in ‘getting the issue resolved’ by effectively working to both satisfy the needs of many potential stakeholders while helping them form a collective vision that includes the needs of the public sector agent. It is in this mode that we need to consider what mode of ‘network facilitation’ is the most appropriate.

Evoking Cooperative Action

O’Toole, et. al., in their article “Managing Implementation Processes,” outline strategic approaches to inducing cooperative action from within a network. Thinking about these strategies is appropriate, it is argued, because, [w]hile it is sometimes possible to find a sense of common purpose among the constituent units of a network, or at least a commonality sufficient to stimulate voluntary cooperation on behalf of the problem-solving effort, circumstances often dictate otherwise” (146). What is offered are three distinct approaches to a situation where common purpose is limited, authority throughout the network is restricted, and a range of perspectives are existent.

Bargaining and Compromise

One of the more traditional modes to stimulating agreement/problem solving/etc. is to encourage bargaining leading to compromises. Each party gets something of what they

desire, but not all. The network facilitator can assist by identifying bargaining points and potential agreements, as well as by brokering bargaining processes and working to ensure commitments are maintained over time. This approach has been referred to in other texts as the 'lose-lose' option. While decisions may be adjudicated and some progress made following this model, in the end, it may not do much to guarantee long-term success of a continuing implementation process. To be sure, as game theorists have shown, much forward progress toward a certain goal can be made by getting differing parties to make acceptable trade-offs. However, it would be hard to argue that this is the 'best' method of achieving a goal given that the attitudes and beliefs of these individuals about the situation at hand are never changed. Instead, thinking taken from a single moment in time regarding a single issue is applied by all parties, and bargaining and compromise is used to determine who gets what part of their agenda on the table and accessible for funding, etc.. When the current implementation hits a snag of some sort (change of strategic direction, need for more funding, etc.), then the game must start once again, new calculations must be set according to each player's understanding of the other players' positions, and new strategies of maximization must be established, thus consuming more valuable resources to again achieve the balance of interests previously attained. This happens because one of the three major components of the 'game' (players, payoffs, or rules) has changed – a new game is afoot (Shubik, 1964). That is, success is gained only in the static environment following the compromise. Because fundamental disagreements still exist, it cannot be assumed that when the context dictates change (for example, a key party leaves the process, or a key rule has changed) that the parties will remain committed. This is a truism by definition in game theory where both cooperative and noncooperative solutions to nonconstant sum games are generally referred to in terms of symmetry and equilibrium (Luce and Raiffa, 1952; Von Neumann and Morgenstern, 1944; Ellsberg, 1961). When the system is thrown out of equilibrium, the system needs to recalibrate – by definition.

Changing Perspectives - Controlling the Content of Perceptions

So, if the bargaining approach fails because it does not have the effect of changing attitudes and beliefs, than why not work in a mode focused on doing just that? This is the approach of the *changing perceptions* mode. In this approach the network facilitator will work to manipulate the variables/properties of the given network to shift the views of actors and their relationship to others. Ostrom (1990) provides examples

of this style of implementation management. In her work, Ostrom defines the properties of communities surrounding an issue. These are size, diversity, stability, perspective toward the future, constitutional-level understandings, levels of trust, norms of reciprocity, and understanding of the problem at hand.

While this approach can be, undoubtedly, quite effective in achieving implementation, it fails on two counts for our purposes. First, the role played by the administrator in this context is obviously central and more powerful than the constituent stakeholders. Choices about the dimensions allowing membership are determined by the central actor and information is shared selectively to influence opinion. This position assumes two things that cannot be assumed when working in a complex network environment: one, that the other actors, who have just as legitimate a reason for being at the table as the central actor, will allow such central control; and, two, that the problem at hand is definable and approachable by one entity, the central actor (which of course is illogical as one primary reason for facilitating a policy network is that understanding and resources are not as such to go it alone).

Second, any long-term hope for continued implementation is surely threatened by any attempt to control the content of stakeholder perceptions. It will be difficult, at best, to maintain trust in the network if it is perceived that this is occurring. Such an approach certainly violates a key precept of the new network facilitator mind-set – enabling stakeholder ownership of the process.

Managing the Context – “Facilitating” Processes in which Perceptions are Changed

So, if bargaining and compromise is short-sighted at best, and controlling the content of perceptions is potentially dangerous, at worst, then what other approach is left for the budding network facilitator? The third strategy suggested by O’Toole, et. al. is *Management of Context*. In this approach, the aim is not to bargain or change old perspectives, but instead is to encourage cooperation without resolving conflicts. Or, as Stoker puts it, “...the problem is not to eliminate all conflict...but instead to create conditions in which participants are more likely to respond to conflict with cooperation.

...[I]t may be possible to encourage cooperative responses to conflicts of interest (Stoker, 1991, 50). This approach, which calls for the network facilitator to manage the context in which understandings are derived and strategies selected, is appealing – especially as it begins to bring to mind many of the approaches taken specifically by people trained in ‘facilitation.’ It is also appealing because it can be conducted overtly, as opposed to managing perceptions, which, by necessity, must be, at least partially, covert. The overt quality of this approach vitiates the fear of creating a non-trusting atmosphere which would certainly reduce the chances of long term implementation success.

A New Role - The Network Manager/Facilitator

Summarizing the new role of the network facilitator, as opposed to hierarchy manager, we are left with these specific responsibilities:

- The network facilitator is responsible for trying to create conditions under which goal-oriented processes can evolve; this involves trying to build trust among the participating parties.
- The network facilitator must act within the network to move the clusters of actors toward cooperation in the interests of program success. This involves using information to heighten the salience of preferred choices and conveying knowledge about how cooperation can serve interests of the others. Confidences must be honored and the facilitator’s focus must be on participant’s perceptions of elements crucial for success.
- The network facilitator can act to alter the network structure toward a more favorable array by: finding ways to shift network membership toward more supportive coalitions (although doing this overtly is suggested), locating key allies at crucial nodes, trying to alter agreements among the parties to heighten program salience, and buffering well-functioning arrays to limit uncertainty and complexity (O’Toole, 48).

CHAPTER III: CONTEXTUAL ASSESSMENT –

UNDERSTANDING THE CONTEXT, IDENTIFYING THE

STAKEHOLDERS

The “Implementation Network” as “Political Economy”

As stated in Chapter I, the purpose of this treatise is to devise a methodological system for building multi-organizational, multi-sector structures for the purpose of implementation. It was further suggested that such a structure can be conceived of as a “political economy,” a functioning set of political and economic relationships. In other words, you are being asked to visualize building an “implementation network” as building a political economy.

The reason for this is fairly straightforward. Because, in this case, we are attempting to ‘build’ an implementation network where none existed before, as opposed to ‘analyzing an existing network, we must first have a framework with which we may scan the environment and pull appropriate resources with which we will build. Without such a framework, our scope, or frame of reference, cannot be appropriately limited so as to focus on those resources we actually need vs. those that we do not.

An analogy would be designing and building a new house. The first thing you start with is *not* a set of blueprints. The first thing you start with is an idea of what types of features must be included in the blueprints to make what you are drawing qualify as a “house.” Types of features necessary for a bunch of raw materials to be a “house” might include a foundation, walls, windows, doors, etc.. The point is, you already have an empty theoretical framework into which you posit your specific ‘house’ ideas (e.g. “I want a stone foundation”). Also, at the same time, you consider the neighborhood that you want to build you house in. What kind of schools are there, what kind of public services are nearby, who will be your neighbors?

The political economy framework of Wamsley and Zald, even though it was originally intended as a framework for analyzing existing organizations, can also function as a normative framework for determining what must exist before any set of relationships can qualify conceptually as an 'organization.' Additionally, it helps the network facilitator visualize the context into which this new "virtual" organization must be inserted. Or, in our case, what must exist for a network of relationships to function as an 'implementation network' and, what, in the environment will help/hamper its development. This framework thus will allow us to conceptually go from 'nothing' to 'something.' Or, better said, from many unrelated entities to a network of inter-related entities that comprise a functioning political economy (our implementation network).

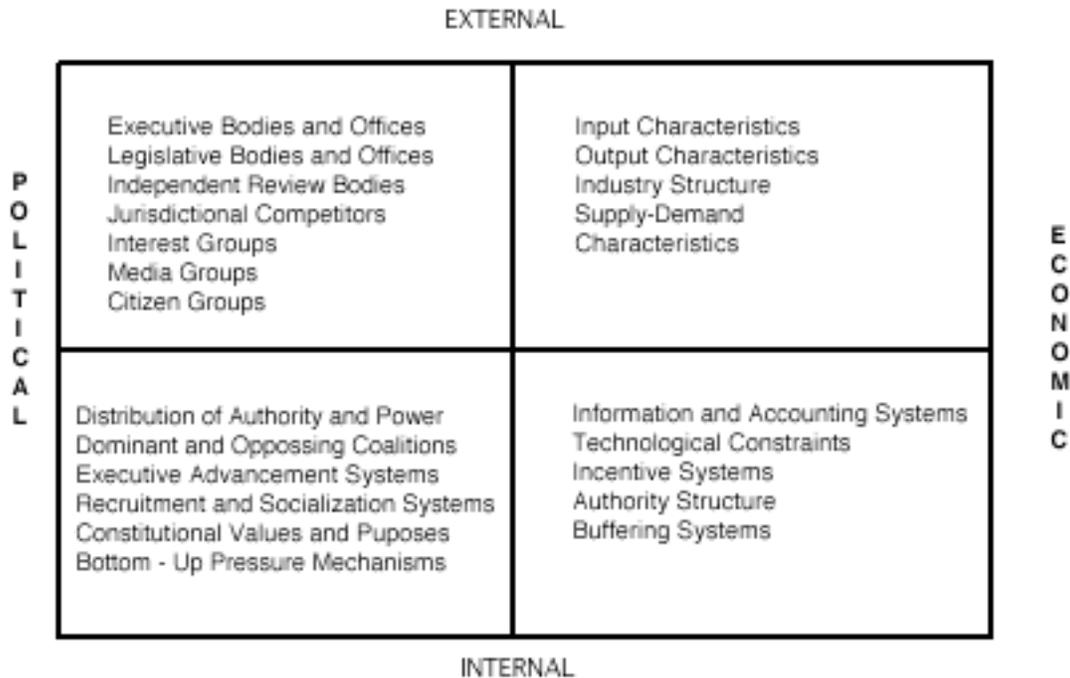
The political economy framework seems to lend itself to this process precisely because it "directs attention not merely to the internal workings of the institution but to its environment; and that environment is dealt with not only as an "interesting" past but as a source and repository of multitudinous transactions" (Goodsell, 291). Put another way, using such a framework helps us to consider the neighborhood into which we want to insert our new house – covenants, architecture, the schools, etc.. And, as stated before, before you build your house, there is only neighborhood – you must start there.

To use the political economy framework, however, a little translation is necessary to convert it from being a descriptive document to a prescriptive one. Luckily this is pretty straight-forward.

The Political Economy of Public Organizations

In Wamsley and Zald's political economy framework, structure and process are categorized as political or economy. Political encompasses the basis for legitimacy, and the distribution of power. Both factors affect an organization's function, goals, and means of work. In addition, the political also involves the general contextual perception of the

Figure 3 – The Political Economy Framework of Wamsley and Zald



propriety of the organization's existence, and the relation of the organizational goals to the goals of dominant elites.

Economy in the Wamsley and Zald framework refers to the physical arrangement of labor, technology and resources. Task accomplishment, means of production, and efficiency, are the main concerns within this realm, and are focused on the specific output of the organization.

The relationship between the political and economic aspects of an organization form the basis for analyzing both the internal and external elements which affect the development and operation of public agencies. An organization's political economy can be conceptualized by dividing the political-economic dimension by a cross-cutting internal-external dimension (see Figure 3). Ultimately, the four analytical frameworks, thus created - internal political, external political, internal economy, external economy -

provide a holistic view of the processes and linkages which comprise the entire organizational system.

Political Economic Dimensions Defined

The **internal economic structure** is where the broader technological aspects of the organization are concentrated, where instrumental and efficiency norms take precedence over legitimacy. Specifically, the structure refers to the patterned interaction of sub-units and roles in accomplishment of organizational tasks (who does what, when, and how). The internal economy is thus an arrangement of power and authority on the level of instrumentality and efficiency rather than legitimacy and survival (Wamsley and Zald, 70). Task structure can be broken down into:

- the variety of products offered;
- the operations necessary to deliver the products;
- the degree of geographic dispersion; and,
- the nature of role interdependencies requiring role clustering at different levels in order to reduce coordination costs.

Supporting the task structure are:

- resource allocation systems (budgeting systems); and,
- incentive systems

The **internal polity** is comprised of the structure of authority and power and the dominant values, goals, and ethos institutionalized in that structure. The 5 characteristics of an internal polity are:

- constitutions

The constitution (written or unwritten) of any social group consists of the basic norms involving the ends and means of power. That is, conceptions of legitimate purposes (the matters within or without its area of concern) and ways for wielding authority to pursue them (the range of discretion in utilizing resources).

- degree of goal consensus
Few public organizations embody total unity over purpose and general direction (most certainly because of their openness to direct affect by external political influences). Prevailing coalitions, however, can quite often be identified, and the level of agreement by others in the organization can be assessed against this coalitions definition of the goals of the network.
- unity of authority
Most networks, while having some degree of goal consensus, will still have a splintered authority structure (this is so almost by definition). What is important here is whether or not there exists agreements (actual and tacit) to exercise authority cooperatively in pursuit of common goals.
- patterns of organizational power
Within an organization, different actors will usually be responsible for helping to achieve different goals or phases of task accomplishment. Their ability to successfully achieve their responsibilities are a reflection of their power to marshal the necessary resources when needed. Power here is defined by: the essentiality of the actor to the accomplishment of the goals; the actors ability to access and influence information and communications; and, the actors ability to marshal public and 'powerful-other' support for the project.
- patterns of leadership succession, cadre maintenance, and socialization
Within organizations, some system, most often informal, is used to determine who else should be at the table as well as who should not be at the table any longer. Additionally, a system of socialization to the purposes and process of the organization is also evident.

An **external political structure** represents the distribution of sentiment and power resources among an organization's "relevant others" (i.e. opposition or support to the network, its goals and programs). This distribution is a reflection of at least seven factors:

- the dramaturgy (or perceived role) of the network's operations;
- the network's perceived expertise in the matter;
- the degree to which the network's impact is felt by others;
- the breadth (number of groups and individuals affected or interested) of its relevant others;
- the intensity of their interest;
- the resources they can bring to bear in exerting influence; and,
- their ability and willingness to use resources (1973, 64).

The **external economic structure** is comprised of the costs and behaviors necessary in obtaining factors of production and exchange of output at the organization's boundaries. What we are concerned with is the "industry structure," the system of inputs and outputs to and from the organization that make the existing network function, including:

- functional relationships between competitors;
- distinctive aspects of technology;
- supply of raw materials and labor; and,
- markets affecting the distribution of outputs.

Translating the Framework to Help Us Build Political Economies

To continue, we must translate this descriptive analytical framework into a prescriptive tool, a tool that tells us, the potential network builders and facilitators, what to look for.

First, after discussing the labels used in this framework with many who have attempted to apply it in practice, it appears necessary to re-label the dimensions so as to provide clarity. Accordingly, for the rest of this document, the dimensional labels will be thus:

External Polity → Political Environment

External Economy → Economic Environment

Internal Polity → Social (or Organizational) System

Internal Economy → Technical (or Functional) System

The terms “social system” and “technical system” were chosen over “internal polity” and “internal economy” for: 1) for conceptual clarity, and; 2) because the internal polity and economy, taken together, very closely approximates Burns & Stalker’s ‘Socio-Technical System.’ With that out of the way, we now need to devise a description of each dimension that directs us toward finding what we need to find, or creating what we need to create.

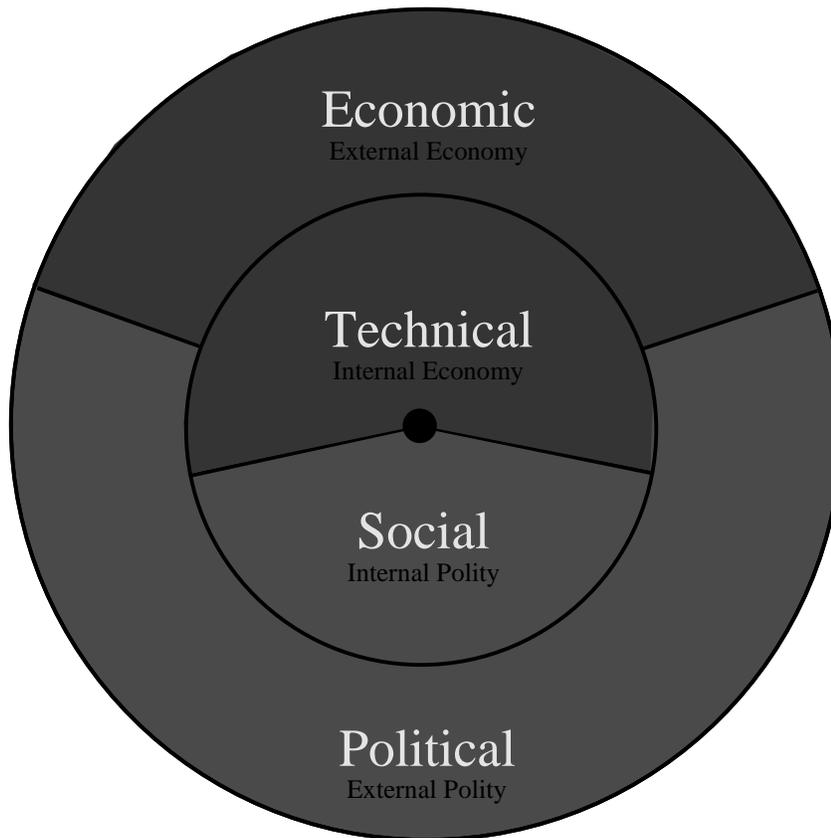
Figure 4 shows the four dimensions as rewritten to apply to an implementation network. In each dimension, a ‘primary question’ is posed. This is what the network builder is looking for to satisfy this dimension. Following each question is a list of possible variables to consider in answering the question. In a sense, this graphic depicts the original framework now “operationalized” and ready for prescriptive use.

Figure 4 – Operationalizing the Political Economy Framework

<p>Political Environment <i>Primary question:</i> Who, in the existing political environment will have to be involved for implementation to take place?</p> <p><i>Variables to consider:</i> Level of surveillance by external actors; External actors understanding of potential network’s goals; Match between statutory charge and political environment; Level which external control mechanisms dictate internal resource allocation; Level of external support & influence available to potential implementation network from larger policy arena.</p>	<p>Economic Environment <i>Primary question:</i> What are the potential resources of economic support for the implementation network?</p> <p><i>Variables to consider:</i> Level of demand for outputs (products) of a successful implementation; Availability of resource inputs (personnel, money, technical resources) to the network; Who are the recipients of outputs (citizens, customers?); Amount received for outputs (money, power, prestige, fuzzy feeling?); Level of competition.</p>
<p>Social / Organizational System <i>Primary question:</i> What are the primary social/organizational components of a new implementation network that need to be created?</p> <p><i>Variables to consider:</i> Mission; Goals; Dominant norms and values; Communication System; Measurement and analysis of job performance; Recruitment system(s); Incentive System(s)</p>	<p>Technical / Functional System <i>Primary question:</i> What are the primary technical/functional components that must be created for the implementation network to operate?</p> <p><i>Variables to consider:</i> The “production system”; Primary system functions; Required functional positions; Required functional responsibilities; Technological requirements; Budget and budgeting system; Purchasing & accounting</p>

A problem still exists, however, with this new framework. It does not allow us to visualize what is going on. When setting out to build a new implementation network, there is no social or technical system to speak of. No resources have been marshaled to try and implement anything yet. This depiction in figure 4 does not convey that fact. Nor does it convey any other facts about the state of a growing implementation network. Accordingly, a second ‘graphical’ depiction has been devised to accompany the first (see Figure 5).

Figure 5 – A More Dynamic Depiction of the Political Economy Framework



In the Wamsley and Zald volume, the four aspects of the organization are visualized as a two-by-two static box. In the dynamic world of policy networks, where the relationships between political and economic entities are constantly changing, a more dynamic approach is warranted. Additionally, if we accept the proposition of the constructivist paradigm of enquiry, that 'reality' is a social construct, then it must follow that any definition of what is political and what is economic is also a social construction and ephemeral at best. This being the case, what is needed is a better visualization that allows for changing definitions of political and economic variables. Or, more precisely, as an implementation network moves from conceptual stages to stages of actual application, we need a way to show that the system, while composed of many of the same actors, has evolved from a mostly 'political' state to a most 'economic' state.

Figure 5 shows such a re-conceptualization. In this figure, the lines separating the Political and Economic dimensions, and the lines separating the Social and Technical

dimensions, are dynamic and can move back and forth. Also, the size of the inner circle can shrink and grow. That is, everything can move to better describe the situation. For instance there is initially only a Political and Economic environment, but no internal structure to speak of – facilitation has not yet begun. Such a state might be represented by Figure 6. In this figure, it is evident that there is political action in the environment to “do something.” Such action starts people thinking, in a preliminary fashion, about how any potential solution might be resourced (staffed, financed, etc.), so a small economic dimension begins to form.

As stakeholders are brought together, however, to discuss the possible implementation of something new, ideas about what this means to each stakeholder begin to coalesce (see figure 7). An Idea about what this new system/organization might look like, and who would be responsible for it begins to form (the internal structure begins to form). This coming together of ideas allows the preliminary commitment of resources to begin (an internal economy or technical system begins to form).

After organizational commitment is secured, departmental responsibilities are assigned. The economic viability of the new implementation network is more secure, and the technical side of a new functioning system begins to grow (see figure 8).

The ideal result of a successfully deployed implementation network is a socio-technical system (internal Political Economy) that is functioning as a stable production system in balance with its political economic environment (see figure 9).

Figure 6 – Stage 1, no network yet exists – only environment

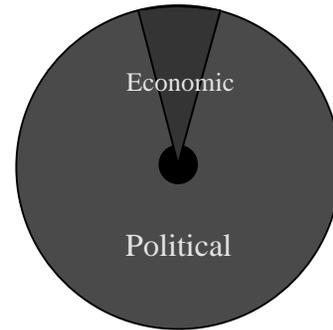


Figure 7 – Stage 2, an internal structure – our network – begins to form

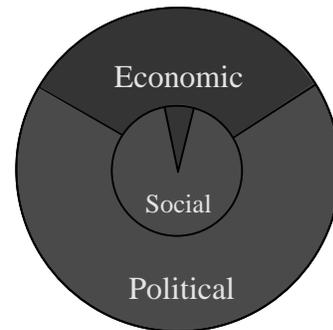


Figure 8 – Stage 3, a functioning delivery system begins to emerge – economic resources are solidified.

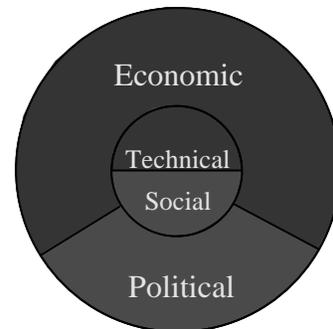
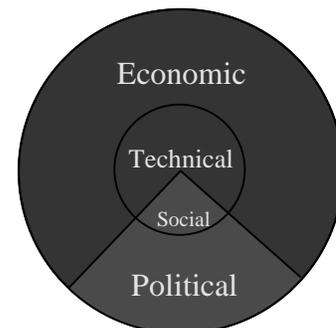


Figure 9 – Stage 4 – An operating implementation network



Figures 6 thru 9 depict fairly well what it is the methods in this volume are supposed to help the network facilitator create. Starting from a political and economic environment, you need to be able to create, in the end, a functioning implementation network.

Creating the Instrument and Approach

This section introduces a method of “contextual assessment” that uses the political economy framework to develop an interview instrument for use by a recently appointed network facilitator. Combined with other standard qualitative methods, including snowballing, and quota sampling, one should be able to assess the existing political and economic environment surrounding a potential implementation network and, further, begin to select from that environment an initial set of stakeholders in the nascent implementation network. This method will result in something that closely equates to figure 6, a conceptual “mapping” of the environment from which one may begin to select potential resources to build a network.

If one accepts that the overall aim of the network facilitator is the creation of a new political economy where one did not exist before, and, if one accepts that, with some translation, the four-dimensional model of Wamsley and Zald provides a useful framework from which a facilitator can operate, it follows that the next step is development of an interview instrument based on the political economy understanding of the potential network’s environment. The need for such an instrument is apparent. Before an implementation network is established, there is nothing but the edict/initiative/idea of one or a small group of decision makers. There is not yet an appreciation of the political and economic environment into which this new edict/initiative/idea must be inserted and grown. Nor does there exist somewhere a standardized empirical assessment of that environment. In fact, each new implementation likely impacts a fairly unique set of contextual variables.

The problem is that most of the political and economic variables that will possibly impact implementation cannot be found by consulting a single source. On the contrary, each possible variable will be viewed differently (in terms of importance, possible impact, etc.) by each person associated with the implementation. That is, there will be *multiple*

interpretations concerning who is important, what factors need to be considered, where the greatest pitfalls are located, etc.. Additionally, each of these interpretations will most likely be dictated by where a particular “interpreter” “sits.” The President of a company might consider the overall potential profit margin of a new product idea to be the most important factor to consider, while the IT manager might consider the lack of a product support infrastructure to be the most important factor. *An implementation network, by definition, spans not only multiple individuals, but multiple organizations, each working within its own political economy.*

This being the case, a method for gleening the needed environmental information is required. The purpose of this method must be three-fold:

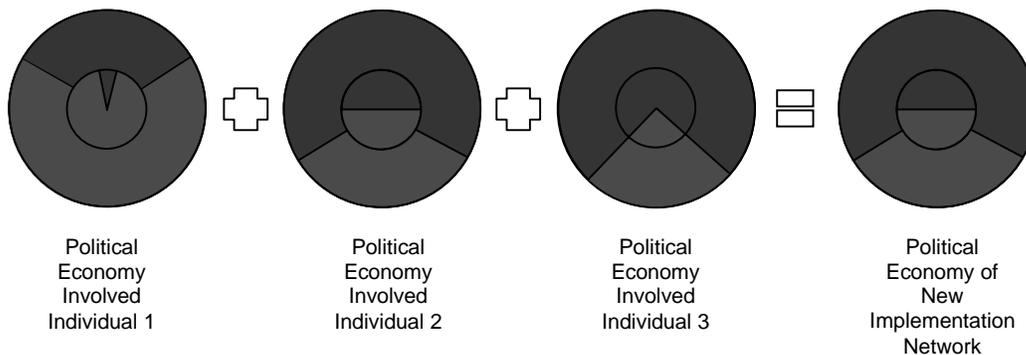
- it must help glean necessary information from these individuals concerning the potential environment of the new network;
- it must help to identify all individuals who can affect the success of establishing the implementation network; and,
- it must provide a way to combine/summarize the information collected from the various individuals.

Given what we are looking for, as defined in the dimensions of the new Political Economy framework above, we can create both an instrument (satisfying requirement 1) and an approach (satisfying requirement 2). By instrument I mean an “interview instrument” – a template document from which one can conduct an interview and successfully glean the necessary information referred to above. By approach I mean a certain manner of using this interview instrument to maximize the number of relevant respondents to it – here the approach advocated combines two non-probabilistic sampling methods: quota sampling and snowballing. These methods will be discussed further below.

The Interview Instrument

Succinctly put, the purpose of the interview instrument is to *discover the political economy of the new network according to one person*. Any individual, however, only really has a feel for the political economy of their existing situation (where they sit).

Figure 10 – Network’s PE is aggregation of other PEs



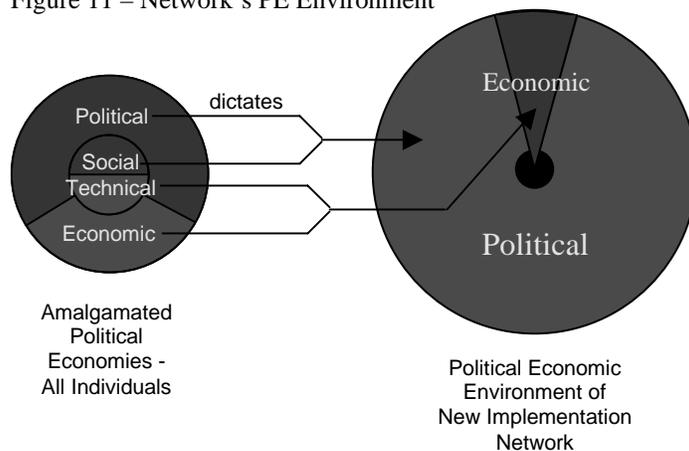
Therefore, all that one can really ask of any individual is for their opinion, given where they sit, on the potential rewards, pitfalls, concerns, etc. of the new idea that you are trying to implement. Therefore, the more specific purpose of the interview instrument is to:

Discover the political economy of an individual's current organization "in relation to" the proposed implementation network.

That is, all questions about economics, politics, organization, and function should concern his/her organization in relation to a new possible network (or virtual organization). The questions should not directly concern the new possible network. The purpose here is to determine the current "environment" of the new network. That current environment is going to be composed of the collective political economies of all involved organizations. This relationship is expressed in figure 10 which graphically expresses that the actual environment for implementation is an amalgamation of the beliefs of each individual involved in that implementation.

Figure 11 is more precise in that it indicates that the amalgamated political economies of these individuals dictates only the “context” of the new implementation network, not the internal organization of the new network (which doesn’t exist yet). That is, the Economic Environment AND Technical System of individuals who will be involved dictate, together, the Economic Environment of your implementation effort. The same is true of the Political Environment.

Figure 11 – Network’s PE Environment



To ascertain the individual political economies, one needs to choose questions to elicit information concerning each political economy dimension. From experience in the Travel Shenandoah project, a master list of generalizable questions was generated. Using this same master list, appropriate questions can be derived for most circumstances. Table 4 shows this list.

Drawing upon this list, appropriate questions can be compiled into a single interview instrument. Once the instrument is compiled, the question is how to proceed. As indicated, this method advocates an approach using both Quota Sampling and Snowballing.

Table 4 – Master List of Political Economic Questions for Interview Instrument

Political Questions

- If we were to go ahead with this idea, how do think it will be perceived by stakeholders outside your organization?
- How much surveillance by these external actors occurs currently?
- Do you think that implementation of this idea matches well with your existing political environment?
- How much latitude does your organization have to lend resources to this implementation effort?
- Do you perceive a high or low level of external support & influence available to organization?

Economic Questions

- What do you think is the potential level of demand for what it is this new system will produce?
- Do you perceive trouble in getting the necessary resources to support the effort?
- Who will be the primary recipients of what is produced?
- What sort of payment will your organization get back for its participation (payment, power, prestige)?
- How much of each type of payment do you project would be received?
- How much competition is there in this field?

Social / Organizational Questions

- What's your organization's mission? Do you have a mission statement? Does this new effort support that mission?
- Have the goals of your organization been articulated? Does this new effort support those goals?
- How would you describe the work culture of your organization? Are there any dominant norms or values that come to mind?
- How is job performance measured?
- What incentive system(s) does your organization have in place to reward performance?
- How do you recruit new staff members?

Technical / Functional Questions

- What are the primary functions of the organization? How would they be impacted by this new implementation?
- What are the required functional positions needed by your organization? Will more be needed?
- What are the required functional responsibilities of these positions? Will they have to be changed?
- What technological requirements does the organization have to perform its functions? Will you need more?
- What is the size of your budget? How does your budgeting system operate?

Quota Sampling First, Snowball Sampling Second – An Approach to Interview Instrument Usage

The first problem we run into after preparation of an interview instrument is who to interview? The approach advocated here is to start with a technique called quota sampling, and then proceed with another technique called snowballing. The purpose of the initial quota sample is to make sure that you start with a set of interviewees that represent the most obvious set of stakeholders of the proposed implementation. This approach is followed by snowballing, however, because it is quite unlikely that you will 'guess' all of the appropriate stakeholders at the beginning, and you will need to solicit the opinion of the first interviewees as to how to proceed.

Although quota sampling is a non-probability method, it is similar to probability sampling. Like a probability sampling method, quota sampling 'addresses the issue of representativeness, although the two methods approach the issue quite differently' (Babbie 1998 p. 196).

How does quota sampling work? First, the researcher begins with 'a matrix, or table, describing the characteristics of the target population. If the researcher needed a national quota sample, for instance, she "would need to know what proportion of the national population is urban, eastern, male, under 25, white, working class, and the like, and all the other permutations of such a matrix" (196). After constructing this matrix and assigning a relative proportion assigned to each cell in the matrix, the researcher should collect data from people having all the characteristics of a give cell. The researcher could then go farther and assign 'a weight' to each person in each cell 'appropriate to his or her portion of the total population.'

Snowballing is a popular technique used in network studies (Wasserman and Faust, 1994), particularly in situations where stakeholders or other interested representatives are not easily identifiable (Goldenberg, 1992). Hence, this strategy is extremely useful in helping facilitators identify relevant individuals at various stages of implementation network establishment and management. Snowballing is a simple process of expanding the zone of contacts through initial contacts. The process begins by identifying an initial group of stakeholders, hopefully those who are already involved in the preliminary stages of the process. These actors or participants are then asked to identify those individuals whom they feel should be involved in the process as well. This is the "first-order" zone. The researcher then proceeds to contact those actors (whether individuals or groups) and proceeds to have these "second-order" actors, further identify others who they think would have an interest in the project or process (Wasserman and Faust, 1994: 34; see also Goldenberg, 1992; Babbie, 1998; Doreian and Woodward, 1992).

The process can involve asking respondents to review a "fixed list" from preliminary research or to simply brainstorm to identify those stakeholders that they think are important to add to the list of those whom they think should be included. If being asked

to brainstorm, it is advisable to precede this task with another that may stimulate thinking. The key to this process is to be as *exhaustive* as possible. Not only is this exhaustiveness critical to the validity of the study, more importantly, it is politically necessary for administrators to at least be aware of all potentially interested stakeholders.

The purpose of snowballing here is to find, as quickly as possible, the self-limiting reference system of the new implementation network (see figure 12). By self-limiting I mean that after a few iterations of snowballing, the names of suggested new interviewees begin to be repeated. When most of the names suggested have already been interviewed, you have

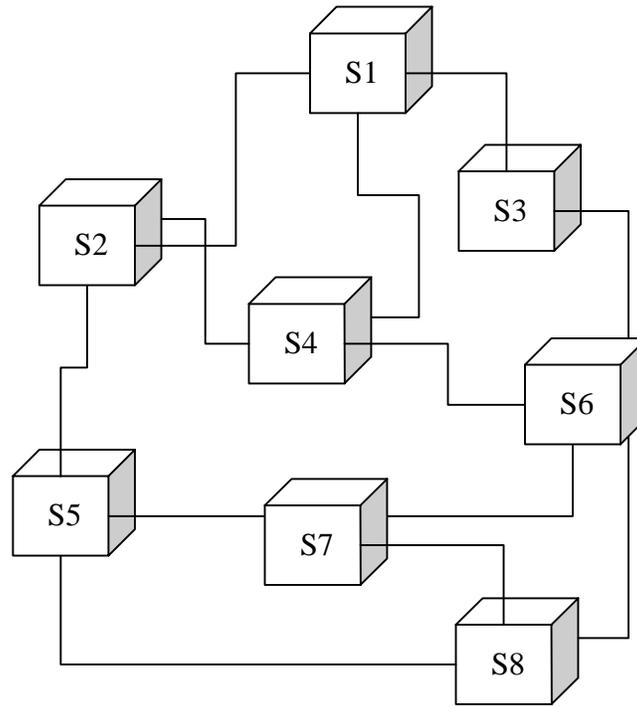


Figure 12 – Snowballing: Finding the Self-Limiting Reference System

reached the end of the snowball process. Using the snowball technique with the interview instrument created above, we can now specify our approach.

First, we start with interviews of known, obvious stakeholders who meet a specific set of criteria (quota sampling) - then, snowball.

We want to know 3 things, and the information should be elicited in the following order:

- 1 - What are the implications (politically-economically speaking) to this stakeholder of implementing this new idea?
- 2 - Who else does that stakeholder believe you should talk to concerning this implementation, and why (will the be impacted in some way?)

3 - How important is it that the concerns of these other individuals be addressed (what happens if we don't)?

To find out the first required piece of information, we start with a quota sample and use the interview instrument. To find out the second, we begin to snowball. In this manner, the interview instrument has already been used to stimulate the thinking of the interviewee about potential other actors that need to be considered. As part of the snowballing technique, we also ask the third question. Knowing the relative importance of the individual being suggested to the task at hand is very important. At some point the snowball process needs to stop. If every person thought of was followed up on, the task could take a very long time indeed. Additionally, the returns begin to diminish. For example, if you interview 30 people and 10 of them suggest strongly that you interview a single person, but only one suggests that, if you have time, you might want to talk another person who might have a little insight, your choice should be clear. Unfortunately, it would seem impossible to set a hard and fast rule here as the number of people interviewed in the snowball will obviously be dictated by length and funding constraints of the initiative.

Travel Shenandoah

In the Travel Shenandoah project we were faced with getting an Advanced Traveler

Table 5 – Travel Shenandoah Interview Instrument

I. TRAVELER INFORMATION NEEDS:

1. What role does your organization play in providing traveler information (i.e. industry function, regional function)?
2. What types of information do you provide to travelers?
3. How do you know what information travelers need?
4. What are the most common types of information people ask for?
5. What other information would you like to provide, but cannot?
6. What technologies do you currently use to collect, update, and communicate information?
7. In your opinion, what are the issues that need to be addressed in the region with regard to traveler information needs?
8. What would you like to see as the future direction of advanced traveler information services in this region?

II. INSTITUTIONAL ISSUES:

Technical/Functional

1. What ATIS products do you think would enhance the provision of traveler/tourist information in the region? (i.e. kiosk, active logo signing system)
2. What resources do you think would be needed to support such an ATIS project in the region?
3. Considering these resources, what do you think that you and other stakeholders might be able to contribute?

Social/Organizational

4. From your perspective, what should be the goals of an ATIS project?
5. In your opinion who are the major traveler information stakeholders in the region? (Individuals/Organizations)
6. Are there current institutional or organizational issues that need to be addressed?
7. In your opinion, how might these current issues manifest themselves in a traveler information systems project?
8. How can these institutional or organizational issues be addressed/resolved?
9. In your opinion, how can these institutional or organizational issues be avoided in the future?
10. Should stakeholders in the region determine that they want to develop the capacity to provide ATIS, where do you think conflicts might appear?
11. How do you feel stakeholders would appropriately address such conflicts?

External Political

13. How do you feel a coalition of ATIS interests would appropriately address such external actors?
14. If we were to go ahead with this idea, how do think it will be perceived by stakeholders outside your organization?
15. Who else should we be talking to regarding the successful deployment of the ATIS? Why?
16. Do you think that implementation of an ATIS matches well with your existing political environment?
17. How much latitude does your organization have to lend resources to this implementation effort?
18. Do you perceive a that a high or low level of external support & influence will be available to the ATIS?

External Economic.

19. What do you think the market's demand is for advanced travel/tourism information?
20. Who do you think will be the primary recipients of such information?
21. How will recipients of this information compensate stakeholders supporting an ATIS project?
22. What are some potential sources of funding for an ATIS project in the region?
23. Who will be the primary recipients of what is produced?
24. What sort of payment will your organization get back for its participation (payment, power, prestige)?
25. How much competition is there in this field? Do you perceive yourself as a competitor?

Information System designed, supported, and deployed in Virginia's Shenandoah Valley. This meant that we had to figure out the potential political and economic environment of a Traveler Information System that would be implemented in a geographic area comprising 9 counties, three planning districts, four cities, many towns, and approximately 9,000 square miles. Not only did we need to derive an interview instrument to help us understand the political economy into which we wanted to insert a new implementation network, but we had to do it in a large geographic area involving many potential stakeholders (including more than 5000 businesses), each with different ideas about what was needed and why. Given the number of services that are provided by the public, private, and non-profit sectors that have direct impact on the 'traveler,' the possible number of stakeholders in our budding implementation network could have been overwhelming. The need for a method that can get us started with a small representative number of stakeholders, but then allow for growth of that number in a non-hap-hazard fashion was evident. That is, we had to decide where to interview first, and, then, decide where to interview next. As stated above, a political economic interview instrument was devised, and a quota sample was developed. This approach permitted us to get started and then 'snowball.'

To understand the needs and wants of the regional stakeholders, a two-part interview instrument was designed based on the political economic framework described above. As indicated above, the framework is just that – a framework. Customization, or adaptation, is needed for each application. In the case of Travel Shenandoah, it seemed first necessary to elicit from the interviewees their thoughts regarding the information 'needs' of their respective clientele. That is, once gaps in service provision can be identified by an individual, that individual can then better assess the applicability of a new Traveler Information System, and, then, assess the potential political and economic impediments to its deployment.

The first series of questions deal with traveler information needs in the region, these questions were designed to find out what information is already being provided and where information gaps exist.

The following questions were designed to reveal barriers stakeholders perceive to the successful deployment of ATIS in the region. This section of the interviews followed the

political-economic framework in order to address the mix of organizational, managerial, technical, political, and economic issues relevant to deploying ATIS in the region. Knowledge of the gaps in traveler information was believed necessary in the development alternative solutions, and knowledge of the barriers, it was believed, would enable stakeholders to better focus their resources on priority issues before and during implementation.

The results of our interviews were interesting in first in that they validated what early studies had found regarding the needs of rural users. For example, back in 1993, the CTR was involved in a “User Needs Study” for the Federal Highway Administration (FHWA) that surveyed travelers nationwide about the information that was most important to them when traveling in rural areas. The most salient issue was safety. Travelers want to know, en-route, about problems they will encounter such as road closures, accidents, and detours. After en-route safety updates, travelers want pre-trip planning information, particularly about weather and road conditions².

These findings reflected the concerns of the stakeholders from our interviews using the PE instrument. The information that stakeholders want, but are unable to provide to travelers, could be broken into 3 main user service categories: Trip Routing, Traveler Advisory, and Traveler Services.

Statements from the stakeholder interviews are broken down by these user service categories and are listed below. Stakeholder’s statements are labeled by the Planning District Commission within which (geographically speaking) the stakeholder resides (Central Shenandoah (CS), Lord Fairfax (LF), and Rappahannock-Rapidan (RR)).

Table 6 - Gaps in Traveler Information Provision

<p><u>Trip Routing</u></p> <ul style="list-style-type: none">• Routing. (CS)• Information/directions for the smaller attractions. (CS)• Specific location directional maps. (LF) <p><u>Traveler Advisory</u></p> <ul style="list-style-type: none">• Current weather conditions. (CS)

- Current traffic conditions, especially in areas like DC and Virginia Beach. (CS)
- Current road conditions and closures both in and out of state. (CS)
- Information about road closures (parkway). (CS)
- Accident and re-routing information. (LF)
- Current information on road closures and re-routing. (RR)

Traveler Services

- More varied information (instead of just food, gas and lodging). (CS)
- Ways to show travelers something unique about the area/attract them to other things. (CS)
- More regional information on lodging/restaurants. (LF)
- Listing of events/activities; i.e. events calendars. (LF)
- A regional perspective on what is going on. (LF)
- Rental Information. (RR)

As stated, the interview also queried what barriers stakeholders perceived to ATIS deployment in the region. The political-economic instrument elicited a great deal of information regarding potential impediments to implementation. Below is a list of the most prevalent issues generated from the instrument.

Table 7 - Interview Results: Current and Potential Barriers to Implementation

Public/Private Partnerships

- The private sector must be involved – perhaps the local phone companies for use of infrastructure
- Local government officials and planners have to approve the grants.
- In building partnerships, will they be equal partners or prorated by ability to contribute?
- Stakeholders would conceptually support, but some may not support it financially due to small budgets.
- We need to get approval from boards for spending (public, private, non-profit).

Funding Issues

- Funding.

- Money.
- County won't kick in money.
- Infrastructure will cost a lot
- State is moving to private fee for service tourist program; so I am willing to support and cooperate but there is no money to contribute.
- Political, organizational and funding boundaries limit perspectives and cooperation.

Customer Satisfaction

- People respond to a live body, you lose that contact with technologies.
- People need somebody to talk to, visitors centers offer a personal touch.

Interorganizational

- Egos get in the way.
- Competition.
- Everybody wants name recognition.
- No coordination or cooperation.
- Politics, you can't be answerable to several political masters.
- Different agendas, working together is a slow process.
- No cooperation between tourist organizations and facilities.
- Some organizations or facilities may be challenged if they are currently providing a service.
- No real regional direction, perspective, cooperation, or coordination.
- Lack of regional effort.
- Counties are slow, there are still territorial county lines and tax dollar issues.
- Political, organizational and funding boundaries limit perspective and cooperation.

Support (public and political)

- Lack of local government understanding and support.
- No political support or understanding of tourism industry and its impact.

Social Equity

- Basic travelers may not have access to this technology (cell phone, internet).

Staffing Issues

- Lack of marketing resources , ‘who do I talk to, who do I need to target?’
- I can tell you everything you need to know, but electronically I am not comfortable.
- No systematic data collection due to short staff.

Cultural Issues

- Political, organizational and funding boundaries limit perspective and cooperation.
- Tourist organizations are stuck in ‘old way’ of doing things.

Overcoming these issues seemed quite feasible following these interviews. The interviews made clear that stakeholders are concerned with economic & political barriers such as lack of funding and interorganizational cooperation. Yet they also stated that in the past when they had coordinated and collaborated, they were able to market their areas more effectively (for purposes such as economic development). For instance stakeholders in Rappahannock-Rappidan found, through the Civil War Battlefields project, they were able to collaborate across jurisdictional boundaries.

Table 8 - Travel Shenandoah List of Interviewees

RRPDC

Chris Done, VDOT, Warrenton Residency (C)

Don Gore: VDOT Culpeper Residency (D)

Andrea Horning: Culpeper County Planning (A)

Susan Pakies: County of Orange, Department of Tourism (S)

Barbara Banner: Orange, Chamber of Commerce (B)

Becky Crouch-Fauquier County Visitor’s Center (B1)

CSPDC

Amy Crowder, Planner, Bath County

Becky Earhart, Sr. Planner, Augusta County
Brent Frank, Director of Economic Development, city of Waynesboro
Sam Crickenberger, Director of Planning, Rockbridge County
Sharon Angle, Director of Planning
Stacy Turner, Director of Community Development, City of Harrisonburg
Becky Thorpe, Sr. Transportation Planner, CSPDC

Peter Rippe (PR), P Buckley Moss Museum
Maureen Keyyey (MK), Ex. Director, Waynesboro-East Augusta Chamber of Commerce
Jean Clarke (JC), Lexington-Rockbridge Visitors Center
Partricia Doss (PD), Harrisonburg-Rockingham Chamber of Commerce

LFPDC

Judy Kirby, Clearbrook Visitors center
Trace Noel, River Renter Outfitters, Front
Gary Rutherford, Strasburg Hotel, Strasburg

Interviews done previously using the interview instrument:

Andy Dawson, SVTA
Stephanie Bushog, George Washington Natural Forest (Lee District)
Susan Sprague, Sales Rep., Johnny Appleseed Quality Inn, New Market
Cornelia Spain, Director Marketing and PR, Luray Caverns
Mike Butler, EX.Director, Lord Fairfax EMS Council
Julie Armel, Director of Tourism Marketing, Winchester-Frederick Chamber
Barbara Stewart, Northern District Interpreter, Shenandoah National Park
Charles Jones, Clarke County Planning Admin.,
Judy Reynolds, Director of Tourism, Shenandoah County
Sissy Franks, Marketing and Sales, Virginia Inland Port

Table 9 - Travel Shenandoah Quota Sample

STAKEHOLDER CSPDC (6) LFPDC (7) RRPDC (9)

Chamber of Commerce	3	4	4	
Tourism Rep	1	1	3	
Travel Rep		1		
Park Rep		5	1	
Local Planner	8		2	
Comm./Econ. Dev.	5	1		
VDOT reps		2	3	
VisitVA		2		
Other	2		3	
TOTAL	19	16	12	47

Discovery of the potential Political Environment

Sources of outside “political” support for such an endeavor were found to be plentiful. Interestingly, while each representative of an agency/company was personally very supportive of the system, he/she would invariably warn us that stakeholder x or stakeholder y would probably have real problems with the system. Invariably the referenced stakeholder would hold the same opinion of the stakeholder who had negatively referred to them earlier. It was from this type of information that we were able to discern the historical relationships between local entities and ascertain whether or not they would be willing/able to work with one another to get the system implemented. Generally speaking, what we found was a set of organizational actors, almost all of whom who had had dealings, both positive and negative, with most of the other potential stakeholders. That is, cooperation seemed very possible if the project was individually supportable and each person thought that they would have a chance to contribute (to make sure the others didn’t overshadow what it was they wanted to see happen).

Most importantly, what became clear was exactly who had to be involved in the endeavor vs. who should be “informed” of what’s going on. The most obvious stakeholder was VDOT itself. After this, however, it became clear that one of our assumed stakeholders, the Virginia Tourism Corporation, while important, was only just as important as the local Welcome Centers and the local Destination Management Organizations (somewhat smaller than Welcome Centers and focusing more minutely on a few attractions). That is, we found that there was a definite political separation

between these three entities, even though, on paper, they all seem to be part of the same statewide organization. It was a good thing we discovered this, as the most potent political opposition could have been forthcoming from these local organizations had we failed to recognize them and assumed, instead, that the state level organization represented their interests.

Another aspect of emergency situation management that became clear from the interviews was that there existed no good coordination between the state police, local authorities, VDOT and local volunteer rescue squads regarding current road and traffic conditions. If this information was going to be relayed to the public it would first need to be collected from all these entities and synthesized, and, at this point, that level of synthesis did not exist.

Probably the most important recommendation that came out of the interviews was that we include private sector telecommunications companies in our endeavors. Primarily, because they control the dissemination infrastructure (wireless, pager, cable), but also because they might have good insight into how such a system might be re-structured. As it soon turned out, the contributions of a certain telecommunications company, SHNETEL, proved invaluable. Upon interviewing the Vice President of SHNETEL, it became evident that they would be able to help design the conceptual delivery of such a service, as well as potentially donate the wireless spectrum needed for one aspect of the service's delivery (cell-phones). In fact, after repeated discussions with SHNETEL, the company decided to become a full partner with Virginia Tech and VDOT in producing the ATIS. It cannot be over-emphasized. If we had not conducted the series of interviews, we would have never had made the connection to what turned out to be the most important private sector stakeholder involved in the project.

Economic Environment

A solid understanding of the potential economic environment of the ATIS started to emerge from our interviews. Local non-profit entities and governments replied predictably. High political support – no money. However, in terms of producing an ATIS, their economic contributions did not need to take the form of cash. It was actually just as beneficial to the project to have access to all of the local information on traveler services, emergency services and tourism that was at the disposal of these entities. In fact, it

became clear that most of the entities would consider it a good trade to compile and hand over this information if it would result in better dissemination of the information – dissemination that they themselves could not afford.

The largest repository of this type of information was with the Welcome Centers and Destination Management Organizations referred to above. The Virginia Tourism Corporation actually had access to the least relevant information. In terms of marketing support, however, the VTC had control over the production of the annual state tourism guides and state maps. They were willing, if the product proved viable, to market it as an official “Virginia” product via these modes of dissemination. This of course, proved to be a very large economic form of support.

The primary public support for the system was going to come from VDOT. This was expected. As stated above, however, what was unexpected was that a private sector telecommunications company, SHENTEL, decided to become a major fiscal supporter of the project as well. In fact, they quickly assigned permanent personnel to support the endeavor. Over time, this support would grow to 6 FTE employees, including office space, computers, and a marketing budget.

Our preliminary conclusions:

1. Political support would be available if we were careful not to step on the toes of local tourism and traveler service organizations.
2. Economic support would be shared by VDOT, SHENTEL and VTC.
3. Effort would need to be put into coordinating with the Virginia State Police and local entities in collecting the most accurate road and traffic information.

What we still needed to know:

1. Which individuals would play what role in supporting, designing, implementing, etc., the ATIS?
2. Which individuals could potentially scuttle the effort, and, what should we do about it?

Assessing Contextual Assessment

Given the requirements of a good methodological system stated in chapter 1, which of the requirements are satisfied by this first method? The political economic interview certainly allows for 'assessment' of the environment of the potential policy implementation, the first requirement. It was found that many potential impediments to implementation are surfaced by asking the respondents to consider the implication of a new initiative upon 'their' existing organization. Asking such questions across four dimensions additionally requires the respondent to consider the problem from viewpoints they have not used in the past. This is probably the best aspect of this method. It appeared to the interviewers that every individual interviewed started his/her responses from a particular viewpoint corresponding with one of the political economy dimensions. That is, a mid-level manager would often start with opinions rooted in the effect of a new initiative upon operations (technical dimension), whereas an agency director would first start thinking of the impacts on his/her relationship with an immediate political supervisor like a Secretary of Transportation or a State Delegate (political dimension). It was apparent, however, that after being asked to consider the problem from three other dimensions, the interviewees generally became very thoughtful and reasoned in their responses (the initial responses came to them very easily without much thought). Very often, comments were made to the effect of "I hadn't thought about things from that perspective." Comments from the interviewers generally purported that these answers, where the respondent was forced to think hard from a different angle, were the most insightful for both identifying the potential reaction of the respondent's organization and identifying other people who should be approached and interviewed. An additional benefit noted by the interviewers was that the longer the conversation went on and the more it made the respondent think outside of his/her daily 'box' of operations, the more interested they got in the eventual outcome/success of the project. In some ways, it was as if the respondents were being asked to help solve a jig-saw puzzle, and the more they got into it, the more they didn't want to put it down.

A consistent failing on the part of the interviewers, however, was being able to effectively describe what the potential new inter-organizational system was. That is, we found that describing an Advanced Traveler Information System to people from different organizations at different levels of authority, was difficult to do consistently. Many times,

the answer to a question would elicit a response that indicated a lack of such understanding. At that point, the interviewer would have to re-explain what the traveler information system was/could be, and then ask the respondent to re-examine the answers to previously answered questions. This proved time consuming and sometimes confusing for the respondent. While it is a given in such a circumstance that a clear definition of 'what is to be' cannot be derived (nor do you want to), there is a strong indication that some preliminary effort has to be taken to derive descriptive documents, diagrams, etc. that show, as much as possible, current thinking. Our team developed such materials, but only after this problem became evident.

The second requirement was that the method help the builder understand and work with individuals from the environment. While the satisfaction of this requirement seems better suited to the next method to be discussed, Stakeholder Analysis and Management, the above findings were instructive. As relevant stakeholders were selected to participate in the process, we found that the initial interview had generally had the very positive effect of creating a 'want' in many interviewees to participate further in the process. Given the busy nature of many of the respondent's jobs, this was unexpected, but welcomed.

The third requirement to enable the network builder to plan for resource usage across boundaries was not addressed by this method, nor were there any findings by the interviewers that indicated that this method was somehow leading us to this ability.

The fourth requirement to be iterative in the approach is also not satisfied by this method. The contextual assessment method calls for only one round of interviews with all potential stakeholders.

The contextual assessment method does seem to satisfy the fifth requirement, to use purposive sampling, quite well. In fact, given the enormity of the initial situation, the use of quota sampling, followed by snowballing, allowed us to establish a self-limiting network of possible stakeholders within a very short-time, approximately 2-months. This is not to say, however, that this approach, followed methodically, will always lead to the best results in every implementation scenario. There is an inherent problem in using snowballing and that is that it has the potential to identify a network of already established 'elites.' That is, the other individuals that interviewees name are most likely

going to be 'already established' stakeholders in one realm or another. Those who do not normally get spoken for, will still not be spoken for. A short answer to this problem would be to state that the purpose of this method is to 'get something implemented,' and not to 'get everybody involved,' and that because it requires the network builder to work across boundaries, the method, by definition, requires the participation of more stakeholders than would have traditionally been included. Such an answer, while valid, would not seem to adequately satisfy a need to do work in the "public interest." This is especially so when there exists a methodological answer, at least a partial one. This tendency to only refer to those that you know was found to be the case in the Travel Shenandoah interviews. It was recognized, however, early on that this would be the case. Accordingly, the quota sampling portion was used to off-set, to a certain extent, this problem. Who is chosen to be interviewed in the quota sample becomes very important here, because the only method we have to counter the snowballing problem is to include in the initial sampling representatives of groups who are not traditionally included in a particular realm of application. In this case, the realm of application was transportation. This realm normally includes the central state DOT, DOT Districts, planning district commissions, and city planning departments. When we brainstormed who travelers were and what services they are provided while traveling, it became evident that the initial quota must be larger. Other initial interviewees that came out of this brainstorming session included the national and state parks in the region, the chamber's of commerce who represent many small businesses serving travelers, medium size to large businesses that service a disproportionate number of travelers, local emergency response officials, and state and local tourism groups that are in the business of bringing travelers to the Shenandoah Valley. Establishing this larger quota to begin with had the effect of capturing a larger "self-limiting" network than would have been captured otherwise. Additionally, beyond satisfying an intrinsic need to give service to the most 'public' possible, the functional need to do so also became obvious. Many times, in the passage of the two years of this project, it was recognized that the project team was able to solve or get around potential impediments precisely because such initial contacts with not-so-obvious stakeholders had been made.

The implication of this should not be lost on the future network builder. It is in this initial choice of who to include at the very beginning that will set the parameters of the discussion down the line. This is probably the most palpable 'power-point' for the

facilitator in the whole process. It needs to be taken seriously and thought through carefully. While the overlap of transportation and information systems may require the quota sample above, an even more technologically obscure arena of application may require a smaller sample, while a more politically charged environment (e.g. welfare policy) may require one quite a bit larger.

The sixth requirement for the method to require inductive reasoning is also satisfied, at least generally, by contextual assessment. The final product of contextual assessment, as shown, is a description of the political and economic dimensions surrounding a potential implementation, including the stakeholders who seem to be the most important when considering that environment. That is, from a sample of interviews, some inductive conclusions have been reached. These conclusion are broad and sweeping, however, and need to become more precise or contextualized to be of use – that, hopefully, is the purpose of the next method, Stakeholder Analysis and Management.

The seventh requirement is that the method require the development of grounded theories. In our case, that would seem to mean the establishment, from our inductive reasoning, of theories of operation for the implementation network (if X does Y, the Y will be able to satisfy Z). Such theoretical conclusions seem beyond the reach of contextual assessment.

Because the seventh requirement is not satisfied by contextual assessment, the eighth, to enable a reasoned assessment of next steps to be taken, is also not satisfied. Table 5 summarizes which of the requirements are satisfied, at least to some extent, by the first method, contextual assessment.

Table 10 – Satisfaction of Good Method Requirements			
	Contextual Assessment	Stakeholder Analysis & Mgt.	Joint-Visioning
Environmental Assessment	√		
Understand/Work with Stakeholders	√		
Plan for Resource Usage	-		
Iterative Approach	-		
Purposive Sampling	√		
Inductive Reasoning	√		
Require Grounded Theories	-		
Indicate Next Steps	-		

CHAPTER IV: STAKEHOLDER ANALYSIS –

CATEGORIZING, TYPING, & SELECTING NETWORK

PARTICIPANTS

How do we know who should be at the table?

As the theory and practice of public administration in this country has begun to move away from the concept of hierarchically-controlled, scientifically-based operations to more open, flatter, and citizen-inclusive “network” forms of management, the concept of “stakeholder inclusion” in the governance process has gained in prominence (deLeon, 1992; Fischer, 1993). In fact, while it may be argued that the appropriate role of the “public” in public administration has been an active and ongoing area of inquiry and debate since the founding of this nation, a discernible contemporary movement to examine the role of the “public” in the process of administrative decision making has come about in the past three decades as a result of concern over citizen discouragement and apathy (Box, 1996; Putnam, 1995; Timney, 1996; Thomas, 1995, Schroeder and Wamsley, 1995). This trend is of profound importance to the field of public administration. Foremost is the effect that such an orientation has on the conceptual role of the administrator in the governance process (as discussed in Chapter 2).

The concept of *stakeholder analysis*, and other theoretical approaches advocating increased public participation and deliberation, are scattered throughout the literature. Not only are agencies increasingly being mandated to incorporate some legitimate form of public/stakeholder participation process beyond the traditional notice and hearing standards (Rossi, 1997; Jones, 1997; Powell, 1997), but a valid and important normative/ethical component also exists (Donaldson and Preston, 1995; Clarkson, 1995). As Donaldson and Preston put it, “... all stakeholders’ interests have intrinsic value. In turn, recognition of these ultimate moral values and obligations gives stakeholder management its fundamental normative base” (1995: 74). Moreover, these authors assert that “the ultimate managerial implication of the stakeholder theory is that

managers should acknowledge the validity of diverse stakeholders interests and should attempt to respond to them within a mutually supportive framework, because that is a moral requirement for the legitimacy of the management function” (p. 87). In addition, it would seem to just make good “management” sense that one can no longer expect to be effective and seem equitable without incorporating multiple perspectives in the policy process.

However, little has been done to help public sector managers devise tools to identify and manage relevant stakeholders, nor has the literature developed tools to deal with the various ways and situations in which different types of stakeholders can and should be included in a public-sector driven stakeholder process. That is, such tools are not well defined *methodologically* within the field of public administration. The problem is that most research in public administration takes stakeholders as a *given*. Many authors begin with the assumption that stakeholders are already known, or that stakeholders have already self-selected themselves to be involved in the process. The literature has done little, however, to contribute methods for identifying relevant stakeholders when they are *not* known, or identifying additional stakeholders when those that have self-selected do not adequately represent all interests at hand. As discussed above, this is the case when trying to build an implementation network.

While one may be tempted to conclude that those issues that generate little interest in potential stakeholder populations do not *need* stakeholder input, the experienced public administrator will most likely agree that the most difficult stakeholder situations arise *after* a decision has been made without a group’s consultation, *regardless* of the fact that they did not self-select into the process at the beginning.

The reality of the public administrator’s daily life, in working to “get things done in the public interest,” is that most of the time, obvious, relevant stakeholders are not readily evident or self-selecting. Most of the literature which addresses stakeholder involvement addresses it within the context of highly visible, highly salient, and very often, highly controversial issues (e.g. environmental and land-use planning, welfare policy). In these incidents, many people, whether or not they were interested stakeholders initially, are familiar to some extent with the problem, and can accordingly self-select in or out of the process. The vast majority of issues to be addressed and/or programs to be

implemented by the public administrator, however, are generally not “sexy” enough to generate the same kind of visibility or interest. That is, starting with an assumption that relevant stakeholders will magically self-select into the process results in the researcher focusing on areas of public-life which represent the exception to the public manager’s daily life, not the rule.

The Problem

If the public administrator is no longer “in charge” of a defined hierarchy of his/her employees, all administered through the concepts of a clear line-of-authority and span-of-control, then what is the role of the public administrator? As discussed, the public “administrator” becomes instead a network “facilitator” of a complex set of public and private stakeholder interests (Fox and Miller, 1995; Stivers, 1990). While the intuitive appeal of this position is obvious, we are left with an incomplete feeling, such as: *Who are we facilitating and why? What is a stakeholder? If anyone can be at the table, how can a process even get off the ground?*

Given the cold, hard fact that much of the activity entailed in “getting things done in the public interest” is rather mundane and sparks very little heated controversy, how can the network facilitator go about identifying those stakeholders that should be involved in such instances versus those who should not? How does (s)he avoid not having enough stakeholders at the table (resulting in a program that may not have the backing it needs to stay viable) while at the same time avoiding having too many potential stakeholders at the table (potentially resulting in an inability to come to a conclusion or, even worse, resulting in a conclusion that has been swayed heavily by an entity that most other parties at the table do not believe even has a legitimate role being at the table – thus resulting, as above, in a program that may not have the backing it needs to stay viable)?

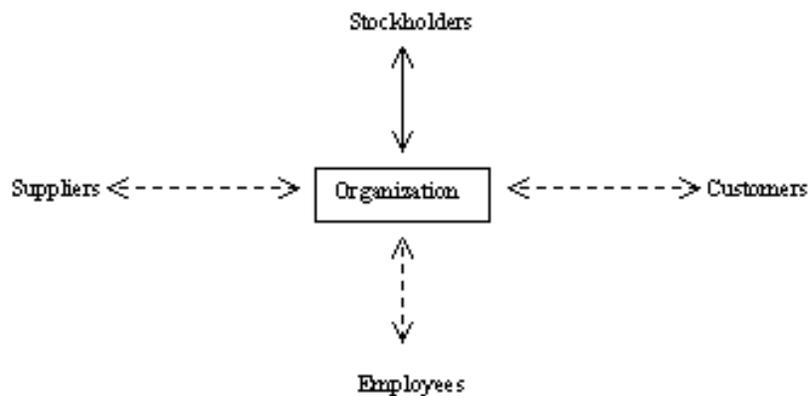
Methodological Definitions

Stakeholder analysis, stakeholder management, and stakeholder theory, are concepts which, for our purposes, have emerged from a body of literature which has had profound impacts upon the business and society literature (Rowley, 1997). Since the publication

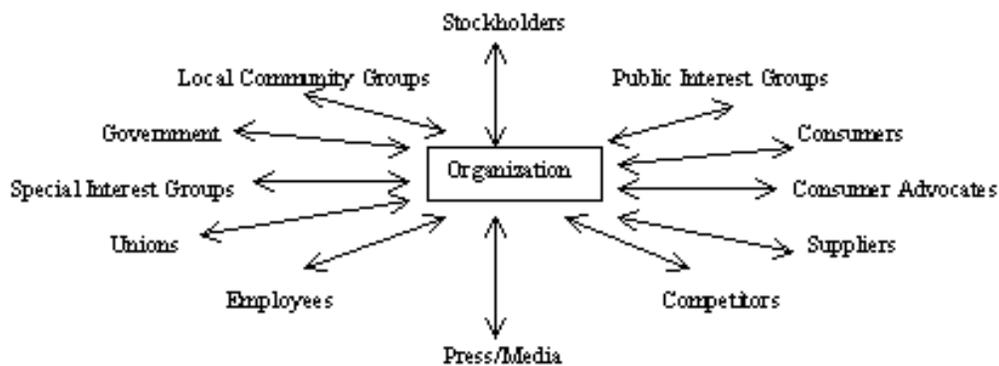
of Freeman's influential piece, *Strategic Management: A Stakeholder Approach* (1984), research in the area of stakeholder theory has exploded, proceeding to redefine traditional modes of thought in the business management literature. To date, however, scholars in public administration have failed to take advantage of the work these scholars have to offer. In part, this is a result of the ontological/epistemological biases upon which public administration research is founded. The stakeholder management literature, however, is easily adaptable into a format which readily meets the needs of administrators in the public sector, especially those faced with trying to build an implementation network.

Figure 13 – Stockholder vs. Stakeholder

Stockholder Model



Stakeholder Model



Source: Rowditch and Buono, 1994: 253.

Bowditch and Buono (1994) argue that the development of stakeholder theory is part and parcel of an epistemological shift in the business literature which is akin to the shift currently occurring in public administration towards network approaches to governance (see also Freeman and Evan, 1990). Contrasting the traditional stockholder model with a stakeholder perspective (see Figure 13), the authors contend that “the stakeholder model suggests that corporations are servants of the larger society” (252). The stockholder model holds the organization as a central entity, impacted by or impacting only entities directly associated with it, such as employees, shareholders and suppliers. In contrast, the stakeholder model “includes a wider variety of groups” in the network of *organizational* activity. The allusion to networks is not accidental. As organizations across *all* sectors become increasingly interdependent, the need to recognize and understand the broad dynamics of the various relationships organizations confront in daily life will be critical to effective management (Wamsley and Schroeder, 1996; Schroeder, Wamsley, and Lane, 1996). As noted above, this trend is similar to the shift in public administration away from black box approaches to policy-making and governance (i.e., Easton, 1953) towards more inclusive and descriptive approaches that aim to capture the richness of organizational life.

What is a stakeholder?

Freeman *defines a stakeholder as* “any group or individual who can affect or is affected by the achievement of an organization’s objectives” (Freeman, 1984: 46). While this definition may seem rather broad, it highlights one important fact; just about anybody can be a stakeholder. Table 11 gives a more exhaustive list of definitions of stakeholders in the stakeholder theory literature.

Table 11 - Who Is A Stakeholder?

Source	Stake
Stanford memo, 1963	"those groups without whose support the organization would cease to exist" (cited in Freeman & Reed, 1983, and Freeman, 1984
Rhenman, 1964	"are depending on the firm in order to achieve their personal goals and on whom the firm is depending for its existence (cited in Nasi, 1995).
Ahlstedt & Jahnukainen, 1971	"drivewn by their own interests and goals are participants in a firm, and thus depending on it and whom for its sake the firm is depending (cited in Nasi, 1995).
Freeman & Reed, 1983: 91	Wide: "can affect the achievement of an organization's objectives or who is affected by the achievement of an organization's objectives" Narrow: "on which the organization is dependent for its continued survival"
Freeman, 1984: 46	"can affect or is affected by the achievement of the organization's objectives"
Freeman & Gilbert, 1987: 397	"can affect or is affected by a business"
Cornell & Shapiro, 1987: 5	"claimants who have contracts"
Evan & Freeman, 1988: 75-6	"have a stake in or claim on the firm"
Evan & Freeman, 1988: 79	"benefit from or are harmed by, and whose rights are violated or respected by, corporate actions"
Bowie, 1988: 112, n2	"without whose support the organization would cease to exist"
Alkhafaji, 1989: 36	"groups to whom the organization is responsible"
Carroll, 1989: 57	"asserts to have one or more of these kinds of stakes"—"ranging from an interest to a right (legal or moral) to ownership or legal title to the company's assets or property"
Freeman and Evan, 1990	contract holders
Thompson et al., 1991: 209	in "relationship with the organization"
Savage et al., 1991: 61	"have an interest in the actions of an organization and...the ability to influence it"
Hill & Jones, 1992: 133	"constituents who have a legitimate claim on the firm...established through the existence of an exchange relationship" who supply "the firm with critical resources (contributions) and in exchange each expects its interests to be satisfied (by inducements)"
Brenner, 1993: 205	"having some legitiamte, non-trivial relationship with an organization [such as] exchange transactions, action impacts, and moral responsibilities"
Carroll, 1993: 60	"asserts to have one or more of the kinds of stakes in business—may be affected or affect..."
Freeman, 1994: 415	participants in "the human process of joint value creation"
Wicks et al., 1994: 483	"interact with and give meaning and definition to the corporation"
Langtry, 1994: 433	the firm is significantly responsible for their well-being, or they hold a moral or legal claim on the firm
Starik, 1994: 90	"can and are making their actual stakes known"—"are or might be influenced by, or are influencers of, some organization"
Clarkson, 1994: 5	"bear some form of risk as a result of having invested some form of capital, human or financial, something of value, in a firm" or "are placed at risk as a result of a firm's activities"
Clarkson, 1995: 106	have, or claim, ownership, rights, or intereests in a corporation and its activities"
Nasi, 1995: 19	"interact with the firm and thus make its operations possible"
Brenner, 1995: 76, n. 1	"are or which could impact or be impacted by the firm/organization"
Donaldson & Preston, 95: 85	"persons or groups with legitimate interests in procedural and/or substantive aspects of corporate activity"

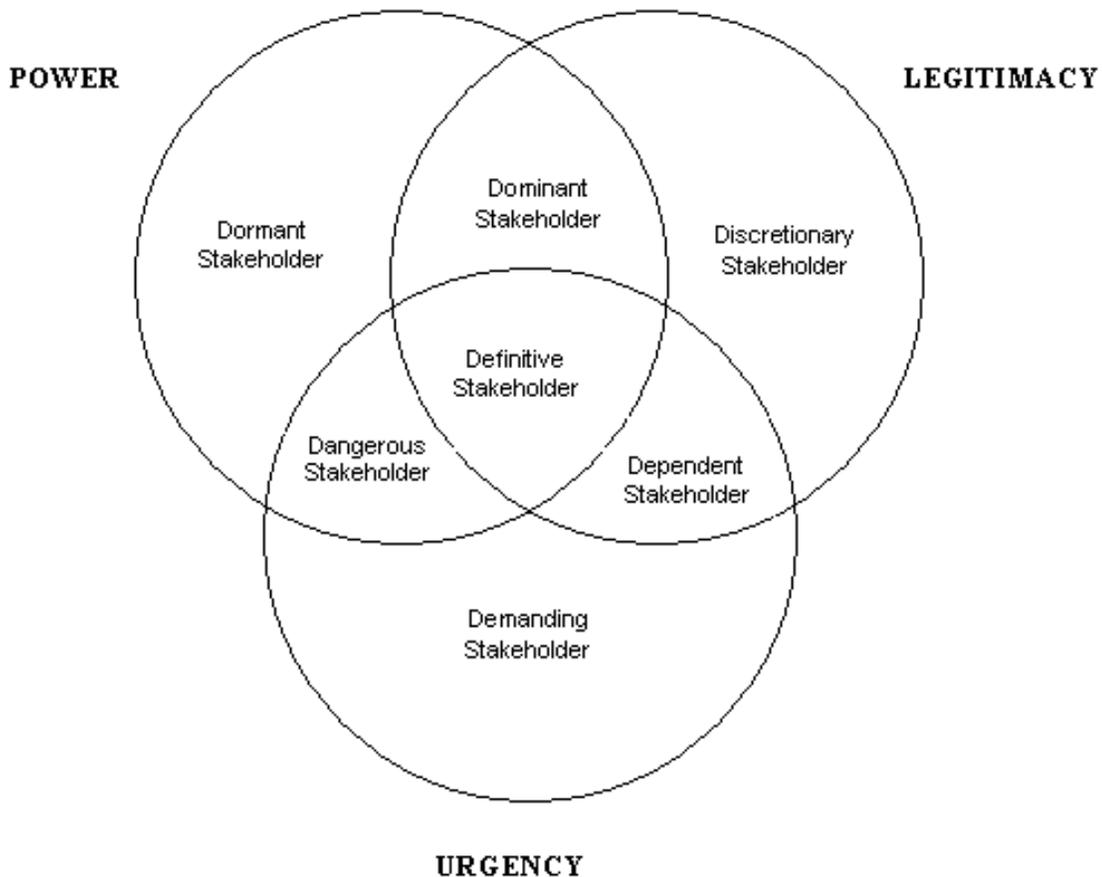
Source: Mitchell, Agle and Wood, 1995: 858.

There are so many, any could possibly suffice, but most do not provide a definition that is operation for our purposes. Within this literature, the definition that provides the most

operational guidance for selecting from a broad political/economic environment the “right” stakeholders to help build an implementation network is provided by Mitchell, Agle, and Wood (1997). These authors have devised a typology in which classes of stakeholders are identified by their possession or attribution of one, two, or all three of the following attributes:

- (1) the stakeholder’s *power* to influence others involved in the issue;
- (2) the *legitimacy* of the stakeholder’s relationship to the issue,
- (3) the *urgency* of the stakeholder’s claim on the issue at hand (854).

Figure 14 – Stakeholder Typology



Stakeholder Analysis – The Method

Mitchell, Agle, and Wood’s (1997) formulations of power, legitimacy, and urgency can be visualized in figure 14. In general, power can be defined simply as “the probability that

one actor within a social relationship would be in a position to carry out his own will despite resistance,” or the ability of some actor A, to get another actor B to do something that B would otherwise not do” (865). They further distinguish power by dividing the various types of resources one uses to exercise that power: *coercive* power is based on physical restraint, violence or force; *utilitarian* power is based on the premise that material or financial resources can be used as a resource for power; and finally, *normative* power, which relies on some aspect of moral or symbolic resources to induce a particular outcome.

Legitimacy can be defined as “a generalized perception or assumption that the actions of an entity are desirable, proper, or appropriate within some socially constructed system of norms, values, beliefs and definitions” (Mitchell, Agle, and Wood, 1997: 866). Hence, legitimate stakeholders will be viewed as having “a right” to participate.

Finally, urgency exists “when a relationship or claim is of a time sensitive nature and...when that relationship or claim is important to the stakeholder” (867). Hence, these attributes of time sensitivity and criticality are important in assessing a stakeholder’s overall urgency with respect to a given project.

This framework, then, establishes a three-part classification system in characterizing stakeholders and assessing their potential impact.

The first is an assessment of the total number of attributes on which a stakeholder scores high. **Scoring high on all three characteristics identifies a *primary or definitive stakeholder*** (p. 874). These are the most “important” stakeholders and almost always should be included in the process. The second classification is labeled *secondary* or *expectant* stakeholders. ***Secondary stakeholders are stakeholders who score high on two of the three attributes*** (dominant, dangerous, dependent). The final grouping, **based on scoring high on only one attribute, are *tertiary or latent stakeholders*** (dormant, discretionary, demanding).

In addition, **within each category of secondary and tertiary stakeholders are different combinations of attributes**. Hence, we get an additional framework for classifying stakeholders.

Expectant or Secondary Stakeholders

Within the Expectant or Secondary stakeholder category, ***Dominant*** stakeholders are those who are considered **powerful** and **legitimate** stakeholders and tend to be the most influential stakeholders within this secondary realm. Hence, despite not being a definitive stakeholder, given their place in the framework, we would expect that were they to acquire some sense of urgency, their interests would become of significant importance to managers, moreso than others in this expectant phase. ***Dependent*** stakeholders are those with **urgent** and **legitimate** claims and are characterized as being dependent because they are essentially reliant upon other powerful stakeholders or a manager who is considerate of their claims on the process at hand. ***Dangerous*** stakeholders score high on both the **urgent** and **powerful** attributes are classified as dangerous because they lack legitimacy in the process. These stakeholders are likely to use coercive or utilitarian power to influence a process as opposed to symbolic power. It is important to note that these are subjective descriptions. Thus, classifying a stakeholder as “dangerous” does not automatically imply that they should be excluded from the process. Many “dangerous” stakeholders are critical to a fair and equitable stakeholder process. How and when these types of stakeholders are included will ultimately depend upon the needs and the stage of implementation.

Latent or Tertiary Stakeholders

Within this category, there are also three possible categories under which stakeholders can be classified. ***Dormant*** stakeholders score high only on the **power** category. These stakeholders are unlikely to exercise any of their power without any sense of urgency or legitimacy with respect to the process, but possess the *potential* to change status rapidly. The second category is ***discretionary***. These stakeholders score high on **legitimacy**, and as such, have no power to assert their claims, nor a sense of urgency to make themselves be heard. ***Demanding*** stakeholders are those who are neither powerful nor legitimate, but perceive a deep sense of **urgency** with respect to a particular issue, and hence, try desperately to enter the field of legitimate and powerful stakeholders, and generally have to rely on others to help them voice their concerns.

While these categories are most easily described in categorical terms, the reality of stakeholder management tells us that these characteristics occur across dynamic continuums (Mitchell, Agle and Wood, 1997). Any stakeholder, at any time, can move in or out of a different classification or may simultaneously occupy more than one category depending upon the nature of the problem.

Up to this point, we have an excellent tool with which to begin to analyze the “types” of stakeholders in the political/economic environment of the new implementation network. Using this tool, the network facilitator will be able to quickly distinguish between types and make some preliminary judgment about where to focus his/her energies. Unfortunately, used alone, this method is still not instructive enough for our purposes. While primary stakeholders should almost always be included in the process, and tertiary stakeholders should probably get the least amount of attention (at least to start), the real difficulty in building a stakeholder network would seem to come when dealing with everybody else. That is, what do you do with all of the Dominant, Dependent, and Dangerous stakeholders? Without a little more qualitative assessment, we are still shooting in the dark.

Identifying Threatening and Cooperative Stakeholders

To address this problem, a second methodology, the “threat vs. cooperation matrix” was found, that when combined with the first, results in a more complete understanding of all potential stakeholders in the implementation network. Whitehead and Blair (1988; see also Savage, Nix, Whitehead and Blair, 1991) developed a useful matrix across two different dimensions which is extremely helpful in further delineating different types of stakeholders relevant to the management process. Based upon an assessment of a stakeholders’ willingness to cooperate, as well as the stakeholder’s ability to become a threat to the organization, Whitehead and Blair formulated four categories or types of stakeholder which can be used to explicate and add more depth to our understanding (see figure 15).

Figure 15 – Threat vs. Cooperation Matrix

		Stakeholder's Potential for Threat to Organization	
		High	Low
Stakeholder's Potential for Cooperation with the Organization	High	Type 4 MIXED BLESSING Strategy: COLLABORATE ?	Type 1 SUPPORTIVE Strategy: INVOLVE
	Low	Type 3 NONSUPPORTIVE Strategy: DEFEND	Type 2 MARGINAL Strategy: MONITOR

Source: Blair and Whitehead, 1988: 158.

Using the Threat vs. Cooperation Matrix for Stakeholder Selection

As demonstrated in Figure 15, a stakeholder who scores high on potential for cooperation and low on potential for threat is referred to as a “supportive” stakeholder. These stakeholders, as the label implies, are approving of the network’s goals and are willing to help achieve them. Not surprisingly, the best strategy is to *involve* these stakeholders in the network’s activities. Conversely, a stakeholder who scores high on potential for threat and low on potential for cooperation is considered a “non-supportive” stakeholder precisely for the opposite reasons. The best management strategy for these stakeholders is to take a *defensive* stance. Ideally, however, the most effective strategy is to attempt to change the status of these stakeholders’ position towards the network.

Stakeholders who score low on both dimensions are considered marginal stakeholders. These are stakeholders who have little reason to support the network’s goals or to mount resources to thwart them. Hence, they remain on the sidelines until some aspect

of either dimension changes. The best management strategy for these stakeholders is to *monitor* them. This simply means keeping a constant reading on where they stand and keeping abreast of any changes in the status of the stakeholder across these dimensions.

While all of these categories and the dimensions upon which they are based are fluid rather than static categories, and the potential for stakeholders to shift positions over time or from issue to issue is high, the final category, “mixed-blessing” stakeholders are perhaps the most dynamic. Because they score high on both potential for threat and

Table 12 - Factors Affecting Stakeholders’ Potentials for Threat and Cooperation

	Increases or Decreases Stakeholder’s Potential for Threat?	Increases or Decreases Stakeholder’s Potential for Cooperation?
Stakeholder controls key resources (needed by organization)	Increases	Increases
<u>Stakeholder does not control key resources</u>	<u>Decreases</u>	<u>Either</u>
Stakeholder more powerful than organization	Increases	Either
Stakeholder as powerful as organization	Either	Either
<u>Stakeholder less powerful than organization</u>	<u>Decreases</u>	<u>Increases</u>
Stakeholder likely to take action (supportive of the organization)	Decreases	Increases
Stakeholder likely to take nonsupportive action	Increases	Decreases
<u>Stakeholder unlikely to take any action</u>	<u>Decreases</u>	<u>Decreases</u>
Stakeholder likely to form coalition with either stakeholders	Increases	Either
Stakeholder likely to form coalition with organization	Decreases	Increases
<u>Stakeholder unlikely to form coalition</u>	<u>Decreases</u>	<u>Decreases</u>

Source: Savage et al., 1991: 64.

potential for cooperation, they become both potentially supportive, and potentially non-supportive at the same time. The most appropriate strategy in these cases is to solicit *collaboration* with the stakeholder. As a result, very often these stakeholders require a great deal of attention in the management process. That is because managers must become acutely aware of the presence of these stakeholders and the volatility they

present to a program or policy. Very often keeping these stakeholders from becoming non-supportive can tax available resources immensely.

Listed in table 12 are some of the factors affecting a stakeholder’s potential for threat or cooperation (Savage et al, 1991: 64). While certainly not exhaustive, this provides the reader with a glimpse at some of the dynamics involved in managing complex networks of stakeholders.

Methodological Instruments

Based on this literature, an instrument and a method for utilizing this instrument can be derived. The instrument, displayed in Figure 16, is designed to be used in conjunction with the contextual assesment interview instrument derived above. Based upon responses to a series of questions related to a particular implementation effort, the

Figure 16 – Stakeholder Analysis Matrices

Step 1.

<i>Stakeholder</i>	Interests	Power	Legitimacy	Urgency	Confidence	Type

Step 2.

<i>Stakeholder</i>	Cooperation	Threat	Confidence	Type

interviewer will complete these matrices, rating each category either high or low. This instrument involves a distinct two-part analysis. The first matrix is primarily for stakeholder identification/analysis. The second matrix is for identifying threat/confidences and also to help manager’s identify specific management strategies to be used in relation to a particular network.

The first matrix explores the dynamics of the three-part category discussed above, and formulated by Michell, Agle, and Wood (1997). This is primarily an *identification* tool, used to identify and categorize potential stakeholders in a systematic fashion. The second matrix is to be used to further distinguish primary and secondary stakeholders

and devise management strategies. Once we have identified the various stakeholders, we want to begin to develop strategies for working with them and deciding how and

Table 13 - *Sample Stakeholder Interview Instrument*

Power

To what extent do you think this stakeholder has an affect or can influence the outcome of this project?

Can the project continue without the inclusion of this stakeholder?

What interests would this stakeholder have in this kind of project?

To what extent can this stakeholder influence other stakeholders in the process?

What resources can this stakeholder use to advance their interests in the process?

Legitimacy

To what extent do these stakeholders provide resources critical to the outcome of this project?

To what extent are we responsible to this stakeholder with respect to this project?

To what extent does this stakeholder have a right, or a moral or legal claim, to be involved in this project? Does this stakeholder have a genuine or legitimate place in this process?

Is there any risk involved to this stakeholder with respect to being included in this project?

To what extent will this stakeholder benefit from, or will be harmed by the outcome of this project?

Urgency

Do you think this stakeholders' claims will demand immediate attention with respect to this project? To what extent does this stakeholder demand immediate attention in this project?

Will it be problematic to keep this stakeholder waiting until the project proceeds further along the implementation schedule?

To what extent do you think this project is critical or urgent to this stakeholder?

To what extent do you think any managerial delay in addressing this stakeholder's interests will become problematic for the stakeholder?

Do you think this stakeholder will bring a sense of crisis or haste to this project?

Cooperation

To what extent does this stakeholder control resources necessary for the completion of this project?

How powerful is this stakeholder with respect to this project?

Overall, how supportive do you think this stakeholder will be with respect to this project?

Do you think this stakeholder is likely to take any action which is likely to undermine this project?

Do you think this stakeholder will be willing to collaborate with other stakeholders to form a coalition in support of this project? Against it?

Threat

To what extent do you think this stakeholder is a potential threat to the success of this project? Would you be insecure about including this stakeholder in this process?

How much power do you think this stakeholder has relative to other stakeholders?

Is there an immediate *opportunity* for this stakeholder to impede or become a threat to this project?

Would this stakeholder be willing to use it s resources as a threat to the project?

Confidence

How familiar do you think you are about these stakeholders' interests with respect to this project? How confident are you about your insight into this stakeholder and the various interests you think they will bring to this project?

How did you come to be familiar with or knowledgeable about this stakeholder?

How long have you had interaction with this stakeholder?

Please tell us why you think you can be confident, or not confident about your assessment of this stakeholder?

Travel Shenandoah

In the case of the Travel Shenandoah project, as would probably be recommended in most cases, the Contextual Assessment method is used in conjunction with the Stakeholder Analysis method. The primary reason for this in the Travel Shenandoah case is that it can be quite difficult, if not potentially annoying, to get multiple appointments for interviews with so many potential stakeholders. It is important to try to get as much information from a single interview as possible. The difference is that one continues to use the stakeholder analysis tools after the initial interview, almost on a continuing basis, as new stakeholders are added/subtracted to/from the process.

For our purposes here, however, Stakeholder Analysis will be discussed separately. It should be noted, however, that a combined interview instrument was used, combining the instruments discussed in Chapters 3 and 4 of this dissertation.

As stated in the discussion ending Chapter 3, political support seemed available and shared economic support looked possible. Effort, however, would need to be put into coordinating with the Virginia State Police and local entities in collecting the most accurate road and traffic information and it wasn't at all clear who would be playing what role in financing, designing, implementing, and running the system. It was also not clear who could potentially scuttle the whole effort, if anybody. What was needed was a more detailed analysis of the potential stakeholders involved in the process. Using the instruments detailed above (combined with the contextual assessment instrument), a master table of all 57 interviewees was generated. Listed below in table X are the 7 stakeholders of the 57 that became the evident individuals that must be dealt with for this project to become a success. The most obvious was the ITS Director at VDOT. The original idea to look into what could be done on the I-81 corridor was his, and, if an idea was designed that he could politically defend to his superiors, he would have access to a great deal of the funding that would be needed to bring that idea to fruition. He was also the only stakeholder that ranked as a "primary" type from the outset. For the others decision had to be made as to what level of effort would be put forth to secure their cooperation or defend the project from it.

While it was assumed from the beginning that the President of the Virginia Tourism Corporation should probably be involved, what became evident from the interview was that while he was definitely willing to cooperate on such an initiative, if he decided it was in any way detrimental to his mission, he would do whatever he could to try and stop it. This was definitely a stakeholder of the “mixed” type and we would be required to put extra effort into collaborating with his current efforts.

What was unexpected from our interviews was the necessity to include a local representative of tourism interests separate from the VTC President. While overall authority for inclusion on state tourism documents (e.g. maps, tourism books) was at the discretion of the VTC President, all discretion over inclusion in any region specific documents (like those featuring the Shenandoah Valley) was in the hands of the Shenandoah Valley Tourism Association.

When it came to the Shenandoah National Park, the largest tourist attractor (and second highest cause of road congestion next to commercial vehicles) in the region, it became evident that federal park representatives must be persuaded to contribute their time and information to the project. So, even though the National Park Service were ranked as only a tertiary stakeholder, because the project needed access to park and park roadway information, and because they were ranked as a “supportive” type of stakeholder, it made sense to begin to include them from the beginning. We had to make them a different kind of stakeholder – at least a dependent one.

The Associate Planner from the Loud Fairfax Planning District Commission was the first person the VDOT ITS Director had asked to think about the I-81 problem. Additionally, he was the first to suggest that contacts be made with the Telecommunications industry. Accordingly, his interest (urgency) in the developing project was high and, at the outset, his legitimacy at the table was also high. While it was evident from the interviews that his legitimacy would probably begin to fade over time as the project was increasingly run from Virginia Tech and not the LFPDC, because he ranked as a “supportive” – that is, high cooperation, low threat, it was decided that his ability to help define the issues well outweighed any growing animosity over project ownership. Additionally, it made little sense to attempt to marginalize a stakeholder who still had urgency and legitimacy and

was not a threat to the project. In fact, our team took it as a good lesson that room should generally be made for this type of stakeholder because if the project is a success there will always be plenty of credit to share, but if you do not include them, the only result is that it could end up being harder to achieve success at all.

The real surprise from our interviews was the repeated suggestion that we contact and also interview a representative from the local telecommunications firm, SHENTEL Corp.. After interviewing the Vice President of SHENTEL, it became evident that they certainly had a legitimate role in the provision of information (via cell-phone, land-line phone and cable television), and, if they could be convinced that there was a bona-fide business model under this project, they had the local power to make the system come to fruition faster than any other. That is, they already had an infrastructure in place, and, if they thought they could profit from the system, this infrastructure would be donated at no cost to the project. This was a “secondary, mixed” type of stakeholder that we could not afford to not collaborate with.

Lastly, as discussed above, the status of automated, integrated road and traffic information in the region was poor at best. This is not to say that certain agencies didn't have any information. It is to say that none of it was coordinated with any other agency to provide an integrated “look” at what was going on in the valley at any given time. While VDOT had relatively good data on roadway conditions/construction, they had very poor data on traffic conditions (especially as related to incidents). It became obvious from our interviews that a coming of information had to take place between VDOT and the Virginia State Police which had recently installed an Computer-Aided Dispatching System (CADS). CADS is a large database system that tracks everything that is going on with state police officers within a state police division. The Shenandoah Valley is covered by three police divisions, each with its own implementation of CADS. It soon became evident that we needed to include the state CADS director who had overall coordination responsibilities for CADS. The problem was that VSP rated as a secondary, marginal type of stakeholder with low marks on Urgency (why should they care?) and cooperation (they have more important things to do). It would be contingent on our efforts to prove the value of the system in terms of increased public information dissemination and, therefore, better managed and safer incident responses by the State Police. Therefore, inclusion early on was called for.

Figure 17 – Result Table for Contextual Analysis and Stakeholder Analysis

<u>Stakeholder</u>	<u>Interests</u>	<u>Power</u>	<u>Legitimacy</u>	<u>Urgency</u>	<u>Confidence</u>	<u>Type</u>
ITS Director, VDOT	XXXXX	H	H	H	H	Primary
Tourism Director, SVTA	XXXXX	H	H	L	L	Secondary
VTC President	XXXXX	H	H	L	H	Secondary
Assoc. Planner LFPDC	XXXXX	L	H	H	H	Secondary
Vice-President						
SHENTEL	XXXXX	H	H	L	H	Secondary
Dir. Public Affairs, SNP	XXXXX	L	H	L	H	Tertiary
VSP CADS Director	XXXXX	H	H	L	L	Secondary

<u>Cooperation</u>	<u>Threat</u>	<u>Confidence</u>	<u>Type</u>	<u>Strategy</u>
H	L	H	Supportive	Involve
H	H	L	Mixed	Collaborate
H	H	H	Mixed	Collaborate
H	L	H	Supportive	Involve
H	H	H	Mixed	Collaborate
H	L	H	Supportive	Involve
L	L	H	Marginal	Monitor

<u>Web page</u>	<u>Contact person</u>	<u>Relationship</u>	<u>Describe</u>	<u>Contact Phone</u>
	XXXXXX	y	XXXXXX	XXXXXX
www.shenandoah.org	XXXXXX	n		XXXXXX
	XXXXXX	y	XXXXXX	XXXXXX
	XXXXXX	y	XXXXXX	XXXXXX
www.shenandoah.com	XXXXXX	n		XXXXXX
<u>www.nps.gov</u>	XXXXXX	N		XXXXXX
	XXXXXX	n		XXXXXX

The Advisory Board

These original 7 stakeholders were asked to become part of a project “advisory board” that would help detail the purpose(s) of the ATIS and also help determine an implementation “road-map” that would help us avoid pitfalls and keep on moving. This advisory board was asked to participate in a planning session for the project at Virginia Tech over a two-day period. The details of why we formed an advisory board and the “joint-visioning” process we brought them through in the planning session will be the topics of the next chapter. For the purposes of this chapter, however, it needs to be noted that it has been the dynamics of the advisory board which have served to help illustrate the utility of the approach outlined above for stakeholder management, as well as selection.

Initially, the ITS Director from VDOT, who was a very powerful and legitimate stakeholder, had only a fleeting sense of urgency in the ATIS project because, while he knew he wanted something to happen, he could envision how it would take place, and what he would say to his superiors to prove the benefit of his decisions. It became evident very early on that we would need this individual as a critical actor in the early phases of the project if it were to be successful. As we began to plan the strategic planning session for the advisory board, we had to insist on this person’s direct participation in this early phase of the project, despite his continued attempts to send an assistant in his place. It was not that he didn’t care about the project. It was that he didn’t understand why he had to be there. When it was explained that his presence would ensure the presence of the other state agency heads and private sector representatives, and, that if they showed up a potential regional plan for ATIS implementation could come out of it, he agreed happily to come. Similarly, another key representative from the state tourism corporation wanted to send another individual in his place as well. Knowing ahead of time that the potential replacement was essentially a discretionary stakeholder, that is, had a legitimate interest, but no sense of urgency or power with respect to this phase of the project, we had to insist that the representative from the state tourism corporation attend.

It is important to note that any marginal or tertiary stakeholders are not simply discarded or eliminated from the process entirely. In the case of the discretionary stakeholder from the tourism corporation, we assured this person that we would make every effort to keep

her abreast of the project's development and the outcomes of the strategic planning session. It is also important to note that our approach to this project is to manage with a small "m." That is, we were not directing the process as much as we were facilitating, or creating the conditions within which progress could be made. None of these actors were required to be there, but the loss of any one of them would have been detrimental to the project.

This facilitative approach has had dramatic impacts upon the success of the project. From the beginning, we had individual stakeholders representing each quadrant of the Diagnostic Typology for Stakeholders. While most people fell into the supportive category, there were some key players who filled the other areas as well which required a great deal of effort, such as the secondary stakeholder heading toward marginal stakeholder discussed above.

As the project progressed, the planning district representative became increasingly marginalized, primarily because he tried to maintain a great deal of ownership over anything involving technology in the corridor, and resisted losing control as this particular project expanded and developed. This caused him to lose not only a great deal of legitimacy in the eyes of the other stakeholders, but also, whatever power he once maintained was subsequently lost. His perspective on the project continued to reduce the amount of power he had, relegating him to the role of demanding stakeholder. At this point, it had become clear that his role had become that of interested observer as his ability to directly influence the outcome is now severely limited. He had even stopped being that "demanding," now wishing to focus his energies elsewhere. However, if efforts were not made to keep him involved at every step, his transition from a position of power to one of interested observer would not have been so smooth.

As noted above, our mixed-blessing stakeholder was the representative from the state tourism corporation. This individual was extremely hesitant about the project, and we knew that he could be extremely valuable if he could be brought on board, but also a hindrance if he could not be brought on board. Initially, he was also clearly a dominant stakeholder, who lacked the sense of urgency to become a definitive stakeholder. As noted, the best strategy for these stakeholders is to collaborate with them. The tourism corporation currently maintained its own travel website, albeit without a substantial

amount of the information being considered here. Still, this agency viewed this project, and in particular the private telecommunications corporation as a potential competitor. Therefore, getting support from this stakeholder would be difficult given his rather open reservations about the project itself. However, once we were able to get him to the table, we were able to slowly bring him on board and garner increasing amounts of potential support. Hence, as Blair and Whitehead (1991) argue, an appropriate strategy for dealing with non-supportive stakeholders is a defensive strategy, ideally one would try to move the non-supportive stakeholder into a less hostile position. And while this is not always possible, in this case it clearly played an important role in moving the project forward one more notch. His participation at the planning session seemed to be the turning point. Once we were able to get him there and get him actively involved, his perspective on the project changed, increasing his sense of urgency and moving him from a mixed-blessing to a supportive stakeholder.

The Problem of Who to Include and Why

Returning to one of our initial questions: how do you justify limiting participants, if anyone is potentially a stakeholder?, the answer to this question must be: it depends. As noted above, most of the literature automatically assumes that all participation, at all stages of planning is desirable and necessary. Such oversimplifications are simply unhelpful. As Melissa Powell notes, more often than not, the problem is not whether to include stakeholders, but who gets included and who doesn't (1997). In the case of the ATIS, the success of the entire project rested upon how the advisory board was set-up and on the outcome of the following visioning session. Hence, substantial resources were invested simply to begin to understand the dynamics of the existing network, and planning out how and who should be involved.

One cannot underestimate the importance of optimizing one's resources in situations where time, people and other resources are limited. Ideally, one would like to have processes where every interested party could be allowed effective participation. To be sure, every successful program must involve, at some point and to some degree, all relevant voices. The utility of an approach such as the one offered here is that in many cases, different interests can only participate effectively at particular points in the

process. Each step of a program will have different goals and different dynamics to consider.

The Complexity of Joint Action

In their landmark study of implementation, Pressman and Wildavsky (1973) presented a case study of how a project with seemingly unanimous support, was considered a good and valuable project by all, failed miserably. The approach and methodology presented here hopefully provides implementation network facilitators a way of avoiding the pitfalls that were the undoing of the actors in Pressman and Wildavsky's book. As noted above, the most time consuming phase of a project should increasingly become the initial assessment stages. As public administrators increasingly become network facilitators, as opposed to director's, the need to "feel out" a problems various participants will be critical to effective implementation strategies. That is, through a better understanding of the network involved in any given policy area using some derivation of the stakeholder management approach offered above, manager's can (and already have) more effectively dealt with the complexities of joint action and the people involved in them.

Calls for increased public participation and deliberation abound within public administration. The concept of stakeholders and stakeholder management are sprinkled throughout the literature but the concepts are poorly defined, and very often the literature does not present effective tools for carrying out real-life public deliberation processes. Given the changing stances of ontological and epistemological research paradigms taking place throughout the social sciences, as well as the shifting dynamics of the working environments for contemporary administrators, new tools are called for. This chapter delineating stakeholder analysis has attempted to begin to fill this methodological void.

Assessing Stakeholder Analysis

Given the requirements of a good methodological system stated in chapter 1, which of the requirements are satisfied by this second method, "stakeholder analysis?" The stakeholder analysis methodology does not allow for a general analysis of the environment (like the political economic instrument) because it purposefully focuses on a

select few culled from that environment. However, it certainly does begin to more precisely contextualize definitions formed from the first method (see requirement #6).

The second requirement was that the method help the builder understand and work with individuals from the environment. This, of course, is the primary purpose of the stakeholder analysis method. As stated earlier, as relevant stakeholders were selected to participate in the process, we found that the initial interview had generally had the very positive effect of creating a 'want' in many interviewees to participate further in the process. Given the busy nature of many of the respondent's jobs, this was unexpected, but welcomed. Of course, not everybody that wanted to participate fully in the process necessarily belonged in that role. Additionally, not everybody that needed to be involved in the process necessarily wanted to keep participating (e.g. the Virginia Tourism Corporation President). This is the real benefit of considering stakeholder variables from the outset – being able to understand who needs to be at the table and who does not so that the process may continue forward.

The third requirement, to enable the network builder to plan for resource usage across boundaries, was not addressed by the political-economic instrument, but the stakeholder method does begin to help some in this capacity. While no direct planning, or cross-stakeholder communications at all, have yet occurred, the network facilitator does begin to understand just exactly who should be talking to who so that these types of agreements can occur.

The fourth requirement that the approach be iterative is not satisfied by this method. The stakeholder analysis method, like the contextual assessment method, calls for only one round of interviews with all potential stakeholders (in fact, in many cases, the two instruments can be used during the same round of interviews).

The stakeholder analysis method does not satisfy the fifth requirement, to use purposive sampling. Nor is it supposed to, as it is designed to take a pre-determined set of stakeholders and analyze each one to determine how (s)he rates relative to each other stakeholder across a number of dimensions.

The sixth requirement for the method to require inductive reasoning is satisfied by stakeholder analysis. As stated above, while the method does not directly allow for additional assessment of the environment, it certainly does begin to more precisely contextualize understandings formed from the first method, contextual analysis. While it is found, using the political economic instrument, that many potential impediments to implementation exist by asking the respondents to consider the implication of a new initiative upon ‘their’ existing organization, stakeholder analysis aids the network facilitator in determining both the actual extent of that impediment, the likelihood of and possible strategies for overcoming the impediment. That is, it allows the facilitator to induce from his/her environment possible directions to take. For example, while the political economic interviews revealed that a telecommunications industry partner should probably be involved and that there was budding interest, it wasn’t until we considered the latent ability to enable the ATIS (power) and willingness to cooperate of a specific company, SHENTEL Corp., that we had a true picture of the ATIS’s potential environment and, that that picture may very well involve a local telcom.

The seventh requirement is that the method require the development of grounded theories. In our case, that would seem to mean the establishment, from our inductive reasoning, of theories of operation for the implementation network (if X does Y, the Y will be able to satisfy Z). Such theoretical conclusions seem beyond the reach of stakeholder analysis, as they are for contextual assessment.

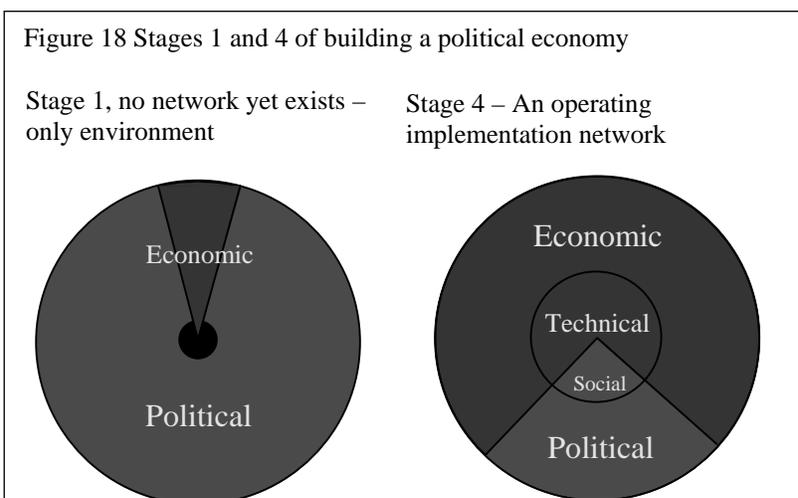
Even though the seventh requirement is not satisfied by stakeholder analysis, the eighth, to enable a reasoned assessment of next steps to be taken, is partially satisfied, because some preliminary theories about who should be talking to who and about what can be induced, next steps for planning “joint visioning” sessions can be taken. Joint visioning is the topic of the next chapter. Table 14 summarizes which of the requirements are satisfied, at least to some extent, by the second method, stakeholder analysis and management.

Table 14 – Satisfaction of Good Method Requirements			
	Contextual Assessment	Stakeholder Analysis & Mgt.	Joint-Visioning
Environmental	√	–	

Assessment			
Understand/Work with Stakeholders	√	√	
Plan for Resource Usage	-	√	
Iterative Approach	-	-	
Purposive Sampling	√	■	
Inductive Reasoning	√	√	
Require Grounded Theories	-	■	
Indicate Next Steps	-	√	

CHAPTER V: JOINT VISIONING - STRATEGIC PLANNING WITH THE ADVISORY BOARD (THE GOAL SETTING NETWORK)

Recall the discussion in Chapter 3 applying the political economy framework in understanding the facilitator's endeavor to build a new "virtual" organization, or implementation network, where one did not exist before. In the beginning, no new organizational form yet exists and the facilitator must first analyze the environments of potential stakeholders to determine the political and economic environment of the potential implementation



network. Additionally, the network facilitator needs to know which stakeholders to include in the process going forward. That is the purpose of the first two methods introduced here, contextual assessment and stakeholder analysis. That is, they enable the analysis of the potential environment, and stakeholders essential to getting the implementation network built. These methods are meant to take the network facilitator from Stage 1 to the threshold of the process for creating a new political economy (see figure 18). To get through stages 2 and 3 to finally achieve a new functioning political economy (stage 4), more steps are necessary. In fact, the majority of the sweat work is still ahead. The first two methods have just helped set the stage for these steps yet to be taken.

The facilitator is now at the point where some form of strategic planning is needed to determine the mission, goals, and approach of the new virtual organization. The problem, however, is that doing any form of strategic planning in the public sector can be troublesome – in network settings even more so (see above). However, if the facilitator realizes this from the outset, works to counter these difficulties, and uses techniques that

are more compatible with a network setting, then there is little reason to believe that the benefits of planning cannot be realized.

Borrowing from the theoretical approaches of community facilitation training, action research, and policy networks (specifically implementation networks), this chapter, which represents the final step in the methodological system proposed here, will lay out the process by which multiple stakeholders in a given network of political and economic influences can be facilitated in a way that permits the establishment of goals, the attainment of programmatic-level “by-in,” and the specification of “next-steps” or tasks to be accomplished.

The purpose of joint-visioning is to create among a number of stakeholders a common vision of what an implementation network will be charged with doing as well as how that implementation network will function. What the method of joint-visioning calls for specifically is a shared understanding of how the network can be developed over time and a set of activities that, when combined together, will lead stakeholders through what could be loosely referred to as a “strategic planning process.” The term “strategic planning” is used loosely here, although the end product of the process is admittedly the same as a strategic planning process - that is, the enumeration of mission, goals, responsibilities and tasks in response to environmental conditions – the way we get there must be specifically formulated for application in the loosely structured environment that falls between the public, private and non-profit sectors or, in this case, the implementation network. Accordingly, the first part of this chapter will deal with the problems of applying traditional corporate strategic planning in the public sector and, additionally, suggest a direction for a planning method that has a better chance of success. Second, the theoretical approach for joint visioning will be explained. This section draws directly on the writing of O’Toole, Hanf and Hupe regarding the conceptualization of implementation networks as being composed of three functional subnetworks. Following this, facilitative techniques for promoting joint visioning will be suggested. Results of this approach in the Travel Shenandoah Case study will then be detailed and, finally, the method will be evaluated against the criteria for a “good method.”

Traditional Strategic Planning Approaches in this Context Fail

There are, of course, numerous definitions of and approaches to strategic planning. Most definitions focus, it seems clear, on aligning the organization with its current and perceived future environment. They are based on ideal constructs that yield planning methods that are primary rational, sequential, and comprehensive. Olsen and Eadie define strategic planning as a disciplined effort to produce fundamental decisions and actions that shape and guide what an organization is, what it does, and why it acts as it does. Such an endeavor usually requires broad-scale information gathering, generation and exploration of alternative courses of action, and an emphasis on the future implications of near-term decisions (Olsen & Eadie, 1982).

A review of the literature reveals that strategic planning generally includes the following:

- setting a vision for the organization;
- scanning the external environment;
- assessing internal capabilities; and,
- establishing goals, performance measures, and implementation plans.

Implementation, the intended result of strategic planning, itself addresses how the organization's financial resources, human resources, information, and reward systems, along with structure and culture, will be changed in the near term to achieve long-term, strategic goals (Bourgeois, 1984; Campbell & Garnett, 1989; Galbraith & Kazanjian, 1986; Hill & Jones, 1995; Roush & Ball, 1980).

The diagram in Figure 19 depicts a strategic planning process developed for public sector organizations by Bryson (1995). This model shows a set of integrated planning activities. These activities are designed to identify and resolve strategic issues facing the organization. The model emphasizes a set of activities, initially aimed at gathering and assessing information, and then aimed at integrating this information in a decision-making process to formulate strategies and actions. Taking one look at this graphic quickly enables us to understand that there is a problem in adapting traditional models of strategic planning to the public sector. That is, in order to incorporate the necessary complexity of public sector life into such a system, the system itself loses its original,

simple, form, and begins to look incredibly complex and non-comprehensible. This situation, of course, calls into question the usefulness of such a graphic, as one of the

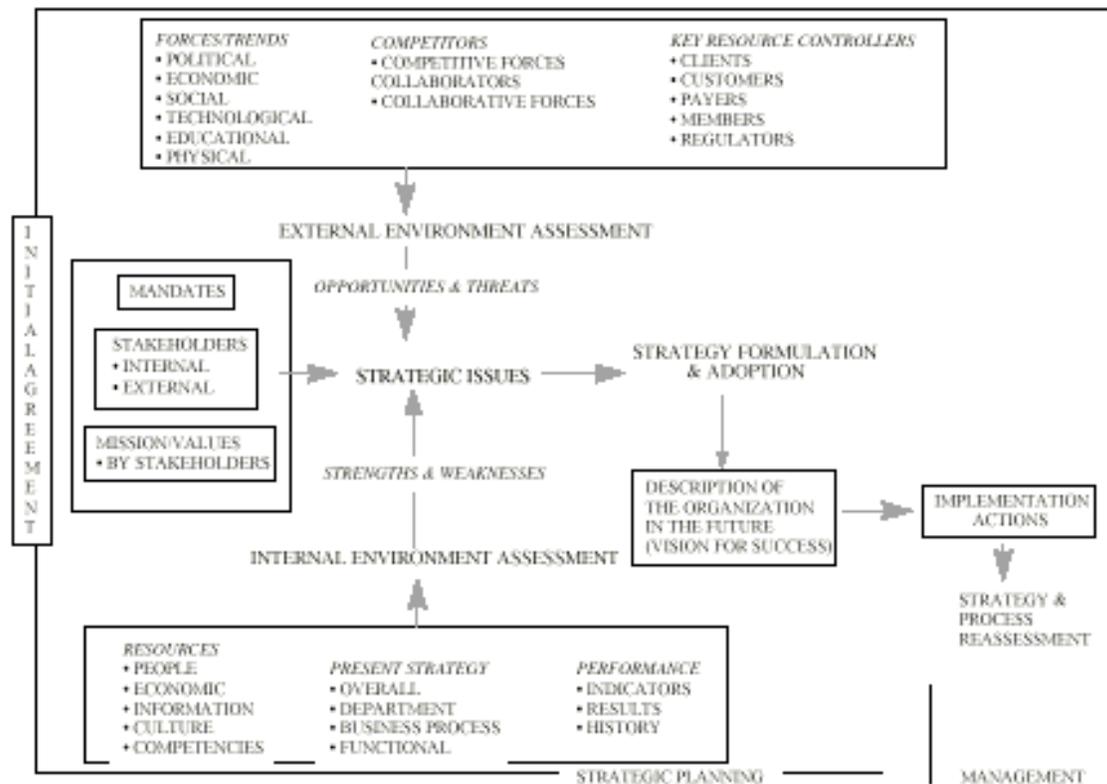


Figure 19 – Prototypical Strategic Planning Process for the Public Sector

primary purposes of graphical representation is the reduction of complexity.

The Difficulty of Strategic Planning in Public Organizations

According to Baile, public organizations began in the 1980s to adopt the ideas of corporate-style strategic planning and apply these to communities and government agencies. “Most approaches were based on previous corporate strategic planning models and include variations that account for unique public sector aspects (Baile, 11). Many writers on this subject hold that to be successful, the planning and implementation process should have specific elements that reflect the unique nature of the organization and its environment (Eadie, 1989; Koteen, 1991). Bryson contends that a strategic planning process can provide qualitative improvements to the design process of a public institution over conventional long-range planning. The reasoning behind this assertion is

that strategic planning is more *issue-oriented* in public organizations and therefore more suitable for politicized circumstances. This *issue* approach to public sector strategic planning is appropriate because political decision-making starts with issues, and strategic planning is useful for forming and addressing these issues (Bryson, 1993). Additionally, as Baile points out, others have also argued that the unique characteristics of public organizations demand an approach to strategic planning that allows for bargaining, opportunism, and response to the dynamic forces in the political environment (Isenberg, 1987; Lindblom, 1965; Miller, 1989; Mintzberg, 1987; Mintzberg, 1994b).

Baile, in summarizing the reasons given for slow adoption of public sector strategic planning efforts (in comparison to the private sector), finds a number of issues that seem to have led to a reluctance to embrace strategic planning, including:

- Planning is driven, usually, by the yearly appropriations cycle.
- There is less control over administrative systems in bureaucracies as compared to businesses.
- A “bottom line” does not exist for most public organizations.
- Measuring progress on many social problems is difficult.
- Laws and policy established by political authority determine what the public organization does (Baile, 12).

A more extensive treatment of the differences in sectors that has led to such a circumstance is provided by William Eldridge. Eldridge argues that cultural distinctions dictate different approaches to strategic planning in business and government and create different expectations for successful implementation of strategic plans. He suggests that these distinctions can be organized in seven main propositions, as follows

- Governments have less competition than business. Governments do compete with each other for resources and, in some cases, with the private sector (such as in privatization studies). However, in many cases, governments have a monopoly over services, and there are not the same powerful incentives to maintain a competitive edge. Therefore, one of the main reasons for strategic planning in business—to be competitive—is not felt as strongly in government organizations.

- Customer influence is likely to be weaker in government. Governments do not depend on customers for resources. Their revenues are derived from appropriations, and they are not directly dependent on how the customer feels about their products or services. Even if there is a customer demand imposed on an agency, governments are reactive, responding to this demand rather than proactively seeking to determine customer needs, as private sector companies do. Strategic planning, in the private sector, is highly dependent on determining future market requirements, and a substantial effort is devoted to scanning the environment for this purpose. It is not impossible for governments to have a customer base, but identifying this base and tapping into it for strategic planning purposes is difficult in government.
- Measuring governmental work performance is more difficult. In a further breakdown of the measurement difficulty category, Eldridge adds that there are greater restraints on rewards and punishment in government systems; a government unit is subject to greater influence from changes in its leadership. Businesses normally use financial measures to measure performance, and the data for these measurements are readily available. Few government agencies are in a similar position. Governments find it difficult to establish yardsticks to measure performance on many programs that provide services, especially in the area of social programs. Measurement is a fundamental part of strategic control. Without measurement, there is no means for feedback and evaluation, and therefore strategies can become stagnant, decoupled from their intended effect.
- The rapid turnover of governmental leaders causes instabilities that inhibit the developing and sustaining of a long-term strategic direction for the organization. For example, politically elected officials and appointees change more frequently compared to leaders in the private sector. The time perspective of political leaders is short; they want to introduce their ideas quickly and see results. This short-term perspective is not particularly suitable for strategic planning.
- Governments have more stakeholders and are subject to greater outside influence than are private companies. There are often political forces imposed on a government organization from constituencies, legislative oversight bodies, and other stakeholders that can overwhelm any attempt to set goals using classical strategic

planning processes. Most often, strategic planning in business is based on a high degree of rationality, and plans are developed using analytical models and techniques. Politics addresses questions of allocation of scarce resources, and decisions are more subjective and based on non-rational logic. Government business is not conducted in the same orderly manner as private business.

- Governments normally have far more purposes than do private companies. Eliminating or reducing the scope of programs in government is a difficult proposition mainly because these programs have societal purposes, such as improving the education system or helping the disenfranchised to obtain meaningful work. Strategic managers in business must adjust the mix of products and services in rapid response to the market, independent of considerations about societal value.
- Government supervisors are more likely to view themselves as specialists rather than managers. Managers are concerned with directing the organizational unit to produce a profit; specialists have allegiance to their occupational discipline. The idea of a specialist is enhanced by the protective nature of civil service rules and procedures that protect government workers from being fired without reduction-in-force due process. All this contributes to a sense of stability and aversion to risk, which are not conducive to the innovative spirit of strategic planning (Eldridge, 1989).

Based on these assertions and others in the literature, Baile, in his dissertation on Strategic Planning in Federal Organizations, constructed an empirical survey/interview methodology that was implemented at 18 federal agencies. Baile was aiming to answer a number of questions, including, what difficulties are commonly run into trying to implement strategic planning in a government setting, and, what techniques are suggested for surmounting those difficulties. His results indicate that the top ranked difficulties for strategic planning in the public sector are:

- Stakeholder Diversity and Dispersion
- Performance Measures Difficult to Specify
- Lack of consistent support from the organization's leader
- Diversity and Autonomy among organizational sub-units makes it difficult to achieve buy-in and produce a coherent plan

- Lack of a Supporting Organizational Culture for Strategic Planning
- Lack of Alignment with Political Authority (Baile, 81)

It would certainly seem that most of these factors would be deterrents to successful planning for implementation purposes in a network setting. In fact, the only item in the list that would not seem to translate directly is “Lack of Supporting Organizational Culture for Strategic Planning.” This is mostly because a network, by definition, is not an organization, and, therefore, does not have an identifiable organizational culture. This is not to say that a network does not constitute a *form* of organization, say, a *virtual organization*. It is to say, though, that at the outset of network formation, an identifiable common culture is not yet evident. It is, in fact, probably the mark of a successful network implementation effort that a culture is successfully created in the process. Generally speaking, however, the other five factors certainly translate to a network setting. In fact, it may be argued that the only difference between the public organizational and network settings, with respect to these difficulties in planning, is that the public official has *less* authority to allocate resources in a network setting until (s)he effectively deals with these difficulties (as opposed to the autonomous public actor who may have authority to continue on for a while without having to deal with them).

Techniques for Overcoming Difficulties Associated With Strategic Planning in Public Organizations

These formidable obstacles notwithstanding, authors have proposed models and techniques to deal with them. Bryson, for example, proposes a model that centers on issue management (Bryson, 1988). Issues are generated from a number of factors, but explicit attention is given the political influences of the agency as a major driver of strategy. The management of strategic issues as a core concern for public and nonprofit organizations is also advocated by Koteen (Koteen, 1991). Nutt and Backoff (1992, 1993) offer a choice of “high action” type strategies for public organizations that are matched to their environment.

The most complete treatment of potential approaches is probably that by Nutt and Backoff (1993). They derive 16 prescriptive steps that can be taken to facilitate strategic

planning in the public sector. They further organized these prescriptions into three categories of application: public environments, transactional factors, and organizational processes. These prescriptions are listed here:

For working with public environments

- Understand beliefs, values, and constraints imposed by political influence and authority networks and customize the strategic planning process to account for them.
- Uncover controversy among stakeholders and frame issues as tensions to deflect powerful influences.
- Buffer outside influence by creating advisory groups, interagency coordinating groups, etc.
- Build negotiating and bargaining opportunities into the process.
- Frequently sample outside events, trends, directions, and issues and adjust implementation plans accordingly.

Transactional factors – for dealing with inter-organizational affairs:

- Use coercive powers in the organization's mandates to fashion an implementable strategy.
- Use the organization's social mission as a force to carry out plans.
- Create a coalition of interests to overcome the inertia in implementation.
- Approach change incrementally and manage tensions inherent in strategic issues.
- Communicate strategic plans to stakeholders.

For working with your own organizational processes:

- Clarify strategic goals
- Maintain stakeholder involvement throughout the process.
- Improve performance measures for the strategic plan.
- Improve accountability for achieving goals and implementing plans.
- Provide better incentives to achieve strategic change within the organization.
- Provide opportunities for participation within the organization to increase "buy-in" to the plan.

Baile, starting with these prescriptive techniques, added some of his own from his own observations and readings, and from his interviews with federal agency personnel, and came up with a final list of implementation techniques that could then be ranked by personnel of the 18 agencies in his study. These are listed in table 15. The top ranked techniques for overcoming the top ranked difficulties discussed above are listed in table 16. What is especially striking about Baile's findings is that they fall very much in line with the new role of the "public facilitator" discussed above. Top down strategic planning adopted from the private sector is difficult to implement in the public sector (and, therefore, by definition, it also is suspect in an implementation network that includes public sector entities). Understanding political and economic constraints in the environment, as well as understanding who the primary stakeholders in a process are (and how they impact on the political and economic factors just mentioned), is of paramount importance in these circumstances. Knowing how to work with these stakeholders, in such a political-economic environment, to successfully plan for the implementation of something, is, therefore, as important.

Table 15 – Techniques to Ensure Successful Implementation of Strategic Planning in the Public Sector

Use organizational mandates and obligations to drive strategies and resolve goal conflicts
Understand the beliefs and demands of key people in positions of influence and authority and customize the planning process to account for them
Collaborate with oversight bodies during the strategy formulation and implementation process
Frequently sample outside events, trends, and issues and adjust implementation accordingly
Clarify strategic goals during the formulation of the plan
Use ideals as a substitute for goals
Provide opportunities for participation within the organization to increase “buy-in” to the plan
Develop performance measures for achieving strategic goals
Assign accountability for achieving goals and implementation plans
Approach change incrementally
Maintain an open strategy formulation and implementation process and build in negotiating and bargaining opportunities
Develop buffering mechanisms to deflect outside influence on the organization
Develop a coalition of interests to help keep the strategic management process on track
Provide incentives for organizational change
Engage the organization's leader to gain internal support for strategic planning
Use the strategic plan to persuade congress that the organization “has its act together”
Closely link strategic planning to the appropriation structure and financial performance systems
Develop crosscutting goals and plans to provide integration across the organization
Develop partnering arrangements with stakeholders to improve plan implementation
Emphasize strategic thinking and management development as a way to build a planning culture

(Baile, 104)

Table 16 - Top Ranked Techniques for Overcoming Difficulties to Public Sector Strategic Planning
Maintain an open strategy formulation and implementation process and build in negotiating and bargaining opportunities
Develop a coalition of interests to help keep the strategic management process on track
Understand the beliefs and demands of key people in positions of influence and authority and customize the planning process to account for them
Engage the organization's leader to gain internal support for strategic planning
Closely link strategic planning to appropriation structure and financial performance systems

(Baile, 107)

Conceptualizing the Implementation Network – creating a new vision and operational structure for a new “virtual organization”

If we look at table 16 above specifying the best techniques for overcoming difficulties in strategic planning, each would seem to serve as a good guide for setting up a planning process in a network setting. The only edict that would seem to need some translation is the 4th that prescribes engaging the organization's leader to gain internal support for strategic planning. In the case of building an implementation network, it would probably be more appropriate to advise that the facilitator engage each stakeholder organization's leader to gain support for a strategic planning process possibly involving the resources of their organization. In many cases, the stakeholder will already be the organizational leader. Other times, however, this will not be the case, yet it will be necessary for that person to be operating as a representative of that organization's resources for good planning to go forward. Otherwise, conclusions may be reached that cannot be followed though on by the obligated organization.

The third choice by managers in Baile's sample, “to understand the beliefs and demands of key people in positions of influence and authority and customize the planning process to account for them,” is a good reason for doing contextual assessment and stakeholder analysis before attempting any planning process for an implementation network. The other four edicts (including the translated one) are what need to be adhered to by any proposed strategic planning method.

Creating Iterative Networks - subnetworks of implementation from O'Toole, Hanf and Hupe

In their 1997 “Managing Implementation Processes in Networks,” O’Toole, Hanf and Hupe suggest that a number of functional subnetworks can be identified within an implementation network. Each of these subnetworks involves different sets of actors drawn from different levels of an organization(s) and is identifiable at different stages of the policy process. While the authors admit that the degree and form of coordination between these subnetworks will vary from one situation to another, they do suggest, for analytical purposes, that they can be conceived of as being formed around the basic management activities of “goal setting, program development, and operational implementation”. This is suggested because “both the analyst and the practitioner of network management need to recognize that implementation comprises managing across and through different functional subnetworks” (140-141).

For the purpose of building a new implementation network, this concept of functional subnetworks is very useful. While we know, from Wamsley and Zald’s theory of Political Economy, that the facilitator needs to help create a functioning socio-technical system (or internal political economy), and, further, we know how to identify an initial set of high-level stakeholders, we do not yet have a method for moving forward to identify the mission, goals, strategy, organizational structure, functional duties, and tasks of the new

virtual organization. O’Toole et. al. give us a method to visualize what it is the facilitator needs to do next.

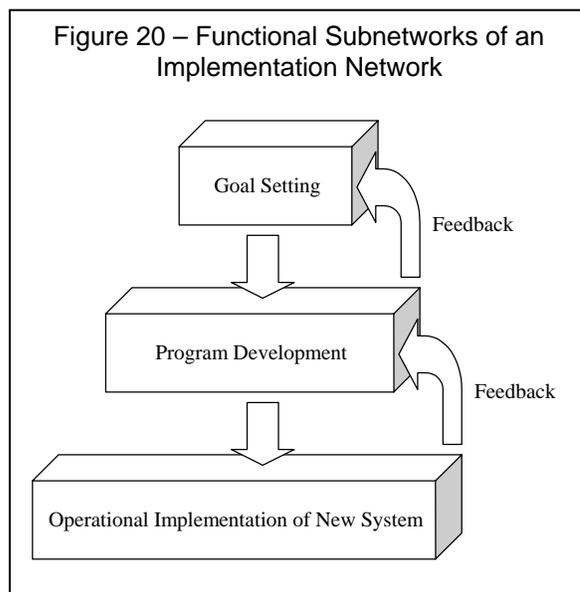


Figure 20 attempts to put in visual terms what the network facilitator can take from O’Toole et. al.. Each functional subnetwork must be created in order: goal to program to operational implementation. In turn, each successive subnetwork must provide feedback back up the ladder so that iterative

development of a new functional implementation network may occur over time.

The three subnetworks are actually summary concepts pulled by the authors from Agranoff's two 1990 articles on intergovernmental analysis and policy networks. It is in these works that Agranoff distinguishes three interdependent management activities and links participation in them to different levels in the organizations involved (Agranoff, 1990a, 1990b). The first management activity identified is the need to develop policies or strategies that will support integration at the service and implementation levels. In order for this management activity to occur, shared problem definitions and agreed-upon courses of action must be developed at the executive decision level (141). For the network facilitator's purposes it is probably enough to say that the objectives of the goal setting subnetwork is to (1) evaluate all of the data collected on the political economic environment of the potential implementation, (2) develop the vision and approach of the implementation, and (3) identify additional stakeholders to add to the goal setting network, as well as populate the program and operational implementation subnetworks. As the purpose of the "stakeholder methodology," described in Chapter 4, is the identification of individuals to participate in the implementation network, that same method can now be used again and again as the goal-setting subnetwork (or, in the case of Travel Shenandoah, the Advisory Board) is expanded by the original set of stakeholders.

As stakeholders are brought together to discuss the possible implementation of a new system, ideas about what this means to each stakeholder begin to coalesce. An Idea about what this new system/organization might look like, and who would be responsible for it begins to form (the internal structure begins to form). This coming together of ideas allows the preliminary commitment of resources to begin (an economy begins to form).

The second step (the program level subnetwork) involves the "creation of operating plans and programs that provide the framework for the case by case service-level integration. These programming decisions are the result of the strategic choices of the executives, as top staff (defined as the managers just below the top: program heads, planning directors, budget deputies and agency program directors) work out key details and agency domain problems relating to how each integrated policy element is to be executed. These managers possess a high degree of program knowledge and sufficient

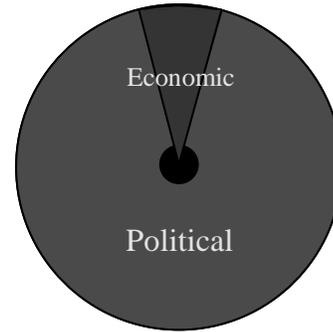
delegated authority from those at the top to enable them to make organizational commitments to the aspects they are responsible for” (142). This is what O’Toole, et. al. refer to as the program level subnetwork. For the network facilitator, the objectives of the program level subnetwork would be: (1) identify opportunities to contribute to the building of the new network, (2) identify possible impediments to implementation (both inside their own organization and between organizations), (3) identify possible remedies to these impediments, and (4) report back to the goal setting network the need for any policy level decision making to facilitate further development of the program level network.

Lastly, at the level of service contact, there is the development of what is referred to as the operational implementation subnetwork. This is the level where the necessary operational linkages for operation are formed. The most common forms of linkage involve information distribution, inter-institutional agreements, access to each others resources, and performance monitoring. The relative success/failure of these linkages is reported to program level subnetwork representatives who, in turn, may report the need for different policy-level decisions by the goal setting subnetwork.

Recall now that the purpose of facilitating “joint visioning” is to begin the development of a functioning political economy – a new “virtual” organization. The reason O’Toole et. al.’s three-level version of an implementation network is so attractive for the purposes of network facilitation is that it enables a clear conceptualization of the development of a functioning political economy. See Figure 21 for a view of the process synthesizing the political economy framework with the outputs of the functional subnetworks.

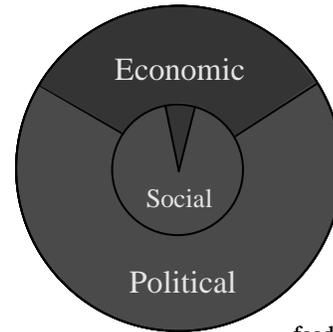
Figure 21 – Subnetworks related to stages of Political Economy Formation

To Start: No "Organization" to speak of.
 Only a loosely configured political environment.
 Many thoughts on what to do, but little,
 if any, mobilization of resources.



Result of Goal Setting

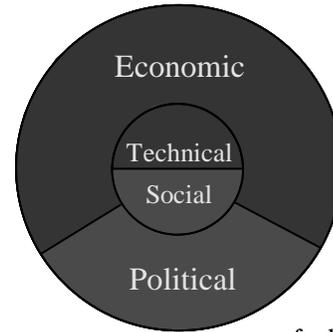
As stakeholders are brought together to discuss the possible implementation of a new system, ideas about what this means to each stakeholder begin to coalesce. An Idea about what this new system/organization might look like, and who would be responsible for it begins to form (the internal structure begins to form). This coming together of ideas allows the preliminary commitment of resources to begin (an economy begins to form).



feedback

Result of Program Development

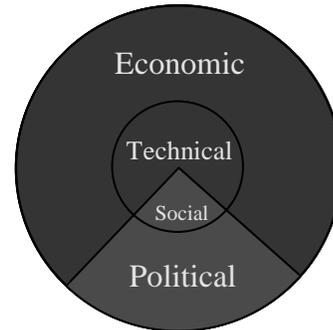
After organizational commitment is secured, departmental responsibilities are assigned. The economic viability of the new organization is more secure, and the technical side of the new organization begins to grow.



feedback

Result of Operational Implementation

The ideal result of the operational implementation stage is a socio-technical system (internal PE) that is functioning as a stable production system in balance with its political economic environment.



Relationship to Action Research

Many times while introducing the concept synthesized in figure 21 the question has arisen as to whether or not this method of network building would qualify as "Action Research"? The simple answer is yes, but a more detailed consideration is required to determine to what "type" of action research network building most closely approximates.

What is action research?

The literature on action research is unclear on the origins. Authors such as Kemmis and McTaggart (1988), Zuber-Skerrit (1992), Holter and Schwartz-Barcott (1993) state that action research originated with Kurt Lewin, an American psychologist. McKernan (1988 as cited in McKernan 1991) states that action research as a method of inquiry has evolved over the last century and careful study of the literature shows "clearly and convincingly that action research is a root derivative of the scientific method' reaching back to the Science in Education movement of the late nineteenth century." (McKernan 1991:8)

McKernan (1991:8) also states that there is evidence of the use of action research by a number of social reformists prior to Lewin, such as Collier in 1945, Lippitt and Radke in 1946 and Corey in 1953. McTaggart (1992:2) cites work by Gstettner and Altricher which has a physician named Moreno using group participation in 1913 in a community development initiative with prostitutes in Vienna. Freideres (1992:3-4) asserts that the concept of participatory research emerged in the 1970s from development work in low income countries and mentions names such as Fals-Borda and Freideres.

Regardless the origins, Kurt Lewin, in the mid 1940s constructed a theory of action research, which described action research as "proceeding in a spiral of steps, each of which is composed of planning, action and the evaluation of the result of action" (Kemmis and McTaggart 1990:8). Lewin argued that in order to "understand and change certain social practices, social scientists have to include practitioners from the real social

world in all phases of inquiry" (McKernan 1991:10). This construction of action research theory by Lewin made action research a method of acceptable inquiry. (McKernan 1991:9)

There are many definitions of action research, as there are for "policy network." Three of the many definitions for action research are: a "systemic inquiry that is collective, collaborative, self-reflective, critical and undertaken by participants in the inquiry" (McCutcheon and Jung 1990:148). "a form of collective self-reflective inquiry undertaken by participants in social situations in order to improve the rationality and justice of their own social or educational practices, as well as their understanding of these practices and the situations in which these practices are carried out" (Kemmis and McTaggart 1990:5). "action research aims to contribute both to the practical concerns of people in an immediate problematic situation and to the goals of social science by joint collaboration within a mutually acceptable ethical framework" (Rapoport 1970:499 as cited in McKernan 1991:4).

From these definitions four basic themes can be derived: empowerment of participants; collaboration through participation; acquisition of knowledge; and social change. A commonly known cycle that the researcher goes through to achieve these themes is that of the influential model of Kemmis and McTaggart (1988) -- plan, act, observe, reflect; then, in the light of this, plan for the next cycle. It is also generally held that action research is participative, though writers differ on how participative it is. The preference for network building is obviously to use participative methods.

Grundy and Kemmis (1981 as cited in Grundy 1988) state that there are three minimal requirements for action research. "These requirements incorporate the goals of improvement and involvement which characterise any action research project. The conditions which are set out there as individually necessary and jointly sufficient for action research to exist are:

- 1.the project takes as its subject-matter a social practice, regarding it as a strategic action susceptible to improvement;

2.the project proceeds through a spiral of cycles of planning, acting, observing and reflecting, with each of these activities being systematically and self-critically implemented and interrelated; and

3.the project involves those responsible for the practice in each of the moments of the activity, widening participation in the project gradually to include others affected by the practice and maintaining collaborative control of the process (Grundy and Kemmis 1981 as cited in Grundy 1988:353).

What are the types of Action Research?

Grundy (1988:353) discusses three modes of action research: technical, practical, and emancipatory. Holter and Schwartz-Barcott (1993:301) also discuss three types of action research, that of a technical collaborative approach, a mutual collaborative approach and an enhancement approach. McKernan (1991:16 -27) also list three types of action research: Type 1: the scientific-technical view of problem solving; Type 2: practical-deliberative action research; and Type 3: critical emancipatory action research. McCutcheon and Jurg (1990:145-147) discuss instead three ‘perspectives’ of action research: a positivist perspective, an interpretivist perspective and a critical science perspective. Regardless, all the definitions seem to always get down to three distinct approaches to action research. These approaches are fairly well summarized by Grundy in Table 17.

Table 17 – Summary of the Three General Approaches to Action Research			
	Technical Action Research	Mutual-Collaboration Action Research	Participatory Action Research
Philosophical Base	Natural Sciences	Historical hermeneutic	Critical Sciences
The nature of reality	Single, measurable, fragmentable	Multiple, constructed, holistic	Social, economic. Exists with problems of equity and hegemony
Problem	Defined in advance	Defined in situation	Defined in the

			situation based on values clarification
Relationship between the Knower and Known	Separate	Interrelated, dialogic	Interrelated, embedded in society
Focus of collaboration theory	Technical validation, refinement, deduction	Mutual understanding, new theory, inductive	Mutual emancipation, validation, refinement, new theory, inductive, deductive
Type of knowledge produced	Predictive	Descriptive	Predictive, descriptive
Change duration	Short lived	Longer lasting, dependent on individuals	Social change, emancipation
The nature of understanding	Events explained in terms of real causes and simultaneous effects	Events are understood through active mental work, interactions with external context, transactions between one's mental work and external context	Events are understood in terms of social and economic hindrances to true equity
The role of value in research	Value free	Value bounded	Related to values of equity
Purpose of research	Discovery of laws underlying reality	Understand what occurs and the meaning people make of phenomena	free oneself of false consciousness and change practice toward more equity

It is not in the methodologies that the three modes of action research differ, but rather in the underlying assumptions and world views of the participants that cause the variations in the application of the methodology (Grundy 1982:363).

Which Action Research is most suited for Network Building?

Given the discussion in Chapter 1 of the appropriate paradigmatic locus of network building being the interpretivist paradigm, and, additionally, given that the purpose of the methodological system is to create a new, common understanding, of what “could be” and how to go about it, it would seem safe to conclude that network building most accurately approximates the mutual-collaboration form of action research.

Additionally, this method of action research certainly equates to the proposed method of Joint Visioning. Each subnetwork is instructed generally to 1) figure out what it is that needs to be done at that level (plan), 2) instruct others to carry out, or carry out themselves the actions decided upon (act), 3) receive input back from those that have been instructed to do something or the client receiving the service (observe), 4) figure out what additional action must be taken given the feedback (reflect).

Suggested Facilitative Techniques for Joint Visioning

Recalling that the purpose of joint-visioning is to create among a number of stakeholders a common vision of what an implementation network will be charged with doing as well as how that implementation network will function, it becomes clear that what is needed are some techniques bringing together multiple viewpoints into a single viewpoint. There are, of course, many techniques already used in many fields for bringing such agreement into being. The techniques/tools suggested here for joint visioning are pulled directly from the field of professional group facilitation, a popular and quickly growing field of application derived from the disciplines of group process psychology, sociology, and organizational science (to name just a few of the major influences). As indicated in the introduction to this volume, the tools suggested here are probably the least “original” of the volume in that they seem to serve the purpose well without need for modification and/or combination with other tools (unlike the other methods suggested). That which is original is the frameworks within which these tools are being used – that is, within the interlinked functional goal, program and operational implementation sub-networks

discussed above; and, a revised problem-solving flow process (discussed below). The point to be remembered is that, regardless of the techniques used, each sub-network needs to go through a process of defining the new vision for themselves. That is, what a new vision means to a CEO is NOT what it will mean to a middle-manager being tasked with implementing the vision.

This being said, the process that experience has taught is the most beneficial in establishing an implementation network are well summarized by Moore and Feldt's Group Problem-Solving Process Flow (1993, 76). That is, once the general reason for meeting has been defined and the major stakeholders that need to meet have been identified, it is then useful to consider the meeting of the Goal Setting sub-network as a "problem-solving session." However, because we are in fact meeting to conceptualize a new approach to a new system (not to solve the problems of an existing system), it would seem more descriptive to refer to the process more positively as a "group-visioning session" as opposed to a "problem-solving session." The vision to be achieved: What do we want to do and how are we going to do it?

According to Moore and Feldt, the success of any group problem solving effort is predicated on how well the group attends to the stages or steps in a process. "Specific skills and experience are needed in defining the problem, thinking up, and developing ideas for possible solutions, evaluating solutions, and designing plans of action" (75). Their suggestion is the group problem-solving process flow (see Table 18). This process seems well adaptable to vision creation. A re-defined process flow for "vision creation" follows in table 19.

Action	Group Task	Barriers	Processes
Define the problem(s)	Problem Clarification	Jump to solutions Don't understand problem	<ul style="list-style-type: none"> ▪ Two words for problem ▪ problem picture (visual) ▪ needs analysis
Discuss/verify problem	Discussion	Critique to soon Introduce Solutions	<ul style="list-style-type: none"> ▪ Nominal Group Technique/Words to describe

			problem(s)
Critique/Analyze problem(s)	Build Criteria	Don't apply same criteria to all problems	<ul style="list-style-type: none"> ▪ Nominal Group Technique ▪ Strength/Weakness analysis ▪ Sticking dots to select problems
Solution(s) for Problem(s)	Opinions about what will solve problem	Automatic assignment of solution to problem	<ul style="list-style-type: none"> ▪ Brainstorming ▪ Brainwriting and post on walls
Discuss possible solutions	Potentials and Liabilities of Solutions	"Nay sayers" not willing to dream	<ul style="list-style-type: none"> ▪ Draw/illustrate new designs
Select "best" solution or option	Achieve consensus on decision	Not willing to collaborate or work toward consensus	<ul style="list-style-type: none"> ▪ Sticking dots ▪ Lobby and select
Put option into action	Design Action Plan	No commitment to action	<ul style="list-style-type: none"> ▪ Action Plans ▪ Selecting what you can/want to do
Response to Action	Evaluation Assessment	Bias toward success/failure	<ul style="list-style-type: none"> ▪ Application of criteria to results

Table 19 – Group Visioning Process Flow (Problem-solving re-envisioned)			
Action	Group Task	Barriers	Processes
Define Individual Visions	Vision Clarification	Jump to total solution Don't understand realm of application	<ul style="list-style-type: none"> ▪ Vision draw (visual) ▪ Five W's
Discuss/share visions	Discussion	Critique to soon Introduce final visions	<ul style="list-style-type: none"> ▪ Nominal Group Technique ▪ Brainstorming
Explore, combine and prioritize vision	Build group vision	To much ownership of individual visions	<ul style="list-style-type: none"> ▪ Nominal Group Technique ▪ Sticking dots to select problems

Solution(s) for Vision(s)	Opinions about what will make the vision possible	Automatic assignment of solutions	<ul style="list-style-type: none"> ▪ Vision draw new designs ▪ Brainwriting and post on walls ▪ Five W's
Select "best" vision	Achieve consensus on decision	Not willing to collaborate or work toward consensus	<ul style="list-style-type: none"> ▪ Sticking dots ▪ Lobby and select
Critique/Analyze Vision(s)	Build Criteria of Evaluation	Don't apply criteria consistently	<ul style="list-style-type: none"> ▪ Nominal Group Technique ▪ Sticking dots to select problems
Put vision into action	Design Action Plan	No commitment to action	<ul style="list-style-type: none"> ▪ Five W's ▪ Selecting what you can/want to do
Response to Action	Evaluation Assessment	Bias toward success/failure	<ul style="list-style-type: none"> ▪ Application of criteria to results

The group visioning process flow in table 19 was applied with good results in the Travel Shenandoah case (the results are elaborated below). As can be seen in table 19, the tools/methods most often employed within this process are: Nominal Group Technique, Five W's, Brainstorming, Sticking Dots, and Vision Drawing. For the use of the budding network facilitator, it would seem a good idea to define these terms here.

Nominal Group Technique

[as defined by A.L. Delbecq and A.H. VandeVen, 1971]

Objective: To obtain multiple inputs from several persons on a problem/issue in a structured format.

Procedure: This technique is a structural variation of small-group discussion methods. The process prevents the domination of discussion by a single person, encourages the more passive persons to participate, and results in a set of prioritized solutions or recommendations.

1. Divide the persons present into small groups of five-six members, preferably seated around a table.

2. State an open-ended task (e.g. “what are some ways that we could encourage employees to ???”)
3. Have each person spend several minutes in silence individually brainstorming all the possible ideas they can generate, and jot these ideas down.
4. Have the groups collect ideas by having the ideas shared in round-robin fashion (one response per person each time), while all are recorded in key terms on a flipchart. No criticism is allowed, but clarification in response to questions is encouraged.
5. Then have each person evaluate the ideas and individually vote for the best ones (e.g. the best idea gets five points, the next best four, etc.).
6. Votes are shared within the group and tabulated. A group report is prepared, showing the ideas receiving the most points.
7. Allow time for brief group presentations on their conclusions.

Five W's

[as defined by A.B. VanGundy, 1984]

In addition to being useful for redefining problems, the five W's technique can be very useful for implementing ideas (hence its use at both the beginning and end of the visioning process). For relatively simple implementation tasks, this method provides an efficient and orderly means for seeing that an idea is applied to a problem. It can also be used quite easily in conjunction with other methods. The major steps are:

1. Ask who, what, where, and when in regard to implementation tasks. For example, you might ask: Who will implement the idea? What will they do? Where will they implement the idea? And, when will they implement the idea? Then answer each of these questions, being as specific as possible.
2. Ask why for each of the preceding questions and answer each question. For example: Why should these people implement the idea? Why should they do what they are going to do? And so forth. (By asking why, you provide a rationale for each implementation action and ensure that no major activities are overlooked.)
3. If asking why reveals any overlooked implementation activities, revise the implementation strategy.
4. Implement the idea.

Brainstorming

[as defined by Moore and Feldt, 1993]

Objective: To give participants an opportunity to engage in a creative problem-solving exercise.

Procedure: Research indicates that creativity can be cultivated by the use of a simple and practical exercise. All too often, however, the spark of innovative thinking is dampened by killer phrases like “We tried it last year,” “We’ve always done it that way,” and a host of similar comments.

To evoke creativity, a sample brainstorm session can be used. The basic ground rules of brainstorming are:

1. No critical judgement is permitted;
2. Free-wheeling is welcomed (i.e., the wilder the idea, the better);
3. Quantity, not quality, is desired;
4. Combination and improvement of ideas are sought.

With these four basic rules in mind, divide the participants into groups of four-six people. For example, their task for 60 seconds will be to suggest all the ways they can think of for using a paper clip. Have someone in the group merely tally the number of ideas, not necessarily the ideas themselves. At the end of the minute, ask the groups to report first the number of ideas they generated, and then get a sampling of some of the seemingly “crazy” or “far out” ideas. Suggest that sometimes these “silly” ideas may well turn out to be very workable.

Sticking Dots

[as defined by VanGundy, 1984]

This technique is one of the simplest and most time-efficient voting methods available. Members each receive a fixed number of self-sticking paper dots with which they can indicate their idea preferences with minimal time and effort. The steps involved are:

1. Display a previously generated list of ideas on a flip chart or on cards attached to a bulletin board.

2. Give each group member a sheet of self-sticking colored dots. Each member should receive a different color, and the number of dots should equal about 10 percent of the ideas evaluated.
3. Ask the group members to vote for ideas by placing dots next to the ideas they prefer. They may allocate their dots in any way they wish. Thus all of one member's dots may be placed next to one idea, one dot may be placed next to one idea, half the dots may be placed on one idea and the other half on another idea, and so forth.
4. Count the votes received by each idea, and select the idea with the most votes.

In addition to the relatively small amount of time required to use this method is the advantage of the sense of equal participation that it affords to group members. Placing dots next to ideas is an activity in which all members have an opportunity to participate on an equal basis. Furthermore, should questions arise about the voting distribution, the color coding of the dots makes it relatively easy to ask people why they voted the way they did.

Vision Drawing

Vision drawing is not, as far as we know, a documented technique, but has proved an invaluable method for helping a group envision a new system/organization. Simply based on the notion that many people think and express themselves better using a vision, rather than verbal, medium, this technique simply asks that each participant take a minute and "draw" what they are thinking of as a solution to a problem or as a vision of what could be possible. While all of the techniques mentioned here were very useful to facilitating the creation of the Travel Shenandoah implementation network, arguably, the most useful thing we had the group do was draw their ideas and then share their drawings.

Setting the Rules of the Game

One last method that Moore and Feldt suggest, and that we have found invaluable, is to establish "rules of the game" before a facilitation session is begun. Moore and Feldt "believe that setting and using ground rules is the single most important way that facilitators can be proactive and even be preemptive in working with the group to establish acceptable behavior patterns in the facilitated session. Without a set of agreed-

upon ground rules, the facilitator will be having to react to inappropriate behaviors and play a constant catch-up game” (65). Moore and Feldt suggest asking for affirmation and refined of a set of rules that have been previously generated by the facilitator. Table 20 provides a sample set of rules.

Table 20 – Rules of the Game
1. Actively listen to each other.
2. Respect what others say and their points of view – recognize that no one has a monopoly on the truth.
3. Personal attacks of any kind are not allowed.
4. Actively participate.
5. Focus on the doable.
6. Be specific and ensure meaningfulness.
7. Look for common ground.
8. Focus on what can be done to remedy things – after the problem definition step, stop the complaining and blaming and get to what you can do.
9. No side conversations – share your thoughts.
10. Maintain an outcome orientation.
11. Stay resourceful – think creatively.
12. If you get stuck, move on – don’t allow yourselves to get bogged down.
13. Accept that this meeting is just a start.
14. Enforcing rules is everyone’s responsibility.
15. No booze until the work is done (no two-martini lunches).

Case Study: Conceptualizing the Travel Shenandoah Implementation Network

Following is a description of the facilitation process used in developing the vision and initial planning for Travel Shenandoah by the primary stakeholders identified with the other methods discussed in this volume. It is important to understand, however, that even though the final product has been implemented, as a functioning, living network organization, the process of network facilitation is still ongoing and ever changing as the stakeholders necessary for its survival and continual renewal are drawn into the fold.

The two-day Goal-Setting Subnetwork Facilitated Session

Following approximately 6 months of analysis using the tools described above (Contextual Analysis to figure out what we were getting ourselves into; and, Stakeholder Analysis to figure out who was going to help us make this thing a reality), the official 'project' was kicked off by a two-day facilitated 'visioning-session' session at the Virginia Tech Transportation Institute in Blacksburg, VA. Before the stakeholders came to Blacksburg they were each interviewed. The interview was designed to find out if any of the stakeholders had issues that might disrupt the meeting and to inform them about the process thus far and about ATIS in general so that when they came to Blacksburg they were prepared to begin working.

One of the more interesting aspects of attempting to get the initial Goal-Setting Subnetwork together is actually 'getting the people there.' This was such an endeavor in this case that it requires now a little reflection. In retrospect, it seems clear that any new endeavor, no matter how good an idea one may believe it to be, is nonetheless a new effort that must be undergone. This being the case, actually surrendering the time for a two-day meeting from an already busy schedule becomes difficult (if not just a bother). This was the attitude we ran into when scheduling the two-day session. The two most often asked questions were: can't we just have the meeting here (at my place of business)?; and, can't I send one of my assistants in my place? While the answers to us were obvious, they were obviously not to the potential participants. The answer to the first is that a neutral territory must always be used when attempting to forge partnerships between equally powerful entities (especially when there are more than two). A citation is not handy to justify this assertion, but suffice it to say that a cease-fire is rarely signed on the territory of either party. The answer to second question is, of course, a political economic question. The goal-setting subnetwork must be comprised of individuals with the authority to commit both political and/or financial backing to the endeavor. Second lieutenants without such authority can contribute little to the overall vision of the endeavor as they will need to check back with appropriate authorities before their opinion can be offered (or at least before an opinion backed by political and economic weight can be offered). The approach we used to secure participation was probably not scientific in nature, but was instructive none-the-less. One participant was reminded that it was a home football-game weekend and that there were tickets remaining; another

was promised a pre-session golf outing; a third was simply promised jelly-donuts. The point here is only that one should expect such resistance to participating in the joint-visioning session and should, therefore, be prepared with the necessary inducements to secure participation.

Day 1: Creating the Vision

Define Individual Visions –

The first exercise that the participants in the joint-visioning activity were asked to perform was to take 5 minutes and draw and/or write what their individual visions of the ATIS was to this point. That is, given the past interviews and discussions that had taken place, where did they each, individually, think the project stood that day?

Following this exercise, each participant was asked to consider the 5 W's for their vision. Who will implement what aspect of your vision? What will they do? Where will they implement this aspect? And, when will they implement this aspect? Following this, go back and ask why for each of the preceding questions. For example: Why should these people implement the idea? Why should they do what they are going to do? And so forth. By asking why, a rationale is provided for each implementation action and ensures that no major activities are overlooked. A half-hour was given for this second activity.

Probably the most interesting aspect of this step was how well asking the participants to 'draw' their visions worked. Paper after paper was scribbled on and thrown away until each participant had something they could rationally justify in their own mind. It made it clear to us that while an individual may think (s)he has a complete idea about a topic, once (s)he is asked to draw it, it quickly becomes clear that not all of the logical connections between different facets of his/her vision have been envisioned.

Share/Discuss Visions –

Next, each participant was asked to take 10 minutes and describe to the other participants his/her vision and the 5W's associated with the different aspects of the vision. No criticisms were allowed at this point (and this was strictly enforced). Questions of clarification, however, were welcome.

Following the presentations, a nominal group technique was used. Each participant was given multiple sheets of paper. On each sheet, each participant was asked to write one item in response to two questions: what companies/agencies must be involved in this projects for it to become a success; and, what functions must this new system perform for it to be a success? They could write on as many sheets of paper as they needed – one item per sheet.

Then, in round-robin fashion, each participant was asked for one sheet of paper. Each piece of paper was placed on the wall with sticky-tape so that all participants could see it. The point of putting the pieces of paper on the wall was so that preliminary combinations of items could begin to occur. That is, all the participants were asked where each piece of paper should be put on the wall in relation the pieces placed on the wall previously. What we ended up with was some obvious clusters of functions and suggested companies/agencies, as well as some outliers.

After this preliminary categorization had taken place, the participants were asked to justify, if they wished, the inclusion of any outlier that they had offered. No papers were moved at this point, but a chance was simply given for the individual author of that item to explain their thoughts.

Explore, combine and prioritize vision -

Next, the participants were asked to explore, combine, and prioritize their visions. Because difficulty in combining ideas is probably directly related to the size of the group attempting the combination, the larger group was broken into two groups of three and one group of four. Each group, in separate rooms, was asked to generate from the categories of items previously generated a common vision including the participating entities, the functions of the system, and, additionally, the logical of how the system of entities and functions will operate as a system (the 5 W's again). The groups were given an hour to perform this task.

Following this, each of the three groups was asked to present their unified vision to the other two groups. At this point, a certain amount of overlap began to occur. This was to be expected given that they were all starting with same raw materials in building their visions.

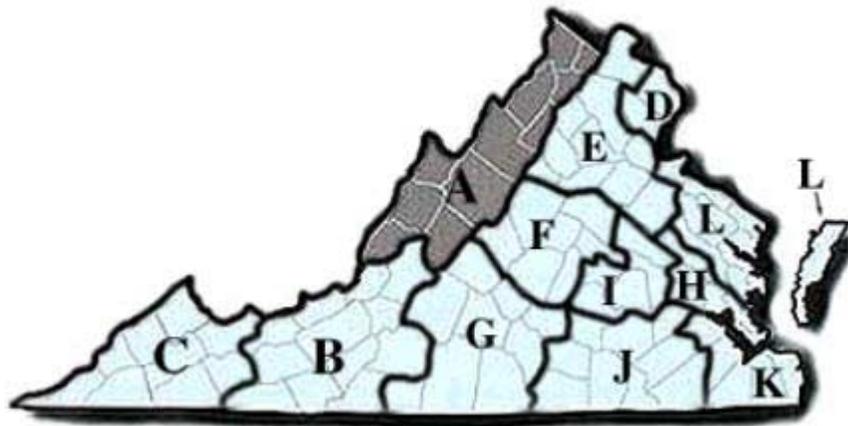
Next, all the potential system functions were transferred to single large pieces of paper and posted on the wall. Underneath each were written the 5 W's. A round-robin process was again begun to fill in the holes. Once all of the holes were filled, the participants were asked to individually rank both the most important functions and the best ideas for who should be doing what, when, where, etc... The result was a hierarchy of functions and a hierarchy of processes that would need to be followed to achieve those functions. What was not yet completely clear, was the actual vision that had been arrived at jointly.

Solution(s) for Vision(s) and Creation of "best" vision –

To create the top-level joint-vision that was now needed to proceed, the facilitator stood at the front of the room and began to draw on a flip-chart the basic components of an operating ATIS. These components were drawn from the previous visioning tasks and rankings. At this point, everybody was invited to participate by offering opinions, shouting, arguing, getting up and drawing themselves, etc.. Given all of the forced "facilitation" steps taken previously, this seemed a welcome activity to most in the room. Within very little time, there were four people at the head of the room, each with a marker in hand, scribbling down what needed to be done. In the background, all others were offering their opinions on everything they heard. Two basic products came from this first day:

1. As seen in figure 22, a concept of a "statewide," as opposed to just

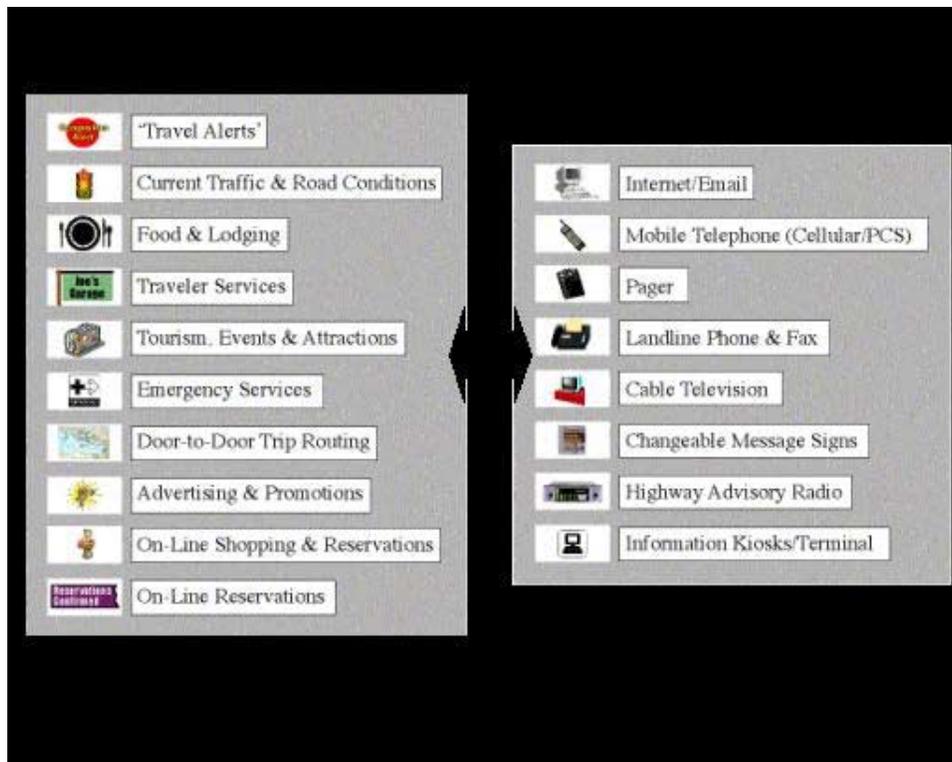
Figure 22 – The Joint-Vision concept of a Statewide System of Traveler Information Franchises – shaded is Travel Shenandoah



Shenandoah Valley, Advanced Traveler Information System that was supported by the private sector. While information could be gleaned from many different public sources (e.g. State Police, Dept. of Transportation), local telecommunications providers could provide the final link to the customer in their

- area. In figure 22, Area A represents the telecommunications territory of the private partner, SHENTEL. Travel Shenandoah would be delivered by SHENTEL in its area and they would act as an “information franchisee.”
2. As seen in figure 23, the types of services that would be delivered by each franchisee was also agreed upon (the left side of the figure). Additionally, the modes of transmitting this information was agreed upon (the right side of the figure).

Figure 23 – The services and delivery modes agreed upon in the joint-visioning process



Day 2: Refining the Vision

Critique/Analyze Vision(s) –

Before leaving on the first day of the facilitated session, all participants were asked to think about what had been generated the first day and to bring critiques the second. Interestingly, everybody stated on the morning of the second day that they were very happy with what they had come up with in such a short period of time. Of course, from our perspective, it had taken 6 months to get to this point, but the point was taken. In our

minds, they were either really happy with their accomplishments, or they didn't want to be "facilitated" any longer (or both).

Put vision into action –

The final task the participants were asked to perform, and the most difficult and time-consuming, was to again revisit all of their answers to the 5 W's and now start to detail exactly who they were going to individually deem responsible for what aspect of the project and what they were going to have them do by when. To help the team focus, we asked that they consider this a proposal writing session where they were preparing a complete multi-year project proposal for consideration by one or more funding agencies. In this way, they were being asked to provide a complete textual and graphical account of what was going to be done, and by whom, when, and for how much. It also quickly got each participant into thinking about what they brought to the table and how they could contribute.

This task took about 5-6 hours with breaks and produced a tremendous amount of material that our project team was then asked to synthesize into a complete project proposal. Appendix B of this volume presents the complete finished project proposal that dictated the direction of the project for the next two years.

Assessing Joint Visioning

Given the requirements of a good methodological system stated in chapter 1, which of the requirements are satisfied by this third method, joint visioning? Like the stakeholder analysis methodology, joint visioning does not allow for a general analysis of the environment (like the political economic instrument) because it purposefully focuses on working directly with a select few culled from that environment (by stakeholder analysis).

The second requirement was that the method help the builder understand and work with individuals from the environment. While it was earlier stated that the stakeholder analysis method leads to a much better understanding of who should be involved, it is the joint visioning method that takes care of defining "how" to start working with these stakeholders.

The third requirement, to enable the network builder to plan for resource usage across boundaries is probably the requirement most specifically addressed by joint visioning. As discussed above, joint visioning is really a method to start strategically planning across organizational boundaries for a new system, including the resources (people, funding, equipment, etc.) that are needed.

The fourth requirement to be iterative in the approach is certainly satisfied by this method. In fact, without being iterative, this method would surely fail. Planning for resource usage within a single organization is difficult enough. When working across multiple organizations, coordination of vision at the top levels of the participating organizations is absolutely necessary. Following this, understanding by mid-level managers of the vision and their expected contributions is necessary. If the vision is not clear or practical changes to the vision are required, feedback must occur. Following this, understanding by the individuals who will have direct implementation responsibility is necessary. If implementation is not possible or being hampered in some way, feedback must occur. At all levels, evaluative feedback must also occur. That is, iteration is integral to successful network formation and, more specifically, is at the heart and soul of joint visioning across the goal-setting, program-level, and operational implementation subnetworks.

The joint visioning method does not satisfy the fifth requirement, to use purposive sampling. Nor is it supposed to, as it is designed to take a pre-determined set of stakeholders and work with them to build an implementation network.

The sixth requirement for the method to require inductive reasoning is satisfied by joint visioning. While to this point any induction that has occurred has occurred at the hands of the network facilitator, when it come to joint visioning, this duty is handed over, initially, to the goal setting subnetwork. The job of the network facilitator at this point is to deliver to the subnetwork the knowledge of the political economic environment that has been gained to date. It is then up to the subnetwork to begin to induce from that environment hypotheses about what is and what is not possible in that environment. It is this stage of induction that supports the grounded theories that will be necessary to proceed. For example, while the political economic interviews revealed that a telecommunications industry partner should probably be involved and that there was

budding interest, and during stakeholder analysis we considered the latent ability to enable the ATIS (power) and willingness to cooperate of a specific company, SHENTEL Corp., it wasn't until all current findings were given to SHENTEL in the goal-setting meeting, that they were able to induce the possibilities of using an expanded network of multiple technologies by leveraging their existing relationships with other telcos and cable systems.

The seventh requirement is that the method require the development of grounded theories. In our case, that would seem to mean the establishment, from our inductive reasoning, of theories of operation for the implementation network (if X does Y, the Y will be able to satisfy Z). These conclusions are exactly what the method is trying to get to. That is, what will result if we try to do action X? For example, the grounded theory was posited that more revenue can be raised in a rural environment if a 'total traveler solution' is built that features service, tourism, and emergency information, in addition to traffic data.

Like the seventh requirement, the eighth, to enable a reasoned assessment of next steps to be taken, is satisfied in that a direct output of each subnetwork (goal-setting, program-level, and operation implementation) is a description of what will be done, who will do it, where will it be done, when will it be done, and why is it being done (the 5 W's). These are the tasks that are handed down successive subnetworks, are reacted to, and generate feedback. Table 21 summarizes which of the requirements are satisfied by the third method, joint-visioning.

Table 21 – Satisfaction of Good Method Requirements			
	Contextual Assessment	Stakeholder Analysis & Mgt.	Joint-Visioning
Environmental Assessment	√	-	■
Understand/Work with Stakeholders	√	√	√
Plan for Resource Usage	-	√	√
Iterative Approach	-	-	√

Purposive Sampling	√	-	-
Inductive Reasoning	√	√	-
Require Grounded Theories	-	-	√
Indicate Next Steps	-	√	√

CONCLUSION

The purpose of this dissertation has been the delineation a new approach, or, more precisely, a “methodological system,” for building and maintaining a multi-organizational, multi-sector structure for the purpose of policy implementation. That is, this dissertation lays out an approach for building a “policy implementation network.”

The need for such a methodological system is evident when we consider the state of “network” theory. Network theory today is at the stage of conceptual argument. Discussions in the literature are primarily concerned with the conceptualization of structures that we can use to “think” about “networks” of different policy relevant entities. The next step, deriving the approaches and tools necessary to prove the utility of these concepts, has not yet occurred. That is, “network thinking” is currently “idea” without the “skills” necessary to implement, and, therefore, evaluate the utility of the idea. Validation of what seems to be a very promising theoretical approach cannot yet take place.

Ideas without the requisite skills to link to them to action are, of course, nothing new in academia, and certainly not new in the related fields of public administration, political science, and policy analysis. Network concepts of the policy formulation and implementation processes, however, would seem to hold a special status in that they are beginning to gain in popularity in all three fields/disciplines at the same time. One may refer to such an occurrence as a shift in the “Zeitgeist” of academics dealing with governmental matters. With such a convergence “conceptually” in the works, it would seem a great loss for all fields/disciplines involved if the process were to stop, as it often does, at the conceptual level.

Just like other policy networks, a ‘policy implementation network,’ or more simply an ‘implementation network’ is a socially constructed vehicle for purposive action. As O’Toole puts it, “[t]he image of the ‘policy implementation network’ can be used to convey the idea of a highly differentiated and complex array of public and private organizations that are involved in the translation of the policy intentions ... into appropriate measures or actions for the realization of these objectives at the ‘level of the consumer’ (139).” Implementation networks get things done at ground level, where the effect is direct.

The “methodological system” proposed here for building “implementation networks” is comprised of the three separate methodologies (themselves comprising several methods), “Contextual Assessment,” “Stakeholder Analysis,” and “Joint-Visioning.”

In Chapter 3, “Contextual Assessment - Understanding the Context, Identifying the Stakeholders,” the reader was introduced to a method that uses the political economy framework of Wamsley and Zald to derive an interview instrument for use by a recently appointed network facilitator. Combining this instrument with the other methods of snowballing and quota sampling, one should be able to assess the existing political and economic environment surrounding a potential implementation network and, further, begin to select from that environment a first set of stakeholders to help build it.

In Chapter 4, “Stakeholder Analysis - Categorizing, Typing, & Selecting Network Participants,” the reader was introduced to two methods, that when used together, allow for the analysis, categorization, and selection of network stakeholders. Taken together, these methods can be referred to as “stakeholder analysis.” It is the successful selection and facilitation of these stakeholders that results in the formation of a young implementation network.

In Chapter 5, “Joint Visioning - Strategic Planning with the Advisory Board (the Goal Setting Network),” the reader was introduced to a method of “joint visioning.” Borrowing from the theoretical approaches of community facilitation training, action research, and policy networks (specifically implementation networks), this chapter, which represents the final step in the methodological system proposed here, lays out the process by which multiple stakeholders in a given network of political and economic influences can be facilitated in a way that permits the establishment of goals, the attainment of programmatic-level “by-in,” and the specification of “next-steps” or tasks to be accomplished.

What the method of joint-visioning calls for specifically is a shared understanding of how the network can be developed over time and a set of activities that, when combined together, will lead stakeholders through what could be loosely referred to as a “strategic planning process.” The term “strategic planning” is used loosely here (a discussion about

the problems of adopting corporate strategic planning in the public sector begins this chapter), although the end product of the process is admittedly the same as a strategic planning process - that is, the enumeration of mission, goals, responsibilities and tasks in response to environmental conditions – the way we get there must be specifically formulated for application in the loosely structured environment that falls between the public, private and non-profit sectors or, in this case, the implementation network. This concept draws directly on the writing of O'Toole, Hanf and Hupe regarding the conceptualization of implementation networks as being composed of three functional subnetworks (goal, program, and implementation). Following this, facilitative techniques for promoting joint visioning were suggested.

In recognition that working in a “networked” context would require more than just new methods to do so, but also a change in the role of the public administrator, Chapter 2, “A New Role – The Network Facilitator,” was included. In this chapter, the role of public administrator, a person responsible for coordination and centralization in the name of attaining implementation of ex ante formulated policy, is shifted to that of a “network facilitator.” The role of the network facilitator is focused on improving the conditions under which actors interact so that collective thought and action may be realized.

As this methodological system has been developed as much from experience as from scholarly analysis, a case study, “Travel Shenandoah,” was used to parallel the discussion of each methodology. Benefits, thoughts, and any failings of the proposed methods as applied in this real-world setting were discussed.

Finally, because a “networked” view of the work world calls for, almost by definition, a consideration of multiple interpretations of a situation, philosophically speaking, what is called for is a consideration of multiple “realities.” And, as soon as we begin to speak of multiple versions of reality, we are no longer operating within the paradigm of “positivistic science.” The network facilitator, in order to discover multiple realities, it would seem, would need to use tools that require conversing with people interactively and over time to gather deep context-specific knowledge. Such a necessity goes beyond what can be supplied by an approach that elicits generalizable information (data) from a preset scheme (e.g. survey or demographic analysis). This being the case then, it would be irresponsible to not take into consideration the methodological requirements put upon

any methodology by its realm of application or “paradigm.” Accordingly, a set of “requirements” for a good qualitative method are discussed and then used to evaluate the relative attributes of each methodology proposed.

Next Steps

As stated at the outset, this dissertation set out to delineate a new methodological system for building implementation networks. Proof of the concepts here has not been achieved through discussion of one case study, although significant effort was taken to establish the validity of the proposed methodological system as a ‘good’ qualitative method. Any proof of a method, of course, can only come through repeated successful replication. Accordingly, the first two methods proposed here – Contextual Analysis and Stakeholder Analysis & Management – need to be applied in more cases. These first two methods are generalizable – that is, almost any given situation will have a “context” and “stakeholders” that can be analyzed. Therefore, replication can provide needed validation of the methods. This is not the case, however, of the third method. The third method, Joint-Visioning, is not as generalizable in that it reflects the particular tools used to create a common vision in a particular instance – one where all parties actually wanted to see something successful come out of the process. What is needed in future scholarship, therefore, is not more case studies of similar situations, but, instead, case studies of implementation scenarios that differ from the one presented here. In this manner, different configurations of the tools of facilitation can be discovered that help create a “joint-vision” in different types of circumstances.

Beyond a call for follow-up research that would validate the specific suggested methods created within this dissertation, it is hoped that what is taken from this document is a general understanding of the continually shifting world within which the public administrator will increasingly have to function – living and managing within continually fluctuating ‘networks’ rather than within hierarchical organizations with clear lines and spans of authority. In this sense, I would hope that this dissertation on the methods of implementing networks will be seen as part and parcel of a larger wholesale ‘repositioning’ in public administration toward discussions of institutions, networks, and governance.

George Frederickson, in his 1999 John Gaus lecture on 'The Repositioning of American Public Administration,' focuses on public administration theory moving away from theories and concepts of clash of interests, electoral and interest competition, games, and winners and losers toward "theories of cooperation, networking, governance, and institution building and maintenance (1999, 702). In Frederickson's view, the 'state,' as it were, has become fragmented and disarticulated. Economics (in terms of globalization, movement of goods, movement over time of people, etc.) has played a major part in reducing the importance of political jurisdictions as the appropriate unit of analysis. Instead, continuing cross-jurisdictional relationships have become the norm for many successful public programs. That is, networks have become the norm, and the ways that we as public administration scholars have dealt with this change has been to begin to increasingly discuss the different 'types' of networks, their 'institutionalization' over time, and what this all means to our forms of 'governance.' This shift in the reality of government, according to Frederickson, has great import for the field of Public Administration because we are the only people discussing the phenomena, discussing, how to think about it, and discussing what to do about it. In this sense, public administration is out in front with respect to Political Science (which still focuses primarily on interest group politics within jurisdictions) when it comes to understanding and working within the American governmental system of the early 21st century. It is within this new thrust within Public Administration theory that I hope this dissertation can be contextualized. That is, now that we have begun to realize the implications of a more dynamic, less jurisdictional world, we must begin to construct the tools of governance that will enable us, the public administrators, to survive and succeed in that world. The methodological system proposed here is a first attempt to begin constructing such tools.

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APPENDIX A - THE NEW CONTEXT - MULTI-JURISDICTIONAL AND MULTI-SECTOR IMPLEMENTATION

While at first blush the concept of network implementation might not seem cause for great alarm (after all, some form of inter-agency coordination has always been around), after deliberative analysis of the differences between the public and private sectors, it becomes clear that the level of complexity involved in trying to get something implemented has been exponentially compounded once we actively work in multiple sectors (many public administrators already have known the difficulty of working across jurisdictions). That is to say, the sectors are sufficiently different that to work in a network composed of both is to work in a network that CANNOT be synthesized into a simple common framework – all sides must be dealt with on their own terms.

The Difference Between the Sectors

So, how are the sectors different? Well, first off, why do we study “public” organizations, as opposed to just “organizations?” If there were no differences between public and private we could go ahead and privatize all government agencies or nationalize all industrial firms without appreciable effects. Could we simply take existing corporate executives and stick them at the top of government agencies and let them run the show as they would a large profit driven corporation?

In the last decade, responding to the onslaught of the generic management movement, a great deal of research and writing has been conducted concerning this question. The thesis of the generic viewpoint, argued by the likes of Meyer and Williams (1976) and Haas, Hall, and Johnson (1966), posited that distinct characteristics of public

organizations are merely myths that need to be clarified and dispensed with, for the real importance was to be found in the similarities. This view, of course, is not new and in fact, since its beginnings in the progressive area, has become part and parcel of American conventional wisdom concerning government-- "run it like a business!" This is the point of view Wamsley and Zald refer to as "administration-*qua*-administration, and is also the viewpoint that they, and most public theorists since, have regarded as uninformed at best and dangerous at worst. Wamsley and Zald argue that a government "is a system of rule, distinctive from non-governmental institutions in that: (1) it ultimately rests upon coercion and a monopoly of force, and (2), if legitimate, it symbolically speaks for the society as a whole, or purports to do so" (W & Z, 1973, p. 63). Public organizations are those owned and funded by government and private organizations are those funded through sales (or private donations). Organizations that overlap, such as publicly-funded private organizations (contractors) and privately funded public organizations (government corporations) represent mixed and hybrid types. Because public organizations are based on fundamental features that are quite removed from those of a business, definitions of membership, rights, expectations, and obligations are also significantly different. Meyer (1979) argues that inattention to these differences between profit-oriented firms and public agencies can lead to overgeneralization in organization theory. Wamsley and Zald argue, drawing on the work of Dahl and Lindblom (1953), that degree of external control by major institutions of the political economy, like political authorities and economic markets, is a significant distinction between organizational types (ownership and sources of funding being organizational properties reflecting these sources of control).

To date, there have been two major discourses concerning the question of "publicness." These are the core and dimensional approaches (Bozeman and Bretschneider, 1994).

An overview of the two approaches reveals that each has its relative strengths and weaknesses. Most public organization theorists, especially those studying public management or public policy, assess the question from the core approach. The basic thrust of this approach is that there are essential differences between sectors and that this distinction can be based on legal type. That is the concepts “government-owned” vs. “privately-owned” bring with them different sets of legal constraints which can be seen as directly impacting the running of an organization. There are a number of advantages associated with this approach the first being that many executives who have practiced in both sector have concurred with Sayre’s (1953) conclusion that “public and private organizations are alike in all unimportant respects” and Appleby’s conclusion (1945) that “government administration differs from all other administration work to a degree not even faintly realized outside.”

Perry and Rainey (1988) compiled a great deal of systematic empirical research that attempts to show this difference. Each study does a comparison according to a particular distinction between a one or a set of core public and one or a set of core private organizations. Researchers have found empirically verified differences including motivation (Rainey, 1983), decision patterns (Hickson, et. al. 1986; Coursey and Bozeman, 1990), and performance (Bozeman and Loveless, 1987; Bozeman, et. al., 1992). Functional differences (in management areas) have also been found between the sectors (Bryson, 1988; Ring and Perry, 1985). One of the most impressive findings, involving many of these studies, is that they consistently show similar results across studies regardless of the particular theoretical lens being employed (Bozeman, 1987).

While the core approach has certainly had its affect on the field--certainly as anecdotal evidence justifying the field of study, there are two serious problems

with the approach. First, it has proven difficult to easily categorize all organizations in an either/or selection process between public and private. That is to say, there is little capability in handling exceptions to the rule. Many studies, including Crow and Bozeman's study of research and development organizations, have found this a problem (in this case 30% were non-classifiable). Second, and certainly more important as it affects the field, there is very little theoretical explanation for most findings. While it may be the case that a difference exists when we consider something like decision making, it is basically a meaningless finding without a theoretical framework through which to interpret the results. From this position, one finds it hard to defend against the charge of "so what?"

The dimensional approach, on the other hand, has a rather lengthy theoretical history. The basic thrust of this approach is that publicness is not defined by a single, discrete attribute, but instead, organizations are more or less public depending on the extent to which externally imposed political authority affects the (Bozeman and Bretschneider, 1994). As discussed above, this theoretical thread can be located as beginning with Dahl and Lindblom's (1953) development of typologies that help relate political and economic dimensions so that comparisons of government agencies and enterprises can take place. Their findings suggested that agencies under governmental control have more intangible goals, less incentive for cost reduction, and more dysfunctions of bureaucracy than do privately owned enterprises controlled by markets. Wamsley and Zald (1973) went farther with the dimensional concept and created a public organization-specific analysis framework which distinguished organizations according to internal and external political and economic dimensions. In completing this framework, Wamsley and Zald were attempting to relate the external influences of the politico-economic system (normally the focus of political science researchers) to the internal functioning of the organization (normally the focus of public administration researchers).

Only recently, however, have organizational researchers begun to employ the dimensional approach to the empirical study of publicness. Crow and Emmert (1988) studied 250 R&D organizations and found that many were not classifiable by ownership. Employing the framework and four organizational types of Wamsley and Zald (public, mixed, hybrid, and private), they found that most organizations were definable.

According to Bozeman (1987), all organizations have some degree of political influence and are subject to some level of external government control and, therefore, have some level of “publicness” (although variance between types may be great). Like Wamsley and Zald, Bozeman uses the two sub-dimensions of political authority and economic authority. Bozeman, however, treats the two as continua where one reacts to the other. Therefore, economic authority will increase as managers have more authority over the use of income and assets of the organization, but will decrease as external government authorities have more control over the finances (Rainey, 1991, p. 26). Bozeman’s dimensional model, while paying particular attention to organizational resource processes, also considers other activities such as goal setting, structuring and design, and organizational maintenance. The primary thrust of this model, as discussed above, is that some mix of public and private authority can be found influencing behavior in all organizations.

Extending the dimensional approach are Perry and Rainey (1988) who suggest that all of these efforts to clarify the public-private dimension cannot capture its full complexity without further acknowledging the mode of social control under which the organization operates, either polyarchy or market. Within each of these modes one may ask the questions of ownership and funding. In this manner, Perry and Rainey end up with eight distinct forms of organization: bureau, govt. corporation, govt.-sponsored enterprise, regulated enterprise, governmental enterprise, state-owned enterprise, government contractor, and private enterprise.

There appears to be two main advantages to the dimensional approach. First, the approach is able to explain different forms of organization that do not fit the “pure type” core model. Second, the approach has a theoretical lineage that allows analysis of findings. One disadvantage is that, perhaps because it is more complicated, there are far fewer empirical studies that have been conducted verifying the theory.

The two streams of research on the concept of “publicness” are, of course, not mutually-exclusive. In fact both have their benefits and would easily complement each other. To date, a great deal of data has been gathered on the side of the core approach, but a well-founded theoretical model is to be found on the dimensional side. Future analyses employing the case histories of one with the analytical framework of the other would seem likely to produce more complete results.

While this is not directly the purpose of this volume, it is the case that the approach advocated within these pages uses the assumptions of difference found in the core approach while using the theoretical tools of the dimensional approach as its analytical framework (namely, the theory of political economy).

In essence, the approach advocated here can be looked at as one of the first attempts in the field of public administration to synthesize the two approaches in a methodological system to be used by practicing administrators.

So, what purpose has this foray into the schools of thought concerning the differences between the public and private sectors served? If we acknowledge that the environment of public sector program implementation is indeed changing, and recognize that

programs to be implemented today rarely fall within the jurisdiction of a single agency and instead can involve other public agencies (at all levels of government), private sector non-profits, private sector for-profits, special interest groups, and individual citizens, then we must conclude that working in a multi-jurisdictional and multi-sector environment is no simple shift of focus. It is, instead, a shift, of an order of magnitude, to a much higher level of complexity. If every organization must be dealt with on their own terms, and these organizations run the gamut from public to private, and we acknowledge that these sectors are not easily reconcilable, then the world of centrally originating top-down, hierarchical management is fast disappearing. Equally so , however, is the fact that simply getting to know the prejudices of the various actors is no guarantee of implementation success. The system is so complex that some level of coordination must occur.

APPENDIX B – THE ORIGINAL PROPOSAL AFTER THE PROTOTYPE PERIOD

Shenandoah Valley Advanced Traveler Information System Pilot Project Proposal

Submitted by: the Virginia Tech Center for Transportation Research

INTRODUCTION

There is a potential for Advanced Traveler Information Systems (ATIS) to address traveler information needs along the I-81 Corridor in the Northern Shenandoah Valley. In the autumn of 1997, a pre-deployment study was initiated to determine the potential for Advanced Traveler Information Systems to improve the provision of traveler information in the Northern Shenandoah Valley. The study found that there was a need for improved traveler information and that ATIS was a potential avenue for addressing that need. There were several organizations involved in the study, including: the Loud Fairfax Planning District Commission, the Virginia Tech Center for Transportation Research, and the Virginia Department of Transportation.

In April 1998, Virginia Tech's Center for Transportation Research presented their findings from the pre-deployment study to the Shenandoah Telecommunications Company (ShenTel) with the hope that ShenTel would become a willing participant in helping to develop and deploy an actual ATIS in the region. A proposal for how to involve stakeholders and manage an ATIS deployment effort was also included in early discussions with ShenTel. ShenTel accepted the proposal and indicated that they would move forward with the creation of a web-based ATIS if stakeholder commitment and cooperation could be secured throughout the region.

ShenTel asked the CTR to help this vision become a reality by facilitating the planning and organization of a demonstration ATIS project along the I-81 Corridor in the Shenandoah Valley. The demonstration project is being guided by the CTR and informed by strategic plans crafted in June of 1998 by an ATIS Advisory Board whose membership includes ShenTel, VDOT, LFPDC, CTR, and the Virginia Tourism Corporation (VTC). The results of the recent strategic planning session along with

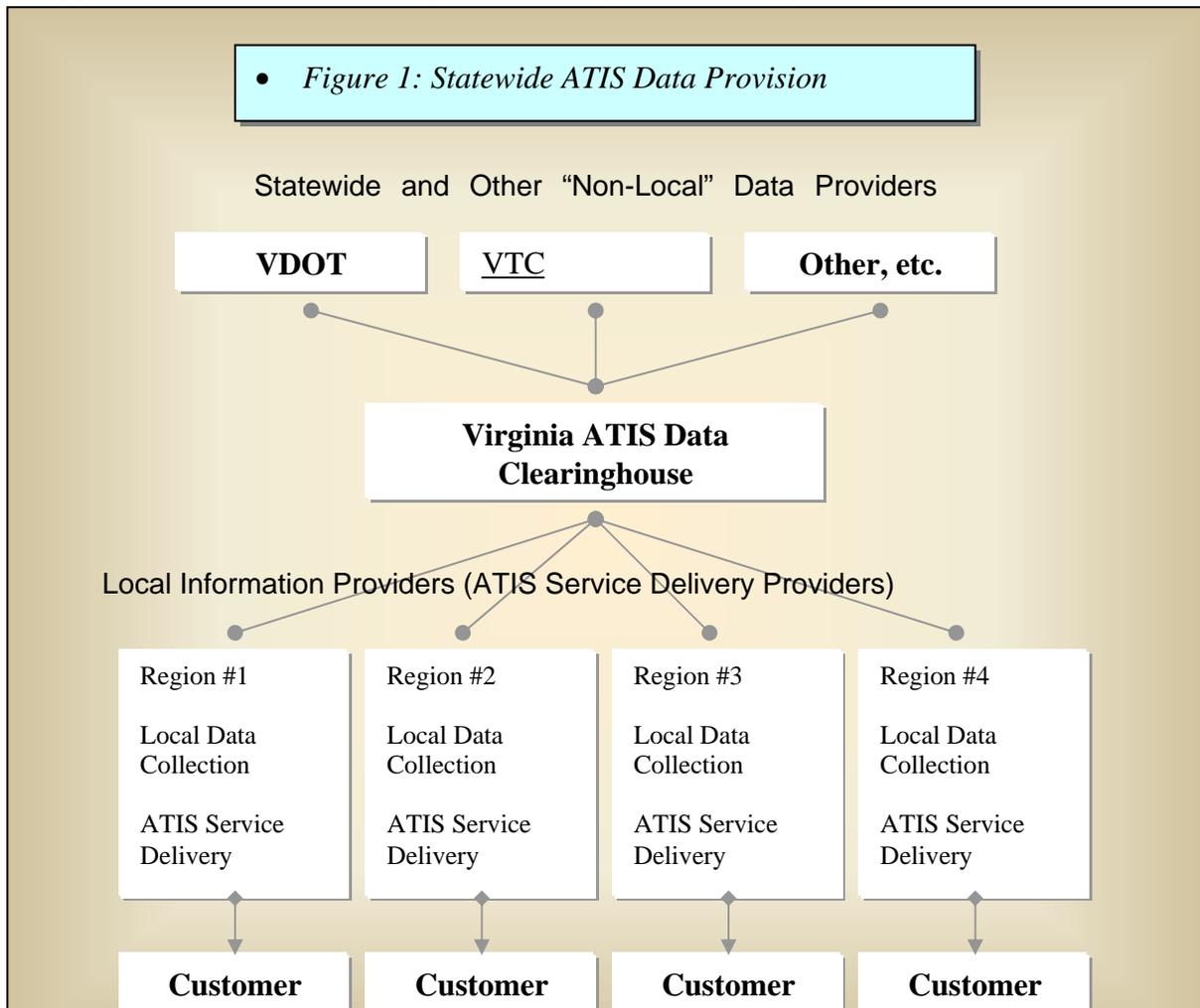
further discussions with ShenTel, the private-sector organization that will spearhead this project, have provided the framework for this demonstration project proposal.

Shenandoah Valley Advanced Traveler Information System Pilot Project

What is proposed here is a pilot ATIS project, located in the Shenandoah Valley, but designed to serve as a model for ATIS proliferation throughout the Commonwealth of Virginia. To understand how this pilot project has been conceptualized from the outset as a potential model for Virginia, it is necessary to understand the state ATIS model conceptualized by VDOT, VTC, Virginia Tech, and the ShenTel Corporation at the June 1998 strategic planning session alluded to above.

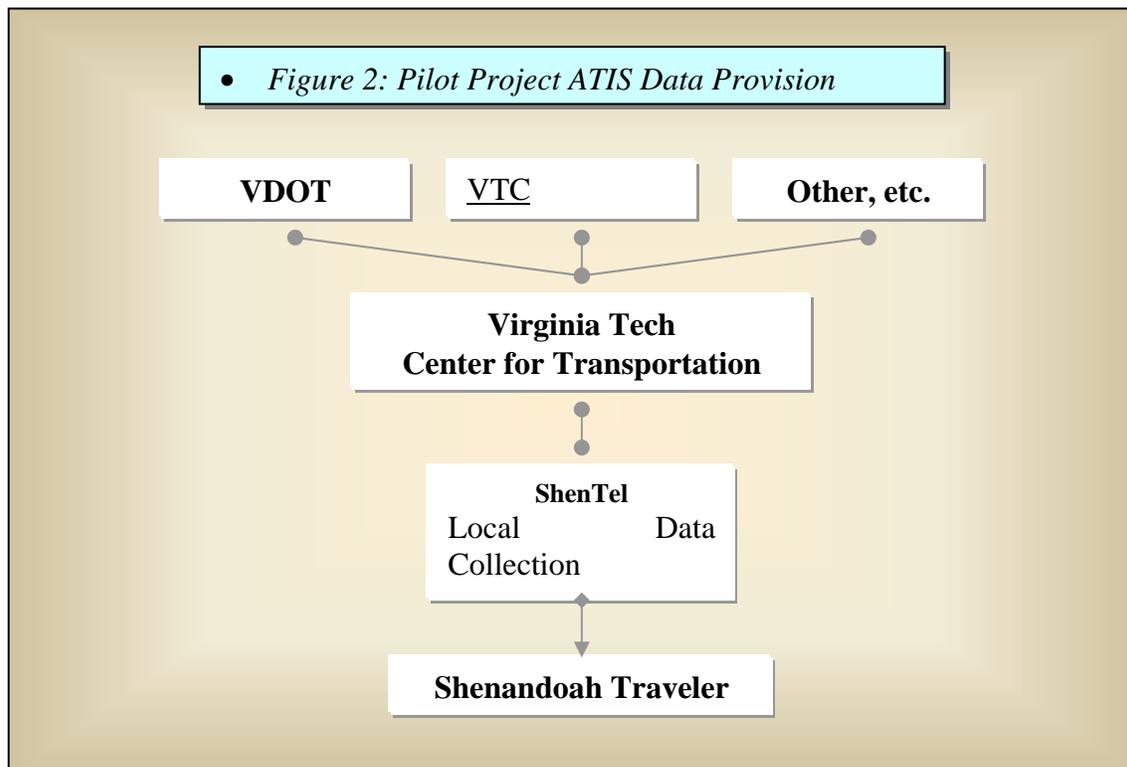
Statewide Conceptualization

During the Advisory Board's Strategic Planning Session, the concept of a statewide ATIS was discussed as well as how a demonstration project in the Shenandoah Valley would fit into such a statewide framework. The concept of this ATIS is centered upon the creation of an "information clearinghouse" of salient non-local information collected from "non-local" information providers (e.g. VDOT, VTC, the State Police) that could then be tapped by "local" information providers (e.g. ShenTel). Figure 1 provides a clear



Pilot Project

The pilot project proposed here would serve as a model for how to deploy ATIS in rural areas within the context of such a statewide framework. A myriad of content areas would be addressed by this system, such as emergency services and lodging information, and disseminated through several telecommunication vehicles including web-based, cellular, and pager systems. This ATIS will be a timely and a necessary communication tool as construction begins to encompass the I-81 Corridor. Taking this model into consideration, the “top-level” conceptual model of the pilot project is relatively easy to explain. If we look at figure 2, we can see that in this pilot project, the local service provider role is fulfilled by the ShenTel Corporation, a communications company with substantial existing investment in community information provision in the Shenandoah Valley. VDOT, VTC, and others (e.g. the State Police) fulfill the role of non-local information providers, and Virginia Tech fulfills the role of information clearinghouse, acting as the “go-between” in helping to establish the inter-institutional relationships (strategic partnerships, contracts, information protocols, etc.) necessary for system success.



Local and Non-Local Audiences

In order to establish an pilot ATIS that is attractive and useful for consumers, both within the Shenandoah region and beyond its borders, it must provide, as indicated in the statewide model, salient “local” and “non-local” information. In order to provide this type of content, reliably and accurately, the system must have two levels of collection with the regional provider (e.g. ShenTel) collecting the local level information while the clearinghouse (in this case, the Center for Transportation Research) serves as the collector and coordinator of non-local information. Information flows are conceptualized as flowing both downstream and upstream. That is, while a regional provider will be able to add significant value to local data by accessing the clearinghouse, the clearinghouse will continue building its overall value by linking to relevant local data that would be of interest to other regional providers.

Pilot Project Objectives

There are several internal and external objectives for the proposed Shenandoah Valley Advanced Traveler Information System. Internally, the most important considerations are that such a system be not only conceptually, but also technically and economically viable. Specifically, such a system must:

7. Be financially self-supporting over the long-term
8. Incorporate capacity for growth as demand/usage evolves and technologies change
9. Include a carefully thought-out marketing approach to maximize user awareness
10. Leverage a functional design that is capable of accepting high data input loads and still be able to provided a streamlined user interface
11. Serve as a functional model for the design and implementation of similar systems

Externally, this system must, at a minimum, support a host of public needs as well as the development needs of various economic interests in the valley. The needs of both the traveling public and service providers in the Shenandoah valley have been extensively studied by the Center for Transportation Research. Additionally, the June 1998 strategic planning session, alluded to above, provided additional focus on exactly “what” services should be offered by such a system. The types of traveler information described as a priority by the Advisory Board fall under five major content areas: travel advisory, traveler services, tourism, trip routing, and community information and yellow pages. A

preliminary list of specific information needs was then generated. Out of an extensive list, 11 services were selected as being both the most needed and the most viable; they are:

- Emergency Services
- Itinerary Design
- Incidents
- Yellow Pages
- Maps
- Information to Delayed Travelers
- Travel Time/Delay
- Reservations/Confirmations
- Construction Operations
- Visitor Center Information
- Transportation Alternatives

The potential customers for this data were identified to be local residents, potential tourists, I-81 non-tourist traffic, VDOT itself, the State Police, rescue squads, and students and families associated with local colleges and universities. These customers are envisioned accessing static, variable, and real-time information while at home, en-route, at rest areas/gas stations, or while at visitor centers/destination locations. Methods of access are envisioned to be desktop and laptop PCs, cellular phones, and next generation pagers (with display technology).

I-81

The Virginia Department of Transportation is beginning, in the summer of 1998, to widen the I-81 Corridor. Currently, the plan is to add one lane to each side of the corridor along its entire length in Virginia. The construction that will take place, over the next decade and a half, could have a crippling effect on the regional economy and cause significant traffic delays to travelers if not handled pro-actively and effectively.

The construction that will take place along I-81 makes this Shenandoah Valley ATIS an important project for the region. Two of the objectives that the ATIS Advisory Board decided upon for the demonstration project were to reduce and mitigate traffic delays and to reduce the economic impacts of the construction on tourism and local businesses along the corridor. Not only will this demonstration ATIS be a timely and a necessary communication tool as construction begins to encompass the I-81 Corridor, but it will enable travelers to know how they can travel through the Shenandoah Valley and still enjoy all it has to offer.

ShenTel as Model

ShenTel, through Shenandoah.com, provides the ideal platform for such a demonstration project because the company already supports various types of telecommunication

vehicles. Having ShenTel as the spearhead for this model is also appropriate because they are a private sector rural telecommunications company that is interested in finding ways to better serve customers as well as support an ATIS that can be financially and technically viable beyond the demonstration period.

SVATIS - PROPOSED PROJECT APPROACH

The project will be broken down into six phases, covering a three-year period. The approach is designed to ensure that 'SVATIS' will be fully tested prior to the scheduled commencement of major re-construction work on I-81, and hence will be available to help mitigate the negative impacts of this construction on traffic using the corridor and on surrounding businesses.

The six major phases of this project are:

- Phase One: “Detailed Functional Design and Implementation Plan”**
(Duration 3 months: July 1, 1998 - September 30, 1998)
- Phase Two: “System Development and Testing”**
(Duration 9 months: October 1, 1998 - June 30, 1999)
- Phase Three: “Pre-Deployment Activity”**
(Duration 9 months: October 1, 1998 - June 30, 1999)
- Phase Four: “Initial Implementation and Refinement of System”**
(Duration 6 months: July 1 - December 31, 1999)
- Phase Five: “Eighteen Month Operation and Evaluation of ‘SVATIS’”**
(Duration 18 months: January 1, 2000 - June 30, 2001)
- Phase Six: “Project Management”**
(Duration 36 months: July 1, 1998 – June 30, 2001)

The work to be accomplished under each of these phases, and the major tasks involved is discussed briefly in the following paragraphs.

The proposed approach to be taken to Phase One is developed in some detail. The five subsequent phases are developed in less detail. In the case of each of these phases, the general approach to be taken is outlined, together with a set of proposed tasks. A more detailed approach to each of these phases will be developed as part of Phase One.

PHASE ONE: “DETAILED FUNCTIONAL DESIGN AND IMPLEMENTATION PLAN”

Phase One will focus on the development of a detailed functional design for the ‘SVATIS’ system and on the preparation of an integrated implementation plan for the remainder of the project. It will be completed in a three-month period, starting on July 1, 1998 and ending on September 30, 1998. The end product of Phase One will be a report summarizing the functional design of the system, together with detailed plans for its development, implementation, marketing, operation and evaluation.

Functional Design

The functional design will include refinement of the overall ‘SVATIS’ concept, together with functional designs for each of three ‘SVATIS’ delivery systems:

- ‘SVATIS’ Web-based System,
- ‘SVATIS’ Cellular system and
- ‘SVATIS’ Pager System.

For each system, the functional design will include specification of:

- functional structure of system
- priority outputs
- secondary outputs
- input data needs
- input data sources
- reporting formats
- technical structure of system
- s/w and h/w requirements
- relationship to other systems
- other issues

System Outputs

System outputs, representing the information to be provided to I-81 travelers and other customers of ‘SVATIS’, will be grouped into five, broad categories:

- real-time **traffic advisory** information
- up-to-date **travel services** information
- recommended **trip-routing** information
- up-to-date **tourism** information, and
- current **community, community service** and “**yellow pages**” information.

Information will be accessible via the Web at any computer location having an Internet connection, including both desktop and laptop terminals. In addition, consideration will be given to installing a limited number of touch-screen kiosks at appropriate locations within and outside the I-81 corridor (e.g. at tourist information centers, rest areas, service stations, hotels, major tourist destinations, airports and rental car facilities, etc).

In addition, travelers and local residents will be able to obtain information via cellular telephone, both through a pre-programmed response system and, potentially, via an operator. Similar information will also be made available via pager technology to individuals subscribing to an appropriate paging system partner.

System Inputs

Input data will be divided into three broad categories:

- **local** data, relating to businesses, traffic and roadway conditions, tourist attractions, travel services and other issues within the immediate geographic area covered by ‘SVATIS’;
- **Virginia** data, relating both to the Commonwealth as a whole and to specific areas of the Commonwealth outside the immediate ‘SVATIS’ service area; and,
- **other** data, relating to areas and activities outside the boundaries of the Commonwealth but relevant to I-81 travelers.

In each of these three categories, the information will be further broken down into one of three sub-categories:

- **static** data, which changes infrequently, if at all
- **variable** data which changes more frequently, according to varying time schedules depending on the type of information involved, and
- **real-time** data which has to be constantly up-dated to be of value to VDOT’s customers.

It is anticipated that the vast majority of this information will be available from existing sources. There will, however, be some exceptions.

One such example is real-time **travel-time and delay** information for the I-81 corridor. It is proposed that such data be collected by VDOT with support from the CTR, using a number of specially located detection stations, coupled with other, yet-to-be-defined data collection methods.

I-81 Clearinghouse

An ‘I-81 Clearinghouse’ function will be established at Virginia Tech, operated by the CTR, to collect, synthesize and pass-on all ‘non-local’ data to SHENTEL for subsequent dissemination to the customers of ‘SVATIS’. Such ‘non-local’ data will include, but not necessarily be restricted to:

- information on real-time traffic and roadway conditions within the I-81 corridor and elsewhere; and,

- all information required from sources other than those located within the immediate ‘SVATIS’ service area.

Finally, attention will be directed to issues of the ownership and use of data, confidentiality of information, privacy and data/information security requirements.

Implementation Plan

The ‘SVATIS’ implementation plan will be broken down into four components:

- an ‘SVATIS’ **“marketing plan;”**
- an ‘SVATIS’ **“deployment plan;”**
- an ‘SVATIS’ **“evaluation plan;”** and,
- an ‘SVATIS’ **“financial/business and management plan.”**

Each of these four plans is described briefly below.

Marketing Plan

An SVATIS “marketing plan” will be developed, focused on creating awareness of the availability of ‘SVATIS’ among potential customers of the system, and of the ways in which the system might be of value to them.

It will include a summary of the overall marketing approach to be adopted, and its relationship to other, established programs maintained by VTC, VDOT and other organizations. The potential market of customers will be broken-down into a series of discrete market segments, broken down broadly into two groupings:

- **‘travelers’**, and
- **‘non-travelers’** serving the ‘traveler’ market.

For each grouping, market segments would be defined by such characteristics as:

Travelers

- purpose of travel within I-81 corridor
- location of origin and destination for I-81 travel, both within and outside corridor/state
- location of home/office/workplace
- interest(s) in, and/or planned activities within the Shenandoah Valley and

- elsewhere in Virginia
- time-of-year and time-of-day of travel
- persons/families living within ‘SVATIS’ service area
- students attending colleges/universities in I-81 corridor
- individuals having business with organizations within ‘SVATIS’ service area, etc

Non-Travelers

- persons/families living within ‘SVATIS’ service area
- persons/organizations operating a business within the ‘SVATIS’ service area
- operators of hotels/guest houses/’bed and breakfasts’ in ‘SVATIS’ service area
- state and local police
- VDOT operations and maintenance
- VTC and local/regional tourism organizations
- colleges/universities within I-81 corridor
- organizations operating a tourist destination within or adjacent to I-81 corridor
- operators of restaurants and ‘fast-food’ establishments within I81 corridor
- operators of gasoline stations and automobile service facilities within I-81 corridor
- medical facilities, hospitals and doctor/dentists within ‘SVATIS’ service area
- organizations providing emergency services within the ‘SVATIS’ service area, etc

It is anticipated that distinction will be drawn between 15 and 20 major market segments, including, for example:

- potential recreational travelers considering a visit to Virginia well in advance of their planned departure date, living both within the USA and overseas
- business travelers planning a series of visits to locations within the ‘SVATIS’ service area
- students attending or considering attending colleges within the I-81 corridor, their parents and friends
- local operators of tourist attractions and businesses, hotels or restaurants within the ‘SVATIS’ service area

- travelers about to leave their home or office wishing to check on conditions within the I-81 corridor
- travelers en-route within the corridor wishing to make a reservation for the night at a hotel, or to obtain information on local attractions and points of interest
- en-route travelers encountering a problem or emergency and wishing to obtain assistance
- government agencies operating facilities within/adjacent to I-81 corridor
- national ‘chains’ operating hotels, restaurants and other facilities within the I-81 corridor
- non-English speaking travelers, etc.

“Targeted marketing plans” will be developed to create customer awareness of ‘SVATIS’ within each segment, using such approaches as:

- prominent placement of ‘SVATIS’ logo, service description and access information on VDOT maps, VTC materials and elsewhere;
- links to Shendoah.com from other Web sites;
- placement of signs announcing availability of ‘SVATIS’ service on the approaches to the ‘SVATIS’ service area, at regular points within the I-81 corridor and at appropriate service station locations, tourist information centers, airports, car rental agencies, etc.;
- HAR information describing the ‘SVATIS’ service at key locations; and,
- Media advertisements incorporating information on ‘SVATIS’ as part of other promotions, etc..

Deployment Plan

The SVATIS “deployment plan” will describe in detail the steps to be taken to develop, deploy and operate the system over the full, 36 month period.

It will summarize the overall approach to be taken to system development, testing, deployment and operation, major responsibilities, time schedules and milestones. This will include development of necessary partnering relationships.

It is presently anticipated that the deployment plan will be broken-down into nine major

phases, grouped into four major sets of activities:

- **organization and prototyping:**
 - development and maintenance of partner and other associative relationships
 - development and testing of software and hardware systems
- **initial data assembly and management:**
 - collection and synthesis of initial 'non-local' information and establishment of 'I-81 Clearinghouse'
 - collection of initial 'local' data and initial development of local subscriber and advertiser base
 - creation of initial 'SVATIS' data-base
- **'alpha-testing' of 'SVATIS':**
 - implementation, testing and refinement of pilot 'SVATIS' systems, initial operation of 'I-81 Clearinghouse' and 'local' data collection/advertising activity and initial delivery of information to travelers/customers
- **eighteen month demonstration project:**
 - on-going operation of I-81 Clearinghouse
 - on-going operation of 'local' data collection and related subscriber/advertiser activities
 - on-going operation of 'SVATIS' systems, on-going delivery of information to travelers/customers.

Evaluation Plan

The 'SVATIS' Evaluation Plan will be designed to provide a solid framework for assessing the degree to which the demonstration project achieved its objectives. It will focus on a formal, structured evaluation of the demonstration project, concentrating on three primary issues:

- **traveler/customer response** to, and use of the system, based on the eighteen month period of operation starting January 1, 2000 and running through June 30, 2001;
- **viability of the continued operation** of the system going forward after the end of the demonstration period; and,
- **major lessons learned** relating to the design, deployment and operation of the system, and the implications of this experience for the design and deployment of similar systems, both within the Commonwealth of Virginia and elsewhere.

The plan will include a summary of the overall evaluation approach, proposed evaluation criteria, evaluation methodology and evaluation data collection requirements. It is anticipated that the evaluation criteria will include, but not necessarily be limited to:

- customer value, broken down by customer group/market segment and value received
- ease of use and operation of ‘SVATIS’
- mitigation of I-81 construction impacts
- response of ‘SVATIS’ service area residents and businesses
- operating costs of ‘SVATIS’ service
- financial/management viability of continued operation of ‘SVATIS’ as a self-funding entity beyond the period of the demonstration project
- impact of ‘SVATIS’ on safety and other aspects of I-81 traffic operations
- impact on VDOT operations
- impact on VTC activities and operations, and
- impact on state police and emergency service operations.

Financial and Business Plan & Management Plan

The fourth component of the implementation plan will address the development of an initial financial and business plan for the system, together with an overall management plan for the demonstration project.

The “financial and business plan” will focus on developing an initial estimate of the on-going costs of operating ‘SVATIS’ as currently envisioned, and the potential revenues which might be generated by the system to off-set these costs once the initial development and testing of the system has been completed.

Operating costs will include the on-going development and maintenance of necessary input data, operation of the ‘I-81 Clearinghouse’, collection of ‘local’ data, maintenance of the ‘SVATIS’ data-base and on-going “12/7/24” operation of all three ‘SVATIS’ delivery systems based, respectively, on internet, cellular- ‘phone and pager technology.

Potential *revenue sources* to be examined will include:

- paid advertising by local businesses, hotels, restaurants, etc
- subscriber fees
- paid advertising by national chains
- telephone usage charges for internet, cellular and pager services,
- transaction commissions, and
- fee-for-service arrangements with public agencies.

The “management plan” would summarize the proposed final work plan for the remainder of the demonstration project (Phases Two – Six), provide a detailed work-breakdown structure, responsibilities and time schedule with interim milestones, and a final staffing plan and budget.

It will also include designation of a recommended Advisory Board for the project.

Phase One will result in the preparation of a report detailing the functional design of the proposed demonstration version of 'SVATIS', together with each of the four plans outlined above.

Phase One will be divided into five major tasks:

- | | |
|----------|---|
| Task I.1 | “Detailed Functional Design” |
| Task I.2 | “Sources of Information” |
| Task I.3 | “Marketing, Deployment and Evaluation Plan” |
| Task I.4 | “Management and Financial/Business Plan” |
| Task I.5 | “Phase One Report: ‘SVATIS’ Design and Implementation Plan” |

PHASE TWO: “SYSTEM DEVELOPMENT AND TESTING”

Phase Two will focus on the initial development and testing of the demonstration version of 'SVATIS', based on the detailed functional design developed under Phase One.

Phase Two will last 9 months, starting on October 1, 1998 and running through June 30, 1999.

Major emphasis will be place in Phase Two on the following six activities:

- **development of the necessary set of partnership and related co-operative arrangements**

- **assembly of an initial set of input data, including both ‘local’ and ‘non-local’ data obtained from existing sources, as well as special purpose data (e.g. travel-time and delay information) requiring original data collection**
- **development of an initial advertiser and subscriber base**
- **implementation of the ‘I-81 Clearinghouse’ function**
- **design and implementation of the initial ‘SVATIS’ data base**
- **development and testing of the software and hardware components of all three ‘SVATIS’ delivery systems: Web-based, Cellular-‘Phone-based and Pager-based**
- **refinement of data collection and related data management procedures, and**
- **refinement of initial systems.**

The end product of Phase Two will be an initial, operational version of ‘SVATIS’ which has been thoroughly tested and ‘de-bugged’ and is ready for ‘alpha-testing’ under Phase Four.

Phase Two will consist of eleven major tasks:

- | | |
|-----------|--|
| Task II.1 | “Develop Full Set of Partner Arrangements” |
| Task II.2 | “Assemble Initial Non-Local Input Data” |
| Task II.3 | “Assemble Initial Local Input Data” |
| Task II.4 | “Implement Specialized Data Collection Procedures” |
| Task II.5 | “Implement Clearinghouse Function” |
| Task II.6 | “Design and Implement ‘SVATIS’ Data Base” |

- Task II.7 “Develop Prototype and Test Web-based System”
- Task II.8 “Develop and Test Prototype Cellular System”
- Task II.9 “Develop and Test Prototype Pager System”
- Task II.10 “Refine Systems”
- Task II.11 “Refine Input Data and Data Assembly Procedures”

PHASE THREE: “PRE-DEPLOYMENT ACTIVITY”

Phase Three will cover a series of tasks preparatory to the initial ‘launch’ of the system. They will be designed to ensure that the six-month ‘alpha-test’ goes off as smoothly as possible.

Phase Three will last nine months, from October 1, 1998 to June 30, 1999.

Particular emphasis will be placed during Phase Three on pre-marketing of the system, to ensure maximum awareness of its capabilities among potential users and participants prior to its launch. In addition, attention will be directed to formalizing all necessary partnership and related arrangements, establishing necessary protocols and refining/updating the proposed deployment plan. Finally, a set of ‘pre-deployment’ data collection activities will be undertaken to establish a partial baseline for system evaluation.

Phase Three will consist of four major tasks:

- Task III.1 “Implement Marketing Plan”
- Task III.2 “Formalize ‘Partnership’, ‘Protocol,’ ‘Contractual’ and Related Arrangements”
- Task III.3 “Refine Deployment Plan”
- Task III.4 “Initiate Pre-Deployment Evaluation Data Collection”

PHASE FOUR: “INITIAL IMPLEMENTATION AND REFINEMENT OF SYSTEM”

Phase Four will cover a six-month ‘alpha-test’ of the entire ‘SVATIS’ system, data collection and information dissemination procedures.

This phase will be designed to ‘shake-out’ the bugs in the system and associated procedures/arrangements, and to ensure that the demonstration version of ‘SVATIS’ is ready to go live at the start of the formal eighteen-month demonstration period.

Phase Four will last six months, commencing on July 1, 1999 and running through December 31, 1999.

It should be emphasized that, although a major purpose of Phase Four is to ‘shake-out’ the bugs in the system, the intent is to provide valuable, timely and accurate information to travelers and other users from the outset of Phase Four.

Phase Four will be divided into ten major tasks:

- Task IV.1 “Continue Implementation of Marketing Program”
- Task IV.2 “Implement Local Data Collection, Advertiser and Subscriber Program”
- Task IV.3 “Implement Non-Local Data Collection”
- Task IV.4 “Implement I-81 Information Clearinghouse”
- Task IV.5 “Implement and Maintain Refined ‘SVATIS’ Data Base”
- Task IV.6 “Implement Web-based System”
- Task IV.7 “Implement Cellular System”
- Task IV.8 “Implement Pager System”
- Task IV.9 “Review and Refine Data Collection and Clearinghouse Procedures
- Task IV.10 “Review and Refine Systems”

PHASE FIVE: “EIGHTEEN MONTH OPERATION AND EVALUATION OF ‘SVATIS’

Phase Five will focus on the conduct and formal evaluation of an eighteen-month field test of the ‘SVATIS’ system. It will commence on January 1, 2000 and run through June 30, 2001.

It will include six major activities:

- on-going marketing of ‘SVATIS;’
- on-going ‘local’ data collection, advertising and related activities;
- on-going collection of ‘non-local’ and ‘specialized’ data and operation of the ‘I-81 Clearinghouse;’
- on-going maintenance and operation of ‘SVATIS’ data base and three delivery systems (Web-based, Cellular-based and Pager-based);
- formal evaluation of the ‘SVATIS’ demonstration system; and,
- preparation of a final report.

Phase Five will be divided into ten major tasks:

- | | |
|-----------|---|
| Task V.1 | “Implement Evaluation Program” |
| Task V.2 | “Operate Non-Local Data Collection” |
| Task V.3 | “Operate I-81 Clearinghouse” |
| Task V.4 | “Operate Local Data Collection” |
| Task V.5 | “Operate and Maintain ‘SVATIS Data Base” |
| Task V.6 | “Operate Web-based System” |
| Task V.7 | “Operate Cellular System” |
| Task V.8 | “Operate Pager System” |
| Task V.9 | “Evaluate Systems, Associated Data Collection Procedures and Organizational Arrangements” |
| Task V.10 | “Prepare Final Report” |

PHASE SIX: “PROJECT MANAGEMENT”

Phase Six will cover the continuing management of the demonstration of the project. It will include all necessary management activities, including:

- quality assurance
- cost and schedule control
- co-ordination and facilitation of partnership relationships

- progress reporting as required by VDOT and VTC
- organization of quarterly Project Advisory Board review meetings
- other support as required.

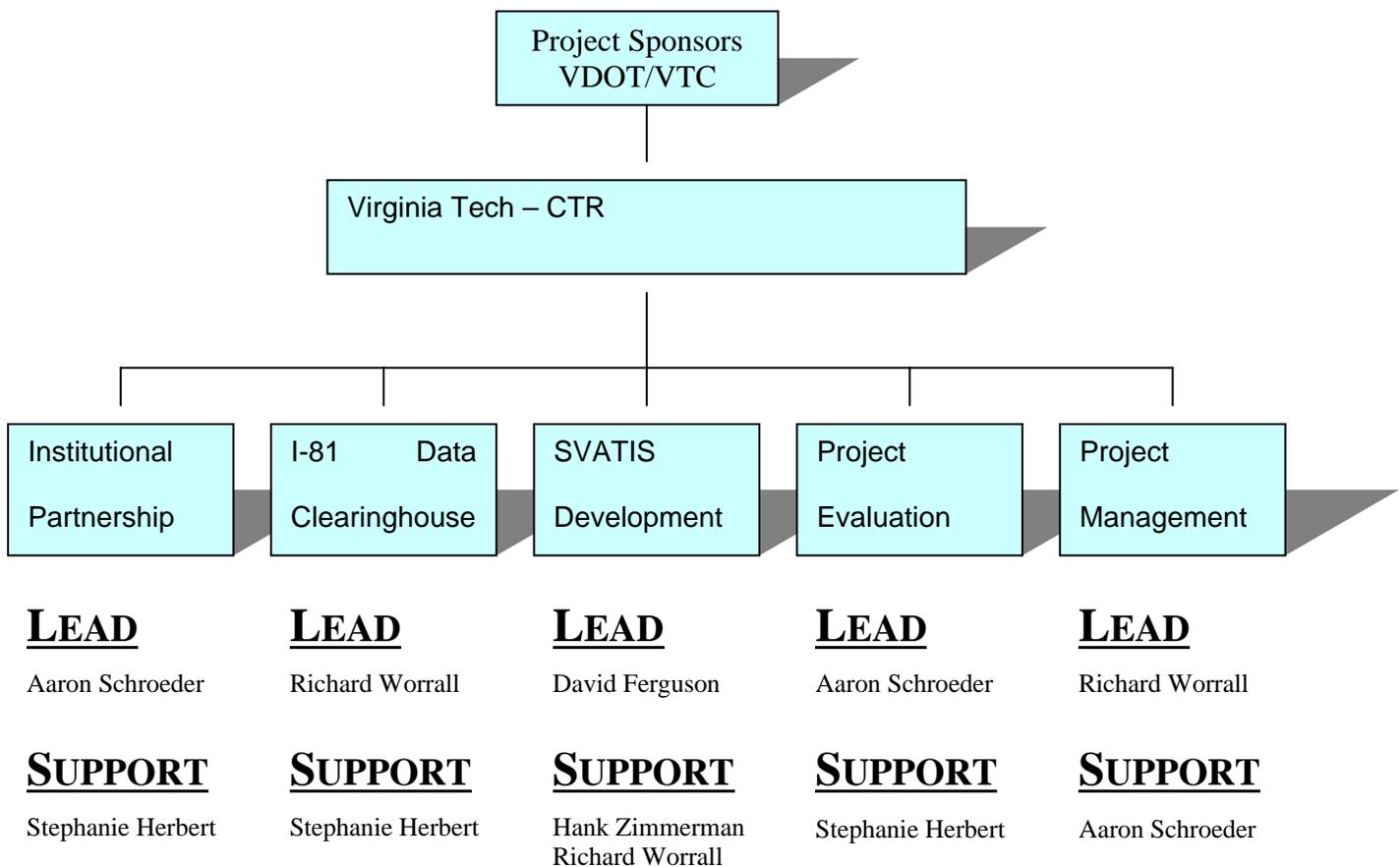
SVATIS WORK PLAN

To accomplish the vision of a Shenandoah Valley Advanced Traveler Information System, as envisioned in the Introduction to this proposal, and as detailed in the Approach section, an organizational structure has been devised, individual tasks have been delineated, and individual responsibilities for those tasks have been assigned.

In this section, documents detailing the organizational structure, task hierarchy and timeline, and task responsibilities are presented.

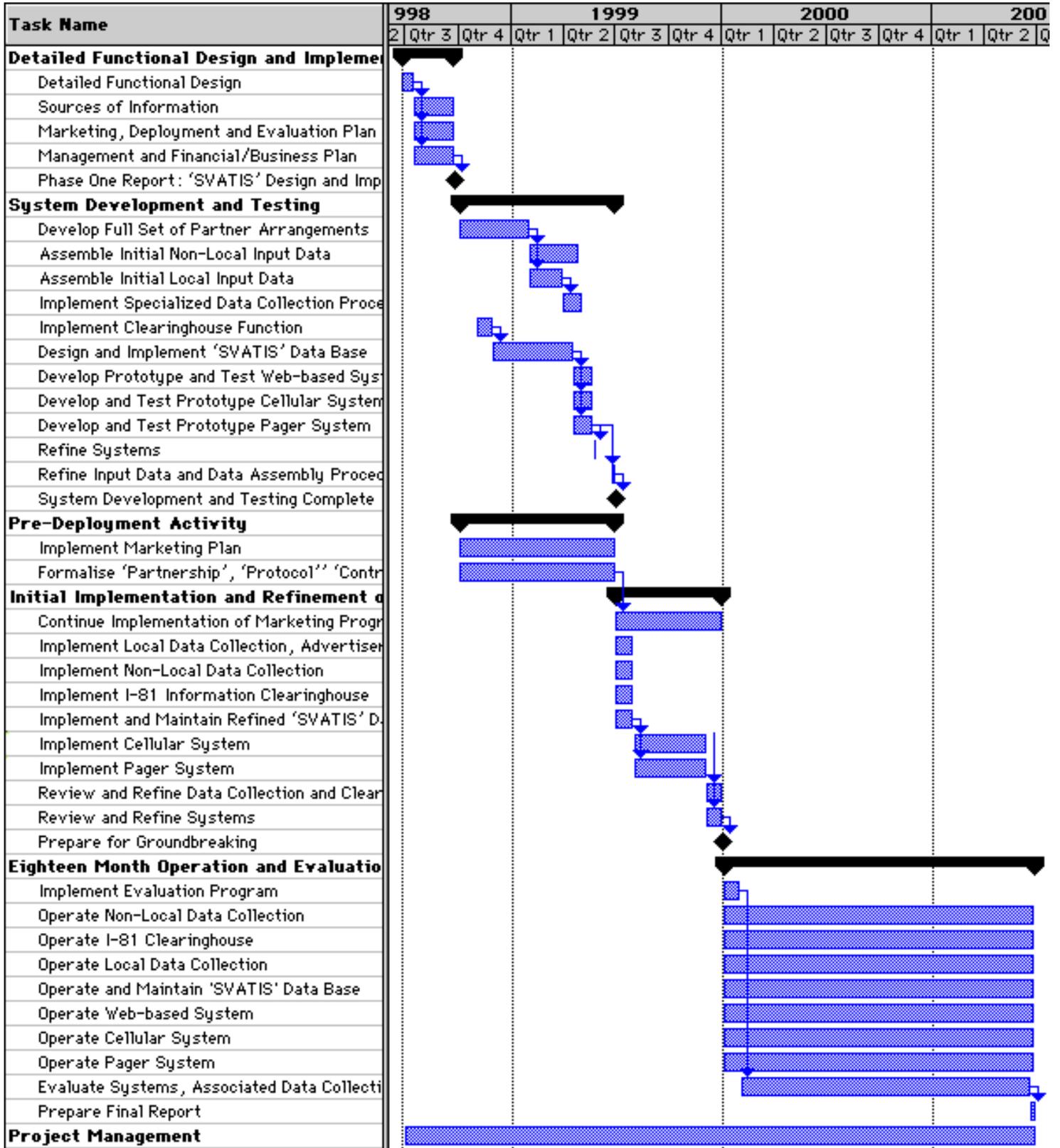
- *Shenandoah Valley Advanced Traveler Information System*

Project Organization



Shenandoah Valley Advanced Traveler Information System

Task Breakout and Timeline



SVATIS – Proposed Responsibilities

(Note: L = Lead Responsibility; S = Support Responsibility; r = Review Responsibility)

Phase/Task	SHENTEL	CTR	VDOT	VTC	LFPDC
Phase One					
Task I.1	L	S	r	r	r
Task I.2	L	S	S	S	S
Task I.3	S	L	r	r	S
Task I.4	S	L	r	r	r
Task I.5	S	L	r	r	S
Phase Two					
Task II.1	S	L	S	S	S
Task II.2	S	L	S	S	S
Task II.3	L	S	r	r	S
Task II.4	r	S	L	r	r
Task II.5	r	L	S	r	r
Task II.6	L	S	r	r	r
Task II.7	L	r	r	r	r
Task II.8	L	r	r	r	r
Task II.9	L	r	r	r	r
Task II.10	L	S	r	r	r
Task II.11	L	S	S	S	S
Phase Three					
Task III.1	S	L	S	S	S
Task III.2	S	L	S	S	S
Task III.3	L	S	r	r	r
Task III.4	r	L	r	r	r
Phase Four					
Task IV.1	S	L	S	S	S
Task IV.2	L	r	r	r	S
Task IV.3	r	L	S	S	r
Task IV.4	r	L	S	r	r
Task IV.5	L	S	r	r	r
Task IV.6	L	r	r	r	r
Task IV.7	L	r	r	r	r
Task IV.8	L	r	r	r	r
Task IV.9	L	S	S	S	S
Task IV.10	L	S	r	r	r
Phase Five					
Task V.1	r	L	r	r	r
Task V.2	r	L	S	S	S
Task V.3	r	L	S	r	r
Task V.4	L	r	r	r	S
Task V.5	L	S	r	r	r
Task V.6	L	r	r	r	r
Task V.7	L	r	r	r	r

Task V.8	L	r	r	r	r
Task V.9	S	L	S	r	r
Task V.10	S	L	r	r	r

Shenandoah Valley Advanced Traveler Information System

Proposed Staff Bios

Richard D. Worrall

Senior Transportation Research Fellow,
Center for Transportation Research
Virginia Tech

Dr. Worrall has 37 years of experience in the application of operations research and related analytical techniques to transportation planning and management problems. He has consulted widely on these topics in the U.S. and overseas, and has taught and conducted research in these areas at three universities.

Dr. Worrall was recently the President and CEO of COMSIS Corporation, a \$12 million/year transportation and information technology consulting firm that has consulted to public- and private-sector transportation clients on transportation planning, management and technology issues.

Dr. Worrall also served as Vice President of Science Applications International Corporation (1994-1996), directly managing the transportation business unit, and Chief Operating Officer of JHK & Associates (1991-1994).

For 23 years, Dr. Worrall served as a transportation consultant for KPMG Peat Marwick, consulting to public- and private-sector clients in the U.S. and overseas on business strategy/change management, information technology and transportation issues. Dr. Worrall retired from KPMG as a senior partner in 1991.

Dr. Worrall has worked on many transportation projects relevant to the current study, including:

- Statewide Intelligent Transportation Systems Planning for the state Of Washington Department of Transportation
- I-95 Corridor ITS Program Design with the I-95 Corridor Coalition
- Rural Applications of Advanced Traveler Information Systems for FHWA/DOT
- IAGOS Integrated Airport Groundside Operating System Development with Nippon Electric Corp.
- Analysis of Congested Freeway Corridors for FHWA/DOT

- Development and Application of an Urban Growth Model for the Atlanta Regional Commission

Aaron D. Schroeder

Senior Research Associate,
Center for Transportation Research
Virginia Tech

Mr. Schroeder is a Senior Research Associate with the Policy Research Group at the Center for Transportation Research. He holds a Bachelor's degree in Psychology from the University of Delaware, and a Master's degree in Public Administration from James Madison University. Mr. Schroeder is currently a Ph.D. candidate in Public Administration & Public Affairs at the Center for Public Administration & Policy at Virginia Tech (1998 expected).

At the CTR, Mr. Schroeder's responsibilities include the management of the transportation policy research group which conducts analysis and implementation of policy and organizational issues related to ITS specifically and transportation generally. Currently, Mr. Schroeder and the policy research group are involved in a number of policy studies, including: Program Support for Highway Policy Analysis, Smart Road Operational Capacity, Welfare to Work - Institutional Impediments and Solutions for Access to Jobs, and ATIS deployment in the Shenandoah Valley.

Currently, Mr. Schroeder is coordinating the policy research group on the following projects:

- **Enhanced Night Visibility** -- Currently working with the Federal Highway Administration to establish a policy implementation network for the nationwide deployment of UV-A Fluorescent headlamps and traffic control devices. This facilitation involves working with federal/state/and local agencies, private sector automotive interests (Ford, Chrysler, GM), lighting and materials manufacturers, and public safety interest groups to disseminate the benefits of UV-A technologies and to overcome institutional impediments to nation-wide UV-A deployment.
- **Smart Road Operational Capacity** – Currently assessing the future operational capacity and organizational structure of the "Smart Road," a limited access highway between Blacksburg, VA and Interstate 81 that will serve as a test bed for state-of-the-art ITS research.
- **ATIS Deployment Strategies for the I-81/Shenandoah Corridor** – CTR is currently coordinating research with the Loud Fairfax Planning district determining institutional impediments to ATIS, CVO, and Incident Management technologies deployment in the I-81/Shenandoah corridor, as well as strategies for surmounting them. This research includes the formation and maintenance of an "Implementation Network" including industrial, governmental, and citizen-based stakeholder groups.

- **Welfare to Work - Institutional Impediments and Solutions for Access to Jobs** – Sponsored by the Federal Transit Administration (FTA) and the FHWA, the CTR Policy Team is assessing the transportation impediments precluding government aid recipients from reaching possible employment sources, and how different ITS technologies may be used to ameliorate the discovered problems.

Mr. Schroeder was previously employed as the Assistant to the Director of a National Academy of Public Administration (NAPA) study focusing on the relationship of military resources to civilian agencies in natural disaster response and recovery. Responsibilities included extensive interviews with congressional and senatorial staffers and emergency management and military personnel, the directing of expert panels, and the analysis of emergency declaration and manpower downsizing data trends.

Ray D. Pethtel

University Transportation Fellow
Associate Director
Center for Transportation Research
Virginia Tech

Ray Pethtel was appointed University Transportation Fellow in May 1994. He is responsible for providing leadership and direction for Virginia Tech's transportation interests. He is Tech's spokesman and facilitator for the "Smart Road," a limited access road between Blacksburg and Interstate 81 that will serve as a test bed for state-of-the-art intelligent transportation systems (ITS) research. His broader assignment is to identify and promote local, regional, statewide and national transportation initiatives. Mr. Pethtel's appointment to this university-wide role is one of the first of its kind in the nation.

Mr. Pethtel was Interim Director of the Center for Transportation Research from October 1994 to January 1996 and continues as Associate Director. He holds an appointment as Visiting Professor at the Center for Public Administration and Policy. He is managing several research projects dealing with the I-81 corridor and teaches a graduate class in transportation policy and administration.

Ray Pethtel served from 1986 to 1994 as Virginia's Transportation Commissioner. He was Chairman of the Commonwealth Transportation Board from 1986 to 1990 and Vice-Chairman from 1991 to 1994.

Between 1974 and 1986 he served as the founding Director of the Joint Legislative Audit and Review Commission, the program oversight agency of the Virginia General Assembly. He previously worked with the New York State Division of the Budget, the Graduate School of Public Affairs of the State University of New York at Albany, the New York State Legislature, and the American Society for Public Administration.

Mr. Pethtel received his bachelor's and masters' degree from The Pennsylvania State University. In 1992, he was awarded the permanent title of "Alumni Fellow" by the Penn State Board of Trustees.

In 1994, he was recognized by the Federal Highway Administration for leadership and commitment to constitutional ideals of fair treatment in the employment, programs, and contracting opportunities of the Virginia Department of Transportation.

Stephanie Herbert

Senior Research Associate
Center for Transportation Research
Virginia Tech

Ms. Herbert is currently a Senior Research Assistant and Policy Group Team Member at the Center for Transportation Research at Virginia Tech. Ms. Herbert's research specialties are in Community Involvement in Rural Development, Rural Advanced Traveler Information Systems, and Group Process. Before coming to the CTR, Ms. Herbert conducted research and published three reports on Community Involvement in Rural Transport Provision and Tourism Development for the Central Research Unit of the Scottish Office in Edinburgh.

Ms. Herbert's responsibilities at the CTR include research into the information needs of transportation and tourism interests along the I-81 corridor in Virginia, and the institutional barriers to rural ATIS deployment along the corridor. The project has involved designing, planning and analyzing interviews, writing proposals and reports, and facilitating the development of an ATIS Advisory Board to oversee the I-81 Corridor project.

Ms. Herbert currently holds a Master's Degree in Public Administration from the University of Georgia. At the Institute for Community and Area Development in Georgia, where Ms. Herbert was a graduate assistant, she was trained in Community Development Facilitation and assisted faculty on numerous projects. Since that time she has also attended several National Issues Forum workshops, been trained as a moderator, and is currently part of a Kellogg Foundation Grant to train community leaders in how to use technology for rural development.

Brian Daily

Research Associate
Center for Transportation Research
Virginia Tech

Brian Daily received his B.S. in Electrical Engineering, along with a minor in Computer Science, from Virginia Tech in 1992. Mr. Daily began working for Bolt, Beranek and Newman (BBN) immediately after graduation. While at BBN, Mr. Daily worked mainly on two projects: an active sonar project and a travel information system using voice recognition.

On the active sonar project, Mr. Daily worked primarily on the user interface. The project was written in C and C++ and used the X windows user interface libraries. Mr. Daily participated in all aspects of the design and implementation of the user interface including menu design, graphic representations of sonar data and translation of existing Sunview interface code to X windows code using the Xview libraries.

For the travel information system, Mr. Daily contributed in two areas: user interface and inter-process communication. The system consisted of several different processes running under the UNIX operating system. Mr. Daily participated in the design and coding of the data structures and associated functions that allowed the various processes to communicate. This was written entirely in C++. The user interface work was for the system administrator's console. This was written using C++ and the Tcl/Tk libraries for X windows.

In December 1995, Mr. Daily began working for the Virginia Tech Center for Transportation Research as a Software Developer/Systems Administrator. While working for the Center, Mr. Daily's work has concentrated primarily on administering the Pcs, Macs, and Sun Sparcserver. In addition to his administration responsibilities, Mr. Daily has participated in several software projects. Mr. Daily wrote a software package that controls the reconfigurable dashboard display in the Center's Oldsmobile Aurora. This package uses simple configuration files to select and position reusable instrumentation objects on the display, which allows the display to be quickly modified and enables the Aurora to be easily reconfigured for different experiments. Another project Mr. Daily has contributed to is a project with Blacksburg Transit. For this project, Mr. Daily designed part of the system database, including writing code to retrieve GPS bus position data over the network from another system. He also wrote a C program to modify graphic files to create a dynamic map display of the bus positions.

David E. Ferguson

Vice President-Operations

Shenandoah Cable Television Company
ShenTel Service Company

Vice President-Customer Service

Shenandoah Telecommunications Company
Shenandoah Telephone Company

Shenandoah Mobile Company
Virginia 10 RSA Limited Partnership
Virginia 10 RSA Limited Partnership dba Shenandoah Cellular

David Ferguson was born and raised in the Shenandoah Valley of Virginia. Upon completion of high school in 1964, he joined the United States Army Signal Corp. He served in Korea with the 1st Target Acquisition Battalion and in Vietnam with the 83rd Artillery. While in Vietnam, he was responsible for the installation and maintenance of rapid deployment communication sites.

When discharged in 1967, he was employed by Shenandoah Telephone Company. During his employment he has held positions of lineman, installer/repairman, engineering assistant, cable supervisor, and plant manager. In 1982 he was promoted to vice president of customer service for Shenandoah Telecommunications Company. He currently also holds the positions of Vice President of Operations for the company's cellular and cable television subsidiaries.

Mr. Ferguson is also actively involved in social and community organizations. His list of offices held includes such organizations as the Woodstock Rotary Club of which he has been past president and the recipient of the Paul Harris Fellow Award, the Edinburg Lions Club, past district chairman of the Boy Scouts of America, and the Virginia Savings Bank advisory board. In addition, he has been extremely active in local, state, and national organizations relative to the telephone company and its affiliate companies.

Hank Zimmerman

Project Manager

Shenandoah.com
ShenTel Service Company

Hank Zimmerman came to Shentel in August of 1997, and was given the mission to develop and deploy a community web site that provides public information and showcases the Shenandoah Valley. Zimmerman has lived in Shenandoah County for 20 years and has raised a family here. His background is in microcomputers and he has a degree in Communications/Journalism with an emphasis in broadcasting. He began his career in radio, but joined the microcomputer revolution that occurred during the 1980s. In 1992 he founded Shenandoah Technology Systems, Inc. in Woodstock, which provides local computer support and sales. During the early 1990s Zimmerman provided outside MIS support for a local daily newspaper, the Northern Virginia Daily, and was involved in major upgrade of the newspaper's prepress pagination system. As a result of an effort to provide a means for the newspaper to develop an online presence, he joined Shentel. The Northern Virginia Daily remains a strong content partner with Shentel through the provision of daily news and classified ads.

Shenandoah Valley Advanced Traveler Information System

**PROJECT BUDGET, COST-SHARE, AND IN-KIND
CONTRIBUTIONS**

SVATIS Pilot Project 3-Year Project Budget

TODAY'S DATE: 6/27/02
 FILENAME: MPW - Jun98 Budgets
 PRIN. INVESTIGATOR: Schroeder - VDOT - I-81 Traveler
 PERFORMANCE PERIOD: 7/1/98 to 6/30/01

NAME/POSITION	7/1/98 to			10/1/98 to			10/1/98 to			7/1/99 to			1/1/00 to			TOTAL					
	hrs	23%	hourly rate	hrs	18%	hourly rate	hrs	8%	hourly rate	hrs	23%	hourly rate	hrs	24.02%	hourly rate						
			PHASE I			PHASE II			PHASE III			PHASE IV			PHASE V						
A. Schroeder PI - CY - 11/1	120	23%	21.92	\$2,630	280	18%	23.03	\$6,447	120	8%	23.03	\$2,763	240	23.85%	23%	\$5,723	720	24.02%	23%	\$17,292	\$34,856
D. Worrall - CY - 8/1	240	46%	56.20	\$13,487	520	33%	56.19	\$29,221	240	15%	56.19	\$13,487	450	59.24%	43%	\$26,657	600	62.22%	19%	\$37,335	\$120,187
S. Herbert - CY - 8/1	360	69%	16.83	\$6,059	960	62%	16.83	\$16,157	240	15%	16.83	\$4,039	720	17.74%	69%	\$12,774	1500	18.64%	48%	\$27,954	\$66,983
B. Daily - CY - 12/1	80	15%	20.70	\$1,656	800	51%	21.75	\$17,398	0	0%	21.75	\$0	480	22.29%	46%	\$10,697	700	24.07%	22%	\$16,851	\$46,602
GRA (C,3) (CY)	0	0%	16.01	\$0	600	77%	15.69	\$9,415	0	0%	15.69	\$0	480	16.16%	92%	\$7,758	1440	16.70%	92%	\$24,048	\$41,221
TOTAL PERSONNEL SALARIES	800			23,832	3,160			78,639	600			20,289	2,370			63,610	4,960			123,480	309,850
FRINGE BENEFITS:																					
FACULTY 25%, SMR/WAGES 8%																					
CLASSIFIED 31%				<u>3,666</u>			<u>12,339</u>				<u>2,780</u>			<u>9,432</u>			<u>18,511</u>			<u>46,728</u>	
TOTAL SALARIES AND FRINGES				27,498			90,978				23,069			73,042			141,991			356,578	
EQUIPMENT				0			0				0			0			0			0	0
TUITION - AY				0			3,171				0			2,537			2,537			2,537	8,244
MATERIALS & SUPPLIES				300			800				800			800			1,200			1,200	3,900
TRAVEL				1,000			5,000				2,000			2,000			1,000			1,000	11,000
CONTRACTUAL SERVICES				500			1,000				1,000			500			200			200	3,200
SUBCONTRACT - ShenTel Corp				13,000			122,000				103,500			103,500			195,000			195,000	537,000
TOTAL DIRECT COSTS				42,298			222,948				130,369			182,378			341,927			919,921	
INDIRECT COSTS @ 45%				<u>19,034</u>			<u>49,400</u>				<u>12,091</u>			<u>34,354</u>			<u>64,976</u>			<u>179,855</u>	
TOTAL COSTS				61,332			272,348				142,460			216,732			406,903			1,099,776	

Cost Share for Ray D. Pethtel

UNIVERSITY

TODAY'S DATE: 6/27/02

FILE NAME: MPW - Jun98 Budgets

PRINCIPAL INVESTIGATOR: Schroeder - VDOT - I-81 Traveler

PERFORMANCE PERIOD: 7/1/98 to 6/30/01

<u>NAME/POSITION</u>	7/1/98 to 9/30/98 <u>PHASE I</u>	10/1/98 to 6/30/99 <u>PHASE II</u>	10/1/98 to 6/30/99 <u>PHASE III</u>	7/1/99 to 12/31/99 <u>PHASE IV</u>	1/1/00 to 6/30/01 <u>PHASE V</u>	<u>TOTAL</u>
R. Pethtel CY	10% \$2,038	5% \$4,816	5% \$4,816	10% \$6,581	10% \$6,933	25184
TOTAL PERSONNEL SALARIES	2038	4816	4816	6581	6933	25184
FRINGE BENEFITS						
Faculty @ 25%	509	1204	1204	1645	1733	6295
Faculty Summer & Wage @ 8%	0	0	0	0	0	0
Classified @ 31%	0	0	0	0	0	0
TOTAL FRINGE BENEFITS	509	1204	1204	1645	1733	6295
TOTAL SALARIES & BENEFITS	\$2,547	\$6,020	\$6,020	\$8,226	\$8,666	31479
EQUIPMENT	\$0	\$0	\$0	\$0	\$0	0
TUITION - AY	0	0	0	0	0	0
TRAVEL	\$0	\$0	\$0	\$0	\$0	0
MATERIALS & SUPPLIES	\$0	\$0	\$0	\$0	\$0	0
PUBLICATION COSTS	\$0	\$0	\$0	\$0	\$0	0
TELEPHONE/FAXES/COMM	0	0	0	0	0	0
TOTAL DIRECT COSTS	\$2,547	\$6,020	\$6,020	\$8,226	\$8,666	31479
INDIRECT COSTS @ 45%	\$1,146	\$2,709	\$2,709	\$3,702	\$3,900	14165.55
TOTAL COSTS	\$3,693	\$8,729	\$8,729	\$11,928	\$12,566	\$45,645

Shenandoah Valley Advanced Traveler Information System

SHENTEL Staffing Budget

Staffing Requirements	Time Allocation	Cost Allocation
Data Base Development Engineer	100%	\$49,000
Deployment Engineer	100%	\$49,000
Clerical	100%	\$31,000
Miscellaneous Expenses		\$50,000
Total SVATIS Budget/yr.		\$179,000

- *SHENTEL In-Kind Contributions*

Executive Administrative Support Davis Ferguson, V.P. – Operations (@5%) Hank Zimmerman, Project Mgt (@25%)	\$7,500 \$18,000
Administrative Support General Administration Financial Accounting Data Processing Network Design	\$35,000
Infrastructure Office Space Utilities Transportation	\$21,000
Shenandoah.com SHENTEL presently supports Shenandoah.com, the entity through which the SVATIS demonstration project will be developed, with a yearly operating budget of approximately \$275,000. Approximately 15% of existing resources will be diverted to the development of the SVATIS demonstration project.	\$41,250
TOTAL	\$122,750

vita

Aaron D. Schroeder

Leader, Information Applications Group

Virginia Tech Transportation Institute

Virginia Polytechnic Institute and State University

Blacksburg, Virginia

Education

Doctor of Philosophy (2001). Public Administration and Public Affairs, Virginia Polytechnic Institute and State University.

Dissertation: Building Implementation Networks: Building Multi-Organizational, Multi-Sector Structures for Policy Implementation

Master of Public Administration (1993). Specialization in Government Technologies. James Madison University.

Bachelor of Science (1991). Psychology, University of Delaware.

Employment Experience - Administration

11/98 to present: Leader, Information Applications Group, Virginia Tech Transportation Institute. The mission of the Information Applications Program is to utilize information

technology and inter-institutional (e.g. public-private) partnerships to develop and deploy new or enhanced public services. Responsibilities include the management of existing program development and deployment projects, procurement of all program funding, management of program relationships with private and public-sector personnel and political representatives, and coordinating with other Institute research programs. The Information Applications Group was founded in 1998 and has quickly grown to become the second largest research group at the Institute. Current statistics for the center are: over \$3 million in committed contract funding, 7 staff members (programmers, policy analysts, marketing analysts, lawyers, project managers), 4 associated Virginia Tech faculty members, and 11 graduate research assistants (representing Systems Engineering, Public Administration, Computer Science, and Marketing).

Employment Experience - Research

11/96 to 10/98: Senior Research Associate, Virginia Tech Center for Transportation Research. Served on numerous research teams taking responsibility for necessary policy analyses, stakeholder facilitations, and development of applicable IT solutions. Served as principal investigator, co-principal investigator, or researcher on numerous projects.

10/95 to 10/96: Research Associate, National Academy of Public Administration. Served as the Assistant to the Director of a National Academy of Public Administration study focusing on the relationship of the National Guard to public, non-profit, and private agencies in natural disaster response and recovery.

Employment Experience - Teaching

8/94 to present: Adjunct Instructor, Center for Public Administration and Policy, Virginia Polytechnic Institute and State University. Responsible for teaching or co-teaching masters and doctoral-level courses in:

- Internet and Database Technologies
- Computer Business Applications
- Statistical Methods
- Policy Network Analysis
- Public Budgeting

8/95 to 5/96: Adjunct Professor, Department of Public Administration, Elon College. Responsible for teaching undergraduate courses in:

- Public Administration
- Policy Analysis

Employment Experience - Consulting

6/97 to present: Internet Applications Developer. Consulted on many development efforts deploying business applications on the internet, including:

- Travel New England – contracted to PB Faradyne to develop an Advanced Traveler Information System in Maine, New Hampshire, and Vermont.

- Delaware Medical Equipment – contracted to develop a business-to-business online e-commerce site linking up a medical equipment distributor to both other distributors and selected medical services establishments.
- Intelligent Vehicle Highway Systems (IVHS) Multimedia Tutorial – contracted to design and produce of an interactive multimedia program to educate state officials and interested citizens about the potential applications of Intelligent Vehicle Highway Systems.

Technical skills:

- Databases: SQL, Microsoft SQL Server, MS Access, Filemaker Pro
- Web Application Development: Cold Fusion, Javascript, HTML, MS SafeSource
- Operating Systems: 2000 Server and Workstation, NT Server and Workstation, MacOS 6 – 9
- Multimedia: Macromedia Authorware, Macromedia Director, Adobe Photoshop, Adobe Premiere
- Business: MS Excel, MS Word, MS Powerpoint
- Statistical: SAS, SPSS, SAS-JMP
- GIS: Atlas GIS

8/92 to 6/93: Environmental Impact Analyst, Department of Policy Studies and Planning, James Madison University. Responsible for conducting multiple Environmental Impact Analyses of major capital projects, including a 20,000 sq. ft. student recreation center.

8/91 to 6/92: GIS Consultant. Designed, developed and implemented a GIS database system for use in retaining and analyzing data on all poultry producers in Rockingham

County, Virginia. This information system was used to enforce the county's Nutrient Management Plan.

1/93 to 6/93: Personnel Analyst, Rockingham County Government, Harrisonburg, Virginia. Employed as a consultant to prepare and conduct directed interviews and three focus groups of all county personnel as part of the initiation of a civil service merit pay system for the County of Rockingham, VA.

Membership in Professional Organizations

Intelligent Transportation Society of America

Intelligent Transportation Society of Virginia

Pi Alpha Alpha National Public Administration Honor Society

American Society for Public Administration

Summary of Recent Honors and Awards

Invited speaker to Technology and Public Administration conference. 2000

Lectured, over a two-day period, on the concepts of stakeholder analysis and management, public-private partnerships, and political-economic analysis for the purpose of Information Technology development and implementation in the public sector.

Invited speaker to 50th Virginia Transportation Conference. Lectured on 2000
topics of public-private partnerships and information technology
deployment in rural areas.

Invited speaker on Advanced Traveler Information Systems in Rural 2000
Areas, sponsored by the Intelligent Transportation Society of Virginia.

Nominated by the Association of State Governments for award in 1999
Innovation in State Government for the design, development and
deployment of Travel Shenandoah, a public-private partnership for
Advanced Traveler Information Systems in Virginia's Shenandoah Valley.

Invited speaker to 49th Virginia Transportation Conference. Lectured on 1999
topic of technology deployment in rural areas.

Named as Program Director of the Intelligent Transportation Society of 1999
Virginia's 5th Annual Conference.

Named as an Eno Transportation Fellow and invited to participate in the 1997
Eno Transportation Foundation Leadership Development Program.

Invited to be a member of the Congressional Commission on I-81 Truck 1999
Safety.

Invited as Guest Editor for journal *Administration & Society*. 1997

Research Grants and Contracts - Principal or Co-Principal Investigator

Project Title and Description	Amount and Sponsor(s)
<p>Schroeder, A.D. (1999-2005). Intelligent Transportation Systems Implementation in Virginia.</p> <p>Currently co-directing \$12 million / 6-year program to facilitate ITS deployment in the Commonwealth of Virginia. The Information Applications Group is responsible for directly administering \$1.8 million over the 6-year period and will be focusing on the design, development and production of the "Virginia Traveler Information Clearinghouse."</p>	<p>\$1,800,000</p> <p><i>Research and Special Programs Administration (USDOT)</i></p>

Schroeder, A.D. (1998-2000). Travel Shenandoah – An Advanced Traveler Information System for Virginia’s Shenandoah Valley. *Virginia Department of Transportation, Shenandoah Telecommunications* \$1,400,000

Directed the conceptual and technical design, development, and deployment of a Traveler Information System in Virginia’s Shenandoah Valley: Travel Shenandoah (www.travelshenandoah.com). The system integrates current traffic & travel conditions, food and lodging information, traveler services information, tourism information, emergency services information, and trip routing capabilities.

Schroeder, A.D. and Worrall, R.D. (1999-2000). Travel Virginia – A Statewide System of Private-Public Partnerships. *Virginia Department of Transportation* \$200,000

Co-directing a planning and design effort to replicate the success of Travel Shenandoah across the Commonwealth of Virginia

Schroeder, A.D. and Worrall, R.D. (2000-2001). I-81 Intelligent Transportation Systems Task Force. *Virginia Department of Transportation* \$275,000

Currently directing an effort to plan for Intelligent

Transportation Systems deployment in the I-81 corridor in Virginia. This includes overseeing and participating in 6 technical working groups, including: Corridor Concept of Operation; Public Information & Marketing; Incident Response and Clearance; ITS Design Guidelines; Data Requirements; and, Traveler Information Services. This task force has the standing responsibility of recommending to VDOT the ITS projects that should be funded for each coming fiscal year.

Schroeder, A.D. and Worrall, R.D. (1998-2000). \$250,000

Harrisburg Extension.

I-95 Corridor Coalition

Extension of the Travel Shenandoah ATIS demonstration project north to Harrisburg, Pennsylvania.

Schroeder, A.D. (1997-2002). Enhanced Night Visibility. \$125,000

Currently working with the Federal Highway Administration on a project to establish a policy implementation network for the nationwide deployment of UV-A Fluorescent headlamps and traffic control devices. *Federal Highway Administration*

Schroeder, A.D. (2000). The Staunton District ITS \$125,000

Concept of Operations

Virginia Department of

This report will outline the functions of the integrated regional ITS, the agencies involved in operating and managing the ITS, and each agency's roles and responsibilities.

Transportation

Schroeder, A.D. and Worrall, R.D. (1999-2000). Truck Fleet Alert. \$75,000

Fleet Alert.

Virginia Department of

Truck Fleet Alert is being built as a particular application of Travel Shenandoah. The system will provide timely, relevant information on traffic and road conditions, weather, parking availability, route guidance, and other information for commercial traffic traveling through the Commonwealth of Virginia.

Transportation

Schroeder, A.D. (1998-2000). ACCESS to Rides – A Dynamic System for Volunteer and Transportation Resource Management. \$70,000

Resource Management.

Kellogg Foundation,

Blacksburg National

Designed, developed and currently operating, in partnership with local non-profit and governmental organizations, a dynamic on-line scheduling system for managing a volunteer-based ride-sharing program in Virginia's New River Valley.

Bank,

Research and Special

Projects Administration

(USDOT)

Scholarly Research

Book Chapters:

Schroeder, A.D., Wamsley, G.L., and Ward, R. (2000). The Evolution of Emergency Management in America: From a Painful Past to a Promising but Uncertain Future, in Handbook of Emergency Management. Ed. Ali Farazmand. Marcel-Dekker: New York.

Journal Publications (refereed):

Ward, R., Schroeder, A.D., Wamsley, G.L., and Robins, D.B. (2000). Network Organizational Development in the Public Sector. *Journal of the American Society for Information Science*, vol. 51, no. 11.

Schroeder, A.D., Wamsley, G.L., and Lane, L.M. (1996). To Politicize is Not to Control. *The American Review of Public Administration*, September, pp. 45-60.

Wamsley, G.L. and Schroeder, A.D. (1996). Escalating in a Quagmire: The Changing Dynamics of the Emergency Management Policy Subsystem. *Public Administration Review*, May/June, pp. 235-244.

Schroeder, A.D. and Kachroo, P. (2001). Fuzzy Cognitive Mapping of Stakeholder Positions for ITS Technologies Deployment. *ITS Quarterly*, Forthcoming.

Software Published (commercially):

Schroeder, A.D. (1999). Travel Information Data Clearinghouse and Management System. Copyright: Virginia Polytechnic Institute and State University.

Schroeder, A.D. and Daily, B. (1999). Web-Based Dynamic Ride Request, Assignment, and Tracking System. Copyright: Virginia Polytechnic Institute and State University.

Major Technical Reports and Presentations

Worrall, R.D. and Schroeder, A.D. (2000). Travel Virginia: A Statewide System of Public-Private Partnerships for ATIS Deployment. Research Report. Virginia Department of Transportation.

Schroeder, A.D. (2000). Information Technology and Public-Private Partnerships: Getting Services Deployed in Rural Areas. Conference Presentation, Technology in Public Administration Conference, University of LaVerne, California.

Schroeder, A.D. and Herbert, S. (2000). Staunton District Concept of Operations: Lessons Learned. Research Report. Virginia Department of Transportation.

Neale, V.L., Dingus, T.A., Schroeder, A.D. (1998). Advanced Traveler Information Systems and Commercial Vehicle Operations Components of the Intelligent Transportation Systems: Investigation of User Stereotype and Preferences. Federal Highway Administration Contract No. DTFH61-92-C-00102, Item No. 0021.

Schroeder, A.D., Evans, K.E., and Wamsley, G.L. (1997). Learning to Live with Chaos: A Case for the Dissipative Structure Metaphor in Policy Subsystem Analysis. Conference Presentation, Intergovernmental Analysis Conference, Copenhagen, Denmark.

Other Publications

Schroeder, A.D. (1995). The Political Roots of Hating Government. *Roanoke Times and World News*, April 30.